Wasabi-1

VIC-P58

Well Completion Report

Basic Data

March 2009

GENERAL DATA SHEET

Well:	Wasabi-1	**Partners:**	Apache Northwest Pty Ltd (Operator)
Well Type:	Exploration		
Basin:	Gippsland		
Tenement:	Vic-P58		
Status:	Plugged and Abandoned		
Spudded:	23:00 hrs 14 February, 2008	**Latitude:**	38° 29' 18.157" S
TD Reached:	05:30 hrs 1 March, 2008	**Longitude:**	147° 15' 49.147" E
Rig Released:	16:00 hrs 8 March, 2008	**Northing:**	5 739 963.350 mN
Total Depth:	-2086.0 mTVDAHD (2313.0 mMDRT)	**Easting:**	522 993.588 mE
RT Elevation:	39.0 m above AHD	**Datum:**	GDA94
Water Depth:	27.0 m below AHD	**Projection:**	MGA94, UTM Zone 55° S CM 147° E
Drill. Contr.:	Seadrill		
Rig (Type):	West Triton (Jack-up)		

MWD/LWD Logs

Bit No.	Log Suite	Interval mTVDAHD (mMDRT)	Max °C	Hole Size (mm)	Remarks
1	GR-RES-Sonic (SLB)	-96.0 to -823.0 (135.0 to 862.0)	38.9	406	All data recovered. Poor quality sonic data due to large hole size.
2	GR-RES-Density-Porosity (SLB)	-823.0 to -1713.6 (862.0 to 1796.0)	53.4	311	POOH at 1796.0 mMDRT, unable to get tools steering in correct direction. All data recovered at surface.
3	GR-RES (SLB)/ BAT Sonic (Sperry)	-1713.6 to -1799.5 (1796.0 to 1900.0)	56.3	311	ADN tool removed. Poor quality GVR image acquired from 1200.0 to 1700.0 mMDRT. All Gamma, resistivity & sonic data acquired.
4	GR-RES (SLB)/ BAT Sonic (Sperry))	-1799.5 to -2086.0 (1900.0 to 2313.0)	60.0	311	
5	GR-RES-Density-porosity (SLB)/ BAT Sonic (Sperry)	-1666.3 to -2086.0 (1740.0 to 2313.0)	65.0	311	Wiper trip. POOH logging ADN from TD to 1740.0 MDRT.

Wireline Logs

Suite	Run	Log Suite	Interval mTVDAHD (mMDRT)	BHT (°C)	Hrs *	Remarks
1	1	VSI	-31.1 to -1345.0 (70.1 to 1385.5)	60.0	20.82	Unable to pass 1390.0 mMDRT. Commenced survey from 1385.0 mMDRT at 15 m intervals to loss of signal.
	2	PEX-SP-MSIP	-27.0 to -1349.4 (66.0 to 1390.0)	59.0	30.48	Tool hung up whilst RIH at 1390.0 mMDRT. Logged up from 1390.0 mMDRT, all data acquired from this point.
	3	MDT	-1229.3 to -1398.1 (1268.5 to 1440.1)	60.0	28.98	13 pretests (9 good, 3 no seal, 2 flow line blockage). 3 samples taken at 1328.0 mMDRT.
	4	CST	-1210.9 to -1433.5 (1250.0 to 1477.2)	61.0	35.40	30 cores shot, 29 recovered, 1 empty.

	5	VSI through drill pipe	-1226.3 to -2077.3 (1265.5 to 2300.0)	NA	3.83	RIH open ended drill pipe and circulated for 3.5 hrs. Moved drill pipe every 30 min through logging operations to avoid becoming hydrostatically stuck.

* Hours since circulation stopped.

Hole and Casing Details

Hole Size (mm)	Interval (mMDRT)	Interval (mTVDAHD)	Casing Size (mm)	Depth (mMDRT)	Depth (mTVDAHD)
660	66.0 to 135.0	-27.0 to -96.0			
406	135.0 to 862.0	-96.0 to -823.0	340 x 508	857.3	-818.0
311	862.0 to 2313.0	-823.0 to -2086.0			

Cement Plugs

Plug No.	Interval mTVDAHD (mMDRT)	Tagged
1	-1170.9 to -1230.8 (1210.0 to 1270.0)	
2	-758.0 to -845.0 (797.0 to 887.0)	
3	-37.0 to -82.0 (76.0 to 121.0)	

Testing: No testing carried out.

Coring: No conventional cores were cut. 29 percussion sidewall cores were recovered from 30 shots.

Comments: The Wasabi-1 location is 14.86 m on a bearing of 179.88° (True) from the intended surface location.

West Triton

For further information contact::

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www.seadrill.com

GENERAL

Delivery	01-Jan 2008
Hull ID	P2011
Major Upgrades	-
Design	Baker Marine-375 Pacific Class
Previous Names	Seadrill 2
Flag	Singapore
Classification Agency	ABS-CDS✠ Self Elevating Unit
Dimensions	236' x 224' x 27.9'
Operating Draft	18.8 Ft
Transit draft	19.5 Ft
Target VDL - Operating	7,496 kips
Target VDL - Survival	6,500 kips
Target VDL - Transit	6,000 kips
Outfitted Max WD	375 Ft
Min WD	30 Ft
Leg Length	506' (incl spudcan tip)
- usable below hull	435 (incl spudcan tip)
Leg Spacing	155.2' transverse 145.3' longitudinal
Usable Deck Space	32,722 Ft 2
Spudcan Diameter	55.446ft
Max Drilling Depth	30,000'
Cantilever Envelope	70' aft 30' transverse
Max Combined Load	2599 kips at 70' aft
Quarters	115
Helideck Size	75.5' diameter
Helideck Capacity	S61N or 20,500 lbs
Helideck Certification	CAP437

DRILLING PACKAGE

Derrick (SHL)	1,500 kips
Racking Capacity	30,000' x 5.5" dp
Drawworks	NOV-D3000UE- 3450HP AC
Rotary Table	NOV-D 495 –API 7K
Top Drive	Hydralift Power Swivel HPS750
- continuous torque	64,175 ft lbs @ 94 rpm
Pipehandling	Hydra Tong MPT-200

MUD SYSTEM

Pressure Rating	7.5M
Pumps	3 x NOV 14-P-220 triplex
Solids Control	1 x dual gumbo box 4 x VSM 300

CAPACITIES

Diesel	3900bls
Drillwater	4850-bbls
Potable Water	3,556 bbls
Bulk Product	11,654 cu ft
Sack Storage	5,000 sacks
Base Oil	1,274 bbls
Brine	1310
Liquid Mud	4,727 bbls
Mudpits (excl slug/mix)	8

WELL CONTROL

Diverter	49.5" KFDJ -500psi
Annular Preventer	1 x Hydril GX 18 ¾" 10M
High pressure BOP	2 x Hydril 18 ¾" 15M double
C&K Manifold	3 1/16" I.D.- 15M

CRANES

Pedestal Cranes	3 ea Baker Marine (900 / 1600 / 2250)
API SWL-Short Tons	7.8ST@100' / 25.0ST@20' 8.7ST@100' / 44.9ST@25' 17.0ST@120' / 55ST@25'
BOP Crane	2 x 50MT

POWER

Main Engines	5 x CAT3516HD
Total Power	10,750 hp
Main Generators	5 x Baylor SR4
Emergency Power	1 x CAT3508

OTHER

Mooring System	4 x Baker/Series 70
Conductor Tensioner	500 kips vertical

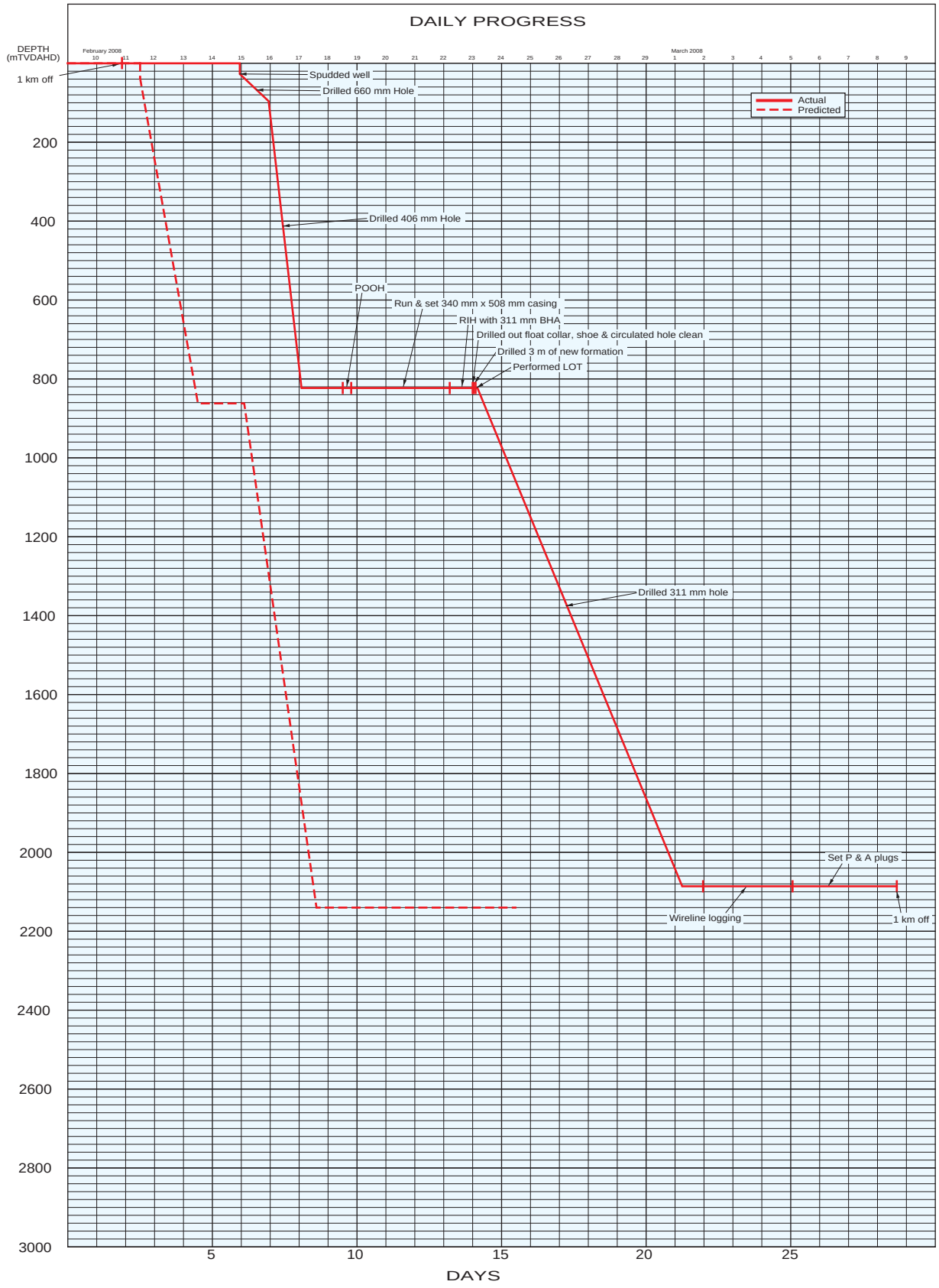
TUBULARS

Drillpipe	15750' x 5.5" x S-135 XT-57 tooljoints, Arnco 300XT

FEATURES	Helo refuelling system Single stage preload Coring Caisson

Date of Update: 21 Jun 07

Wasabi-1



LATITUDE :	38°29' 18.157" S	UTM:	5,739,963.35 mN
LONGITUDE :	147°15' 49.147" E		522,993.59 mE
SPUD DATE :	14 February 2008 @ 23:00 hrs		
REACHED T.D.:	1 March 2008 @ 05:30 hrs		
ELEVATION R.T.:	39.0 m above (AHD)		
WATER DEPTH :	27.0 m below (AHD)		
SEA BED :	66.0 m below R.T.		
STATUS :	Plugged & Abandoned		
RIG :	West Triton		
RIG RELEASED :	18 March 2008 @ 16:00 hrs		

GDA

Apache Energy

Vic/P 58

GIPPSALND BASIN

Wasabi-1

WELL HISTORY

Author :	WCR	Date :	4 February, 2009
Drawn :	Perth Exploration Dept.	Plan No.	WHu10776

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				29-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	1

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	38.00 (m)	**INC**	0.00°	**AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Continue with 100% preload

24 HR SUMMARY: Take on100% preload and hold for 2 hours. skid out drilling package, lower texas deck and pick up and lower Bop's, off load 3rd party equipment.

24 HR FORECAST:

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	12:00	12.00	R-MOB-DEM OB	DEMOB	PP		Removed sea fastenings. Prepared for floating of rig from HLV MS Target. Ballasted down MS Target and attached work tugs.
12:00	13:00	1.00	R-MOB-DEM OB	DEMOB	PP		Made fast rig to MV Hastings, MV Cooma, MV Tusker
13:00	14:30	1.50	R-MOB-DEM OB	DEMOB	PP		Towed rig off HLV MV Target and towed rig to standby location.
14:30	16:30	2.00	R-MOB-DEM OB	DEMOB	PP		Filled spud cans and secured hatches.
16:30	17:30	1.00	R-MOB-DEM OB	DEMOB	PP		Jacked up rig to 2 metres air gap. Connected deepwell pumps.
17:30	18:00	0.50	R-MOB-DEM OB	DEMOB	PP		Released tugs.
18:00	20:00	2.00	R-MOB-DEM OB	DEMOB	PP		Levelled rig and jacked down to 1 metre air gap.
20:00	0:00	4.00	R-MOB-DEM OB	DEMOB	PP		Commenced taking on preload for 100% preload test.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00am Continued taking on preload. Preload tank filling rate very slow due to load sharing problem of water supply between preload tanks, equipment cooling and chiller units.
Prepared 130 joints of 5 1/2" drill pipe for back load.

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
Tie On	38.00	0.00	0.00	38.00	0.00	0.00	0.00	0.00

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	2		CATERING	8	
SEA DRILL	46		SEA DRILL SUBCONTRACTOR	8	

TOTAL PERSONNEL ON BOARD: 64

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				29-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	1

SUPPORT CRAFT

TYPE	REMARKS

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		0	CEMENT	MT		0
BENTONITE	MT		0	BARACARB	MT		0
FUEL OIL	MT		360	WATER, POTABLE	MT		120
WATER, DRILLING	MT		0	BASE OIL	bbl		0
BRINE	bbl		0				

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				30-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	2

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Split cement lines and install crossovers. Continue with pre-drilling test / training.

24 HR SUMMARY: Pick up 5 1/2" DP, HWDP and 8" drill collars. Test run equipment and crew training with rig equipment.

24 HR FORECAST:

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	8:00	8.00	R-MOB-DEM OB	MOB	PP		Continued taking on preload. Preload tank filling rate very slow due to load sharing problem of water supply between preload tanks, equipment cooling and chiller units. Five out of ten preload tanks filled. Prepared 130 joints of 5 1/2" drill pipe for back load. Held preload.
8:00	10:00	2.00	R-MOB-DEM OB	MOB	PP		Opened main preload valve and completed taking on preload (restrictions to cooling water and chiller units).
10:00	12:00	2.00	R-MOB-DEM OB	MOB	PP		Held preload.
12:00	14:00	2.00	R-MOB-DEM OB	MOB	PP		Dumped preload. Held helicopter landing training for new deck crew.
14:00	16:00	2.00	R-MOB-DEM OB	MOB	PP		First helicopter landing. Shut down helicopter and conducted heli equipment audit. Departed with 5 PAX.
16:00	17:30	1.50	R-MOB-DEM OB	MOB	PP		Jacked down to zero airgap then back up to 4.9m airgap.
17:30	19:30	2.00	R-MOB-DEM OB	MOB	PP		Offloaded equipment from MV Wrangler.
19:30	0:00	4.50	R-MOB-DEM OB	MOB	PP		Held prejob meeting with all crew. Prepared to skid out cantilever. Skidded out cantilever to drilling position and lowered CTU deck.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Continued to offload equipment from MV Wrangler to 02.00 hrs. Rigged up service lines. Secured ROV spread to aft deck. Prepared tubulars for picking up. Offloaded mud chemicials from containers.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL	49		THIRD PARTY	10	
CATERING	8		SEA DRILL SUBCONTRACTOR	5	
ADA	4				

TOTAL PERSONNEL ON BOARD: 76

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				30-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	2

SUPPORT CRAFT

TYPE	REMARKS
MV WRANGLER	
MV BATTLER	
PACIFIC WRANGLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		0	CEMENT	MT		0
BENTONITE	MT		0	BARACARB	MT		0
FUEL OIL	MT	11	349	WATER, POTABLE	MT	19	101
WATER, DRILLING	MT		0	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				31-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	3

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Training crew with iron roughneck and casing stabbing basket. Hydrotesting mud pits (Pits 1 to 3 complete).

24 HR SUMMARY: Reset PLC to allow operation of top drive functions and picking up of drill pipe. Continue with rig training / pre drilling tests.

24 HR FORECAST: Reset PLC to allow operation of top drive functions and picking up of drill pipe. Continue with rig training / pre drilling tests.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	7:00	7.00	R-MOB-DEM OB	MOB	PP		Rigged up service lines. Continued to offload equipment from MV Wrangler to 02.00 hrs. Secured ROV spread to aft deck. Prepared tubulars for picking up. Offloaded mud chemicials from containers.
7:00	9:00	2.00	R-MOB-DEM OB	MOB	PP		Attempted to move TDS/blocks to pick up pipe. Unable to release brake. Investigated problem.
9:00	13:00	4.00	R-MOB-DEM OB	MOB	PP		Held JSA. Moved stairway from upper deck to main deck and installed same to CTU deck. Continued offloading chemicials from containers to sack store.
13:00	15:30	2.50	R-MOB-DEM OB	MOB	PP		Rigged up chicksans from cement unit to fixed lines.
15:30	16:00	0.50	R-MOB-DEM OB	MOB	PP		Held JSA for picking up drill pipe. Cleared rig floor.
16:00	20:30	4.50	R-MOB-DEM OB	MOB	PP		Continued trouble shooting control problems with TDS/blocks and rotary table. Solved RT problem (closed hydraulic valve). Still unable to move TDS/blocks.
20:30	22:30	2.00	R-MOB-DEM OB	MOB	PP		Held JSA. Lifted BOP's, moved to well centre and lowered BOP's to CTU deck.
22:30	0:00	1.50	R-MOB-DEM OB	MOB	PP		Trained crew with iron roughneck.

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				31-01-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	3

06:00 UPDATE

0000-0600

00:00 - 01:00 - Held JSA. Picked up and racked back BOP's.
01:00 - 03:00 - Nippled up BOP's on test stump.
03:00 - 03:30 - Changed out auto elevators to manual elevators (auto elevators not functioning).
03:30 - 06:00 - Trained crew with iron roughneck and casing stabbing basket. Commenced sequentially filling mud pits with sea water for hydrotesting.

NOTE:
Deck crew preparing bulk loading hoses and vent hoses.

GENERAL NOTES:
1) Unable to operate Starboard crane as oil filter blocked, no spares onboard.
2) SAFETY CONCERN: BOP winches are rated to a total off 100 ton, BOP weight is 85 ton. Should one BOP winch fail we have no redunancy. Lifting system should incoperate a safety factor to support the weight of the Bop's
should one winch fail. Personnel are required to be under Bop's to see it land on stump etc.
3) Drillers PA system on rig floor is very hard to hear and understand by crew menbers working on rig floor. Driller has to remove hand from joy stick to press numbers to activate talk back system. Should be foot activated system
to allow driller to have both hands on controls.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	3		SEA DRILL	49	
SEA DRILL SUBCONTRACTOR	5		CATERING	8	
THIRD PARTY	10				

TOTAL PERSONNEL ON BOARD: 75

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV WRANGLER	
MV BATTLER	
PACIFIC WRANGLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		0	CEMENT	MT		0
BENTONITE	MT		0	BARACARB	MT		0
FUEL OIL	MT	11	338	WATER, POTABLE	MT	31	70
WATER, DRILLING	MT		38	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME	DATE
WASABI-1	01-02-2008

API #	24 HRS PROG	TMD	TVD	REPT NO
OH	0.00 (m)	0.00 (m)	38.00 (m)	4

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) INC 0.00° AZM 0.00°	(sg)		

CURRENT OPERATIONS: Commence pumping test with mud pumps.

24 HR SUMMARY: Commence pumping test with mud pumps.

24 HR FORECAST: Complete pumping test, layout tubullars from derrick, test mud mixing system and cement mixing system

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:00	1.00	R-MOB-DEM OB	MOB	PP		Held JSA. Picked up and racked back BOP's.
1:00	3:00	2.00	R-MOB-DEM OB	MOB	PP		Nippled up BOP's on test stump.
3:00	3:30	0.50	R-MOB-DEM OB	MOB	PP		Changed out auto elevators to manual elevators (auto elevators not functioning).
3:30	6:30	3.00	R-MOB-DEM OB	MOB	PP		Trained crew with iron roughneck and casing stabbing basket. Commenced hydrotesting of mud pits.
6:30	8:30	2.00	R-MOB-DEM OB	MOB	PP		Held JSA. Installed securing straps to top drive service loop and mud hoses. Completed hydrotesting of all mud pits.
8:30	11:30	3.00	R-MOB-DEM OB	MOB	PP		Held JSA. P/U test joint with tugger rigged through back of derrick. Landed test joint in BOP's. M/U safety clamp and secured test joint.
11:30	12:00	0.50	R-MOB-DEM OB	MOB	PP		Function tested BOP's.
12:00	13:30	1.50	R-MOB-DEM OB	MOB	PP		Filled stack with water (problems with water supply).
13:30	18:00	4.50	R-MOB-DEM OB	MOB	PP		Pressure tested rams, annular and choke and kill valves to 250 / 5000psi for 5 / 10 minutes.
18:00	23:30	5.50	R-MOB-DEM OB	MOB	PP		Conducted cyber chair training with drillers by cyber chair instructor. Instructions given on block calibration and system set up of cyber chair.
23:30	0:00	0.50	R-MOB-DEM OB	MOB	PP		Changed out 500 ton bails to 350 ton bails.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Held JSA. Picked up 3 stands 5 1/2" drill pipe using iron roughneck, 1 stand 5 1/2" HWDP using manual tongs and 1 stand 8 1/2" drill collars using iron roughneck.

Note:
Travelling blocks are operating in slow mode as upper most limit switch requires recalibrating.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				01-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	4

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL	49		ADA	4	
SEA DRILL SUBCONTRACTOR	1		CATERING	8	
THIRD PARTY	16				

TOTAL PERSONNEL ON BOARD: 78

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC WRANGLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		23	CEMENT	MT		23
BENTONITE	MT		22	BARACARB	MT		0
FUEL OIL	MT	11	327	WATER, POTABLE	MT	24	46
WATER, DRILLING	MT	2	36	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				02-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	5

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	38.00 (m)	**INC**	0.00°	**AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Continue with testing of circulating system, circulate thru choke checking operation of chokes, flush and pump thru trip tank.

24 HR SUMMARY: Continue with testing of circulating system, circulate thru choke checking operation of chokes, flush and pump thru trip tank.

24 HR FORECAST: Mix 50 bbls mud in slug pit, check bulk mud transfer line to boat, continue with Cyber chair training.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	6:00	6.00	R-MOB-DEM OB	MOB	PP		Held JSA. Picked up 3 stands 5 1/2" drill pipe using iron roughneck, 1 stand 5 1/2" HWDP using manual tongs and 1 stand 8 1/2" drill collars using iron roughneck.
6:00	7:30	1.50	R-MOB-DEM OB	MOB	PP		Make TDS to string and preformed pumping tests on all drilling equipment.
7:30	15:00	7.50	R-MOB-DEM OB	MOB	PP		Staged up all mud pumps to 85 spm, 1540 gpm and rotate TDS at 85 rpm, all equipment good, deep well able to keep up with pumping rate
15:00	19:30	4.50	R-MOB-DEM OB	MOB	PP		Pumped sea water thru choke and kill manifold at 880 gpm, mud degasser, over shale shaker, solids control equipment and returned to mud pits. All good tests.
19:30	20:30	1.00	R-MOB-DEM OB	MOB	PP		Break out TDS from string, layout x/o and one joint drill pipe stand back stand drill collars.
20:30	22:30	2.00	R-MOB-DEM OB	MOB	PP		Held JSA lower cement hose from derrick and with Halliburton mix 10 bbls cement at 16.00 ppg and pumped 5 bbls cement to rig floor into waste skip. All equipment operation. Flush cement lines and stowed cement hose in derrick.
22:30	0:00	1.50	R-MOB-DEM OB	MOB	PP		Held JSA, layed out drill collars. Note: Travelling blocks are operating in slow mode as upper most limit switch requires recalibrating.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 03:00 - Held JSA, Layed out heavy weight and drill pipe from derrick.
03:00 - 06:00 - Continue with testing of circulating system, circulate thru choke checking operation of chokes, flush and pump thru trip tank.

Note:
Travelling blocks are operating in slow mode as upper most limit switch requires recalibrating. Lined up to mix bentonite, unable to mix bentonite as fault in mixing panel, electrician to fault find in morning.
Off loaded drilling equipment, tools and Schlumberger wire line unit from the Pacific Wrangler.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				02-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	5

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		SEA DRILL SUBCONTRACTOR	2	
SEA DRILL	50		CATERING	8	
THIRD PARTY	15				

TOTAL PERSONNEL ON BOARD: 79

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC WRANGLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		46
BENTONITE	MT		44	BARACARB	MT		0
FUEL OIL	MT	11	316	WATER, POTABLE	MT	24	22
WATER, DRILLING	MT	2	34	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				03-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	6

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Current Ops @ 06:00 Secure decks and cantilever for rig move.

24 HR SUMMARY: Current Ops @ 06:00 Secure decks and cantilever for rig move.

24 HR FORECAST: Planned Operations Secure decks and cantilever for rig move and continue with Cyber chair training.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	3:00	3.00	R-MOB-DEM OB	MOB	PP		Held JSA, Layed out heavy weight and drill pipe from derrick.
3:00	6:00	3.00	R-MOB-DEM OB	MOB	PP		Continue with testing of circulating system, circulate thru choke checking operation of chokes, flush and pump thru trip tank.
6:00	12:00	6.00	R-MOB-DEM OB	MOB	PP		Re-calibrate travelling block height senator, NOV training with remote for Hydra tong. Installed blank flanges on Kill and Choke manifold, flushed through de-silter till clean, reinstated nozzles.
12:00	22:00	10.00	R-MOB-DEM OB	MOB	PP		Held JSA, removed service lines from cantilever to main deck, prepared cantilever for skidding into transit position.
22:00	0:00	2.00	R-MOB-DEM OB	MOB	PP		Held JSA and skidded cantilever to forward transit position. Note: Travelling blocks are operating at correct speed.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 01:30 - Secured rig after skidding, installed cantilever wedges.
01:30 - 03:30 - Secured top drive service loops and mud hose, changed out rig tongs to HT-100 type.
03:30 - 06:00 - Prepare for rig move, move tubular and tie down equipment. Prepare drilling equipment.

Note:
Unable to operate Port crane, electrical fault and faulty starter solenoid.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
CATERING	8		SEA DRILL SUBCONTRACTOR	3	
THIRD PARTY	13		ADA	4	
SEA DRILL	51				

TOTAL PERSONNEL ON BOARD: 79

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC WRANGLER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				03-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	6

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT	8	36	BARACARB	MT		0
FUEL OIL	MT	13	303	WATER, POTABLE	MT	17	80
WATER, DRILLING	MT	5	29	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				04-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	7

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		SHAUGHAN CORLESS / STEFAN G H SCHMIDT / BILL OPENSHAW		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: BOP'S

24 HR SUMMARY: BOP'S

24 HR FORECAST: Planned Operations Continue with Cyber chair training of crews.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:30	1.50	R-MOB-DEM OB	MOB	PP		Secured rig after skidding, installed cantilever wedges.
1:30	3:30	2.00	R-MOB-DEM OB	MOB	PP		Secured top drive service loops and mud hose, changed out rig tongs to HT-100 type.
3:30	6:30	3.00	R-MOB-DEM OB	MOB	PP		Prepare for rig move, move tubular and tie down equipment. Prepare drilling equipment.
6:30	8:00	1.50	R-MOB-DEM OB	MOB	PP		Secured Bop's and clean area.
8:00	9:30	1.50	R-MOB-DEM OB	MOB	PP		NOV troubleshoot fault with rotary table, noise coming from hydraulic motor with rotating in forward and reverse at 20 rpm.
9:30	10:30	1.00	R-MOB-DEM OB	MOB	PP		Held JSA and removed faulty derrickmans air winch from monkey board.
10:30	12:00	1.50	R-MOB-DEM OB	MOB	PP		Prepare BHA for Wasabi, continue with fault finding of draworks and traveling blocks calibration.
12:00	15:00	3.00	R-MOB-DEM OB	MOB	PP		Held JSA and remove Auger from cutting ditch in front of shale shakers.
15:00	18:00	3.00	R-MOB-DEM OB	MOB	PP		Held JSA and install test joint and prepare to test Bop's
18:00	20:30	2.50	R-MOB-DEM OB	MOB	PP		Fault find and correct fault with Bop test pump.
20:30	0:00	3.50	R-MOB-DEM OB	MOB	PP		Tested lower, middle rams, kill and choke line valves 250/5000 psi 5/10 mins. Note: Lower pressure test pump leaking through NRV, no spares on rig. Carried safety inspection of Derrick and rig package.

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				04-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	7

06:00 UPDATE

0000-0600 00:00 - 03:00 - Rig move delayed due poor weather forecast for pinning rig on Wasabe location.
Meanwhile while testing Bop's test mandrel moved upwards through Bops, stripped through safety clamp causing 2 dies to fall into Bop's. drain stack, run magnet and recover one die and spring, attempt to retrieve other die no success. Functioned rams, observed rams closing no die on top of rams.

03:00 - 06:00 - Held JSA and prepare to lift Bop's

In conjunction drill crew working on closing out items from safety inspection.

Note:
Design of test plug can allow upward movement of test joint and plug if seals are not sealing. Recommend that test joint be screw into test stump, at present test stump has no threads (box) machined into it.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL	48		SEA DRILL SUBCONTRACTOR	2	
ADA	4		THIRD PARTY	13	
CATERING	8				

TOTAL PERSONNEL ON BOARD: 75

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT		36	BARACARB	MT		0
FUEL OIL	MT	6	297	WATER, POTABLE	MT	37	43
WATER, DRILLING	MT	9	20	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				05-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	8

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: WOW, close out items from Drops/Safety inspection

24 HR SUMMARY: WOW, close out items from Drops/Safety inspection

24 HR FORECAST: WOW. Position satellite receiver to gain full communications

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:00	24.00	R-MOB-DEM OB	MOB	PN	WOW	Rig move delayed due poor weather forecast, due to wave height and period at Western Port. Meanwhile while testing Bop's test mandrel moved upwards through Bops, stripped through safety clamp causing 2 dies to fall into Bop's. drain stack, run magnet and recover one die and spring, attempt to retrieve other die no success. Functioned rams, observed rams closing no die on top of rams. Held JSA and prepared to lift Bop's, lifted Bop's and recovered second die, lowered Bop's and make Bop's to test stump. Drill crew working on closing out items from safety inspection/drops inspection. Continued with cyber chair training for crews. Preform house keeping on main deck and cantilever deck. Backloaded equipment to boat. Jacked rig down into water, turn rig heading to 127', jacked up to 1.50 meter air gap. Preload rig to 50%.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Rig move delayed due poor weather forecast for pinning rig on Wasabi location.
Held preload for two hours, dumped preload, jack up rig to 5 meter air gap, release towing lines from work boats.
Held JSA and installed air winch at monkey board.
Drill crew working on closing out items from safety inspection/drops inspection.

Note:
Fuel Figures Reconciled at 24:00 hours.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
CATERING	8		ADA	4	
SEA DRILL	48		SEA DRILL SUBCONTRACTOR	2	
THIRD PARTY	13				

TOTAL PERSONNEL ON BOARD: 75

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				05-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	8

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT		36	BARACARB	MT		0
FUEL OIL	MT	13	284	WATER, POTABLE	MT	20	23
WATER, DRILLING	MT		20	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				06-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	9

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) INC 0.00° AZM 0.00°	(sg)		

CURRENT OPERATIONS: WOW, close out items from Drops/Safety inspection

24 HR SUMMARY: WOW, close out items from Drops/Safety inspection

24 HR FORECAST: WOW. Continue with cyber training.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:00	24.00	R-MOB-DEM OB	MOB	PN	WOW	Rig move delayed due poor weather forecast, due to wave height and period at Western Port Held preload for two hours, dumped preload, jack up rig to 5 meter air gap, release towing lines from work boats. Held JSA and installed air winch at monkey board. Drill crew working on closing out items from safety inspection/drops inspection. Fill Bop control unit reservoir with 2 bbls erifon CLS 25 fluid. Drill crew familiarization with break out and make up TDS saver sub. Continued with training of and use of Hydra tong, functioned tested power slips. Change out manual tongs hanging arms to short style arm. Preformed heli-deck fire training with Deck crews. General housekeeping and tie down loads for rig move. Note: Stop cards total figure adjusted to reflect cards submitted since the 01-01-2008.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Rig move delayed due poor weather forecast, due to wave height and period at Western Port
Adjusted counter weights for tongs.
Carried out familiarization with crew on shale shaker and mud pit room lines.
Greased skid beams for skidding cantilever into drilling position.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL SUBCONTRACTOR	2		ADA	4	
THIRD PARTY	14		SEA DRILL	50	
CATERING	8				

TOTAL PERSONNEL ON BOARD: 78

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				06-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	9

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT		36	BARACARB	MT		0
FUEL OIL	MT	5	279	WATER, POTABLE	MT	58	65
WATER, DRILLING	MT	11	9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				07-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	10

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: WOW, close out items from Drops/Safety inspection, crew training with mud system.

24 HR SUMMARY: WOW, close out items from Drops/Safety inspection, crew training with mud system.

24 HR FORECAST: WOW. Coninue with Cyber chair training. Repair generator prior to leaving pressent location.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:00	24.00	R-MOB-DEM OB	MOB	PN	RO	Rig move delayed due to: Emergency generator down due to broken fan belt idler tensioner this requires repairing before West Triton can leave present location to Wasabi-1 as per SOLAS and ABS requirement. Adjusted counter weights for tongs. Carried out familiarization with crew on shale shaker and mud pit room lines. Greased skid beams for skidding cantilever into drilling position. Preform training with hydra tong. Break out and make up subs on top drive. Checked bolt tennsion on dead man anchor. Calibrate mud pits to SDI system with sea water. Sea fasten equipment on rig floor. Note: Damaged top drive saver sub while training crews, the 4 spares on board are 7cm too long and they do not allow the make up of tubulars to top drive. Require correct length spare saver subs ASAP Note: Unable to pressure test Bop's, IBOP'S, TIW valves, gray valves, stand pipe and choke and kill manifold due to test pump non operational on both low and high pressure pumps. No parts on board.

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				07-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	10

06:00 UPDATE

0000-0600 00:00 - 06:00 - Rig move delayed due to: Emergency generator down due to broken fan belt idler tensioner this requires repairing before West Triton can leave present location to Wasabi-1 as per SOLAS and ABS requirement

Continued with calibrating mud pits to SDI system with sea water.

Paint and high light trip hazards around rig.

Note:
Shaft for emergency genarator arrived on rig at 00.30, shaft is incorrect size for bearings and also housing for bearings is damaged requiring repair at workshop. Sea Drill has arranged boat to come to rig to pick shafts, bearing etc at 06.00 this morning.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL	51		ADA	4	
CATERING	8		THIRD PARTY	12	
SEA DRILL SUBCONTRACTOR	2				

TOTAL PERSONNEL ON BOARD: 77

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT		36	BARACARB	MT		0
FUEL OIL	MT	4	275	WATER, POTABLE	MT	29	36
WATER, DRILLING	MT		9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				08-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	11

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)		(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	38.00 (m)	INC	0.00°	AZM 0.00°	(sg)		

CURRENT OPERATIONS: Current Ops @ 06:00 Prepare rig to tow to Wasabi-1.

24 HR SUMMARY: Current Ops @ 06:00 Prepare rig to tow to Wasabi-1.

24 HR FORECAST: Planned Operations Tow rig to Wasabi-1.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	20:30	20.50	R-MOB-DEM OB	MOB	PN	RO	Rig move delayed due to: Emergency generator down due to broken fan belt idler tensioner this requires repairing before West Triton can leave present location to Wasabi-1 as per SOLAS and ABS requirements. Rebuilt bearing arrived on rig at 19:00, install same and test run generator all OK.
20:30	0:00	3.50	R-MOB-DEM OB	MOB	PP		Waiting on daylight / slack water to move rig from Westernport to Wasabi. Continued with calibrating mud pits to SDI system with sea water. Install hose and transfer seawater to trip tank and checked system. Pumped sea water from trip tank through MGS, taking returns via return ditch to trip tank. Good test. Paint and high light trip hazards around rig. Carried out inventory on fishing tools. Re-installed air winch on monkey board. Sea fastened equipment on rig floor. Note: Damaged top drive saver sub while training crews, the 4 spares on board are 7cm too long and they do not allow the make up of tubbulars to top drive. Require correct length spare saver subs ASAP Note: unable to pressure test Bop's, IBOP'S, TIW valves, gray valves, stand pipe and choke and kill manifold due to test pump non operational on both low and high pressure pumps. No parts on board.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Waiting on daylight / slack water to move rig from Westernport to Wasabi.
Carried out inventory on fishing tools.
Sea fastened equipment on rig floor and checked rig and prepared for jacking rig down.

Note:
Fault with Top Drive rotating system, system will not stop rotating when controls are operated correctly.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				08-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	11

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL SUBCONTRACTOR	2		THIRD PARTY	12	
SEA DRILL	51		ADA	4	
CATERING	8				

TOTAL PERSONNEL ON BOARD: 77

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		43
BENTONITE	MT		36	BARACARB	MT		0
FUEL OIL	MT	4	271	WATER, POTABLE	MT	28	58
WATER, DRILLING	MT		9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				09-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	12

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	0.58 (days)	(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC:	DHC:
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL:	TOTAL:

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Rig in transit from Westernport to Wasabi-1 location. ETA 23:00 10 Feb 2008.

24 HR SUMMARY: Rig transferred to Apache from Bass Strait Consortium at 10:00 (1 km from standby location at Westernport). Rig underway to Wasabi-1 location.

24 HR FORECAST: Move rig onto Wasabi-1 location. Pin rig & commence pre-loading operations.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
10:00	0:00	14.00	R-MOB-DEM OB	MOB	PP		Rig position 1km from standby location at Westernport and underway to Wasabi-1 location. Operatorship of rig transferred from Bass strait Consortium to Apache Energy Ltd. Position at midnight: Heading 130' Longitude 38' South, Latitude 145' East, Speed 5 knots, total distance traveled 47 nautical. miles. ETA at Wasabi 23:00 10 Feb 2008

14.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Rig in transit from Westernport to Wasabi-1 location.
Heading 131' Longitude 146'08 South, Latitude 39' East, Speed 4 knots, total distance traveled 81 nautical miles. ETA at Wasabi 23:00 10 Feb 2008

Note:
Mob/Demob(P1) 14 09 Feb 2008 09 Feb 2008 22.00 0.917 0.0m

General Comments: 00:00 TO 24:00 Hrs ON 09 Feb 2008
Operational Comments Seadrill awaiting arrival of NOV technician to rectify various issues / problems with rig floor cyber control system.
Operational Comments Test pump inoperable due to lack of spare parts.
Operational Comments Awaiting delivery of saver subs for top drive.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
FURGO	2		SERVICE	1	
SEA DRILL	16		TAMBORITHA	2	
CATERING	8		ADA	4	
MO47 CREW	5		TOTAL MARINE	35	
NATIONAL OILWELL	1		ABB VECTO	1	
BHI	2				

TOTAL PERSONNEL ON BOARD: 77

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				09-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	12

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		40
BENTONITE	MT	8	28	BARACARB	MT		0
FUEL OIL	MT	4	267	WATER, POTABLE	MT		58
WATER, DRILLING	MT		9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				10-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	13

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	1.58 (days)	(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 628,872	DHC: 628,872
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 628,872	TOTAL: 628,872

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	38.00 (m)	**INC**	0.00°	**AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Continuing with 100% preloading of rig

24 HR SUMMARY: Towed rig to Wasabi-1 with Pacific Wrangler and Pacific Battler, pinned rig at Wasabi-1, confirmed and accepted heading and location. Jacked up rig to 1.5 meter air gap and comence preloading rig to 100%.

24 HR FORECAST: Complete 100% preload, hold preload for 6 hours, dump preload, jack up to drilling draft and skid out cantilever.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	21:00	21.00	R-MOB-DEM OB	MOB	PP		Rig in transit from Westernport to Wasabi-1 location. At 06:00, Heading 131' Longitude 146'08 South, Latitude 39' East, Speed 4 knots, total distance traveled 81 nautical miles. ETA at Wasabi 23:00 10 Feb 2008. At 18:00, Heading 27' Longitude 146'49.0 South, Latitude 39'11.3 East, Speed 5.5 knots, total distance traveled 115 nautical miles. At 21:00, Heading 119.5" Longitude 147'15.85 South, Latitude 38'39.32 East, total distance traveled 161 nautical miles
21:00	23:00	2.00	R-MOB-DEM OB	MOB	PP		Start run in to Wasabi-1 1km from location, lower legs, soft pinned rig and confirmed and accepted rig postion. Provisional Rig Postion: (Position to be confirmed after preload is completed and rig jacked up to working height.) Latitude 38'29.18.1685 South Longitude 147'15.49.0843 East Rig Heading 119.51 Rig postion is 15.27 meters ON A BEARING OF 185.55' T from intended location.
23:00	0:00	1.00	R-MOB-DEM OB	MOB	PP		Jacked up rig to 1.5 meter air gap and commenced 100% preload

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Continue with 100% preloading of rig.

Phase Data to 2400hrs, 10 Feb 2008:

Mob/Demob	(P1)	38	09 Feb 2008 to 10 Feb 2008	38.00	1.583	0.0m

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				10-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	13

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
TOTAL MARINE	35		SERVICE	1	
MO47 CREW	5		ADA	4	
NATIONAL OILWELL	1		BHI	2	
TAMBORITHA	2		ABB VECTO	1	
CATERING	8		SEA DRILL	16	
FURGO	2				

TOTAL PERSONNEL ON BOARD: 77

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		40
BENTONITE	MT		28	BARACARB	MT		0
FUEL OIL	MT	10	257	WATER, POTABLE	MT	43	15
WATER, DRILLING	MT		9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				11-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	14

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	2.58 (days)	(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 426,466	DHC: 1,055,338
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 426,466	TOTAL: 1,055,338

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Jacking up to operational height.

24 HR SUMMARY: Preload rig to 60%, fault find increase in water level in tank 5C, continued with 100% preloading. Hold 100% preload.

24 HR FORECAST: Held 100% preload for 6 hours total, dump preload, jack up rig to operational height, skid out cantilever and attach and test service lines. Prepare to and pick up drill pipe. Off load equipment fron Pacific Wrangler and offload bulkfrom Pacific Battler

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	8:00	8.00	R-MOB-DEM OB	MOB	PP		Continue with 100% preloading of rig. Preloading stopped due to increase level in Drill water tank 5C (drill water tank). 55% preload achieved at this point.
8:00	11:30	3.50	R-MOB-DEM OB	MOB	PN	RO	Investigate leak into Tank 5C, isolate lines to 5C.
11:30	21:30	10.00	R-MOB-DEM OB	MOB	PP		Continued with 100% preload
21:30	0:00	2.50	R-MOB-DEM OB	MOB	PP		Held preload.

24.00 = Total Hours Today

Daily Drilling Report

WELL NAME				DATE
WASABI-1				11-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	14

06:00 UPDATE

0000-0600 00:00 - 03:30 - Held 100% preload for total 6 hours. (6 hour period required due to leg settlement of 0.4m during preload) Final leg penetrations: Bow 1.95m, Port 1.65m, Starboard 1.65m.
03:30 - 06:00 - Dumped preload, release sea fastenings, held JSA jacked down to zero air gap to confirm leg penetration, jacked up rig to operational height.

General Comments
00:00 TO 24:00 Hrs ON 11 Feb 2008
Operational Comments Preloading slow due to starboard deep well pump requiring repairs. Deep well pumps requires electrical cable re-attached.

Operational Comments List of rig items that require attention.

1. Dust extraction in mud mixing area require instillation.
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Printed on 11 Feb 2008
2. Require more saver subs for top drive as only one on board and in use, no spares on board.
3. Bop test pump inoperable, unable to test Bops offline. No parts on board for test pump.
4. Bop spare parts are mininal, no spare ram blocks, bonnet bolts.
5. Bop test plug is of poor design, present design allows test plug and test joint to travel upwards if seals on test plug fail. Test stump requires thread machined into it to hold test joint.
6. Heat excahanger on mud pump cooling system not fitted, this are laying on floor in pump room, Modu inspection recommend instillation of these.
7. No hands free talk back for driller to crew, at present driller has to let go of control sticks and dial number and then speak into mircophone, crew menbers on rig floor are unable to hear what driller is saying. Contract states driller and derrickman to have hands free.
8. UHF radios require headphones and mirophones as stated in contract.
9. No mechanical mouse hole supplied, contract states mechanical mouse hole supplied for sizes's 2 7/8" to 10 3/4".
10. Derrick TV Camera System, only one camera fitted to derrick and one in shale shaker house, contract states two fitted in derrick and one at shakers with monitors located in the Drillers Cabin, Toolpushers and Company mans office no monitors in offices.
11. Fuel service pump#1 badly damaged, not in service, awaiting spare parts.
Operational Comments NOV IT tech arrived today to fault find and correct problems with NOV system.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
DRIL-QUIP	2		TOTAL MARINE	8	
SEA DRILL	15		APACHE	1	
FURGO	2		WEATHERFORD	2	
SCHLUMBERGER MWD/LWD	2		ADA	4	
SEA DRILL SERVICES	40		BHI	4	
HALIBURTON	2		TAMBORITHA	2	

TOTAL PERSONNEL ON BOARD: 84

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		45	CEMENT	MT		40
BENTONITE	MT		28	BARACARB	MT		0
FUEL OIL	MT	10	247	WATER, POTABLE	MT	43	83
WATER, DRILLING	MT		9	BASE OIL	bbl		0
BRINE	bbl		0				

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

Daily Drilling Report

WELL NAME				DATE
WASABI-1				11-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	14

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				12-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	15

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	3.58 (days)	(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 409,830	DHC: 1,465,168
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 409,830	TOTAL: 1,465,168

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Picking up 5 1/2" drill pipe, mixing hi/vis mud and off loading Pacific Battler

24 HR SUMMARY: Held 100% preload for total 6 hours, dumped preload, checked leg penetrations, jacked up to operational height, skidded out cantilever, rigged up texas deck and service lines, start mixing hi/vis mud and pick up 5 1/2" drill pipe

24 HR FORECAST: Pick up tubulars require for sectional TD, make up BHA, make up and rack back well head and running tool, mix hi/vis mud, off load equipment from Pacific Wrangler and spud well.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	3:30	3.50	R-MOB-DEM OB	MOB	PP		Held 100% preload for total 6 hours. (6 hour period required due to leg settlement of 0.4m during preload)
3:30	5:00	1.50	R-MOB-DEM OB	MOB	PP		Dumped preload.
5:00	6:30	1.50	R-MOB-DEM OB	MOB	PP		Held JSA and jacked down to zero air gap confirm leg penetrations and jacked up to 14.6 meter air gap. Final leg penetrations: Bow 1.95m, Port 1.65m, Starboard 1.65m.
6:30	9:00	2.50	R-MOB-DEM OB	MOB	PP		Held JSA and skid cantilever out to 15ft mark.
9:00	11:00	2.00	R-MOB-DEM OB	MOB	PP		Rigged up texas deck for drilling operations.
11:00	12:00	1.00	R-MOB-DEM OB	MOB	PP		Continued to skid out cantilever to 21ft mark.
12:00	13:00	1.00	R-MOB-DEM OB	MOB	PP		Held JSA, installed gumbo hose and secure Texas deck.
13:00	14:00	1.00	R-MOB-DEM OB	MOB	PP		Continued to skid out cantilever to drilling position.
14:00	16:00	2.00	R-MOB-DEM OB	MOB	PP		Held JSA and install stairway to Texas deck from main deck
16:00	18:30	2.50	R-MOB-DEM OB	MOB	PP		Held JSA lowered CTU and secure same on Texas deck.
18:30	22:00	3.50	R-MOB-DEM OB	MOB	PP		Held JSA and installed service lines and flowline
22:00	8:25		S-DRL	DPIPE	PP		Held JSA and picked up 90 meters 5 1/2" drill pipe.

22.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				12-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	15

06:00 UPDATE

0000-0600

00:00 - 02:30 - Pick up and make up 5 1/2" drill pipe, continue mixing hi/vis mud. Alarm for draworks activated.
02:30 - 03:00 - NOV fault find cause of alarm, checked draworks OK.
03:00 - 04:30 - Continue picking up 5 1/2" drill pipe.
04:30 - 06:00 - NOV IT fault finding alarm on draworks electrical system, drillers screen frozen, reset drillers screen

General Comments
00:00 TO 24:00 Hrs ON 12 Feb 2008

Operational Comments Preloading slow due to starboard deep well pump requiring repairs. Deep well pumps requires electrical cable re-attached.

Operational Comments Final rig position after jacking up to operational height.
Position is15.01 meters @ 182.53' T from intended location.
Latitude 38'29.18.1620 South
Longitude 147'15.49.1179 East

Operational Comments NOV IT tech corrected three faults with system today.

Operational Comments Pacific Battler stopped transferring of cement at 23.50 due to weather conditions, retieved bulk hose and sent vessel to anchor.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		SCHLUMBERGER MWD/LWD	2	
SEA DRILL SERVICES	38		MO47 CREW	5	
SEA DRILL	17		FURGO	2	
HALIBURTON	4		BHI	4	
CATERING	9		DRIL-QUIP	2	
TAMBORITHA	2		WEATHERFORD	4	

TOTAL PERSONNEL ON BOARD: 93

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
HELICOPTER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		126	CEMENT	MT		130
BENTONITE	MT	5	61	BARACARB	MT		0
FUEL OIL	MT	19	246	WATER, POTABLE	MT	31	176
WATER, DRILLING	MT	20	228	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
11:32	0.50/ /12	/ /	/	/210.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				13-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	16

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	4.58 (days)	(days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 425,656	DHC: 1,890,824
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 425,656	TOTAL: 1,890,824

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) **INC** 0.00° **AZM** 0.00°	(sg)		

CURRENT OPERATIONS: Picking up 5 1/2" heavy weight drill pipe.

24 HR SUMMARY: Picked up 33 stands 5 1/2" drill pipe, fault find alarms on draworks "C" motor, mix spud mud and install work platform for CTU on Texas deck.

24 HR FORECAST: Pick up 5 1/2" heavy weight drill pipe. Make up BHA, spud well, drill 26" to sectional TD, Pooh, Rih with 16" BHA and drill ahead.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:30	2.50	S-DRL	DPIPE	PP		Pick up and make up 5 1/2" drill pipe, continue mixing hi/vis mud. Alarm for draworks activated.
2:30	3:00	0.50	S-DRL	DPIPE	PN	DW	NOV fault find cause of alarm, checked draworks OK.
3:00	4:30	1.50	S-DRL	DPIPE	PP		Continue picking up 5 1/2" drill pipe.
4:30	6:00	1.50	S-DRL	DPIPE	PN	DW	NOV IT fault finding alarm on draworks electrical system, drillers screen frozen, reset drillers screen.
6:00	16:00	10.00	S-DRL	DPIPE	PP		Continue picking up 5 1/2" drill pipe. Pick up total 33 stands 5 1/2" drill pipe.
16:00	20:00	4.00	S-DRL	RIGSER	PP		Held JSA and lower and install work platform for CTU on Texas deck, while trouble shooting electrical fault with draworks "C" motor.
20:00	22:00	2.00	S-DRL	RIGSER	PN	DW	Change out encoder on draworks "C" motor, motor still showing alarm. Disable and isolate draworks "C" motor.
22:00	23:30	1.50	S-DRL	RIGSER	PP		Pick up and make up diverter running tool, pup joint and 2 joints drill pipe.
23:30	0:00	0.50	S-DRL	RIGSER	PP		Engage diverter running tool into diverter and confirm with 4k overpull.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 00:30 - Held JSA, pull diverter and rack back in derrick.
00:30 - 02:30 - Prepare drill quip well head and running tool and rig up 20" handling equipment.
02:30 - 05:30 - Pick up and makeup 18 5/8" wellhead to running tool and landing string, lower well head into CTU to confirm fit, all OK. POOH and rack back 18 5/8"' well head and running tool and rig down handling equipment. Measurement RT to top CTU 21.03 meters
05:30 - 06:00 - Pick up and make up 5 1/2" heavy weight drill pipe.

General Comments
00:00 TO 24:00 Hrs ON 13 Feb 2008

Operational Comments Pacific Wrangler attempted to come along side to discharge cargo, unable to hold station due to weather conditions, waiting for weather to ease to come along and discharge cargo.

Operational Comments Draworks encoder faulty, isolated draworks "C". No spare encoder on rig.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				13-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	0.00 (m)	38.00 (m)	16

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
BHI	4		DRIL-QUIP	2	
TAMBORITHA	2		SCHLUMBERGER MWD/LWD	2	
CATERING	9		ADA	4	
FURGO	2		HALIBURTON	4	
SEA DRILL	17		WEATHERFORD	4	
MO47 CREW	5		SEA DRILL SERVICES	38	

TOTAL PERSONNEL ON BOARD: 93

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		126	CEMENT	MT		130
BENTONITE	MT	23	38	BARACARB	MT		0
FUEL OIL	MT	8	334	WATER, POTABLE	MT	29	147
WATER, DRILLING	MT	300	30	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/210.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				14-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	135.00 (m)	135.00 (m)	135.00 (m)	17

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	5.58 (days)	0.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 670,560	DHC: 2,561,384
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 670,560	TOTAL: 2,561,384

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	38.00 (m)	INC	0.00°	AZM 0.00°	(sg)		

CURRENT OPERATIONS: Drilling ahead 26" hole to sectional TD at 135 meters.

24 HR SUMMARY: Pick up and rack back diverter, make up 20" casing running tool and well head, dummy run well head and checked land out in CTU, racked back well head and running tool. Pick up and make up BHA. Spud Wasabi-1 @ 23.00 hours.

24 HR FORECAST: Drilll 26" hole to sectional TD @ 135 meters, displace to mud, POOH, make up 16" BHA, RIH and drill 16" hole.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:30	0.50	S-NUP	WLHEAD	PP		Held JSA, pull diverter and rack back in derrick.
0:30	2:30	2.00	S-NUP	WLHEAD	PP		Prepare drill quip well head and running tool and rig up 20" handling equipment
2:30	5:30	3.00	S-NUP	WLHEAD	PP		Pick up and makeup 18 5/8" wellhead to running tool and landing string, lower well head into CTU to confirm fit, all OK. POOH and rack back 18 5/8"" well head and running tool and rig down handling equipment. Measurement RT to top CTU 21.03 meters.
5:30	8:30	3.00	S-DRL	BHA	PP		Held JSA, picked up and make up 5 1/2" heavy weight drill pipe. Total 5 stands.
8:30	12:00	3.50	S-DRL	BHA	PN	RO	Held JSA and install saver sub onto top drive.
12:00	14:30	2.50	S-DRL	BHA	PP		Held JSA and pick up 9 1/2" and 8" drill collars.
14:30	15:00	0.50	S-DRL	BHA	PN	RO	Nov fault find trouble with pipe handler.
15:00	16:00	1.00	S-DRL	BHA	PP		Prepare to pick up 26" BHA.
16:00	19:30	3.50	S-DRL	BHA	PP		Make up 26" BHA, picked up 2 x 9-1/2" drill collars, 26" bit, 16" stab. Near miss incident - Driller inadvertently released drawworks brake while leaning forward to access drill floor PA system. Travelling bock moved down 1 ft before brake was applied.
19:30	20:00	0.50	S-DRL	SFTY	PN	RO	Time out for safety,OIM, DSV held safety meeting with crews and drillers on rig floor.
20:00	23:00	3.00	S-DRL	BHA	PP		Continued handling BHA and RIH. Tagged seabed at 66 meters.
23:00	0:00	1.00	S-DRL	DRLCPA	PP		Drill 26" hole from 66m - 69m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 02:00 - Drill 26" hole from 69 meters to 91 meters
02:00 - 03:00 - When going to make connection drillers screen frooze, unable to move travelling blocks, circulate @ 80 spm at 400 gpm while NOV IT and electrian trouble shoot system. PLC not a communicating with Cyber chair, reboot system x 2 times.
03:00 - 06:00 - Drill 26" hole 91 meters to 135 meters. Pump 75 bbls hi/vis sweep prior making connections.

General Comments
00:00 TO 24:00 Hrs ON 14 Feb 2008

Operational Comments ROV checked spud cans on Port and Starbord legs.

Operational Comments Note: Adjustment in fuel figures from metric ton to cubic meters, fuel figures reconcilled at 24.00hrs to reflect usage in cubic meters.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				14-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	135.00 (m)	135.00 (m)	135.00 (m)	17

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
1 / 1	660.4	ROCK	XR+C	MZ1716	4x18	66.00 / 14-02-2008	1-1-WT-A-1-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
1/1			4,012.54		6653	1.00	3.00	3.0	1.00	3.00	3.0

MOTOR OUTPUT

RPG:	ROTARY CURRENT:	TOTAL RPM: 60

LCM:

MUD PROPERTIES

MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	1	JAR S/N		BHA / HOLE CONDITIONS	JAR HRS		BIT	1

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	4 (kN-m)	62.95 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Cross Over	0	1.20	241.30	76.20		
Drill Collar	0	28.34	215.90	69.85		
Crossover	0	1.22	215.90	69.85		
Drill Collar	0	9.44	241.30	76.20		
Welded Blade Stabilizer	0	2.27	406.40	76.20		
Drill Collar	0	18.59	241.30	76.20		
Bit Sub	0	1.23				
Tri-Cone Bit	0	0.66				

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP:

HP: 0.130 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
EXPRO	1		BHI	4	
CATERING	9		ADA	5	
SEA DRILL SERVICES	41		HALIBURTON (BAROID)	2	
WEATHERFORD	4		HALIBURTON	4	
SEA DRILL	15		SCHLUMBERGER (WL)	3	
TAMBORITHA	2		RIGCOOL	1	
DRIL-QUIP	2		APACHE	4	
SCHLUMBERGER MWD/LWD	2				

TOTAL PERSONNEL ON BOARD: 99

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
HELICOPTER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				14-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	135.00 (m)	135.00 (m)	135.00 (m)	17

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		126	CEMENT	MT		130
BENTONITE	MT	2	36	BARACARB	MT		0
FUEL OIL	MT	10	685	WATER, POTABLE	MT	28	269
WATER, DRILLING	MT	8	322	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/330.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME	DATE
WASABI-1	15-02-2008

API #	24 HRS PROG	TMD	TVD	REPT NO
OH	22.00 (m)	157.00 (m)	157.00 (m)	18

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	6.58 (days)	1.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 680,072	DHC: 3,241,456
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 680,072	TOTAL: 3,241,456

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 38.00 (m) INC 0.00° AZM 0.00°	(sg)		

CURRENT OPERATIONS: Drilling 16" hole at 359m.

24 HR SUMMARY: Drill 26' hole to TD at 135m.Pump/ spot hi vis in hole and trip out for BHA change.
Pick up new 16" bit and logging tools and run back to sea bed. work bit into old hole and run to bottom of 26" hole section and drill 16" hole.

24 HR FORECAST: Continue to drill 16" hole to casing point at 911m.
Pump hi vis sweep and circulate hole clean prior to displacing to a 9.6ppg mud and pulling out of hole to run 20" X 13-3/8" casing.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:00	2.00	S-DRL	DRLG	PP		Drill 26" hole from 69 meters to 91 meters
2:00	3:00	1.00	S-DRL	DRLG	PN	RO	When going to make connection drillers screen frooze, unable to move travelling blocks, circulate @ 80 spm at 400 gpm while NOV IT and electrian trouble shoot system. PLC not a communicating with Cyber chair, reboot system x 2 times.
3:00	6:00	3.00	S-DRL	DRLG	PP		Drill 26" hole 91 meters to 135 meters. Pump 75 bbls hi/vis sweep prior making connections.
6:00	6:30	0.50	S-DRL	CIRC	PP		Displace hole top 150bbls of Hi Vis mud.
6:30	10:00	3.50	S-DRL	TRIPBIT	PP		Pull out of hole from 135m.
10:00	10:30	0.50	S-DRL	BHA	PP		Break and lay out 26' bit. Make up 16" bit. Run in hole to 35m.
10:30	11:00	0.50	S-DRL	BHA	PP		BHI and Schlumberger calibrate draworks for depth tracking operations.
11:00	12:00	1.00	S-DRL	BHA	PP		Pick up and make up Schlumberger Sonic / MWD collars.
12:00	16:00	4.00	S-DRL	BHA	PP		Continue to make up 16" BHA and run in hole and tag seabed at 66m.
16:00	20:30	4.50	S-DRL	TRIPBIT	PN		Unable to re-enter 26" hole at seabed. ROV unable to make visual contact in strong current. Pull ROV. Make more blind attempts to re-enter hole. No go. Jump ROV at slack water, confirm hole proximity. pull ROV and work string into 26" hole.
20:30	22:00	1.50	S-DRL	TRIPBIT	PP		Continue to run in hole from 66m to 129m.
22:00	22:30	0.50	S-DRL	TRIPBIT	PP		Make up top drive and perform a shallow test on Schlumberger MWD tools. (585 GPM / 400psi.)
22:30	23:00	0.50	S-DRL	TRIPBIT	PP		Wash down from 129m and tag bottom at 135m. Pick up and establish drilling paramaters.
23:00	0:00	1.00	S-DRL	DRLG	PP		Drill 16" hole from 135m to 157m; pump hi vis sweeps at connections. Survey each connection.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Drill 16" hole 157 meters to 359 meters. Pump sweeps prior making connections.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				15-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	22.00 (m)	157.00 (m)	157.00 (m)	18

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
				SSD7131		135.00 / 15-02-2008	- - - - - -
2 / 1	406.4	REED	T11CDH	1369484	1x16, 3x28	135.00 / 15-02-2008	1-2-WT-A-E-I-NO-TD
1 / 1	660.4	ROCK	XR+C	MZ1716	4x18, 4x18	66.00 / 14-02-2008	1-1-WT-A-1-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
2/1	5/5	60/80	3,975.00	11,100	1533	1.00	22.00	22.0	1.00	22.00	22.0
1/1	5/5	80/80	4,500.00	16,500	8337	3.00	44.00	14.7	6.00	69.00	11.5

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 80	TOTAL RPM: 160

LCM:

MUD PROPERTIES

MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	2	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	130.67 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.86	203.20	76.20		
Drilling Jar	0	10.17	203.20	76.20		
Drill Collar	0	47.24	209.55	69.85		
Logging While Drilling	0	8.23	209.55			
MWD Tool	0	8.49	209.55			
Cross Over	0	0.48	241.30	76.20		
Cross Over	0	0.69	228.60	69.85		
Integral Blade Stabilizer	0	2.73	230.12	69.85		
Drill Collar	0	9.44	241.30	76.20		
Integral Blade Stabilizer	0	2.64	242.82	76.20		
Drill Collar	0	18.59	241.30	76.20		
Bit Sub	0	1.23				
Tri-Cone Bit	0	0.66		76.20		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 11,100 (kPa)

HP: 0.078 (kW/cm²)

SPR

	SPM	PPSR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				15-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	22.00 (m)	157.00 (m)	157.00 (m)	18

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
WEATHERFORD	4		TAMBORITHA	2	
CATERING	9		HALIBURTON (BAROID)	2	
ADA	5		EXPRO	1	
APACHE	4		HALIBURTON	4	
BHI	4		SCHLUMBERGER MWD/LWD	2	
SEA DRILL SERVICES	41		RIGCOOL	1	
SEA DRILL	15		DRIL-QUIP	2	
SCHLUMBERGER (WL)	3				

TOTAL PERSONNEL ON BOARD: 99

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/330.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				16-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	688.00 (m)	845.00 (m)	844.98 (m)	19

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	7.58 (days)	2.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 501,621	DHC: 3,743,077
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 501,621	TOTAL: 3,743,077

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 494.63 (m) **INC** 0.28° **AZM** 191.25°	(sg)		

CURRENT OPERATIONS: Displacing well to 1.15sg gel mud.

24 HR SUMMARY: Drilling 16" hole from 157m to 845m.Survey as necessary and pump 75bbl sweeps per stand.

24 HR FORECAST: Pull out of hole with 16" BHA and rig up and run 13-3/8" casing.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	9:30	9.50	S-DRL	DRLG	PP		Drill 16" hole from 157m to 506m; Pump 75bbl sweeps at connections. Survey as necessary.
9:30	10:30	1.00	S-DRL	CIRC	PN	RO	Circulate. Hold JSA with crew, loosen bolts on the top drive bale positioning cylinder clamps, Extend the cylinders to position the clamps and tighten and secure the bolts.
10:30	12:00	1.50	S-DRL	DRLG	PP		Drill 16" hole from 506m to 565m. Pump 75bbl sweeps before connections and survey.
12:00	12:30	0.50	S-DRL	CIRC	PN	RO	Circulate and rotate pipe (655gpm / 55rpm) off bottom while electrician repaired drillers 'joy stick' on the cyber-chair.
12:30	0:00	11.50	S-DRL	DRLG	PP		Drill 16" hole from 565m to 845m, pumping 75bbls hi-vis sweeps and taking surveys at each connection.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

0000 0200 2.00 862.0m Drill 16" hole from 845m to 862m.
0200 0230 0.50 862.0m Pump 200bbl Hi Vis sweep.
0230 0400 1.50 862.0m Circulate.Schlumberger send down link to tool, and await response; Pump up survey to check tool settings. No sucess. Attempt same again.Failed. Programmed drilling systems too slow for downlink .
0400 0500 1.00 862.0m Back ream / repeat log 2 stands from 862m to 800m as per programme.
0500 0600 1.00 862.0m Pump Hi Vis sweep ; Displace hole to 1.15sg gel mud.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
				SSD7131		135.00 / 15-02-2008	- - - - - -
2 / 1	406.4	REED	T11CDH	1369484	1x16, 3x28	135.00 / 15-02-2008	1-2-WT-A-E-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
2/1	3/10	60/100	4,012.54	13,790	1563	12.00	688.00	57.3	13.00	710.00	54.6

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				16-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	688.00 (m)	845.00 (m)	844.98 (m)	19

BHA	2	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	130.67 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.86	203.20	76.20		
Drilling Jar	0	10.17	203.20	76.20		
Drill Collar	0	47.24	209.55	69.85		
Logging While Drilling	0	8.23	209.55			
MWD Tool	0	8.49	209.55			
Cross Over	0	0.48	241.30	76.20		
Cross Over	0	0.69	228.60	69.85		
Integral Blade Stabilizer	0	2.73	230.12	69.85		
Drill Collar	0	9.44	241.30	76.20		
Integral Blade Stabilizer	0	2.64	242.82	76.20		
Drill Collar	0	18.59	241.30	76.20		
Bit Sub	0	1.23				
Tri-Cone Bit	0	0.66		76.20		

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	115.45	0.14	336.08	115.45	0.09	-0.04	0.09	0.05
NORMAL	142.86	0.18	296.21	142.86	0.14	-0.09	0.14	0.13
NORMAL	170.39	0.09	303.79	170.39	0.17	-0.15	0.17	0.10
NORMAL	201.95	0.09	130.71	201.95	0.16	-0.15	0.16	0.17
NORMAL	229.75	0.10	88.12	229.75	0.15	-0.11	0.15	0.08
NORMAL	494.63	0.28	191.25	494.63	-0.48	0.00	-0.48	0.04

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 13,790 (kPa)

HP: 0.081 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
APACHE	4		ADA	5	
BHI	4		SEA DRILL	15	
SCHLUMBERGER (WL)	3		HALIBURTON (BAROID)	2	
WEATHERFORD	4		SEA DRILL SERVICES	41	
DRIL-QUIP	2		TAMBORITHA	2	
EXPRO	1		RIGCOOL	1	
HALIBURTON	4		CATERING	9	
SCHLUMBERGER MWD/LWD	2				

TOTAL PERSONNEL ON BOARD: 99

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				16-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	688.00 (m)	845.00 (m)	844.98 (m)	19

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/330.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME	DATE
WASABI-1	17-02-2008

API #	24 HRS PROG	TMD	TVD	REPT NO
OH	17.00 (m)	862.00 (m)	861.98 (m)	20

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	8.58 (days)	3.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 501,621	DHC: 4,244,698
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 501,621	TOTAL: 4,244,698

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 886.60 (m) INC 0.20° AZM 232.91°	(sg)		

CURRENT OPERATIONS: Picking up and running in hole with 16" BHA to 90m

24 HR SUMMARY:
Drill 16" hole to casing point at 862m.
Pump Hi-Vis sweep and circulate hole clean.
Pull a 2 stand sonic calibration wiper trip fm 862m to 800m.
Pump a Hi-Vis sweep and displace hole to 9.6ppg gel mud.
Pull out of hole;Make repairs on TDS pipe handler.
Pu

24 HR FORECAST:
Pick up slick 16" BHA and RIH and ream past bridge at 139m, pump hi vis sweep at +/- 150m.
Run to bottom at 862meters and pump 200bbls 9.6ppg mud.
Pull out of hole and rig up and re-run 13-3/8" x 20" casing.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:00	2.00	S-DRL	DRLG	PP		Drill 16" hole from 845m to 862m.
2:00	2:30	0.50	S-DRL	CIRC	PP		Pump 200bbl Hi Vis sweep while working pipe.
2:30	4:00	1.50	S-DRL	CIRC	PN	MW	Circulate.Schlumberger send down link to tool, and await response; Pump up survey to check tool settings. No sucess. Attempt same again.Failed. Programmed drilling systems too slow for downlink . P4 P E5 0400 0500 1.00 862.0m Back ream / repeat log 2 stands from
4:00	5:00	1.00	S-DRL	RMCLN	PN	MW	Back ream / repeat log 2 stands from 862m to 800m as per programme.
5:00	5:30	0.50	S-DRL	CIRRUN	PP		Pump 300bbls Hi Vis sweep
5:30	6:30	1.00	S-DRL	CIRRUN	PP		Displace hole to 1.15sg gel mud.
6:30	9:00	2.50	S-DRL	TRIPBIT	PP		Pull out of hole from 862m to 128m
9:00	10:30	1.50	S-DRL	TRIPBIT	PN	TD	Top drive pipe handler failed to allow rotation. trouble-shoot with Mech and Electrician
10:30	11:30	1.00	S-DRL	TRIPBIT	PP		Pull out of hole 2 stands of drill collars
11:30	13:00	1.50	S-DRL	TRIPBIT	PN	TD	Continue to trouble shoot and work on pipe handler rotation problem.
13:00	17:30	4.50	S-DRL	BHA	PP		Continue to pullout of hole from 71m to surface. Laid out Anadril tools and 16" stabilizers.
17:30	18:00	0.50	S-CSG	CSGRP	PP		Hold JSA. Rig up to run 13-3/8" casing.
18:00	19:30	1.50	S-CSG	CSGRP	PP		Pick up Float/Shoe and RIH, make up and Bakerlock next jt . Pump through to test float.OK.
19:30	20:00	0.50	S-CSG	CSGRP	PP		Continue to run 13-3/8" casing from 26m to sea-bed at 66m.Filling up string.Tag sea-bed.
20:00	20:30	0.50	S-CSG	CSGRP	PP		Work string and enter well bore at sea-bed.
20:30	21:30	1.00	S-CSG	CSGRP	PP		Continue to run in hole with 13-3/8" casing from 66m to 135m. Pipe filled as run in hole.
21:30	23:30	2.00	S-CSG	CSGRP	PN	CS	Entered 16" hole at 135m and observed 10k drag.Run in from 135m to 139m.Hang up. Work casing using full weight of string (26klbs) - no progress made.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				17-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	17.00 (m)	862.00 (m)	861.98 (m)	20

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
23:30	0:00	0.50	S-CSG	CSGRP	PN	CS	Hold JSA rigfloor crew and deck crew on laying out casing. Rig up and pull out and lay out 13-3/8" casing from 139m to 127m.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

0000 0230 2.50 862.0m Continue to pull out and lay out 13-3/8" casing.
0230 0300 0.50 862.0m Hold JSA. Lay out double bakerlocked single /float shoe joint.
0300 0330 0.50 862.0m Rig down casing equipment and rig up for BHA.
0330 0600 2.50 862.0m Pick up slick 16" BHA and run into sea-bed.Re-enter wellbore no problem.Run in to 94m, hole tight. Rack back stand of DC's/jars and pick up HWDP.Prepare to wash and ream past tight hole sections.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
				SSD7131		135.00 / 15-02-2008	- - - - - -
2 / 1	406.4	REED	T11CDH	1369484	1x16, 3x28	135.00 / 15-02-2008	1-2-WT-A-E-I-NO-TD
2RR / 2	406.4	REED	T11CDH	1369484	1x16, 3x28	862.00 / 18-02-2008	1-2-WT-A-E-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
2/1	3/8	80/100	4,201.81	14,750	1713	1.40	17.00	12.1	14.40	727.00	50.5

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	2	JAR S/N	09147	JAR HRS		BIT	

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	130.67 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.86	203.20	76.20		
Drilling Jar	0	10.17	203.20	76.20		
Drill Collar	0	47.24	209.55	69.85		
Logging While Drilling	0	8.23	209.55			
MWD Tool	0	8.49	209.55			
Cross Over	0	0.48	241.30	76.20		
Cross Over	0	0.69	228.60	69.85		
Integral Blade Stabilizer	0	2.73	230.12	69.85		
Drill Collar	0	9.44	241.30	76.20		
Integral Blade Stabilizer	0	2.64	242.82	76.20		
Drill Collar	0	18.59	241.30	76.20		
Bit Sub	0	1.23				
Tri-Cone Bit	0	0.66		76.20		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				17-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	17.00 (m)	862.00 (m)	861.98 (m)	20

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	553.43	0.48	178.29	553.43	-0.86	-0.02	-0.86	0.11
NORMAL	700.75	0.84	171.77	700.74	-2.55	0.15	-2.55	0.07
NORMAL	759.92	0.78	172.15	759.90	-3.38	0.27	-3.38	0.03
NORMAL	789.17	0.56	166.34	789.15	-3.71	0.33	-3.71	0.24
NORMAL	818.74	0.38	176.04	818.72	-3.95	0.37	-3.95	0.20
NORMAL	886.60	0.20	232.91	886.58	-4.25	0.29	-4.25	0.14

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 14,750 (kPa)

HP: 0.093 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
HALIBURTON (BAROID)	2		HALIBURTON	4	
ADA	5		CATERING	9	
SCHLUMBERGER MWD/LWD	2		SEA DRILL	15	
APACHE	4		DRIL-QUIP	2	
TAMBORITHA	2		SCHLUMBERGER (WL)	3	
EXPRO	1		RIGCOOL	1	
BHI	4		SEA DRILL SERVICES	41	
WEATHERFORD	4				

TOTAL PERSONNEL ON BOARD: 99

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/330.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME	DATE
WASABI-1	18-02-2008

API #	24 HRS PROG	TMD	TVD	REPT NO
OH	0.00 (m)	862.00 (m)	861.98 (m)	21

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	9.58 (days)	4.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 501,481	DHC: 4,746,179
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 501,481	TOTAL: 4,746,179

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 886.60 (m) INC 0.20° AZM 232.91°	(sg)		

CURRENT OPERATIONS: Running in hole with 20" casing.
13-3/8" shoe at 774m

24 HR SUMMARY: Lay out 13-3/8" casing; Run in hole for clean out trip with 16"bit and wash and ream through thght spots; sweep with hi-vis and displace with 1.15sg gel mud.Pull out 16" bit; Rig up and run 13-3/8" casing.

24 HR FORECAST: Cement 13-3/8" x 20" casing string.Pull cement
stinger and circulate casing clean.Pull out and
lay out stinger.
Pick up and lower DrillQuip fast lock connector
and install on wellhead.
Nipple up BOP's
(offline work on TD and Seadrill systems.)

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:30	2.50	S-CSG	CSGRP	PN	CS	Continue to pull out and lay out 13-3/8" casing.
2:30	3:00	0.50	S-CSG	CSGRP	PN	CS	Hold JSA. Lay out double bakerlocked single /float shoe joint.
3:00	3:30	0.50	S-CSG	CSGRP	PN	CS	Rig down casing equipment and rig up for BHA.
3:30	6:00	2.50	S-CSG	CSGRP	PN	CS	Pick up slick 16" BHA and run into sea-bed.Re-enter wellbore no problem.Run in to 94m, hole tight. Rack back stand of DC's/jars and pick up HWDP.Wash and ream past tight hole section at 70m to 96m.
6:00	6:30	0.50	S-CSG	CSGRP	PN	CS	Rack back stand HWDP and pick up stand DC'c and jars and RIH with same
6:30	8:15	1.75	S-CSG	CSGRP	PN	CS	Wash and ream from 96m to 135m
8:15	10:00	1.75	S-CSG	CSGRP	PN	CS	Run in hole from 135m to 857m.Taged 5m of fill on bottom of 862m.
10:00	12:30	2.50	S-CSG	CSGRP	PN	CS	Pull out of hole from 857m to 142m
12:30	13:00	0.50	S-CSG	CSGRP	PN	CS	Make up Topdrive and pump 100bbls Hi-Vis, Displace with 400bbls of 9.6ppg gel mud
13:00	15:30	2.50	S-CSG	CSGRP	PN	CS	Observed 60-70kips overpull. Worked tight spot from 126m to 155m. Back ream several passes
15:30	16:30	1.00	S-CSG	CSGRP	PN	CS	Pull out of hole from 155m to 126m, Run back in from 126m to 155m.Hole OK.
16:30	17:00	0.50	S-CSG	CSGRP	PN	CS	Pump 100bbls Hi-Vis,displace with 400bbls 9.6ppg gel mud. ROV standby and observe / monitor mud returns at sea-bed
17:00	19:00	2.00	S-CSG	CSGRP	PN	CS	Pull out of hole from 155m to surface with BHA.
19:00	19:30	0.50	S-CSG	CSGRP	PN	CS	Hold JSA; Rig up for casing. Pick up double 13-3/8" casing joint/float,shoe joint.
19:30	20:00	0.50	S-CSG	CSGRP	PN	CS	Hold JSA on running casing with deck and floor crews
20:00	21:30	1.50	S-CSG	CSGRP	PN	CS	Run 13-3/8" casing from surface to 139m. Re-enter at seabed OK; hole sticky at 110m. work through and no further problems. Fill pipe while running in hole.
21:30	0:00	2.50	S-CSG	CSGRP	PP		Continue to pick up and run in hole 13-3/8" casing from 139m to 418m

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				18-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	21

06:00 UPDATE

0000-0600 0000 0330 3.50 862.0m Continue to run 13-3/8" casing from 418m to 733m.
0000 0330 3.50 0.0m Rig down 13-3/8" csg equipment and rig up 20" handling tools.
0330 0430 1.00 862.0m Pick up and make up 13-3/8" x 20" X/Over and run in to 739m.
0430 0600 1.50 862.0m Run 20" casing with 13-3/8" shoe from 739m to 774m.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
2RR / 2	406.4	REED	T11CDH	1369484	1x16, 3x28	862.00 / 18-02-2008	1-2-WT-A-E-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
2RR/2					0				0.00	0.00	0.0

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	3	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	2RR

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	249.54 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	140.95	177.80	82.55		
Cross Over	0	1.20	215.90	73.15		
Drill Collar	0	18.86	209.55	76.20		
Drilling Jar	0	10.17	203.20	73.15		
Drill Collar	0	47.24	209.55	69.80		
Cross Over	0	1.20	241.30	76.20		
Drill Collar	0	9.44	241.30	76.20		
Drill Collar	0	18.59	241.30	76.20		
Bit Sub	0	1.23				
	0	0.66		76.20		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP:

HP: 0.000 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
TAMBORITHA	2		CATERING	9	
BHI	4		SCHLUMBERGER MWD/LWD	2	
HALIBURTON (BAROID)	2		WEATHERFORD	4	
APACHE	4		SEA DRILL	15	
RIGCOOL	1		ADA	5	
HALIBURTON	4		SEA DRILL SERVICES	41	
SCHLUMBERGER (WL)	3		DRIL-QUIP	2	
EXPRO	1				

TOTAL PERSONNEL ON BOARD: 99

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				18-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	21

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.50/ /12	/ /	/	/330.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME	DATE
WASABI-1	19-02-2008

API #	24 HRS PROG	TMD	TVD	REPT NO
OH	0.00 (m)	862.00 (m)	861.98 (m)	22

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	10.58 (days)	5.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 1,265,607	DHC: 6,011,786
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 1,265,607	TOTAL: 6,011,786

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 886.60 (m) INC 0.20° AZM 232.91°	(sg)		

CURRENT OPERATIONS: Rig down cement circulating side-entry assembly.

24 HR SUMMARY: Continued to run 13-3/8" casing and cross-over to 20" casing and wash down; Picked up DrillQuip wellhead and made up to 20" and washed down and landed out on CTU with 13-3/8" casing shoe at 857m Disengaged running tool free of wellhead and pulled / layed

24 HR FORECAST: Pull out inner cement string and install fastlock connector. Nipple up BOP and lines

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	3:30	3.50	S-CSG	CSGRP	PP		Rig down 13-3/8" csg equipment and rig up 20" handling tools.
3:30	4:30	1.00	S-CSG	CSGRP	PP		Pick up and make up 13-3/8" x 20" X/Over and run in to 739m.
4:30	7:30	3.00	S-CSG	CSGRP	PP		Run 20" casing with 13-3/8" shoe from 739m to 809m. Filling each joint.
7:30	8:30	1.00	S-CSG	CSGRP	PN	RO	Hold JSA. Work on link cylinders and brackets on bails / topdrive.
8:30	10:30	2.00	S-CSG	CSGRP	PP		Continue to run 20" casing from 809m to 832m. Hole sticky from 825m.
10:30	11:00	0.50	S-CSG	CSGRP	PP		Rig down 20" casing equipment, Rig up 5-1/2" drilling equipment. Pick up 20" casing DrillQuip wellhead and make up to string
11:00	15:30	4.50	S-CSG	CSGRP	PP		Work and wash casing down from 832m to 857m. Work casing down while pumping at 450gpm with seawater. very slow progress from 832m to 837m. Land out wellhead on CTU. String weight prior to land out 130kips.
15:30	18:30	3.00	S-NUP	WLHEAD	PN	SO	Attempt to disengage DrillQuip running tool from wellhead. Backed out at x/over on running tool.trapped pressure released and tool dropped free and dogs engaged.
18:30	20:00	1.50	S-CSG	CSGRP	PP		Made up at x/over to running tool, disengaged running tool, pull to rig floor and lay out same.
20:00	0:00	4.00	S-CMT	CMTPRI	PP		Make up cement stinger and run in hole with 5-1/2" DP from surface to 825m. Rig equipment not functioning correctly. Iron roughneck disfunctional - had to chain-tong in tool joints. Draworks controls erratic, links on topdrive not calibrated

24.00 = Total Hours Today

Daily Drilling Report

WELL NAME				DATE
WASABI-1				19-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	22

06:00 UPDATE

0000-0600

0000 - 0130 - Hold JSA.
Pick up and make up cement side entry sub circulating assembly and lay out same.

0130 - 0200 - Pick up stand of drillpipe and runin hole from 825m to 845m.
Pick up cementing assembly and make up to topdrive.
Run inner string in, and sting into float with 12k down at 855m.

0200 - 0300 - Hold JSA .
Rig up cement line and valves.
Pump 5bbls dye water and break circulation with Halliburton Cement unit. Test line to 1000 psi and pump further 15bbls dye water.
Check for annulus flow. No flow.
Test lines to 1500psi.

0300 - 0515 - Mix and pump cement while ROV monitoring returns at seabed - observed traces of dye water but no cement, observation difficult due to current.
Displace inner string with 62bbls of seawater. Back pressure on completion of displacement 500psi (calculated pressure for cement to sea bed = 528psi) bleed off and check for back flow. No flow.

0515 - 0530 - Unsting from float at 855m and pull back to 845m. P4 P F4 0530 0600 0.50 862.0m Circulate bottoms up with rig pumps.

HSE Summary

Abandon Drill 1 2 Days Abandon rig drill prior rig move
Environmental Incident 0 54 Days
Lost Time Incident 0 54 Days 0 LTI since start of rig operations
Medical Treatment Case 0 7 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 5 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 7 0 Days PTW issued for the day.
Safety Meeting 2 3 Days Weekly rig safety meeting.
STOP Card 12 0 Days Total for year to date 547 cards.
ToolBox Talk 12 0 Days Held Tool box talk with crews for related tasks.

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1		63	165.10	0
# 2		63	165.10	0
# 3		63	165.10	0

SPP:

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
BHI	4		SPERRI SUN	1	
ADA	5		DRIL-QUIP	2	
WEATHERFORD	2		SEA DRILL SERVICES	41	
APACHE	3		TAMBORITHA	2	
SCHLUMBERGER MWD/LWD	4		CATERING	9	
HALIBURTON	4		SEA DRILL	15	
HALIBURTON (BAROID)	2				

TOTAL PERSONNEL ON BOARD: 94

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		167	CEMENT	MT		181
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT		305	WATER, POTABLE	MT		287
WATER, DRILLING	MT		322	BASE OIL	bbl		0
BRINE	bbl		0				

Daily Drilling Report

WELL NAME				DATE
WASABI-1				19-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	22

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.40/ /12	/ /120.00	/	/138.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				20-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	23

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	11.58 (days)	6.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 262,735	DHC: 6,274,521
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 262,735	TOTAL: 6,274,521

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	886.60 (m)	**INC**	0.20°	**AZM** 232.91°	(sg)		

CURRENT OPERATIONS: Make up slip joint and divertor. Continue to hammer up BOP / connector bolts.

24 HR SUMMARY: Cement 13-3/8" x 20" casing. Unsting from float and circulate casing volume clean. Pull out inner string and lay out stinger. Install DrillQuip connector to wellhead. Pick up and make up BOP's

24 HR FORECAST: Body test BOP to 200psi / 2500psi. Test casing to 2000psi. Install wearbushing. Pick up Drill Pipe.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:30	1.50	S-CMT	CMTPRI	PP		Hold JSA. Pick up and make up cement side entry sub circulating assembly and lay out same.
1:30	2:00	0.50	S-CMT	CMTPRI	PP		Pick up stand of drillpipe and run in hole from 825m to 845m. Pick up cementing assembly and make up to topdrive. Run inner string in, and sting into float with 12k down at 855m.
2:00	3:00	1.00	S-CMT	CMTPRI	PP		Hold JSA . Rig up cement line and valves. Pump 5bbls dye water and break circulation with Halliburton Cement unit. Test line to 1500 psi and pump further 15bbls dye water. Check for annulus flow. No flow.
3:00	5:15	2.25	S-CMT	CMTPRI	PP		Mix and pump cement while ROV monitoring returns at seabed - observed traces of dye water but no cement, observation difficult due to current. Pumped 740bbls lead slurry at 12.5ppg (220% OH excess), followed by 40bbls tail slurry. Displace inner string with 62bbls of seawater. Back pressure on completion of displacement 500psi (calculated pressure for cement to sea bed = 528psi) bleed off and check for back flow. No flow.
5:15	5:30	0.25	S-CMT	CIRC	PP		Unsting from float at 855m and pull back to 845m.
5:30	6:00	0.50	S-CMT	CIRC	PP		Circulate bottoms up with rig pumps.
6:00	8:30	2.50	S-CMT	CMTPRI	PN		NOV tech and rig mechanic trouble shoot problem with cyber chair connection to draworks brakes and Hi / Low clutch commands. Lay out cementing side entry assembly, and pull out to 750m while fault finding.
8:30	11:00	2.50	S-CMT	CMTPRI	PP		Pull out from 750m to surface. NOV monitoring system and alarm ststus while tripping. Lay out cement stinger.
11:00	15:00	4.00	S-NUP	WLHEAD	PP		Hold JSA. Rig up long slings to top drive for running Fast Lock connector.Remove rotary master bushings and outer ring. Pick up the DrillQuip fastlock connector and lower to wellhead.DrillQuip make up to wellhead. Meanwhile break out BOP bolts from stump.
15:00	18:30	3.50	S-NUP	BOPS	PP		JSA meeting. Lift BOP from setback stump,transfer to well centre. Lower BOP onto connector bolts. Due to alignment for Choke & Kill lines, lift BOP and orient to position and lower onto bolts. Make handrail adjustments to accomodate.
18:30	20:30	2.00	S-NUP	BOPS	PP		Lower CTU work platform,for better access to make up BOP bolts to connector. Install nuts on BOP / Connector studs. Prep top annular bolts and ring groove for riser. Prep choke and kill lines
20:30	22:30	2.00	S-NUP	BOPS	PP		Clear CTU. Pull master bushings and outer ring, lower BOP high pressure riser mandrel onto top of

Daily Drilling Report

WELL NAME				DATE
WASABI-1				20-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	23

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
							BOP annular and land over studs. Secure nuts.Remove slings and pull to rig floor. Clear CTU, and install outer ring and master bushings. Cover hole.
22:30	0:00	1.50	S-NUP	BOPS	PP		Install remainder of studs and nuts to mandrel,and tighten. Prepare hydraulic lines for slip joint. Make up test lines to topdrive and prepare to test IBOP valves while working on BOP.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

0000 - 0230 - Tighten nuts on BOP mandrel. Commence tightening / torquing BOP connector bolts. Flush cement line; Test lower and upper IBOP valves on topdrive to 250psi / 10min,
5000psi / 10min. Good test. lay out test tools. Prepare crane on slip joint and lift to rig floor.
0230 - 0430 - Rig up to run slip joint. Continue to hammer up BOP bolts. Pick up over shot riser joint and set in rotary
0430 - 0600 - Hold JSA. Rig down slings off bails and pick up elevators.
Pick up divertor and make up overshot riser joint .
Run overshot riser and divertor.

Abandon Drill 1 3 Days Abandon rig drill prior rig move
Environmental Incident 0 55 Days
Lost Time Incident 0 55 Days 0 LTI since start of rig operations
Medical Treatment Case 0 8 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 6 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 7 0 Days PTW issued for the day.
Safety Meeting 2 4 Days Weekly rig safety meeting.
STOP Card 17 0 Days Total for year to date 547 cards.
ToolBox Talk 10 0 Days Held Tool box talk with crews for related tasks

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	5		BHI	4	
DRIL-QUIP	2		SEA DRILL SERVICES	41	
SCHLUMBERGER MWD/LWD	4		TAMBORITHA	2	
HALIBURTON (BAROID)	2		HALIBURTON	4	
WEATHERFORD	2		SEA DRILL	15	
CATERING	9		SPERRI SUN	1	
APACHE	3				

TOTAL PERSONNEL ON BOARD: 94

SUPPORT CRAFT

TYPE	REMARKS
HELICOPTER	
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT	12	155	CEMENT	MT	80	101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	12	293	WATER, POTABLE	MT	34	253
WATER, DRILLING	MT	17	305	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.40/ /12	/ /120.00	/	/138.00	

Daily Drilling Report

WELL NAME				DATE
WASABI-1				20-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	23

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				21-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	24

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	12.58 (days)	7.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 584,081	DHC: 6,858,602
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 584,081	TOTAL: 6,858,602

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	886.60 (m)	**INC**	0.20°	**AZM**	232.91°	(sg)		

CURRENT OPERATIONS: Picking up 12-1/4" directional BHA.

24 HR SUMMARY: Nipple up BOP and lines. Perform BOP shell test and 13-3/8" casing test to 2000psi. (Choke line failed at target block - under repair)Test against HCR test good.
Run wear bushing. Pick up / make up drillpipe and rack into derrick.

24 HR FORECAST: Make up BHA and shallow test same. Run in hole picking up drill pipe to13-3/8" casing float. Pump 50bbl Hi Vis spacer and displace hole to 1.15sg KCL/Polymer mud while drilling float shoe and 2 meters of new hole to 864m. Circulate and balance mud weight.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:30	2.50	S-NUP	BOPS	PP		Tighten nuts on BOP mandrel. Commence tightening / torquing BOP connector bolts. Flush cement line; Test lower and upper IBOP valves on topdrive to 250psi / 10min, 5000psi / 10min. Good test. lay out test tools. Prepare crane on slip joint and lift to rig floor.
2:30	4:30	2.00	S-NUP	BOPS	PP		Rig up to run slip joint. Continue to hammer up BOP bolts. Pick up over shot riser joint and set in rotary
4:30	6:00	1.50	S-NUP	BOPS	PP		Hold JSA. Rig down slings off bails and pick up elevators. Pick up divertor and make up overshot riser joint . Run overshot riser and divertor.
6:00	8:00	2.00	S-NUP	BOPS	PP		Land divertor / slip joint over high pressure mandrel riser; Secure dogs, attach hoses in rotary.
8:00	14:00	6.00	S-NUP	BOPS	PP		Nipple up choke and kill lines to BOP. Off line; Halliburton pressure test choke manifold.
14:00	15:00	1.00	S-NUP	BOPS	PP		Install fittings for slip joint packer and connect hoses.Energise same.
15:00	16:00	1.00	S-NUP	BOPS	PP		Break out divertor running tool; clear rig floor of excess equipment
16:00	17:00	1.00	S-NUP	BOPS	PP		Function test BOP rams ; Line up to test casing.
17:00	18:00	1.00	S-NUP	BOPS	PP		Fill BOP, flush lines, attempt to connector test BOP and casing to 2000psi. Failed. Leak on choke line.
18:00	20:00	2.00	S-NUP	BOPS	PN	RO	Continue with repairs to Draworks Motor 'C' encoder. Work blocks to confirm repair OK.
20:00	20:30	0.50	S-NUP	BOPS	PP		Line up and test casing / BOP against HCR to 2000psi/15min. OK Repairs to choke line block ongoing.
20:30	21:30	1.00	S-NUP	WLHEAD	PP		Lay out divertor running tool; Make up wearbushing running tool and run in and set wear bushing .
21:30	22:30	1.00	S-NUP	WLHEAD	PP		Lay out wear bushing running tool and pup joint / Xover. Break down side entry pumping assembly.
22:30	0:00	1.50	P-DRL	DPIPE	PP		Hold PJSM. Pick up 5½" drill pipe from deck, rabbit, make up and rack in derrick.

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				21-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	24

06:00 UPDATE

0000-0600 00:00 - 04:30 - Continue to pick up drill pipe from deck, rabbit, make up and rack in derrick.Total 63 joints.
04:30 - 05:00 - Pick up Schlumberger sonic tool and break out battery. Lay out same.
05:00 - 06:00 - 862.0m Hold JSA. Pick up 12¼" BHA as per Schlumberger DD.

Abandon Drill 1 4 Days Abandon rig drill prior rig move
Environmental Incident 0 56 Days
Lost Time Incident 0 56 Days 0 LTI since start of rig operations
Medical Treatment Case 0 9 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 7 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 10 0 Days PTW issued for the day.
Safety Meeting 2 5 Days Weekly rig safety meeting.
STOP Card 32 0 Days Total for year to date 547 cards.
ToolBox Talk 12 0 Days Held Tool box talk with crews for related tasks.

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
HALIBURTON	2		SEA DRILL	13	
SEA DRILL SERVICES	43		DRIL-QUIP	2	
APACHE	4		BHI	4	
SPERRI SUN	1		SCHLUMBERGER MWD/LWD	5	
TAMBORITHA	2		ADA	4	
CATERING	9		HALIBURTON (BAROID)	2	

TOTAL PERSONNEL ON BOARD: 91

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
HELICOPTER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		155	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	16	277	WATER, POTABLE	MT	33	220
WATER, DRILLING	MT	46	259	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.40/ /12	/ /120.00	/	/80.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				22-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	25

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	13.58 (days)	8.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 705,617	DHC: 7,564,219
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 705,617	TOTAL: 7,564,219

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	886.60 (m)	**INC**	0.20°	**AZM** 232.91°	(sg)		

CURRENT OPERATIONS: Directional Drilling 12¼" hole to 940m

24 HR SUMMARY: Pick up 21stds 5½" drillpipe and rack in derrick. Make up BHA as per directional driller and run in hole. Run in hole picking up drill pipe and tag float at 855m.
Prepare to displace hole to 9.6ppg KCL/PHPA mud.

24 HR FORECAST: Directional Drill 12¼" hole as per Schlumberger directional driller

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	4:30	4.50	P-DRL	DPIPE	PP		Continue to pick up drill pipe from deck, rabbit, make up and rack in derrick.Total 63 joints.
4:30	5:00	0.50	P-DRL	BHA	PP		Pick up Schlumberger sonic tool and break out battery. Lay out same.
5:00	10:30	5.50	P-DRL	BHA	PP		Hold JSA. Pick up 12¼" BHA as per Schlumberger DD and run in to 40m
10:30	12:30	2.00	P-DRL	BHA	PP		Hold JSA. Schlumberger commence loading Radio-Active source into tool. Problems with capability of loading tool.
12:30	15:00	2.50	P-DRL	BHA	PP		Continue running in hole with BHA from 40m to 259m.
15:00	17:30	2.50	P-DRL	BHA	PN	TD	Trouble shoot problems with link tilt. Remove handles from V/V's on top drive. service top drive / traveling block.
17:30	23:30	6.00	P-DRL	DPIPE	PP		Hold PJSM. Pick up 5½" drill pipe from deck, rabbit and run in hole to 851m Off line; Test choke manifold
23:30	0:00	0.50	P-DRL	SFTY	PP		Hold JSA with all crews and 3rd party involved in mud displacement

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				22-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	25

06:00 UPDATE

0000-0600

0000-0030 Drill float and shoe and clean out rathole from 855m to 862m while displacing hole to 9.6ppg KCL / PHPA mud.
0030-0100 Drill 12¼" hole from 862m to 864m and work pipe while displacing to mud.
0100-0130 Circulate and condition mud to even weight.Pull back inside casing shoe.
0130-0230 Rig up Halliburton, break circulation to confirm lines, close upper pipe rams and perform
LOT. 925psi @ 9.6ppg with 857m shoe = 15 9ppg EMW.
Pumped max 1.9bbls at .3bbls/min. Back flow of 1.5bbls.
0230-0600 3.50 862.0m Drill 12¼" hole from 864m to 940m.

Abandon Drill 1 5 Days Abandon rig drill prior rig move
Environmental Incident 0 57 Days
Lost Time Incident 0 57 Days 0 LTI since start of rig operations
Medical Treatment Case 0 10 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 8 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 7 0 Days PTW issued for the day.
Safety Meeting 2 6 Days Weekly rig safety meeting.
STOP Card 13 0 Days Total for year to date cards.
ToolBox Talk 14 0 Days Held Tool box talk with crews for related tasks.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 1	311.2	SMITH	Mi616VBPX	SCC985	6x18	862.00 / 22-02-2008	2-6-BT-S-X-1-RO-BHA

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	4	JAR S/N	09147	JAR HRS		BIT	3

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	259.84 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	140.95	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.90	209.55	69.85		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	47.20	209.55	69.85		
Cross Over	0	0.70	211.07	82.55		
Logging While Drilling	0	6.37	209.55	69.85		
Cross Over	0	0.34	214.38	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				22-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	862.00 (m)	861.98 (m)	25

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Bent Housing	0	9.99	237.74			
Polycrystalline Diamond Bit	0	0.37	311.15	95.25		

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
APACHE	4		HALIBURTON	2	
BHI	4		SCHLUMBERGER MWD/LWD	5	
SEA DRILL	13		TAMBORITHA	2	
ADA	4		CATERING	9	
DRIL-QUIP	2		HALIBURTON (BAROID)	2	
SEA DRILL SERVICES	43				

TOTAL PERSONNEL ON BOARD: 90

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.40/ /12	/ /120.00	/	/80.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				23-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	531.00 (m)	1,393.00 (m)	1,391.40 (m)	26

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	14.58 (days)	9.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 605,290	DHC: 8,169,509
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 605,290	TOTAL: 8,169,509

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	1,388.32 (m)	**INC**	11.22°	**AZM** 337.32°	(sg)		

CURRENT OPERATIONS: Directionally drilling 311mm (12¼") hole to 1455m

24 HR SUMMARY: Directionally drilling 311mm (12¼") hole .

24 HR FORECAST: Directional drill 311mm (12¼") hole to section total depth.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:30	0.50	P-CMT	DOCMT	PP		Drill float and shoe and clean out rathole from 855m to 862m while displacing hole to 1.15sg (9.6ppg) KCL / polymer mud
0:30	1:00	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 862m to 864m and work pipe while displacing to mud
1:00	1:30	0.50	P-DRL	CIRC	PP		Circulate and condition mud to even weight. Pull back inside casing shoe.
1:30	2:30	1.00	P-CSG	LKOFF	PP		Rig up Halliburton, break circulation to confirm lines, close upper pipe rams and perform LOT. 925psi @ 9.6ppg with 857m shoe = 15 9ppg EMW. Pumped max 1.9bbls at .3bbls/min. Back flow of 1.5bbls.
2:30	12:00	9.50	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 864m to 1176mm
12:00	14:15	2.25	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1176mm to 1215m
14:15	14:45	0.50	P-DRL	DRLG	PP		Directional drill 311mm (12¼") hole from 1215m to 1230m
14:45	15:00	0.25	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1230m to 1235mm
15:00	15:15	0.25	P-DRL	DRLDIF	PN	MW	Trouble shoot MWD signal problems
15:15	15:30	0.25	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1235mm to 1245m
15:30	16:15	0.75	P-DRL	DRLG	PP		Directional drill 311mm (12¼") hole from 1245m to 1263m
16:15	17:00	0.75	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1263m to 1280m
17:00	18:00	1.00	P-DRL	DRLG	PP		Directional drill 311mm (12¼") hole from 1280m to 1291m
18:00	18:45	0.75	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1291m to 1312m
18:45	19:30	0.75	P-DRL	DRLG	PP		Directional drill 311mm (12¼") hole from 1312m to 1319m
19:30	20:00	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1319m to 1330m
20:00	20:30	0.50	P-DRL	DRLG	PP		Directional drill 311mm (12¼") hole from 1330m to 1336m
20:30	21:00	0.50	P-DRL	DRLDIF	PN		High sand content cause blinding off at shakers.Reduce pump strokes while shaker screens are changed out to coarser size. MWD unable to get detection under 1050gpm's
21:00	23:30	2.50	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1336m to 1381m
23:30	0:00	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") hole from 1381m to 1393m

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				23-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	531.00 (m)	1,393.00 (m)	1,391.40 (m)	26

06:00 UPDATE

0000-0600 0000-0600 Directionally drilling 311mm (12¼") hole from 1391m to 1455m.

Abandon Drill 1 6 Days Abandon rig drill prior rig move
Environmental Incident 0 58 Days
Lost Time Incident 0 58 Days 0 LTI since start of rig operations
Medical Treatment Case 0 11 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 9 Days
Pre-Tour Meetings 2 1 Day Held pretour safety meetings with crews.
PTW issued 6 0 Days PTW issued for the day.
Safety Meeting 2 0 Days Weekly rig safety meeting.
STOP Card 15 0 Days Total for year to date cards.
ToolBox Talk 8 0 Days Held Tool box talk with crews for related tasks.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 1	311.2	SMITH	Mi616VBPX	SCC985	6x18	862.00 / 22-02-2008	2-6-BT-S-X-1-RO-BHA

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
3/1	10/12	0/40	4,088.24	19,050	3197	10.70	531.00	49.6	10.70	531.00	49.6

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 40	TOTAL RPM: 200

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	4	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	3

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	7 (kN-m)	259.84 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	140.95	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.90	209.55	69.85		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	47.20	209.55	69.85		
Cross Over	0	0.70	211.07	82.55		
Logging While Drilling	0	6.37	209.55	69.85		
Cross Over	0	0.34	214.38	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				23-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	531.00 (m)	1,393.00 (m)	1,391.40 (m)	26

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.99	237.74			
Polycrystalline Diamond Bit	0	0.37	311.15	95.25		

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	1,034.55	0.55	198.33	1,034.52	-5.08	-0.14	-5.08	0.08
NORMAL	1,180.90	0.38	233.51	1,180.87	-6.03	-0.75	-6.03	0.07
NORMAL	1,239.98	3.38	334.13	1,239.92	-4.58	-1.67	-4.58	1.76
NORMAL	1,270.01	6.32	334.23	1,269.83	-2.30	-2.77	-2.30	2.94
NORMAL	1,298.75	8.02	326.45	1,298.35	0.80	-4.57	0.80	2.04
NORMAL	1,328.72	8.15	333.60	1,328.02	4.45	-6.67	4.45	1.01
NORMAL	1,358.00	9.08	336.28	1,356.97	8.42	-8.52	8.42	1.04
NORMAL	1,388.32	11.22	337.32	1,386.82	13.33	-10.62	13.33	2.13

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 19,050 (kPa)

HP: 0.287 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SCHLUMBERGER MWD/LWD	5		TAMBORITHA	2	
HALIBURTON	2		BHI	4	
HALIBURTON (BAROID)	2		SEA DRILL	13	
CATERING	9		ADA	4	
APACHE	4		DRIL-QUIP	2	
SEA DRILL SERVICES	43				

TOTAL PERSONNEL ON BOARD: 90

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	0.40/ /12	/ /120.00	/	/80.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				24-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	254.00 (m)	1,647.00 (m)	1,625.56 (m)	27

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	15.58 (days)	10.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 631,454	DHC: 8,800,963
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 631,454	TOTAL: 8,800,963

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	1,624.03 (m)	**INC**	29.21°	**AZM**	334.37°	(sg)		

CURRENT OPERATIONS: Directional drill 311mm (12¼") hole to 1706m

24 HR SUMMARY: Directionally drilling 311mm (12¼") hole from 1393m to 1647m

24 HR FORECAST: Directional drill 311mm (12¼") hole to section total depth.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	12:00	12.00	P-DRL	DRLG	PP		Directionally drilling 311mm (12¼") hole from 1391m to 1500m.
12:00	14:30	2.50	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1500m to 1526m
14:30	15:00	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1526m to 1529m.
15:00	15:30	0.50	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1529m to 1533m
15:30	16:00	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1533m to 1540m
16:00	19:00	3.00	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1540m to 1553m
19:00	19:30	0.50	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1553m to 1559m.
19:30	20:00	0.50	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1559m to 1566m.
20:00	20:15	0.25	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1566m to 1572m
20:15	20:30	0.25	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1572m to 1583m P7 P
20:30	21:45	1.25	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1583m to 1588m
21:45	22:30	0.75	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1588m to 1590m
22:30	22:45	0.25	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1590m to 1603m.
22:45	23:15	0.50	P-DRL	CUTDL	PP		Directionally drilling 311mm (12¼") hole from 1603m to 1608m
23:15	0:00	0.75	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1608m to 1647m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Drill 311mm (12¼") from 1647m to 1706m

Abandon Drill 1 7 Days Abandon rig drill prior rig move
Environmental Incident 0 59 Days
Lost Time Incident 0 59 Days 0 LTI since start of rig operations
Medical Treatment Case 0 12 Days IP sent to town for xrays, IP returning to rig next helicopter.
Near Miss 1 10 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 3 0 Days PTW issued for the day.
Safety Meeting 2 0 Days Weekly rig safety meeting.
STOP Card 12 0 Days Total for year to date cards.
ToolBox Talk 6 0 Days Held Tool box talk with crews for related tasks.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				24-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	254.00 (m)	1,647.00 (m)	1,625.56 (m)	27

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 1	311.2	SMITH	Mi616VBPX	SCC985	6x18	862.00 / 22-02-2008	2-6-BT-S-X-1-RO-BHA

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
3/1	8/10	0/50	4,160.17	18,919	3311	14.70	256.00	17.4	25.40	787.00	31.0

MOTOR OUTPUT

RPG: | ROTARY CURRENT: 40 | TOTAL RPM: 200

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	4	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	3

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	11 (kN-m)	259.84 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	140.95	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.90	209.55	69.85		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	47.20	209.55	69.85		
Cross Over	0	0.70	211.07	82.55		
Logging While Drilling	0	6.37	209.55	69.85		
Cross Over	0	0.34	214.38	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.99	237.74			
Polycrystalline Diamond Bit	0	0.37	311.15	95.25		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				24-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	254.00 (m)	1,647.00 (m)	1,625.56 (m)	27

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	1,447.39	16.50	340.87	1,444.15	26.57	-15.59	26.57	2.71
NORMAL	1,476.79	18.71	341.36	1,472.17	34.98	-18.47	34.98	2.26
NORMAL	1,506.00	21.47	336.96	1,499.60	44.34	-22.06	44.34	3.23
NORMAL	1,535.79	23.81	336.52	1,527.09	54.88	-26.59	54.88	2.36
NORMAL	1,564.88	26.29	336.35	1,553.44	66.17	-31.51	66.17	2.56
NORMAL	1,594.25	28.63	333.72	1,579.50	78.44	-37.24	78.44	2.69
NORMAL	1,624.03	29.21	334.37	1,605.57	91.38	-43.54	91.38	0.66

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 18,919 (kPa)

HP: 0.302 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
BHI	4		SEA DRILL SERVICES	43	
CATERING	9		TAMBORITHA	2	
SCHLUMBERGER MWD/LWD	5		ADA	4	
HALIBURTON (BAROID)	2		SPERRI SUN	1	
APACHE	4		SEA DRILL	13	
DRIL-QUIP	2		HALIBURTON	2	

TOTAL PERSONNEL ON BOARD: 91

SUPPORT CRAFT

TYPE	REMARKS
HELICOPTER	
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		155	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	20	257	WATER, POTABLE	MT	26	194
WATER, DRILLING	MT		259	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				25-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	150.00 (m)	1,797.00 (m)	1,753.16 (m)	28

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	16.58 (days)	11.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 631,455	DHC: 9,432,418
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 631,455	TOTAL: 9,432,418

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 1,624.03 (m) **INC** 29.21° **AZM** 334.37°	(sg)		

CURRENT OPERATIONS: Handle BHA.

24 HR SUMMARY: Drilled 12 1/4" hole to 1797m, pumped 50 bbls Hi/vis and circulated hole clean. POOH, 35k overpull at 1638m pumped out of hole to 1442m hole good. Pumped slug and POOH to 851m.

24 HR FORECAST: Handle BHA, Pick up 15 joints 5 1/2" heavy weight and 12 joints 5 1/2" drill pipe and RIH. Drill 12 1/4" hole.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	16:00	16.00	P-DRL	DRLG	PP		Drill 311mm (12¼") from 1647m to 1797M.
16:00	17:30	1.50	P-DRL	CIRC	PN	BT	Pumped 50 bbls Hi Vis and circulated hole clean. Slight increase in cuttings on bottoms up with return of pill, the shakers came clean. Flow checked well.
17:30	18:00	0.50	P-DRL	TRIPBIT	PN	BT	POOH slowly with first stand of drill pipe while sorting out trip tank line up - actuator on hole fill valve was jammed in closed position, removed actuator & operated valve manually.
18:00	20:30	2.50	P-DRL	TRIPBIT	PN	BT	POOH from 1979m - 1530m, 35k overpull at 1638m, pumped out of hole from 1638m - 1530m.
20:30	21:00	0.50	P-DRL	TRIPBIT	PN	RO	Cyber chair screen locked up, no weight indicator reading, circulate and rotate string while reboot system.
21:00	22:00	1.00	P-DRL	TRIPBIT	PN	BT	Continued pump out of hole from 1530m - 1442m, hole good at 1442m.
22:00	0:00	2.00	P-DRL	TRIPBIT	PN	BT	Pumped slug and POOH to 851m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 02:00 - Continued POOH to BHA.
02:00 - 06:00 - Handle BHA.

Abandon Drill 1 8 Days Abandon rig drill.
Environmental Incident 0 60 Days
First Aid Case 1 6 Days First aid case, bruised knee.
Lost Time Incident 0 60 Days 0 LTI since start of rig operations
Medical Treatment Case 1 13 Days IP sent to town for xrays. IP returned to rig after xrays.
Near Miss 1 11 Days
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 6 0 Days PTW issued for the day.
Safety Meeting 2 2 Days Weekly rig safety meeting.
STOP Card 15 0 Days Total for year to date 559 cards.
ToolBox Talk 8 0 Days Held Tool box talk with crews for related tasks.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 1	311.2	SMITH	Mi616VBPX	SCC985	6x18	862.00 / 22-02-2008	2-6-BT-S-X-1-RO-BHA

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				25-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	150.00 (m)	1,797.00 (m)	1,753.16 (m)	28

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
3/1		0/40	4,160.17	18,919	3311	9.40	150.00	16.0	34.80	937.00	26.9

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 40	TOTAL RPM: 200

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	4	JAR S/N	09147	JAR HRS		BIT	3

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	89 (tonne)	11 (kN-m)	259.84 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	140.95	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drill Collar	0	18.90	209.55	69.85		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	47.20	209.55	69.85		
Cross Over	0	0.70	211.07	82.55		
Logging While Drilling	0	6.37	209.55	69.85		
Cross Over	0	0.34	214.38	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.99	237.74			
Polycrystalline Diamond Bit	0	0.37	311.15	95.25		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 18,919 (kPa)

HP: 0.302 (kW/cm²)

SPR

	SPM	PPSR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				25-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	150.00 (m)	1,797.00 (m)	1,753.16 (m)	28

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SCHLUMBERGER MWD/LWD	12		HALIBURTON	2	
SEA DRILL SERVICES	41		CATERING	9	
SPERRI SUN	1		HALIBURTON (BAROID)	2	
TAMBORITHA	2		SEA DRILL	17	
APACHE	4		BHI	4	
ADA	4				

TOTAL PERSONNEL ON BOARD: 98

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		155	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT		257	WATER, POTABLE	MT		194
WATER, DRILLING	MT		259	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				26-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	27.00 (m)	1,824.00 (m)	1,775.53 (m)	29

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	17.58 (days)	12.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / STEFAN G H SCHMIDT		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 654,183	DHC: 10,086,601
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 654,183	TOTAL: 10,086,601

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 1,624.03 (m) **INC** 29.21° **AZM** 334.37°	(sg)		

CURRENT OPERATIONS: Directional drill 12 1/4" hole.

24 HR SUMMARY: POOH, changed out BHA and bit, picked up 15 joints 5 1/2" heavy weight drill pipe and 12 joints 5 1/2" drill pipe. RIH, washed 28m to bottom no fill. Directional drill 12 1/2" hole from 1797m - 1824m

24 HR FORECAST: Finish pumping hi-vis sweep. POOH to change BHA. TIH and continue drilling 12 1/4" hole to TD.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:00	2.00	P-DRL	TRIPBIT	PN	BT	Continued POOH to BHA.
2:00	4:30	2.50	P-DRL	TRIPBIT	PN	BT	POOH with BHA to 40m.
4:30	5:00	0.50	P-DRL	TRIPBIT	PN	BT	Held JSA and retrieve RA scoure.
5:00	8:30	3.50	P-DRL	TRIPBIT	PN	BT	Held JSA and layout BHA from 40m - surface.
8:30	9:00	0.50	P-DRL	RIGSER	PP		Rig service, Top drive.
9:00	13:30	4.50	P-DRL	BHA	PN	BT	Pick up and make up BHA and new bit and RIH to 207m.
13:30	16:30	3.00	P-DRL	BHA	PN	BT	Adjusted link tilt and picked up 15 joints 5 1/2" heavy weight drill pipe and 12 joints 5 1/2" drill pipe.
16:30	18:00	1.50	P-DRL	TRIPBIT	PN	BT	Adjusted link tilt and RIH to 857m
18:00	19:00	1.00	P-DRL	TRIPBIT	PN	BT	Break circulation, test MWD, good signal.
19:00	21:30	2.50	P-DRL	TRIPBIT	PN	BT	Continued to RIH to 1767m. Hole good.
21:30	22:00	0.50	P-DRL	RMWASH	PN	BT	Break circulation, washed down 28m to bottom, no fill.
22:00	0:00	2.00	P-DRL	DRLG	PP		Directional drill 12 1/4" hole from 1797m - 1824 m. Pumped 30 bbls H/Vis at 1797m observed increase of cutting at shakers, large amount of coal.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 - 06:00 - Directional drill 12 1/4" hole from 1824m - 1887m (pumps need to be cycled on motor stalls due to MWD going out of sync).

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
5 / 1	311.2	SMITH	Mi616VHVPX	SCC991	9x14	1,797.00 / 26-02-2008	2-4-CT-T-X-1-WT-BHA
3 / 1	311.2	SMITH	Mi616VBPX	SCC985	6x18	862.00 / 22-02-2008	2-6-BT-S-X-1-RO-BHA

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

					PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	5	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	5

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	348.79 (m)

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				26-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	27.00 (m)	1,824.00 (m)	1,775.53 (m)	29

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	18.89	209.55	69.85		
Cross Over	0	0.70	203.20	82.55		
Non-Mag Pony Collar	0	2.32	203.20	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.50	237.74			
Polycrystalline Diamond Bit	0	0.37	311.15	95.25		

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		SEA DRILL SERVICES	41	
APACHE	4		HALIBURTON (BAROID)	2	
HALIBURTON	2		SEA DRILL	17	
BHI	4		SCHLUMBERGER MWD/LWD	12	
TAMBORITHA	2		CATERING	9	

TOTAL PERSONNEL ON BOARD: 97

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				27-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	76.00 (m)	1,900.00 (m)	1,838.18 (m)	30

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	18.58 (days)	13.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / 0000		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 551,070	DHC: 10,637,671
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 551,070	TOTAL: 10,637,671

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	1,890.59 (m)	**INC**	34.34°	**AZM** 324.56°	(sg)		

CURRENT OPERATIONS: Directional Drill 12 1/4" hole from 1914m.

24 HR SUMMARY: Directional drilled 12 1/4" hole to 1900m, POOH, layout bit, make up bit # 6 and RIH to 851m. Test MWD, remove pipehandler from top drive. Change out saver sub.

24 HR FORECAST: Drill ahead to section TD.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	9:00	9.00	P-DRL	DRLG	PP		Directional drill 12 1/4" hole from 1824m - 1900m (pumps need to be cycled on motor stalls due to MWD going out of sync).
9:00	10:00	1.00	P-DRL	TRIPBIT	CN		Pumped 50 bbls Hi/vis and circulated hole clean. No increase in cuttings with return of pill, hole came clean on bottoms up.
10:00	11:30	1.50	P-DRL	TRIPBIT	CN		Flow checked (Static) POOH wet from 1900m - 1523m. Hole good.
11:30	12:00	0.50	P-DRL	TRIPBIT	CN		Pumped slug.
12:00	14:30	2.50	P-DRL	TRIPBIT	CN		POOH from 1523m to BHA.
14:30	16:00	1.50	P-DRL	BHA	CN		Handle BHA, layout Bat/Sonic to download memory, remove sleeve from motor and break out bit.
16:00	17:00	1.00	P-DRL	BHA	CN		M/U bit #6, install 12.125" stabilizer sleeve on motor and check orientation.
17:00	18:00	1.00	P-DRL	BHA	CN		Down load data from RAB-8 tool.
18:00	20:00	2.00	P-DRL	TRIPBIT	CN		P/U and M/U Bat/Sonic, handle BHA and RIH to 377m.
20:00	20:30	0.50	P-DRL	TRIPBIT	CN		Removed pipe handler from top drive.
20:30	21:30	1.00	P-DRL	TRIPBIT	CN		RIH to 851m.
21:30	22:00	0.50	P-DRL	TRIPBIT	CN		Break circulation and tested MWD, good test.
22:00	0:00	2.00	P-DRL	TRIPBIT	PN	RO	Continue repairs to pipehandler and change out saver sub on top drive

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 00:30 - Change out saver sub on top drive. Pipe handler repiars still ongoing.
00:30 - 02:00 - RIH to 1619m Held up with 40k down
02:00 - 02:30 - Wash and ream from 1619m 1639m
02:30 - 03:30 - RIH, washed 28m to bottom No fill. Worked through hole from 1806m - 1816m with 20k down.
03:30 - 06:00 - Directional drill 12 1/4" hole from 1900m - 1914m. Pumped 30 bbls H/vis at 1910m observed large amount of coal on bottoms up.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
6 / 1	311.2	HUGHES CHRISTENSEN	MXL-1X	6065524	3x24	1,900.00 / 27-02-2008	2-8-WT-A-4-16-CT-PR
5 / 1	311.2	SMITH	Mi616VHVPX	SCC991	9x14	1,797.00 / 26-02-2008	2-4-CT-T-X-1-WT-BHA

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				27-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	76.00 (m)	1,900.00 (m)	1,838.18 (m)	30

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
5/1	2/10	0/40	4,163.95	21,718	4028	9.50	103.00	10.8	9.50	103.00	10.8

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 0	TOTAL RPM: 160

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	6	JAR S/N	09147	JAR HRS		BIT	6

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	348.79 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	18.89	209.55	69.85		
Cross Over	0	0.70	203.20	82.55		
Non-Mag Pony Collar	0	2.32	203.20	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.50	237.74			
Tri-Cone Bit	0	0.37	311.15	95.25		

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	1,831.13	34.60	326.01	1,781.40	185.82	-98.34	185.82	1.01
NORMAL	1,860.48	34.24	324.51	1,805.62	199.45	-107.79	199.45	0.94
NORMAL	1,890.59	34.34	324.56	1,830.49	213.26	-117.63	213.26	0.10

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 21,718 (kPa)

HP: 0.368 (kW/cm²)

SPR

	SPM	PPSR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				27-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	76.00 (m)	1,900.00 (m)	1,838.18 (m)	30

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		SEA DRILL SERVICES	39	
SEA DRILL	18		SCHLUMBERGER MWD/LWD	13	
CATERING	9		BHI	5	
DRIL-QUIP	1		APACHE	4	
HALIBURTON (BAROID)	2		HALIBURTON	2	
TAMBORITHA	2		SPERRI SUN	1	

TOTAL PERSONNEL ON BOARD: 100

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT	2	153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	16	241	WATER, POTABLE	MT	29	175
WATER, DRILLING	MT	31	228	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				28-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	221.00 (m)	2,121.00 (m)	1,995.84 (m)	31

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	19.58 (days)	14.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / 0000		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 652,637	DHC: 11,290,308
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 652,637	TOTAL: 11,290,308

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY	LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD 2,096.38 (m) **INC** 47.60° **AZM** 318.28°	(sg)		

CURRENT OPERATIONS: Drilling 12 1/4" hole @ 2175m

24 HR SUMMARY: Install saver sub on top drive, RIH 1619m, washed and reamed from 1619m - 1639m. Continue RIH to 1900m. Directional drill 12 1/4" hole f/- 1900m - 2121m.

24 HR FORECAST: Drill 12 1/4" hole to sectional TD.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:30	0.50	P-DRL	TRIPBIT	PN	RO	Change out saver sub on top drive. Pipe handler repairs still ongoing.
0:30	2:00	1.50	P-DRL	TRIPBIT	CN	DD	RIH to 1619m Held up with 40k down.
2:00	2:30	0.50	P-DRL	RMCLN	CN	DD	Wash and ream from 1619m 1639m
2:30	3:30	1.00	P-DRL	TRIPBIT	CN	DD	RIH, washed 28m to bottom No fill. Worked through hole from 1806m - 1816m with 20k down.
3:30	0:00	20.50	P-DRL	DRLG	PP		Directional drill 12 1/4" hole from 1900m - 2121m. Pumped 30 bbls H/vis at 1910m observed large amount of coal on bottoms up.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
6 / 1	311.2	HUGHES CHRISTENSEN	MXL-1X	6065524	3x24	1,900.00 / 27-02-2008	2-8-WT-A-4-16-CT-PR

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
6/1	10/20	40/40	3,785.41	23,442	3560	18.50	221.00	11.9	18.50	221.00	11.9

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 40	TOTAL RPM: 160

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	6	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	6

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	348.79 (m)

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				28-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	221.00 (m)	2,121.00 (m)	1,995.84 (m)	31

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	18.89	209.55	69.85		
Cross Over	0	0.70	203.20	82.55		
Non-Mag Pony Collar	0	2.32	203.20	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.50	237.74			
Tri-Cone Bit	0	0.37	311.15	95.25		

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	1,919.28	39.56	321.67	1,853.41	227.03	-128.00	227.03	5.75
NORMAL	1,948.88	41.97	319.68	1,875.83	241.98	-140.25	241.98	2.77
NORMAL	1,978.21	44.07	317.65	1,897.28	257.00	-153.47	257.00	2.57
NORMAL	2,008.18	45.45	317.25	1,918.56	272.54	-167.74	272.54	1.41
NORMAL	2,037.55	46.14	317.73	1,939.03	288.06	-181.97	288.06	0.79
NORMAL	2,066.69	46.95	318.03	1,959.08	303.75	-196.15	303.75	0.86
NORMAL	2,096.38	47.60	318.28	1,979.22	320.00	-210.70	320.00	0.68

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 23,442 (kPa)

HP: 0.295 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
APACHE	4		CATERING	9	
TAMBORITHA	2		SPERRI SUN	1	
ADA	4		SCHLUMBERGER MWD/LWD	13	
HALIBURTON (BAROID)	2		SEA DRILL	18	
BHI	5		SEA DRILL SERVICES	39	
HALIBURTON	2				

TOTAL PERSONNEL ON BOARD: 99

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				28-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	221.00 (m)	2,121.00 (m)	1,995.84 (m)	31

SUPPORT CRAFT

TYPE	REMARKS
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	14	227	WATER, POTABLE	MT	26	149
WATER, DRILLING	MT	13	215	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				29-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	165.00 (m)	2,286.00 (m)	2,106.50 (m)	32

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	20.58 (days)	15.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / 0000		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 784,213	DHC: 12,074,521
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 784,213	TOTAL: 12,074,521

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS: Circulating hole clean

24 HR SUMMARY: Drilled 12 1/4" hole from 2121m - 2286m. Unblocked flow line at 2263m due to coal and cuttings blocking same. Reamed and worked tight hole from 2237m - 2242m 40k overpull.

24 HR FORECAST: Circulate hole clean. POOH for wireline logs.
Ream interval from 1980m on trip out for LWD logs.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	16:30	16.50	P-DRL	DRLG	PP		Drill 12 1/4" hole from 2121m - 2247m. Drill string stalled out. Pumped 30 bbls H/Vis at 2128m, observed large amount of coal on bottoms up.
16:30	17:00	0.50	P-DRL	RMWASH	PN	HC	Ream and work tight hole from 2242m - 2237m 40k overpull.
17:00	19:30	2.50	P-DRL	DRLG	PP		Drill 12 1/4" hole from 2247m - 2263m Pumped 40 bbls H/vis at 2247m. Observed a slight increase in coal over shakers on bottoms up. Commenced increasing mud weight to 10ppg from 2260m due to increase in splintery coal cuttings.
19:30	20:00	0.50	P-DRL	DRLG	PN	FP	Flow line blocked with coal and cuttings at 2263m causing approx 40bbls mud to overflow flowline onto main deck with approx 35bbls flowing to sea via drains. Cleared flowline.
20:00	0:00	4.00	P-DRL	DRLG	PP		Drill 12 1/4" hole from 2263m - 2286m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

0000-0530 Drill 12 1/4" hole from 2286m - 2315m. Pumped 10 bbls 15.80ppg pill at 2305m, observed increase of coal at bottoms up.
0530-0600 0.50 2121.0m Circulate hole clean.

Abandon Drill 5 Days Muster Drill - alternative muster points
BOP Drill 1 Day Trip Drill. Held trip drill with crew while RIH.
BOP Test 8 Days BOP test on nipple up
Environmental Incident 8 Days 159 litres Erifon BOP Fluid spilt to sea Hose not connected to diveter overshot when line was pressurized.
Lost Time Incident 64 Days 0 LTI since start of rig operations
Medical Treatment Case 17 Days IP sent to town for xrays. IP returned to rig after xrays.
Near Miss 1 Day Drop Object. Door damper fell off door to radio room falling to landing below. Landed approx 2 meters from person standing on landing.
Pre-Tour Meetings 2 0 Days Held pretour safety meetings with crews.
PTW issued 7 0 Days PTW issued for the day.
Safety Meeting 6 Days Weekly rig safety meeting.
STOP Card 18 0 Days Total for year to date 623 cards.
ToolBox Talk 6 0 Days Held Tool box talk with crews for related tasks.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
6 / 1	311.2	HUGHES CHRISTENSEN	MXL-1X	6065524	3x24	1,900.00 / 27-02-2008	2-8-WT-A-4-16-CT-PR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				29-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	165.00 (m)	2,286.00 (m)	2,106.50 (m)	32

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
6/1	15/20	40/90	3,785.41	23,442	3560	10.00	165.00	16.5	28.50	386.00	13.5

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 40	TOTAL RPM: 240

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	6	JAR S/N	09147	JAR HRS		BIT	6

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	348.79 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	18.89	209.55	69.85		
Cross Over	0	0.70	203.20	82.55		
Non-Mag Pony Collar	0	2.32	203.20	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.50	237.74			
Tri-Cone Bit	0	0.37	311.15	95.25		

SURVEY

TYPE	MD (m)	DEG (°)	AZI (°)	TVD (m)	+N/-S (m)	+E/-W (m)	V.SECT (m)	D.L (°/30m)
NORMAL	2,125.42	47.49	318.95	1,998.82	336.07	-224.87	336.07	0.52
NORMAL	2,155.49	47.85	318.70	2,019.07	352.81	-239.50	352.81	0.40
NORMAL	2,185.00	47.98	319.61	2,038.85	369.37	-253.83	369.37	0.70
NORMAL	2,214.22	48.00	319.92	2,058.41	385.95	-267.85	385.95	0.24
NORMAL	2,230.00	48.04	320.29	2,068.96	394.95	-275.38	394.95	0.53
NORMAL	2,243.21	48.08	320.67	2,077.79	402.53	-281.63	402.53	0.65
NORMAL	2,272.78	47.76	323.36	2,097.61	419.82	-295.13	419.82	2.05

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				29-02-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	165.00 (m)	2,286.00 (m)	2,106.50 (m)	32

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 23,442 (kPa)

HP: 0.295 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		HALIBURTON (BAROID)	2	
CATERING	9		APACHE	4	
SCHLUMBERGER MWD/LWD	13		SEA DRILL	18	
HALIBURTON	2		BHI	5	
SEA DRILL SERVICES	39		TAMBORITHA	2	

TOTAL PERSONNEL ON BOARD: 98

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
HELICOPTER	
MV BATTLER	
HELICOPTER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				01-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	27.00 (m)	2,313.00 (m)	2,124.65 (m)	33

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	21.58 (days)	16.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / 0000		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 718,226	DHC: 12,792,747
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 718,226	TOTAL: 12,792,747

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM** 323.36°	(sg)		

CURRENT OPERATIONS: Run log #1 VSP from 1395m. Depth at 06:00hrs 721m. Hole losses since starting logging 0.50 bbls.

24 HR SUMMARY: Drill 12 1/4" hole to 2313m, Circulate hole clean, POOH, logged sections 2270m - 2210m and 1980m -1780m. POOH, down load data from MWD. Rigged up Schlumberger wireline.

24 HR FORECAST: Run logging program.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	5:30	5.50	P-DRL	DRLG	PP		Drill 12 1/4" hole from 2286m - 2313m. Pumped 10 bbls 15.80ppg pill at 2305m, observed increase of coal at bottoms up.
5:30	6:30	1.00	P-DRL	CIRC	PP		Circulate hole clean
6:30	7:30	1.00	P-DRL	TRIPBIT	PP		Flow check (Static) POOH to 2270m
7:30	9:00	1.50	P-DRL	RMWASH	PN	LP	Log up with LWD from 2270m - 2210m with 60rpm, 1080gpm, 60m/hr.
9:00	11:00	2.00	P-DRL	RMCLN	PN	HC	POOH from 2210m - 2186m, 40k overpull at 2186m, back ream from 2186m - 2041m
11:00	12:30	1.50	P-DRL	RMCLN	PN	HC	Pump 10bbls 15.80ppg pill and contine back reaming from 2041m - 1980m. Tight spots at: 2186m, 2182, 2177m, 2148, 2115m 30k - 60k overpull
12:30	15:00	2.50	P-DRL	RMWASH	PN	LP	Log up from 1980m - 1777m with 60rpm, 1080gpm, 120 - 150m/hr.
15:00	19:00	4.00	P-DRL	TRIPBIT	PP		POOH from 1777m - 348M. Flow checked prior BHA at Bop's.
19:00	20:00	1.00	P-DRL	BHA	PP		Handle BHA to 38m.
20:00	21:00	1.00	P-DRL	BHA	PN	RO	Attempted to pull back stand 8 1/4" drill collar, wire line on air winch broke. Pulled drill collar into fingers with rig floor tugger and secure same.
21:00	22:00	1.00	P-DRL	BHA	PP		Handle BHA, layout Bat/Sonic and pony NMDC, drain motor and break out bit.
22:00	23:00	1.00	P-DRL	BHA	PP		Download data from RAB-8.
23:00	23:30	0.50	P-DRL	BHA	PP		Rack back stand (PDM / LWD).
23:30	0:00	0.50	PL-EVAL	SFTY	PP		Held JSA and rigged up Schlumberger wireline

24.00 = Total Hours Today

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				01-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	27.00 (m)	2,313.00 (m)	2,124.65 (m)	33

06:00 UPDATE

0000-0600

00:00 - 01:00 - Held JSA and continued rigging up Schlumberger
01:00 - 02:00 - Pick up VSP tool string.
02:00 - 03:30 - RIH with log #1, VSP to HUD 1390m, 9 attempts to pass.
03:30 - 06:00 - Log up with VSP from 1385m.

00:00 TO 24:00 Hrs ON 01 Mar 2008

Operational Comments: 600kg Air winch on monkey board is too weak to pull 8 1/4" drill collars. Monkey board requires 2 x 1500kg air winches with remonte control unit. At pressent only one winch has remonte control. Rig has no spare parts for air winch's and no spare wire rope, only one wire rope for two winches.

Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode. Hence the longer times for handling BHA's.

Drillers instrutmention on screen still locking up, this has occurred in open hole while tripping and also while drilling.

Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.

Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
6 / 1	311.2	HUGHES CHRISTENSEN	MXL-1X	6065524	3x24	1,900.00 / 27-02-2008	2-8-WT-A-4-16-CT-PR

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
6/1	15/20	60/100	3,785.41	23,442	3650	4.50	27.00	6.0	33.00	413.00	12.5

MOTOR OUTPUT

RPG:	ROTARY CURRENT: 80	TOTAL RPM: 200

LCM:

MUD PROPERTIES

MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	6	JAR S/N	09147

BHA / HOLE CONDITIONS

JAR HRS		BIT	6

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	111 (tonne)	84 (tonne)	100 (tonne)	20 (kN-m)	348.79 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	1.22	215.90	73.15		
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	0	18.89	209.55	69.85		
Cross Over	0	0.70	203.20	82.55		
Non-Mag Pony Collar	0	2.32	203.20	76.20		
Logging While Drilling	0	6.24	203.20	127.00		
Saver Sub	0	0.62	209.55	82.55		
Cross Over	0	0.47	211.07	107.95		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
Logging While Drilling	0	3.88	212.85	99.06		
Cross Over	0	0.37	203.20	76.20		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				01-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	27.00 (m)	2,313.00 (m)	2,124.65 (m)	33

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Bent Housing	0	9.50	237.74			
Tri-Cone Bit	0	0.37	311.15	95.25		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 23,442 (kPa)

HP: 0.303 (kW/cm²)

SPR

	SPM	PPSR

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SCHLUMBERGER MWD/LWD	13		APACHE	4	
HALIBURTON	2		ADA	4	
TAMBORITHA	2		CATERING	9	
SEA DRILL	18		BHI	5	
HALIBURTON (BAROID)	2		SEA DRILL SERVICES	39	

TOTAL PERSONNEL ON BOARD: 98

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	10	339	WATER, POTABLE	MT	33	116
WATER, DRILLING	MT	31	184	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				02-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	34

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	22.58 (days)	17.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 718,226	DHC: 13,510,973
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 718,226	TOTAL: 13,510,973

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS: RIH.

24 HR SUMMARY: Run log#1 VSP to 1390m. Unable to pass 1390m. Run VSP from 1385m to 66m. RIH log #2 PEX to 1390m. Unable to pass 1390m. Log up to 66m. M/U BHA and RIH.

24 HR FORECAST: Continue RIH. Log up with LWD to 1740m. POOH. Run wireline logs.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:00	1.00	PL-EVAL	SFTY	PP		Held JSA and continued rigging up Schlumberger.
1:00	2:00	1.00	PL-EVAL	LOG	PP		Pick up VSP tool string.
2:00	3:30	1.50	PL-EVAL	LOG	PP		RIH with log #1, VSP to HUD 1390m, 9 attempts to pass.
3:30	7:30	4.00	PL-EVAL	LOG	PP		Log up with VSP from 1385m - 66m
7:30	8:00	0.50	PL-EVAL	LOG	PP		Layout tool string.
8:00	10:30	2.50	PL-EVAL	LOG	CP		Pick up PEX-HRLA-MSIP tool string.
10:30	11:30	1.00	PL-EVAL	LOG	CP		Perform surface checks and install radioactive sources
11:30	16:00	4.50	PL-EVAL	LOG	CP		RIH with PEX-HRLA-MSIP to HUD at 1390m. Log SP and MSIP from 1390m - 1150m. Continue logging MSIP from 1150m - 66m.
16:00	18:00	2.00	PL-EVAL	LOG	CP		Lay out tools
18:00	18:30	0.50	PL-EVAL	LOG	PN	LP	Change out elevators to 5 1/2". Install snubbing post in conjuction with NOV changing over valves on rotating head on top drive.
18:30	19:30	1.00	PL-EVAL	LOG	PN	LP	M/U bit # 7 and handle BHA.
19:30	21:00	1.50	PL-EVAL	LOG	PN	LP	Install radio active source into LWD.
21:00	23:00	2.00	PL-EVAL	LOG	PN	LP	RIH with BHA to 346m. Shallow test MWD..
23:00	0:00	1.00	PL-EVAL	LOG	PN	LP	Continue RIH to 700m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 04:00 - Continued RIH to 1850m. Worked and wash hole from 1380m - 1383m. Worked hole from 1394m - 1396m, 1778m - 1780m, 1828m -1830m with 20k - 40k overpull.

04:00 - 05:30 - Held up at 1850m with 40k down. Work pipe and jar up with up to 100k overpull five times, pipe free. Pump 30 bbls high vis and circulate hole clean while working pipe.

Large quantities of coal back over shakers.

05:30 - 06:00 - Continue RIH to 1930m

00:00 TO 24:00 Hrs ON 02 Mar 2008

Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode. Hence the longer times for handling BHA's.

Drillers instrutmention on screen still locking up, this has occurred in open hole while tripping and also while drilling.

Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.

Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				02-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	34

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD
6 / 1	311.2	HUGHES CHRISTENSEN	MXL-1X	6065524	3x24	1,900.00 / 27-02-2008	2-8-WT-A-4-16-CT-PR

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
7/1					0			0.0	0.00	0.00	0.0

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL			

BHA / HOLE CONDITIONS

BHA	7	JAR S/N	09147	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP:

HP: 0.000 (kW/cm²)

SPR

	SPM	PPSR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				02-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	34

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL	18		HALIBURTON	2	
HALIBURTON (BAROID)	2		CATERING	9	
SCHLUMBERGER MWD/LWD	13		SEA DRILL SERVICES	39	
TAMBORITHA	2		BHI	5	
APACHE	4		ADA	4	

TOTAL PERSONNEL ON BOARD: 98

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
HELICOPTER	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	18	443	WATER, POTABLE	MT	28	88
WATER, DRILLING	MT	8	176	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				03-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	35

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	23.58 (days)	18.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 754,788	DHC: 14,265,761
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 754,788	TOTAL: 14,265,761

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS: Layout BHA.

24 HR SUMMARY: RIH to 2313m. POOH logging up from 2313m - 1740m. Pumped 15bbls 15.8ppg pill and circulated hole clean. POOH to 1057m. M/U BHA and RIH.

24 HR FORECAST: Run wireline logs. Commence plug and abandon program.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	4:00	4.00	PL-EVAL	LOG	PN	LP	Continue RIH to 1850m. Worked and washed hole from 1380m - 1383m. Worked hole from 1394m - 1396m, 1778m - 1780m, 1828m -1830m with 20k - 40k down.
4:00	5:30	1.50	PL-EVAL	LOG	PN	SP	Held up at 1850m with 40k down. Work pipe and jar up with up to 100k overpull five times, pipe free. Pump 30 bbls high vis and circulate hole clean while working pipe. Large quantities of coal back over shakers.
5:30	7:30	2.00	PL-EVAL	LOG	PN	LP	Continue RIH to 2167m.
7:30	9:30	2.00	PL-EVAL	LOG	PN	LP	Wash to bottom from 2167m to 2313. 4m fill on bottom.
9:30	10:00	0.50	PL-EVAL	LOG	PN	LP	Pump and displace 15 bbls of high vis 15.8 ppg pill from string.
10:00	20:30	10.50	PL-EVAL	LOG	PN	LP	POOH logging from 2313m to 1740m at 120m/hr, 1100gpm. 60rpm. 1 - 6kft-lb tq. At 2146m pumped 15 bbls 15.8 ppg high vis pill. Tight spots at 2194 - 2193m, 2188m, 2182m, 2175m - 2172, 2166m, 2082m, 2006m, 1955m - 1953m, 1945m, 1847m, 1842m, 1837m. Average 5-10k overpull with drillstring torquing up.
20:30	21:30	1.00	PL-EVAL	LOG	PN	LP	At 1740m pumped 15 bbls 15.8ppg high vis pill and circulated hole clean. Large quantities of coal back over shakers.
21:30	0:00	2.50	PL-EVAL	LOG	PN	LP	Flow check (static). POOH wet from 1740m to 1440m. Pump and displace slug. Continue POOH from 1440m to 1057m

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 02:30 - Continue POOH from 1057 to BHA.
02:30 - 03:00 - Retreive radioactive source from LWD.
03:00 - 04:00 - Lay out ADN-8.
04:00 - 05:00 - Unable to open elevators while laying out MWD. Remove link tilt pistons from bails.
05:00 - 06:00 - Continue layout MWD, RAB-8, Motor.

00:00 TO 24:00 Hrs ON 03 Mar 2008
Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's. Drillers instrutmention on screen still locking up. This has occurred in open hole while tripping and also while drilling.
Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.
Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				03-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	35

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

LCM: | MUD PROPERTIES | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

					PP		DAILY COST	0	CUM COST	0	%OIL		

BHA	7	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
BHI	2		SEA DRILL SERVICES	40	
APACHE	4		SEA DRILL	17	
SCHLUMBERGER MWD/LWD	13		HALIBURTON	2	
ADA	5		TAMBORITHA	2	
HALIBURTON (BAROID)	2		WEATHERFORD	1	
CATERING	9				

TOTAL PERSONNEL ON BOARD: 97

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
HELICOPTER	
PACIFIC VALKYRIE	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				03-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	35

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	11	432	WATER, POTABLE	MT	19	169
WATER, DRILLING	MT	77	99	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	3.00/ /12	/ /120.00	/	/240.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				04-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	36

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	24.58 (days)	19.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 658,690	DHC: 14,924,451
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 658,690	TOTAL: 14,924,451

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM** 323.36°	(sg)		

CURRENT OPERATIONS: RIH with open ended drill pipe to 2310m.

24 HR SUMMARY: POOH, layout MWD tool. R/U Schlumberger and Run log #2 MDT to HUD at 1499m, log as per program. Run log #4 to HUD 1500m and take shots as per program. POOH with wire line.

24 HR FORECAST: Run VSI logs in drill pipe. POOH wire line and rig down same. Commence P&A program.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	2:30	2.50	PL-EVAL	LOG	PN	LP	Continued POOH from 1057m to BHA.
2:30	3:00	0.50	PL-EVAL	LOG	PN	LP	Retreived radioactive source from LWD.
3:00	4:00	1.00	PL-EVAL	LOG	PN	LP	Layed out ADN-8.
4:00	5:00	1.00	PL-EVAL	LOG	PN	RO	Unable to open elevators while laying out MWD. Removed link tilt pistons from bails.
5:00	6:30	1.50	PL-EVAL	LOG	PN	LP	Continued layout MWD, RAB-8, Motor.
6:30	8:00	1.50	PL-EVAL	LOG	PP		Held JSA and rigged up Schlumberger wireline equipment and MDT tools.
8:00	8:30	0.50	PL-EVAL	LOG	PP		Surface tested and calibrate MDT equipment.
8:30	10:00	1.50	PL-EVAL	LOG	PP		Run in hole with Schlumberger MDT to total depth 1499m.
10:00	17:00	7.00	PL-EVAL	LOG	PP		Logging with MDT.
17:00	18:00	1.00	PL-EVAL	LOG	PP		Layed down Schlumberger MDT tools.
18:00	20:00	2.00	PL-EVAL	LOG	CP		Make up Schlumberger CST tool string.
20:00	23:30	3.50	PL-EVAL	LOG	CP		Run in hole with CST tool string unable to pass 1500m . Take shots as per program Shot points at 1477.2m . 1448.1m . 1438.4m .1417.5m . 1410.4m . 1406.3m . 1379.3m . 1374.2m . 1354.1m . 1350m . 1344.4m . 1331m . 1329.5m . 1329m . 1328.5m . 1327.3m . 1319.2m . 1314.4m . 1303m . 1298.2m . 1295.2m . 1288m . 1276.8m . 1264.5m . 1262.9m . 1261.3m . 1259.3m . 1258.1m . 1256.4m . 1250m
23:30	0:00	0.50	PL-EVAL	LOG	CP		POOH with schlumberger CST tools

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 01:00 - Continued POOH with CST tool and layed out same. 30 shots fired. 29 shots recovered.
01:00 - 01:30 - Rigged down Schlumberger and clear rig floor.
01:30 - 02:30 - Change out elevators, picked up 6 jt's drill pipe, make up x/o, double box sub to drill pipe.
02:30 - 06:00 - RIH with open end drill pipe.

00:00 TO 24:00 Hrs ON 04 Mar 2008

Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's.

Drillers instrutmention on screen still locking up. This has occurred in open hole while tripping and also while drilling.
Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.

Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

Operational Comments: Note: Fuel figures reflect reconciliation of input error on previous report.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				04-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	36

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24 Hr PROG	24 HR ROP	CUM HRS	CUM PROG	CUM ROP
7/1			4,163.95	22,063	0				0.00	0.00	0.0

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

					PP		DAILY COST	0	CUM COST	0	%OIL	

BHA	7	JAR S/N	09147	BHA / HOLE CONDITIONS	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

MUD PUMPS/HYDRAULICS

	STROKE	SPM	LINER	FLOW
# 1				
# 2				
# 3				

SPP: 22,063 (kPa)

HP: 0.000 (kW/cm²)

SPR

	SPM	PPSR

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				04-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	36

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
BHI	2		APACHE	2	
ADA	4		CATERING	9	
HALIBURTON	2		WEATHERFORD	4	
HALIBURTON (BAROID)	2		SEA DRILL SERVICES	40	
PROTECH	1		SEA DRILL	17	
SCHLUMBERGER MWD/LWD	13		TAMBORITHA	2	

TOTAL PERSONNEL ON BOARD: 98

SUPPORT CRAFT

TYPE	REMARKS
HELICOPTER	
PACIFIC WRANGLER	
HELICOPTER	
MV BATTLER	
PACIFIC VALKYRIE	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	11	421	WATER, POTABLE	MT		169
WATER, DRILLING	MT		99	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	1.80/ /12	/ /120.00	/	/100.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				05-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	37

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	25.58 (days)	20.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 610,883	DHC: 15,535,334
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 610,883	TOTAL: 15,535,334

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS: Cement plug #1 at 1270m - 1210m.

24 HR SUMMARY: RIH DP , rig up schlumberger , log with VSP tools..

24 HR FORECAST: Plug and abandon well.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:00	1.00	PL-EVAL	LOG	PP		Continued POOH with CST tool and layed out same. 30 shots fired. 29 shots recovered.
1:00	1:30	0.50	PL-EVAL	LOG	PP		Rigged down Schlumberger and clear rig floor.
1:30	2:30	1.00	PL-EVAL	TRIPBIT	PP		Change out elevators, picked up 6 jt's drill pipe, make up x/o, double box sub to drill pipe.
2:30	8:00	5.50	PL-EVAL	TRIPBIT	PP		RIH with open end drill pipe to 1927m. Held up with 20k down.
8:00	8:30	0.50	PL-EVAL	RMWASH	PN	LP	Washed down from 1927m to 1951m with 180spm at 800psi.
8:30	9:30	1.00	PL-EVAL	TRIPBIT	PN	LP	Continued to RIH from 1951m to 2310m.
9:30	10:30	1.00	PL-EVAL	CIRC	PN	LP	Circulate hole clean. Concurrent operation change out elevators and bails in readiness for logging.
10:30	13:00	2.50	PL-EVAL	LOG	PN	LP	Install schlumberger sheave at crown while circulating. Held toolbox meeting and conduct JSA prior to job.
13:00	14:30	1.50	PL-EVAL	LOG	PN	LP	Picked up Schlumberger VSP tools.
14:30	21:00	6.50	PL-EVAL	LOG	PP		Schlumberger RIH and conduct VSP logging as per program.
21:00	22:00	1.00	PL-EVAL	LOG	PN	LP	Layed down Schlumberger VSP tool string.
22:00	23:30	1.50	PL-EVAL	LOG	PN	LP	Riggged down Schlumberger wireline and remove sheave from crown. Held pre job safety meeting.
23:30	0:00	0.50	PL-EVAL	LOG	PN	DW	Draworks fault, no control to draworks , troubleshoot draworks B encoder fault.

24.00 = Total Hours Today

Daily Drilling Report

WELL NAME				DATE
WASABI-1				05-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	37

06:00 UPDATE

0000-0600

00:00 - 00:30 - Trouble shooting problem with draworks, fault appears to be encoder on draworks "B" drive motor.
00:30 - 01:00 - Unable to use 500 ton long bails as link tilt piston bent and unable to attach same to bails. Changed out bails and elevators.
01:00 - 03:00 - POOH.
03:00 - 03:30 - Fire alarm , secure well, rig to muster stations.
Fire alarm was false alarm caused by cement dust in "P" tank area.
03:30 - 05:00 - Continue to POOH to 1330m.
05:00 - 05:30 - At 1330m pumped and displaced 30 bbls hi-vis pill.
05:30 - 06:00 - POOH 1330m to 1270m and rig up for cement plug #1 at 1270m - 1210m.

00:00 TO 24:00 Hrs ON 05 Mar 2008
Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's.

Drillers instrutmention on screen still locking up. This has occurred in open hole while tripping and also while drilling.
Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.

Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

Operational Comments: Note: Fuel figures reflect reconciliation of input error on previous report.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	7	JAR S/N	09147	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				05-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	37

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
CATERING	9		SEA DRILL	17	
SEA DRILL SERVICES	38		SCHLUMBERGER MWD/LWD	8	
APACHE	3		DRIL-QUIP	2	
HALIBURTON	2		HALIBURTON (BAROID)	2	
TAMBORITHA	2		BHI	2	
Q-TECH	1		ADA	4	
WEATHERFORD	4				

TOTAL PERSONNEL ON BOARD: 94

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
HELICOPTER	
MV BATTLER	
PACIFIC VALKYRIE	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		101
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	20	401	WATER, POTABLE	MT	21	208
WATER, DRILLING	MT	19	170	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	1.80/ /12	/ /120.00	/	/100.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				06-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	38

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	26.58 (days)	21.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 588,915	DHC: 16,124,249
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 588,915	TOTAL: 16,124,249

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS: Nippling down diverter and Bop's.

24 HR SUMMARY: RIH and set cement plugs, 1270-1210m, 1150m - 887m, 121m - 76m. Test cement plug #2 to 1350 psi 10 minutes good test.

24 HR FORECAST: Nipple down Bops, retrieve 20"casing and layout same. Prepare rig for rig move.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	0:30	0.50	P-DRL	TRIPBIT	PN	RO	Trouble shooting problem with draworks, fault appears to be encoder on draworks "B" drive motor.
0:30	1:00	0.50	P-DRL	TRIPBIT	PN	RO	Unable to use 500 ton long bails as link tilt piston bent and unable to attach same to bails. Changed out bails and elevators.
1:00	3:00	2.00	P-DRL	TRIPBIT	PP		POOH.
3:00	3:30	0.50	P-DRL	TRIPBIT	PN	E	Fire alarm , secure well, rig to muster stations. Fire alarm was false alarm caused by cement dust in "P" tank area.
3:30	6:30	3.00	P-DRL	TRIPBIT	PP		Continue to POOH to 1330m.
6:30	7:30	1.00	P-DRL	CIRC	PP		Circulate and condition mud, spot 30 bbls Hi/vis pill at 1330m. POOH to 1270m.
7:30	9:00	1.50	P-CMT	RURDCU	PP		Rig up cement head, test lines 1000psi, mix and pump cement 47 bbls "G" cement. Plug #1 from 1270m - 1210m.
9:00	9:30	0.50	P-CMT	BPLUG	PP		Rig down cement head and POOH from 1330m to 1150m.
9:30	10:00	0.50	P-CMT	CIRC	PP		Reverse circulate 2 x drill pipe volumes, no cement returns.
10:00	10:30	0.50	P-CMT	CIRC	PP		Spot 202 bbls Hi/vis pill at 1150m.
10:30	11:30	1.00	P-CMT	CIRC	PP		POOH from 1150m to 887m.
11:30	12:30	1.00	P-CMT	RURDCU	PP		Rig up cement head, test lines 1000psi, mix and pump cement 44 bbls "G" cement. Plug #2 from 887m - 797m.
12:30	13:00	0.50	P-CMT	CIRC	PP		POOH from 887m to 737m.
13:00	13:30	0.50	P-CMT	CIRC	PP		Reverse circulate 2 x drill pipe volumes, no cement returns.
13:30	14:00	0.50	P-CMT	CIRC	PP		Pipe back flowing , make up TDS and circulate and balance mud.
14:00	15:30	1.50	P-CMT	RIGSER	PP		POOH from 737m to surface.
15:30	16:00	0.50	P-CMT	RIGSER	PP		Held JSA and tidy rig floor.
16:00	17:30	1.50	P-CMT	RIGSER	PN	RO	Wait on rig , unable to latch elevator on stand of drill collars at monkey board due to bent link tilt piston on top drive.
17:30	18:30	1.00	P-CMT	RIGSER	PP		Lay down BHA 1 x drilling jar , 2 x 8 1/4" drill collars.
18:30	19:00	0.50	P-CMT	RIGSER	PP		RIH open end drill pipe to 121m.
19:00	20:00	1.00	P-CMT	WOC	PP		Flush diverter system with sea water.
20:00	21:00	1.00	PL-EVAL	HLPREP	PP		Pressure test cement plug #2 to 1350psi (500 psi over Leak Pressure at 13 3/8" casing shoe.) for10 minutes, good test. Note: the DPI (David Wong) approved pressure testing only, i.e. no tag for this plug.
21:00	22:30	1.50	PL-EVAL	HLPREP	PP		Rig up cement head, test lines 1000psi, mix and pump cement 50.5 bbls "G" cement. Plug #3 from 121m - 76m.
22:30	23:00	0.50	P-CMT	RURDCU	PP		Lay down cement head and POOH from 121m to 75m.
23:00	0:00	1.00	P-CMT	CIRC	PP		Reverse circulate 2 x drill pipe volumes, no cement returns. Continue resverse circulate

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				06-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	38

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
							annulus to sea water.

24.00 = Total Hours Today

06:00 UPDATE

0000-0600

00:00 - 01:00 - POOH from 76m.
01:00 - 02:30 - Make up 20" casing cutter and RIH.
02:30 - 03:00 - Cut 20" casing at 67m RKB.
03:00 - 04:00 - POOH with casing cutter assy and rack in derrick.
04:00 - 04:30 - Make up running tool, retreive wear bushing, layout running tool. Wear on aft lip of wear bushing.
04:30 - 06:00 - Nipple down and lay out diverter.

00:00 TO 24:00 Hrs ON 06 Mar 2008
Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's.
Drillers instrutmention on screen still locking up. This has occurred in open hole while tripping and also while drilling.
Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.
Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

				PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	7	JAR S/N	09147	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				06-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	38

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
CATERING	9		BHI	2	
HALIBURTON (BAROID)	2		SEA DRILL SERVICES	40	
FURGO	2		Q-TECH	1	
DRIL-QUIP	2		HALIBURTON	2	
WEATHERFORD	4		SCHLUMBERGER MWD/LWD	3	
SEA DRILL	13		TAMBORITHA	2	
APACHE	2		ADA	4	

TOTAL PERSONNEL ON BOARD: 88

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC VALKYRIE	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		81
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	7	394	WATER, POTABLE	MT	20	188
WATER, DRILLING	MT	40	130	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	1.80/ /12	/ /120.00	/	/100.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				07-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	39

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	27.58 (days)	22.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 574,528	DHC: 16,698,777
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 574,528	TOTAL: 16,698,777

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY					LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM** 323.36°	(sg)		

CURRENT OPERATIONS: Skid cantilever into transit position.

24 HR SUMMARY: Cut casing at 67m, POOH with cutting assy. Nippled down diverter system, nipple down and racked Bop's. Recovered wellhead and 20" casing . preparing rig for skidding and jacking.

24 HR FORECAST: Skid rig in and jack down, tow to new location.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	1:00	1.00	P-CMT	TRIPBIT	PP		POOH from 76m.
1:00	2:30	1.50	P-CMT	TRIPBIT	PP		Make up 20" casing cutter and RIH.
2:30	3:00	0.50	P-CSG	CSGRP	PP		Cut 20" casing at 67m RKB.
3:00	4:00	1.00	P-CSG	TRIPBIT	PP		POOH with casing cutter assy and rack in derrick.
4:00	5:00	1.00	P-NUP	WLHEAD	PP		Make up running tool, retreived wear bushing, layed out running tool. Wear on aft lip of wear bushing.
5:00	11:00	6.00	P-NUP	WLHEAD	PP		Rigged to pull diverter, lay out diverter insert, lay out divrter overshot ,diverter asssy/bell nipple. Removed choke line, lift and racked back Bop's in set back area.
11:00	11:30	0.50	P-NUP	WLHEAD	PP		Layed out Bop's slings, make up wellhead retreiving tool.
11:30	12:00	0.50	P-NUP	WLHEAD	PP		Engaged wellhead retreiving tool to wellhead.
12:00	12:30	0.50	P-NUP	WLHEAD	PP		Removed side out let valves from wellhead.
12:30	13:00	0.50	P-NUP	WLHEAD	PP		Pull wellhead to rigfloor and rack back 1 std drill pipe.
13:00	13:30	0.50	P-CSG	CSGRP	PP		Cleared rig floor snd conduct JSA for laying down wellhead and 20" casing.
13:30	17:00	3.50	P-CSG	CSGRP	PP		Layed down wellhead, running tool , 20" casing. Unable to break out one joint, cut of same and lay down.
17:00	17:30	0.50	P-CSG	CSGRP	PP		Rigged down weatherford casing equipment.
17:30	18:30	1.00	P-CSG	RIGSER	PP		Breaked down and layout casing cutter assy.
18:30	20:00	1.50	R-MOB-DEMOB	MOB	PP		Rigged up Bop slings, Remove work platform from Texas deck.
20:00	21:30	1.50	R-MOB-DEMOB	MOB	PP		Removed CTU from from Texas deck and set on stump.
21:30	0:00	2.50	R-MOB-DEMOB	MOB	PP		Hanged choke line, clear texas deck, remove stair's from Texas deck.

24.00 = Total Hours Today

Daily Drilling Report

WELL NAME				DATE
WASABI-1				07-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	39

06:00 UPDATE

0000-0600 00:00 - 04:30 - Continued preparing rig package for skidding into transit position.
Install slings from blocks to Texas deck, removed rig floor service lines.
04:30 - 06:00 - Skidded in 3 feet and remove gumbo shaker overboard line.

00:00 TO 24:00 Hrs ON 07 Mar 2008
Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's.
Drillers instrutmention on screen still locking up. This has occurred in open hole while tripping and also while drilling.
Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.
Operational Comments: Jar hours (serial number 09147) = 145.5 hours.
Operational Comments: ROV carried out sea bed survey, no debris etc on sea bed.

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	7	JAR S/N	09147	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				07-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	39

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
ADA	4		BHI	1	
HALIBURTON (BAROID)	1		TAMBORITHA	2	
SCHLUMBERGER MWD/LWD	1		APACHE	2	
CATERING	9		WEATHERFORD	4	
FURGO	2		DRIL-QUIP	2	
SEA DRILL SERVICES	40		HALIBURTON	2	
SEA DRILL	13				

TOTAL PERSONNEL ON BOARD: 83

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC VALKYRIE	

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		81
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	10	384	WATER, POTABLE	MT	40	158
WATER, DRILLING	MT		130	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	1.80/ /12	/ /120.00	/	/100.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				08-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	40

RIG NAME NO	FIELD NAME	AUTH TMD	PLANNED DOW	DOL	DFS / KO	WATER DEPTH
WEST TRITON			15.98 (days)	29.58 (days)	24.04 (days)	27.00 (m)

SPUD DATE	Rig Release	WELL SUPERVISOR	OIM	PBTMD
09-02-2008		BILL OPENSHAW / RICHARD REDDINGS		

REGION	DISTRICT	STATE / PROV		RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE	VICTORIA			

AFE # 067 08E43	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
DESCRIPTION:	DHC: 11,816,036	DHC: 380,376	DHC: 17,079,153
	DCC:	DCC:	DCC:
	CWC:	CWC:	CWC:
	Others:	Others:	Others:
	TOTAL: 11,816,036	TOTAL: 380,376	TOTAL: 17,079,153

DEFAULT DATUM / ELEVATION	LAST SAFETY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
ROTARY TABLE / 38.00 (m)				

LAST SURVEY						LAST CSG SHOE TEST (EMW)	LAST CASING	NEXT CASING
MD	2,272.78 (m)	**INC**	47.76°	**AZM**	323.36°	(sg)		

CURRENT OPERATIONS:

24 HR SUMMARY: Skidded in jacked down , commenced tow a 16.00 hr's

24 HR FORECAST: Operation finished. Move to Coelacanth-1.

OPERATION SUMMARY

From	To	HRS	Phase	Operation	PT/NPT	NPT CODES	ACTIVITY SUMMARY
0:00	4:30	4.50	R-MOB-DEM OB	MOB	PP		Continued preparing rig package for skidding into transit position. Install slings from blocks to Texas deck, removed rig floor service lines.
4:30	6:00	1.50	R-MOB-DEM OB	MOB	PP		Skidded in 3 feet and remove gumbo shaker overboard line.
6:00	9:30	3.50	R-MOB-DEM OB	MOB	PP		Skid cantilever in and secure . Secure texas deck
9:30	11:00	1.50	R-MOB-DEM OB	MOB	PP		Continue sea fastening , secure drill pipe and drill collars in derrick . Hang of TDS Held pre job PJSA
11:00	11:30	0.50	R-MOB-DEM OB	MOB	PP		Hold pre rig move meeting with all crews
11:30	12:00	0.50	R-MOB-DEM OB	MOB	PP		Commence jacking rig down
12:00	12:30	0.50	R-MOB-DEM OB	MOB	PP		Held pre job safety meeting for leg jacking operations
12:30	13:00	0.50	R-MOB-DEM OB	MOB	PP		Continue with rig jacking operations
13:00	13:30	0.50	R-MOB-DEM OB	MOB	PP		Reposition deepwater at bow leg and port leg
13:30	14:00	0.50	R-MOB-DEM OB	MOB	PP		Continue jacking operations to 2 metre draft level
14:00	15:00	1.00	R-MOB-DEM OB	MOB	PP		Conduct water integrity test
15:00	16:00	1.00	R-MOB-DEM OB	MOB	PP		Continue to jack legs clear of seabed and comence tow

16.00 = Total Hours Today

06:00 UPDATE

0000-0600 00:00 TO 24:00 Hrs ON 08 Mar 2008

Operational Comments: Interface between IBOP and PH rotating requires attention as at present it is in creep mode, hence the longer times for handling BHA's.

Drillers screen still locking up. This has occurred in open hole while tripping and also while drilling.

Link tilt activating cylinder bent requires replacing. This is increasing the stress on the other cylinder. The latching and unlatching of the elevators is affected by this bent cylinder thus slowing down BHA handling times and tripping times.

Operational Comments: Jar hours (serial number 09147) = 145.5 hours.

Operational Comments: ROV carried out sea bed survey, no debris etc on sea bed.

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				08-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	40

BIT DATA

BIT / RUN	SIZE (mm)	MANUFACTURER	TYPE	SERIAL NO	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
7 / 1	311.2	SMITH	XR+CPS	PF 5796	1x21, 3x24	2,313.00 / 02-03-2008	0-0-NO-A-0-I-NO-TD

MUD PROPERTIES

LCM: | MUD TYPE:

VIS (s/l)	PV/YP (cp) / (Pa)	GELS (Pa)	WL/HTHP (ml/30 min)	FC/T.SOL (mm) / (%)	OIL/WAT (%)	% SAND/MBT (%)/(sg)	pH/Pm (mL)	Pf/Mf (mL)	Cl (ppm)	Ca (ppm)	H2S (%)	KCL (ppm)	LGS (%)

PP		DAILY COST	0	CUM COST	0	%OIL	

BHA / HOLE CONDITIONS

BHA	7	JAR S/N	09147	JAR HRS		BIT	7

BHA WT BELOW JARS	STRING WT UP	STRING WT DN	STRING WT ROT	TORQUE/UNITS	BHA LENGTH
(tonne)	(tonne)	(tonne)	(tonne)	(kN-m)	346.56 (m)

ITEM DESCRIPTION	NO JTS	LENGTH	O.D	I.D	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	0	281.99	184.15	82.55		
Cross Over	0	0.91	201.17	82.30		6 5/8 REG
Drilling Jar	0	10.17	211.07	76.20		
Drill Collar	2	18.89	203.20	63.50		7 H-90
Cross Over	0	0.70	201.17	82.30		6 5/8 REG
MWD Tool	0	6.37	203.20	76.20		6 5/8 REG
Crossover	0	0.34	214.38	76.20		
Crossover	0	0.47	211.07	107.95		
Saver Sub	0	0.47	209.55	107.95		
MWD Tool	0	7.56	212.85	129.79		
Saver Sub	0	0.47	214.38	107.95		
MWD Tool	0	3.88	203.20	82.55		6 5/8 REG
Cross Over	0	0.91	201.17	76.20		6 5/8 REG
Non-Mag Pony Collar	0	2.90	206.50	76.20		
Float Sub	0	0.65	203.20	82.55		
Positive Displacement Motor	0	9.50	241.30	95.25		7 5/8 REG
Tri-Cone Bit	0	0.37	311.15	95.25		

PERSONNEL DATA

COMPANY	QTY	HRS	COMPANY	QTY	HRS
SEA DRILL SERVICES	40		FURGO	2	
CATERING	9		BHI	1	
SCHLUMBERGER MWD/LWD	1		SEA DRILL	13	
DRIL-QUIP	2		HALIBURTON	2	
APACHE	2		HALIBURTON (BAROID)	1	
WEATHERFORD	4		TAMBORITHA	2	
ADA	4				

TOTAL PERSONNEL ON BOARD: 83

SUPPORT CRAFT

TYPE	REMARKS
PACIFIC WRANGLER	
MV BATTLER	
PACIFIC VALKYRIE	

APACHE CORPORATION

Daily Drilling Report

WELL NAME				DATE
WASABI-1				08-03-2008
API #	**24 HRS PROG**	**TMD**	**TVD**	**REPT NO**
OH	0.00 (m)	2,313.00 (m)	2,124.65 (m)	40

MATERIALS/CONSUMPTION

ITEM	UNITS	USAGE	ON HAND	ITEM	UNITS	USAGE	ON HAND
BARITE BULK	MT		153	CEMENT	MT		81
BENTONITE	MT		26	BARACARB	MT		0
FUEL OIL	MT	10	374	WATER, POTABLE	MT	20	138
WATER, DRILLING	MT		130	BASE OIL	bbl		0
BRINE	bbl		0				

WEATHER

TIME	SWELL HT/DIR/PER	WAVE HT/DIR/PER	WIND SPEED/DIR	GUST SPEED/DIR	TEMP
00:00	1.80/ /12	/ /120.00	/	/100.00	

DECKLOG

MAX VDL	ACT VDL	AVG VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S BOARD)
			1.20	0.50	1.30

MUD INVENTORY

ITEM	UNIT	USAGE	Day Cost ($)	ON HAND

DAILY GEOLOGICAL REPORT

Date:	13 February 2008	**Rig:**	West Triton
Report Number:	4	**Bit Diameter:**	No bit in hole
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	Wasabi-1 not spud	**Integrity Test:**	N/A
Days From Spud:	0	**Mud Weight:**	Mud conditioning in progress
Depth @ 0600 Hrs:	0.0 mMDRT -0.0 mTVDAHD	**Mud Type:**	Sea water w/ Hi-Vis PHG sweeps
Lag Depth:	0.0 mMDRT	**Mud Chlorides:**	Mud conditioning in progress
Last Depth:	N/A		
Progress:	0 m		
Water Depth:	37.0 m	**Last Survey:**	N/A
RT:	75.0 m	**Deviation:**	

OPERATIONS SUMMARY

24 HOUR SUMMARY: Held 100% pre-load for total 6 hours, dumped pre-load, checked leg penetrations and jacked up to operational height. Skidded out cantilever, rigged up texas deck and service lines. Commenced mixing Hi-Vis mud and picking up 5 1/2" drill pipe.

NEXT 24 HOURS: Pick up drill pipe, make up 660 mm BHA, make up and rack back well head and running tool, continue to mix Hi-Vis mud, off load equipment from Pacific Wrangler and spud well.

CURRENT OPERATION @ 06:00 HRS (13-Feb-2008): Continue to pick up 5 1/2" drill pipe, mix Hi-Vis mud.

GEOLOGICAL SUMMARY

REMARKS
This is the first Daily Geological Report for Wasabi-1and is numbered as DGR04 in keeping with the Daily Drilling Report.

The West Triton came on hire for Wasabi-1 when the rig was 1 km from the proposed location at 21:00 hrs, 10/02/2008. The rig was pinned at a wellhead location of;

Latitude: 38 deg 29' 18.162" S
Longitude: 147 deg 15' 49.1179" E
Easting: 522 992.896m E
Northing: 5 739 963.235mN

This is 15.01 m at 185.6 deg (T) from the intended location. The final rig heading is 182.53 deg.

Rig elevation:

RT to AHD	75.0 m
Water Depth	37.0 m
RT to Seabed	112.0 m

The rig was pre-loaded and jacked up to the final drilling elevation of 75.0 m above AHD. The cantilever deck was skidded out and the texas deck installed.

WELLSITE GEOLOGIST
Adam Cruickshank

DAILY GEOLOGICAL REPORT

Date:	14 February 2008	**Rig:**	West Triton
Report Number:	5	**Bit Diameter:**	No bit in hole
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	Wasabi-1 not spud	**Integrity Test:**	N/A
Days From Spud:	N/A	**Mud Weight:**	Mud conditioning in progress
Depth @ 0600 Hrs:		**ECD:**	
		Mud Type:	Sea water w/ Hi-Vis PHG sweeps
Lag Depth:		**Mud Chlorides:**	Mud conditioning in progress
Last Depth:	N/A		
Progress:	0 m		
Water Depth:	37.0 m	**Last Survey:**	N/A
RT:	75.0 m	**Deviation:**	

OPERATIONS SUMMARY

24 HOUR SUMMARY: Picked up and made up 5 1/2" drill pipe and continued mixing hi-vis mud.
Made up and racked back well head and running tool.
20" casing and ancillary equipment discharged from Pacific Wrangler.

NEXT 24 HOURS: Continue to make up 5 1/2" drill pipe, 5 1/2" HWDP and 8" collars. Spud well with 26" bit to 135mRT, POH rack back BHA and break off bit. Make up 16" bit and BHA with LWD. Discharge 13 3/8" casing and additional equipment from Pacific Wrangler.

CURRENT OPERATION @ 06:00 HRS (14-Feb-2008): Making up and racking back 5 1/2" drill pipe.

GEOLOGICAL SUMMARY

REMARKS
1500bbls sweep mud and 1500bbls displacement mud mixed and ready to go. Visean Engineer waiting on LWD to complete rig up prior to system testing. LWD waiting on equipment from supply boat to complete rig up. BHI mudloggers are rigged up.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	15 February 2008	**Rig:**	West Triton
Report Number:	6	**Bit Diameter:**	660 mm (26")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	0.3	**Mud Weight:**	1.03 sg
Depth @ 0600 Hrs:	135.0 mMDRT -97.0 mTVDAHD	**ECD:** **Mud Type:**	SPUD / PHG Sweeps
Lag Depth:	135.0 mMDRT	**Mud Chlorides:**	
Last Depth:	N/A		
Progress:	135.0 m		
Water Depth:	28.0 m	**Last Survey:**	No surveys taken
RT:	38.0 m	**Deviation:**	Inc.° Az.°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to make up 5 1/2" drill pipe and collars. Spud Wasabi-1 @ 23.00 hrs 14/02/08. Drilled to 135.0 mMDRT.

NEXT 24 HOURS: Circulate hole clean & displace to PHG mud. POH, break off 660mm (26") bit and M/U 406mm (16") bit with BHA containing LWD. RIH and drill ahead 406 mm (16") hole from 135.0 mMDRT.

CURRENT OPERATION @ 06:00 HRS (15-Feb-2008): Circulating 660 mm (26") hole clean at section TD 135.0 mMDRT

GEOLOGICAL SUMMARY

REMARKS

Picked up and racked back diverter, made up 20" casing running tool and well head, dummy run well head and checked land out in CTU, racked back well head and running tool. A 660 mm (26") bit was made up to the BHA and run in hole, tagging the seabed at 66.0 mMDRT.

The 660mm hole was drilled to 135.0 mMDRT with Hi/Vis PHG sweeps.

WELLSITE GEOLOGISTS

Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	16 February 2008	**Rig:**	West Triton
Report Number:	7	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	1.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	359.0 mMDRT -320.8 mTVDAHD	**ECD:** **Mud Type:**	 SPUD / PHG Sweeps
Lag Depth:	359.0 mMDRT	**Mud Chlorides:**	1100.00 mg/L
Last Depth:	135.0 mMDRT		
Progress:	224.0 m		
Water Depth:	27.2 m	**Last Survey:**	229.75 mMDRT
RT:	38.8 m	**Deviation:**	Inc. 0.10° Az. 88.12°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Circulated hole and displaced to PHG mud. POOH and M/U 406mm (16") bit with BHA and LWD tools. RIH and drilled ahead 406mm (16") hole from 135.0 to 359.0 mMDRT.

NEXT 24 HOURS: Drill ahead 406mm surface hole to section TD (~900.0 mMDRT). Circulate hole clean, displace to mud and POOH to surface. Run and cement 508mm x 340mm surface casing.

CURRENT OPERATION @ 06:00 HRS (16-Feb-2008): Drilling ahead 406mm (16") surface hole at 359.0 mMDRT per hour.

GEOLOGICAL SUMMARY

MWD
Incorrect BHA tally given to Schlumberger MWD/LWD, hence tool offsets incorrect by +0.83m. All data will be adjusted at section TD.

REMARKS
At section TD the hole was circulated clean and displaced to 1.03 sg pre hydrated gel / sea water (150 bbls). The 660mm (26") bit and drilling assembly was pulled from the hole and laid out. A 406 mm (16") drilling assembly was made up consisting of a DBS rock bit and LWD tools for the acquisition of gamma ray, sonic and directional data. The assembly was then run in hole and shallow tested prior to drilling ahead to 359.0 mMDRT.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	17 February 2008	**Rig:**	West Triton
Report Number:	8	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	2.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -835.0 mTVDAHD	**ECD:** **Mud Type:**	 SPUD / PHG Sweeps
Lag Depth:	862.0 mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	359.0 mMDRT		
Progress:	503.0 m		
Water Depth:	27.2 m	**Last Survey:**	818.74 mMDRT
RT:	38.8 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 406 mm (16") hole from 359.0 m to 862.0 mMDRT. Attempts to downlink to LWD tool failed and abandoned. Performed two stand wiper trip and displaced hole to mud. Commenced POOH

NEXT 24 HOURS: Continue to POOH to surface. Retrieve LWD data. Rack back 406mm BHA for wiper trip if required. Run and cement 508mm x 340mm surface casing.

CURRENT OPERATION @ 06:00 HRS (17-Feb-2008): Displacing hole to 1.15sg gel mud

GEOLOGICAL SUMMARY

MWD
Incorrect BHA tally given to SLB, tool offsets incorrect by +0.83m. All data to be adjusted prior to handover. SLB experienced problems with tool downlink due to difficulties with pump controls.

REMARKS
Drilled ahead 406 mm (16") hole from 359.0 mMDRT to TD at 862.0 mMDRT. Attempts to downlink to LWD tool failed and reprogramming was abandoned. A two stand wiper trip was performed and the hole was wept with pre-hydrated gel displaced with seawater. The hole was then displaced with 1.15sg pre-hydrated gel.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	18 February 2008	**Rig:**	West Triton
Report Number:	9	**Bit Diameter:**	406 mm (16”)
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	3.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -835.0 mTVDAHD	**ECD:**	1.08 sg
		Mud Type:	SPUD / PHG Sweeps
Lag Depth:	862.0 mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	862.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	818.74 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to displace to 1.15sg gel mud and POH, rack back BHA and lay out MWD/LWD. Rig up for running casing. Commence RIH 340mm (13 3/8") casing. Hung up at 139.0 mMDRT, POH 340mm casing and commence making up and RIH BHA for wiper trip.

NEXT 24 HOURS: Continue to make up 406mm (16") BHA and RIH for wiper trip to TD at 862.0 mMDRT. Check fill and circulate if necessary. POH, rack back BHA and rig up and run 508mm x 340mm (with cross over) casing.

CURRENT OPERATION @ 06:00 HRS (18-Feb-2008): Making up BHA with 406mm (16") bit for wiper trip.

GEOLOGICAL SUMMARY

MWD
LWD recorded sonic data downloaded once tools laid out. Data has been forwarded to Schlumberger town base for further processing.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	19 February 2008	**Rig:**	West Triton
Report Number:	10	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	4.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -835.0 mTVDAHD	**ECD:**	1.08 sg
		Mud Type:	SPUD / PHG Sweeps
Lag Depth:	862.0 mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	862.0 m MDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	863.00 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Ran in hole with 406 mm BHA for wiper trip. POOH and commenced running casing.

NEXT 24 HOURS: Continue to RIH 508mm (20") casing to landing point. RIH inner string. Rig up and cement casing. Start nipple up of BOP's.

CURRENT OPERATION @ 06:00 HRS (19-Feb-2008): Running in 508mm (20") casing. 340mm (13 3/8") casing shoe @ 739.0 m to 774.0 mMDRT.

GEOLOGICAL SUMMARY

LITHOLOGY
No new formation drilled.

REMARKS
Continued making up 406 mm (16") wiper trip BHA and ran in hole to 857.0 mMDRT, tagging 5m of fill in bottom of hole. Pulled out of hole from 857.0 mMDRT to 142.0 mMDRT and worked tight spot. Continued to POOH. Rigged up and ran in 340 mm (13 3/8") casing to 733.0 mMDRT. Rigged up and ran 508 mm (20") casing with 340 mm (13 3/8") casing shoe @ 739.0 m to 774.0 mMDRT.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	20 February 2008	**Rig:**	West Triton
Report Number:	11	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	N/A
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	5.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -835.0 mTVDAHD	**ECD:** **Mud Type:**	 SPUD / PHG Sweeps
Lag Depth:	0.0 mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	862.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	862.00 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Completed running and setting casing.

NEXT 24 HOURS: POH cement stinger and commence nippling up BOP's.

CURRENT OPERATION @ 06:00 HRS (20-Feb-2008): Circulating bottoms up.

GEOLOGICAL SUMMARY

LITHOLOGY
No new lithology drilled.

REMARKS
Continued to RIH 508 mm (20") casing, pick up and make up well head and land out in CTU on Texas deck. Unlatch running tool and RIH cement stinger, pump cement job, pull back stinger and circulate bottoms up.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	21 February 2008	**Rig:**	West Triton
Report Number:	12	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm (13 3/8") Surface Casing @ 857.0 mMDRT
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	6.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -835.0 mTVDAHD	**ECD:**	1.08 sg
		Mud Type:	SPUD / PHG Sweeps
Lag Depth:	862.0 mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	862.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	818.74 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Pulled out of hole with cement stinger & commenced nippling up BOP.

NEXT 24 HOURS: Continue nippling up BOP. Pressure test BOP & surface equipment. Pick up 21 stands 5 1/2" drill pipe and rack back.

CURRENT OPERATION @ 06:00 HRS (21-Feb-2008): Nippling up BOP.

GEOLOGICAL SUMMARY

Lithology
No new lithology drilled.

REMARKS
Repaired cyber chair connections to draw works. Picked up fast lock connector and positioned on well head, picked up BOP stack and fixed down. Picked up riser and fixed to BOP. Made up test lines to top drive and tested IBOP (good test). Prepared and installed slip joint, picked up and installed overshot riser.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	22 February 2008	**Rig:**	West Triton
Report Number:	13	**Bit Diameter:**	406 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	13 3/8" Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**Integrity Test:**	N/A
Days From Spud:	7.3	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	862.0 mMDRT -823.0 mTVDAHD	**ECD:** **Mud Type:**	 SPUD / PHG Sweeps
Lag Depth:	N/A mMDRT	**Mud Chlorides:**	2000.00 mg/L
Last Depth:	862.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	818.74 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.38° Az. 163.08°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Pressure tested BOP, pick up 5 1/5" drill pipe.

NEXT 24 HOURS: Make up 311mm (12 1/4") BHA, pick up 57 joints drill pipe, RIH, drill out shoe and 3m formation, LOT and drill ahead 311mm (12 1/4") hole.

CURRENT OPERATION @ 06:00 HRS (22-Feb-2008): Picking up 311mm (12 1/4") BHA.

GEOLOGICAL SUMMARY

Lithology
No new lithology drilled.

REMARKS
Pick up and run divertor and over shot riser joint, nipple up choke and kill lines and pressure test manifold. Function test BOP rams and line up and test BOP connectors and casing, fail on choke line. Line up and test BOP/casing against HCR to 2000psi/15min, OK. Make up and run wear bushing Repairs to choke line ongoing. Pick up and rack back 5 1/2" drill pipe.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	23 February 2008	**Rig:**	West Triton
Report Number:	14	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**FIT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	8.3	**Mud Weight:**	1.15 sg
Depth @ 0600 Hrs:	940.0 mMDRT -901.0 mTVDAHD	**ECD:** **Mud Type:**	1.25 sg Gel Polymer
Lag Depth:	928.0 mMDRT	**Mud Chlorides:**	60000.00 mg/L
Last Depth:	862.0 m MDRT		
Progress:	78.0 m		
Water Depth:	27.0 m	**Last Survey:**	886.00 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 0.20° Az. 232.91°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Made up 311mm (12 1/4") BHA and LWD tools, ran in hole, drilled out shoe, displaced mud, conducted FIT and drilled ahead.

NEXT 24 HOURS: Drill ahead 311mm (12 1/4") hole.

CURRENT OPERATION @ 06:00 HRS (23-Feb-2008): Drilling ahead 311mm (12 1/4") hole.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 862.0 to 928.0 m MDRT (-865.0 to -920.0 m TVDAHD)
ROP (Range): 11.0 to 80.0 m/h
Av. ROP: 42.0 m/h

Interbedded CALCARENITE and CALCILUTITE.
CALCARENITE (70 to 80%): Off white, light to medium grey, light brownish grey in part, arenaceous, common pale grey argillaceous matrix, abundant fossils, common very coarse frosted and iron stained quartz grains, trace nodular pyrite, rare glauconite specks, moderately hard aggregates, tight visible porosity, trace mineral fluorescence.
CALCILUTITE (20 to 30%): Light to medium grey, off white to pale grey, trace grey, argillaceous, trace microcrystalline, minor micro fossils, soft to dispersive, moderately hard in part, sub-blocky.

GAS SUMMARY

Background Gas							
INTERVAL (mMDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
862.0 – 968.0	0.0	0	0	0	0	0	0

SAMPLE QUALITY
Samples have been caught mostly at a ten metre interval due to the rapid ROP.

MUDLOGGING EQUIPMENT / PERSONNEL
No gas is being registered by equipment. Carbide checks indicate system functioning properly.

MWD
Incomplete real time gamma ray and resistivity data, thought due to pump harmonics. Particularly evident when pump 2 used, though not great with 1 and 3 also, ring resistivity is sending no signal at this time.

REMARKS
The BOP was nippled up and pressure tested. The 311 mm drilling assembly was then made up consisting of a Smith Mi616VBPX PDC bit and LWD tools for the acquisition of gamma ray, resistivity, neutron density, neutron porosity, sonic and directional data. The LWD tools were shallow tested whilst running in hole.

The drilling assembly tagged cement at 854.0 mMDRT. The casing shoe was drilled out and the well displaced to 1.15sg KCl/Polymer mud with clay seal additive. 2.0 m of new formation was drilled to 864.0 mMDRT while the well was displaced to mud. Circulation continued to weight up mud and a Formation Integrity Test (FIT) was performed to 1.91 sg (EMW). 311 mm hole was then drilled to the 06:00 depth of 940.0 mMDRT.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	24 February 2008	**Rig:**	West Triton
Report Number:	15	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**FIT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	9.3	**Mud Weight:**	1.15 sg
Depth @ 0600 Hrs:	1455.0 mMDRT -1412.1 mTVDAHD	**ECD:**	0.38 sg
		Mud Type:	Gel Polymer
Lag Depth:	1455.0 mMDRT	**Mud Chlorides:**	60000.00 mg/L
Last Depth:	940.0 m MDRT		
Progress:	515.0 m		
Water Depth:	27.0 m	**Last Survey:**	1388.32 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 11.22° Az. 337.32°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to drill ahead 311mm (12 1/4") hole from 940.0 to 1455.0 mMDRT. Commenced programmed angle build from 1245.0 mMDRT.

NEXT 24 HOURS: Continue to directionally drill ahead 311mm (12 1/4") section.

CURRENT OPERATION @ 06:00 HRS (24-Feb-2008): Drill ahead 311mm (12 1/4") hole.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 928.0 to 1255.0 m MDRT (-881.0 to -1215.8 m TVDAHD)
ROP (Range): 15.0 to 99.0 m/h
Av. ROP: 77.0 m/h

Interbedded CALCARENITE, CALCISILTITE and CALCILUTITE.
CALCARENITE (20 to 60%): Off white, light to medium grey, light brownish grey in part, locally arenaceous, common pale grey argillaceous matrix, abundant fossils, common very coarse frosted & iron stained quartz grains, trace nodular pyrite, rare glauconite specks, trace rounded brown-red lithics, moderately hard aggregates, tight visible porosity, trace mineral fluorescence.
CALCISILTITE (20 to 50%): Light to medium grey, off white to pale grey, trace grey, argillaceous, minor micro fossils, soft to firm, moderately hard in part, sub-blocky, locally grading to CALCILUTITE and CALCARENITE.
CALCILUTITE (20 to 50%): Light to medium grey, off white to pale grey, trace grey, argillaceous, trace microcrystalline, minor micro fossils, soft to dispersive, moderately hard in part, sub-blocky.

INTERVAL: 1255.0 to 1382.0 m MDRT (-1215.8 to -1341.5 m TVDAHD)
ROP (Range): 11.0 to 168.0 m/h
Av. ROP: 76.0 m/h

SANDSTONE with SILTSTONE and COAL interbeds.
SANDSTONE (70 to 100%): Clear to translucent, pale to medium brown grey, very fine to coarse, poorly sorted, angular to sub-angular, minor weak calcareous cement, locally common light brown grey argillaceous matrix where fine grained and grading to arenaceous siltstone, common carbonaceous laminations and specks, generally loose grains, moderately hard fine grained aggregates, locally common carbonaceous specks, locally disseminated and nodular pyrite, poor visible porosity, fair to good inferred porosity, no hydrocarbon fluorescence.
SILTSTONE (5 to 25%): Medium to dark grey, argillaceous, common carbonaceous material and locally

grading to coal stringers, minor micaceous flecks, moderately hard to hard, sub-blocky to sub-fissile.
COAL (0 to 5%): Dark grey to black, sub-vitreous, dull to earthy in part, common silty laminations and locally grading to carbonaceous siltstone, friable to moderately hard, sub-fissile to sub-blocky, locally sub-conchoidal fracture.

INTERVAL: 1382.0 to 1455.0 m MDRT (-1341.5 to -1412.1 m TVDAHD)
ROP (Range): 7.0 to 111.0 m/h
Av. ROP: 36.0 m/h

Interbedded SANDSTONE and SILTSTONE with COAL stringers and minor CLAYSTONE interbeds.
SANDSTONE (5 to 90%)**:** Light grey brown, translucent, fine to coarse, poor sorted, sub-angular to sub-rounded, minor moderately strong calcareous cement, minor nodular pyrite, generally loose grains, fair to good inferred porosity, no hydrocarbon fluorescence.
SILTSTONE(5 to 45%): Dark brown grey, dark grey, argillaceous, abundant carbonaceous material and laminations, common grading to coal, occasional siderite cement, hard to very hard, sub-fissile.
COAL (0 to 80%): Black, dark grey, vitreous to sub-vitreous, silty in part and locally grd to very dark brown carbonaceous siltstone, hackly in part, friable to moderately hard, conchoidal to sub-conchoidal fracture, sub-blocky in part.
CALCAREOUS CLAYSTONE (0 to 10%): Pale bluish grey, siliceous, common to abundant calcareous material, hard to very hard, sub-fissile.

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
928.0 - 1255.0	25	14	0	0	0	0	0
1255.0 - 1382.0	26	9	0	0	0	0	0
1382.0 - 1455.0	17	6	0	0	0	0	0

No gas peaks recorded.

SAMPLE QUALITY
Samples have been caught mostly at a ten metre interval due to the rapid ROP.

MUDLOGGING EQUIPMENT / PERSONNEL
Trace to 26 ppm gas being registered by equipment. Carbide checks at gas trap and in flow line indicate system functioning properly.

MWD
Incomplete real time gamma ray and resistivity data, thought due to pump harmonics. Ring resistivity is sending no signal at this time.

REMARKS
Steady drilling in both orientating (from 1245.0 mMDRT) and rotary modes.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	25 February 2008	**Rig:**	West Triton
Report Number:	16	**Bit Diameter:**	311 mm (12 ¼")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm (13 3/8") Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**FIT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	10.3	**Mud Weight:**	1.15 sg
Depth @ 0600 Hrs:	1706.0 mMDRT -1637.7 mTVDAHD	**ECD:**	1.30 sg
		Mud Type:	KCL Polymer
Lag Depth:	1705.0 mMDRT	**Mud Chlorides:**	50000.00 mg/L
Last Depth:	1455.0 mMDRT		
Progress:	251.0 m		N/A
Water Depth:	27.0 m	**Last Survey:**	1710.00 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 30.00° Az. 331.00°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to drill 311mm (12 1/4") hole from 1455.0 mMDRT in both slide and rotary modes.

NEXT 24 HOURS: Continue to drill 311mm (12 1/4") hole.

CURRENT OPERATION @ 06:00 HRS (25-Feb-2008): Drilling 311mm (12 1/4") hole.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1455.0 to 1500.0 mMDRT (-1412.3 to -1454.9 mTVDAHD)
ROP (Range): 3.0 to 159.0 m/h
Av. ROP: 41.0 m/h

SANDSTONE with interbedded **COAL**, minor **CLAYSTONE**
SANDSTONE (10 to 100%): dominantly white, minor transparent, loose, coarse to very coarse, dominantly very coarse, very well sorted, sub angular to rounded, dominantly rounded, spherical, good to very good inferred porosity, no shows. Localised, 20% white to off white, fine to medium, dominantly fine, angular, well sorted, weakly calcareous cemented aggregates, trace very light grey argillaceous matrix, commonly fractured aggregates creating loose quartz angular grains, poor to moderate inferred porosity
COAL (10 to 90%): Black, blocky, sub conchoidal to conchoidal fracture, sub bituminous
CLAYSTONE (Nil to 5%): light blue to medium blue grey, firm to moderately hard, blocky, moderately calcareous.

INTERVAL: 1500.0 to 1705.0 mMDRT (-1454.9 to -1636.8 mTVDAHD)
ROP (Range): 4.0 to 173.0 m/h
Av. ROP: 61.0 m/h

Dominantly **SANDSTONE** interbedded with **CLAYSTONE,** minor **SILTSTONE** and trace **COAL.**
SANDSTONE (45 to 100%): dominantly white, minor transparent, loose, coarse to very coarse, dominantly very coarse, very well sorted, sub angular to rounded, dominantly rounded, spherical, good to very good inferred porosity, no shows.
CLAYSTONE (Nil to 100%): medium brown, medium orange brown, very dark brown grey, trace arenaceous in part, trace calcareous material, common carbonaceous material where very dark brown grey, firm to hard, dispersive to sub-blocky, sub-fissile in part.
COAL (Nil to 10%): black, very dark grey, vitreous, sub vitreous in part, minor silty laminations and locally grading to carbonaceous siltstone, firm to hard, brittle in part, conchoidal to sub-conchoidal fracture, sub-blocky in part.
SILTSTONE (Nil to 20%): dark brownish grey, dark grey, hard to very hard, sub fissile, argillaceous,

abundant carbonaceous material, commonly grading to COAL.

GAS SUMMARY
No significant gas peaks
Background gas between 20-100ppm C1

SAMPLE QUALITY
Samples have been of excellent quality at 5m intervals

MUDLOGGING EQUIPMENT / PERSONNEL
Trace gas to maximum 100ppm being registered by equipment. Carbide checks in flowline and gas trap indicate system functioning properly.

MWD
Real time data recovery has improved with depth

REMARKS
Bit tending to walk right of line so corrective slides to adjust.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	26 February 2008	**Rig:**	West Triton
Report Number:	17	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	11.3	**Mud Weight:**	1.15 sg
Depth @ 0600 Hrs:	1797.0 mMDRT -1714.4 mTVDAHD	**ECD:**	1.32 sg
		Mud Type:	KCL Polymer
Lag Depth:	1797.0 mMDRT	**Mud Chlorides:**	52000.00 mg/L
Last Depth:	1706.0 mMDRT		
Progress:	91.0 m		Normal
Water Depth:	27.0 m	**Last Survey:**	1770.80 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 32.50° Az. 328.20°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to drill 311mm hole from 1706.0 mMDRT in both rotary and slide modes to 1797.0 mMDRT. Circulate hi-vis pill and POOH

NEXT 24 HOURS: Make up BHA, RIH and drill 311mm (12 1/4") hole

CURRENT OPERATION @ 06:00 HRS (26-Feb-2008): Racking back and laying out BHA

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1705.0 to 1797.0 mMDRT (-1636.5 to -1714.4 mTVDAHD)
ROP (Range): 1.0 to 180.0 m/h
Av. ROP: 51.0 m/h

Dominantly clean **SANDSTONE** with thin interbedded stringers of **SILTSTONE** and **CLAYSTONE**
SANDSTONE (5 to 100%): off white, white, translucent, bi-modal, fine to medium, angular to subangular, dominantly subangular, moderately to well sorted, greater than very coarse grains, sub-round to round, very well sorted, rare nodular pyrite, rare coral fragments, rare shell fragments, nil visible cement, moderate visible porosity.
SILTSTONE (Nil to 95%): off white, off white to pale grey, occasional light blue grey, hard to very hard, sub-blocky to sub-fissile, locally arenaceous, very fine Sand grains, locally argillaceous, trace lithics fragments, trace carbonaceous material.
CLAYSTONE (Nil to 20%): pale blue grey, light grey, firm to moderately hard, blocky, slightly calcareous,
SILTSTONE (10% to 30%): medium grey to dark grey, greenish grey, firm, blocky, sub-fissile in part, arenaceous in part, moderately calcareous.

HYDROCARBON FLUORESCENCE

No Shows

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
1706.0 - 1797.0	0.0035	14	0	0	0	0	0

SAMPLE QUALITY
Loggers have been catching 5m samples as per program

MUDLOGGING EQUIPMENT / PERSONNEL
Trace gas to maximum 76ppm being registered by equipment. Carbide checks in flowline and gas trap indicate system functioning properly.

REMARKS
Difficulty experienced maintaining programmed well path. Pulled out of hole to reconfigure BHA before running in to drill ahead.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	27 February 2008	**Rig:**	West Triton
Report Number:	18	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	13 3/8" Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	12.3	**Mud Weight:**	1.15 sg
Depth @ 0600 Hrs:	1887.0 mMDRT -1788.9 mTVDAHD	**ECD:**	1.19 sg
		Mud Type:	KCL Polymer
Lag Depth:	1878.0 mMDRT	**Mud Chlorides:**	49000.00 mg/L
Last Depth:	1797.0 mMDRT		
Progress:	90.0 m		Normal
Water Depth:	27.0 m	**Last Survey:**	1875.71 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 33.73° Az. 325.79°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to POOH. Reconfigured BHA for 311mm hole and ran in. Drilled ahead directional hole from 1797.0 mMDRT.

NEXT 24 HOURS: Continue to drill 311mm directional hole.

CURRENT OPERATION @ 06:00 HRS (27-Feb-2008): Drilling 311mm directional hole @ 1887.0 mMDRT

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1797.0 to 1885.0 mMDRT (-1714.3 to -1787.2 mTVDAHD)
ROP (Range): 1.0 to 77.0 m/h
Av. ROP: 32.0 m/h

Interbedded SANDTONE, SILTSTONE and CLAYSTONE with minor COAL
SILTSTONE (5 to 10%): medium brown, medium grey, arenaceous and common grading to very fine sandstone, commonly micromicaceous, common lithics and carbonaceous laminations, hard to very hard, sub-blocky.
Massive Sandstone with interbedded Claystone and thin Coal stringers.
SANDSTONE (50 to 90%): translucent, clear, frosted, fine to very coarse, poorly sorted, angular to sub-angular, common weak calcareous cement, locally pale grey brown argillaceous matrix, occasional coal laminations, minor nodular pyrite, generally loose clean grains, good inferred porosity.
CALCAREOUS CLAYSTONE (Nil to 50%): (localised) light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, locally carbonaceous material, common to abundant calcareous cement, trace nodular pyrite, hard to very hard, sub-blocky to sub-fissile.
CALCAREOUS SANDSTONE (Nil to 60%): (localised) Off white to pale brown, translucent to clear, very fine to very coarse, poorly sorted, angular to sub-angular, sub-rounded where fine grained, common moderately strong calcareous cement, locally common pale brown grey argillaceous matrix where fine grained, common rock flour, generally loose grains, very hard fine grained aggregates, poor visible porosity, fair inferred porosity where coarse.
COAL (Nil to 5%): black, vitreous, very hard, conchoidal fracture.

GAS SUMMARY
No gas data recorded from 1797.0 m to 1887.0 mMDRT due to broken gas line for detection equipment

MWD
Schlumberger LWD Tools Run 1 memory 64% full
Sperry Bat Sonic LWD Tool Run 1 memory 85% full

WIRELINE
Crew on board and preparing all available tools for running

REMARKS
Pulled out of hole with BHA laying out AND (SLB Density/Neutron tool). Downloaded all recorded data and re-initialised LWD tools (GVR8 and BatSonic) for next run in 311mm hole section. Made up BHA and ran in hole to 857.0 mMDRT, broke circulation and tested MWD. Continued to run in hole to 1767.0 mMDRT, then washed to bottom at 1797.0 mMDRT. Continued to drill 311mm directional hole.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	28 February 2008	**Rig:**	West Triton
Report Number:	19	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 mMDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	13.3	**Mud Weight:**	1.16 sg
Depth @ 0600 Hrs:	1914.0 mMDRT -1811.2 mTVDAHD	**ECD:**	1.21 sg
		Mud Type:	KCL Polymer
Lag Depth:	1912.0 mMDRT	**Mud Chlorides:**	50000.00 mg/L
Last Depth:	1887.0 mMDRT		
Progress:	27.0 m		Normal
Water Depth:	27.0 m	**Last Survey:**	1890.59 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 34.34° Az. 324.56°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to drill 311mm directional hole from 1887.0 m to 1900.0 mMDRT, POH, replaced bit and motor sleeve on BHA and RIH, drilled ahead 311mm hole from 1900.0 mMDRT.

NEXT 24 HOURS: Continue to drill directional 311mm hole.

CURRENT OPERATION @ 06:00 HRS (28-Feb-2008): Drilling 311mm directional hole at 1914.0 mMDRT

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1885.0 to 1912.0 mMDRT (-1787.3 to -1809.5 mTVDAHD)
ROP (Range): 4.0 to 65.0 m/h
Av. ROP: 14.0 m/h

Interbedded SANDSTONE, SILTSTONE AND CLAYSTONE with CLAYSTONE increasing with depth
SANDSTONE (20 to 50%): off white to pale brown, translucent, dominantly loose, very fine to very coarse, poorly sorted, angular to sub-rounded, minor weak calcareous cement, common pale brown silty matrix where fine grained and locally grading to arenaceous siltstone, occasional coal laminations, dominantly carbonaceous, poor visible porosity, fair inferred porosity.
SILTSTONE (40 to 55%): light grey to medium grey, brownish grey, blocky, moderately hard to hard, very fine grained arenaceous, carbonaceous, micromicaceous, rare Foraminifera and shell fragments
CLAYSTONE (5 to 40%): light bluish grey, green grey, moderately hard to hard, sub-blocky to blocky, rare sub-fissile, siliceous, minor micromicaceous, localised trace carbonaceous material, minor calcareous material, trace nodular pyrite.

GAS SUMMARY
No significant peaks recorded

Background Gas							
INTERVAL (m MDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
1885.0 - 1912.0	0.003	22	0	0	0	0	0

MUDLOGGING EQUIPMENT / PERSONNEL
Gas system thoroughly checked and reported fully operational

MWD
Schlumberger LWD Tools Run 2 memory 16% full
Sperry Bat Sonic LWD Tool Run 2 memory 26% full

WIRELINE
Dummy ran cable to drill floor to test placement of shieves.

REMARKS
Continued to drill 311mm directional hole from 1887.0 m to 1900.0 mMDRT. Assembly not building inclination quick enough. CBU and pulled wet to 1593.0 mMDRT, hole good. Pumped slug and POH. Laid out Bat Sonic for memory dump, broke off bit and motor sleeve and made up same with new replacements, NB#6. Downloaded RAB8 tool, picked up and made up Bat Sonic with BHA and RIH. Continued to drill ahead deviated 311mm hole to 1914.0 mMDRT.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	29 February 2008	**Rig:**	West Triton
Report Number:	20	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	14.3	**Mud Weight:**	1.18 sg
Depth @ 0600 Hrs:	2175.0 mMDRT -1993.5 mTVDAHD	**ECD:**	1.18 sg
		Mud Type:	KCL Polymer
Lag Depth:	2174.0 mMDRT	**Mud Chlorides:**	50000.00 mg/L
Last Depth:	1914.0 m		
Progress:	261.0 m		
Water Depth:	27.0 m	**Last Survey:**	2125.42 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.49° Az. 318.95°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 311mm deviated hole from 1914.0 mMDRT to 2175.0 mMDRT.

NEXT 24 HOURS: Continue drilling ahead intersecting Campian Volcanics and the primary objective, Golden Beach Formation. POH.

CURRENT OPERATION @ 06:00 HRS (29-Feb-2008): Drilling ahead 311mm hole at 6m/hr.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1995.0 to 2040.0 mMDRT (-1870.6 to -1902.1 mTVDAHD)
ROP (Range): 7.0 to 51.0 m/h
Av. ROP: 22.0 m/h

Interbedded SANDSTONE & SILTSTONE with minor COAL stringers.
SANDSTONE (60 to 100%): pale grey to off white, clear to translucent, very fine to very coarse, dominantly fine to medium, poorly sorted, sub-angular to sub-rounded, angular where coarse grained, common moderate calcareous cement, minor pale grey argillaceous matrix & locally grading to arenaceous siltstone, minor carbonaceous laminations, occasional disseminated and nodular pyrite, generally loose grains, fair to good inferred porosity.
SILTSTONE (10 to 30%): medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, common coal laminations, occasional nodular pyrite, firm, sub-blocky.
CLAYSTONE (30 to 40%): medium grey to brownish grey, medium dark grey, very soft to firm, dominantly soft, amorphous to blocky, dominantly sub blocky, dispersive in part, non calcareous, minor grading to SILTSTONE.
COAL (Trace to 5%): very dark grey, black, hard, blocky, dull vitreous lustre, dominantly sub-conchoidal fracture, rare conchoidal fracture.

INTERVAL: 2040.0 to 2085.0 mMDRT (-1902.1 to -1932.9 mTVDAHD)
ROP (Range): 8.0 to 58.0 m/h
Av. ROP: 31.0 m/h

Massive SANDSTONE with minor SILTSTONE interbeds.
SANDSTONE (85 to 95%): clear to translucent, off white to pale grey, very fine to very coarse, poorly sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.
SILTSTONE (5 to 15%): light to medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, occasional calcareous material, trace flakey micas, minor coal laminations,

occasional nodular pyrite, firm, sub-blocky.

INTERVAL: 2085.0 to 2174.0 mMDRT (-1932.9 to -1992.8 mTVDAHD)
ROP (Range): 5.0 to 51.0 m/h
Av. ROP: 16.0 m/h

Interbedded SILTSTONE & SANDSTONE with minor COAL stringers.
SANDSTONE (70 to 95%): clear to translucent, off white to pale grey, very fine to very coarse, dominantly fine to medium, poor to moderately sorted, angular to sub-angular, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.
SILTSTONE (5 to 25%): medium grey, light to medium brown grey, argillaceous in part, generally arenaceous and grading to very fine sandstone, occasional calcareous material, common micromicaceous, common carbonaceous material, occasional nodular pyrite, firm, sub-blocky.
CLAYSTONE (Trace to 5%): pale green grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky.
COAL (Trace to 5%): black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub-conchoidal.

GAS SUMMARY
No significant gas peaks

Background Gas							
INTERVAL (m MDRT)	**Total Gas (%)**	**C1 (ppm)**	**C2 (ppm)**	**C3 (ppm)**	**iC4 (ppm)**	**nC4 (ppm)**	**C5 (ppm)**
1912.0 - 2174.0	0.01	25	0	0	0	0	0

MUDLOGGING EQUIPMENT / PERSONNEL
Gas system readings remain low to anticipation, though function tests indicate fully operational.

MWD
Medium button resistivity data indicates a faulty sensor.

REMARKS
Directionally drilled 311mm hole from 1914.0 m to 2121.0 mMDRT and rotary drilled to 2175.0 mMDRT.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	01 March 2008	**Rig:**	West Triton
Report Number:	21	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	15.3	**Mud Weight:**	1.18 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.0 mTVDAHD	**ECD:**	1.23 sg
		Mud Type:	KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	48000.00 mg/L
Last Depth:	2175.0 mMDRT		
Progress:	138.0 m		Normal
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 311mm hole from 2175.0 mMDRT to 2313.0 mMDRT.

NEXT 24 HOURS: Complete circulating hole clean, POOH from 2313.0 mMDRT, reaming interval from 1980.0 mMDRT for GVR Image data on way out of hole. Rig up to run wireline or LWD wiper trip.

CURRENT OPERATION @ 06:00 HRS (01-Mar-2008): Circulating hole clean in preparation for POOH

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 2174.0 to 2207.0 mMDRT (-1992.8 to -2014.9 mTVDAHD)
ROP (Range): 4.0 to 29.0 m/h
Av. ROP: 13.0 m/h

Dominantly SILTSTONE with interbedded SANDSTONE and CLAYSTONE
SILTSTONE (50 to 70%): light to medium grey, medium brown grey, soft to firm, dominantly soft, amorphous to blocky, dominantly blocky, arenaceous and commonly grading to very fine sandstone, slightly calcareous, common carbonaceous laminations and specks, commonly micromicaceous, rare glauconite
CLAYSTONE (10 to 30%): pale greenish grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky, slightly to moderately calcareous, becoming partly medium grey, soft and amorphous with depth through interval.
SANDSTONE (10 to 30%): clear to translucent, frosted, very fine to very coarse, dominantly very fine to medium, poorly sorted, angular to sub-rounded, trace weak calcareous cement, common pale grey argillaceous matrix, minor nodular pyrite, generally loose grains, fair inferred porosity.

INTERVAL: 2207.0 to 2230.0 mMDRT (-2014.9 to -2030.3 mTVDAHD)
ROP (Range): 5.0 to 29.0 m/h
Av. ROP: 10.0 m/h

Interbedded SANDSTONE and SILTSTONE
SANDSTONE (40 to 60%): clear to translucent, frosted, very fine to very coarse, dominantly fine to medium, poorly to moderately sorted, angular to sub-rounded, trace weak calcareous cement, common pale grey argillaceous matrix, trace nodular pyrite, generally loose grains, fair to good inferred porosity.
SILTSTONE (40 to 50%): light to medium grey, medium brown grey, firm to moderately hard, dominantly moderately hard, sub-blocky to blocky, dominantly blocky, arenaceous and commonly grading to very fine sandstone, slightly calcareous, common carbonaceous laminations and specks, minor micromicaceous, becoming very dark grey, brownish black, soft to firm, sub-blocky, slightly calcareous, very fine arenaceous, carbonaceous, minor nodular pyrite

INTERVAL: 2230.0 to 2250.0 mMDRT (-2030.3 to -2043.7 mTVDAHD)
ROP (Range): 7.0 to 22.0 m/h
Av. ROP: 12.0 m/h

Dominantly SANDSTONE with minor SILTSTONE, WEATHERED VOLCANICS and CLAYSTONE
SANDSTONE (50 to 80%): clear to translucent, frosted, loose, dominantly very fine to fine, common medium, rare coarse to very coarse, poorly to moderately sorted, well sorted in part, angular to sub-angular, minor sub-rounded, trace nodular pyrite, trace mica, fair inferred porosity.
VOLCANIC (5 to 10%): off white to pale grey, very pale green grey, argillaceous, weathered, minor dark minerals, trace siliceous, moderately hard to hard, very hard where siliceous, sub-blocky.
CLAYSTONE (Nil to 5%): pale greenish grey, light blue grey, hard to very hard, sub-blocky to blocky, moderately calcareous.
SILTSTONE (10 to 20%): medium brown, light to medium brown grey, medium grey in part, arenaceous and locally grading to very fine sandstone, common carbonaceous laminations and specks, hard, sub-blocky, locally sub-fissile.

INTERVAL: 2250.0 to 2313.0 mMDRT (-2043.7 to -2086.0 mTVDAHD)
ROP (Range): 3.0 to 24.0 m/h
Av. ROP: 10.0 m/h

Thick VOLCANICS with thin beds CLAYSTONE and increasing SANDSTONE with depth
VOLCANIC (5 to 50%): Tuffite, pale grey green, off white to pale green, light to medium blue green, minor dark green, siliceous groundmass, common feldspars, occasional dark green minerals (olivine?) argillaceous where weathered, localised reworked carbonaceous fragments, angular, sub-blocky where weathered.
CLAYSTONE 10%: medium brown, reddish brown, minor carbonaceous material, firm, sub-blocky, dispersive.
CLAYSTONE 10%: pale grey, light to medium grey, siliceous, minor silty and locally grading to argillaceous siltstone, trace carbonaceous material, occasionally micromicaceous, moderately hard to hard, sub-blocky to sub-fissile.
CLAYSTONE 70%: off white, pale brown grey, very pale green grey, very pale blue grey, trace disseminated pyrite, trace chert fragments, firm to hard in part, sub-blocky, dispersive. (Probable weathered tuff).
SANDSTONE (10 to 80%): clear to translucent, pale very fine to very coarse, dominantly medium, moderately sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, trace pale grey argillaceous matrix, occasional calcareous fragments, trace nodular pyrite, occasional carbonaceous material, loose, fair to good inferred porosity.

GAS SUMMARY
No significant gas peaks

Background Gas

INTERVAL (m MDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
2174.0 - 2207.0	0.003	18	0	0	0	0	0
2207.0 - 2230.0	0.012	46	0	0	0	0	0
2230.0 - 2250.0	0.013	56	0	0	0	0	0
2250.0 - 2313.0	0.006	26	0	0	0	0	0

MWD
Medium button resistivity data indicates a faulty sensor.

WIRELINE

Wireline crew ready to run all available tools.

REMARKS
Rotary drilled ahead 311mm hole from 2175.0 mMDRT pumping regular high viscosity sweeps to clean excess cutting in hole. Slide drill from 2247.0 mMDRT to 2253.0 mMDRT to reduce inclination. Continued rotary drilling to 2313.0 mMDRT and circulated hole clean.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	02 March 2008	**Rig:**	West Triton
Report Number:	22	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	16.3	**Mud Weight:**	1.18 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.0 mTVDAHD	**ECD:** **Mud Type:**	 KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	49000.00 mg/L
Last Depth:	2313.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued to circulate hole clean at TD 2313.0 mMDRT, POOH logging up with GVR-8 LWD over various intervals. Continued to POOH to surface. Rig up to run wireline and run in hole wireline run 1, VSI. Held up at 1390.0 mMDRT. Log up VSI.

NEXT 24 HOURS: Continue to log VSI to surface, rig down VSI, rig up Run 2 PEX-MSIP-SP and RIH to TD. Log up PEX to 1740.0 mMDRT, MSIP to mud-line and SP to 1150.0 mMDRT. Rig down.

CURRENT OPERATION @ 06:00 HRS (02-Mar-2008): Logging out of hole VSI.

GEOLOGICAL SUMMARY

LITHOLOGY
No new lithology drilled

GAS SUMMARY
No Gas Data

MWD
Bat Sonic and GVR-8 recorded data downloaded and field processed. Good initial impressions of data except medium button resistivity.

WIRELINE

Rig up and RIH Run 1, VSI, held up at 1390.0 mMDRT, log up 13 stations with top shuttle at 540.0 mMDRT

WATER BASED MUD DATA

DATE MUD CHECK	MUD TYPE	MW (sg)	pH	KCl (%)	Cl (mg/L)	Barite (%)	Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)
01-Mar-2008	KCL Polymer	1.15	8.7	10	49000	4.4	0.08	0.07	0.09

REMARKS

Continued to circulate hole clean at TD 2313.0 mMDRT, POOH to 2270.0 mMDRT and log up with LWD to 2210.0 mMDRT. Continued to POOH washing and reaming tight spots to 1980.0 mMDRT. Log up LWD to 1777.0 mMDRT. Continued to POOH to 348.0 mMDRT. POOH BHA, lay out BAT Sonic, download data from GVR-8 and rack back. Rig up to run wireline and run in hole VSI. Held up at 1390.0 mMDRT. Log up VSI to top shuttle depth of 540.0 mMDRT.

WELLSITE GEOLOGISTS

Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	03 March 2008	**Rig:**	West Triton
Report Number:	23	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	17.3	**Mud Weight:**	1.18 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.0 mTVDAHD	**ECD:** **Mud Type:**	 KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	48000.00 mg/L
Last Depth:	2313.0 m MDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Rigged up wireline for Run#1, VSI and RIH to 1390.0 mMDRT, hung up, attempted to pass, log out to surface, laid out. Rigged up Run#2, PEX-SP-MSIP and RIH, hung up 1390.0 mMDRT. Logged out and rigged down, made up LWD (ADN, BAB-8) wiper trip assembly with 311mm bit and RIH.

NEXT 24 HOURS: Continue RIH LWD wiper assembly to TD at 2313.0 mMDRT, POOH logging ADN from TD to 1740.0 mMDRT, POOH. Lay out ADN, RAB-8, rig up and RIH wireline run no.3 MDT.

CURRENT OPERATION @ 06:00 HRS (03-Mar-2008): Continue to RIH for LWD wiper trip.

GEOLOGICAL SUMMARY

LITHOLOGY
No new lithology drilled

GAS SUMMARY
No Gas Data

WIRELINE
Rig up and RIH VSI, held up at 1390.0 mMDRT, log up 13 stations with top shuttle at 540.0 mMDRT

WATER BASED MUD DATA

DATE MUD CHECK	MUD TYPE	MW (sg)	pH	KCl (%)	Cl (mg/L)	Barite (%)	Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)
01-Mar-2008	KCL Polymer	1.15	8.7	10	49000	4.4	0.08	0.07	0.09

RUN SUMMARY

Run #	Tool String	Log From Depth (m)	Log To Depth (m)	Repeat From Depth (m)	Repeat To Depth (m)	Comments
1	VSI	1385.5	70.1	792.0	0.0	Plan: VSI 15 m intervals from TD to loss of signal. Tools hung up at 1390.0 mMDRT, log to surface from there. Check shot at 792.0 mMDRT

2	PEX-SP-MSIP	1390.0	66.0	1350.0	1250.0	PEX-SP-MSIP - PEX-MSIP from TD to 1740 m (50 m above where ADN tool taken out of the string) - SP log from TD to 1150 m MDRT (100 m above the top of the Latrobe coarse clastics picked at 1250.8 m MDRT (~ -1212 m TVDAHD) - Tool hung up on RIH at 1390.0 mMDRT. Log up as per above criteria. - sonic from TD to surface - If we can't get to TD with the PEX-DSI, log out from whatever depth we reach.
3	MDT	0.0	0.0	0.0	0.0	MDT (program to be given by reservoir engineer after we have full set of quad combo data)
4	MSCT	0.0	0.0	0.0	0.0	MSCT (program TBA – 20-25 cores)

VSP and Environmental Mitigation Measures

Start date/time of whale observation prior to start of seismic source (at least 15 mins)	01/03/08 14:00hrs, intermittent throughout rest of day
Start date/time seismic source	02/03/08 03:30
Was soft start used?	Yes, 500psi build up over 10 minutes
Were whales seen within 3 km prior to VSP starting?	No
Did whales move in within 3 km once VSP started?	No
Did VSP stop due to whales?	No
End date/time seismic source	02/03/08 07:30
Whale sighting sheet filled in?	None sighted
Weather & visibility	Calm, poor visibility at night time
Additional comments	Nil

TEMPERATURE DATA

Date Mud Checked: 01-Mar-2008
Date Time Circulation Stopped: 01-Mar-2008 06:45 AM
Circulation Time: 1.00 h

Run #	Run Date	Tool String	Max BHT (℃)	Max BHT Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
1	3/1/2008	VSI	60.00	1326.0	02-Mar-2008 03:34	20.82
2	3/2/2008	PEX-SP-MSIP	59.00	1390.0	02-Mar-2008 13:14	30.48
3	3/2/2008	MDT	0.00	0.0		
4	3/3/2008	MSCT	0.00	0.0		

REMARKS

Rigged up wireline logging Suite 1 - Run #1: VSI and RIH to 1390.0 mMDRT where tools unable to pass, 7 attempts made. Commenced seismic survey from 1385.0mMDRT to 66.0 mMDRT. Rigged down run#1and RIH run#2 PEX-SP-MSIP to 1390.0 mMDRT, again unable to pass. Commence log up, MSIP to mud-line and SP to 1150.0 mMDRT. Rig down wireline and M/U LWD wiper assembly with ADN, RAB-8 and straight motor BHA and RIH. Worked and wash hole from 1380m - 1383m, 1394m - 1396m, 1778m - 1780m, 1828m -1830m with 20k - 40k. Held up at 1850m with 40k down. Work pipe and jar up with up to 100k overpull five times, pipe free. Pump 30 bbls high vis and circulate hole clean while working pipe, continue RIH to 1930.0 mMDRT.
Large quantities of coal back over shakers.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	04 March 2008	**Rig:**	West Triton
Report Number:	24	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340mm Surface Casing @ 857.0 mMDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 mMDRT
Days From Spud:	18.3	**Mud Weight:**	1.24 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.5 mTVDAHD	**ECD:** **Mud Type:**	 KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	49000.00 mg/L
Last Depth:	2313.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Continued RIH wiper trip assembly from 1930.0 mMDRT to 2167.0 mMDRT. Washed to TD at 2313.0 mMDRT, rotated out whilst LWD logging to 1740.0 mMDRT and continued POOH, racked back BHA and laid out LWD.

NEXT 24 HOURS: Rig up and RIH wireline run#3 MDT.

CURRENT OPERATION @ 06:00 HRS (04-Mar-2008): Breaking down wiper trip BHA.

GEOLOGICAL SUMMARY

LITHOLOGY
No new lithology drilled

GAS SUMMARY
No trip gas recorded and no significant gas peaks whilst circulating.

MWD
RIH with LWD (ADN-GVR-MWD) wiper assembly to TD at 2313.0 mMDRT, POOH logging ADN from TD to 1740.0 mMDRT at 120m/hr.

RUN SUMMARY

Run #	Tool String	Log From Depth ()	Log To Depth ()	Repeat From Depth ()	Repeat To Depth ()	Comments
5	ADN – GVR-8	2313.0	1740.0	1759.0	1710.0	Run 5 overlap Run 2 for repeat

REMARKS
Continued from 1930.0 mMDRT RIH wiper trip assembly with ADN and GVR-8, washed and reamed from 2167.0 to 2313.0 mMDRT. Rotate out of hole at 120m/hr to 1740.0 mMDRT. Tight spots at 2194-2193, 2188, 2182, 2175-2172, 2166, 2082, 2006, 1955-1953, 1945, 1847, 1842, 1837.0 mMDRT. Continued POOH to surface. Retrieved RA source and laid out and downloaded ADN, laid out GVR-8.

WELLSITE GEOLOGISTS
Adam Cruickshank / Hamish Little

DAILY GEOLOGICAL REPORT

Date:	05 March 2008	**Rig:**	West Triton
Report Number:	25	**Bit Diameter:**	311 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm (13 3/8") Surface Casing @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	19.3	**Mud Weight:**	1.23 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.5 mTVDAHD	**ECD:** **Mud Type:**	 KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	50000.00 mg/L
Last Depth:	2313.0 mMDRT		
Progress:	0 m		
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: POOH and laid out LWD tools. Rigged up and RIH wireline run#3 MDT, logged in pretests and samples from 1268.5 mMDRT to 1440.1 mMDRT as per program. POOH and rigged up wireline run#4 CST. RIH and performed 30 shots. POOH with wireline.

NEXT 24 HOURS: Run VSI logs in drill pipe as per program. POOH and rig down wire line. Commence P&A program.

CURRENT OPERATION @ 06:00 HRS (05-Mar-2008): RIH with open ended drill pipe to 2310 mMDRT for VSI logs.

GEOLOGICAL SUMMARY

LITHOLOGY
No new lithology drilled

GAS SUMMARY
No trip gas recorded and no significant gas peaks whilst circulating.

MWD
LWD tools laid out and ready to be dispatched to town for service.

WIRELINE

RUN SUMMARY

Run #	Tool String	Log From Depth (m)	Log To Depth (m)	Repeat From Depth (m)	Repeat To Depth (m)	Comments
1	VSI	1385.5	70.1	792.0	0.0	Plan: VSI at 15 m intervals from TD to loss of signal. Tools hung up at 1390.0 mMDRT, log to surface from there. Total of 13 stations with top shuttle at 540.0 mMDRT. Check shot at 792.0 mMDRT
2	PEX-SP-MSIP	1390.0	66.0	1350.0	1250.0	PEX-SP-MSIP -Tool hung up on RIH at 1390.0

						mMDRT. Log up as per OOWL. - Sonic from hang point to surface
3	MDT	1440.1	1268.5	0.0	0.0	Preliminary logging program - 13 pre tests (1440m-1268.5m) 2 sample points - 3 sample chambers used. Last on bottom circulation time 10:20 am 03/03/2008 Last circulation time following ADN logs at 1740.0 mMDRT - 21:30 03/03/2008 MDT 13 pretests completed. 9 Good tests - 3 no seal & 2 flow line blockages. 3 x sample chambers taken at 1328m.
4	CST	1477.2	1250.0	0.0	0.0	CST: 30 cores, 29 recovered.

REMARKS

Run#3: MDT-GR was rigged up and run into hole. The tool became hung up and unable to pass 1500.0 mMDRT. A total of 13 pretests were then attempted. (9 Good tests, 3 Seal failure & 2 aborted tests due to plugging) Three samples were then acquired at 1328.0 mMDRT. A sample was also attempted at 1440.0 mMDRT however the test was aborted due to sand plugging the tool sampler line. The MDT tool was then pulled from hole and laid out. The fluid samples were retrieved on surface - Petrotec tests indicating recovery of water only.

Run#4 CST-GR was rigged up and run in hole to the hold up point at 1500.0 mMDRT. 30 shots were taken from 1477.2 mMDRT to 1250.0 mMDRT. The CST tool was then pulled out of hole and laid out. 29 samples were retrieved with 1 sample left in the hole.

WELLSITE GEOLOGISTS

Adam Cruickshank

DAILY GEOLOGICAL REPORT

Date:	06 March 2008	**Rig:**	West Triton
Report Number:	26	**Bit Diameter:**	No bit in hole
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 857.0 m MDRT
Spud Date:	14-Feb-2008 23:00 Hours	**LOT:**	1.91 sg EMW @ 857.0 m MDRT
Days From Spud:	20.3	**Mud Weight:**	1.23 sg
Depth @ 0600 Hrs:	2313.0 mMDRT -2086.5 mTVDAHD	**ECD:** **Mud Type:**	 KCL Polymer
Lag Depth:	2313.0 mMDRT	**Mud Chlorides:**	50000.00 mg/L
Last Depth:	2313.0 mMDRT		
Progress:	0.0 m		
Water Depth:	27.0 m	**Last Survey:**	2272.78 mMDRT
RT:	39.0 m	**Deviation:**	Inc. 47.76° Az. 323.36°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Ran in hole to TD with open ended drill pipe. Rigged up Schlumberger sheaves at crown and ran wireline in hole for Run 5 (VSI). Completed logging operations as per program and rigged down tools. Pulled out of hole to 1270.0 mMDRT for plug and abandonment program.

NEXT 24 HOURS: Continue plug and abandonment program.

CURRENT OPERATION @ 06:00 HRS (06-Mar-2008): Performing plug and abandonment program.
Setting cement plug #1 from 1270 to 1210 mMDRT.

GEOLOGICAL SUMMARY

WIRELINE

WATER BASED MUD DATA

DATE MUD CHECK	MUD TYPE	MW (sg)	pH	KCl (%)	Cl (mg/L)	Barite (%)	Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)
04-Mar-2008	KCL / Polymer	1.23	8.5	10	50000	5	0.091	79	109

RUN SUMMARY

Run #	Tool String	Log From Depth (m)	Log To Depth (m)	Repeat From Depth (m)	Repeat To Depth (m)	Comments
5	VSI through Drill Pipe.	2300.0	1265.5	0.0	0.0	RIH open ended drill pipe and circulated for 3.5 hours. Last circulation 13:10pm 05/03/2008. Move drill pipe every 30mins during logging operations to avoid becoming hydrostatically stuck.

Date Mud Checked: 04-Mar-2008
Date Time Circulation Stopped: 05-Mar-2008 01:10 PM

Run #	Run Date	Tool String	Max BHT (°C)	Max Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
5	5/03/2008	VSI through Drill Pipe.	N/A	2299.9	05-Mar-2008 17:00	3.83

REMARKS

Ran in hole to TD with open ended drill pipe, washing and reaming as required. Circulated hole clean whilst changing out elevators and bails for installation of Schlumberger sheaves at crown. Picked up and ran in hole with VSI tool on wireline for Run 5. Commenced logging operations as per program. Logged 17 stations from 2299.9 to 1279.7 mMDRT. Pulled out of hole with wireline and rigged down Schlumberger wireline equipment. Pulled back with drill pipe to 1330.0 mMDRT. Pumped and displaced a Hi-Vis pill and continued to pull out of hole to 1270.0 mMDRT. Rigged up and prepared for plug and abandonment program. Began setting cement plug #1 from 1270.0 to 1210.0 mMDRT.

WELLSITE GEOLOGIST

Adam Cruickshank

Bit Performance Summary

OPERATOR:	APACHE ENERGY	COUNTRY:	AUSTRALIA	STATE:	WESTERN AUSTRALIA
CONTRACTOR:	STENA DRILLING	RIG NAME:	West Triton	DATE PULLED:	15/02/2008

Wasabi 1

RUN INFORMATION

PROD	Bit Size (in)	Bit Mfg	Bit Type	IADC Code	Serial #	NOZZLES (32nd's) N1	N2	N3	N4	N5	N6	N7	N8	N9	Depth In (m)	Depth Out (m)	Meters Drilled (m)	HOURS	ROPs (m/hr)	WOB (klbs)	Motor RPM	Total RPM	Rot Type	DEV (°)	Pump Press (psi)	Volume (gpm)	MW (sg)	PV / YP	H.S.I
PDC	26.00	STC	XR+C	115	MZ1716	28	28	28							66	135	69	6	11.5 53.2	 N/A		N/A	RS		N/A	N/A			N/A
						TFA = 1.804																							

DULL BIT PHOTOS

PHOTOS NOT AVAILABLE

BOTTOM HOLE ASSEMBLY
Pendulum

COMMENTS

IADC DULL GRADE

CUTTING STRUCTURE				BEARINGS			REMARKS		
INSIDE	OUTSIDE	DULL	LOCATION	1	2	3	GAGE	OTHER	REASON

Bit Performance Summary

OPERATOR:	APACHE ENERGY	COUNTRY:	AUSTRALIA	STATE:	WESTERN AUSTRALIA
CONTRACTOR:	STENA DRILLING	RIG NAME:	West Triton	DATE PULLED:	17/02/2008

Wasabi 1

RUN INFORMATION

PROD	Bit Size (in)	Bit Mfg	Bit Type	IADC Code	Serial #	NOZZLES (32nd's) N1	N2	N3	N4	N5	N6	N7	N8	N9	Depth In (m)	Depth Out (m)	Meters Drilled (m)	HOURS	ROPs (m/hr)	WOB (klbs)	Motor RPM	Total RPM	Rot Type	DEV (°)	Pump Press (psi)	Volume (gpm)	MW (sg)	PV / YP	H.S.I
PDC	16.00	R/HYC	T11CDH	115	1369484	28	28	28							135	862	727	25.5	28.5	16		97	RS	0.4		1110	1.04	7	0.79
						TFA = 1.804													94.4	16		97						6	

DULL BIT PHOTOS

PHOTOS NOT AVAILABLE

BOTTOM HOLE ASSEMBLY	COMMENTS
Pendulum	

IADC DULL GRADE

CUTTING STRUCTURE				BEARINGS			REMARKS		
INSIDE	OUTSIDE	DULL	LOCATION	1	2	3	GAGE	OTHER	REASON
1	2	WT	A	E	E	E	I	NO	TD

Bit Performance Summary

OPERATOR:	APACHE ENERGY	COUNTRY:	AUSTRALIA	STATE:	WESTERN AUSTRALIA
CONTRACTOR:	STENA DRILLING	RIG NAME:	West Triton	DATE PULLED:	25/02/2008

Wasabi 1

RUN INFORMATION

PROD	Bit Size (in)	Bit Mfg	Bit Type	IADC Code	Serial #	NOZZLES (32nd's) N1	N2	N3	N4	N5	N6	N7	N8	N9	Depth In (m)	Depth Out (m)	Meters Drilled (m)	HOURS	ROPs (m/hr)	WOB (klbs)	Motor RPM	Total RPM	Rot Type	DEV (°)	Pump Press (psi)	Volume (gpm)	MW (sg)	PV / YP	H.S.I
PDC	12.25	STC	Mi616VBPX	M223	SCC985	18	18	18	18	18	18				862	1797	935	61.25	15.3	19	121	121	RS	32.0		1099	1.15	20	2.61
						TFA = 1.491													65.9	19		161						26	

DULL BIT PHOTOS

BOTTOM HOLE ASSEMBLY	COMMENTS
Steerable	HEAVY BLADE CONTACT - SHOULDER.

IADC DULL GRADE

CUTTING STRUCTURE				BEARINGS			REMARKS		
INSIDE	OUTSIDE	DULL	LOCATION	1	2	3	GAGE	OTHER	REASON
2	6	BT	S	X	X	X	I	RO	BHA

Bit Performance Summary

OPERATOR:	APACHE ENERGY	COUNTRY:	AUSTRALIA	STATE:	WESTERN AUSTRALIA
CONTRACTOR:	STENA DRILLING	RIG NAME:	West Triton	DATE PULLED:	27/02/2008

Wasabi 1

RUN INFORMATION

PROD	Bit Size (in)	Bit Mfg	Bit Type	IADC Code	Serial #	NOZZLES (32nd's) N1	N2	N3	N4	N5	N6	N7	N8	N9	Depth In (m)	Depth Out (m)	Meters Drilled (m)	HOURS	ROPs (m/hr)	WOB (klbs)	Motor RPM	Total RPM	Rot Type	DEV (°)	Pump Press (psi)	Volume (gpm)	MW (sg)	PV / YP	H.S.I
PDC	12.25	STC	Mi616VHBPX	M223	SCC991	14	14	14	14	14	14				1797	1900	103	11	9.4	10	121	121	RS	47.5		1099	1.15	18	3.17
						TFA = 0.902													24.09	10		161						35	

DULL BIT PHOTOS

BOTTOM HOLE ASSEMBLY
Steerable

COMMENTS
CUTTERS IN GOOD CONDITION. NO MAJOR WEAR CHARACTERISTIC

IADC DULL GRADE

CUTTING STRUCTURE				BEARINGS			REMARKS		
INSIDE	OUTSIDE	DULL	LOCATION	1	2	3	GAGE	OTHER	REASON
2	4	BT	S	X	X	X	I	CT	BHA

Bit Performance Summary

OPERATOR:	APACHE ENERGY	COUNTRY:	AUSTRALIA	STATE:	WESTERN AUSTRALIA
CONTRACTOR:	STENA DRILLING	RIG NAME:	West Triton	DATE PULLED:	1/03/2008

Wasabi 1

RUN INFORMATION

PROD	Bit Size (in)	Bit Mfg	Bit Type	IADC Code	Serial #	NOZZLES (32nd's) N1	N2	N3	N4	N5	N6	N7	N8	N9	Depth In (m)	Depth Out (m)	Meters Drilled (m)	HOURS	ROPs (m/hr)	WOB (klbs)	Motor RPM	Total RPM	Rot Type	DEV (°)	Pump Press (psi)	Volume (gpm)	MW (sg)	PV / YP	H.S.I
PDC	12.25	HCC	MXL1	117	6065524	24	24	24							1900	2313	413	49	8.4 16.3	40 40	110	110 150	RS	48.1		1000	1.21	20 31	2.62
						TFA = 1.325																							

DULL BIT PHOTOS

PHOTOS NOT AVAILABLE

BOTTOM HOLE ASSEMBLY	COMMENTS
Steerable	

IADC DULL GRADE

CUTTING STRUCTURE				BEARINGS			REMARKS		
INSIDE	OUTSIDE	DULL	LOCATION	1	2	3	GAGE	OTHER	REASON
2	8	WT	A	E	E	E	16	CT	PR

HALLIBURTON

Fluid Systems

BAROID FLUID SERVICES
RECAP

APACHE ENERGY LTD
Wasabi-1
BASS STRAIT, VICTORIA

Prepared by: Mike Flexmore, James Munford, Eugene Edwards, Brad Jackson

Date: March, 2008

Table Of Contents

1. WELL SUMMARY

1.1 Well Data

Well Name	:	Wasabi-1
Operator	:	Apache Energy Ltd
Well Type	:	Deviated/Exploration
Bottom Hole Temperature	:	60°C (Dynamic)
Maximum Inclination	:	48 deg @ 2243 m MD, 2078m TVD
Location	:	Wasabi Field, La Trobe Basin, Victoria
Contractor/Rig	:	West Triton
Start Date (Rig)	:	12/02/2008
Baroid On Location	:	31/01/2008
Drill Out Date	:	14/02/2008
RT to Mudline	:	75 m
Total Depth	:	2313 m MD, 2125 m TVD
Date TD Reached	:	01/03/2008 (05:30 Hrs)
Total Days Actual Drilling	:	8 Days
Date Released	:	08/03/2008
Total Days on Well	:	26 Days
Drilling Cuttings Volume	:	1464 bbls

1.2 Formation Tops

Formation	MDRT (m)	TVDRT (m)	Length (m MD)
Gippsland	66	66	-
Lakes Entrance	1002	1002	936
Gurnard Formation	1255	1254	253
Burong (upper Latrobe)	1382	1380	127
M. Diversus (upper Latrobe)	1709	1674	382
Volcanics (Campanian)	2207	2053	498
Golden Beach	2230	2069	23
Total Depth	2313	2125	2247

1.3 Casing Program

20 x 13 $^{3}/_{8}$"	Surface Casing	@	857 m MDRT
	Production Casing	@	Not planned

1.4 Personnel

Drilling Supervisors	:	Bill Openshaw	Stefan Schmidt	Shaughn Corless
	:	Richard Reading		
Baroid Field Service Reps.	:	Mike Flexmore	James Munford	Eugene Edwards
		Brad Jackson		

2. COST SUMMARY

2.1 Drilling Fluid Costs

	Drilling Fluid	Hole Size	MD From	MD To	Cost USD $
1.	Seawater & Sweeps	26" x 16"	66 m	862 m	50,101.46
2.	KCL/POLYMER	12 ¼"	862 m	2313 m	217,741.91
Mud Materials Used For Drilling				**USD $**	**267,843.37**
Products Lost / Damaged				**USD $**	**3,269.08**
Total Materials				**Total USD $**	**267,843.37**

2.2 Engineering Costs

Service Representatives	From (date)	To (date)	Days
Mike Flexmore	31/01/08	14/02/08	15
James Munford (Intvl 1)	11/02/08	22/02/08	12
James Munford (Intvl 2)	23/02/08	27/02/08	5
Eugene Edwards (Intvl 1)	15/02/08	22/02/08	8
Eugene Edwards (Intvl 2)	23/02/08	08/03/08	15
Brad Jackson (Intvl 2)	28/02/08	08/03/08	10
Total Days:			65
Service Cost	**@ USD $ 1250**	**USD $**	**81,250.00**
Total Cost of Materials & Engineering:		**USD $**	**352,362.45**

3. PERFORMANCE SUMMARY

3.1 Comments

The West Triton was commissioned and the first well for Apache, Wasabi-1, was spud on 14/02/2008. The first top hole intervals, 26" x 16", was drilled from 66 m – TD at 862 m. The 13.375" casing could not be run passed 139m and was pulled out the hole.
A wiper trip was run to 857m, with tight hole being reamed, from 94m to 135m, on the way in and from 155m to 126m, on the way out.
The 13.375" casing was run to 733m, then the 20" crossover and casing run to 809m. The casing was washed down from 809m to 857m and cemented in place as per program.

The 12 ¼" interval was drilled to TD at 2313 m. The final target depth was changed during drilling and was 235m shallower then the programmed TD of +/- 2548m.
The hole angle was increased, from a programmed 28 degrees at 1490-2211m, to 48 degrees at 2243m. Wire line logs could not be run passed 1390m. MWD and LWD logs were run with the drill string, with additional wire line logs run after.
The hole was plugged and abandoned with 3 cement plugs set at 1270m to 1210m, 887m to 827m and 121m to 76m.

3.2 Performance Indicators

Interval 1. (66 m – 862 m) – 26" x 16" Hole	**Program**	**Actual**	**Achieved (+/- 10 %)**
• Drilled, m	825	796	Yes
• Volume Built, bbl	4330	5888	No
• Dilution Rate, bbl/m	n/a	n/a	n/a
• Consumption Rate, bbl/m	n/a	7.4	No
• Mud Cost / bbl, US$	7.32	8.5	No
• Mud Cost / m, US$	38.43	62.94	No
• Interval Mud Cost, US$ **	31,703	50,101.66	No

Interval 2. (862 m – 2313 m) – 12 ¼" Hole	**Program**	**Actual**	**Achieved (+/- 10 %)**
• Drilled, m	1752	1451	no
• Volume Built, bbl	4098	4740	no
• Dilution Rate, bbl/m	1.75	1.9	yes
• Consumption Rate, bbl/m	2.34	3.2	no
• Mud Cost / bbl, US$	44.96	43.70	yes
• Mud Cost / m, US$	105.19	142.76	no
• Interval Mud Cost, US$ **	184,285.00	207,146.87	no

3.3 Explanation of Non-Conformance

Interval 1:

- Make up costs were higher, due to contaminated drill water, used in the makeup of the spud mud. The use of costly BARAZAN-D+ was necessary to achieve the desired viscosity of all mud and barite suspension of the Displacement/Kill mud.
- An unplanned wiper trip was carried out tog et casing down. A greater volume of mud was used, because of an additional 758bbls, of Hi Vis sweeps. These were pumped while reaming tight spots, on the wiper trip. An additional displacement of 800bbls, 1.15sg mud was also required, due to the unplanned wiper trip.

Interval 2:

- The total mud costs, for the 12.25" interval, was $22861.87 higher then programmed. The program did not include any costs for the use of EZ mud ($1630.77), Circal 60/16 ($4033.37), Circal Y ($1946.68), Bara defoam W300 ($3084.40).
- The usage was higher for Potassium Hydroxide (75 @ $3373.50) then programmed (15 x Caustic Soda) and Aldacide G (21 actual @ $1834.77, vs 2 programmed).
- The actual volume built was 4740 bbls, which comprised of 4340 bbls of KCL/Polymer mud and 400 bbls of PHB reserve mud. The PHB reserve mud was built as contingency volume, when the boats were unable to offload chemicals and drill water, during bad weather. The actual volume of KCL/Polymer mud built was 4340bbls, 242bbls higher then the 4098 bbls programmed.
- The average hole wash out, was 17.3%. The programmed open hole volume, at 2548m was 652 bbls. While the actual open hole volume at 2313m was 935 bbls. This is 283 bbls more open hole mud volume, despite being 235m shallower.
- The dilution rate is slightly higher than programmed. Generally the seepage losses while drilling were 10bbls /hr. there were occasional increases to this rate, the most severe being shortly after entering the Latrobe sands. The losses peaked at 30bbls / hr and 50 bbls of a 40ppb Calcium Carbonate LCM pill, was transferred into the active. The losses retreated to 7 bbls /hr after the treatment. Due to the 17.3% hole wash out, the dilution rate and losses are not entirely accurate and will include a component required to displace the washed out hole.

4. INTERVAL - 1

4.1 SUMMARY

26”x16” Hole From 66 m To 862 m In 5 Days

Drilling Fluid Seawater & Sweeps
Formations Gippsland.

The 26” interval was drilled, using seawater and unweighted hi-vis, spud mud sweeps, from 66 m to 135 m. Open hole was then displaced to hi-vis spud mud. The next run was made using 16” bit and drilling continued to section TD at 862m using seawater and hi-vis spud mud sweeps. At TD the open hole was displaced to 960bbls spud mud weighted to 1.15 sg.

The 13 3/8” casing hung up at 139m. The casing was pulled and a 16” BHA picked up and reamed from 70m to 135m. The BHA was run in to 857m, with 5m of fill. On the way out the hole, a tight spot from 155m to 126m was worked, pumping Hi-vis sweeps.
The 20” x 13 3/8” tapered casing string was run to 809m, washed down to setting depth, at 857m and cemented as per program.

The time from spud, to running 13 3/8” casing was almost 72 hours, with rig repair and a BHA change contributing to the time taken. The displacement fluid had no inhibitive properties.

Prior to spud, mud properties were generally lower than programmed, due to the chloride contamination of the drill water. This was rectified with additions of 1.15ppb Barazan D plus to those pits that were contaminated and then by using low chloride drill water, when it was available. All mud checks while drilling the 26” and 16” hole conformed to the programmed specifications.

Properties	**Programmed**		**Actual (Typical Drilling)**		
	Min	**Max**	**Min**	**Max**	**Conformance**
Mud Weight, sg	1.03	1.15	1.03	1.15	Yes
6 rpm, lb/100 ft²	40		15	81	Partial
YP, lbs/100ft^2	50		28	103	Partial
Viscosity, sec/qt	100		60	300	Partial
pH	9	10	9	9.5	Yes
Plastic Viscosity, cp	ALAP		6	15	Yes
Gel 10s, lbs/100ft2	>40		10	80	Partial
Gel 10m, lbs/100ft2	>40		17	110	Partial
Displacement Fluid					
6 rpm, lb/100 ft²	>25		29	30	Yes
Gel 10s, lbs/100ft2	>20		21	27	Yes
Gel 10m, lbs/100ft2	>20		44	45	Yes

Explanation of Non-Conformance

- Partial success was met with the rheological properties of the system due to the makeup drill water being contaminated with 6-5% seawater in the rig’s port side bulk storage tank. BARAZAN D+ had to be incorporated into the prehydrated bentonite to promote additional viscosity for hi-vis sweeps and suspension of barite used in the displacement mud.

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Maintenance

- All bentonite used was first prehydrated in drill water at a concentration of 35-40 ppb. This was then cut back to 20 ppb using seawater. BARAZAN D+ was added at 1.1 ppb to all the displacement mud for viscosity due to the poor quality drill water. Lime was added prior to use to enhance viscosity.
- Caustic soda was used to obtain required alkalinity.
- Pit #5 was used for seawater for drilling. The hi-vis sweeps were contained in pits 1, 2, 3 and 6. All 1.15 sg weighted displacement mud was kept in pits 4, 7 and 8.
- A total of 5888 bbls bbls of spud mud was prepared for top hole. Of this, 1200 bbls was prepared, as weighted displacement mud. An additional application, of the displacement fluid, was as Kill Mud, as a precaution against shallow gas.

4. INTERVAL - 2

4.1 SUMMARY

12 1/4" Hole From 892 m To 2313 m In 8 Days

Drilling Fluid KCl/Polymer
Formations Lakes Entrance, Latrobe Group.

The 12.25" section was drilled using a KCL/Polymer drilling fluid system.

There were some issues relating to hole conditions, which was evidenced by cuttings at the shakers and tight spots, when tripping for BHA changes and attempting to run wire line logs in the well.

Intermittent coal seams were drilled from 1390m to 1500m, 1580m, 1670m,1800m to 1860m and 2090m to 2140m. There were coal pieces visible at the shakers from 1390m to TD, ranging in size from less then a ¼" to a maximum of 7", shortly after 2040m.

Seepage losses for the 12.25" section ranged from 0 to 3bbls an hour at a minimum and +30bbls an hour at a maximum, when entering the Latrobe at 1390m. This was treated and healed with sized calcium carbonate additions to the active, reducing seepage losses to 7 to 10 bbls / hour.

The average washout for the 12.25" hole was 17.3% or 14.37" hole. The maximum washout was in the Latrobe sands, with 19" hole at 1390m. The wire line logs could not be run passed this point.

After evidence of large coal splinters / caving's, the required minimum mud weight was increased to 1.12sg, by 2286m.

Properties	**Programmed**		**Actual (Typical Drilling)**		
	Min	**Max**	**Min**	**Max**	**Conformance**
Mud Weight, sg		1.15	1.15	1.23	
PV, cp	ALAP		16	22	Yes
YP, lbs/100 ft^2	25		19	49	Partial
6 rpm, lbs/100 ft^2	12	15	8	18	Partial
Gels, lbs/100 ft^2	12	20	8	17	Partial
pH		10	8.5	9.6	Yes
KCL, wt%	10	12	9	12	Partial
API WL, mL/30 min	3	5	4	5.6	Partial
MBT, ppb		15	0	2.5	Yes

Explanation of Non-Conformance

- The mud weight was easily kept to 1.15sg, to a depth of 1797m, using unweighted premix additions. After this depth, the weight continued to creep up to 1.18sg, by 2250m.

  The increase in weight was due to a combination of events. Two 30bbl, 1.39sg slugs added to the active system while tripping, to change the BHA at 1797m and 1900m.

  The use of unweighted premix additions for weight control became limited, when building enriched KCL content premixes (1.13 -1.15sg), to maintain the active KCL content at 10% (could not add directly to the active).

At 2286m the mud weight was increased to 1.2 after evidence of splintering coal at the shakers. The maximum mud weight was 1.23 sg, following the introduction of slugs, 10–15 bbl 1.9sg hole cleaning sweeps and circulating the hole clean prior to and during the logging runs.

- The highest YP and 6rpm readings occurred when EZ mud (PHPA) was added directly to the active system, from 1800m. These were only temporary increases.
- KCL content dropped below 10% occasionally. There was no way of adding KCL directly to the active system. It could only be added via enriched premixes. This is not an efficient method, taking longer and using excessive quantities of premixed mud, to treat only one mud property. This needs to be addressed for the next well.
- MBT remained low for the entire well, with a maximum reading of 2.5ppb equivalent.

Maintenance

- Barablok was added to the active at 4ppb at 950m. An additional 1.5ppb was added at 1550m to maintain concentration after dilution. Increased coal cuttings were observed at 1830m and an additional 4ppb Barablok was added to the active, for prevention. A Hivis sweep was concurrently pumped, to clean the hole, with additional (25%) cuttings observed at the shakers.
- From 1900m, 1.9sg Hivis sweeps were used, to ensure the hole was clean, while building angle to 45 degrees. Sweeps pumped at 2227m and 2242m showed only none to marginal increase in cuttings at the shakers. A 1.9sg sweep pumped after TD, at 2300m, increased the cuttings at the shakers by 100%.
- EZ-Mud was added from 1800m, at 0.6 ppb, in anticipation, of clay stone formations and to improve the lubricity of the mud, while building hole angle.
- The initial 6rpm readings were below the programmed 12 -15. This was primarily due to building new unsheared, mud between 0.8 and 1ppb, to enable circulation and mixing with the mix pumps / hoppers. The 6rpm was raised by 0.5ppb Barazan D additions, to 12-16.
- The KCL content was maintained by building enriched premixes of 12-15%, since it could not be added directly to the active.

Solids Control Equipment

- The 4 VSM 300 shakers were dressed with 89 mesh screens for the displacement of the hole to the new KCL /Polymer mud. They were fined up to 145's and 255's while circulating rates were -900gpm. Once circulations increased to +1100gpm, the 89 screens were reinstalled. Three shakers were upgraded to 255 mesh screens by 1700m. One shaker was dressed with 89's, incase the flow rates and cuttings volume, were too excessive for the shakers to handle. The majority of the mud returns were directed over the 255 screens.
- By 2000m, 2 shakers were dressed with 280 mesh screens and 2 shakers a combination of 255's and 280 mesh screens.
- The desilter was not used. It is installed over shaker 4 and its discharge chute is onto the screens of shaker 4. There is no overboard discharge, making the unit completely redundant. Any discharge would be removed from the circulating system, only if it could not pass through the shaker screens. In this case 280 mesh any finer particle sizes would be reincorporated into the mud.
- The degasser was test run several times prior to drilling any potential permeable / porous formations.
- The centrifuges are not rigged up and available for use.

6.2 EVALUATION

Comments

The KCL /Polymer drilling fluid performed well, with good properties regarding MBT 2ppb, sand content 1% and LGS <2.7%.
There were some issues regarding the intermittent coal sections, with fragments and splinters of coal visible at the shakers for much of the 12.25" section. Apache's coal, drilling fluid guide lines were followed, keeping fluid loss low, adding Barablok, pH below 9 and pumping 10-15bbl, 1.9sg sweeps for hole cleaning.

There are significant limitations on mixing, mud cleaning and circulating operations, due to rig design. These limitations have been identified in the West Triton Appraisal document and should be addressed for future operations.

Problems, Causes, Remedial Action Taken or Recommended

Hole Conditions

1) Problem — Coal splinters and cavings (< 0.25" to 7") present from drilling coal seems in Burong formation, until TD.
   Cause — Unstable coal seams, pressure fluctuations, time dependant exposure
   Action — Pumps should be staged up and down, to minimize the change in ECD.
   BARABLOK, regular additions made once coal encountered.
   Increased 6rpm and yield point, to improve carrying capacity and remove any coal cavings as they occur. 1.9sg sweeps were pumped with varying degrees of success, from 100% increase in cuttings to zero.
   The recommended product of choice according to the Apache coal drilling guide lines, is Soltex. This product is at present unable to be imported into Australia.
   Keep the pH below 9 to prevent any solublisation, which may increase borehole instability.
   There are two schools of thought, whether weighing up helps borehole stability or invades and decreases borehole stability. It should be considered, that when coal cavings are evidenced at the shakers/surface, the coal beds are already unstable and a greater mud weight will increase the penetration into the formation and fractures. The correct mud weight for stability should be selected prior to drilling.

2) Problem — Moderate losses drilling 1450-1647m.
   Cause — Drilling new permeable formation.
   Action — Pumped 40bbls, 40ppb LCM sweep. Healed losses.

3) Problem — Occasional moderate losses drilling 1900 – 2100m.
   Cause — Drilling new permeable formation.
   Action — Introduced 50bbls of 40ppb LCM pill into the active. Healed losses to 7bbls/hr immediately.

Drilling Fluid

1) Problem Poor hydration of the prehydrated bentonite spud mud.
Cause Rig's drill water supply was contaminated with 65% seawater.
Action BARAZAN D+ polymer was added to the spud mud to improve viscosity.

2) Problem Poor hydration of prehydrated bentonite spud mud
Cause Total hardness in the rig's contaminated drill water supply and the lack of soda ash due to logistics issues.
Action Caustic soda was used to suppress some hardness prior to mixing.

3) Problem Unable to unload chemicals from the boat due to bad weather.
Cause Bad weather
Action Guar Gum was mixed for a Hivis sweep. 400bbls of PHB was mixed for volume. There is limited storage on the rig to carry significant stocks of contingency products. However, if the shaker screens and some rig equipment are removed form the sack room. Greater amounts of contingency products can be stored in the sack room.

Solids Control and Mud Mixing Equipment

1) Problem Mixing pumps losing or failing to prime, rig's drillwater pumps losing prime, overfilling of surge tanks causing clouds of vented bulk, incorrect valve usage, bulk movement problems, overflowing hoppers
Cause New rig and new crews, undergoing teething problems.
Action Learning curve for the crews, which will improve with experience on the West Triton.

2) Problem Significant design faults in mixing, mud cleaning and auxiliary equipment.
Cause Unknowledgeable engineering, short cuts in design and incomplete work.
Action **See West Triton Appraisal document**

3) Problem Unable to get bulk bags mixed as required (crane operation).
Cause Bad weather stopped crane and boat operations.
Action Send a combination of sacked and bulk chemicals to the rig, reducing the dependence on the crane.

4) Problem Cuttings blocking up the header boxes and flow line.
Cause Large fragments of coal and cuttings coming from the well.
Action Run the gumbo buster at all times while drilling. Minimizing large cuttings to the shakers will also improve screen life and ability to handle higher flow.

5) Problem Unable to add bulk products to all pits (only pit7)
Cause Deck hopper discharges into pit 7 only
Action KCL brine has been mixed while logging for the next hole.
A supply of sacked Calcium Carbonate should also be supplied for the next well.

6) Problem No or minimal gas readings by BHI gas sensor, in the header box
Cause Possibly due to the length of the flow line allowing gas breakout.
Action Relocate to the flow line before the gumbo box

6.3 RECOMMENDATIONS FOR IMPROVEMENT

Hole Conditions

- The 6rpm figure should be kept on the high side of the 12-15 range, or slightly over this to ensure any coal cavings are removed as they occur. High weight / vis sweeps should be pumped at least each tour.

Drilling Fluid

- All drillwater from the supply vessel's, is to be checked for chloride contamination, by the mud engineer. This has already been enforced on the West Triton, following the initial contamination.

Solids Control and Mud Mixing Equipment

- Human error seems to be the cause of some equipment issues. Being a new rig and new crews, this will be overcome in time, as a learning curve.
- **Also see the West Triton Appraisal**

Plug and Abandon

7.1 SUMMARY

P and A **In** **1** **Days**

The hole was plugged and abandoned with 3 cement plugs set at 1270m to 1210m, 887m to 827m and 121m to 76m.

Properties	Programmed		Actual		
	Min	Max	Min	Max	Conformance
Hi Vis -Viscosity				175	Yes

Explanation of Non-Conformance

- All properties were maintained in the programmed range.

Maintenance

- 420 bbls of Hivis was mixed and spotted prior to each cement plug.
- 1200 bbls of KCL /Polymer mud was treated with 0.375ppb Aldacide G for backload onto a boat and use on Coelacanth 1.
- 800 bbls KCL brine mixed and back loaded onto a boat, for Coelacanth 1.

Solids Control Equipment

- Circulation did take place over the shakers, which were being cleaned of mud residue.

POSTWELL AUDIT

Baroid Fluid Services

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Well Summary Report

Well Data

Spud Date		02/14/2008	Fluids/Products: Drilling Cost	$	267,843.37
TD Date		03/01/2008	Fluids/Products: Completion Cost	$	0.00
Project			Solids Control/Waste Management Cost	$	0.00
Days on Well		26	Fluids/Products: Cementing Cost	$	0.00
From Date		02/12/2008	Prod Lost/Damaged Cost	$	3,216.72
To Date		03/08/2008	Engineer Services Cost	$	81,250.00
Drilling Days		13	Equipment Cost	$	0.00
Rotating / Drilling Hours		161.5/154.5	Transport/Packaging	$	0.00
Average ROP	m/hr	14.5	Other Cost	$	52.36
Maximum Density	SG	1.24	Total Well Cost	$	352,362.45
Total Measured Depth	m	2,313	Planned Cost	$	0.00
True Vertical Depth	m	2,251	Fluid Cost Per Fluid Volume	$/bbl	21.62
Distance Drilled	m	2,247	Fluid Cost Per Length Drilled	$/m	119.20
Maximum Deviation	deg	21.46	Fluid Cost/Vol of Hole Drilled	$/bbl	139.09
Max. Horz. Displacement	m	49	Total Additions/Hole Drilled	bbl/bbl	6.433
Bottom Hole Temp			Total Additions/Length Drilled	bbl/m	5.513

Casing Design

Description	Set Date & Time	Top MD m	Top TVD m	End MD m	End TVD m	CSG OD in	CSG ID in	Max. Hole Size in	Hole MD m	Hole TVD m
20 X-56 129.3	02/20/2008 6:00	66	66	135	135	20.000	19.120	27.000	135	135
13.375 L-80 68.0	02/20/2008 6:00	135	135	857	857	13.375	12.415	16.000	862	862

Fluid Program

Int #	Fluid Type	Interval Days	BHT Deg C	Max. Dens SG	Whole fluid + Mix products	Other material charges	Other charges	Total Interval Cost $		
								Plan	Actual	Variance
1	Seawater Spud Mud	9		1.15	50,101.66	0.00	38,750.00		88,851.66	
2	Seawater KCl/Polymer	17		1.24	217,741.71	3,269.08	42,500.00		263,510.79	
Total Well Cost $					**267,843.37**	**3,269.08**	**81,250.00**		**352,362.45**	**352,362.45**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	Apache

Total Cost Breakdown

	Unit Size	Quantity	Total Cost
Engineering/Services			
Drilling Fluids Engineer	day(s)	38.00	47,500.00
Drilling Fluids Engineer 2	day(s)	27.00	33,750.00
		SubTotal	**$ 81,250.00**
Fluid/Product: Lost Damage			
bentonite	1000 kg bulk	6.500	3,216.72
		SubTotal	**$ 3,216.72**
Other			
Kwikseal Fine	40 lb bag	1.00	52.36
		SubTotal	**$ 52.36**
Fluids/Products: Drilling Cost			
ALDACIDE G	25 l can	21.00	1,834.77
BARABLOK	50 lb bag	220.00	6,685.80
BARA-DEFOAM W300	5 gal can	5.00	3,084.40
BARAZAN D PLUS	25 kg bag	218.00	33,188.32
barite	1000 kg bulk	107.000	50,812.16
bentonite	1000 kg bulk	62.700	31,028.98
caustic soda	25 kg pail	42.00	1,855.98
Circal 60/16	1200 kg bag	11.00	4,033.37
Circal Y	1200 kg bag	4.00	1,946.68
citric acid	25 kg bag	2.00	92.48
CLAYSEAL PLUS	216 kg drum	64.00	61,224.96
EZ-MUD	25 kg pail	19.00	1,630.77
guar gum	25 kg bag	32.00	2,717.76
KCl/Polymer	bbl	1.00	
lime	20 kg bag	4.00	26.20
PAC-L	25 kg bag	260.00	21,286.20
potassium chloride	1000 kg bag	96.00	42,380.16
potassium hydroxide	25 kg bag	81.00	3,643.38
soda ash	25 kg bag	28.00	371.00
		SubTotal	**$ 267,843.37**
		Total Well Cost:	**$ 352,362.45**

Well	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Net Well Cost Breakdown

Cost Breakdown I $	Interval 01	Interval 02	Total
Fluid/Product: Drilling	50,101.66	217,741.71	267,843.37
Fluid/Product: Comp/Filtration			
Solids Control/Waste Management Cost			
Fluids/Products: Cementing Cost			
Engineering Services	38,750.00	42,500.00	81,250.00
Fluid/Product: Lost Damage		3,216.72	3,216.72
Other Cost		52.36	52.36
Equipment Cost			
Transport/Packaging Cost			
Total Cost	88,851.66	263,510.79	352,362.45

Cost Breakdown II $	Interval 01	Interval 02	Total
Total Products Cost	50,101.66	221,010.79	271,112.45
Total Fluids Cost			
Total Charges Cost	38,750.00	42,500.00	81,250.00
Allocated To / From Other Interval		0.00	
Total Cost	88,851.66	263,510.79	352,362.45
Planned Cost			
Variance			

Volume Breakdown bbl	Interval 01	Interval 02	Total
Total Base Fluids Addition			
Total Chemical Addition	149.2	539.2	688.4
Total Barite Addition	32.2	128.1	160.3
Total Water Addition	6,137.9	4,920.9	11,058.8
Total Fluid Built	6,319.3	5,588.3	11,907.6
Total Fluid Received	480.0		480.0
Total Influx Addition			
Not Used In Interval		0.0	
Total Fluid Volume	6,799.3	6,399.9	12,387.6

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Summary

Interval # 1	**Max Bit Size: 26.000 in**	**Hole Size Avg/Max**	**17.100 / 27.000 in**

Interval Start Date		02/12/2008	Planned Cost	$	0.00
Interval End Date		02/20/2008	Total Interval Cost	$	88,851.66
Interval TD Date		02/18/2008	Program Variance	$	88,851.66
Drilling Days		5.00	Other material charges	$	0.00
Rotating/Hours		38.00 / 31.00	Total Fluids Cost	$	50,101.66
Interval Top MD/TVD	m	66.0 / 66.0	Total Charges Cost	$	38,750.00
Interval End MD/TVD	m	862.0 / 862.0	Total Cementing Cost	$	0.00
Footage	m	796.0	Fluid Cost Per Vol Unit	$/bbl	7.37
Average ROP	m/hr	25.7	Fluid Cost/Hole Drilled	$/m	62.94
Max Hole Angle	degrees	0.00	Fluid Cost/Vol Drilled	$/bbl	67.54
Casing Size	in	13.375	Fluid Built	bbl	6,319.3
Casing Shoe MD	m	857.0	Total Additions/Vol Drilled	bbl/bbl	9.17
Casing Length	m	791.0	Total Additions/Hole Drilled	bbl/m	8.54
Bottom Hole Temp			Fluid Loss/Vol Drilled	bbl/bbl	7.49
Max Fluid Density	SG	1.150	Fluid Loss/Hole Drilled	bbl/m	6.98

Interval Product and Base Fluids Usage and Cost

Product Function / Name	Drilling Fluid	Packaging	Quantity Used	Product Cost
Weighting Material				
barite	Spud Mud	1000 kg bulk	21.500	10,209.92
			Total	**$ 10,209.92**
Viscosifier/Suspension Agent				
BARAZAN D PLUS	Spud Mud	25 kg bag	60.000	9,134.40
bentonite	Spud Mud	1000 kg bulk	55.000	27,218.40
guar gum	Seawater	25 kg bag	27.000	2,293.11
			Total	**$ 38,645.91**
Alkalinity Control				
caustic soda	Spud Mud	25 kg pail	27.000	1,193.13
lime	Spud Mud	20 kg bag	4.000	26.20
soda ash	Spud Mud	25 kg bag	2.000	26.50
			Total	**$ 1,245.83**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Summary

Interval # 2	**Max Bit Size: 16.000 in**	**Hole Size Avg/Max**	**16.000 / 16.000 in**

Interval Start Date		02/21/2008	Planned Cost	$	0.00
Interval End Date		03/08/2008	Total Interval Cost	$	263,510.79
Interval TD Date		03/01/2008	Program Variance	$	263,510.79
Drilling Days		8.00	Other material charges	$	3,269.08
Rotating/Hours		123.50 / 123.50	Total Fluids Cost	$	217,741.71
Interval Top MD/TVD	m	862.0 / 862.0	Total Charges Cost	$	42,500.00
Interval End MD/TVD	m	2,313.0 / 2,250.7	Total Cementing Cost	$	0.00
Footage	m	1,451.0	Fluid Cost Per Vol Unit	$/bbl	34.02
Average ROP	m/hr	11.7	Fluid Cost/Hole Drilled	$/m	150.06
Max Hole Angle	degrees	21.46	Fluid Cost/Vol Drilled	$/bbl	183.92
Casing Size	in	13.375	Fluid Built	bbl	5,588.3
Casing Shoe MD	m	857.0	Total Additions/Vol Drilled	bbl/bbl	5.41
Casing Length	m	791.0	Total Additions/Hole Drilled	bbl/m	4.41
Bottom Hole Temp			Fluid Loss/Vol Drilled	bbl/bbl	1.84
Max Fluid Density	SG	1.240	Fluid Loss/Hole Drilled	bbl/m	1.50

Interval Product and Base Fluids Usage and Cost

Product Function / Name	Drilling Fluid	Packaging	Quantity Used	Product Cost
Bactericides				
ALDACIDE G	KCl/Polymer	25 l can	21.000	1,834.77
			Total	**$ 1,834.77**
Defoamer				
BARA-DEFOAM W300	KCl/Polymer	5 gal can	5.000	3,084.40
			Total	**$ 3,084.40**
Filtration Control				
BARABLOK	KCl/Polymer	50 lb bag	220.000	6,685.80
PAC-L	KCl/Polymer	25 kg bag	260.000	21,286.20
			Total	**$ 27,972.00**
Weighting Material				
barite	KCl/Polymer	1000 kg bulk	85.500	40,602.24
			Total	**$ 40,602.24**
Viscosifier/Suspension Agent				
BARAZAN D PLUS	Brine	25 kg bag	3.000	456.72
BARAZAN D PLUS	KCl/Polymer	25 kg bag	155.000	23,597.20
bentonite	KCl/Polymer	1000 kg bulk	7.700	3,810.58
bentonite	No Fluid	1000 kg bulk	6.500	3,216.72
guar gum	KCl/Polymer	25 kg bag	4.000	339.72
guar gum	Seawater	25 kg bag	1.000	84.93
			Total	**$ 31,505.87**
Alkalinity Control				
caustic soda	KCl/Polymer	25 kg pail	15.000	662.85
citric acid	KCl/Polymer	25 kg bag	2.000	92.48
potassium hydroxide	KCl/Polymer	25 kg bag	81.000	3,643.38
soda ash	KCl/Polymer	25 kg bag	26.000	344.50
			Total	**$ 4,743.21**
Shale Control				

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Summary

EZ-MUD	KCl/Polymer	25 kg pail	19.000	1,630.77
potassium chloride	Brine	1000 kg bag	24.000	10,595.04
potassium chloride	KCl/Polymer	1000 kg bag	72.000	31,785.12
CLAYSEAL PLUS	KCl/Polymer	216 kg drum	64.000	61,224.96
			Total	**$ 105,235.89**
Lost Circulation/Bridging Agent				
Kwikseal Fine	No Fluid	40 lb bag	1.000	52.36
Circal Y	KCl/Polymer	1200 kg bag	4.000	1,946.68
Circal 60/16	KCl/Polymer	1200 kg bag	11.000	4,033.37
			Total	**$ 6,032.41**
Whole Fluid				
KCl/Polymer	KCl/Polymer	bbl	1.000	0.00
			Total	**$ 0.00**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Cost Breakdown

Interval # 01		**From Date**	**02/12/2008**	**Top of Interval**	**66.0 m**
Max. Hole Size / Bit Size	**27.000 / 26.000 in**	**To Date**	**02/20/2008**	**Bottom of Interval**	**862.0 m**

Material	Unit Size	Quantity	Total Cost
Engineering/Services			
Drilling Fluids Engineer	day(s)	21.00	26250.00
Drilling Fluids Engineer 2	day(s)	10.00	12500.00
		SubTotal	**$ 38,750.00**
Fluids/Products: Drilling Cost			
BARAZAN D PLUS	25 kg bag	60.00	9134.40
barite	1000 kg bulk	21.500	10209.92
bentonite	1000 kg bulk	55.000	27218.40
caustic soda	25 kg pail	27.00	1193.13
guar gum	25 kg bag	27.00	2293.11
lime	20 kg bag	4.00	26.20
soda ash	25 kg bag	2.00	26.50
		SubTotal	**$ 50,101.66**
		Interval Total Cost	**$ 88,851.66**
	Charged To/From Other Interval		**$**
	Net Description Total Cost		**$ 88,851.66**
	Programmed Cost		**$ 0.00**
	Program Variance		**$ 88,851.66**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Cost Breakdown

Interval # 02		**From Date**	**02/21/2008**	**Top of Interval**	**862.0 m**
Max. Hole Size / Bit Size	**16.000 / 16.000 in**	**To Date**	**03/08/2008**	**Bottom of Interval**	**2,313.0 m**

Material	Unit Size	Quantity		Total Cost
Engineering/Services				
Drilling Fluids Engineer	day(s)	17.00		21250.00
Drilling Fluids Engineer 2	day(s)	17.00		21250.00
		SubTotal	**$**	**42,500.00**
Fluid/Product: Lost Damage				
bentonite	1000 kg bulk	6.500		3216.72
		SubTotal	**$**	**3,216.72**
Other				
Kwikseal Fine	40 lb bag	1.00		52.36
		SubTotal	**$**	**52.36**
Fluids/Products: Drilling Cost				
ALDACIDE G	25 l can	21.00		1834.77
BARABLOK	50 lb bag	220.00		6685.80
BARA-DEFOAM W300	5 gal can	5.00		3084.40
BARAZAN D PLUS	25 kg bag	158.00		24053.92
barite	1000 kg bulk	85.500		40602.24
bentonite	1000 kg bulk	7.700		3810.58
caustic soda	25 kg pail	15.00		662.85
Circal 60/16	1200 kg bag	11.00		4033.37
Circal Y	1200 kg bag	4.00		1946.68
citric acid	25 kg bag	2.00		92.48
CLAYSEAL PLUS	216 kg drum	64.00		61224.96
EZ-MUD	25 kg pail	19.00		1630.77
guar gum	25 kg bag	5.00		424.65
KCl/Polymer	bbl	1.00		
PAC-L	25 kg bag	260.00		21286.20
potassium chloride	1000 kg bag	96.00		42380.16
potassium hydroxide	25 kg bag	81.00		3643.38
soda ash	25 kg bag	26.00		344.50
		SubTotal	**$**	**217,741.71**
		Interval Total Cost	**$**	**263,510.79**
	Charged To/From Other Interval		**$**	**0.00**
	Net Description Total Cost		**$**	**263,510.79**
	Programmed Cost		**$**	**0.00**
	Program Variance		**$**	**263,510.79**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Inventory Report

Interval # 01		**From Date**	**02/12/2008**	**Top of Interval**			**66.0 m**
Max. Hole Size / Bit Size	**27.000 / 26.000 in**	**To Date**	**02/20/2008**	**Bottom of Interval**			**862.0 m**
Product Name	**Units**	**Starting**	**Received**	**Used**	**Returned**	**Ending**	**Weight lb**
ALDACIDE G	25 l can		32.0			32.0	1,938.80
BARABLOK	50 lb bag		250.0			250.0	12,500.00
BARA-DEFOAM W300	5 gal can		8.0			8.0	292.90
BARAZAN D PLUS	25 kg bag		150.0	60.0		90.0	4,960.40
barite	1000 kg bulk		103.000	21.500		81.500	179,676.74
bentonite	1000 kg bulk		83.000	55.000		28.000	61,729.43
calcium chloride flake 77%	25 kg bag		10.0			10.0	551.16
caustic soda	25 kg pail		140.0	27.0		113.0	6,228.06
Circal 60/16	1200 kg bag		20.0			20.0	52,910.94
Circal Y	1200 kg bag		13.0			13.0	34,392.11
citric acid	25 kg bag		40.0			40.0	2,204.62
CLAYSEAL PLUS	216 kg drum		52.0			52.0	24,762.32
guar gum	25 kg bag		36.0	27.0		9.0	496.04
Kwikseal Fine	40 lb bag		80.0			80.0	3,200.00
lime	20 kg bag		45.0	4.0		41.0	1,807.79
PAC-L	25 kg bag		300.0			300.0	16,534.67
potassium chloride	1000 kg bag		12.0			12.0	26,455.47
potassium hydroxide	25 kg bag		168.0			168.0	9,259.41
soda ash	25 kg bag		80.0	2.0		78.0	4,299.01
sodium bicarbonate	25 kg bag		35.0			35.0	1,929.04
					Total Weight of Products in Stock lb		**446,128.92**
					Total Weight of Products in Stock, Metric Tons		**202.36**

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Inventory Report

Interval # 02		**From Date**	**02/21/2008**		**Top of Interval**		**862.0 m**	
Max. Hole Size / Bit Size	**16.000 / 16.000 in**	**To Date**	**03/08/2008**		**Bottom of Interval**		**2,313.0 m**	
Product Name	**Units**	**Starting**	**Received**	**Used**	**Returned**	**Ending**	**Weight lb**	
ALDACIDE G	25 l can	32.0		21.0	11.0			
BARABLOK	50 lb bag	250.0		220.0	30.0			
BARA-DEFOAM W300	5 gal can	8.0		5.0	3.0			
BARAZAN D PLUS	25 kg bag	90.0	97.0	158.0	29.0			
barite	1000 kg bulk	81.500	81.000	85.500	77.000			
BAROFIBRE FINE	25 lb bag		50.0		50.0			
bentonite	1000 kg bulk	28.000	7.000	14.200	20.800			
calcium chloride flake 77%	25 kg bag	10.0	84.0		94.0			
caustic soda	25 kg pail	113.0		15.0	98.0			
Circal 60/16	1200 kg bag	20.0		11.0	9.0			
Circal Y	1200 kg bag	13.0	2.0	4.0	11.0			
citric acid	25 kg bag	40.0		2.0	38.0			
CLAYSEAL PLUS	216 kg drum	52.0	20.0	64.0	8.0			
EZ SPOT	55 gal drum		8.0		8.0			
EZ-MUD	25 kg pail		32.0	19.0	13.0			
guar gum	25 kg bag	9.0		5.0	4.0			
Kwikseal Fine	40 lb bag	80.0		1.0	79.0			
lime	20 kg bag	41.0			41.0			
N-DRIL HT PLUS	50 lb bag		90.0		90.0			
NO-SULF	17 kg pail		48.0		48.0			
Omyacarb 5	25 kg bulk		48.000		48.000			
PAC-L	25 kg bag	300.0		260.0	40.0			
potassium chloride	1000 kg bag	12.0	88.0	96.0	4.0			
potassium hydroxide	25 kg bag	168.0		81.0	87.0			
soda ash	25 kg bag	78.0		26.0	52.0			
sodium bicarbonate	25 kg bag	35.0			35.0			
STEELSEAL	25 kg sack		60.0		60.0			

Company	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Fluid Volume Record Report

			Additions								Losses						Volumes			
Report No	Date	Initial Volume	Received	Mixed	Base	Water	Barite	Chemicals	Other	Daily Total	SCE	Downhole	Misc	Mixed	Returned	Daily Total	Hole Volume	Active Pit Volume	Reserve Volume	Final Volume
		bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl
Interval # 01																				
Fluid Name:	**Seawater**																			
002	13/02/2008		480.0							480.0									480.0	480.0
003	14/02/2008	480.0									52.6					52.6	7.5	420.0		427.5
004	15/02/2008	427.5		1,055.5						1,055.5	881.8					881.8	161.2	440.0		601.2
005	16/02/2008	601.2		1,665.3						1,665.3	1,192.9					1,192.9	693.6	380.0		1,073.6
006	17/02/2008	1,073.6		888.9						888.9	1,382.5		200.0			1,582.5		380.0		380.0
009	20/02/2008	380.0				431.7				431.7							431.7	380.0		811.7
Cumulative Volume			480.0	3,609.7		431.7				4,521.4	3,509.8		200.0			3,709.8				
Fluid Name:	**Spud Mud**																			
002	13/02/2008					2,653.5		81.5		2,735.0									2,735.0	2,735.0
003	14/02/2008	2,735.0				421.2	32.2	6.6		460.0									3,195.0	3,195.0
004	15/02/2008	3,195.0				900.0		25.5		925.5				1,055.5		1,055.5			3,065.0	3,065.0
005	16/02/2008	3,065.0				850.0		20.3		870.3				1,665.3		1,665.3			2,270.0	2,270.0
006	17/02/2008	2,270.0												888.9		888.9	781.1		600.0	1,381.1
007	18/02/2008	1,381.1				450.0		12.8		462.8	1,082.8					1,082.8	723.1		38.0	761.1
008	19/02/2008	761.1									38.0					38.0	723.1			723.1
009	20/02/2008	723.1									723.1					723.1				
Cumulative Volume						5,274.7	32.2	146.7		5,453.6	1,843.9			3,609.7		5,453.6				
Fluid Name:	**guar gum**																			
007	18/02/2008					431.5		2.5		434.0									434.0	434.0
009	20/02/2008	434.0											434.0			434.0				
Cumulative Volume						431.5		2.5		434.0			434.0			434.0				

Company	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Fluid Volume Record Report

			Additions								Losses						Volumes			
Report No	Date	Initial Volume	Received	Mixed	Base	Water	Barite	Chemicals	Other	Daily Total	SCE	Downhole	Misc	Mixed	Returned	Daily Total	Hole Volume	Active Pit Volume	Reserve Volume	Final Volume
		bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl
Interval # 02																				
Fluid Name:	**Seawater**																			
010	21/02/2008	811.7				7.4				7.4							439.1	380.0		819.1
012	23/02/2008	819.2											819.2			819.2				
Cumulative Volume						7.4				7.4			819.2			819.2				
Fluid Name:	**KCl/Polymer**																			
012	23/02/2008					2,760.0	27.7	250.7		3,038.4	255.7		35.0			290.7	859.7	510.0	1,378.0	2,747.7
013	24/02/2008	2,747.7				560.0		35.4		595.4	433.1		86.0			519.1	1,054.0	486.0	1,284.0	2,824.0
014	25/02/2008	2,824.0				410.0	12.0	26.1		448.1	155.0					155.0	1,217.1	423.0	1,477.0	3,117.1
015	26/02/2008	3,117.1				197.1		46.0		243.1							1,194.2	513.0	1,653.0	3,360.2
016	27/02/2008	3,360.2				0.8	3.0	13.9		17.7							1,305.8	488.0	1,584.0	3,377.8
017	28/02/2008	3,377.8				50.0	1.5	2.3		53.8	60.0	97.4				157.4	1,421.1	503.0	1,350.0	3,274.1
018	29/02/2008	3,274.1				200.6		23.8		224.4	72.8		40.0			112.8	1,555.8	444.0	1,386.0	3,385.8
019	1/03/2008	3,385.8				0.1	30.0	62.5		92.6	174.7	1.0				175.7	1,699.6	430.0	1,173.0	3,302.6
020	2/03/2008	3,302.6						0.3		0.3	14.7					14.7	1,642.9	406.3	1,239.0	3,288.2
021	3/03/2008	3,288.2					25.5	0.6		26.1	85.7					85.7	1,640.6	496.0	1,092.0	3,228.6
022	4/03/2008	3,228.6									9.9					9.9	1,699.6	390.0	1,129.0	3,218.6
023	5/03/2008	3,218.6									87.5					87.5	1,568.2	508.0	1,055.0	3,131.2
024	6/03/2008	3,131.2					28.5	1.3		29.8			349.3			349.3	1,699.6		1,112.0	2,811.6
025	7/03/2008	2,811.6									143.7				1,100.0	1,243.7	1,568.0			1,568.0
026	8/03/2008	1,568.0											3.2			3.2	1,568.0			1,568.0
Cumulative Volume						4,178.6	128.2	462.9		4,769.7	1,492.8	98.4	513.5		1,100.0	3,204.7				
Fluid Name:	**guar gum**																			
019	1/03/2008							0.1		0.1	0.1					0.1				
Cumulative Volume								0.1		0.1	0.1					0.1				

Company	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Fluid Volume Record Report

			Additions								Losses						Volumes			
Report No	Date	Initial Volume	Received	Mixed	Base	Water	Barite	Chemicals	Other	Daily Total	SCE	Downhole	Misc	Mixed	Returned	Daily Total	Hole Volume	Active Pit Volume	Reserve Volume	Final Volume
		bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl	bbl
Fluid Name:		**KCL Brine**																		
022	4/03/2008					734.9		76.1		811.0									811.0	811.0
023	5/03/2008	811.0						0.3		0.3					763.3	763.3			48.0	48.0
024	6/03/2008	48.0									48.0					48.0				
Cumulative Volume						734.9		76.4		811.3	48.0				763.3	811.3				

Baroid Fluid Services

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Chemical Concentration

Interval # 01		**From Report Date**	**02/12/2008**	**Top of Interval**	**66.0 m**
Max. Hole Size / Bit Size	**27.000 / 26.000 in**	**To Report Date**	**02/20/2008**	**Bottom of Interval**	**862.0 m**

Fluid Name: Seawater

Material	Average ppb	Minimum ppb	Maximum ppb
BARAZAN D PLUS	0.55	0.29	0.62
barite	7.94	4.14	8.85
bentonite	18.27	9.88	21.11
caustic soda	0.24	0.13	0.27
lime	0.03	0.02	0.04

Fluid Name: Spud Mud

Material	Average ppb	Minimum ppb	Maximum ppb
BARAZAN D PLUS	0.64	0.47	1.04
barite	9.20	6.71	14.84
bentonite	22.71	21.98	25.79
caustic soda	0.28	0.23	0.38
lime	0.04	0.03	0.04
soda ash	0.06	0.06	0.06

Fluid Name: guar gum

Material	Average ppb	Minimum ppb	Maximum ppb
guar gum	3.43	3.43	3.43

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Chemical Concentration

Interval # 02		**From Report Date**	**02/21/2008**	**Top of Interval**	**862.0 m**
Max. Hole Size / Bit Size	**16.000 / 16.000 in**	**To Report Date**	**03/08/2008**	**Bottom of Interval**	**2,313.0 m**

Fluid Name: Seawater

Material	Average ppb	Minimum ppb	Maximum ppb
BARAZAN D PLUS	0.29	0.29	0.29
barite	4.10	4.10	4.10
bentonite	9.80	9.79	9.80
caustic soda	0.12	0.12	0.12
lime	0.02	0.02	0.02

Fluid Name: KCl/Polymer

Material	Average ppb	Minimum ppb	Maximum ppb
ALDACIDE G	0.20	0.14	0.32
BARABLOK	2.24	1.65	2.45
BARA-DEFOAM W300	0.03	0.01	0.05
BARAZAN D PLUS	1.67	1.26	1.96
barite	27.84	11.03	50.76
bentonite	3.76	1.09	4.78
caustic soda	0.18	0.16	0.27
Circal 60/16	6.09	4.32	6.44
Circal Y	2.28	1.24	2.72
citric acid	0.03	0.03	0.03
CLAYSEAL PLUS	6.49	6.19	7.29
EZ-MUD	0.23	0.03	0.29
guar gum	0.05	0.05	0.07
PAC-L	2.94	2.61	3.12
potassium chloride	31.40	20.59	36.61
potassium hydroxide	0.84	0.25	1.18
soda ash	0.30	0.27	0.32

Fluid Name: guar gum

Material	Average ppb	Minimum ppb	Maximum ppb
guar gum	551.16	551.16	551.16

Fluid Name: KCL Brine

Material	Average ppb	Minimum ppb	Maximum ppb
BARAZAN D PLUS	0.20	0.20	0.20

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval Chemical Concentration

potassium chloride	65.23	65.22	65.24

Operator	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Fluid Property Recap : Water-Based Fluid

Date	Depth	FL Temp	Density	Funn Visc	Rheology 49 Deg C					Filtration					Filtrate Analysis						MBT	Sand	Retort Analysis				Rheometer Dial Readings					
					PV	lbs/100 ft2				API	HTHP	Cake API	Cake HTHP	Temp	pH	Pm	Pf	Mf	Cl	Total Hardness	ppb Eq.	% by vol	% by vol				600	300	200	100	6	3
	m	Deg C	SG	sec/qt	cP	YP	10S	10M	30M	ml/30 min	ml/30 min	32nd in		Deg C		ml	ml	ml	mg/l	mg/l			Corr Solid	LGS	NAP Base	Water						
Interval # 01										**From Date**				**02/12/2008**						**Top of Interval**			**66.0**		**m**							
Max. Hole Size / Bit Size	**27.000 / 26.000 in**									**To Date**				**02/20/2008**						**Bottom of Interval**			**862.0**		**m**							
02/14/2008	0		1.060	300	15	103	80	110	113						9.20								3.96	3.993		95.8	133.0	118.0	111.0	105.0	81.0	77.0
02/14/2008	0		1.030	60	15	28	10	17	18						9.20								2.06	2.055		97.7	58.0	43.0	36.0	28.0	15.0	10.0
02/15/2008	135		1.060	270	15	103	80	90	110						9.40				1,200				3.71	3.657		96	133.0	118.0	113.0	106.0	81.0	75.0
02/15/2008	135		1.060	180	15	82	48	57	68						9.40				1,100				3.72	3.661		96	112.0	97.0	76.0	68.0	48.0	39.0
02/16/2008	500		1.060	124	6	88	65	80	90	13.0		3			9.00	0.90	0.08	0.30	2,000	40			3.66	3.622		96	100.0	94.0	90.0	85.0	60.0	55.0
02/16/2008	855		1.060	120	12	86	48	63	78	13.0		3			9.20	0.80	0.05	0.40	2,000	80			3.66	3.622		96	110.0	98.0	81.0	69.0	49.0	41.0
02/17/2008	862		1.150	95	16	69	21	45	64	14.0		3			9.20	0.90	0.60	0.30	2,000	80			4.66	0.003		95	101.0	85.0	68.0	55.0	29.0	21.0
02/17/2008	862		1.150	96	15	70	27	44	57	14.0		3			9.00	0.80	0.20	0.50	2,000	40			4.66	0.003		95	100.0	85.0	67.0	55.0	30.0	22.0
Interval # 02										**From Date**				**02/21/2008**						**Top of Interval**			**862.0**		**m**							
Max. Hole Size / Bit Size	**16.000 / 16.000 in**									**To Date**				**03/08/2008**						**Bottom of Interval**			**2,313.0**		**m**							
02/21/2008	862		1.145							6.0		1			9.60	0.60	0.65	1.55	60,000	80			3.06	1.623		92						
02/22/2008	862		1.145	92	17	26	9	12	15	6.0		1	2		9.60	0.60	0.65	1.55	60,000	80			2.32	0.183		92.7	60.0	43.0	34.0	25.0	10.0	8.0
02/22/2008	862		1.145	90	18	24	9	11	14	6.0		1	2		9.60	0.60	0.65	1.50	60,000	80			2.32	0.183		92.7	60.0	42.0	33.0	24.0	9.0	8.0
02/23/2008	909	38	1.150	69	11	19	7	9	13	5.7	14.0		1	149	9.50	0.40	0.30	0.60	58,000	80	2.5	0.10	2.61	0.273		92.6	41.0	30.0	24.0	18.0	8.0	5.0
02/23/2008	1,036	40	1.150	75	17	22	8	11	14	5.6	12.0	1	2	149	9.50	0.40	0.30	0.50	59,000	80	2.5	0.20	2.52	0.175		92.6	56.0	39.0	32.0	23.0	11.0	9.0
02/23/2008	1,235	41	1.150	74	13	29	11	14	16	5.5	13.0	1	2	149	9.40	0.40	0.40	0.70	60,000	80	2.5	0.20	2.74	0.693		92.3	55.0	42.0	33.0	26.0	11.0	9.0
02/23/2008	1,337	48	1.150	74	13	25	9	11	15	5.5	14.0	1	2	149	9.20	0.20	0.30	0.60	60,000	80	2.5	0.30	2.74	0.693		92.3	51.0	38.0	31.0	24.0	10.0	8.0
02/24/2008	1,425	42	1.150	65	14	22	10	12	15	5.6	14.6	1	2	149	8.90	0.30	0.40	1.30	54,000	160	2.5	0.25	3.59	1.893		92	50.0	36.0	30.0	22.0	10.0	7.0
02/24/2008	1,455	41	1.150	61	16	23	9	12	14	5.0	14.2	1	1	149	8.80	0.20	0.54	1.80	52,000	320	2.5	0.25	3.76	2.083		92	55.0	39.0	33.0	23.0	8.0	7.0
02/24/2008	1,549	41	1.150	63	20	25	9	14	16	4.0	14.0	1	1	149	9.50	0.50	0.56	2.20	50,000	120	2.5	0.70	3.93	2.272		92	65.0	45.0	38.0	28.0	9.0	7.0
02/24/2008	1,585	41	1.150	57	15	24	8	11	14	5.0	14.5	1	2	149	9.00	0.50	0.53	1.80	50,000	160	2.5	1.00	3.93	2.272		92	54.0	39.0	32.0	24.0	8.0	6.0
02/25/2008	1,670	42	1.160	62	14	20	6	10	12	5.5	14.6	1	2	149	8.90	0.30	0.40	1.80	46,000	160	2.5	1.00	4.27	2.018		92	48.0	34.0	28.0	21.0	7.0	5.0
02/25/2008	1,750		1.150	69	18	29	10	13	14	4.0	13.0	1	1	149	9.10	0.32	0.26	2.00	48,000	160	3.0	1.00	4.1	2.458		92	65.0	47.0	38.0	28.0	10.0	8.0
02/25/2008	1,797		1.150	69	19	26	10	15	21	4.2	13.5	1	2	149	9.20	0.30	0.20	1.90	48,000	160	2.5	1.00	4.1	2.458		92	64.0	45.0	39.0	39.0	12.0	8.0
02/25/2008	1,797		1.150	71	20	26	11	16	21	4.0	13.0	1	2	149	9.10	0.30	0.20	2.00	48,000	160	2.5	1.00	4.1	2.458		92	66.0	46.0	38.0	28.0	13.0	9.0

Operator	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Fluid Property Recap : Water-Based Fluid

Date	Depth	FL Temp	Density	Funn Visc	Rheology 49 Deg C					Filtration					Filtrate Analysis						MBT	Sand	Retort Analysis				Rheometer Dial Readings					
					PV	lbs/100 ft2				API	HTHP	Cake API	Cake HTHP	Temp	pH	Pm	Pf	Mf	Cl	Total Hardness	ppb Eq.	% by vol	% by vol				600	300	200	100	6	3
	m	Deg C	SG	sec/qt	cP	YP	10S	10M	30M	ml/30 min	ml/30 min	32nd in		Deg C		ml	ml	ml	mg/l	mg/l			Corr Solid	LGS	NAP Base	Water						
02/26/2008	1,794		1.150	70	16	38	13	19	24	5.0	14.0	1	2	149	9.10	0.30	0.30	1.70	48,000	160	2.5	0.80	4.1	2.458		92	70.0	54.0	46.0	35.0	14.0	11.0
02/26/2008	1,794		1.150	68	18	35	13	19	24	4.9	14.0	1	2	149	9.00	0.30	0.40	2.00	45,000	160	2.5	1.00	4.36	2.735		92	71.0	53.0	46.0	35.0	14.0	11.0
02/27/2008	1,883	40	1.160	64	18	38	15	20	24	4.9	14.0	1	2	149	8.60	0.20	0.40	1.70	40,000	160	2.5	0.80	4.78	2.561		92	74.0	56.0	48.0	37.0	16.0	14.0
02/27/2008	1,900	41	1.155	75	22	38	16	20	22	5.0	14.0	1	1	149	8.80	0.20	0.45	2.00	50,000	200	2.0	0.80	3.93	1.959		92	82.0	60.0	50.0	38.0	15.0	12.0
02/28/2008	1,905	41	1.170	65	18	34	13	17	21	5.4	14.6	1	2	149	8.90	0.20	0.40	2.00	49,000	200	2.5	0.80	4.02	1.115		92	70.0	52.0	44.0	33.0	14.0	12.0
02/28/2008	1,989	48	1.180	76	22	49	17	21	24	4.0	14.0	1	1	149	8.90	0.30	0.40	1.90	50,000	280	2.0	1.00	3.93	0.396		92	93.0	71.0	59.0	48.0	18.0	15.0
02/28/2008	2,030	50	1.175	75	19	41	16	19	21	4.0	14.0	1	1	149	8.90	0.30	0.40	1.80	50,000	280	2.0	0.75	3.93	0.709		92	79.0	60.0	50.0	38.0	16.0	13.0
02/29/2008	2,180	51	1.185	60	16	30	12	16	18	4.6	13.5	1	1	149	8.50	0.15	0.20	1.15	48,000	200	2.0	0.75	6.19	4.361		90	62.0	46.0	39.0	31.0	13.0	11.0
02/29/2008	2,240	53	1.185	57	16	28	11	15	19	4.2	14.0	1	1	149	8.90	0.15	0.20	1.15	48,000	200	1.5	0.80	5.15	2.316		91	60.0	44.0	37.0	29.0	12.0	10.0
02/29/2008	2,250	54	1.175	50	16	39	14	18	22	5.0	14.0	1	1	149	9.00	0.20	0.30	2.00	48,000	200	2.0	0.75	4.1	0.896		92	71.0	55.0	45.0	34.0	15.0	12.0
03/01/2008	2,313	43	1.210	50	18	32	12	18	22	5.0	14.0	1	1	149	8.70		0.16	1.25	49,000	240	2.0	0.80	5.06	0.661		91	68.0	50.0	41.0	32.0	13.0	10.0
03/01/2008	2,313		1.210	54	20	31	14	20		4.8	12.8	1		149	9.20	0.20	0.25	0.90	51,000	160	2.5	0.70	5.94	2.524		90	71.0	51.0	42.0	33.0	14.0	12.0
03/02/2008	2,313		1.200	54	17	33	12	17	21	5.0	14.0	1	1	149	8.60		0.15	1.22	49,000	240	2.0	0.70	5.06	1.286		91	67.0	50.0	41.0	31.0	12.0	9.0
03/02/2008	2,313		1.210	65	17	35	14	19		4.6	13.6	1		149	9.50	0.20	0.15	0.70	49,000	160	2.5	0.80	6.1	2.707		90	69.0	52.0	42.0	32.0	13.0	11.0
03/03/2008	2,313		1.235	57	16	36	13	18		5.0	13.8	1	1	149	9.00	0.20	0.15	0.80	49,000	200	2.0	0.80	6.1	1.145		90	68.0	52.0	41.0	31.0	12.0	10.0
03/03/2008	2,313	59	1.240	61	19	32	12	19		4.0	12.8			149	8.50	0.15	0.05	0.60	51,000	120	2.5	0.70	6.98	2.697		89	70.0	51.0	43.0	33.0	13.0	12.0
03/04/2008	2,313		1.230	59	19	31	13	19		4.6	13.0	1	1	149	8.50	0.15	0.05	0.60	50,000	120	2.5	0.65	6.02	1.366		90	69.0	50.0	43.0	33.0	12.0	10.0
03/05/2008	2,313		1.230	52	19	30	12	18		4.6	13.0	1	1	149	8.50	0.15	0.05	0.60	50,000	120	2.5	0.65	6.02	1.366		90	68.0	49.0	43.0	32.0	12.0	10.0
03/06/2008	2,312		1.235	65	19	31	13	21		5.0	13.0			149	8.50	0.10	0.05	0.70	48,000	120	2.5	0.50	7.23	3.281		89	69.0	50.0	41.0	29.0	13.0	12.0

Company	Apache
Well Name	Wasabi - 1
Contractor	Seadrill
Rig Name	West Triton
Unit System	Apache

Fluid Program Exception Report

Report No	Date	Time	Depth m	Property Name	Unit System	Actual Value	Exception	Program Min	Program Max
006	02/17/2008	13:00	862	API Filtrate	ml/30 min	14.0	High	3.0	5.0
006	02/17/2008	20:00	862	API Filtrate	ml/30 min	14.0	High	3.0	5.0
006	02/17/2008	13:00	862	Gel, 10 seconds	lbs/100 ft2	21	High	12	20
006	02/17/2008	20:00	862	Gel, 10 seconds	lbs/100 ft2	27	High	12	20
006	02/17/2008	13:00	862	Yield Point	lbs/100 ft2	69	High	25	60
006	02/17/2008	20:00	862	Yield Point	lbs/100 ft2	70	High	25	60
010	02/21/2008	13:00	862	API Filtrate	ml/30 min	6.0	High	3.0	5.0
011	02/22/2008	13:00	862	API Filtrate	ml/30 min	6.0	High	3.0	5.0
011	02/22/2008	22:00	862	API Filtrate	ml/30 min	6.0	High	3.0	5.0
011	02/22/2008	13:00	862	Gel, 10 seconds	lbs/100 ft2	9	Low	12	20
011	02/22/2008	22:00	862	Gel, 10 seconds	lbs/100 ft2	9	Low	12	20
011	02/22/2008	22:00	862	Yield Point	lbs/100 ft2	24	Low	25	60
012	02/23/2008	4:40	909	API Filtrate	ml/30 min	5.7	High	3.0	5.0
012	02/23/2008	4:40	909	Gel, 10 seconds	lbs/100 ft2	7	Low	12	20
012	02/23/2008	4:40	909	Yield Point	lbs/100 ft2	19	Low	25	60
012	02/23/2008	8:30	1,036	API Filtrate	ml/30 min	5.6	High	3.0	5.0
012	02/23/2008	8:30	1,036	Gel, 10 seconds	lbs/100 ft2	8	Low	12	20
012	02/23/2008	8:30	1,036	Yield Point	lbs/100 ft2	22	Low	25	60
012	02/23/2008	15:00	1,235	API Filtrate	ml/30 min	5.5	High	3.0	5.0
012	02/23/2008	15:00	1,235	Gel, 10 seconds	lbs/100 ft2	11	Low	12	20
012	02/23/2008	21:00	1,337	API Filtrate	ml/30 min	5.5	High	3.0	5.0
012	02/23/2008	21:00	1,337	Gel, 10 seconds	lbs/100 ft2	9	Low	12	20
013	02/24/2008	3:30	1,425	API Filtrate	ml/30 min	5.6	High	3.0	5.0
013	02/24/2008	3:30	1,425	Gel, 10 seconds	lbs/100 ft2	10	Low	12	20
013	02/24/2008	3:30	1,425	Yield Point	lbs/100 ft2	22	Low	25	60
013	02/24/2008	6:00	1,455	Gel, 10 seconds	lbs/100 ft2	9	Low	12	20
013	02/24/2008	6:00	1,455	Yield Point	lbs/100 ft2	23	Low	25	60
013	02/24/2008	17:30	1,549	Gel, 10 seconds	lbs/100 ft2	9	Low	12	20
013	02/24/2008	21:00	1,585	Gel, 10 seconds	lbs/100 ft2	8	Low	12	20

Company	**Apache**
Well Name	**Wasabi - 1**
Contractor	**Seadrill**
Rig Name	**West Triton**
Unit System	**Apache**

Fluid Program Exception Report

Report No	Date	Time	Depth m	Property Name	Unit System	Actual Value	Exception	Program Min	Program Max
013	02/24/2008	21:00	1,585	Yield Point	lbs/100 ft2	24	Low	25	60
014	02/25/2008	3:00	1,670	API Filtrate	ml/30 min	5.5	High	3.0	5.0
014	02/25/2008	3:00	1,670	Gel, 10 seconds	lbs/100 ft2	6	Low	12	20
014	02/25/2008	3:00	1,670	Yield Point	lbs/100 ft2	20	Low	25	60
014	02/25/2008	9:45	1,750	Gel, 10 seconds	lbs/100 ft2	10	Low	12	20
014	02/25/2008	16:00	1,797	Gel, 10 seconds	lbs/100 ft2	10	Low	12	20
014	02/25/2008	21:00	1,797	Gel, 10 seconds	lbs/100 ft2	11	Low	12	20
017	02/28/2008	4:40	1,905	API Filtrate	ml/30 min	5.4	High	3.0	5.0
017	02/28/2008	11:30	1,989	Density	SG	1.180	High	1.140	1.170
017	02/28/2008	16:30	2,030	Density	SG	1.175	High	1.140	1.170
018	02/29/2008	3:00	2,180	Density	SG	1.185	High	1.140	1.170
018	02/29/2008	11:15	2,240	Density	SG	1.185	High	1.140	1.170
018	02/29/2008	11:15	2,240	Gel, 10 seconds	lbs/100 ft2	11	Low	12	20
018	02/29/2008	17:30	2,250	Density	SG	1.175	High	1.140	1.170
019	03/01/2008	20:00	2,313	Density	SG	1.210	High	1.140	1.170
019	03/01/2008	8:30	2,313	Density	SG	1.210	High	1.140	1.170
020	03/02/2008	10:00	2,313	Density	SG	1.200	High	1.140	1.170
020	03/02/2008	23:00	2,313	Density	SG	1.210	High	1.140	1.170
021	03/03/2008	20:00	2,313	Density	SG	1.240	High	1.140	1.170
021	03/03/2008	12:00	2,313	Density	SG	1.235	High	1.140	1.170
022	03/04/2008	10:00	2,313	Density	SG	1.230	High	1.140	1.170
023	03/05/2008	9:45	2,313	Density	SG	1.230	High	1.140	1.170
024	03/06/2008	23:59	2,312	Density	SG	1.235	High	1.140	1.170

Operations Log Recap

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval		**01**		**From Date**	**001**	**Top of Interval**	**66.0 m**
Max. Hole Size / Bit Size		**27.000 / 26.000 in**		**To Date**	**009**	**Bottom of Interval**	**862.0 m**
For Report	**# 001**	**On**	**02/12/2008**	**Operation at Depth**		**66.0 m**	
Rig Activity				Jack down rig to zero air gap. Jack up to 46 ft. Skid rig 15 ft. Rig up the Texas deck for drilling operation. Cont. skid rig to 21 ft to drilling location. Install access stairs for texas deck. Commence install C.T.U to deck. Install service lines and flowline. Commence picking up 5 1/2" DP and rack up same.			
Activity				Rig up			
Fluid Treatment				Engineering charges: Engineer #1: 31 Jan - 12 Feb = 13 days Engineer #2: 11 Feb - 12 Feb = 2 days Received bulk barite & bentonite from Battler. Preparing unweighted prehydrated bentonite in progress. Also begin preparing 1500 bbls of 1.15 sg displacement "Kill Mud". Drillwater test in both Pit 2 & 3: chlorides = 12,000 mg/L and total hardness = 1,560 mg/L., suggesting contamination with 63-65% seawater.			
For Report	**# 002**	**On**	**02/13/2008**	**Operation at Depth**		**66.0 m**	
Rig Activity				Cont. to pick up and make up 5 1/2" DP. NOV IT fault finding alarm on draw-works "c". Motor electrical system isolated. Inspect Draw-works "c" motor and drive chains. Reset and cont. picking up DP. DWC drive motor troubles. Troubleshoot. Install mousehole and make up diverter running tool. Remove master bushing. RIH latch onto diverter.			
Activity				Rig up			
Fluid Treatment				Continue mixing about 1500 bbls spud mud and 1500 bbls 1.15 sg displacement/kill mud in progress. Port drillwater tank contaminated with 63-65% seawater, used up all. Starboad drillwater tank uncontaminated. Received chemicals from Pacific Wrangler. Mud still in preparation therefor no mud check for report.			
For Report	**# 003**	**On**	**02/14/2008**	**Operation at Depth**		**69.0 m**	
Rig Activity				Pick up & rack up diverter in derrick. Drillquip prepared 20" wellhead & running tool. Rig up 20" handling equipment, install csg bushing. Set 20" wellhead in rotary. Perform dummy run. Install new saver sub onto top drive. Prepare to pick up 26" BHA, 9 1/2" DC and RIH. Incident with draw works, movement with 9 1/2" DC in elevator. Tag sea @ 38.82m. Tag sea bed @ 66m. Spud hole @ 500 gpm and drill 26" hole from 66m to 69m.			
Activity				Drilling 26" Hole			
Fluid Treatment				Prepared 1900 bbls of 40 ppb prehydrated bentonite. To this seawater was added to cut back to 20 ppb PHB & caustic added for pH. Resultant viscosities were poor due to contaminated drill water. Barazan-D+ was added at 1.15 ppb to promote rheology and barite suspension to displacement mud. The 1400 bbls of displacement mud was weighted to 1.15 sg using 78 ppb barite. Mud check #1 = 40 ppb PHB in clean drillwater (pit 1), mud check #2 = 20 ppb spud mud in s/w contaminated drillwater after adding 1.1 ppb Barazan (pit 2). Spud 26" hole @ 23:00			
For Report	**# 004**	**On**	**02/15/2008**	**Operation at Depth**		**157.0 m**	
Rig Activity				Cont. to drill 26" hole from 69m to 91m pumping 75bbls sweeps as per programme. Cyber screen froze with alarm for VFD "B" motor drive fault. Troubleshoot same. Cont. drill from 91m to 135m reaching section TD. Displace hole with 150 bbl Hi-Vis mud. POOH and lay out 26" BHA. Make up 16" BHA. Calibrate draw works and RIH. Tag seabed at 66m. Made several attempts to enter wellbore. ROV went down to locate wellbore. RIH and wash and tag bottom @ 135m. Begin drilling 16" hole from 135m to 157m pumping 75bbl hi-vis sweeps every stand.			
Activity				Drilling			

Operations Log Recap

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval	**01**		**From Date**	**001**	**Top of Interval**	**66.0**	**m**
Max. Hole Size / Bit Size	**27.000 / 26.000**	**in**	**To Date**	**009**	**Bottom of Interval**	**862.0**	**m**

Fluid Treatment	New Mud Built: 925.5 Total Mud Built: 4120.5 Drilled 26" using s/w and 50-75 bbl hi-vis sweeps as required. At section TD displaced open hole to 150 bbls of Hi-Vis mud. Drill 16" hole using s/w and 50-75 bbl hi-vis sweeps. Building hi-vis spud mud continuously at 25 ppb Bentonite as required.
For Report # 005 On 02/16/2008	**Operation at Depth 845.0 m**
Rig Activity	Cont. drilling 16" hole from 156m to 565m, pumping 75 bbl sweeps every stand at 100 rpm, 3000 trq, 1100 pgm. Take survey after each connection. Cont. drill from 565m to 845m.
Activity	Drilling
Fluid Treatment	New Mud Built: 870.3 bbl Total Mud Built: 4990.8 bbl Drill 16" hole using s/w and 50-75 bbl hi-vis sweeps. Building hi-vis spud mud continuously at 25 ppb Bentonite as required. Lime was added just prior to use for viscosity boost.
For Report # 006 On 02/17/2008	**Operation at Depth 862.0 m**
Rig Activity	Cont. drill 16" hole from 845m to 862m TD. Pump 200 bbl hi-vis while rotating @30rpm. Schlumberger attempt to send signal to tool 1st & 2nd time failed. Backream from 862m to 800m. Run back down to bottom @ 862m and pump 300 bbl hi-vis mud. Displace well with 960 bbl of 9.6ppg bentonite mud. POOH to 128m. Troubleshoot pipe handler rotation. Cont. POOH and lay out tools. Pick up & test float. RIH with 13 3/8" casing to 135m. Work down to 139m, hung up. Cont. working string with 20k wt down without success. Hold JSA and rig up & POOH to 127m.
Activity	Run casing and cement
Fluid Treatment	New Mud Built: 0 bbl Total Mud Built: 4990.8 bbl Reached section TD 862 m @ 02:00.
For Report # 007 On 02/18/2008	**Operation at Depth 862.0 m**
Rig Activity	Cont. lay down 13 3/8" casing from 127m to surface. R/d csg equipment and RIH with 16" BHA, enter 26" hole at 66m. String tagged @94m, wash down to 94m. Tight again. Wash and rotate 30rpm 750gpm from 70m to 135m. RIH free frmo 135m to 857m tagged bottom with 5m fill. POOH from 857m to 142. Pumped 100bbl hi-vis & displaced with 1.15 sg bentonite mud. Observed 60-70 klbs overpull. Worked tight spot from 126m to 155m. Back ream few passes. Pumped 100bbl hi-vis and displaced with 1.15sg bentonite mud. POOH to surface and rig up & RIH with 13 3/8" casing to 418m.
Activity	Run casing and cement
Fluid Treatment	New Mud Built: 896.8 bbl Total Mud Built: 5887.6 bbl Built 434 bbl of Guar gum sweeps as contingency. Built 462.8 bbl of bentonite mud for use in sweeps during tight spots observed from 126m to 155m. Cont. building polymer mud for the 12 1/4" interval.
For Report # 008 On 02/19/2008	**Operation at Depth 862.0 m**

Operations Log Recap

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval	**01**		**From Date**	**001**	**Top of Interval**	**66.0**	**m**
Max. Hole Size / Bit Size	**27.000 / 26.000**	**in**	**To Date**	**009**	**Bottom of Interval**	**862.0**	**m**

Rig Activity	Cont. running 13 3/8" casing from 418m to 733m. Rig up for 13 3/8" X 20" crossover. RIH to 739m. RIH with 20" casing from 733m to 809m. Wash down to 857m. Attempt to disengage running tool from wellhead. Backed out at crossover running tool. Make up cement head stringer and RIH with 5 1/2" DP from surface to 825m.
Activity	Run casing and cement
Fluid Treatment	New Mud Built: 0 bbl Total Mud Built: 5887.6 bbl Cont. building polymer mud for the 12 1/4" interval.

For Report	**# 009**	**On**	**02/20/2008**	**Operation at Depth**	**862.0 m**

Rig Activity	Cont. making up cementing joint. Connect line to side entry sub. Test lines to 1500psi. Mix and pump cement as to HALLIBURTON program. Displace cement from drill string. Unsting cement stinger. Pick up and circ. bottoms up. POOH to surface. Break out BOP bolts from stump. Position BOP over quick connector. Nipple up BOP.
Activity	Nipple up B.O.P.
Fluid Treatment	Continued to mix KCL / Polymer mud for 12.25" section. Begin adding 12% KCL and 5ppb Calcium Carbonate into mud.

Operations Log Recap

Well Name	Wasabi - 1
Operator	Apache
Contractor	Seadrill
Rig No	West Triton
Unit System	Apache

Interval	**02**		**From Date**	**010**	**Top of Interval**	**862.0**	**m**
Max. Hole Size / Bit Size	**16.000 / 16.000**	**in**	**To Date**	**026**	**Bottom of Interval**	**2,313.0**	**m**

For Report # 010 On 02/21/2008	**Operation at Depth 862.0 m**
Rig Activity	Cont. making up BOP. Flush cement lines. Test lower and upper BOP values on the top drive. Pick up overshot joint and set in rotary. Rig up 5 1/2" elevators. Pick up diverter, make up overshot joint, RIH with diverter over BOP mandreal. Nipple up choke and kill lines to BOP. Install fitting for overshot packer and connect hose. Function test BOP rams from remote stations. Fill BOP, flush lines, test casing to 2000psi. Lay out diverter running tool. Make up runniong tool and set wearbushing. Pick up 5 1/2" DP from deck, rabbit and rack back.
Activity	Tripping
Fluid Treatment	Total Mud Built: 5887.6 bbl for 1st Interval. Continued to mix KCL / Polymer mud for 12.25" section. Begin adding 12% KCL and 5ppb Calcium Carbonate into mud. Weigh up displacement KCL polymer mud to 1.15 sg.
For Report # 011 On 02/22/2008	**Operation at Depth 862.0 m**
Rig Activity	Cont. p/u and m/u 5 1/2" DP and rack in derrick. Pick up and service break Anadrill sonic tool. Hold JSA. Pick up BHA and RIH from surface to 40m. Commence loadibng of radioactive source into BHA string. Troubleshoot loading tool. Cont. running BHA from 40m to 259m. Troubleshoot problems on Link tilt. Hold PJSM, service TDS/travelling block. Pick up 5 1/2" DP from derrick and RIH from 259m to 851m. Hold PJSM with all crews involved in the mud displacement.
Activity	Safety meeting
Fluid Treatment	Total Mud Built: 5887.6 bbl for 1st Interval. Continued to mix KCL / Polymer mud for 12.25" section. Weigh up displacement KCL polymer mud to 1.15 sg and prepare mud for displacement.
For Report # 012 On 02/23/2008	**Operation at Depth 1,393.0 m**
Rig Activity	Wash down from 851m to 854m, tag top of cement. Displace well to 12% KCL/Polmer/CLAYSEAL mud whilst drilling out float/shoe and clean out rat hole to 862m. Cont. drill new formation from 862m to 864m. Reciprocate sting and condition mud in prep. for leak off test. Perform leak off test with EMW of 15.9ppg. Drill ahead from 864m to 1235m. Troubleshoot MWD tools. Cont. drilling 12 1/4" hole from 1235m to 1334m. Losses at shakers, change screens. Cont. drill from 1334m to 1393m as per DDs instructions.
Activity	Drilling 12 1/4" Hole
Fluid Treatment	New Mud Built: 3038.3 bbl Total Mud Built: 3038.3 bbl Begin new interval @ 00:10. Treated active system with BARAZAN D PLUS to improve low end rheology. Added BARABLOK into active @ 4ppb as per company mans request at 950 MD. Mixed 240 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by. Ran out of drill water using seawater in 1 premix and at shakers. Note: Bentonite/Barite received was a reconciliation with barge reports.
For Report # 013 On 02/24/2008	**Operation at Depth 1,647.0 m**
Rig Activity	Cont. drilling and sliding 12 1/4" hole from 1393m to 1647m as per directional drillers instuctions. Survey every stand. GPM 1070, SPM - 188, WOB 8-10K, Pressure - 2800psi.

Operations Log Recap

Well Name	Wasabi - 1
Operator	Apache
Contractor	Seadrill
Rig No	West Triton
Unit System	Apache

Interval	**02**		**From Date**	**010**	**Top of Interval**	**862.0**	**m**
Max. Hole Size / Bit Size	**16.000 / 16.000**	**in**	**To Date**	**026**	**Bottom of Interval**	**2,313.0**	**m**

Activity	Drilling
Fluid Treatment	New Mud Built: 595.4 bbl Total Mud Built: 3633.7 bbl Treated active with Aldacide, Soda Ash,KOH and additional 1.5 ppb Barablok to maintain properties and concentrations. Attempted fine up shaker screens. Adjusted to suit circulating conditions. Unable to unload chemicals and drill water from boat, due to weather. Mixed 170bbls Pre-hydrated Bentonite to help build volume. Swept hole with 40 bbl of 40ppb Cal.Carb / Guar Gum sweep with improved cuttings returned.
For Report # 014 On 02/25/2008	**Operation at Depth 1,797.0 m**
Rig Activity	Cont. drilling and sliding 12 1/4" hole from 1647m to 1797m as per directional drillers instuctions. Survey every stand. GPM 1076, SPM - 189, WOB 5-10K, Pressure - 3050psi. Rack back a stand, pump 50 bbl hi vis sweep & circulate out. Flowcheck, POOH from 1797m to 1530m. Pump out of hole from 1638m to 1530m. Hook load locked up on screen, reboot. Cont. pump out of hole from 1530m to 1442m. Pump weighted slug and pull out of hole from 1442m to 851m.
Activity	Tripping
Fluid Treatment	New Mud Built: 448.1 bbl Total Mud Built: 4081.8 bbl Unloaded chemicals and drill water from boat. Treated active with 0.5 ppb Barazan D to raise 6 rpm. Built 15% KCL premix, to maintain active concentration +10% (unable to mix BB's directly to active). Maintained mud weight, using unweighted premix. Incorporated 210 bbls 40ppb CaCo3 LCM, to active. Premix with PHB kept in reserve. Made 11.7 ppg slug to trip out of hole. Cont. building volume.
For Report # 015 On 02/26/2008	**Operation at Depth 1,824.0 m**
Rig Activity	Cont. pull out of hole from 851m to 259m. Flowcheck & cont. POOH to surface and lay out 12 1/4" BHA. Retrieve radio active source and make safe. Service top drive, PIP handler and dolly rollers. Pick up and make up new 12 1/4" BHA. RIH to shoe at 847m. Test MWD tools @ 188spm, 1100gpm. Cont. RIH from 857m to 1767m. Wash down from 1767m to 1797m, pump 50bbl Hi-Vis. Cont. drill and slide 12 1/4" hole as per directional drillers intructions, from 1797m to 1824m.
Activity	Drilling 12 1/4" Hole
Fluid Treatment	New Mud Built: 243.1 bbl Total Mud Built: 4324.9 bbl Took drill water from boat. Began treating active with EZ-MUD as per instructions from Apache. Maintained mud weight, using concentrated unweighted premix as Hi-Vis sweeps. Mixed 250 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by. Premix with PHB kept in reserve.
For Report # 016 On 02/27/2008	**Operation at Depth 1,900.0 m**
Rig Activity	Cont. drill and slide 12 1/4" hole as per directional drillers instructions, from 1824m to 1900m. Pump 50 bbl hi-vis pill & circ. bottoms up. Flow check, then POOH wet to 1532m. Pump 25bbl slug and chase with 10bbl mud. POOH from 1532m to 851m.

Interval	**02**		**From Date**	**010**	**Top of Interval**	**862.0**	**m**
Max. Hole Size / Bit Size	**16.000 / 16.000**	**in**	**To Date**	**026**	**Bottom of Interval**	**2,313.0**	**m**

	Flowcheck, cont. POOH to surface. Lay out BHA and make up bit. Install sleeve on motor, check orientation. Download data from RAB-8 tool. P/up Bat sonic tool & RIH to 851m. Test MWD tools. Repair pipe handler and change out saver sub.
Activity	Repair Rig
Fluid Treatment	New Mud Built: 17.7 bbl Total Mud Built: 4342.6 bbl Treated active with EZ-MUD, in preparation of claystone formations. Added Caustic Potash to maintain pH. Noticed coal at shakers @ 1830 MD, cont. treating mud with 4ppb BARABLOK and used concentrated 1.15sg premix as a Hi-Vis sweep, brought up additional amount coals. Mixed 250 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by. Premix with PHB kept in reserve.
For Report # 017 On 02/28/2008	**Operation at Depth 2,121.0 m**
Rig Activity	RIH from 851 m to 1,619 m. Performed kick drill. Took weight at 1,619 m (40 klbs). Washed and reamed from 1,619 m to 1,639 m. RIH to 1,806 m. Took weight (20 klbs) and continued to RIH to bottom. No fill. Drilled ahead from 1,900 m to 2,121 m as per DD instructions with surveys performed every stand. ROP has generally been 10- 20 m hour Large sized coal pieces are occasionally observed on shakers ranging from approximately 1- 7 inch in diameter. Mud weight creep through today's drilling has been addressed by changing to finer shaker screens and dilution of the active system with unweighted premix via wilden pump.
Activity	Drilling
Fluid Treatment	New mud built: 53.8bbls Total mud built: 4,396.4bbls. Continued to treated active with 0.2 ppb EZ-MUD and Caustic Potash. Added enriched premix to maintain properties and mud weight. Added 50 bbls of 40ppb LCM (sized calcium carbonate) to active as losses appeared after entering Latrobe formation.Initial seepage losses 30bbl/hr, down to 7-10 bbl/hr after treatment. Dressed shakers # 2,3 and 4 with 280 mesh. Drilling through predominantly sandstone with occasional coal stringers. Cuttings are generally consolidated and inhibited indicating adequate hole cleaning and KCl content. There are marginal indications of delayed cuttings transportation to surface (10% unconsolidated, mushy cuttings)but no abnormal increasing trend in torque observed.
For Report # 018 On 02/29/2008	**Operation at Depth 2,286.0 m**
Rig Activity	Continued to drill directional 12 1/4" hole to 2,286 m at midnight. Drilling at 7-17 m hour. 40 klbs overpull at 2,242 m and reamed through tight spot. Pumped 40 bbl high viscosity sweep. Drilled to 2,263 m. Flowline plugged with coal. Stopped drilling and unplugged.Pumped 10 bbls 1.9 ppg pill at 2,277 m and circulated out. Continued drilling to 2,286 at midnight. Treatments and Observations (cont'd) Cuttings still generally consolidated and inhibited. As per yesterday marginal signs of delayed cuttings transport to surface. Continued presence of large coal peices seen at shakers. Increased Mud Weight to 10.0 ppg at midnight to address signs of splintered coal (possibly pressured or time dependent cavings) observed at shakers.

Operations Log Recap

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval	**02**		**From Date**	**010**	**Top of Interval**	**862.0**	**m**
Max. Hole Size / Bit Size	**16.000 / 16.000**	**in**	**To Date**	**026**	**Bottom of Interval**	**2,313.0**	**m**

Activity	Drilling
Fluid Treatment	New mud built: 224.4bbls Total mud built: 4,620.8bbls. Continued to treated active with 0.3 ppb EZ-MUD and Caustic Potash. Cut back creeping mud weight with additions of drill water and premix. Added 0.75 ppb Pac L to maintain fluid loss with dilution. Pumped 50 bbl 1.13 sg Hivis (Vis 100+ seconds) with marginal increase in cuttings observed at shakers. Predominantly drilling through sand with coal and quartz stringers. Pumped 10 bbl 1.9 S.G sweep at 2,227 m. Marginal increase in cuttings observed at shakers.
For Report # 019 On 03/01/2008	**Operation at Depth 2,313.0 m**
Rig Activity	Continued drilling ahead to 2,313 m as per DD instructions. Low ROP of 1-10 m/hour. Circulated hole clean. Flowcheck and POOH wet. Backreamed at 3ft/min for logging from 2,270 m to 2,210 m. COntinued POOH wet from 2,210 m to 2,186 m. Tight spot 30-40k drag up. Backreamed 2,186 m to 2,041 m. Pumped 10 bbl hivis/weight pill and continued to backreamfrom 2,041 m to 1,980 m. Tight spots at 2,186 m, 2,182 m, 2,177 m, 2,148 m and 2,115 m. Backreamed and logged at 7' minute from 1,980 m to 1,780 m. Pumped slug. POOH and racked back BHA. Prepare to wireline log.
Activity	Wire Line logs
Fluid Treatment	Added 2 ppb Barablock to active system. Ran Gumbo catcher. Dumped sandtrap. Pumped 1.9 SG pill at 2,300 m with considerable amount of additional cuttings observed at shakers (>100%)
For Report # 020 On 03/02/2008	**Operation at Depth 2,313.0 m**
Rig Activity	Rigged up Schlumberger wireline. RIH to 1,393 m and tool hung up. POOH and logged on the way to surface. Broke out and laid out toolstring. Rigged up new toolstring. RIH with Pex logging tool. Unable to pass 1,390 m. Logged out of hole. Laid out toolstring. Picked up BHA and RIH. Made up R.A source and RIH to midnight.
Activity	RIH
Fluid Treatment	New mud built: 0.3 bbls Total mud built: 4,713.4 bbbls. Prepared 50 bbl 4ppb Barazan-D high viscosity sweep.
For Report # 021 On 03/03/2008	**Operation at Depth 2,313.0 m**
Rig Activity	Continued to RIH. Tight spots at 1,380 - 1,384 m. and 1,394 to 1,396 m. Tight spot at 1,850 m. Freed pipe with 100k overpull. Pumped 30 bbls high viscosity weighted piull and circulated bottoms up. (Large amount of coal seen at surface) Continued to RIH to 2,309 m and washed to 2,309 m. 4m of fill. Washed to 2,313 m.Pumped 15 bbl weighted sweep at 1.9 s.g. Logged out of hole to 1,740 m. Pumped 1.9 s.g weighted sweep and circulated out. Flow check and POOH wet to 1,440 m. Pumped and displaced slug. POOH to 1,057 m at midnight.
Activity	Tripping
Fluid Treatment	New Mud Built: 26.1 bbls Total Mud Built: 4,739.5 bbls Treated active system with 0.1 ppb Caustic Potash to maintain fluid alkalinity. High viscosity sweeps made with 4 ppb Barazan-D. Barite for 1.9 s.g sweeps. Hi-weight sweeps bought back 10-50% increase in coal cavings to surface.

Operations Log Recap

Well Name	**Wasabi - 1**
Operator	**Apache**
Contractor	**Seadrill**
Rig No	**West Triton**
Unit System	**Apache**

Interval	**02**		**From Date**	**010**	**Top of Interval**	**862.0**	**m**
Max. Hole Size / Bit Size	**16.000 / 16.000**	**in**	**To Date**	**026**	**Bottom of Interval**	**2,313.0**	**m**

For Report	**# 022**	**On**	**03/04/2008**	**Operation at Depth**	**2,313.0 m**
Rig Activity				Continued to pull out of hole. Rigged down BHA. Rigged up Schlumberger MDT wireline. RIH to 1,499 m - Hung Up. POOH and laid out. RIH CST on wireline. Unable to pass 1,500 m. POOH wireline at midnight.	
Activity				Wire Line logs	
Fluid Treatment				Continued to prepare 800 bbls 15% KCl brine for next well.	
For Report	**# 023**	**On**	**03/05/2008**	**Operation at Depth**	**2,313.0 m**
Rig Activity				POOH with Schlumberger wireline to surface. Made up x-over BHA on 5.5" DP. RIH to 1,927 m. Tight spot. Made up top drive and washed to 1,957 m. Continued to RIH to 2,310 m. Made up top drive and circulated hole clean. at 1,100 gpm. Installed VSI toolstring and TIW V/V. RIH VSI toolstring and perform log as per program. POOH wireline. Rigged down Schlumberger wireline.	
Activity				Wire Line logs	
Fluid Treatment				Viscosified mud in Pit 4 with addition of Barazan-D for use in Plug and Abandon program. Transferred 800 bbls KCl brine to vessel.	
For Report	**# 024**	**On**	**03/06/2008**	**Operation at Depth**	**2,313.0 m**
Rig Activity				POOH to 2,010m. Pumped 20 bbl slug. POOH to 1,330 m. Spotted 30 bbl hi-vis pill. Rigged up per cement job and cemented first plug. POOH to 1,150 m. Reverse circulated 2 x DP volume and spotted 202 bbls hi-vis pill. POOH to 887 m. Performed 2nd plug cement job as per program. POOH to 737 m. Reverse circulated 2 x DP volume. POOH to surface . Laid out X-Overs. RIH with OEDP. Pumped 3rd cement plug. Reversed circulated and displaced to seawater.	
Activity				Plug and abandon	
Fluid Treatment				Dumped 38bbls of cement contaminated mud, while reverse circulating @1150m. No cement seen at surface while reversing @ 767m. Pumped out mud from sand traps, dump and clean same. Treated 1200 bbls, KCL / Polymer mud, with 0.375ppb Aldacide G prior to boat storage. (NB:$10,595.04 costs for KCL BB, used to build Brine for Coelacanth-1)	
For Report	**# 025**	**On**	**03/07/2008**	**Operation at Depth**	**2,313.0 m**
Rig Activity				Cut casing, nipple down BOP's, retrieve well head. Prepare for rig move, to Coelacanth-1. Mud engineers sent off for rig move.	
Activity				Rig up and rig down	
Fluid Treatment				Backload 1100bbls 10.2 ppg KCL Polymer mud. To be used on Coelacanth 1. Dump and clean pits.	
For Report	**# 026**	**On**	**03/08/2008**	**Operation at Depth**	**2,313.0 m**
Rig Activity				Continued to rig down and prepare for rig move. Rig released 1600 hrs	
Activity				rig released	

Well Name	Wasabi - 1
Operator	Apache
Contractor	Seadrill
Rig No	West Triton
Unit System	Apache

Deviation Actual

Survey Date	MD m	TVD m	Angle	Direction	Horiz Displ. m
02/24/2008	202	202	0.09	130.7	
02/24/2008	760	760	0.78	172.1	
02/24/2008	1,181	1,181	0.38	233.5	
02/24/2008	1,358	1,357	9.08	335.2	11.9
02/24/2008	1,506	1,500	21.46	336.9	48.6

Company	Apache
Well Name	Wasabi - 1
Contractor	Seadrill
Rig No	West Triton
Unit System	Apache

Bit Record Report

Run No	Bit No	Bit Size in	Bit Manufacturer	Bit Type	Bit Style	IADC Code	Serial Number	Jet or TFA sq-in	Depth Out m	Run Length m	ROP m/hr	WOB lb	Bit RPM	Pump Press psi	Pump OutPut gpm	Fluid Type	Fluid Weight SG	Hole Angle	Bit Grading	Reason Pulled
4	4	12.250	SMITH	Mi616VBPX	FC		SCC985	6x18	1,797.0	935.0	19.8	15,000.0	172	2,800.0	1,100	KCl/Polymer	1.150	32	2-6-CT-S-X-I-RO-BHA	BHA - Change BHA
5	5	12.250	SMITH	Mi616VBPX	FC		SCC991	9x14	1,900.0	103.0	12.2	10,000.0	172	3,200.0	1,100	KCl/Polymer	1.150	32	2-4-CT-T-X-I-WT-BHA	BHA - Change BHA

DAILY MUD REPORTS

Baroid Fluid Services

Report No 001

Daily Drilling Fluid Report

Date 02/12/2008		Depth 66.0 m	
Spud Date 02/14/2008		Rig Activity Rig up	
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information		Drill String (in) / (m) OD	ID	Length	in Casing m OD	Set	MD
Bit Size	in						
Make/Type							
Jets							
TFA	sq-in						
Jets Velocity	m/sec						
Jet Impact Force	lbf						
Bit HHSI	hhp/in2						
Press Drop @ Bit	psi						
Bit Depth	m						
ECD @ Csg Shoe	SG						
ECD @ Bit	SG						

Circulation/Hydraulics Data			
Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			
Total GPM	AV, Riser	Circ Press psi	
Total Circ Time	AV min DP	Tot Pres Loss	
BU Time , min	AV max DC	Press Drop DP	
Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						
Additional Properties							

Fluid Treatments

Fluid Type

Engineering charges:
Engineer #1: 31 Jan - 12 Feb = 13 days
Engineer #2: 11 Feb - 12 Feb = 2 days

Received bulk barite & bentonite from Battler. Preparing unweighted prehydrated bentonite in progress. Also begin preparing 1500 bbls of 1.15 sg displacement "Kill Mud". Drillwater test in both Pit 2 & 3: chlorides = 12,000 mg/L and total hardness = 1,560 mg/L., suggesting contamination with 63-65% seawater.

Rig Activity

Jack down rig to zero air gap. Jack up to 46 ft. Skid rig 15 ft. Rig up the Texas deck for drilling operation. Cont. skid rig to 21 ft to drilling location. Install access stairs for texas deck. Commence install C.T.U to deck. Install service lines and flowline. Commence picking up 5 1/2" DP and rack up same.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer	day(s)			13		$16,250.00
Drilling Fluids Engineer 2	day(s)			2		$2,500.00
ALDACIDE G	25 l can		32		32	
barite	1000 kg bulk		103.000		103.000	
bentonite	1000 kg bulk		52.000		52.000	
caustic soda	25 kg pail		140		140	
Circal 60/16	1200 kg bag		17		17	
lime	20 kg bag		45		45	
PAC-L	25 kg bag		300		300	
potassium hydroxide	25 kg bag		168		168	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	24.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown

Active	bbl	Additions	bbl	Losses	bbl
Annulus		Base		Fluid Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits		Dewatering		SCE	
Total Hole		Sea Water		Evaporation	
Total Circ		Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol		Chemicals		Total Surface	
Net Change		Other		Downhole	
Total Vol		Total		Total Losses	

Fluid Types	Vol bbl

Deviation Information

Survey MD	m
Survey TVD	m
Angle	Deg
Direction	
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$18,750.00
Cumulative Products Cost	$0.00	Total Cumulative Cost	$18,750.00

Baroid Representatives	Mike Flexmore	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 002

Daily Drilling Fluid Report

Date 02/13/2008		Depth 66.0 m	
Spud Date 02/14/2008		Rig Activity Rig up	
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information		Drill String (in) / (m) OD	ID	Length	in Casing m OD	Set	MD
Bit Size	in						
Make/Type							
Jets							
TFA	sq-in						
Jets Velocity	m/sec						
Jet Impact Force	lbf						
Bit HHSI	hhp/in2						
Press Drop @ Bit	psi						
Bit Depth	m						
ECD @ Csg Shoe	SG						
ECD @ Bit	SG						

Circulation/Hydraulics Data			
Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			
Total GPM	AV, Riser	Circ Press psi	
Total Circ Time	AV min DP	Tot Pres Loss	
BU Time , min	AV max DC	Press Drop DP	
Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						
Additional Properties							

Fluid Treatments

Fluid Type Seawater

Continue mixing about 1500 bbls spud mud and 1500 bbls 1.15 sg displacement/kill mud in progress. Port drillwater tank contaminated with 63-65% seawater, used up all. Starboad drillwater tank uncontaminated. Received chemicals from Pacific Wrangler. Mud still in preparation therefor no mud check for report.

Rig Activity

Cont. to pick up and make up 5 1/2" DP. NOV IT fault finding alarm on draw-works "c". Motor electrical system isolated. Inspect Draw-works "c" motor and drive chains. Reset and cont. picking up DP. DWC drive motor troubles. Troubleshoot. Install mousehole and make up diverter running tool. Remove master bushing. RIH latch onto diverter.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
bentonite	1000 kg bulk	52.000		32.000	20.000	$15,836.16
caustic soda	25 kg pail	140		12	128	$530.28
ALDACIDE G	25 l can	32			32	
BARAZAN D PLUS	25 kg bag		80		80	
barite	1000 kg bulk	103.000			103.000	
Circal 60/16	1200 kg bag	17			17	
lime	20 kg bag	45			45	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	24.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus		Base		Fluid Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits		Dewatering		SCE	
Total Hole		Sea Water		Evaporation	
Total Circ		Whole Mud	480.0	Trips	
Reserve	480.0	Barite		Other	
Prev Vol		Chemicals		Total Surface	
Net Change	480.0	Other		Downhole	
Total Vol	480.0	Total	480.0	Total Losses	

Fluid Types	Vol bbl
Spud Mud	2735.0

Deviation Information

Survey MD	m
Survey TVD	m
Angle	Deg
Direction	
Horiz Displ.	m

Daily Products Cost	$16,366.44	Total Daily Cost	$18,866.44
Cumulative Products Cost	$16,366.44	Total Cumulative Cost	$37,616.44

Baroid Representatives	Mike Flexmore	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 003

Daily Drilling Fluid Report

Date 02/14/2008		Depth 69.0 m	
Spud Date 02/14/2008		Rig Activity Drilling 26" Hole	
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	26.000 in
Make/Type	DBS/Rock Bit
Jets	4x18
TFA	0.994 sq-in
Jets Velocity	49.4 m/sec
Jet Impact Force	lbf
Bit HHSI	hhp/in2
Press Drop @ Bit	psi
Bit Depth	69.0 m
ECD @ Csg Shoe	SG
ECD @ Bit	SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.000	3.000	7.3
Drill Collar	8.250	2.750	28.3
Drill Collar	9.500	3.000	33.4
Open Hole	26.000		3.2

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	43	43	0
gpm|bbl/min	252 | 5.99	252 | 5.99	
Total GPM	503	AV, Riser	Circ Press psi
Total Circ Time	35	AV min DP 5.8	Tot Pres Loss
BU Time , min	0	AV max DC 6.4	Press Drop DP
Total Strokes	2,999	BU Strokes -29	Press Drop An

Properties		1	2	3	4	Targets	Program	
Source		Pit # 1	Pit # 2					
Time		15:00	15:25					
Depth	m	0	0					
FL Temp	Deg C							
Density @ Deg C	SG	1.060 @ 20	1.030 @ 20			X	1.031	1.160
FV @ Deg C	sec/qt	300 @ 20	60 @ 20			X X	100	
PV @ Deg C	cP	15 @ 20	15 @ 20					
YP	lbs/100 ft2	103	28					
GELS	lbs/100 ft2	80/110/113	10/17/18			X *	40/40/-	
600/300		133.0/118.0	58.0/43.0					
200/100		111.0/105.0	36.0/28.0					
6/3		81.0/77.0	15.0/10.0					
API Filt	ml/30 min							
HTHP @ Deg C	ml/30 min							
Cake API/HTHP	32nd in							
Corr Solid	% by Vol	4.0	2.1					
NAP/Water	% by Vol	-/95.8	-/97.7					
Sand	% by vol							
MBT	ppb Eq.							
pH @ Deg C		9.20 @ 20	9.20 @ 20				9.00	10.00
ALK Mud	Pm							
ALK Filt	Pf/Mf							
Chlorides	mg/l							
Tot. Hardness	mg/l							
LGS/HGS	% by Vol	4.0/0.0	2.1/0.0					
LGS/HGS	ppb	36.39/-0.45	18.73/0.04					
ASG	SG	2.588	2.602					

Additional Properties

Fluid Treatments

Fluid Type Seawater

Prepared 1900 bbls of 40 ppb prehydrated bentonite. To this seawater was added to cut back to 20 ppb PHB & caustic added for pH. Resultant viscosities were poor due to contaminated drill water. Barazan-D+ was added at 1.15 ppb to promote rheology and barite suspension to displacement mud. The 1400 bbls of displacement mud was weighted to 1.15 sg using 78 ppb barite. Mud check #1 = 40 ppb PHB in clean drillwater (pit 1), mud check #2 = 20 ppb spud mud in s/w contaminated drillwater after adding 1.1 ppb Barazan (pit 2). Spud 26" hole @ 23:00

Rig Activity

Pick up & rack up diverter in derrick. Drillquip prepared 20" wellhead & running tool. Rig up 20" handling equipment, install csg bushing. Set 20" wellhead in rotary. Perform dummy run. Install new saver sub onto top drive. Prepare to pick up 26" BHA, 9 1/2" DC and RIH. Incident with draw works, movement with 9 1/2" DC in elevator. Tag sea @ 38.82m. Tag sea bed @ 66m. Spud hole @ 500 gpm and drill 26" hole from 66m to 69m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
barite	1000 kg bulk	103.000		21.500	81.500	$10,209.92
BARAZAN D PLUS	25 kg bag	80		60	20	$9,134.40
caustic soda	25 kg pail	128		10	118	$441.90
ALDACIDE G	25 l can	32			32	
BARA-DEFOAM W300	5 gal can		8		8	
bentonite	1000 kg bulk	20.000			20.000	
calcium chloride flake 77%	25 kg bag		10		10	
Circal 60/16	1200 kg bag	17			17	
citric acid	25 kg bag		40		40	
CLAYSEAL PLUS	216 kg drum		16		16	
guar gum	25 kg bag		36		36	
lime	20 kg bag	45			45	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	0.5
Circulating	
Trips	3.0
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	20.5
Total	24.0
Rotating	0.5
ROP	6.0
Dil Rate	0.00

Fluid Volume Breakdown — Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus	-4.0	Base		Fluid Dumped	
Pipe Cap	1.9	Drill Water		Transferred	
Active Pits	420.0	Dewatering		SCE	-52.6
Total Hole	-2.1	Sea Water		Evaporation	
Total Circ	417.9	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	480.0	Chemicals		Total Surface	
Net Change	-52.6	Other		Downhole	
Total Vol	417.9	Total		Total Losses	-52.6

Fluid Types	Vol bbl
Spud Mud	3195.0

Deviation Information

Survey MD	m
Survey TVD	m
Angle	Deg
Direction	
Horiz Displ.	m

Daily Products Cost	$19,786.22	Total Daily Cost	$22,286.22
Cumulative Products Cost	$36,152.66	Total Cumulative Cost	$59,902.66

Baroid Representatives	Mike Flexmore	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 004

Daily Drilling Fluid Report

Date 02/15/2008	Depth 157.0 m		
Spud Date 02/14/2008	Rig Activity Drilling		
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	16.000	in
Make/Type	DBS/Rock Bit	
Jets	3x28|1x16	
TFA	2.000	sq-in
Jets Velocity	58.2	m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	157.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.670	27.1
Drill Collar	8.250	2.750	94.5
Drill Collar	9.500	3.000	35.4
Open Hole	27.000		69.2
Open Hole	16.000		22.0

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	68	68	68
gpm|bbl/min	398 | 9.48	398 | 9.48	398 | 9.48

Total GPM	1,194	AV, Riser	Circ Press psi
Total Circ Time	21	AV min DP 12.8	Tot Pres Loss
BU Time , min	5	AV max DC 53.8	Press Drop DP
Total Strokes	4,286	BU Strokes 1,092	Press Drop An

Properties		1	2	3	4	Targets	Program	
Source		Pit # 1	Pit # 6					
Time		20:00	20:20					
Depth	m	135	135					
FL Temp	Deg C							
Density @ Deg C	SG	1.060 @ 20	1.060 @ 20				1.031	1.160
FV @ Deg C	sec/qt	270 @ 20	180 @ 20			X X	100	
PV @ Deg C	cP	15 @ 20	15 @ 20					
YP	lbs/100 ft2	103	82					
GELS	lbs/100 ft2	80/90/110	48/57/68			X *	40/40/-	
600/300		133.0/118.0	112.0/97.0					
200/100		113.0/106.0	76.0/68.0					
6/3		81.0/75.0	48.0/39.0					
API Filt	ml/30 min							
HTHP @ Deg C	ml/30 min							
Cake API/HTHP	32nd in							
Corr Solid	% by Vol	3.7	3.7					
NAP/Water	% by Vol	-/96.0	-/96.0					
Sand	% by vol							
MBT	ppb Eq.							
pH @ Deg C		9.40 @ 20	9.40 @ 20				9.00	10.00
ALK Mud	Pm							
ALK Filt	Pf/Mf							
Chlorides	mg/l	1,200	1,100					
Tot. Hardness	mg/l							
LGS/HGS	% by Vol	3.7/0.1	3.7/0.1					
LGS/HGS	ppb	33.32/0.78	33.36/0.81					
ASG	SG	2.623	2.624					

Additional Properties

Fluid Treatments

Fluid Type Seawater

New Mud Built: 925.5
Total Mud Built: 4120.5

Drilled 26" using s/w and 50-75 bbl hi-vis sweeps as required. At section TD displaced open hole to 150 bbls of Hi-Vis mud.
Drill 16" hole using s/w and 50-75 bbl hi-vis sweeps.
Building hi-vis spud mud continuously at 25 ppb Bentonite as required.

Rig Activity

Cont. to drill 26" hole from 69m to 91m pumping 75bbls sweeps as per programme. Cyber screen froze with alarm for VFD "B" motor drive fault. Troubleshoot same. Cont. drill from 91m to 135m reaching section TD. Displace hole with 150 bbl Hi-Vis mud. POOH and lay out 26" BHA. Make up 16" BHA. Calibrate draw works and RIH. Tag seabed at 66m. Made several attempts to enter wellbore. ROV went down to locate wellbore. RIH and wash and tag bottom @ 135m. Begin drilling 16" hole from 135m to 157m pumping 75bbl hi-vis sweeps every stand.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
bentonite	1000 kg bulk	20.000		10.000	10.000	$4,948.80
caustic soda	25 kg pail	118		4	114	$176.76
ALDACIDE G	25 l can	32			32	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	20			20	
barite	1000 kg bulk	81.500			81.500	
calcium chloride flake 77%	25 kg bag	10			10	
Circal 60/16	1200 kg bag	17			17	
Circal Y	1200 kg bag		11		11	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	16			16	
guar gum	25 kg bag	36			36	
lime	20 kg bag	45			45	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	
sodium bicarbonate	25 kg bag		35		35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	6.0
Circulating	
Trips	6.5
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	0.5
Testing	
Logging	
Dir Work	
Repair	1.0
Other	10.0
Total	24.0
Rotating	6.5
ROP	14.7
Dil Rate	0.00

Fluid Volume Breakdown — Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus	152.1	Base		Fluid Dumped	
Pipe Cap	5.2	Drill Water		Transferred	
Active Pits	440.0	Dewatering		SCE	-881.8
Total Hole	157.3	Sea Water		Evaporation	
Total Circ	597.3	Whole Mud	1055.5	Trips	
Reserve		Barite		Other	
Prev Vol	417.9	Chemicals		Total Surface	
Net Change	173.7	Other		Downhole	
Total Vol	597.3	Total	1055.5	Total Losses	-881.8

Fluid Types	Vol bbl
Spud Mud	3065.0

Deviation Information

Survey MD	m
Survey TVD	m
Angle	Deg
Direction	
Horiz Displ.	m

Daily Products Cost	$5,125.56	Total Daily Cost	$7,625.56
Cumulative Products Cost	$41,278.22	Total Cumulative Cost	$67,528.22

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 005

Daily Drilling Fluid Report

Date 02/16/2008	Depth 845.0 m		
Spud Date 02/14/2008	Rig Activity Drilling		
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	16.000	in
Make/Type	DBS/Rock Bit	
Jets	3x28|1x16	
TFA	2.000	sq-in
Jets Velocity	53.9	m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	845.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.670	715.1
Drill Collar	8.250	2.750	94.5
Drill Collar	9.500	3.000	35.4
Open Hole	27.000		69.2
Open Hole	16.000		710.0

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220		Nat 14-P-220		Nat 14-P-220		
Bore in	6.500		6.500		6.500		
Strokes in	14.000		14.000		14.000		
Eff(%)	97		97		97		
bbl/strk	0.139		0.139		0.139		
SPM	63		63		63		
gpm|bbl/min	369	8.78	369	8.78	369	8.78	
Total GPM	1,106	AV, Riser		Circ Press psi			
Total Circ Time	41	AV min DP	11.8	Tot Pres Loss			
BU Time , min	24	AV max DC	49.9	Press Drop DP			
Total Strokes	7,708	BU Strokes	4,602	Press Drop An			

Properties		1	2	3	4	Targets				Program	
Source		Pit # 1	Pit # 5								
Time		10:00	23:00								
Depth	m	500	855								
FL Temp	Deg C										
Density @ Deg C	SG	1.060 @ 20	1.060 @ 20							1.031	1.160
FV @ Deg C	sec/qt	124 @ 20	120 @ 20			X	X			100	
PV @ Deg C	cP	6 @ 20	12 @ 20								
YP	lbs/100 ft2	88	86								
GELS	lbs/100 ft2	65/80/90	48/63/78			X	*			40/40/-	
600/300		100.0/94.0	110.0/98.0								
200/100		90.0/85.0	81.0/69.0								
6/3		60.0/55.0	49.0/41.0								
API Filt	ml/30 min	13.0	13.0								
HTHP @ Deg C	ml/30 min										
Cake API/HTHP	32nd in	3/-	3/-								
Corr Solid	% by Vol	3.7	3.7								
NAP/Water	% by Vol	-/96.0	-/96.0								
Sand	% by vol										
MBT	ppb Eq.										
pH @ Deg C		9.00 @ 20	9.20 @ 20							9.00	10.00
ALK Mud	Pm	0.90	0.80								
ALK Filt	Pf/Mf	0.08/0.30	0.05/0.40								
Chlorides	mg/l	2,000	2,000								
Tot. Hardness	mg/l	40	80								
LGS/HGS	% by Vol	3.6/0.0	3.6/0.0								
LGS/HGS	ppb	33.01/0.51	33.01/0.51								
ASG	SG	2.615	2.615								

Additional Properties

Fluid Treatments

Fluid Type Seawater

New Mud Built: 870.3 bbl
Total Mud Built: 4990.8 bbl

Drill 16" hole using s/w and 50-75 bbl hi-vis sweeps.
Building hi-vis spud mud continuously at 25 ppb Bentonite as required.
Lime was added just prior to use for viscosity boost.

Rig Activity

Cont. drilling 16" hole from 156m to 565m, pumping 75 bbl sweeps every stand at 100 rpm, 3000 trq, 1100 pgm. Take survey after each connection. Cont. drill from 565m to 845m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
bentonite	1000 kg bulk	10.000		8.000	2.000	$3,959.04
lime	20 kg bag	45		4	41	$26.20
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag		50		50	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	20			20	
barite	1000 kg bulk	81.500			81.500	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	114			114	
Circal 60/16	1200 kg bag	17	3		20	
Circal Y	1200 kg bag	11	2		13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	16	8		24	
guar gum	25 kg bag	36			36	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag		80		80	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	22.5
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	0.5
Other	1.0
Total	24.0
Rotating	22.5
ROP	30.6
Dil Rate	0.00

Fluid Volume Breakdown — Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus	641.3	Base		Fluid Dumped	
Pipe Cap	52.8	Drill Water		Transferred	
Active Pits	380.0	Dewatering		SCE	-1192.9
Total Hole	694.1	Sea Water		Evaporation	
Total Circ	1074.1	Whole Mud	1665.3	Trips	
Reserve		Barite		Other	
Prev Vol	597.3	Chemicals		Total Surface	
Net Change	472.4	Other		Downhole	
Total Vol	1074.1	Total	1665.3	Total Losses	-1192.9

Fluid Types	Vol bbl
Spud Mud	2270.0

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$3,985.24	Total Daily Cost	$6,485.24
Cumulative Products Cost	$45,263.46	Total Cumulative Cost	$74,013.46

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 006

Daily Drilling Fluid Report

Date 02/17/2008		Depth 862.0 m	
Spud Date 02/14/2008		Rig Activity Run casing and cement	
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	13.375	in
Make/Type	CASING/13 3/8 Casing	
Jets	3x12	
TFA	0.331	sq-in
Jets Velocity	310.4	m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	127.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	13.375	12.415	127.0
Open Hole	27.000		69.2
Open Hole	16.000		727.0

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	60	60	60
gpm|bbl/min	351 | 8.36	351 | 8.36	351 | 8.36

Total GPM	1,053	AV, Riser		Circ Press psi	
Total Circ Time	22	AV min DP	14.3	Tot Pres Loss	
BU Time , min	4	AV max DC		Press Drop DP	
Total Strokes	3,945	BU Strokes	770	Press Drop An	

Properties		1	2	3	4	Targets				Program	
Source		Pit # 4	Pit # 4								
Time		13:00	20:00								
Depth	m	862	862								
FL Temp	Deg C										
Density @ Deg C	SG	1.150 @ 20	1.150 @ 20							1.140	1.170
FV @ Deg C	sec/qt	95 @ 20	96 @ 20								
PV @ Deg C	cP	16 @ 20	15 @ 20								
YP	lbs/100 ft2	69	70			X	X			25	60
GELS	lbs/100 ft2	21/45/64	27/44/57			X	*			12/-/-	20/-/-
600/300		101.0/85.0	100.0/85.0								
200/100		68.0/55.0	67.0/55.0								
6/3		29.0/21.0	30.0/22.0								
API Filt	ml/30 min	14.0	14.0			X	X			3.0	5.0
HTHP @ Deg C	ml/30 min										
Cake API/HTHP	32nd in	3/-	3/-								
Corr Solid	% by Vol	4.7	4.7								
NAP/Water	% by Vol	-/95.0	-/95.0								
Sand	% by vol										
MBT	ppb Eq.										
pH @ Deg C		9.20 @ 20	9.00 @ 20								10.00
ALK Mud	Pm	0.90	0.80								
ALK Filt	Pf/Mf	0.60/0.30	0.20/0.50								
Chlorides	mg/l	2,000	2,000								
Tot. Hardness	mg/l	80	40								
LGS/HGS	% by Vol	0.0/4.7	0.0/4.7								
LGS/HGS	ppb	0.03/68.56	0.03/68.56								
ASG	SG	4.199	4.199								

Additional Properties

Fluid Treatments

Fluid Type Spud Mud

New Mud Built: 0 bbl

Total Mud Built: 4990.8 bbl

Reached section TD 862 m @ 02:00.

Rig Activity

Cont. drill 16" hole from 845m to 862m TD. Pump 200 bbl hi-vis while rotating @30rpm. Schlumberger attempt to send signal to tool 1st & 2nd time failed. Backream from 862m to 800m. Run back down to bottom @ 862m and pump 300 bbl hi-vis mud. Displace well with 960 bbl of 9.6ppg bentonite mud. POOH to 128m. Troubleshoot pipe handler rotation. Cont. POOH and lay out tools. Pick up & test float. RIH with 13 3/8" casing to 135m. Work down to 139m, hung up. Cont. working string with 20k wt down without success. Hold JSA and rig up & POOH to 127m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	50			50	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	20			20	
barite	1000 kg bulk	81.500			81.500	
bentonite	1000 kg bulk	2.000			2.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	114			114	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	24			24	
guar gum	25 kg bag	36			36	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag	80			80	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16	4	
Vacu-Flo 1200 Degasser	0	0	

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	2.0
Circulating	1.5
Trips	7.0
Rig	
Surveys	
Fishing	
Run Casing	4.5
Coring	
Reaming	1.0
Testing	
Logging	0.5
Dir Work	
Repair	2.0
Other	5.5
Total	24.0
Rotating	3.0
ROP	8.5
Dil Rate	0.00

Fluid Volume Breakdown — Spud Mud

Active	bbl	Additions	bbl	Losses	bbl
Annulus	107.3	Base		Fluid Dumped	
Pipe Cap	62.4	Drill Water		Transferred	-888.9
Active Pits	380.0	Dewatering		SCE	
Total Hole	781.4	Sea Water		Evaporation	
Total Circ	549.7	Whole Mud		Trips	
Reserve	600.0	Barite		Other	
Prev Vol	2270.0	Chemicals		Total Surface	
Net Change	-888.9	Other		Downhole	
Total Vol	1761.4	Total		Total Losses	-888.9

Fluid Types	Vol bbl
Seawater	380.0

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$45,263.46	Total Cumulative Cost	$76,513.46

Baroid Representatives	Eugene Edwards	James Munford	
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Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 007

Daily Drilling Fluid Report

Date 02/18/2008	Depth 862.0 m		
Spud Date 02/14/2008	Rig Activity Run casing and cement		
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	13.375	in
Make/Type	CASING/13 3/8 Casing	
Jets	3x12	
TFA	0.331	sq-in
Jets Velocity	258.7	m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	862.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	13.375	12.415	862.0
Open Hole	27.000		69.2
Open Hole	16.000		727.0

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	50	50	50
gpm|bbl/min	293 | 6.97	293 | 6.97	293 | 6.97

Total GPM	878	AV, Riser	Circ Press psi
Total Circ Time	53	AV min DP 11.9	Tot Pres Loss
BU Time , min	14	AV max DC	Press Drop DP
Total Strokes	7,919	BU Strokes 2,153	Press Drop An

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						

Additional Properties

Fluid Treatments

Fluid Type Spud Mud

New Mud Built: 896.8 bbl
Total Mud Built: 5887.6 bbl

Built 434 bbl of Guar gum sweeps as contingency.
Built 462.8 bbl of bentonite mud for use in sweeps during tight spots observed from 126m to 155m.

Cont. building polymer mud for the 12 1/4" interval.

Rig Activity

Cont. lay down 13 3/8" casing from 127m to surface. R/d csg equipment and RIH with 16" BHA, enter 26" hole at 66m. String tagged @94m, wash down to 94m. Tight again. Wash and rotate 30rpm 750gpm from 70m to 135m. RIH free frmo 135m to 857m tagged bottom with 5m fill. POOH from 857m to 142. Pumped 100bbl hi-vis & displaced with 1.15 sg bentonite mud. Observed 60-70 klbs overpull. Worked tight spot from 126m to 155m. Back ream few passes. Pumped 100bbl hi-vis and displaced with 1.15sg bentonite mud. POOH to surface and rig up & RIH with 13 3/8" casing to 418m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
bentonite	1000 kg bulk	2.000	31.000	5.000	28.000	$2,474.40
guar gum	25 kg bag	36		27	9	$2,293.11
caustic soda	25 kg pail	114		1	113	$44.19
soda ash	25 kg bag	80		2	78	$26.50
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	50			50	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	20	40		60	
barite	1000 kg bulk	81.500			81.500	
calcium chloride flake 77%	25 kg bag	10			10	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	24	4		28	
Kwikseal Fine	40 lb bag		80		80	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	1.0
Trips	9.0
Rig	
Surveys	
Fishing	
Run Casing	8.5
Coring	
Reaming	5.5
Testing	
Logging	
Dir Work	
Repair	
Other	
Total	24.0
Rotating	5.5
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — Spud Mud

Active	bbl	Additions	bbl	Losses	bbl
Annulus	300.0	Base		Fluid Dumped	
Pipe Cap	423.4	Drill Water	450.0	Transferred	
Active Pits	380.0	Dewatering		SCE	-1082.8
Total Hole	723.4	Sea Water		Evaporation	
Total Circ	1103.4	Whole Mud		Trips	
Reserve	38.0	Barite		Other	
Prev Vol	1381.4	Chemicals	12.8	Total Surface	
Net Change	-620.0	Other		Downhole	
Total Vol	1141.4	Total	462.8	Total Losses	-1082.8

Fluid Types	Vol bbl
guar gum	434.0
Seawater	380.0

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$4,838.20	Total Daily Cost	$7,338.20
Cumulative Products Cost	$50,101.66	Total Cumulative Cost	$83,851.66

Baroid Representatives Eugene Edwards James Munford
Office 90 Talinga Rd Melbourne Telephone 61-03-9581-7555
Warehouse c/o of Esso Australia Ltd Telephone 61-3-56-881-445

Baroid Fluid Services

Report No 008

Daily Drilling Fluid Report

Date 02/19/2008	Depth 862.0 m		
Spud Date 02/14/2008	Rig Activity Run casing and cement		
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	13.375	in
Make/Type	CASING/13 3/8 Casing	
Jets	3x12	
TFA	0.331	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	862.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	13.375	12.415	862.0
Open Hole	27.000		69.2
Open Hole	16.000		727.0

in Casing m

OD	Set	MD

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM	AV, Riser	Circ Press psi	
Total Circ Time	AV min DP	Tot Pres Loss	
BU Time , min	AV max DC	Press Drop DP	
Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						
Additional Properties							

Fluid Treatments

Fluid Type Spud Mud

New Mud Built: 0 bbl

Total Mud Built: 5887.6 bbl

Cont. building polymer mud for the 12 1/4" interval.

Rig Activity

Cont. running 13 3/8" casing from 418m to 733m. Rig up for 13 3/8" X 20" crossover. RIH to 739m. RIH with 20" casing from 733m to 809m. Wash down to 857m. Attempt to disengage running tool from wellhead. Backed out at crossover running tool. Make up cement head stringer and RIH with 5 1/2" DP from surface to 825m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	50			50	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	60			60	
barite	1000 kg bulk	81.500			81.500	
bentonite	1000 kg bulk	28.000			28.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	113			113	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	28			28	
guar gum	25 kg bag	9			9	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag	78			78	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	4.0
Rig	
Surveys	
Fishing	
Run Casing	18.5
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	1.0
Other	0.5
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — Spud Mud

Active	bbl	Additions	bbl	Losses	bbl
Annulus	300.0	Base		Fluid Dumped	
Pipe Cap	423.4	Drill Water		Transferred	
Active Pits	380.0	Dewatering		SCE	-38.0
Total Hole	723.4	Sea Water		Evaporation	
Total Circ	1103.4	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	761.4	Chemicals		Total Surface	
Net Change	-38.0	Other		Downhole	
Total Vol	1103.4	Total		Total Losses	-38.0

Fluid Types	Vol bbl
guar gum	434.0
Seawater	380.0

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$50,101.66	Total Cumulative Cost	$86,351.66

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 009

Daily Drilling Fluid Report

Date 02/20/2008		Depth 862.0 m	
Spud Date 02/14/2008		Rig Activity Nipple up B.O.P.	
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information		Drill String (in) / (m) OD	ID	Length	in Casing m OD	Set	MD	Circulation/Hydraulics Data			
Bit Size	in				20.000	@	135.0	Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Make/Type					13.375	@	857.0	Bore in	6.500	6.500	6.500
Jets								Strokes in	14.000	14.000	14.000
TFA	sq-in							Eff(%)	97	97	97
Jets Velocity	m/sec							bbl/strk	0.139	0.139	0.139
Jet Impact Force	lbf							SPM	94	94	0
Bit HHSI	hhp/in2							gpm|bbl/min	550 13.10	550 13.10	
Press Drop @ Bit	psi							Total GPM	1,100	AV, Riser	Circ Press psi
Bit Depth	m	Open Hole 16.000		5.0				Total Circ Time	15	AV min DP	Tot Pres Loss
ECD @ Csg Shoe	SG							BU Time , min		AV max DC	Press Drop DP
ECD @ Bit	SG							Total Strokes	2,727	BU Strokes	Press Drop An

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						
Additional Properties							

Fluid Treatments

Fluid Type Seawater

Continued to mix KCL / Polymer mud for 12.25" section.

Begin adding 12% KCL and 5ppb Calcium Carbonate into mud.

Rig Activity

Cont. making up cementing joint. Connect line to side entry sub. Test lines to 1500psi. Mix and pump cement as to HALLIBURTON program. Displace cement from drill string. Unsting cement stinger. Pick up and circ. bottoms up. POOH to surface. Break out BOP bolts from stump. Position BOP over quick connector. Nipple up BOP.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	50	200		250	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	60	30		90	
barite	1000 kg bulk	81.500			81.500	
bentonite	1000 kg bulk	28.000			28.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	113			113	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	28	24		52	
guar gum	25 kg bag	9			9	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium chloride	1000 kg bag		12		12	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag	78			78	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	2.5
Rig	
Surveys	
Fishing	
Run Casing	6.0
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	1.0
Other	14.5
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus		Base		Fluid Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits	380.0	Dewatering		SCE	
Total Hole	435.9	Sea Water	431.7	Evaporation	
Total Circ	380.0	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	380.0	Chemicals		Total Surface	
Net Change	431.7	Other		Downhole	
Total Vol	815.9	Total	431.7	Total Losses	

Fluid Types Vol bbl

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$50,101.66	Total Cumulative Cost	$88,851.66

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 010

Daily Drilling Fluid Report

Date 02/21/2008		Depth 862.0 m	
Spud Date 02/14/2008		Rig Activity Tripping	
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information		Drill String (in) / (m) OD	ID	Length	in Casing m OD	Set	MD	Circulation/Hydraulics Data			
Bit Size	in				20.000	@	135.0	Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Make/Type					13.375	@	857.0	Bore in	6.500	6.500	6.500
Jets								Strokes in	14.000	14.000	14.000
TFA	sq-in							Eff(%)	97	97	97
Jets Velocity	m/sec							bbl/strk	0.139	0.139	0.139
Jet Impact Force	lbf							SPM	0	0	0
Bit HHSI	hhp/in2							gpm|bbl/min			
Press Drop @ Bit	psi							Total GPM	AV, Riser	Circ Press psi	
Bit Depth	m	Open Hole 16.000		5.0				Total Circ Time	AV min DP	Tot Pres Loss	
ECD @ Csg Shoe	SG							BU Time , min	AV max DC	Press Drop DP	
ECD @ Bit	SG							Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 3							Fluid Type Seawater
Time		13:00							Total Mud Built: 5887.6 bbl for 1st Interval.
Depth	m	862							
FL Temp	Deg C								Continued to mix KCL / Polymer mud for 12.25"
Density @ Deg C	SG	1.145 @ 16					1.140	1.170	section.
FV @ Deg C	sec/qt								Begin adding 12% KCL and 5ppb Calcium
PV @ Deg C	cP								Carbonate into mud.
YP	lbs/100 ft2								Weigh up displacement KCL polymer mud to
GELS	lbs/100 ft2								1.15 sg.
600/300									
200/100									
6/3									
API Filt	ml/30 min	6.0				X	3.0	5.0	
HTHP @ Deg C	ml/30 min								
Cake API/HTHP	32nd in	1/-							
Corr Solid	% by Vol	3.1							
NAP/Water	% by Vol	-/92.0							
Sand	% by vol								Rig Activity
MBT	ppb Eq.								Cont. making up BOP. Flush cement lines. Test
pH @ Deg C		9.60 @ 16						10.00	lower and upper BOP values on the top drive.
ALK Mud	Pm	0.60							Pick up overshot joint and set in rotary. Rig up 5
ALK Filt	Pf/Mf	0.65/1.55							1/2" elevators. Pick up diverter, make up
Chlorides	mg/l	60,000							overshot joint, RIH with diverter over BOP
Tot. Hardness	mg/l	80							mandreal. Nipple up choke and kill lines to BOP.
LGS/HGS	% by Vol	1.6/1.4							Install fitting for overshot packer and connect
LGS/HGS	ppb	14.79/21.16							hose. Function test BOP rams from remote
ASG	SG	3.351							stations. Fill BOP, flush lines, test casing to
									2000psi. Lay out diverter running tool. Make up
Additional Properties									runniong tool and set wearbushing. Pick up 5
KCL %	% by vol	12.0							1/2" DP from deck, rabbit and rack back.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	250			250	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	90			90	
barite	1000 kg bulk	81.500	72.500		154.000	
bentonite	1000 kg bulk	28.000			28.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	113			113	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	52	20		72	
guar gum	25 kg bag	9			9	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium chloride	1000 kg bag	12	28		40	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag	78			78	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment			
Shaker	Screens	Hrs	
VSM-300			
VSM-300	20 89		
VSM-300	20 89		
VSM-300	20 89		
Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		
Centrifuge	Speed	Feed Rate	Hrs

Time	
Drilling	
Circulating	
Trips	1.5
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	5.0
Logging	
Dir Work	
Repair	2.0
Other	15.5
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown	Seawater				
Active	bbl	Additions	bbl	Losses	bbl
Annulus		Base		Fluid Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits	380.0	Dewatering		SCE	
Total Hole	435.9	Sea Water	7.4	Evaporation	
Total Circ	380.0	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	815.9	Chemicals		Total Surface	
Net Change	7.4	Other		Downhole	
Total Vol	815.9	Total	7.4	Total Losses	

Fluid Types	Vol bbl

Deviation Information	
Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$50,101.66	Total Cumulative Cost	$91,351.66

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 011

Daily Drilling Fluid Report

Date 02/22/2008		Depth 862.0 m	
Spud Date 02/14/2008		Rig Activity Safety meeting	
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250 in
Make/Type	SMITH/Mi616VBPX
Jets	6x18
TFA	1.491 sq-in
Jets Velocity	m/sec
Jet Impact Force	lbf
Bit HHSI	hhp/in2
Press Drop @ Bit	psi
Bit Depth	851.0 m
ECD @ Csg Shoe	SG
ECD @ Bit	SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	591.0
Drill Pipe	5.500	3.250	142.0
Drill Collar	8.250	3.500	108.0
Motor	9.625	0.000	10.0
Open Hole	16.000		5.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 3	Pit # 6						Fluid Type Seawater
Time		13:00	22:00						Total Mud Built: 5887.6 bbl for 1st Interval.
Depth	m	862	862						
FL Temp	Deg C								Continued to mix KCL / Polymer mud for 12.25"
Density @ Deg C	SG	1.145 @ 16	1.145 @ 16				1.140	1.170	section.
FV @ Deg C	sec/qt	92 @ 16	90 @ 16						Weigh up displacement KCL polymer mud to
PV @ Deg C	cP	17 @ 49	18 @ 49						1.15 sg and prepare mud for displacement.
YP	lbs/100 ft2	26	24			X	25	60	
GELS	lbs/100 ft2	9/12/15	9/11/14			X *	12/-/-	20/-/-	
600/300		60.0/43.0	60.0/42.0						
200/100		34.0/25.0	33.0/24.0						
6/3		10.0/8.0	9.0/8.0						
API Filt	ml/30 min	6.0	6.0			X X	3.0	5.0	
HTHP @ Deg C	ml/30 min								
Cake API/HTHP	32nd in	1/2	1/2						
Corr Solid	% by Vol	2.3	2.3						
NAP/Water	% by Vol	-/92.7	-/92.7						
Sand	% by vol								
MBT	ppb Eq.								
pH @ Deg C		9.60 @ 16	9.60 @ 16					10.00	
ALK Mud	Pm	0.60	0.60						
ALK Filt	Pf/Mf	0.65/1.55	0.65/1.50						
Chlorides	mg/l	60,000	60,000						
Tot. Hardness	mg/l	80	80						
LGS/HGS	% by Vol	0.2/2.1	0.2/2.1						
LGS/HGS	ppb	1.67/31.50	1.67/31.50						
ASG	SG	4.074	4.074						
Additional Properties									
KCL %	% by vol	12.0	12.0						

Rig Activity

Cont. p/u and m/u 5 1/2" DP and rack in derrick. Pick up and service break Anadrill sonic tool. Hold JSA. Pick up BHA and RIH from surface to 40m. Commence loadibng of radioactive source into BHA string. Troubleshoot loading tool. Cont. running BHA from 40m to 259m. Troubleshoot problems on Link tilt. Hold PJSM, service TDS/travelling block. Pick up 5 1/2" DP from derrick and RIH from 259m to 851m. Hold PJSM with all crews involved in the mud displacement.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	32			32	
BARABLOK	50 lb bag	250			250	
BARA-DEFOAM W300	5 gal can	8			8	
BARAZAN D PLUS	25 kg bag	90			90	
barite	1000 kg bulk	154.000			154.000	
bentonite	1000 kg bulk	28.000			28.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	113			113	
Circal 60/16	1200 kg bag	20			20	
Circal Y	1200 kg bag	13			13	
citric acid	25 kg bag	40			40	
CLAYSEAL PLUS	216 kg drum	72			72	
guar gum	25 kg bag	9			9	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
PAC-L	25 kg bag	300			300	
potassium chloride	1000 kg bag	40			40	
potassium hydroxide	25 kg bag	168			168	
soda ash	25 kg bag	78			78	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	18.5
Rig	0.5
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	5.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — Seawater

Active	bbl	Additions	bbl	Losses	bbl
Annulus	334.8	Base		Fluid Dumped	
Pipe Cap	38.9	Drill Water		Transferred	
Active Pits	435.1	Dewatering		SCE	
Total Hole	380.8	Sea Water		Evaporation	
Total Circ	808.8	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	815.9	Chemicals		Total Surface	
Net Change		Other		Downhole	
Total Vol	815.9	Total		Total Losses	

Fluid Types — Vol bbl

Deviation Information

Survey MD	759.9 m
Survey TVD	759.9 m
Angle	0.78 Deg
Direction	172
Horiz Displ.	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$50,101.66	Total Cumulative Cost	$93,851.66

Baroid Representatives Eugene Edwards James Munford
Office 90 Talinga Rd Melbourne Telephone 61-03-9581-7555
Warehouse c/o of Esso Australia Ltd Telephone 61-3-56-881-445

Baroid Fluid Services

Report No 012

Daily Drilling Fluid Report

Date 02/23/2008		Depth 1,393.0 m	
Spud Date 02/14/2008		Rig Activity Drilling 12 1/4" Hole	
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250 in
Make/Type	SMITH/Mi616VBPX
Jets	6x18
TFA	1.491 sq-in
Jets Velocity	57.4 m/sec
Jet Impact Force	821.6 lbf
Bit HHSI	1.32 hhp/in2
Press Drop @ Bit	304 psi
Bit Depth	1,393.0 m
ECD @ Csg Shoe	1.171 SG
ECD @ Bit	1.167 SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,133.0
Drill Pipe	5.500	3.250	142.0
Drill Collar	8.250	3.500	108.0
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		536.0

in Casing m

OD	Set	MD
20.000 @		135.0
13.375 @		857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	75	75	0
gpm|bbl/min	439 | 10.45	439 | 10.45	
Total GPM	878	AV, Riser 19.6	Circ Press psi 2800
Total Circ Time	65	AV min DP 20.5	Tot Pres Loss 2016
BU Time , min	38	AV max DC 34.9	Press Drop DP 988
Total Strokes	9,807	BU Strokes 5,671	Press Drop An 35

Properties		1	2	3	Hyd 4	Targets				Program	
Source		Pit # 6	Flow Line	Pit # 6	Flow Line						
Time		8:30	4:40	15:00	21:00						
Depth	m	1,036	909	1,235	1,337						
FL Temp	Deg C	40	38	41	48						
Density @ Deg C	SG	1.150 @ 16	1.150 @ 16	1.150 @ 30	1.150 @ 30					1.140	1.170
FV @ Deg C	sec/qt	75 @ 16	69 @ 16	74 @ 30	74 @ 30						
PV @ Deg C	cP	17 @ 49	11 @ 49	13 @ 49	13 @ 49						
YP	lbs/100 ft2	22	19	29	25	X	X			25	60
GELS	lbs/100 ft2	8/11/14	7/9/13	11/14/16	9/11/15	X	*	*	*	12/-/-	20/-/-
600/300		56.0/39.0	41.0/30.0	55.0/42.0	51.0/38.0						
200/100		32.0/23.0	24.0/18.0	33.0/26.0	31.0/24.0						
6/3		11.0/9.0	8.0/5.0	11.0/9.0	10.0/8.0						
API Filt	ml/30 min	5.6	5.7	5.5	5.5	X	X	X	X	3.0	5.0
HTHP @ Deg C	ml/30 min	12.0 @ 149	14.0 @ 149	13.0 @ 149	14.0 @ 149					12.0	15.0
Cake API/HTHP	32nd in	1/2	-/1	1/2	1/2						
Corr Solid	% by Vol	2.5	2.6	2.7	2.7						
NAP/Water	% by Vol	-/92.6	-/92.6	-/92.3	-/92.3						
Sand	% by vol	0.20	0.10	0.20	0.30						
MBT	ppb Eq.	2.5	2.5	2.5	2.5						15.0
pH @ Deg C		9.50 @ 25	9.50 @ 25	9.40 @ 25	9.20 @ 25						10.00
ALK Mud	Pm	0.40	0.40	0.40	0.20						
ALK Filt	Pf/Mf	0.30/0.50	0.30/0.60	0.40/0.70	0.30/0.60						
Chlorides	mg/l	59,000	58,000	60,000	60,000						
Tot. Hardness	mg/l	80	80	80	80						
LGS/HGS	% by Vol	0.2/2.3	0.3/2.3	0.7/2.1	0.7/2.1						
LGS/HGS	ppb	1.59/34.48	2.49/34.34	6.32/30.19	6.32/30.19						
ASG	SG	4.089	4.032	3.796	3.796						
Additional Properties											
KCL %	% by vol	12.0	12.0	12.0	12.0						

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 3038.3 bbl
Total Mud Built: 3038.3 bbl
Begin new interval @ 00:10.
Treated active system with BARAZAN D PLUS to improve low end rheology. Added BARABLOK into active @ 4ppb as per company mans request at 950 MD.
Mixed 240 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by.
Ran out of drill water using seawater in 1 premix and at shakers.
Note: Bentonite/Barite received was a reconciliation with barge reports.

Rig Activity

Wash down from 851m to 854m, tag top of cement. Displace well to 12% KCL/Polmer/CLAYSEAL mud whilst drilling out float/shoe and clean out rat hole to 862m. Cont. drill new formation from 862m to 864m. Reciprocate sting and condition mud in prep. for leak off test. Perform leak off test with EMW of 15.9ppg. Drill ahead from 864m to 1235m. Troubleshoot MWD tools. Cont. drilling 12 1/4" hole from 1235m to 1334m. Losses at shakers, change screens. Cont. drill from 1334m to 1393m as per DDs instructions.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
CLAYSEAL PLUS	216 kg drum	72		42	30	$40,178.88
potassium chloride	1000 kg bag	40		40		$17,658.40
BARAZAN D PLUS	25 kg bag	90		90		$13,701.60
PAC-L	25 kg bag	300		144	156	$11,789.28
barite	1000 kg bulk	154.000	8.500	18.500	144.000	$8,785.28
bentonite	1000 kg bulk	28.000	7.000	8.000	27.000	$3,959.04
BARABLOK	50 lb bag	250		100	150	$3,039.00
Circal 60/16	1200 kg bag	20		7	13	$2,566.69
Circal Y	1200 kg bag	13		2	11	$973.34
caustic soda	25 kg pail	113		15	98	$662.85
BARA-DEFOAM W300	5 gal can	8		1	7	$616.88
ALDACIDE G	25 l can	32		7	25	$611.59
soda ash	25 kg bag	78		15	63	$198.75
calcium chloride flake 77%	25 kg bag	10			10	
citric acid	25 kg bag	40			40	
quar gum	25 kg bag	9			9	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
potassium hydroxide	25 kg bag	168			168	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	20 89	24.0
VSM-300	20 89	24.0
VSM-300	20 89	24.0
VSM-300	20 255	18.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	21.0
Circulating	1.5
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	1.5
Total	24.0
Rotating	21.0
ROP	25.3
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	790.3	Base		Fluid Dumped	
Pipe Cap	66.2	Drill Water	2360.0	Transferred	
Active Pits	510.0	Dewatering		SCE	-255.7
Total Hole	856.5	Sea Water	400.0	Evaporation	
Total Circ	1366.5	Whole Mud		Trips	
Reserve	1378.0	Barite	27.7	Other	-15.0
Prev Vol		Chemicals	250.6	Total Surface	-20.0
Net Change	2747.6	Other		Downhole	
Total Vol	2744.5	Total	3038.3	Total Losses	-290.7

Fluid Types Vol bbl

Deviation Information

Survey MD	1,358.0 m
Survey TVD	1,357.0 m
Angle	9.08 Deg
Direction	335
Horiz Displ.	11.9 m

Daily Products Cost	$104,741.58	Total Daily Cost	$107,241.58
Cumulative Products Cost	$154,843.24	Total Cumulative Cost	$201,093.24

Baroid Representatives Eugene Edwards James Munford
Office 90 Talinga Rd Melbourne Telephone 61-03-9581-7555
Warehouse c/o of Esso Australia Ltd Telephone 61-3-56-881-445

Baroid Fluid Services

Report No 013

Daily Drilling Fluid Report

Date 02/24/2008	Depth 1,647.0 m		
Spud Date 02/14/2008	Rig Activity Drilling		
Operator Apache	Report For Bill Openshaw/Paul Gallagher	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250 in
Make/Type	SMITH/Mi616VBPX
Jets	6x18
TFA	1.491 sq-in
Jets Velocity	72.7 m/sec
Jet Impact Force	1318.2 lbf
Bit HHSI	2.69 hhp/in2
Press Drop @ Bit	488 psi
Bit Depth	1,647.0 m
ECD @ Csg Shoe	1.171 SG
ECD @ Bit	1.166 SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,387.0
Drill Pipe	5.500	3.250	142.0
Drill Collar	8.250	3.500	108.0
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		790.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	95	95	0
gpm|bbl/min	556 | 13.24	556 | 13.24	
Total GPM	1,112	AV, Riser 24.8	Circ Press psi 3000
Total Circ Time	58	AV min DP 25.9	Tot Pres Loss 3146
BU Time , min	37	AV max DC 44.2	Press Drop DP 1706
Total Strokes	11,029	BU Strokes 6,974	Press Drop An 38

Properties		1	2	3	Hyd 4	Targets				Program	
Source		Flow Line	Pit # 6	Pit # 6	Flow Line						
Time		3:30	6:00	17:30	21:00						
Depth	m	1,425	1,455	1,549	1,585						
FL Temp	Deg C	42	41	41	41						
Density @ Deg C	SG	1.150 @ 35	1.150 @ 34	1.150 @ 37	1.150 @ 35					1.140	1.170
FV @ Deg C	sec/qt	65 @ 35	61 @ 34	63 @ 37	57 @ 35						
PV @ Deg C	cP	14 @ 49	16 @ 49	20 @ 49	15 @ 49						
YP	lbs/100 ft2	22	23	25	24	X	X		X	25	60
GELS	lbs/100 ft2	10/12/15	9/12/14	9/14/16	8/11/14	X	*	*	*	12/-/-	20/-/-
600/300		50.0/36.0	55.0/39.0	65.0/45.0	54.0/39.0						
200/100		30.0/22.0	33.0/23.0	38.0/28.0	32.0/24.0						
6/3		10.0/7.0	8.0/7.0	9.0/7.0	8.0/6.0						
API Filt	ml/30 min	5.6	5.0	4.0	5.0	X				3.0	5.0
HTHP @ Deg C	ml/30 min	14.6 @ 149	14.2 @ 149	14.0 @ 149	14.5 @ 149					12.0	15.0
Cake API/HTHP	32nd in	1/2	1/1	1/1	1/2						
Corr Solid	% by Vol	3.6	3.8	3.9	3.9						
NAP/Water	% by Vol	-/92.0	-/92.0	-/92.0	-/92.0						
Sand	% by vol	0.25	0.25	0.70	1.00						
MBT	ppb Eq.	2.5	2.5	2.5	2.5						15.0
pH @ Deg C		8.90 @ 25	8.80 @ 28	9.50 @ 28	9.00 @ 28						10.00
ALK Mud	Pm	0.30	0.20	0.50	0.50						
ALK Filt	Pf/Mf	0.40/1.30	0.54/1.80	0.56/2.20	0.53/1.80						
Chlorides	mg/l	54,000	52,000	50,000	50,000						
Tot. Hardness	mg/l	160	320	120	160						
LGS/HGS	% by Vol	1.9/1.7	2.1/1.7	2.3/1.7	2.3/1.7						
LGS/HGS	ppb	17.25/24.94	18.98/24.69	20.70/24.45	20.70/24.45						
ASG	SG	3.356	3.314	3.276	3.276						
Additional Properties											
KCL %	% by vol	11.0	10.5	10.0	10.0						
Potassium Ion	mg/l	55,000	55,000	55,000	55,000						

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 595.4 bbl
Total Mud Built: 3633.7 bbl

Treated active with Aldacide, Soda Ash,KOH and additional 1.5 ppb Barablok to maintain properties and concentrations.
Attempted fine up shaker screens. Adjusted to suit circulating conditions.
Unable to unload chemicals and drill water from boat, due to weather.
Mixed 170bbls Pre-hydrated Bentonite to help build volume.
Swept hole with 40 bbl of 40ppb Cal.Carb / Guar Gum sweep with improved cuttings returned.

Rig Activity

Cont. drilling and sliding 12 1/4" hole from 1393m to 1647m as per directional drillers instuctions. Survey every stand. GPM 1070, SPM - 188, WOB 8-10K, Pressure - 2800psi.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
CLAYSEAL PLUS	216 kg drum	30		13	17	$12,436.32
PAC-L	25 kg bag	156		48	108	$3,929.76
BARABLOK	50 lb bag	150		50	100	$1,519.50
bentonite	1000 kg bulk	27.000		1.600	25.400	$791.81
potassium hydroxide	25 kg bag	168		15	153	$674.70
guar gum	25 kg bag	9		4	5	$339.72
ALDACIDE G	25 l can	25		3	22	$262.11
soda ash	25 kg bag	63		6	57	$79.50
BARA-DEFOAM W300	5 gal can	7			7	
barite	1000 kg bulk	144.000			144.000	
calcium chloride flake 77%	25 kg bag	10			10	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	13			13	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	40			40	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 255	24.0
VSM-300	10 89	24.0
VSM-300	10 145	24.0
VSM-300	10 89	24.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	24.0
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	
Total	24.0
Rotating	24.0
ROP	10.6
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	971.7	Base		Fluid Dumped	
Pipe Cap	79.0	Drill Water	150.0	Transferred	
Active Pits	486.0	Dewatering		SCE	-433.1
Total Hole	1050.7	Sea Water	410.0	Evaporation	-12.0
Total Circ	1536.7	Whole Mud		Trips	
Reserve	1284.0	Barite		Other	-74.0
Prev Vol	2744.5	Chemicals	35.3	Total Surface	
Net Change	76.2	Other		Downhole	
Total Vol	2820.7	Total	595.3	Total Losses	-519.1

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0 m
Survey TVD	1,499.6 m
Angle	21.46 Deg
Direction	337
Horiz Displ.	48.6 m

Daily Products Cost	$20,033.42	Total Daily Cost	$22,533.42
Cumulative Products Cost	$174,876.66	Total Cumulative Cost	$223,626.66

Baroid Representatives	Eugene Edwards	James Munford	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 014

Daily Drilling Fluid Report

Date 02/25/2008	Depth 1,797.0 m		
Spud Date 02/14/2008	Rig Activity Tripping		
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250 in
Make/Type	SMITH/Mi616VBPX
Jets	6x18
TFA	1.491 sq-in
Jets Velocity	m/sec
Jet Impact Force	lbf
Bit HHSI	hhp/in2
Press Drop @ Bit	psi
Bit Depth	851.0 m
ECD @ Csg Shoe	1.150 SG
ECD @ Bit	1.150 SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	591.0
Drill Pipe	5.500	3.250	142.0
Drill Collar	8.250	3.500	108.0
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		940.0

in Casing m

OD	Set	MD
20.000 @		135.0
13.375 @		857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			
Total GPM	AV, Riser	Circ Press psi	
Total Circ Time	AV min DP	Tot Pres Loss	
BU Time , min	AV max DC	Press Drop DP	
Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	Hyd 4	Targets	Program	
Source		Pit # 6	Pit # 6	Pit # 6	Pit # 6			
Time		3:00	9:45	16:00	21:00			
Depth	m	1,670	1,750	1,797	1,797			
FL Temp	Deg C	42						
Density @ Deg C	SG	1.160 @ 35	1.150 @ 38	1.150 @ 30	1.150 @ 30		1.140	1.170
FV @ Deg C	sec/qt	62 @ 35	69 @ 38	69 @ 30	71 @ 30			
PV @ Deg C	cP	14 @ 49	18 @ 49	19 @ 49	20 @ 49			
YP	lbs/100 ft2	20	29	26	26	X	25	60
GELS	lbs/100 ft2	6/10/12	10/13/14	10/15/21	11/16/21	X * * *	12/-/-	20/-/-
600/300		48.0/34.0	65.0/47.0	64.0/45.0	66.0/46.0			
200/100		28.0/21.0	38.0/28.0	39.0/39.0	38.0/28.0			
6/3		7.0/5.0	10.0/8.0	12.0/8.0	13.0/9.0			
API Filt	ml/30 min	5.5	4.0	4.2	4.0	X	3.0	5.0
HTHP @ Deg C	ml/30 min	14.6 @ 149	13.0 @ 149	13.5 @ 149	13.0 @ 149		12.0	15.0
Cake API/HTHP	32nd in	1/2	1/1	1/2	1/2			
Corr Solid	% by Vol	4.3	4.1	4.1	4.1			
NAP/Water	% by Vol	-/92.0	-/92.0	-/92.0	-/92.0			
Sand	% by vol	1.00	1.00	1.00	1.00			
MBT	ppb Eq.	2.5	3.0	2.5	2.5			15.0
pH @ Deg C		8.90 @ 28	9.10 @ 28	9.20 @ 28	9.10 @ 28			10.00
ALK Mud	Pm	0.30	0.32	0.30	0.30			
ALK Filt	Pf/Mf	0.40/1.80	0.26/2.00	0.20/1.90	0.20/2.00			
Chlorides	mg/l	46,000	48,000	48,000	48,000			
Tot. Hardness	mg/l	160	160	160	160			
LGS/HGS	% by Vol	2.0/2.3	2.5/1.6	2.5/1.6	2.5/1.6			
LGS/HGS	ppb	18.39/33.20	22.40/24.22	22.40/24.22	22.40/24.22			
ASG	SG	3.444	3.242	3.242	3.242			
Additional Properties								
KCL %	% by vol	9.5	9.5	9.5	9.5			
Potassium Ion	mg/l	49,000	52,000	52,000	52,000			

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 448.1 bbl
Total Mud Built: 4081.8 bbl

Unloaded chemicals and drill water from boat. Treated active with 0.5 ppb Barazan D to raise 6 rpm. Built 15% KCL premix, to maintain active concentration +10% (unable to mix BB's directly to active). Maintained mud weight, using unweighted premix.
Incorporated 210 bbls 40ppb CaCo3 LCM, to active.
Premix with PHB kept in reserve.
Made 11.7 ppg slug to trip out of hole.
Cont. building volume.

Rig Activity

Cont. drilling and sliding 12 1/4" hole from 1647m to 1797m as per directional drillers instuctions. Survey every stand. GPM 1076, SPM - 189, WOB 5-10K, Pressure - 3050psi. Rack back a stand, pump 50 bbl hi vis sweep & circulate out. Flowcheck, POOH from 1797m to 1530m. Pump out of hole from 1638m to 1530m. Hook load locked up on screen, reboot. Cont. pump out of hole from 1530m to 1442m. Pump weighted slug and pull out of hole from 1442m to 851m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
CLAYSEAL PLUS	216 kg drum	17		7	10	$6,696.48
barite	1000 kg bulk	144.000		8.000	136.000	$3,799.04
BARAZAN D PLUS	25 kg bag		97	15	82	$2,283.60
bentonite	1000 kg bulk	25.400		4.600	20.800	$2,276.45
PAC-L	25 kg bag	108		24	84	$1,964.88
BARA-DEFOAM W300	5 gal can	7		1	6	$616.88
potassium hydroxide	25 kg bag	153		8	145	$359.84
citric acid	25 kg bag	40		2	38	$92.48
ALDACIDE G	25 l can	22		1	21	$87.37
soda ash	25 kg bag	57		2	55	$26.50
BARABLOK	50 lb bag	100			100	
calcium chloride flake 77%	25 kg bag	10	84		94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	13			13	
Circal Y	1200 kg bag	11	2		13	
EZ-MUD	25 kg pail		32		32	
guar gum	25 kg bag	5			5	
Kwikseal Fine	40 lb bag	80			80	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag		90		90	
NO-SULF	17 kg pail		48		48	
potassium chloride	1000 kg bag		40		40	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 89	22.0
VSM-300	10 255	22.0
VSM-300	10 255	22.0
VSM-300	10 255	22.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	16.0
Circulating	2.0
Trips	5.5
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	0.5
Other	
Total	24.0
Rotating	16.0
ROP	9.4
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	405.0	Base		Fluid Dumped	
Pipe Cap	38.9	Drill Water	410.0	Transferred	
Active Pits	423.0	Dewatering		SCE	-155.0
Total Hole	1213.8	Sea Water		Evaporation	
Total Circ	866.9	Whole Mud		Trips	
Reserve	1477.0	Barite	12.0	Other	
Prev Vol	2820.7	Chemicals	26.0	Total Surface	
Net Change	293.0	Other		Downhole	
Total Vol	3113.8	Total	448.0	Total Losses	-155.0

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$18,203.52	Total Daily Cost	$20,703.52
Cumulative Products Cost	$193,080.18	Total Cumulative Cost	$244,330.18

Baroid Representatives Eugene Edwards James Munford
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Baroid Fluid Services

Report No 015

Daily Drilling Fluid Report

Date 02/26/2008	Depth 1,824.0 m		
Spud Date 02/14/2008	Rig Activity Drilling 12 1/4" Hole		
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250 in
Make/Type	SMITH/Mi616VBPX
Jets	9x14
TFA	1.353 sq-in
Jets Velocity	79.3 m/sec
Jet Impact Force	1422.2 lbf
Bit HHSI	3.16 hhp/in2
Press Drop @ Bit	580 psi
Bit Depth	1,824.0 m
ECD @ Csg Shoe	1.182 SG
ECD @ Bit	1.175 SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,484.7
Drill Pipe	5.500	3.250	281.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		967.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220			
Bore in	6.500	6.500	6.500			
Strokes in	14.000	14.000	14.000			
Eff(%)	97	97	97			
bbl/strk	0.139	0.139	0.139			
SPM	94	94	0			
gpm|bbl/min	550 13.10	550 13.10				
Total GPM	1,100	AV, Riser	24.5	Circ Press psi	3200	
Total Circ Time	65	AV min DP	25.6	Tot Pres Loss	3613	
BU Time , min	42	AV max DC	43.7	Press Drop DP	2062	
Total Strokes	12,228	BU Strokes	7,932	Press Drop An	64	

Properties		1	Hyd 2	3	4	Targets	Program	
Source		Pit # 6	Pit # 5					
Time		14:00	21:00					
Depth	m	1,794	1,794					
FL Temp	Deg C							
Density @ Deg C	SG	1.150 @ 25	1.150 @ 30				1.140	1.170
FV @ Deg C	sec/qt	70 @ 25	68 @ 30					
PV @ Deg C	cP	16 @ 49	18 @ 49					
YP	lbs/100 ft2	38	35				25	60
GELS	lbs/100 ft2	13/19/24	13/19/24				12/-/-	20/-/-
600/300		70.0/54.0	71.0/53.0					
200/100		46.0/35.0	46.0/35.0					
6/3		14.0/11.0	14.0/11.0					
API Filt	ml/30 min	5.0	4.9				3.0	5.0
HTHP @ Deg C	ml/30 min	14.0 @ 149	14.0 @ 149				12.0	15.0
Cake API/HTHP	32nd in	1/2	1/2					
Corr Solid	% by Vol	4.1	4.4					
NAP/Water	% by Vol	-/92.0	-/92.0					
Sand	% by vol	0.80	1.00					
MBT	ppb Eq.	2.5	2.5					15.0
pH @ Deg C		9.10 @ 28	9.00 @ 28					10.00
ALK Mud	Pm	0.30	0.30					
ALK Filt	Pf/Mf	0.30/1.70	0.40/2.00					
Chlorides	mg/l	48,000	45,000					
Tot. Hardness	mg/l	160	160					
LGS/HGS	% by Vol	2.5/1.6	2.7/1.6					
LGS/HGS	ppb	22.40/24.22	24.92/23.90					
ASG	SG	3.242	3.196					
Additional Properties								
KCL %	% by vol	9.0	9.0					
Potassium Ion	mg/l	53,000	49,000					

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 243.1 bbl
Total Mud Built: 4324.9 bbl

Took drill water from boat.
Began treating active with EZ-MUD as per instructions from Apache.
Maintained mud weight, using concentrated unweighted premix as Hi-Vis sweeps.
Mixed 250 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by.
Premix with PHB kept in reserve.

Rig Activity

Cont. pull out of hole from 851m to 259m. Flowcheck & cont. POOH to surface and lay out 12 1/4" BHA. Retrieve radio active source and make safe. Service top drive, PIP handler and dolly rollers. Pick up and make up new 12 1/4" BHA. RIH to shoe at 847m. Test MWD tools @ 188spm, 1100gpm. Cont. RIH from 857m to 1767m. Wash down from 1767m to 1797m, pump 50bbl Hi-Vis. Cont. drill and slide 12 1/4" hole as per directional drillers intructions, from 1797m to 1824m.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
potassium chloride	1000 kg bag	40		10	30	$4,414.60
Circal 60/16	1200 kg bag	13		3	10	$1,100.01
Circal Y	1200 kg bag	13		2	11	$973.34
EZ-MUD	25 kg pail	32		2	30	$171.66
Kwikseal Fine	40 lb bag	80		1	79	$52.36
ALDACIDE G	25 l can	21			21	
BARABLOK	50 lb bag	100			100	
BARA-DEFOAM W300	5 gal can	6			6	
BARAZAN D PLUS	25 kg bag	82			82	
barite	1000 kg bulk	136.000			136.000	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	10			10	
quar gum	25 kg bag	5			5	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
PAC-L	25 kg bag	84			84	
potassium hydroxide	25 kg bag	145			145	
soda ash	25 kg bag	55			55	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 89	6.0
VSM-300	10 255	6.0
VSM-300	10 255	6.0
VSM-300	10 255	6.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	2.0
Circulating	
Trips	20.0
Rig	0.5
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	1.0
Dir Work	
Repair	
Other	0.5
Total	24.0
Rotating	2.0
ROP	13.5
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1105.2	Base		Fluid Dumped	
Pipe Cap	85.7	Drill Water	197.1	Transferred	
Active Pits	513.0	Dewatering		SCE	
Total Hole	1190.9	Sea Water		Evaporation	
Total Circ	1703.9	Whole Mud		Trips	
Reserve	1653.0	Barite		Other	
Prev Vol	3113.8	Chemicals	46.0	Total Surface	
Net Change	243.1	Other		Downhole	
Total Vol	3356.9	Total	243.1	Total Losses	

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0 m
Survey TVD	1,499.6 m
Angle	21.46 Deg
Direction	337
Horiz Displ.	48.6 m

Daily Products Cost	$6,711.97	Total Daily Cost	$9,211.97
Cumulative Products Cost	$199,792.15	Total Cumulative Cost	$253,542.15

Baroid Representatives Eugene Edwards James Munford
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Baroid Fluid Services

Report No 016

Daily Drilling Fluid Report

Date 02/27/2008	Depth 1,900.0 m		
Spud Date 02/14/2008	Rig Activity Repair Rig		
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	851.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	502.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,043.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		1	2	3	4	Targets	Program		
Source		Pit # 6	Pit # 6						
Time		5:00	11:00						
Depth	m	1,883	1,900						
FL Temp	Deg C	40	41						
Density @ Deg C	SG	1.160 @ 30	1.155 @ 32				1.140	1.170	
FV @ Deg C	sec/qt	64 @ 30	75 @ 32						
PV @ Deg C	cP	18 @ 49	22 @ 49						
YP	lbs/100 ft2	38	38				25	60	
GELS	lbs/100 ft2	15/20/24	16/20/22				12/-/-	20/-/-	
600/300		74.0/56.0	82.0/60.0						
200/100		48.0/37.0	50.0/38.0						
6/3		16.0/14.0	15.0/12.0						
API Filt	ml/30 min	4.9	5.0				3.0	5.0	
HTHP @ Deg C	ml/30 min	14.0 @ 149	14.0 @ 149				12.0	15.0	
Cake API/HTHP	32nd in	1/2	1/1						
Corr Solid	% by Vol	4.8	3.9						
NAP/Water	% by Vol	-/92.0	-/92.0						
Sand	% by vol	0.80	0.80						
MBT	ppb Eq.	2.5	2.0					15.0	
pH @ Deg C		8.60 @ 28	8.80 @ 28					10.00	
ALK Mud	Pm	0.20	0.20						
ALK Filt	Pf/Mf	0.40/1.70	0.45/2.00						
Chlorides	mg/l	40,000	50,000						
Tot. Hardness	mg/l	160	200						
LGS/HGS	% by Vol	2.6/2.2	2.0/2.0						
LGS/HGS	ppb	23.34/32.63	17.85/29.05						
ASG	SG	3.342	3.403						
Additional Properties									
KCL %	% by vol	8.5	10.0						
Potassium Ion	mg/l	44,000	55,000						

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 17.7 bbl
Total Mud Built: 4342.6 bbl

Treated active with EZ-MUD, in preparation of claystone formations.
Added Caustic Potash to maintain pH.
Noticed coal at shakers @ 1830 MD, cont. treating mud with 4ppb BARABLOK and used concentrated 1.15sg premix as a Hi-Vis sweep, brought up additional amount coals.
Mixed 250 bbl of 40ppb Mixed Cal.Carb LCM pill on stand-by.
Premix with PHB kept in reserve.

Rig Activity

Cont. drill and slide 12 1/4" hole as per directional drillers instructions, from 1824m to 1900m. Pump 50 bbl hi-vis pill & circ. bottoms up. Flow check, then POOH wet to 1532m. Pump 25bbl slug and chase with 10bbl mud. POOH from 1532m to 851m. Flowcheck, cont. POOH to surface. Lay out BHA and make up bit. Install sleeve on motor, check orientation. Download data from RAB-8 tool. P/up Bat sonic tool & RIH to 851m. Test MWD tools. Repair pipe handler and change out saver sub.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
BARABLOK	50 lb bag	100		50	50	$1,519.50
barite	1000 kg bulk	136.000		2.000	134.000	$949.76
potassium chloride	1000 kg bag	30		2	28	$882.92
potassium hydroxide	25 kg bag	145		6	139	$269.88
ALDACIDE G	25 l can	21		1	20	$87.37
BARA-DEFOAM W300	5 gal can	6			6	
BARAZAN D PLUS	25 kg bag	82			82	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	10			10	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	10			10	
EZ-MUD	25 kg pail	30			30	
guar gum	25 kg bag	5			5	
Kwikseal Fine	40 lb bag	79			79	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
PAC-L	25 kg bag	84			84	
soda ash	25 kg bag	55			55	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 89	12.0
VSM-300	10 255	12.0
VSM-300	10 255	12.0
VSM-300	10 255	12.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	9.0
Circulating	1.5
Trips	9.5
Rig	2.5
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	1.5
Dir Work	
Repair	
Other	
Total	24.0
Rotating	9.0
ROP	8.4
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	412.1	Base		Fluid Dumped	
Pipe Cap	36.5	Drill Water	0.8	Transferred	
Active Pits	488.0	Dewatering		SCE	
Total Hole	1302.6	Sea Water		Evaporation	
Total Circ	936.6	Whole Mud		Trips	
Reserve	1584.0	Barite	3.0	Other	
Prev Vol	3356.9	Chemicals	13.9	Total Surface	
Net Change	17.7	Other		Downhole	
Total Vol	3374.6	Total	17.7	Total Losses	

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0 m
Survey TVD	1,499.6 m
Angle	21.46 Deg
Direction	337
Horiz Displ.	48.6 m

Daily Products Cost	$3,709.43	Total Daily Cost	$6,209.43
Cumulative Products Cost	$203,501.58	Total Cumulative Cost	$259,751.58

Baroid Representatives Eugene Edwards James Munford
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Baroid Fluid Services

Report No 017

Daily Drilling Fluid Report

Date 02/28/2008	Depth 2,121.0 m		
Spud Date 02/14/2008	Rig Activity Drilling		
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	2,121.0	m
ECD @ Csg Shoe	1.170	SG
ECD @ Bit	1.170	SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,772.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,264.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM		AV, Riser	Circ Press psi 3600
Total Circ Time		AV min DP	Tot Pres Loss
BU Time , min		AV max DC	Press Drop DP
Total Strokes		BU Strokes	Press Drop An

Properties		Hyd 1	2	3	4	Targets				Program	
Source		Flow Line	Pit # 6	Pit # 6							
Time		4:40	11:30	16:30							
Depth	m	1,905	1,989	2,030							
FL Temp	Deg C	41	48	50							
Density @ Deg C	SG	1.170 @ 32	1.180 @ 38	1.175 @ 39			X	X		1.140	1.170
FV @ Deg C	sec/qt	65 @ 32	76 @ 38	75 @ 39							
PV @ Deg C	cP	18 @ 49	22 @ 49	19 @ 49							
YP	lbs/100 ft2	34	49	41						25	60
GELS	lbs/100 ft2	13/17/21	17/21/24	16/19/21						12/-/-	20/-/-
600/300		70.0/52.0	93.0/71.0	79.0/60.0							
200/100		44.0/33.0	59.0/48.0	50.0/38.0							
6/3		14.0/12.0	18.0/15.0	16.0/13.0							
API Filt	ml/30 min	5.4	4.0	4.0		X				3.0	5.0
HTHP @ Deg C	ml/30 min	14.6 @ 149	14.0 @ 149	14.0 @ 149						12.0	15.0
Cake API/HTHP	32nd in	1/2	1/1	1/1							
Corr Solid	% by Vol	4.0	3.9	3.9							
NAP/Water	% by Vol	-/92.0	-/92.0	-/92.0							
Sand	% by vol	0.80	1.00	0.75							
MBT	ppb Eq.	2.5	2.0	2.0							15.0
pH @ Deg C		8.90 @ 28	8.90 @ 38	8.90 @ 38							10.00
ALK Mud	Pm	0.20	0.30	0.30							
ALK Filt	Pf/Mf	0.40/2.00	0.40/1.90	0.40/1.80							
Chlorides	mg/l	49,000	50,000	50,000							
Tot. Hardness	mg/l	200	280	280							
LGS/HGS	% by Vol	1.1/2.9	0.4/3.5	0.7/3.2							
LGS/HGS	ppb	10.16/42.74	3.61/52.05	6.46/47.45							
ASG	SG	3.756	4.039	3.912							
Additional Properties											
KCL %	% by vol	10.0	10.0	10.0							
Potassium Ion	mg/l	55,000	55,000	55,000							

Fluid Treatments

Fluid Type KCl/Polymer

New mud built: 53.8bbls

Total mud built: 4,396.4bbls. Continued to treated active with 0.2 ppb EZ-MUD and Caustic Potash. Added enriched premix to maintain properties and mud weight. Added 50 bbls of 40ppb LCM (sized calcium carbonate) to active as losses appeared after entering Latrobe formation.Initial seepage losses 30bbl/hr, down to 7-10 bbl/hr after treatment. Dressed shakers # 2,3 and 4 with 280 mesh. Drilling through predominantly sandstone with occasional coal stringers. Cuttings are generally consolidated and inhibited indicating adequate hole cleaning and KCl content. There are marginal indications

Rig Activity

RIH from 851 m to 1,619 m. Performed kick drill. Took weight at 1,619 m (40 klbs). Washed and reamed from 1,619 m to 1,639 m. RIH to 1,806 m. Took weight (20 klbs) and continued to RIH to bottom. No fill.

Drilled ahead from 1,900 m to 2,121 m as per DD instructions with surveys performed every stand.

ROP has generally been 10- 20 m hour

Large sized coal pieces are occasionally observed on shakers ranging from approximately 1- 7 inch in diameter. Mud weight creep through

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
EZ-MUD	25 kg pail	30		9	21	$772.47
barite	1000 kg bulk	134.000		1.000	133.000	$474.88
potassium hydroxide	25 kg bag	139		8	131	$359.84
ALDACIDE G	25 l can	20		1	19	$87.37
BARABLOK	50 lb bag	50			50	
BARA-DEFOAM W300	5 gal can	6			6	
BARAZAN D PLUS	25 kg bag	82			82	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	10			10	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	10			10	
guar gum	25 kg bag	5			5	
Kwikseal Fine	40 lb bag	79			79	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
PAC-L	25 kg bag	84			84	
potassium chloride	1000 kg bag	28			28	
soda ash	25 kg bag	55			55	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 280 255	22.0
VSM-300	10 280	22.0
VSM-300	10 280	22.0
VSM-300	10 255 280	22.0

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	22.0
Circulating	
Trips	2.0
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	
Total	24.0
Rotating	22.0
ROP	10.0
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1317.4	Base		Fluid Dumped	
Pipe Cap	100.5	Drill Water	50.0	Transferred	
Active Pits	503.0	Dewatering		SCE	-60.0
Total Hole	1417.9	Sea Water		Evaporation	
Total Circ	1920.9	Whole Mud		Trips	
Reserve	1350.0	Barite	1.5	Other	
Prev Vol	3374.6	Chemicals	2.3	Total Surface	
Net Change	-103.6	Other		Downhole	-97.4
Total Vol	3270.9	Total	53.8	Total Losses	-157.4

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0 m
Survey TVD	1,499.6 m
Angle	21.46 Deg
Direction	337
Horiz Displ.	48.6 m

Daily Products Cost	$1,694.56	Total Daily Cost	$4,194.56
Cumulative Products Cost	$205,196.14	Total Cumulative Cost	$263,946.14

Baroid Representatives Eugene Edwards Brad Jackson

Office 90 Talinga Rd Melbourne Telephone 61-03-9581-7555

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Baroid Fluid Services

Report No 018

Daily Drilling Fluid Report

Date 02/29/2008		Depth 2,286.0 m	
Spud Date 02/14/2008		Rig Activity Drilling	
Operator Apache	Report For Bill Openshaw/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Carlos Carvajal	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	2,121.0	m
ECD @ Csg Shoe	1.185	SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,772.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,429.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		Hyd 1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 6	Pit # 6	Flow Line					Fluid Type KCl/Polymer
Time		3:00	11:15	17:30					New mud built: 224.4bbls
Depth	m	2,180	2,240	2,250					Total mud built: 4,620.8bbls.
FL Temp	Deg C	51	53	54					Continued to treated active with 0.3 ppb EZ-MUD
Density @ Deg C	SG	1.185 @ 40	1.185 @ 40	1.175 @ 41		X X X	1.140	1.170	and Caustic Potash.
FV @ Deg C	sec/qt	60 @ 40	57 @ 40	50 @ 41					Cut back creeping mud weight with additions of
PV @ Deg C	cP	16 @ 49	16 @ 49	16 @ 49					drill water and premix. Added 0.75 ppb Pac L to
YP	lbs/100 ft2	30	28	39			25	60	maintain fluid loss with dilution.
GELS	lbs/100 ft2	12/16/18	11/15/19	14/18/22		*	12/-/-	20/-/-	Pumped 50 bbl 1.13 sg Hivis (Vis 100+ seconds)
600/300		62.0/46.0	60.0/44.0	71.0/55.0					with marginal increase in cuttings observed at
200/100		39.0/31.0	37.0/29.0	45.0/34.0					shakers. Predominantly drilling through sand with
6/3		13.0/11.0	12.0/10.0	15.0/12.0					coal and quartz stringers.
API Filt	ml/30 min	4.6	4.2	5.0			3.0	5.0	Pumped 10 bbl 1.9 S.G sweep at 2,227 m.
HTHP @ Deg C	ml/30 min	13.5 @ 149	14.0 @ 149	14.0 @ 149			12.0	15.0	Marginal increase in cuttings observed at
Cake API/HTHP	32nd in	1/1	1/1	1/1					shakers.
Corr Solid	% by Vol	6.2	5.1	4.1					Rig Activity
NAP/Water	% by Vol	-/90.0	-/91.0	-/92.0					Continued to drill directional 12 1/4" hole to 2,286
Sand	% by vol	0.75	0.80	0.75					m at midnight. Drilling at 7-17 m hour. 40 klbs
MBT	ppb Eq.	2.0	1.5	2.0				15.0	overpull at 2,242 m and reamed through tight
pH @ Deg C		8.50 @ 40	8.90 @ 40	9.00 @ 40				10.00	spot. Pumped 40 bbl high viscosity sweep.
ALK Mud	Pm	0.15	0.15	0.20					Drilled to 2,263 m. Flowline plugged with coal.
ALK Filt	Pf/Mf	0.20/1.15	0.20/1.15	0.30/2.00					Stopped drilling and unplugged.Pumped 10 bbls
Chlorides	mg/l	48,000	48,000	48,000					1.9 ppg pill at 2,277 m and circulated out.
Tot. Hardness	mg/l	200	200	200					Continued drilling to 2,286 at midnight.
LGS/HGS	% by Vol	4.4/1.8	2.3/2.8	0.9/3.2					
LGS/HGS	ppb	39.74/26.90	21.10/41.66	8.16/47.22					Treatments and Observations (cont'd)
ASG	SG	3.072	3.480	3.851					Cuttings still generally consolidated and
Additional Properties									inhibited. As per yesterday marginal signs of
KCL %	% by vol	9.5	9.0	9.0					delayed cuttings transport to surface. Continued
Potassium Ion	mg/l	55,000	50,000	50,000					presence of large coal peices seen at shakers.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
KCl/Polymer	bbl		1.0	1.0		
potassium chloride	1000 kg bag	28		6	22	$2,648.76
PAC-L	25 kg bag	84		20	64	$1,637.40
EZ-MUD	25 kg pail	21		8	13	$686.64
BARAZAN D PLUS	25 kg bag	82		4	78	$608.96
ALDACIDE G	25 l can	19			19	
BARABLOK	50 lb bag	50			50	
BARA-DEFOAM W300	5 gal can	6			6	
barite	1000 kg bulk	133.000			133.000	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	10			10	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	10			10	
guar gum	25 kg bag	5			5	
Kwikseal Fine	40 lb bag	79			79	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
potassium hydroxide	25 kg bag	131		11	120	$494.78
soda ash	25 kg bag	55			55	
sodium bicarbonate	25 kg bag	35			35	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300	10 280 255	24.0
VSM-300	10 280	24.0
VSM-300	10 280	24.0
VSM-300	10 255 280	

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	24.0
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	
Total	24.0
Rotating	24.0
ROP	6.9
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1317.4	Base		Fluid Dumped	
Pipe Cap	100.5	Drill Water	200.6	Transferred	
Active Pits	444.0	Dewatering		SCE	-72.8
Total Hole	1552.5	Sea Water		Evaporation	
Total Circ	1861.9	Whole Mud		Trips	
Reserve	1386.0	Barite		Other	-40.0
Prev Vol	3270.9	Chemicals	23.7	Total Surface	
Net Change	111.6	Other		Downhole	
Total Vol	3382.5	Total	224.4	Total Losses	-112.8

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$6,076.54	Total Daily Cost	$8,576.54
Cumulative Products Cost	$211,272.68	Total Cumulative Cost	$272,522.68

Baroid Representatives Eugene Edwards Brad Jackson
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Baroid Fluid Services

Report No 019

Daily Drilling Fluid Report

Date 03/01/2008	Depth 2,313.0 m		
Spud Date 02/14/2008	Rig Activity Wire Line logs		
Operator Apache	Report For Shaugn Corless/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	1.0	m
ECD @ Csg Shoe	1.210	SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Motor	9.625	0.000	1.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000 @		135.0
13.375 @		857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		Hyd 1	2	3	4	Targets		Program	
Source		Pit # 6	Pit # 6						
Time		20:00	8:30						
Depth	m	2,313	2,313						
FL Temp	Deg C		43						
Density @ Deg C	SG	1.210 @ 30	1.210 @ 40			X	X	1.140	1.170
FV @ Deg C	sec/qt	54 @ 30	50 @ 40						
PV @ Deg C	cP	20 @ 49	18 @ 49						
YP	lbs/100 ft2	31	32					25	60
GELS	lbs/100 ft2	14/20/-	12/18/22					12/-/-	20/-/-
600/300		71.0/51.0	68.0/50.0						
200/100		42.0/33.0	41.0/32.0						
6/3		14.0/12.0	13.0/10.0						
API Filt	ml/30 min	4.8	5.0					3.0	5.0
HTHP @ Deg C	ml/30 min	12.8 @ 149	14.0 @ 149					12.0	15.0
Cake API/HTHP	32nd in	1/-	1/1						
Corr Solid	% by Vol	5.9	5.1						
NAP/Water	% by Vol	-/90.0	-/91.0						
Sand	% by vol	0.70	0.80						
MBT	ppb Eq.	2.5	2.0						15.0
pH @ Deg C		9.20 @ 40	8.70 @ 40						10.00
ALK Mud	Pm	0.20							
ALK Filt	Pf/Mf	0.25/0.90	0.16/1.25						
Chlorides	mg/l	51,000	49,000						
Tot. Hardness	mg/l	160	240						
LGS/HGS	% by Vol	2.5/3.4	0.7/4.4						
LGS/HGS	ppb	23.00/50.24	6.03/64.78						
ASG	SG	3.520	3.991						
Additional Properties									
KCL %	% by vol	9.5	10.0						
Potassium Ion	mg/l	52,000	53,000						

Fluid Treatments

Fluid Type KCl/Polymer

Added 2 ppb Barablock to active system. Ran Gumbo catcher. Dumped sandtrap. Pumped 1.9 SG pill at 2,300 m with considerable amount of additional cuttings observed at shakers (>100%)

Rig Activity

Continued drilling ahead to 2,313 m as per DD instructions. Low ROP of 1-10 m/hour. Circulated hole clean. Flowcheck and POOH wet. Backreamed at 3ft/min for logging from 2,270 m to 2,210 m. COntinued POOH wet from 2,210 m to 2,186 m. Tight spot 30-40k drag up. Backreamed 2,186 m to 2,041 m. Pumped 10 bbl hivis/weight pill and continued to backreamfrom 2,041 m to 1,980 m. Tight spots at 2,186 m, 2,182 m, 2,177 m, 2,148 m and 2,115 m. Backreamed and logged at 7' minute from 1,980 m to 1,780 m. Pumped slug. POOH and racked back BHA. Prepare to wireline log.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
barite	1000 kg bulk	133.000		20.000	113.000	$9,497.60
BARAZAN D PLUS	25 kg bag	78		43	35	$6,546.32
potassium chloride	1000 kg bag	22		14	8	$6,180.44
PAC-L	25 kg bag	64		24	40	$1,964.88
CLAYSEAL PLUS	216 kg drum	10		2	8	$1,913.28
BARA-DEFOAM W300	5 gal can	6		3	3	$1,850.64
potassium hydroxide	25 kg bag	120		27	93	$1,214.46
BARABLOK	50 lb bag	50		20	30	$607.80
Circal 60/16	1200 kg bag	10		1	9	$366.67
guar gum	25 kg bag	5		1	4	$84.93
soda ash	25 kg bag	55		3	52	$39.75
ALDACIDE G	25 l can	19			19	
BAROFIBRE FINE	25 lb bag		50		50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
EZ SPOT	55 gal drum		8		8	
EZ-MUD	25 kg pail	13			13	
Kwikseal Fine	40 lb bag	79			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk		48.000		48.000	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack		60		60	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	5.5
Circulating	1.0
Trips	4.5
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	13.0
Total	24.0
Rotating	5.5
ROP	4.9
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	0.9	Base		Fluid Dumped	
Pipe Cap		Drill Water	0.1	Transferred	
Active Pits	430.0	Dewatering		SCE	-174.7
Total Hole	1696.4	Sea Water		Evaporation	
Total Circ	430.9	Whole Mud		Trips	
Reserve	1173.0	Barite	30.0	Other	
Prev Vol	3382.5	Chemicals	62.5	Total Surface	
Net Change	-83.1	Other		Downhole	-1.0
Total Vol	3299.4	Total	92.6	Total Losses	-175.7

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$30,266.77	Total Daily Cost	$32,766.77
Cumulative Products Cost	$241,539.45	Total Cumulative Cost	$305,289.45

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 020

Daily Drilling Fluid Report

Date 03/02/2008	Depth 2,313.0 m		
Spud Date 02/14/2008	Rig Activity RIH		
Operator Apache	Report For Shaugn Corless/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	848.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	499.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 6	Pit # 6						Fluid Type KCl/Polymer
Time		10:00	23:00						New mud built: 0.3 bbls
Depth	m	2,313	2,313						Total mud built: 4,713.4 bbbls.
FL Temp	Deg C								
Density @ Deg C	SG	1.200 @ 27	1.210			X X	1.140	1.170	Prepared 50 bbl 4ppb Barazan-D high viscosity sweep.
FV @ Deg C	sec/qt	54 @ 27	65						
PV @ Deg C	cP	17 @ 49	17 @ 49						
YP	lbs/100 ft2	33	35				25	60	
GELS	lbs/100 ft2	12/17/21	14/19/-				12/-/-	20/-/-	
600/300		67.0/50.0	69.0/52.0						
200/100		41.0/31.0	42.0/32.0						
6/3		12.0/9.0	13.0/11.0						
API Filt	ml/30 min	5.0	4.6				3.0	5.0	
HTHP @ Deg C	ml/30 min	14.0 @ 149	13.6 @ 149				12.0	15.0	
Cake API/HTHP	32nd in	1/1	1/-						
Corr Solid	% by Vol	5.1	6.1						
NAP/Water	% by Vol	-/91.0	-/90.0						
Sand	% by vol	0.70	0.80						
MBT	ppb Eq.	2.0	2.5					15.0	Rig Activity
pH @ Deg C		8.60 @ 27	9.50 @ 27					10.00	Rigged up Schlumberger wireline. RIH to 1,393 m and tool hung up. POOH and logged on the way to surface. Broke out and laid out toolstring. Rigged up new toolstring. RIH with Pex logging tool. Unable to pass 1,390 m. Logged out of hole. Laid out toolstring. Picked up BHA and RIH. Made up R.A source and RIH to midnight.
ALK Mud	Pm		0.20						
ALK Filt	Pf/Mf	0.15/1.22	0.15/0.70						
Chlorides	mg/l	49,000	49,000						
Tot. Hardness	mg/l	240	160						
LGS/HGS	% by Vol	1.3/3.8	2.7/3.4						
LGS/HGS	ppb	11.72/55.57	24.67/50.01						
ASG	SG	3.793	3.490						
Additional Properties									
KCL %	% by vol	10.0	9.0						
Potassium Ion	mg/l	52,000	48,000						

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
BARAZAN D PLUS	25 kg bag	35		3	32	$456.72
ALDACIDE G	25 l can	19			19	
BARABLOK	50 lb bag	30			30	
BARA-DEFOAM W300	5 gal can	3			3	
barite	1000 kg bulk	113.000			113.000	
BAROFIBRE FINE	25 lb bag	50			50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	9			9	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	8			8	
EZ SPOT	55 gal drum	8			8	
EZ-MUD	25 kg pail	13			13	
guar gum	25 kg bag	4			4	
Kwikseal Fine	40 lb bag	39			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk	48.000			48.000	
PAC-L	25 kg bag	40			40	
potassium chloride	1000 kg bag	8	20		28	
potassium hydroxide	25 kg bag	93			93	
soda ash	25 kg bag	52			52	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack	60			60	

Daily Products Cost	$456.72	Total Daily Cost	$2,956.72
Cumulative Products Cost	$241,996.17	Total Cumulative Cost	$308,246.17

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	6.0
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	18.0
Dir Work	
Repair	
Other	
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	410.9	Base		Fluid Dumped	
Pipe Cap	36.4	Drill Water		Transferred	
Active Pits	406.3	Dewatering		SCE	-14.7
Total Hole	1639.7	Sea Water		Evaporation	
Total Circ	853.6	Whole Mud		Trips	
Reserve	1239.0	Barite		Other	
Prev Vol	3299.4	Chemicals	0.3	Total Surface	
Net Change	-14.4	Other		Downhole	
Total Vol	3285.0	Total	0.3	Total Losses	-14.7

Fluid Types | Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 021

Daily Drilling Fluid Report

Date 03/03/2008		Depth 2,313.0 m	
Spud Date 02/14/2008		Rig Activity Tripping	
Operator Apache	Report For Shaugn Corless/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	893.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	544.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			
Total GPM	AV, Riser	Circ Press psi	
Total Circ Time	AV min DP	Tot Pres Loss	
BU Time , min	AV max DC	Press Drop DP	
Total Strokes	BU Strokes	Press Drop An	

Properties		1	2	3	4	Targets	Program	
Source		Flow Line	Pit # 6					
Time		12:00	20:00					
Depth	m	2,313	2,313					
FL Temp	Deg C		59					
Density @ Deg C	SG	1.235	1.240			X X	1.140	1.170
FV @ Deg C	sec/qt	57	61					
PV @ Deg C	cP	16 @ 49	19 @ 49					
YP	lbs/100 ft2	36	32				25	60
GELS	lbs/100 ft2	13/18/-	12/19/-				12/-/-	20/-/-
600/300		68.0/52.0	70.0/51.0					
200/100		41.0/31.0	43.0/33.0					
6/3		12.0/10.0	13.0/12.0					
API Filt	ml/30 min	5.0	4.0				3.0	5.0
HTHP @ Deg C	ml/30 min	13.8 @ 149	12.8 @ 149				12.0	15.0
Cake API/HTHP	32nd in	1/1						
Corr Solid	% by Vol	6.1	7.0					
NAP/Water	% by Vol	-/90.0	-/89.0					
Sand	% by vol	0.80	0.70					
MBT	ppb Eq.	2.0	2.5					15.0
pH @ Deg C		9.00 @ 27	8.50 @ 27					10.00
ALK Mud	Pm	0.20	0.15					
ALK Filt	Pf/Mf	0.15/0.80	0.05/0.60					
Chlorides	mg/l	49,000	51,000					
Tot. Hardness	mg/l	200	120					
LGS/HGS	% by Vol	1.1/5.0	2.7/4.3					
LGS/HGS	ppb	10.43/73.01	24.58/63.08					
ASG	SG	3.900	3.582					
Additional Properties								
KCL %	% by vol	10.0	9.0					
Potassium Ion	mg/l	52,000	48,000					

Fluid Treatments

Fluid Type KCl/Polymer

New Mud Built: 26.1 bbls

Total Mud Built: 4,739.5 bbls

Treated active system with 0.1 ppb Caustic Potash to maintain fluid alkalinity. High viscosity sweeps made with 4 ppb Barazan-D. Barite for 1.9 s.g sweeps.

Hi-weight sweeps bought back 10-50% increase in coal cavings to surface.

Rig Activity

Continued to RIH. Tight spots at 1,380 - 1,384 m. and 1,394 to 1,396 m. Tight spot at 1,850 m. Freed pipe with 100k overpull. Pumped 30 bbls high viscosity weighted piull and circulated bottoms up. (Large amount of coal seen at surface) Continued to RIH to 2,309 m and washed to 2,309 m. 4m of fill. Washed to 2,313 m.Pumped 15 bbl weighted sweep at 1.9 s.g. Logged out of hole to 1,740 m. Pumped 1.9 s.g weighted sweep and circulated out. Flow check and POOH wet to 1,440 m. Pumped and displaced slug. POOH to 1,057 m at midnight.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
barite	1000 kg bulk	113.000		17.000	96.000	$8,072.96
potassium hydroxide	25 kg bag	93		6	87	$269.88
ALDACIDE G	25 l can	19			19	
BARABLOK	50 lb bag	30			30	
BARA-DEFOAM W300	5 gal can	3			3	
BARAZAN D PLUS	25 kg bag	32			32	
BAROFIBRE FINE	25 lb bag	50			50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	9			9	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	8			8	
EZ SPOT	55 gal drum	8			8	
EZ-MUD	25 kg pail	13			13	
guar gum	25 kg bag	4			4	
Kwikseal Fine	40 lb bag	39			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk	48.000			48.000	
PAC-L	25 kg bag	40			40	
potassium chloride	1000 kg bag	28			28	
soda ash	25 kg bag	52			52	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack	60			60	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	13.5
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	10.5
Dir Work	
Repair	
Other	
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	440.1	Base		Fluid Dumped	
Pipe Cap	38.7	Drill Water		Transferred	
Active Pits	496.0	Dewatering		SCE	-85.7
Total Hole	1637.4	Sea Water		Evaporation	
Total Circ	974.8	Whole Mud		Trips	
Reserve	1092.0	Barite	25.5	Other	
Prev Vol	3285.0	Chemicals	0.6	Total Surface	
Net Change	-59.6	Other		Downhole	
Total Vol	3225.4	Total	26.1	Total Losses	-85.7

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$8,342.84	Total Daily Cost	$10,842.84
Cumulative Products Cost	$250,339.01	Total Cumulative Cost	$319,089.01

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 022

Daily Drilling Fluid Report

Date 03/04/2008		Depth 2,313.0 m	
Spud Date 02/14/2008		Rig Activity Wire Line logs	
Operator Apache	Report For Shaugn Corless/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	1.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Motor	9.625	0.000	1.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 6							Fluid Type KCl/Polymer
Time		10:00							Continued to prepare 800 bbls 15% KCl brine for next well.
Depth	m	2,313							
FL Temp	Deg C								
Density @ Deg C	SG	1.230				X	1.140	1.170	
FV @ Deg C	sec/qt	59							
PV @ Deg C	cP	19 @ 49							
YP	lbs/100 ft2	31					25	60	
GELS	lbs/100 ft2	13/19/-					12/-/-	20/-/-	
600/300		69.0/50.0							
200/100		43.0/33.0							
6/3		12.0/10.0							
API Filt	ml/30 min	4.6					3.0	5.0	
HTHP @ Deg C	ml/30 min	13.0 @ 149					12.0	15.0	
Cake API/HTHP	32nd in	1/1							
Corr Solid	% by Vol	6.0							
NAP/Water	% by Vol	-/90.0							
Sand	% by vol	0.65							
MBT	ppb Eq.	2.5						15.0	Rig Activity
pH @ Deg C		8.50 @ 27						10.00	Continued to pull out of hole. Rigged down BHA. Rigged up Schlumberger MDT wireline. RIH to 1,499 m - Hung Up. POOH and laid out. RIH CST on wireline. Unable to pass 1,500 m. POOH wireline at midnight.
ALK Mud	Pm	0.15							
ALK Filt	Pf/Mf	0.05/0.60							
Chlorides	mg/l	50,000							
Tot. Hardness	mg/l	120							
LGS/HGS	% by Vol	1.4/4.7							
LGS/HGS	ppb	12.45/68.53							
ASG	SG	3.837							
Additional Properties									
KCL %	% by vol	10.0							
Potassium Ion	mg/l	50,000							

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
potassium chloride	1000 kg bag	28		24	4	$10,595.04
ALDACIDE G	25 l can	19			19	
BARABLOK	50 lb bag	30			30	
BARA-DEFOAM W300	5 gal can	3			3	
BARAZAN D PLUS	25 kg bag	32			32	
barite	1000 kg bulk	96.000			96.000	
BAROFIBRE FINE	25 lb bag	50			50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	9			9	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	8			8	
EZ SPOT	55 gal drum	8			8	
EZ-MUD	25 kg pail	13			13	
guar gum	25 kg bag	4			4	
Kwikseal Fine	40 lb bag	39			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk	48.000			48.000	
PAC-L	25 kg bag	40			40	
potassium hydroxide	25 kg bag	87			87	
soda ash	25 kg bag	52			52	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack	60			60	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	8.0
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	16.0
Dir Work	
Repair	
Other	
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	0.9	Base		Fluid Dumped	
Pipe Cap		Drill Water		Transferred	
Active Pits	390.0	Dewatering		SCE	-9.9
Total Hole	1696.4	Sea Water		Evaporation	
Total Circ	390.9	Whole Mud		Trips	
Reserve	1129.0	Barite		Other	
Prev Vol	3225.4	Chemicals		Total Surface	
Net Change	-9.9	Other		Downhole	
Total Vol	3215.4	Total		Total Losses	-9.9

Fluid Types	Vol bbl
KCL Brine	811.0

Deviation Information

Survey MD	1,506.0 m
Survey TVD	1,499.6 m
Angle	21.46 Deg
Direction	337
Horiz Displ.	48.6 m

Daily Products Cost	$10,595.04	Total Daily Cost	$13,095.04
Cumulative Products Cost	$260,934.05	Total Cumulative Cost	$332,184.05

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 023

Daily Drilling Fluid Report

Date 03/05/2008	Depth 2,313.0 m		
Spud Date 02/14/2008	Rig Activity Wire Line logs		
Operator Apache	Report For Richard Reading/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	2,309.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,960.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM		AV, Riser	Circ Press psi
Total Circ Time		AV min DP	Tot Pres Loss
BU Time , min		AV max DC	Press Drop DP
Total Strokes		BU Strokes	Press Drop An

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Pit # 6							Fluid Type KCl/Polymer
Time		9:45							Viscosified mud in Pit 4 with addition of Barazan-D for use in Plug and Abandon program. Transferred 800 bbls KCl brine to vessel.
Depth	m	2,313							
FL Temp	Deg C								
Density @ Deg C	SG	1.230				X	1.140	1.170	
FV @ Deg C	sec/qt	52							
PV @ Deg C	cP	19 @ 49							
YP	lbs/100 ft2	30					25	60	
GELS	lbs/100 ft2	12/18/-					12/-/-	20/-/-	
600/300		68.0/49.0							
200/100		43.0/32.0							
6/3		12.0/10.0							
API Filt	ml/30 min	4.6					3.0	5.0	
HTHP @ Deg C	ml/30 min	13.0 @ 149					12.0	15.0	
Cake API/HTHP	32nd in	1/1							
Corr Solid	% by Vol	6.0							
NAP/Water	% by Vol	-/90.0							
Sand	% by vol	0.65							
MBT	ppb Eq.	2.5						15.0	Rig Activity
pH @ Deg C		8.50 @ 27						10.00	POOH with Schlumberger wireline to surface. Made up x-over BHA on 5.5" DP. RIH to 1,927 m. Tight spot. Made up top drive and washed to 1,957 m. Continued to RIH to 2,310 m. Made up top drive and circulated hole clean. at 1,100 gpm. Installed VSI toolstring and TIW V/V. RIH VSI toolstring and perform log as per program. POOH wireline. Rigged down Schlumberger wireline.
ALK Mud	Pm	0.15							
ALK Filt	Pf/Mf	0.05/0.60							
Chlorides	mg/l	50,000							
Tot. Hardness	mg/l	120							
LGS/HGS	% by Vol	1.4/4.7							
LGS/HGS	ppb	12.45/68.53							
ASG	SG	3.837							
Additional Properties									
KCL %	% by vol	0.0							
Potassium Ion	mg/l	0							

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
BARAZAN D PLUS	25 kg bag	32		3	29	$456.72
ALDACIDE G	25 l can	19			19	
BARABLOK	50 lb bag	30			30	
BARA-DEFOAM W300	5 gal can	3			3	
barite	1000 kg bulk	96.000			96.000	
BAROFIBRE FINE	25 lb bag	50			50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	9			9	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	8			8	
EZ SPOT	55 gal drum	8			8	
EZ-MUD	25 kg pail	13			13	
guar gum	25 kg bag	4			4	
Kwikseal Fine	40 lb bag	39			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk	48.000			48.000	
PAC-L	25 kg bag	40			40	
potassium chloride	1000 kg bag	4			4	
potassium hydroxide	25 kg bag	87			87	
soda ash	25 kg bag	52			52	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack	60			60	

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	24.0
Dir Work	
Repair	
Other	
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1451.7	Base		Fluid Dumped	
Pipe Cap	110.0	Drill Water		Transferred	
Active Pits		Dewatering		SCE	-87.5
Total Hole	1565.0	Sea Water		Evaporation	
Total Circ	1561.7	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	3215.4	Chemicals		Total Surface	
Net Change	-87.5	Other		Downhole	
Total Vol	1565.0	Total		Total Losses	-87.5

Fluid Types	Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$456.72	Total Daily Cost	$2,956.72
Cumulative Products Cost	$261,390.77	Total Cumulative Cost	$335,140.77

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 024

Daily Drilling Fluid Report

Date 03/06/2008		Depth 2,313.0 m	
Spud Date 02/14/2008		Rig Activity Plug and abandon	
Operator Apache	Report For Richard Reading/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	1.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Motor	9.625	0.000	1.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties		1	2	3	4	Targets	Program		Fluid Treatments
Source		Flow Line							Fluid Type KCl/Polymer
Time		23:59							Dumped 38bbls of cement contaminated mud, while reverse circulating @1150m.
Depth	m	2,312							No cement seen at surface while reversing @ 767m.
FL Temp	Deg C								
Density @ Deg C	SG	1.235				X	1.140	1.170	
FV @ Deg C	sec/qt	65							Pumped out mud from sand traps, dump and clean same.
PV @ Deg C	cP	19 @ 49							
YP	lbs/100 ft2	31					25	60	
GELS	lbs/100 ft2	13/21/-					12/-/-	20/-/-	Treated 1200 bbls, KCL / Polymer mud, with 0.375ppb Aldacide G prior to boat storage. (NB:$10,595.04 costs for KCL BB, used to build Brine for Coelacanth-1)
600/300		69.0/50.0							
200/100		41.0/29.0							
6/3		13.0/12.0							
API Filt	ml/30 min	5.0					3.0	5.0	
HTHP @ Deg C	ml/30 min	13.0 @ 149					12.0	15.0	
Cake API/HTHP	32nd in								
Corr Solid	% by Vol	7.2							
NAP/Water	% by Vol	-/89.0							
Sand	% by vol	0.50							
MBT	ppb Eq.	2.5						15.0	Rig Activity
pH @ Deg C		8.50 @ 27						10.00	POOH to 2,010m. Pumped 20 bbl slug. POOH to 1,330 m. Spotted 30 bbl hi-vis pill. Rigged up per cement job and cemented first plug. POOH to 1,150 m. Reverse circulated 2 x DP volume and spotted 202 bbls hi-vis pill. POOH to 887 m. Performed 2nd plug cement job as per program. POOH to 737 m. Reverse circulated 2 x DP volume. POOH to surface . Laid out X-Overs. RIH with OEDP. Pumped 3rd cement plug. Reversed circulated and displaced to seawater.
ALK Mud	Pm	0.10							
ALK Filt	Pf/Mf	0.05/0.70							
Chlorides	mg/l	48,000							
Tot. Hardness	mg/l	120							
LGS/HGS	% by Vol	3.3/3.9							
LGS/HGS	ppb	29.90/58.14							
ASG	SG	3.474							
Additional Properties									
KCL %	% by vol	0.0							
Potassium Ion	mg/l	0							

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
barite	1000 kg bulk	96.000		19.000	77.000	$9,022.72
ALDACIDE G	25 l can	19		8	11	$698.96
BARABLOK	50 lb bag	30			30	
BARA-DEFOAM W300	5 gal can	3			3	
BARAZAN D PLUS	25 kg bag	29			29	
BAROFIBRE FINE	25 lb bag	50			50	
bentonite	1000 kg bulk	20.800			20.800	
calcium chloride flake 77%	25 kg bag	94			94	
caustic soda	25 kg pail	98			98	
Circal 60/16	1200 kg bag	9			9	
Circal Y	1200 kg bag	11			11	
citric acid	25 kg bag	38			38	
CLAYSEAL PLUS	216 kg drum	8			8	
EZ SPOT	55 gal drum	8			8	
EZ-MUD	25 kg pail	13			13	
guar gum	25 kg bag	4			4	
Kwikseal Fine	40 lb bag	39			39	
lime	20 kg bag	41			41	
N-DRIL HT PLUS	50 lb bag	90			90	
NO-SULF	17 kg pail	48			48	
Omyacarb 5	25 kg bulk	48.000			48.000	
PAC-L	25 kg bag	40			40	
potassium chloride	1000 kg bag	4			4	
potassium hydroxide	25 kg bag	87			87	
soda ash	25 kg bag	52			52	
sodium bicarbonate	25 kg bag	35			35	
STEELSEAL	25 kg sack	60			60	

Daily Products Cost	$9,721.68	Total Daily Cost	$12,221.68
Cumulative Products Cost	$271,112.45	Total Cumulative Cost	$347,362.45

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	2.0
Trips	16.0
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	6.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	0.9	Base		Fluid Dumped	-349.3
Pipe Cap		Drill Water		Transferred	
Active Pits		Dewatering		SCE	
Total Hole	1696.4	Sea Water		Evaporation	
Total Circ	0.9	Whole Mud		Trips	
Reserve	1112.0	Barite	28.5	Other	
Prev Vol	1565.0	Chemicals	1.3	Total Surface	
Net Change	-319.6	Other		Downhole	
Total Vol	2808.4	Total	29.7	Total Losses	-349.3

Fluid Types | Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

Baroid Fluid Services

Report No 025

Daily Drilling Fluid Report

Date 03/07/2008		Depth 2,313.0 m	
Spud Date 02/14/2008		Rig Activity Rig up and rig down	
Operator Apache	Report For Richard Reading/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	2,313.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,964.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM		AV, Riser	Circ Press psi
Total Circ Time		AV min DP	Tot Pres Loss
BU Time , min		AV max DC	Press Drop DP
Total Strokes		BU Strokes	Press Drop An

Properties		1	2	3	4	Targets	Program
Source							
Time							
Depth	m						
FL Temp	Deg C						
Density @ Deg C	SG						
FV @ Deg C	sec/qt						
PV @ Deg C	cP						
YP	lbs/100 ft2						
GELS	lbs/100 ft2						
600/300							
200/100							
6/3							
API Filt	ml/30 min						
HTHP @ Deg C	ml/30 min						
Cake API/HTHP	32nd in						
Corr Solid	% by Vol						
NAP/Water	% by Vol						
Sand	% by vol						
MBT	ppb Eq.						
pH @ Deg C							
ALK Mud	Pm						
ALK Filt	Pf/Mf						
Chlorides	mg/l						
Tot. Hardness	mg/l						
LGS/HGS	% by Vol						
LGS/HGS	ppb						
ASG	SG						
Additional Properties							

Fluid Treatments

Fluid Type KCl/Polymer

Backload 1100bbls 10.2 ppg KCL Polymer mud.
To be used on Coelacanth 1.
Dump and clean pits.

Rig Activity

Cut casing, nipple down BOP's, retrieve well head.
Prepare for rig move, to Coelacanth-1.
Mud engineers sent off for rig move.

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00
ALDACIDE G	25 l can	11				
BARABLOK	50 lb bag	30				
BARA-DEFOAM W300	5 gal can	3				
BARAZAN D PLUS	25 kg bag	29				
barite	1000 kg bulk	77.000				
BAROFIBRE FINE	25 lb bag	50				
bentonite	1000 kg bulk	20.800				
calcium chloride flake 77%	25 kg bag	94				
caustic soda	25 kg pail	98				
Circal 60/16	1200 kg bag	9				
Circal Y	1200 kg bag	11				
citric acid	25 kg bag	38				
CLAYSEAL PLUS	216 kg drum	8				
EZ SPOT	55 gal drum	8				
EZ-MUD	25 kg pail	13				
guar gum	25 kg bag	4				
Kwikseal Fine	40 lb bag	39				
lime	20 kg bag	41				
N-DRIL HT PLUS	50 lb bag	90				
NO-SULF	17 kg pail	48				
Omyacarb 5	25 kg bulk	48.000				
PAC-L	25 kg bag	40				
potassium chloride	1000 kg bag	4				
potassium hydroxide	25 kg bag	87				
soda ash	25 kg bag	52				
sodium bicarbonate	25 kg bag	35				
STEELSEAL	25 kg sack	60				

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	24.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1454.5	Base		Fluid Dumped	
Pipe Cap	110.2	Drill Water		Transferred	-1100.0
Active Pits		Dewatering		SCE	-143.7
Total Hole	1564.7	Sea Water		Evaporation	
Total Circ	1564.7	Whole Mud		Trips	
Reserve		Barite		Other	
Prev Vol	2808.4	Chemicals		Total Surface	
Net Change	-1243.7	Other		Downhole	
Total Vol	1564.7	Total		Total Losses	-1243.7

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$271,112.45	Total Cumulative Cost	$349,862.45

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

HALLIBURTON | Fluid Systems

Baroid Fluid Services

Report No 026

Daily Drilling Fluid Report

Date 03/08/2008	Depth 2,313.0 m		
Spud Date 02/14/2008	Rig Activity rig released		
Operator Apache	Report For Richard Reading/Stefan Schmidt	Well Name Wasabi - 1	
Contractor Seadrill	Report For Michael Barry	Rig Name West Triton	Unit System Apache
Country Australia	State/Province/Region Victoria	Geographic Area/County Bass Strait	Field or Block Wasabi - 1 Vic-58P

Bit Information

Bit Size	12.250	in
Make/Type	HTC/MXL-1	
Jets	3x24	
TFA	1.325	sq-in
Jets Velocity		m/sec
Jet Impact Force		lbf
Bit HHSI		hhp/in2
Press Drop @ Bit		psi
Bit Depth	2,313.0	m
ECD @ Csg Shoe		SG
ECD @ Bit		SG

Drill String (in) / (m)

	OD	ID	Length
Drill Pipe	5.500	4.000	1,964.7
Drill Pipe	5.500	3.250	290.9
Drill Collar	8.250	2.750	47.4
Motor	9.625	0.000	10.0
Riser	19.120		66.0
Open Hole	16.000		1,456.0

in Casing m

OD	Set	MD
20.000	@	135.0
13.375	@	857.0

Circulation/Hydraulics Data

Model	Nat 14-P-220	Nat 14-P-220	Nat 14-P-220
Bore in	6.500	6.500	6.500
Strokes in	14.000	14.000	14.000
Eff(%)	97	97	97
bbl/strk	0.139	0.139	0.139
SPM	0	0	0
gpm|bbl/min			

Total GPM | AV, Riser | Circ Press psi
Total Circ Time | AV min DP | Tot Pres Loss
BU Time , min | AV max DC | Press Drop DP
Total Strokes | BU Strokes | Press Drop An

Properties

		1	2	3	4
Source					
Time					
Depth	m				
FL Temp	Deg C				
Density @ Deg C	SG				
FV @ Deg C	sec/qt				
PV @ Deg C	cP				
YP	lbs/100 ft2				
GELS	lbs/100 ft2				
600/300					
200/100					
6/3					
API Filt	ml/30 min				
HTHP @ Deg C	ml/30 min				
Cake API/HTHP	32nd in				
Corr Solid	% by Vol				
NAP/Water	% by Vol				
Sand	% by vol				
MBT	ppb Eq.				
pH @ Deg C					
ALK Mud	Pm				
ALK Filt	Pf/Mf				
Chlorides	mg/l				
Tot. Hardness	mg/l				
LGS/HGS	% by Vol				
LGS/HGS	ppb				
ASG	SG				

Targets | Program

Additional Properties

Fluid Treatments

Fluid Type KCl/Polymer

Rig Activity

Continued to rig down and prepare for rig move.
Rig released 1600 hrs

Product Name	Units	Start	Rec	Used	End	Cost
Drilling Fluids Engineer 2	day(s)			1		$1,250.00
Drilling Fluids Engineer	day(s)			1		$1,250.00

Solids Control Equipment

Shaker	Screens	Hrs
VSM-300		
VSM-300		
VSM-300		
VSM-300		

Hydrocyclone	Cones	Screens	Hrs
ATL-1600	16 4		
Vacu-Flo 1200 Degasser	0 0		

Centrifuge	Speed	Feed Rate	Hrs

Time

Drilling	
Circulating	
Trips	
Rig	
Surveys	
Fishing	
Run Casing	
Coring	
Reaming	
Testing	
Logging	
Dir Work	
Repair	
Other	24.0
Total	24.0
Rotating	
ROP	
Dil Rate	0.00

Fluid Volume Breakdown — KCl/Polymer

Active	bbl	Additions	bbl	Losses	bbl
Annulus	1454.5	Base		Fluid Dumped	
Pipe Cap	110.2	Drill Water		Transferred	
Active Pits		Dewatering		SCE	
Total Hole	1564.7	Sea Water		Evaporation	
Total Circ	1564.7	Whole Mud		Trips	
Reserve		Barite		Other	-3.2
Prev Vol	1564.7	Chemicals		Total Surface	
Net Change	-3.2	Other		Downhole	
Total Vol	1564.7	Total		Total Losses	-3.2

Fluid Types Vol bbl

Deviation Information

Survey MD	1,506.0	m
Survey TVD	1,499.6	m
Angle	21.46	Deg
Direction	337	
Horiz Displ.	48.6	m

Daily Products Cost	$0.00	Total Daily Cost	$2,500.00
Cumulative Products Cost	$271,112.45	Total Cumulative Cost	$352,362.45

Baroid Representatives	Eugene Edwards	Brad Jackson	
Office	90 Talinga Rd Melbourne	Telephone	61-03-9581-7555
Warehouse	c/o of Esso Australia Ltd	Telephone	61-3-56-881-445

AUSTRALIA

Casing Report

Well: WASABI-1				Report No.: 1	Report Date: 29/01/2008
Project: VIC-P58	Site: WASABI-1			Rig Name/No.:	
Event: OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008		Spud Date: 14/02/2008	
Active Datum: ROTARY TABLE @38.00m (above Mean Sea Level)		UWI:			

General Information

Assembly Name:	SURFACE	Tubing/Casing Size:	340.00(mm)	Hole MD/TVD:	0.00 (m) / 38.00 (m)	Hole Size:	406.00 (mm)
MD Top:	21.03(m)	Landed MD/TVD:	857.31 (m) / 862.00 (m)	Ground Elevation:	27.00 (m)	Liner Overlap:	
Weight in Slips:		Max Hole Angle:		Hours Circ:	5.00 (hr)	Vol Fluid Lost:	

Casing Flange/Wellhead

Manufacturer:	DRILQUIP	Model:		Size/Rating:	346.08 (mm)/68,948 (kPa)
Hanger Model:		Packoff Model:		Base Size/Rating:	346.00 (mm)/68,948 (kPa)

Integral Casing Detail

Component Type	Body ID (mm)	Item Description	Body OD (mm)	Weight (kg/m)	Grade	Drift (mm)	Connection	Connection OD		No Jts	Length (m)	MD TOP (m)	MU Torque (kN-m)	THD	Manufacturer	Model No.	Cond	Max OD (mm)	Min ID (mm)
								Bottom (mm)	Top (mm)										
Casing Shoe		Float Shoe	340.00	101.20	L-80	315.34				1	0.52	856.79		N				340.00	315.00
Float Collar		Float	340.00	101.20	L-80	315.34				1	0.59	856.20		N				340.00	315.00
Casing		Casing	340.00	101.20	L-80	315.34				57	732.40	123.80		N				340.00	315.00
Casing		Crossover Joint	340.00	101.20	L-80	315.34				1	5.70	118.10		N				340.00	315.00
Casing		406mm Casing	340.00	101.20	L-80	315.34				7	83.57	34.53		N				340.00	315.00
Casing		Crossover Jt #2	340.00	101.20	L-80	315.34				1	11.92	22.61		N				340.00	315.00
Pup Joint		Wellhead	346.07			315.00				1	1.58	21.03		N				346.00	315.00

Jewelry

Accessory Name	Accessory Group	Manufacturer	Num	Spacing (m)	Interval		Fastener Type	How Fixed	Attach Pattern
					MD Top (m)	MD Base (m)			

Comments

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 1	Report Date: 29/01/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date: 14/02/2008	
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

General Information

Job Type:	Primary	Job Desc:	Cement Surface	Cement Job Start Date/Time:	20/02/2008 12:00AM	Job End Date/Time:	20/02/2008 5:15AM	N2 Used: N	CO2: N Zone Isolated: N
Contractor:	HALLIBURTON			Arrival Date/Time:	29/01/2008	Foreman:			
Assembly:	SURFACE			Tubing/Casing Size:	340.00 (mm)	MD Landed:	857.31 (m)	Hole Size:	406.00 (mm)
Ground Temp:		Air Temp:		Seabed Temp:		Annulus Temp:		BHT:	

Pipe Movement

Pipe Movement:	NO MOVEMENT				
Rotating Date/Time (start-End):		Rotating RPM:		Rotating Torque (init/avg/max):	(kN-m)
Reciprocating Date/Time (start-End):		Recip Drag Up/Down:	- (tonne)	SPM:	Stroke Length:

Shoetrack Cement

Shoetrack Top MD:	Shoetrack Drill Date/Time:	Shoetrack Drill MD:

Fluid Name: **Lead Cement**

Fluids (1 of 1)

Fluid Type: Cement

Additives

Name	Type	Amount	Units	Concentration (Pa)	Concentration Unit
NF-6	Fluid Loss	20.00	gal	0.130	GAL/SK
CFR-3L	Friction Reducer			3.000	GAL/SK
HR6-L	RETARDER			1.000	GAL/SK

Fluid Tests

Thick Time (hr)	Thick Temp (°C)	Free Water (%)	Free Water Temp (°C)	Fluid Loss (ml/30 min)	Fluid Loss Temp (°C)	Fluid Loss Press (kPa)	Thick Press (kPa)	Comp Time 1 (min)	Comp Strength 1 (kPa)	Comp Temp 1 (°C)	Comp Time 2 (min)	Comp Strength 2 (kPa)	Comp Temp 2 (°C)
2.50	34						11,287	360	3447	39			

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	PRIM CMT 1ST STAGE	66.00	857.00	406.00	17,237/17,237	3407	17,237	5.00		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 1	Report Date: 29/01/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

Stages

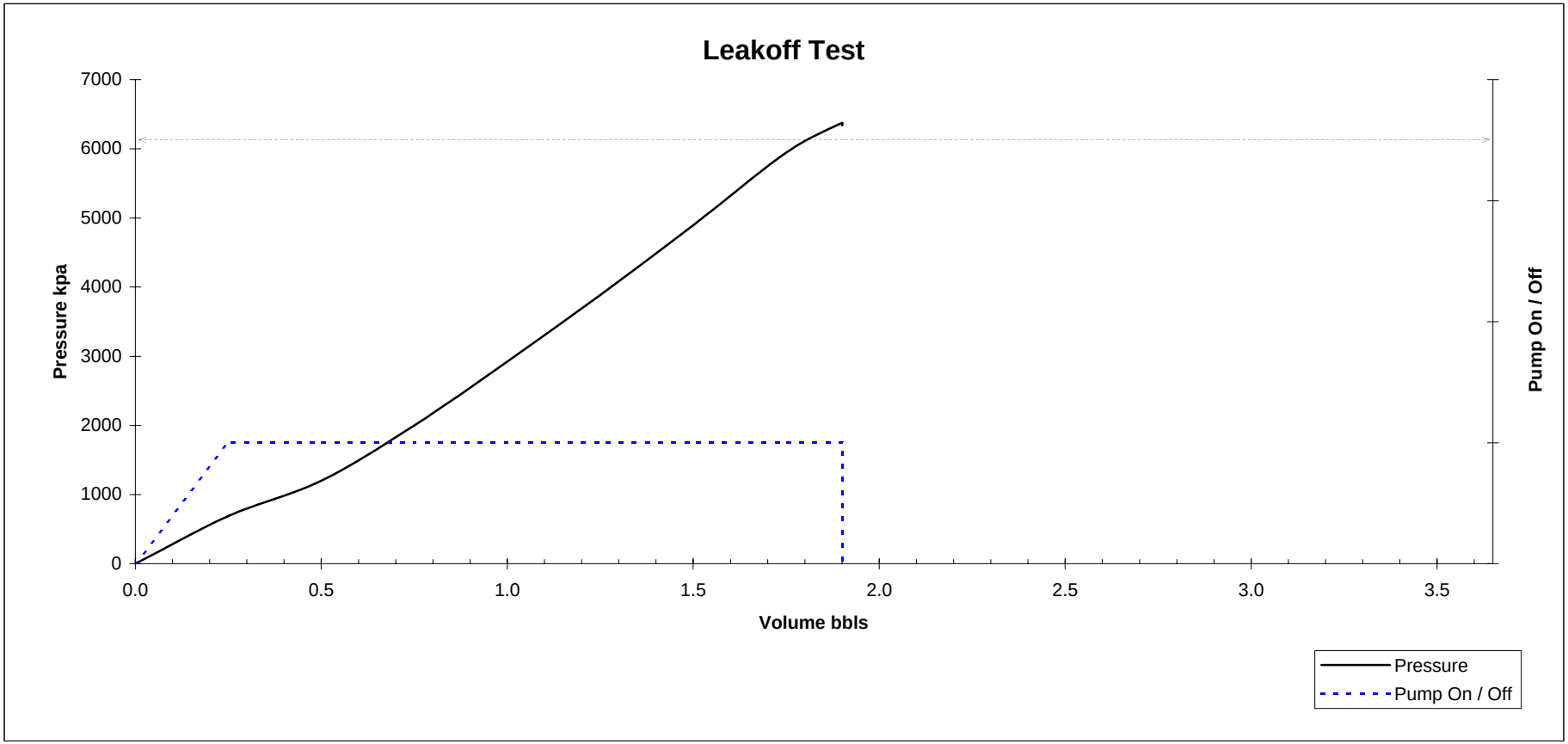
Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	PRIM CMT 1ST STAGE	66.00	857.00	406.00	17,237/17,237	3407	17,237	5.00		

Pumping Schedule

Fluid Pumped	Volume (m³)	Rate (L/min)	Slurry Top MD (m)	Slurry Base MD (m)	Disp Rate Final (L/min)	Disp Pressure Final (kPa)	Top Of Fluid (m)	Pumping Start Date/Time	Pumping End Date/Time	Operation	Shutdown Time (min)	Foam Job	Foam Gas Type	Foam Gas Vol Used (scm)
Lead Cement - Cement	106	954	66.00	857.00		3,447.38		20/05/2008 4:00AM	20/02/2008 5:15AM			N		

APACHE ENERGY LIMITED

Well	**Wasabi-1**	Casing Size	**340** mm	Leak Off Pressure from graph	**6200** kpa
Permit	**Vic P58**	Shoe TVD	**857** meters	Equivalent Mud Weight	**1.90** SG
Rig	**West Triton**	Test Fluid	**WBM**		
		Density	**1.15** SG		



FIT / LOT TEST RESULTS.

Australian Drilling Associates Pty Ltd ADA

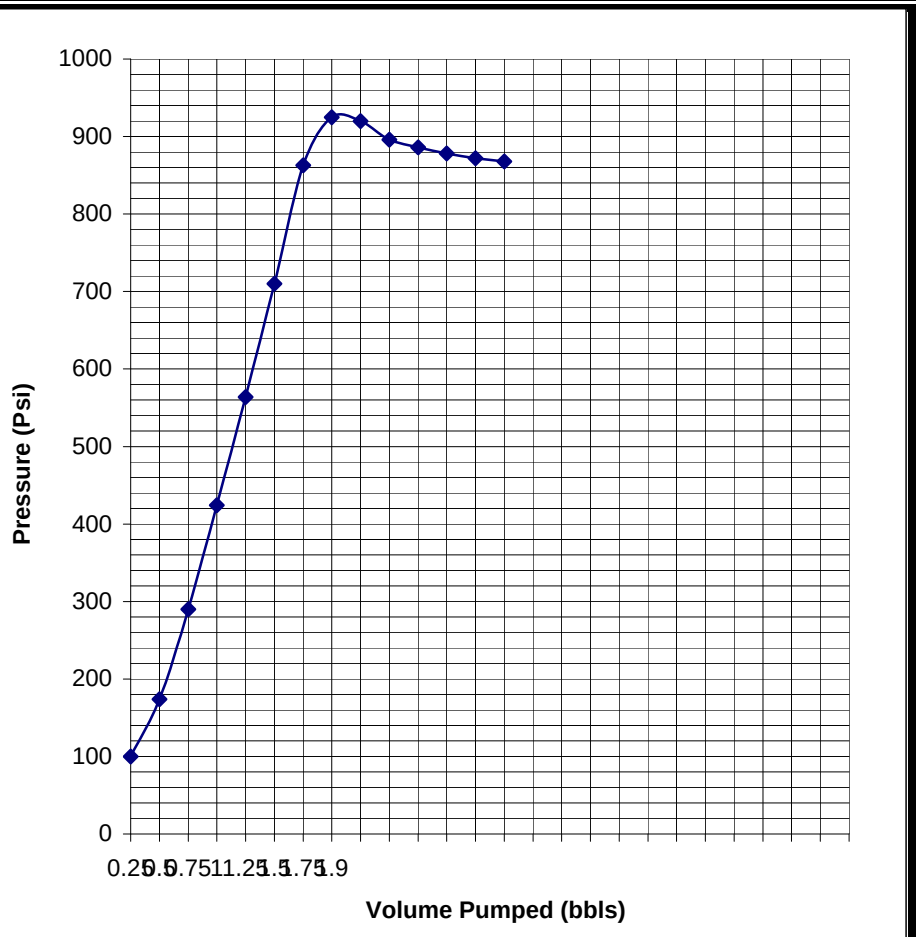
FIT / LOT DATA					
TEST DATE:	23nd Feb 2008	WELL #:	Wasabi-1	CLIENT:	Apache

CASING DATA				TEST MUD DATA	
CASING SIZE	CASING GRADE	SHOE TVD (M)	SHOE MD (M)	WEIGHT (PPG)	VISCOSITY (SEC)
13 3/8	L80	857	857	9.6	75

INDICATE TYPE OF TEST:	FIT:	☑	LOT:	☑

LEAK OFF OR FIT TEST PRESSURE (PSI):	EQUIVALENT MUD WEIGHT (PPG):	MAX. MUD WEIGHT (PPG):	VOLUME PUMPED (BBLS):	VOLUME RETURNED (BBLS):
925	6.33	15.93	2	1.5

SURFACE PRESSURE (PSI):	VOLUME PUMPED (BBLS):
100	0.25
174	0.5
290	0.75
424	1
564	1.25
710	1.5
863	1.75
925	1.9
920	
896	
886	
878	
872	
868	



PRESENT DAY INFO.				
DATE:	DEPTH (M):		MUD:	
	MD:	TVD:	WEIGHT (PPG):	VISCOSITY (SEC):
23/02/2008	857	857	9.6	75

MAASP = 925

COMMENTS:	

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 2	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

General Information

Job Type:	Plug	Job Desc:	Abandonment Plug #1	Cement Job Start Date/Time:	6/03/2008 6:30AM	Job End Date/Time:	6/03/2008 9:00AM	N2 Used: N CO2: N	Zone Isolated: N
Contractor:	HALLIBURTON			Arrival Date/Time:		Foreman:			
Assembly:	SURFACE			Tubing/Casing Size:	340.00 (mm)	MD Landed:	857.31 (m)	Hole Size:	406.00 (mm)
Ground Temp:		Air Temp:		Seabed Temp:		Annulus Temp:		BHT:	

Pipe Movement

Pipe Movement:

Rotating Date/Time (start-End):

Rotating RPM:

Rotating Torque (init/avg/max): (kN-m)

Reciprocating Date/Time (start-End):

Recip Drag Up/Down: - (tonne)

SPM:

Stroke Length:

Plug Detail

Plug Type:	ABANDONMENT	Plug MD Top:	1,210.00 (m)	Plug MD Base:	1,270.00 (m)	Drilled Out:	Drilled Out Date:
Pipe Pull Rate:	3 (m/s)			Pipe Pulled Wet:		WOC Time:	

Plug Status

Stage No.	Top (m)	Base (m)	Date	Status	Comments
1					

Fluid Name: **Plug**

Fluids (1 of 1)

Fluid Type: Cement

Additives

Name	Type	Amount	Units	Concentration (Pa)	Concentration Unit
CFR-3L	Friction Reducer	15.00	gal	3.000	GAL/SK
SCR-100L				0.500	GAL/SK
NF-6				0.125	GAL/SK

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	ABANDONMENT PLUG1	1,210.00	1,270.00	216.00	8274/8274	300,000	8274	1.00		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 2	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	ABANDONMENT PLUG1	1,210.00	1,270.00	216.00	8274/8274	300,000	8274	1.00		

Pumping Schedule

Fluid Pumped	Volume (m³)	Rate (L/min)	Slurry Top MD (m)	Slurry Base MD (m)	Disp Rate Final (L/min)	Disp Pressure Final (kPa)	Top Of Fluid (m)	Pumping Start Date/Time	Pumping End Date/Time	Operation	Shutdown Time (min)	Foam Job	Foam Gas Type	Foam Gas Vol Used (scm)
Plug - Cement	5	795	1,210.00	1,270.00		3,447.38						N		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 3	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

General Information

Job Type:	Plug	Job Desc:	Abandonment Plug #2	Cement Job Start Date/Time:	6/03/2008 11:30AM	Job End Date/Time:	6/03/2008 1:00PM	N2 Used: N CO2: N	Zone Isolated: N
Contractor:	HALLIBURTON			Arrival Date/Time:		Foreman:			
Assembly:	SURFACE			Tubing/Casing Size:	340.00 (mm)	MD Landed:	857.31 (m)	Hole Size:	406.00 (mm)
Ground Temp:		Air Temp:		Seabed Temp:		Annulus Temp:		BHT:	

Pipe Movement

Pipe Movement:

Rotating Date/Time (start-End):

Rotating RPM:

Rotating Torque (init/avg/max): (kN-m)

Reciprocating Date/Time (start-End):

Recip Drag Up/Down: - (tonne)

SPM:

Stroke Length:

Plug Detail

Plug Type:	ABANDONMENT	Plug MD Top:	797.00 (m)	Plug MD Base:	887.00 (m)	Drilled Out:	Drilled Out Date:
Pipe Pull Rate:	3 (m/s)			Pipe Pulled Wet:		WOC Time:	

Plug Status

Stage No.	Top (m)	Base (m)	Date	Status	Comments
1	797.00	887.00	28/01/2009	In Place	

Fluid Name: **Plug**

Fluids (1 of 1)

Fluid Type: Cement

Additives

Name	Type	Amount	Units	Concentration (Pa)	Concentration Unit
CFR-3L	Friction Reducer	15.00	gal	3.000	GAL/SK
NF-6				0.125	GAL/SK

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m^3)	Volume Lost (m^3)
1	ABANDONMENT PLUG	797.00	887.00	215.90	8274/8274	300,000	8274	1.00		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 3	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	ABANDONMENT PLUG	797.00	887.00	215.90	8274/8274	300,000	8274	1.00		

Pumping Schedule

Fluid Pumped	Volume (m³)	Rate (L/min)	Slurry Top MD (m)	Slurry Base MD (m)	Disp Rate Final (L/min)	Disp Pressure Final (kPa)	Top Of Fluid (m)	Pumping Start Date/Time	Pumping End Date/Time	Operation	Shutdown Time (min)	Foam Job	Foam Gas Type	Foam Gas Vol Used (scm)
Plug - Cement	5	795	797.00	887.00		3,447.38						N		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 4	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

General Information

Job Type:	Plug	Job Desc:	Abandonment Plug #3	Cement Job Start Date/Time:	6/03/2008 9:00PM	Job End Date/Time:	6/03/2008 10:30PM	N2 Used: N CO2: N	Zone Isolated: N
Contractor:	HALLIBURTON			Arrival Date/Time:		Foreman:			
Assembly:	SURFACE			Tubing/Casing Size:	340.00 (mm)	MD Landed:	857.31 (m)	Hole Size:	406.00 (mm)
Ground Temp:		Air Temp:		Seabed Temp:		Annulus Temp:		BHT:	

Pipe Movement

Pipe Movement:

Rotating Date/Time (start-End):		Rotating RPM:		Rotating Torque (init/avg/max):	(kN-m)
Reciprocating Date/Time (start-End):		Recip Drag Up/Down:	- (tonne)	SPM:	Stroke Length:

Plug Detail

Plug Type:	ABANDONMENT	Plug MD Top:	76.00 (m)	Plug MD Base:	121.00 (m)	Drilled Out:	Drilled Out Date:
Pipe Pull Rate:	3 (m/s)			Pipe Pulled Wet:		WOC Time:	

Plug Status

Stage No.	Top (m)	Base (m)	Date	Status	Comments
1	76.00	121.00	28/01/2009	In Place	

Fluid Name: **Plug**

Fluids (1 of 1)

Fluid Type: Cement

Additives

Name	Type	Amount	Units	Concentration (Pa)	Concentration Unit
CALC2	ACCELERATOR	15.00	gal	1.000	%BWOC
NF-6				0.125	GAL/SK

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m^3)	Volume Lost (m^3)
1	ABANDONMENT PLUG	76.00	121.00	457.20	8274/8274	300,000	8274	1.00		

AUSTRALIA

Cementing Report

Well:	WASABI-1			Report No.: 4	Report Date: 6/03/2008
Project:	VIC-P58	Site:	WASABI-1	Rig Name/No.:	WEST TRITON
Event:	OFFSHORE - ORIG DRLG	Start Date: 29/01/2008	End Date: 8/03/2008	Spud Date:	14/02/2008
Active Datum:	ROTARY TABLE @38.00m (above Mean Sea Level)	UWI:			

Stages

Stage No.	Type	MD Top (m)	MD Base (m)	Hole Size (mm)	Initial/Final Casing Pressure (kPa)	Circulate Flow Rate (L/min)	Circulate Press (kPa)	Circulate Prior (hr)	Vol Returns (m³)	Volume Lost (m³)
1	ABANDONMENT PLUG	76.00	121.00	457.20	8274/8274	300,000	8274	1.00		

Pumping Schedule

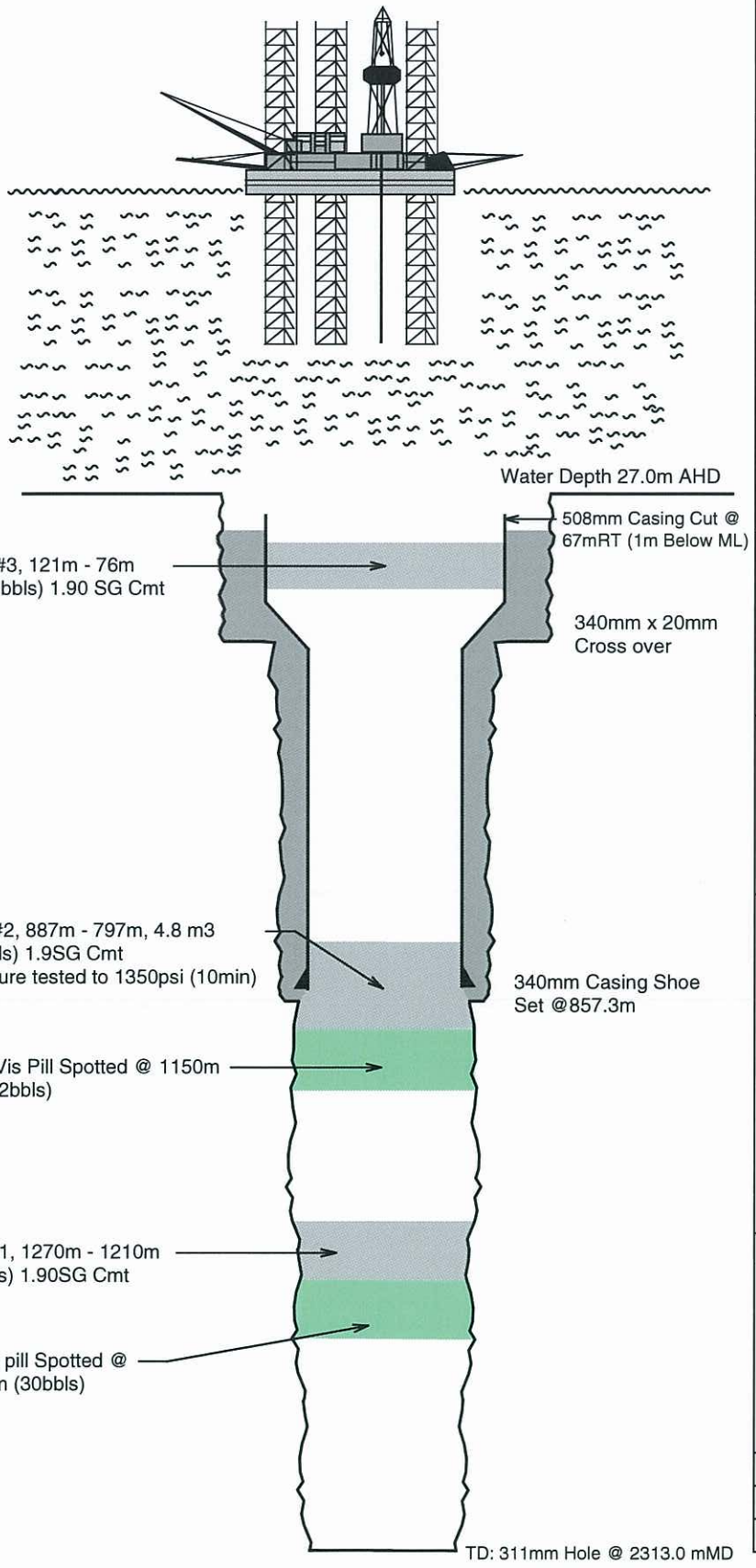
Fluid Pumped	Volume (m³)	Rate (L/min)	Slurry Top MD (m)	Slurry Base MD (m)	Disp Rate Final (L/min)	Disp Pressure Final (kPa)	Top Of Fluid (m)	Pumping Start Date/Time	Pumping End Date/Time	Operation	Shutdown Time (min)	Foam Job	Foam Gas Type	Foam Gas Vol Used (scm)
Plug - Cement	5	795	76.00	121.00		3,447.38						N		

Apache ENERGY

VIC-P58

WASABI-1

PLUG AND ABANDONMENT



LOCATION

Lat:	39° 29' 18.157" S
Long:	147° 15' 49.147" E

ELEVATIONS

RT to AHD Elevation:	39.00 m
Water Depth (AHD):	27.00m

WELL TRACK DETAILS

660 mm Hole to:	135.0 mRT
406mm Hole to:	862.0 mRT
340 mm Casing at:	857.3 mRT
311mm Hole to:	2313.0 mRT

ABANDONMENT PLUGS

P&A Plug No3:	121.0 - 76.0 mRT
P&A Plug No2:	887.0 - 797.0 mRT
P&A Plug No1:	1270.0 - 1210.0 mRT

ADDITIONAL INFORMATION

508mm Casing Cut at:: 67.0 mRT

Note: 508mm x 340mm Crossover used.

Hi-Vis Pil Set @ 1150m and 1330m

Approval Signature

Engineer: Casey Galloway

Engineer:

Drill Supervisor: Mitch Elkins

Drill Supervisor:

All depths MDRT	Scale: NOT TO SCALE
Drawn by: G.COOKS	Date: FERUARY 2009
File Name: Abandonment Wasabi-1.DGN	

REPORT FOR THE WEST TRITON RIG MOVE TO THE WASABI-1 LOCATION

FUGRO BTW JOB NO. – 07066

Client : AUSTRALIAN DRILLING ASSOCIATES PTY LTD

Date of Project : 20th January to 14th February 2008

0	Final			
Rev	Description	Checked	Approved	Date

CONTENTS

FIGURES

TABLES

APPENDICES

1.0 EXECUTIVE SUMMARY

Between the 20th January and 14th February 2008 Fugro BTW Limited (Fugro) provided equipment and personnel for the Jack Up Mobile Offshore Drilling Unit (MODU) West Triton, rig move from Western Port Bay to the Wasabi-1 location.

Surface positioning was achieved utilising Fugro's Starfix Differential GPS (DGPS) interfaced to Fugro's SEIS navigation software.

The final position derived from DGPS observations of the West Triton Drill stem at the Wasabi-1 location is:

Location Name	**West Triton : Drill stem**
MGA94, UTM Zone 55 S	
Easting	**522993.588 m**
Northing	**5739963.350 m**
GDA94-ITRF2008.50	
Latitude	**38º 29' 18.1573" S**
Longitude	**147º 15' 49.1465" E**
Rig Heading (True)	**119.76° (True)**
Height above Australian Height Datum (AHD)	
Rotary Table (RT)	**39.015m**

TABLE 2-1 : FINAL COORDINATES AND HEADING

This position is **14.86m** at a bearing of **179.88° True** FROM the proposed Wasabi-1 location.

All coordinates in this report are quoted in terms of Geocentric Datum of Australia 1994 (GDA94) and Map Grid of Australia 1994, UTM Zone 55 S (MGA94) projection unless otherwise stated.

2.0 INTRODUCTION

Fugro BTW Ltd (Fugro) was contracted by Australian Drilling Associates Pty Ltd (ADA) to provide navigation and positioning survey services onboard the Jack Up Rig (JUR) West Triton, during the rig move to the Wasabi-1 location in the Bass Strait, Australia.

A general location diagram is shown in Figure 1-1.

This report details the equipment used survey parameters adopted, procedures employed and the results achieved. A section on safety is included in Section 4.0 of this report.

2.1 *Scope of Work*

Personnel and equipment were provided on a 24 hour per day basis for:

- Installation of survey navigation equipment on *MODU West Triton* and Anchor Handling Vessels (AHVs) *MV Pacific Battler* and *MV Pacific Wrangler*.
- Final rig surface positioning at the Wasabi-1 location using DGPS observations.
- Final reporting of the positioning results.

2.2 *Sequence of Events*

On 20 January 2008, S. Armstrong and R. Cantlon departed New Plymouth for Melbourne. On 26 January the *MV Pacific Battler* navigation spread and telemetry system was mobilised and operational. On 28 January the *MV Pacific Wrangler* navigation spread and telemetry system was mobilised and operational. On 30 January S. Armstrong and R. Cantlon arrived via helicopter on *West Triton*. At 1000 on 3 February 2008 the navigation systems and telemetry links were confirmed as fully operational between the *West Triton* and AHVs. On 09 February the tow to Wasabi-1 commenced. The rig was positioned and the final fix undertaken on the 12 February 2008 after preloading and jacking operations had been completed. Fugro Personnel departed the rig on 13 February. On 14 February 2008 Fugro personnel arrived back in New Plymouth.

Further details of Fugro's involvement in the rig move are presented in the daily operations reports included in **Appendix A.**

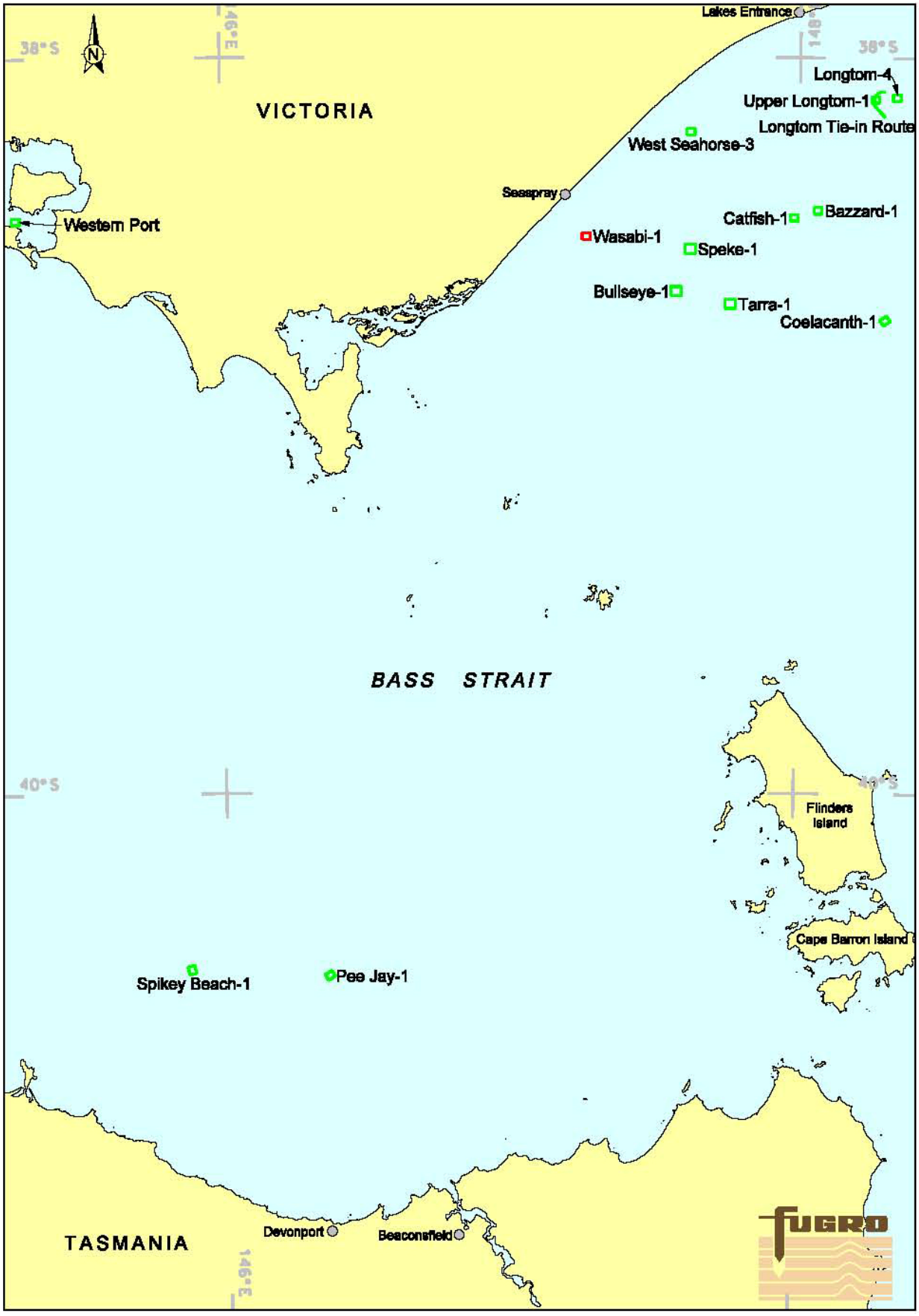


FIGURE 1 : WASABI-1 GENERAL LOCATION DIAGRAM

3.0 RESULTS

3.1 *Final Position*

The final position of the West Triton drill stem at Wasabi-1 was established by calculating the mean position from 1 hour of DGPS data logged between 0613 and 0713 (UTC) on the 12th February 2008. During this period, calculated drill stem coordinates from the primary positioning system were logged and the data used to calculate the final position.

Geocentric Datum of Australia 1994 geographical positions for the West Triton drill stem at the Wasabi-1 location are shown in Table 3-1.

Geocentric Datum of Australia 1994, ITRF2008.50			
Position	**Method**	**Latitude**	**Longitude**
West Triton Drill Stem	DGPS	38º 29' 18.1573" S	147º 15' 49.1465" E
Client Supplied Design for Wasabi-1		38º 29' 17.6755" S	147º 15' 49.1452" E

TABLE 3-1 : GEOGRAPHICAL POSITIONS

Map Grid of Australia 1994 grid coordinates (UTM Zone 55 S, CM 147 E) for the West Triton drill stem at the Wasabi-1 location are shown in Table 3-2.

Map Grid of Australia 1994, UTM Zone 55 S			
Position	**Method**	**Easting**	**Northing**
West Triton Drill Stem	DGPS	522993.588 m	5739963.350 m
Client Supplied Design for Wasabi-1		522993.600 m	5739978.200 m

TABLE 3-2 : GRID COORDINATES

The position is **14.86m** at a bearing of **179.88º** True (180.04° G) from the design location.

A copy of the original rig position field report is contained in Appendix B.

3.2 *Rig Heading*

Gyro calibration's were undertaken both prior to undertaking the rig move at Western Port Bay and on location at Wasabi-1 by sun azimuth to compute the C-O correction.

A copy of the Gyro calibration reports are shown in Appendix C.

The West Triton's heading at Wasabi-1 is shown in Table 3-3.

Description	**Method**	**True**	**Grid**
West Triton heading at Wasabi-1	GYRO	119.76°	119.92°
Client Supplied Design heading		120°	

TABLE 3-3 : FINAL HEADING

3.3 *Height*

The *West Triton* Rotary Table's (RT) height above Australian Height Datum (AHD) was determined from logging 7 hours of carrier phase GPS data between 2118 on 11 February 2008 (UTC) and 0438 on 12 February 2008 (UTC). During this period, antenna heights from the primary positioning system were logged and the data used to calculate the final height of the RT.

The *West Triton's* Rotary Table height is shown in Table 3-4.

Description	Method	Height above AHD
West Triton Rotary Table at Wasabi-1	Carrier Phase GPS	39.015m
Client Supplied Design height		>38m

TABLE 3-4 : FINAL HEIGHT

4.0 SAFETY

All work undertaken by Fugro personnel during the project was preformed within the guidelines of Fugro's Safety policy, as defined in Fugro's Safety Manual (SMS – P01) and Offshore Survey Practices (SMS SP26)

Fugro personnel worked within all project safety guidelines and plans adopted by Seadrill and ADA.

No safety incidents involving Fugro personnel were reported during the project.

Fugro personnel attended a vessel induction/ pre rig move meeting/ muster and abandonment drills whilst onboard.

5.0 GEODETIC PARAMETERS

5.1 *Datum and Projection*

All coordinates are referenced to the Geocentric Datum of Australia 1994 (GDA94) unless otherwise noted. The Global Positioning System (GPS) operates on the World Geodetic System 1984 (WGS84) datum. Fugro's Differential GPS Reference Stations are currently defined in the International Terrestrial Reference Frame 2000 (ITRF2000 Epoch 2008.50) datum. Due to the continual refinement of the WGS84 reference frame, for all cases, the transformation parameters indicate that the WGS84 and ITRF2000 reference frames are essentially identical.

Datum	**:**	**World Geodetic System 1984 (WGS84)**
Reference Spheroid	:	World Geodetic System 1984
Semi Major Axis	:	6378137.000m
Inverse flattening	:	298.257223563

Datum	**:**	**Geocentric Datum of Australia 1994 (GDA94)**
Reference Spheroid	:	Geodetic Reference System 1980 (GRS80)
Semi Major Axis	:	6378137.000m
Inverse flattening	:	298.257222101

The following seven parameter datum transformation was used in Fugro's software, to transform WGS84 (ITRF2000 Epoch 2008.50) coordinates to GDA94 coordinates. These parameters are calculated from the 14 parameter transformation defined by Geoscience Australia. Fugro follows the Coordinate Frame Rotation convention (as defined by UKOOA) for datum transformations.

Transformation Parameters from WGS84 (ITRF2000 Epoch 2008.50) to GDA94			
dX	+0.0174m	rX	+0.017554"
dY	-0.0484m	rY	+0.015065"
dZ	-0.1035m	rZ	+0.018157"
dS	+0.003362ppm		

TABLE 5-1 : TRANSFORMATION PARAMETERS

No transformation is needed in order to compute between WGS84 to GRS80.

Well grid coordinates are referenced to the Map Grid of Australia.

Grid	**:**	**Map Grid of Australia 1994 (MGA94)**
Projection	:	Universal Transverse Mercator (UTM)
Latitude of Origin	:	0°
Central Meridian	:	147° E (UTM Zone 55)
Central Scale Factor	:	0.9996
False Easting	:	500000m
False Northing	:	10000000m
Units	:	Metres

6.0 DIFFERENTIAL GPS REFERENCE STATIONS

Fugro's Differential GPS Reference Stations are currently defined in the ITRF2008.25 datum and shown in Table 6-1

Datum: ITRF 2000 Epoch 2008.25 Reference Ellipsoid: GRS80					
Station Name	**Station ID**	**Latitude**	**Longitude**	**Height (m)**	**Uplink**
Bathurst	336	33° 25′ 46.87757″	149° 34′ 01.97016″	756.670	OCSat / APSat
Brisbane	275	27° 28′ 38.48593″	153° 01′ 37.35303″	93.155	OCSat
Ceduna	355	32° 07′ 03.04719″	133° 41′ 22.85207″	7.280	OCSat
Cobar	316	31° 29′ 57.42962″	145° 50′ 20.34599″	270.176	OCSat / APSat
Melbourne	385	37° 47′ 59.26402″	144° 57′ 39.31144″	67.338	OCSat / APSat

TABLE 6-1 : GPS REFERENCE STATIONS

7.0 PROJECT COORDINATES AND TOLERANCES

Project target coordinates supplied by the client and surface tolerances for the West Triton Drill Stem at the Wasabi-1 location are shown in Table 7.1

Map Grid of Australia 1994, UTM Zone 55 S			
Location	**Easting (m)**	**Northing (m)**	**Tolerance**
West Triton at Wasabi-1	522993.60	5739978.20	±25 m

TABLE 7-1 : PROJECT DESIGN COORDINATES

8.0 PERSONNEL

8.1 *Personnel Listing*

S Armstrong	Party Chief / Surveyor	20th January 2007 – 14th February 2008
R Cantlon	Surveyor	20th January 2007 – 14th February 2008

9.0 VESSELS

The vessels used for towing the West Triton were the Anchor Handling vessels *MV Pacific Battler* and the *MV Pacific Wrangler*. Refer to Appendix D for the offset diagram of the West Triton.

10.0 CONCLUSIONS AND RECOMMENDATIONS

On reviewing the rig move and positioning operations undertaken by Fugro the West Triton was successfully positioned at the Wasabi-1 location.

11.0 DISTRIBUTION

Australian Drilling Associates Pty Ltd	: 1 electronic copy
Fugro BTW Ltd	: 1 paper copy : 1 electronic copy

APPENDIX A
Daily Operations Reports

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: NEW ZEALAND & AUSTRALIA	DATE: 20/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: N/A	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
GMT +13:00		
1230	1300	S. Armstrong & R. Cantlon travel from New Plymouth to Wellington
1600	2000	R. Cantlon departs Wellington for Melbourne
GMT +11:00		
1800		R. Cantlon collects rental car and checks into accommodation

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: RENDEZVOUS HOTEL, MELBOURNE

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-1

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: MELBOURNE	DATE: 21/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: N/A	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0430	0830	S. Armstrong arrives in Melbourne
1000	1130	S. Armstrong & R. Cantlon attend rig move meeting at ADA office, Melbourne
1600		Terrestrial survey equipment (Leica TCA 1105 + 2 circular prisms) is picked up from CR Kennedy
1730		Offshore cellular phone plus various consumable items are purchased
1830		Fugro personnel check into ADA supplied accommodation (Melbourne Airport Motel & Convention Centre)

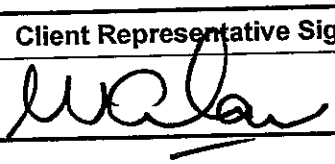
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: AIRPORT MOTEL, MELBOURNE

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-2

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: MELBOURNE	DATE: 22/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: N/A	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0800	1730	Fugro personnel attend Drill Well on Paper (DWOP) conference along with ADA, Seadrill and Third Party personnel
1830	2200	ADA organised dinner, drinks, evening entertainment

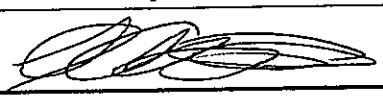
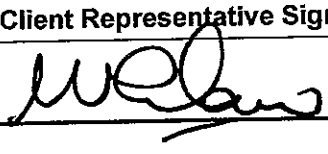
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: AIRPORT MOTEL, MELBOURNE

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-3

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: MELBOURNE	DATE: 23/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: N/A	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0800	1600	Fugro personnel attend Day two of DWOP conference
1630		Survey gear for Pacific Battler is collected from ABX logistics
1700		Consumables required for Pacific Battler survey spread are purchased

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: AIRPORT MOTEL, MELBOURNE

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-4

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: MELBOURNE & GEELONG	DATE: 24/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: PACIFIC BATTLER	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0830	0930	Fugro personnel check out of Melbourne Airport Motel & Conference Centre, depart Melbourne for Corio Quay, Geelong
1000	1015	Fugro personnel undertake induction at Corio Quay
1015	1800	Board Pacific Battler and commence mobilisation
1400	1630	R. Cantlon departs vessel to obtain various consumables, tools, etc
1800	1815	Survey gear operational, calibrations and housekeeping required, Fugro personnel depart vessel and check in to accommodation (Chifley Hotel)

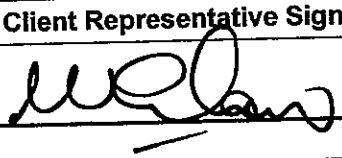
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: CHIFLEY HOTEL GEELONG

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-5

Approved by the Operations Manager – 12/05/04
Note – To ensure that this is the latest version check the Online BMS.

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PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: GEELONG	DATE: 25/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: PACIFIC BATTLER	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0730	0830	Fugro personnel depart Chifley Hotel, head to Bunnings Warehouse to purchase additional tools and consumables
0830	0930	Arrive at Corio Quay, search for survey control on wharf
0930	1300	Carry out GPS verification **(ΔE = 3.14m, ΔN = 2.55m)** and fluxgate compass calibration, **(C-O = 112.94°)**
1300	1400	Upon finishing all housekeeping and covering basic operation of Starfix with skipper, Fugro personnel depart Pacific Battler
1700		Survey gear for Pacific Wrangler and West Triton arrives at Corio Quay from New Plymouth via Melbourne, to collect in morning

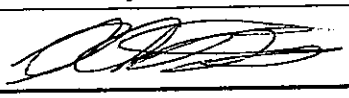
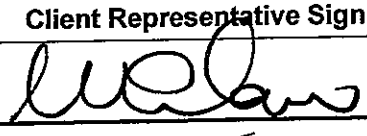
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: CHIFLEY HOTEL GEELONG

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-6

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: GEELONG & WARRNANBOOL	DATE: 26/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: PACIFIC BATTLER	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0800	1000	Check out of Chifley Hotel, collect survey gear that arrived last night
1000	1100	Carried out additional GPS health check utilising survey gear that recently arrived; Δ0.65m, Δ2.49m
1200	1830	Loaded survey gear for Pacific Wrangler and commenced transit to Warrnanbool
1830		Checked in to Central Court Motel, Warranbool

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: CENTAL COURT MOTEL WARRNANBOOL

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-7

Approved by the Operations Manager – 12/05/04
Note – To ensure that this is the latest version check the Online BMS.

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: PORTLAND & TRANSIT TO GEELONG	DATE: 27/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: PACIFIC WRANGLER	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0800	1000	Check out of Central Court Motel, commence transit to Portland
100	1030	Drop off rental car
1030	1115	FRC from Pacific Wrangler arrives at local jetty to collect Fugro Personnel and survey gear
1115	1400	Arrive onboard Pacific Wrangler, demobilise existing survey spread, whilst Pacific Wrangler commence transit to Corio Quay, Geelong
1400	2000	Commence mobilisation of new survey spread
2000	2100	All survey gear operational although housekeeping and sea fastening need to be carried out and a feed from the ships gyro needs to be obtained

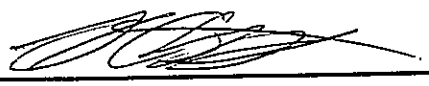
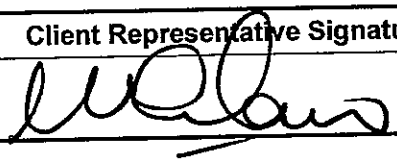
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-8

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: GEELONG	DATE: 28/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: PACIFIC WRANGLER	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	0930	Pacific Wrangler alongside Corio Quay, Geelong; continue mobilisation
0930	1000	Rental car collected plus additional consumables to complete mobilisation
1000	1100	Fluxgate compass moved to more suitable position onboard ship, various components purchased to enable an interface with ships gyro
1100	1230	Getting a feed from ships gyro, undertake gyro calibration and positioning system verification using taped offsets: Pacific Wranglers Gyro; C-O = -1.99°, Fluxgate compass; C-O = 67.91°, GPS Health Check; ΔE = -0.54m, ΔN = -1.5m (Standalone)
1230	1415	Complete housekeeping, remove old survey spread and depart vessel
1430	2359	Check in to Chifley Hotel, Geelong, on standby for flight to West Triton

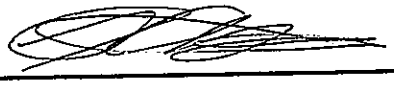
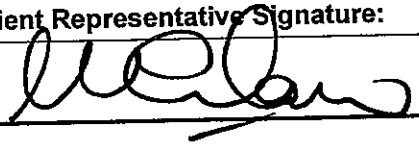
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: CHIFLEY HOTEL, GEELONG

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-9

Approved by the Operations Manager – 12/05/04
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Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: GEELONG & MELBOURNE	DATE: 29/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: N/A	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0001	0900	On standby for flight to West Triton
0900	1030	Carry out admin requirements
1030	1130	Pacific Battler informs that a waypoint is required during float off operations, this is setup via telephone, although recommended that a surveyor needs to be onboard to perform this more effectively
1400		Received confirmation from ADA Fugro Personnel are to travel to West Triton on tomorrow mornings 0800 flight
1500	1530	Checkout of Chifley Hotel, commence transit to Melbourne, Pacific Battler informs of issues with Starfix software (display and heading problems)
1530	1630	Arrive at ABX logistics in Melbourne, where old survey gear from Pacific Wrangler is dropped off and arranged courier to Fugro's New Plymouth office
1630	1830	Return rental car, check in to Holiday Inn, Melbourne Airport

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: HOLIDAY INN, MELBOURNE

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-10

Approved by the Operations Manager – 12/05/04
Note – To ensure that this is the latest version check the Online BMS.

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PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: MELBOURNE & WESTERN PORT	DATE: 30/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0730	0750	Check out of Holiday Inn, travel to Bristow Heliport, Essendon Airport, Melbourne
0750	1200	Informed that flight has been delayed until further notice, standby
1200	1345	Check in for flight to West Triton
1345	1415	Arrive on board West Triton
1415	1630	Undertake full West Triton inductions
1630	1830	Commence planning survey spread installation, discuss options with Barge Master
1830	2030	Commence mobilisation
2030	2100	Shift survey gear under cover until tomorrow, due to means of moving from drill floor to pilot house / radio room

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: RENTAL CAR

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-11

Fugro-BTW
PM-F50
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 30/01/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	0830	Examine rig drawings & establish vessel shape
0830	0845	Commence measuring vessel, stop due to rain, source tarpaulin to cover survey gear
0845	1130	Standby for weather, crane and electrician
1130	1400	Confirmation gained from electrician regarding running of cabling, commence dismantling rig to run internal cables
1400	2000	Survey gear lifted to radio room deck, installation continues
2000	2100	Repair ceiling panels from cable running

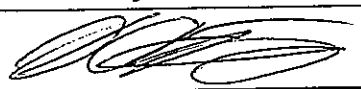
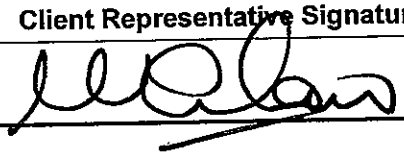
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-12

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 01/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	2000	Continue mobilisation

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-13

Fugro-BTW
PM-F50
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 02/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	1200	Continue mobilisation
1200	1430	Pacific Battler experiencing problems with telemetry system and fluxgate compass, Starfix shore support line contacted, problem not resolved
1430	1530	S. Armstrong and R. Cantlon partake in JHA with West Triton Safety Rep. regarding Billy Pugh transfer to Pacific Battler
1530	1545	Fugro personnel onboard Pacific Wrangler; radio modem appears to be transmitting but not receiving a signal, fluxgate compass is not operating correctly
1545	1600	Fugro personnel transfer back to West Triton to collect spare fluxgate compass and radio, and also check reconfigure West Triton radio
1600	1615	West Triton radio is faulty, swapped out with spare, radio connection successful with Pacific Battler
1615	1645	Fugro personnel transfer back to Pacific Battler with spare fluxgate compass
1645	1715	Spare fluxgate installed on Pacific Battler, operational although not keeping up with ship's gyro, telemetry link operating fine between Pacific Battler and West Triton
1715	1730	S. Armstrong and R. Cantlon transfer back to West Triton
1745	1830	Upon arrival back to the West Triton it appears the port gyro compass is non operational , attempting to fix
1830	1930	Gyro will not power up, unknown what caused it, unfixing gyro from floor for further inspection and tests, as starboard gyro was in port gyros path it had to be removed as well
1930	2000	Starboard gyro re-installed, now on port side

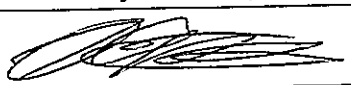
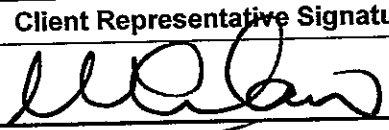
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-14

Approved by the Operations Manager – 12/05/04
Note – To ensure that this is the latest version check the Online BMS.

Fugro-BTW
PM-F50

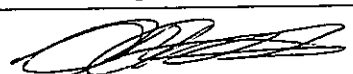
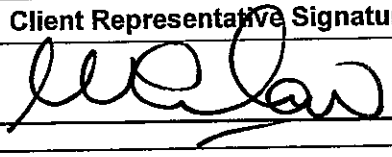
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 03/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	0945	Telemetry problems from between West Triton and Pacific Wrangler are apparent, it is established that it is not at rig end, thus organising transfer to Pacific Wrangler
0945	1000	S. Armstrong transfers to Pacific Wrangler to inspect radio
1000	1010	Telemetry problems solved, S. Armstrong returns to West Triton
1030	1100	Fugro personnel attend abandon rig muster
1100	1300	Undertake measurements in order to determine the centre of rig
1300	1400	Fugro personnel attend weekly safety meeting
1400	1530	Continue vessel centreline measurements
1530	1615	Stop centreline measurements due to arrival of helicopter, start measurement fairlead and towpoints
1615	1730	Complete fairleads and towpoints, continue centreline measurements
1730	1830	Fairlead, towpoints and centreline established vessel file is updated with fairleads and towpoints
1830	1900	Obtain power extension lead from electrician which enables completion of helmsman display in control room

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-15

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 04/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0700	1030	Went through Rig Move Checklist (from BMS), general housekeeping and communication with office
1030	1100	Carried out sun shots for gyro calibration; **C-O = -95.95°**, entered into SEIS
1245	1315	Undertook logging for positioning system verification, problem occurred when processing, to carry out again
1315	2359	Fugro personnel standing by, waiting on weather

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-16

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 05/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	1630	Fugro personnel standing by, waiting on weather
1630	1830	Western Triton changes heading, it is noticed that gyro compass is not moving,
1830	1945	Ashted Singapore is contacted, gyro now operating, re installed and re interfaced
1945	2359	Fugro personnel standing by, waiting on weather

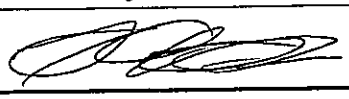
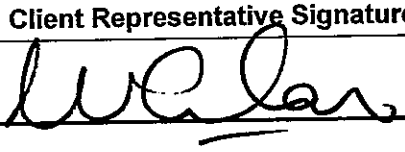
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-17

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 06/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	1400	Fugro personnel standing by, waiting on weather
1400	1530	Undertook offset measurements to new proposed DGPS antenna positions
1530	2359	Fugro personnel standing by, waiting on weather

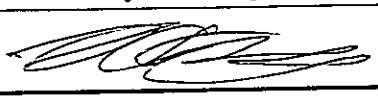
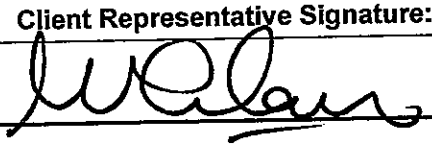
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-18

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 07/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0715	Fugro personnel standing by, waiting on weather
0715	0730	Commenced sun shots for gyro compass calibration; C-O = -114.99°
0730	2359	Fugro personnel standing by, waiting on weather

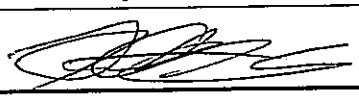
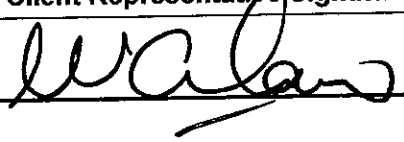
EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				

VEHICLES: N/A

CONSUMABLES: N/A

ACCOMMODATION: N/A

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-19

Fugro-BTW
PM-F50

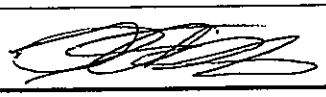
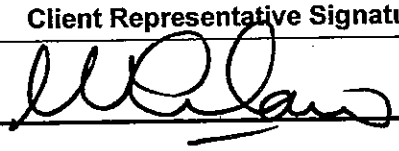
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT	DATE: 08/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	1000	Fugro personnel standing by, waiting on weather
1000	1100	Gyro compass from Ashtead arrives and is installed, calibrated by comparing with existing gyro; C-O = -205.50°
1100	1230	Run cable for proposed position of DGPS antenna's, located on port and starboard sides of the helipad (antennas cannot be relocated until connections arrive)
1230	2359	Fugro personnel standing by, waiting on weather

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-20

Fugro-BTW
PM-F50

DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WESTERN PORT & EN-ROUTE TO WASABI-1	DATE: 09/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0500	Fugro personnel standing by, waiting on weather
0500	0530	Decision made to commence tow to location, Wasabi-1, harbour tugs en route to Western Port Bay
0530	0620	Pacific Battler connecting to centre bow tow chain
0620	0700	New gyro (TSS Meridian) had died, is checked and a blown fuse is discovered
0700	0745	Pacific Wrangler connecting to port aft tow chain
0745	0930	All West Triton legs clear of seabed, commence move off location
0930	0941	Commence logging transit to Wasabi-1 SEIS file name; 200802082241
0941	1000	Statement of facts, under tow to Wasabi-1
1000	1030	Apache client rep. confirms new Wasabi-1 coordinates which slightly differ from the previously supplied coordinates, new coordinates; 522993mE, 5739978.20mN
1030	1045	Apache client rep. confirms skid out distance for West Triton is 15 feet
1200	1215	S. Armstrong hands rig move shift to R. Cantlon
1300	1400	S. Armstrong attends weekly safety meeting
1527		Western Port Bay pilot disembarks Pacific Battler
1554		Pacific Wrangler released from stern of West Triton
1654		Pacific Wrangler connected to West Triton forward port side tow wire
1654	2359	Continue transit to Wasabi-1

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-21

Fugro-BTW
PM-F50

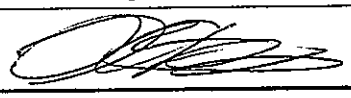
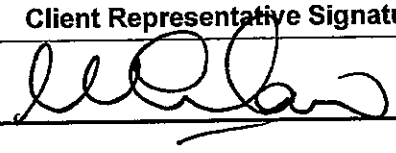
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: EN-ROUTE TO WASABI-1	DATE: 10/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	2034	Continue transit to Wasabi-1
2034		Transit speed decreased as three and a half mile radius approaches to allow Pacific Battler to disconnect from tow bridle
2059		Confirmed from client (Bill Openshaw) that new heading at Wasabi-1 location is to be 120°
2105		Pacific Wrangler contacted to alter West Triton ghost vessel heading
2110		Pacific Battler report spooling problem with winch
2130		1000m from Wasabi-1 location, Statement of Facts
2137		Pacific Battler released from tow wire
2206		Pacific Battler is connected to West Triton port aft tow wire
2257		Pinned at location, approximately 15m from proposed Wasabi-1 coordinates at a heading of approximately 120°T, within tolerances
2330	2345	Commence logging for preliminary position verification
2345	2359	Complete logging, prepare preliminary report

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-22

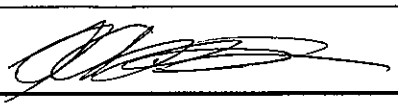
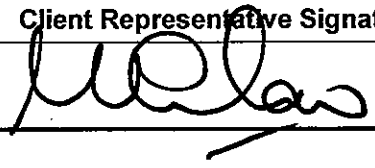
Fugro-BTW
PM-F50
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WASABI-1	DATE: 11/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0030	Preliminary position report handed to ADA Company man
0030	0038	Pacific Wrangler released from tow bridle
0038	0050	Pacific Wrangler departs Wasabi-1 location for Corio Quay, Geelong
0839	0909	Commence logging for 'on-site' gyro compass calibration, commence sun observations
0909	1030	Completed sun shot and stop logging C-O = -114.74°, entered into SEIS
1030	1600	Housekeeping, standing by for completion of rig pre-loading operations
1600	1730	Tested RINEX logging format which is required to obtain accurate heights
1730	2359	Standby for completion of rig pre-loading operations

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-23

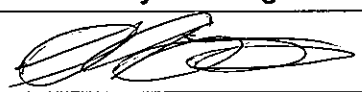
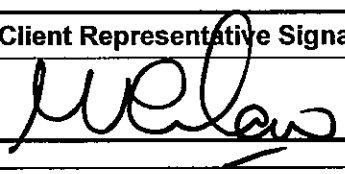
Fugro-BTW
PM-F50
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WASABI-1	DATE: 12/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0500	Rig pre-loading complete, commence jacking to drilling draft
0500	0650	West Triton is at drilling draft
0650	0703	Commence logging for final fix (fix every five seconds for six hours), using *final fix* program
0703	0745	Run-time error occurs with final fix application, restart PC
0745	0758	Commence logging for final fix
0758	0837	Run-time error occurs again with final fix application, restart PC, and commence logging carrier phase GPS RINEX data (for an accurate height value)
0837	0840	Commence logging for primary GPS only for horizontal position using the final fix application
0840	1005	Faulty Ashtead gyro compass freighted to Essendon Heliport via chopper
1005	1100	Run time error occurs with final fix application
1100	1538	Completed RINEX data logging session
1538	1713	Commence logging for final fix with primary and secondary GPS
1713	1813	Logging completed for final fix
1813	1915	Final fix handed to client rep.
1915	1940	Re-measure height from GPS antennas to drill floor, update offset diagrams
1940	2100	Tidy survey area, general housekeeping
2100	2130	Received by email first part of post processed Carrier Phase GPS observations – result agrees with Final Fix heights.
2130	2359	Standing by for helicopter back to Melbourne.

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: N/A					
CONSUMABLES: N/A					
ACCOMMODATION: N/A					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-24

Fugro-BTW
PM-F50
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WASABI-1	DATE: 13/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0800	Standing by for helicopter
0800		Final Fugro DORs signed off by client rep.
0800	0900	Tidying up work area and packing personnel belongings.
1000	1100	Fugro Personnel depart West Triton by helicopter
1100	1130	Transportation from Essendon airport to Melbourne airport provided by ADA
1130	1200	Arrange hire car with Hertz at Melbourne airport.
1200	1500	Drop off Leica TCA 1105 Total Station and reflective prisms back to CR Kennedy Ltd in South Yarra.
1500	1700	Arranging freight for faulty hired Gyro Compass back to Ashtead Technologies Ltd, Singapore, at ABX Logistics Melbourne.
1700	2359	Check in Airport Motel and Convention Centre, Melbourne. Waiting on flight to NZ.

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: HIRE CAR					
CONSUMABLES: N/A					
ACCOMMODATION: AIRPORT MOTEL					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-25

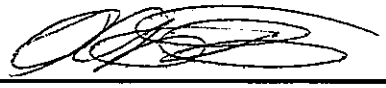
DAILY OPERATIONS REPORT

CLIENT: ADA PTY LTD	LOCATION: WASABI-1	DATE: 14/02/08
PROJECT: RIG MOVE TO WASABI-1 LOCATION	VESSEL: WEST TRITON	JOB NO: 07066

FROM	TO	SUMMARY OF OPERATIONS
0000	0915	Standing by for flight to NZ
0915	0930	Check out Airport Motel and Convention Centre, Melbourne.
0930	1030	Returning hire car to Hertz, Melbourne Airport. Checking in for flight to NZ at Melbourne Airport.
1135		Fugro personnel depart Melbourne for NZ (UTC + 11)
1700	1830	Arrive Auckland airport (UTC + 13). Waiting on flight to New Plymouth.
1830	1915	Flying from Auckland to New Plymouth
1915		S. Armstrong and R. Cantlon arrive New Plymouth airport.

EQUIPMENT RIG	NO.	EQUIPMENT REMOTE	NO.	PERSONNEL	TITLE
Starfix Seis	2	Starfix Wombat (remote)	2	S. Armstrong	Party Chief / Surveyor
Starfix HP DGPS	3	Fluxgate Compass	3	R. Cantlon	Surveyor
Radio Modem	2	Radio Modem	2		
UPS	2	Starfix HP DGPS	2		
Theodolite	1				
SG Brown Gyro	2				
Leica TCA 1105 Total Station	1				
VEHICLES: HIRE CAR					
CONSUMABLES: N/A					
ACCOMMODATION: AIRPORT MOTEL					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		07066-26

APPENDIX B
Final Positioning Data

Starfix Final Fix Report

Fugro Job Number	**07066**
Job Name	**West Triton Rig Move**
Fugro Personnel	**S. Armstrong,R. Cantlon**
Client Name	**ADA**
Client Representative	
Sampling Started	**12 Feb 2008 6:13:24 AM UTC**
Sampling Ended	**12 Feb 2008 7:13:19 AM UTC**
Comment	

Intended Offset / Well Location

Geodetic Datum	**GDA94-ITRF2008.50**
Latitude	38°29'17.6755"S
Longitude	147°15'49.1452"E
Projection	**Transverse Mercator (UTM) Zone: 55**
Easting	522993.600 m
Northing	5739978.200 m
Intended Rig Heading	0.00 °T

Final DGPS Position Fix Summary for West Triton At Wasabi-1

DS computed from FWD OCSAT.GGA (Primary)

DS Offset From CRP	
Starboard	0.000 m
Forward	-4.572 m
Up	0.000 m
Geodetic Datum	**GDA94-ITRF2008.50**
Latitude	38°29'18.1573"S
Longitude	147°15'49.1465"E
Projection	**Transverse Mercator (UTM) Zone: 55**
Easting	522993.588 m
Northing	5739963.350 m

Final Rig Heading 119.76 °T (Convergence 0.16° Australia/New Zealand)
Gyro C-O ###### °
Position is 14.86 m @ 179.88 °T (180.04 °G) FROM intended location

DS computed from AFT APSAT.GGA (Secondary)

Geodetic Datum	**GDA94-ITRF2008.50**
Latitude	38°29'18.1620"S
Longitude	147°15'49.1179"E
Projection	**Transverse Mercator (UTM) Zone: 55**
Easting	522992.896 m
Northing	5739963.207 m

Position is 15.01 m @ 182.53 °T (182.69 °G) FROM intended location

Positioning System Comparison (System 2 minus System 1)

Delta Easting	-0.693 m
Delta Northing	-0.143 m

Party Chief: _____ Client Representative: _____

Fugro BTW Ltd **P07066**
Australian Drilling Associates Pty Ltd
West Triton Rig Positioning

Field Report One **Final Rotary Table Heighting**
Date: 15 February 08

The *West Triton* Rotary Table's (RT) height above Australian Height Datum (AHD) was determined from logging 7 hours of carrier phase GPS data between 2118 on 11 February 2008 (UTC) and 0438 on 12 February 2008 (UTC). During this period, antenna heights from the primary positioning system were logged and the data used to calculate the final height of the RT.

The *West Triton's* Rotary Table height is shown in Table 1.

Description	Method	Height above AHD
West Triton Rotary Table at Wasabi-1	Carrier Phase GPS	39.015m
Client Supplied Design height		>38m

TABLE 1

Stephen Armstrong
Party Chief / Surveyor
Fugro BTW Ltd

Preliminary Pre-Spud Fix

Starfix Final Fix Report

Fugro Job Number	07066
Job Name	West Triton Rig Move
Fugro Personnel	S. Armstrong - Party Chief / Surveyor
	R. Cantlon - Surveyor
Client Name	ADA
Sampling Started	10 Feb 2008 12:30:38 PM UTC
Sampling Ended	10 Feb 2008 12:45:39 PM UTC
Output File Name	"041 12 45 39.pdf"

West Triton At Wasabi-1 - Final DGPS Position Fix Summary for DS

DS Offset From CRP

Starboard	0.000 m
Forward	-4.572 m
Up	0.000 m

Geodetic Datum	**GDA94-ITRF2008.50**
Latitude	38°29'18.1685"S
Longitude	147°15'49.0843"E
Projection	**Transverse Mercator (UTM) Zone: 55**
Easting	522992.080 m
Northing	5739963.010 m
Final Rig Heading	119.51 °T (Convergence 0.16° Aust/NZ)
Gyro C-O	###### °

DS Position is 15.27 m on a bearing of 185.55 °T (185.71 °G) FROM intended location

Intended Offset / Well Location

Geodetic Datum	**GDA94-ITRF2008.50**
Latitude	38°29'17.6755"S
Longitude	147°15'49.1452"E
Projection	**Transverse Mercator (UTM) Zone: 55**
Easting	522993.600 m
Northing	5739978.200 m

Team Leader / Surveyor: _____

Client Representative : _____ W. OPENSHAW SENIOR DRILLING SUPV. A.D.A.

APPENDIX C
Calibrations

GYRO COMPASS CALIBRATION BY SUN AZIMUTH - CALCULATION SUMMARY

Fugro Job Number:	P07066	**Vessel:**	West Triton
Job Description:	Rig Move from Western Port to Wasabi-1	**Instrument:**	Wild T2
Client:	Australian Drilling Associates Pty Ltd	**Serial No:**	252357
Surveyor:	S. Armstrong	**Date:**	February 6, 2008
Gyro Compass (Serial No):	SG Brown (863)	**Time Zone :**	11hrs

Vessel Details

	D	M	S
Enter correction from RO to vessel centreline	###	22 '	41 "

Enter approximate WGS84 position of instrument :

	D	M	S
Latitude (ϕ)	-38 °	26 '	17 "
Longitude (λ)	145 °	17 '	36 "

Observations

Obs. No.	Date	UTC	Instrument Position		Calculated Sun Azimuth at UTC		Observed Direction to Sun				Calc'd Vessel Hdg	Obs'd Vessel Hdg	Sun Semi Diameter	(C-O) Degrees
			Latitude (ϕ) DMS	Longitude (λ) DMS	DMS	Dec. Deg	Deg	Min	Sec	Dec. Deg				
1	6-Feb-08	20:20:46	-038° 26' 17.00"	145° 17' 36.00"	104° 09' 7.85"	104.152 °	298°	01'	07	298.019	125.512 °	240.50 °	0.2707	-114.99 °
2	6-Feb-08	20:21:07	-038° 26' 17.00"	145° 17' 36.00"	104° 05' 59.59"	104.100 °	297°	57'	41	297.961	125.517 °	240.50 °	0.2707	-114.98 °
3	6-Feb-08	20:21:27	-038° 26' 17.00"	145° 17' 36.00"	104° 03' 0.33"	104.050 °	297°	54'	56	297.916	125.513 °	240.50 °	0.2707	-114.99 °
4	6-Feb-08	20:22:04	-038° 26' 17.00"	145° 17' 36.00"	103° 57' 28.81"	103.958 °	297°	49'	31	297.825	125.511 °	240.50 °	0.2707	-114.99 °
5	6-Feb-08	20:22:23	-038° 26' 17.00"	145° 17' 36.00"	103° 54' 38.61"	103.911 °	297°	46'	25	297.774	125.515 °	240.50 °	0.2707	-114.98 °
6	6-Feb-08	20:25:52	-038° 26' 17.00"	145° 17' 36.00"	103° 23' 28.61"	103.391 °	297°	16'	42	297.278	125.491 °	240.50 °	0.2707	-115.01 °
7	6-Feb-08	20:26:24	-038° 26' 17.00"	145° 17' 36.00"	103° 18' 42.62"	103.312 °	297°	10'	34	297.176	125.514 °	240.50 °	0.2707	-114.99 °
8	6-Feb-08	20:26:46	-038° 26' 17.00"	145° 17' 36.00"	103° 15' 26.04"	103.257 °	297°	07'	19	297.122	125.513 °	240.50 °	0.2707	-114.99 °
9	6-Feb-08	20:27:01	-038° 26' 17.00"	145° 17' 36.00"	103° 13' 12.04"	103.220 °	297°	04'	58	297.083	125.515 °	240.50 °	0.2707	-114.98 °
10	6-Feb-08	20:27:19	-038° 26' 17.00"	145° 17' 36.00"	103° 10' 31.26"	103.175 °	297°	01'	58	297.033	125.521 °	240.50 °	0.2707	-114.98 °
11	6-Feb-08	20:27:39	-038° 26' 17.00"	145° 17' 36.00"	103° 07' 32.64"	103.126 °	296°	59'	17	296.988	125.516 °	240.50 °	0.2707	-114.98 °
12	6-Feb-08	20:27:57	-038° 26' 17.00"	145° 17' 36.00"	103° 04' 51.91"	103.081 °	296°	57'	08	296.952	125.507 °	240.50 °	0.2707	-114.99 °
13	6-Feb-08	20:28:18	-038° 26' 17.00"	145° 17' 36.00"	103° 01' 44.43"	103.029 °	296°	53'	30	296.892	125.515 °	240.50 °	0.2707	-114.98 °
14	6-Feb-08	20:28:36	-038° 26' 17.00"	145° 17' 36.00"	102° 59' 3.75"	102.984 °	296°	50'	01	296.834	125.529 °	240.50 °	0.2707	-114.97 °
15	6-Feb-08	20:28:59	-038° 26' 17.00"	145° 17' 36.00"	102° 55' 38.47"	102.927 °	296°	47'	45	296.796	125.510 °	240.50 °	0.2707	-114.99 °

Mean	**-114.99 °**
Std. Deviation	**0.01**
Maximum	**-114.97 °**
Minimum	**-115.01 °**
Range	**0.04**

Signature S. Armstrong

SURVEYOR / PARTY CHIEF

GYRO COMPASS CALIBRATION BY SUN AZIMUTH - CALCULATION SUMMARY

Fugro Job Number:	P07066	**Vessel:**	West Triton
Job Description:	Rig Move from Western Port to Wasabi-1	**Instrument:**	Wild T2
Client:	Australian Drilling Associates Pty Ltd	**Serial No:**	252357
Surveyor:	S. Armstrong	**Date:**	February 10, 2008
Gyro Compass (Serial No):	SG Brown (863)	**Time Zone :**	11hrs

Vessel Details

	D	M	S
Enter correction from RO to vessel centreline	0°	00 '	07 "

Enter approximate WGS84 position of instrument :

	D	M	S
Latitude (ϕ)	-38 °	29 '	19 "
Longitude (λ)	147 °	15 '	52 "

Observations

Obs. No.	Date	UTC	Instrument Position		Calculated Sun Azimuth at UTC		Observed Direction to Sun				Calc'd Vessel Hdg	Obs'd Vessel Hdg	Sun Semi Diameter	(C-O) Degrees
			Latitude (ϕ) DMS	Longitude (λ) DMS	DMS	Dec. Deg	Deg	Min	Sec	Dec. Deg				
1	10-Feb-08	21:55:07	-038° 29' 19.40"	147° 15' 52.20"	087° 38' 15.22"	87.638 °	327°	52'	44	327.879	119.761 °	234.50 °	0.2705	-114.74 °
2	10-Feb-08	21:55:30	-038° 29' 19.40"	147° 15' 52.20"	087° 34' 34.63"	87.576 °	327°	49'	16	327.821	119.757 °	234.50 °	0.2705	-114.74 °
3	10-Feb-08	21:55:53	-038° 29' 19.40"	147° 15' 52.20"	087° 30' 53.88"	87.515 °	327°	45'	27	327.757	119.759 °	234.50 °	0.2705	-114.74 °
4	10-Feb-08	21:56:19	-038° 29' 19.40"	147° 15' 52.20"	087° 26' 44.13"	87.446 °	327°	41'	20	327.689	119.759 °	234.50 °	0.2705	-114.74 °
5	10-Feb-08	21:56:42	-038° 29' 19.40"	147° 15' 52.20"	087° 23' 3.03"	87.384 °	327°	37'	39	327.627	119.759 °	234.50 °	0.2705	-114.74 °
6	10-Feb-08	21:57:10	-038° 29' 19.40"	147° 15' 52.20"	087° 18' 33.64"	87.309 °	327°	32'	55	327.549	119.763 °	234.50 °	0.2705	-114.74 °
7	10-Feb-08	21:57:35	-038° 29' 19.40"	147° 15' 52.20"	087° 14' 32.91"	87.242 °	327°	28'	48	327.480	119.764 °	234.50 °	0.2705	-114.74 °
8	10-Feb-08	21:58:20	-038° 29' 19.40"	147° 15' 52.20"	087° 07' 19.08"	87.122 °	327°	21'	46	327.363	119.761 °	234.50 °	0.2705	-114.74 °
9	10-Feb-08	21:58:43	-038° 29' 19.40"	147° 15' 52.20"	087° 03' 37.10"	87.060 °	327°	17'	42	327.295	119.767 °	234.50 °	0.2705	-114.73 °
10	10-Feb-08	21:59:08	-038° 29' 19.40"	147° 15' 52.20"	086° 59' 35.62"	86.993 °	327°	13'	42	327.228	119.767 °	234.50 °	0.2705	-114.73 °
11	10-Feb-08	21:59:27	-038° 29' 19.40"	147° 15' 52.20"	086° 56' 31.95"	86.942 °	327°	10'	38	327.177	119.767 °	234.50 °	0.2705	-114.73 °
12	10-Feb-08	21:59:48	-038° 29' 19.40"	147° 15' 52.20"	086° 53' 8.82"	86.886 °	327°	07'	37	327.127	119.761 °	234.50 °	0.2705	-114.74 °
13	10-Feb-08	22:00:16	-038° 29' 19.40"	147° 15' 52.20"	086° 48' 37.75"	86.810 °	327°	03'	31	327.059	119.754 °	234.50 °	0.2705	-114.75 °
14	10-Feb-08	22:01:01	-038° 29' 19.40"	147° 15' 52.20"	086° 41' 21.55"	86.689 °	326°	55'	49	326.930	119.761 °	234.50 °	0.2705	-114.74 °
15	10-Feb-08	22:01:23	-038° 29' 19.40"	147° 15' 52.20"	086° 37' 48.06"	86.630 °	326°	52'	08	326.869	119.763 °	234.50 °	0.2705	-114.74 °

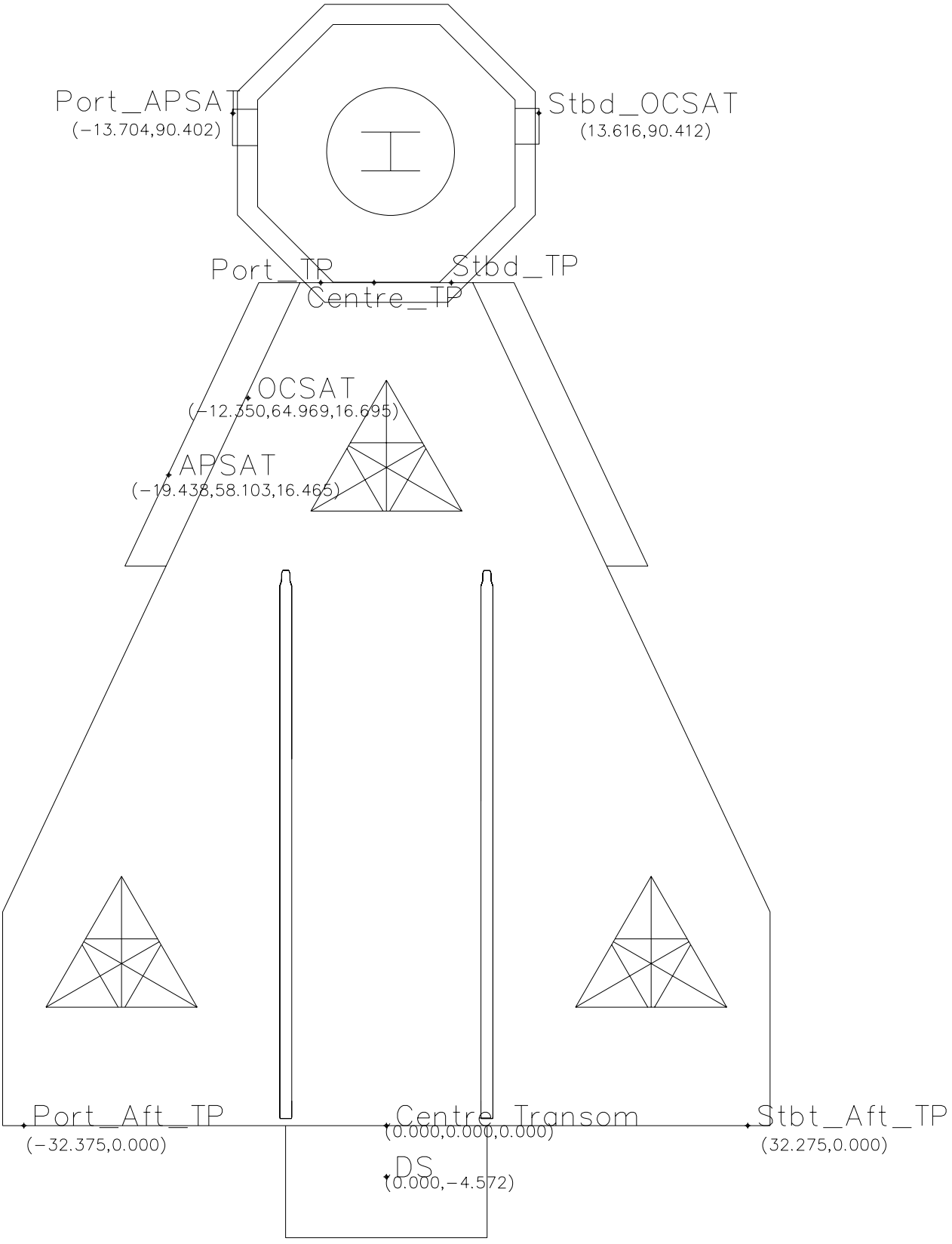
Mean	**-114.74 °**
Std. Deviation	**0.00**
Maximum	**-114.73 °**
Minimum	**-114.75 °**
Range	**0.01**

Signature S. Armstrong

SURVEYOR / PARTY CHIEF

APPENDIX D
Vessel Offset Diagram

WEST TRITON


Port_APSAT
(−13.704,90.402)
Stbd_OCSAT
(13.616,90.412)
Port_TP
Stbd_TP
Centre_TP
OCSAT
(−12.350,64.969,16.695)
APSAT
(−19.438,58.103,16.465)
Port_Aft_TP
(−32.375,0.000)
Centre_Transom
(0.000,0.000,0.000)
Stbt_Aft_TP
(32.275,0.000)
DS
(0.000,−4.572)

APPENDIX E
Client Supplied Data

2-3-4-8-9

The planned sequence of events for Wasabi-1 is summarized in the table below:

Operations	DIMS Phase
Move rig to 1km from location.	MIRU
Move rig and prepare to work	MIRU
Drill 660mm x 406mm Hole Section	C-DRL
Install 508mm x 340mm Conductor	C-CSG
NU BOP	P-NUP
Drill 311mm Hole Section	P-DRL
Openhole Logs	P-EVAL
P & A well	PLUG
Move-off	RDMO

Move Rig & Prepare To Work

1. Tow rig to the Wasabi-1 location. A high accuracy GPS positioning system will be used to determine the final rig position and RT - AHD measurement. The rig position is to be verified by the Apache Drilling Supervisor using the hand held GPS, in accordance with Rig Move Positioning QC procedure DR-00-RQ-001.
2. Position rig onto location within a 25m radius of the Wasabi-1 location. Final rig heading will be (TBA°) per Seadrill and site survey results. Pre-load as per Seadrill procedures.
3. Report the following in the DDR, and send in the actual Rig Positioning/Surveying contractors summary sheet showing:
   - Spud can penetrations
   - Rig heading
   - Distance and bearing from the proposed location
4. Jack up to a height that will be at or above the programmed rotary table elevation of 38m AHD. If required, mark the legs at the time of the rig positioning contractor's height survey to allow subsequent correction if the rig is jacked up or down.

   Do not report any datum at this point.
5. Skid out cantilever.
6. Pick up HWDP as required.
7. Prepare the 476mm (18-3/4") unitized wellhead housing (with pre-installed landing ring and nominal bore protector).

660mm x 406mm (26" x 16") Hole Section to +/- 900m

8. Pick up 660mm (26") BHA as per BHA programme and RIH. Shallow Test MWD/LWD tools.
   - 26" rock bit, bit sub / float, 2 x 9-1/2" DC, 16" stab, 9-1/2" DC, 16" stab , 9 x 8-1/4" DC, jar, 2 x 8-1/4" DC, x/o, 15 x 5-1/2" HWDP).
   - Above will form basis of 406mm BHA. Rack back 8-1/4" DC's as required so that top of DC's is below the RT when tag seabed (RT to seabed estimated 75m).
9. Tag seabed and spud the well.
   - Observe drillstring and confirm it is hanging vertically below the rotary table. Consider waiting on slack tides if necessary.

COELACANTH-1 & WASABI-1

SITE SURVEYS

FINAL REPORT

JOB NO. 10033

OCTOBER 2006

Apache Energy Ltd
Level 3
256 St Georges Terrace
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Appendix B: Gyrocompass Calibration

Appendix C: DGPS Verification

Appendix D: Bar Check

Appendix E: Sound Velocity Profiles

Appendix F: Vessel Offset Diagram

Appendix G: Tidal Data

Appendix H: Sediment Sample Logs

Appendix I: Wasabi-1 Profiles

REFERENCE

G. R. Holdgate, M. W. Wallace, S. J. Gallagher, A. J. Smith, J. B. Keene, D. Moore and S. Shafik (2003). *Plio-Pleistocene tectonics and eustasy in the Gippsland Basin, southeast Australia: evidence from magnetic imagery and marine geological data.* Australian Journal of Earth Sciences, Volume 50, Issue 3.

COELACANTH 1 & WASABI-1
SITE SURVEYS

APACHE Energy Pty Ltd
BASS STRAIT
VICTORIA, AUSTRALIA
FINAL REPORT

EGS JOB NUMBER 10033 **October 2006**

1 INTRODUCTION

1.1 PROJECT DESCRIPTION

EGS Survey Pty Ltd (EGS) was contracted by Apache Energy Australia to provide reconnaissance survey and geophysical information for two areas in the Bass Strait, south of the East Victorian coast. The objective of the survey is to gather seismic and bathymetric data to ensure the two sites are suitable for the installation of a jack up rig.

1.2 SCOPE OF WORK

The scope of work was as follows:

Conduct two site surveys (Coelacanth-1 and Wasabi-1) to determine a suitable rig location. Each site will have 100m-line spacing conducted throughout the area with cross-lines conducted at 500m spacing.

Each site will be surveyed using a dual frequency single beam echo sounder, side-scan sonar and sub bottom profiler.

The information collected will also be used to support Mobile Offshore Drilling Unit (MODU) activities. The following data is required:

- Bathymetry
- Seabed features
- Shallow geology

1.2.1 Survey Area

The proposed locations and survey extents at each site are summarised in the following two tables.

GDA94, MGA, Zone 55 CM 147° E		
Survey Area (Approx): 1km x 2km (North to South Orientation)		
	Easting (m)	**Northing (m)**
NW Corner	612 009	5 714 216
NE Corner	613 640	5 715 297
SW Corner	612 642	5 713 028
SE Corner	614 361	5 714 271
Surface Location	613 194	5 714 177

Table 1: Coelacanth-1 proposed location and survey extents

GDA94, MGA, Zone 55 CM 147° E		
Survey Area (Approx): 1km x 1km (North to South Orientation)		
	Easting (m)	**Northing (m)**
NW Corner	522 152	5 740 844
NE Corner	523 454	5 740 844
SW Corner	522 152	5 739 509
SE Corner	523 446	5 739 509
Surface Location	522 717	5 740 338

Table 2: Wasabi-1 proposed location and survey extents

2 SURVEY EQUIPMENT, VESSEL AND PERSONNEL

2.1 EQUIPMENT LIST

The following equipment was mobilised and used for this survey:

Vessel "Bluefin"
C-Nav 2050 DGPS (Primary and Secondary)
Knudsen dual frequency Single beam Echo sounder and mounting pole
Ashtead DMS-H Heave Motion Compensator
Robinson Gyrocompass
Valeport SVP650 Velocity Probe
Applied Acoustics CSP 300/Boomer
C-Products low-voltage Boomer (LVB)
Klein 2000 Side-scan Sonar (2)
Qinsy online navigation software and PC
C-Phone hydrophone system
C-View
QINSy

2.2 SURVEY VESSEL

The FTV Bluefin is a single hull shallow draft vessel managed by the Australian Maritime College from the port of Beauty Point, Tasmania.

Length Overall:	34.50m
Breadth Overall:	10m
Draft:	4.40m (Max)
Personnel:	9 Crew

2.3 SURVEY PERSONNEL

The following personnel were mobilised for the duration of the project:

Rod Farrawell	Senior Surveyor/Party Chief
David Struthers	Surveyor
Louise Minty	Geophysicist
Ian Wright	Geophysicist
Gary Wong	Survey Technician
Anderson Leung	Survey Technician
David Khoo	Client Representative

3 SURVEY PARAMETERS

The geodetic parameters used for this project are listed below:

Spheroid parameters: WGS 84 (ITRF 2006.5)	
Datum:	GDA 94
Ellipsoid:	GRS80
Semi-Major Axis:	6378137.000
Reciprocal Flattening:	298.257222101
Projection Parameters:	
Projection:	Universal Transverse Mercator (UTM)
Zone	55 South
Central Meridian:	147°
Origin of Latitude	0° North
False East:	500000m
False North:	10000000m
Scale Factor:	0.9996

Table 3: Geodetic parameters

The following 7-parameter transformation (Table 4) values were used to transform between WGS84 (ITRF2000 Epoch 1 July 2006) and GDA94.

Transformation Parameters WGS 84 [ITRF2000 (Epoch 2006.50)] to GDA94			
dX	-0.0046m	RX	0.015486”
dY	-0.0394m	RY	0.013723”
dZ	-0.0687m	RZ	0.016079”
Scale	0.004438 ppm		

Table 4: 7-Parameter transformation

4 EQUIPMENT CALIBRATIONS AND VERIFICATIONS

4.1 GYROCOMPASS CALIBRATION

A Robinson Gyro compass was fitted to the FTV Bluefin as the primary heading source for the survey operation. This was calibrated whilst the vessel was alongside the wharf in Beauty Point during the mobilisation phase of the project. Wharf alignment was ascertained with the use of a nautical chart and tape measure observations were made to determine the heading of the vessel. A straight portion along the ships hull was used as a baseline and perpendicular measurements from the bow and stern of the baseline were made. The ships heading derived by these measurements were then compared with simultaneous readings from the Robinson gyrocompass logged by the navigation software.

A total of 10 observations were made. Once the gyro compass correction (Table 5) was determined the result was entered into the Robinson gyro. Appendix B displays these results.

Gyrocompass	Mean C-O (°)
Robinson	+98.18°

Table 5: Gyrocompass calibration results

4.2 DIFFERENTIAL GPS VERIFICATION

Surface positioning was conducted with a C-Nav 2050 DGPS receiver directly interfaced into the QINSy navigation software. The QINSy navigation software was setup using the geodetic parameters detailed in Section 3. The C-Nav 2050 uses combined GPS and differential antennae, which were installed to maximise satellite visibility and to minimise any multipath effects.

To verify the integrity of the C-Nav 2050 positioning system, checks were carried out whilst alongside in Beauty Point on the 10th October 2006. The QINSy navigation software was initialised and set to log data. All offsets in the QINSy systems were verified. A reflective prism was then mounted on the mast as close to the GPS antenna being verified as possible. A total of 15 observations were then made to this prism from a known reference mark using a total station. A comparison was then made between the calculated position and the observed position (C-O), (Table 6) which confirmed the DGPS accuracy. Appendix C displays these results.

A comparison between the C-Nav primary and secondary DGPS systems was made from 30 observations at 10-second intervals. These calibration results are shown in Appendix C.

System	Easting C-O	Northing C-O	Easting Stdev.	Northing Stdev.
C-NAV Primary	0.02	0.01	0.04	0.02
C-NAV Secondary	0.07	-0.04	0.01	0.02

Table 6: DGPS verification results

4.3 DMS-H HEAVE MOTION SENSOR VERIFICATION

A verification of the DMS-H Heave sensor was carried out on the 10th October 2006. Manually lifting the motion senor approximately 1m whilst recording the heave on the echo sounder trace. This verified that the heave was being applied correctly.

4.4 BOOMER SYSTEMS

Both the C-Products Low-voltage Boomer (LVB) and Applied Acoustics CSP 300/Boomer were 'wet tested' whilst the vessel was moored alongside at Beauty Point. These tests are carried out to ensure power levels, frequency transmissions, pulse rates and general working order of the systems are of the expected quality. The results indicated excellent working order of both instruments, including spares.

4.5 SIDE-SCAN SONAR

Internal clocks used to measure reflection times are calibrated by the manufacturer, the calibration is valid for the life of the instrument therefore no further calibration is required. A rub test and "wet test" were undertaken whilst the vessel was moored alongside at Beauty Point. The results indicated excellent working order of both instruments, including spares.

5 SURVEY OPERATIONS

5.1 SEQUENCE OF EVENTS

The survey was carried out over 24-hour operations between 11th and 13th October 2006.

Survey mobilisation commenced at 0800 on Monday the 9th October 2006. The Bluefin was alongside The Australian Maritime College (AMC), Beauty Point, Tasmania. The mobilisation was carried out safely and within the time frame allowed. There was minor problem attaching the single beam echo sounder pole to the bracket, this was rectified by the services of a local tradesman onboard securing the bracket to the vessel. The mobilisation continued on the 10th October including calibrations, the vessel departed the wharf at 1830 on the 10th October. Whilst in the harbour after departure, wet testing of the geophysical equipment spread was conducted. The vessel departed the Tamar River for the first site (Coelacanth-1) at 2359.

FTV Bluefin arrived at Coelacanth-1 survey area at 1445 on the 11th October. On arrival a Sound Velocity Probe (SVP) was conducted and equipment deployed. Survey operations commenced at 1735 and were completed at 0945 on the 12th October. Time was spent trying to receive better quality data from the CSP boomer system. The vessel noise signature was a constant noise issue for the boomer system and several different methods were tried as to reduce the noise through the system. Choppy sea conditions were also a factor.

On completion of the Coelacanth-1 site the vessel transited to the Wasabi-1 survey site, approximately 6 hours west of the first site. The FTV Bluefin arrived at the Wasabi-1 site at 1555 and immediately commenced deployment of the equipment and obtained an SVP. The Wasabi-1 site was completed at 0020 on the 13th of October. The CSP boomer data was again poor quality due to the vessel noise. A small seabed sample was also collected before leaving the Wasabi-1 survey site.

Due to significant noise with the boomer data first collected at the Coelacanth-1 site, the vessel returned to the site to re-survey with the boomer only. The vessel arrived back at Coelcanth-1 at 0655 and survey operations were underway by 0710 on the 13th October. Attempts were made to improve the data of the boomer by making adjustments with the hydrophone and boomer catamaran. At 0935 the Bluefin conducted noise tests in an effort to determine the cause of the noisy data. These tests indicated that the engine noise was the primary reason for the noisy signal and the engines pitch was adjusted in an attempt to the level of noise. The boomer re-runs then recommenced.

The Coelacanth-1 site re-runs were completed and all equipment recovered by 1535. A seabed sample was collected and the vessel then commenced passage to Beauty Point departing the survey site at 1600 on the 13th October.

The vessel arrived in Beauty Point at 1000 on the 14th October. The vessel demobilisation was completed by 1500 and all EGS staff departed the vessel.

5.2 SURVEY PREPARATION

Prior to commencement of the project and the mobilisation of the vessel there was a period of preparation of survey documentation. A key component of the preparation was also the survey Project Execution Plan (PEP).

The week leading up to the survey was also used as project preparation and dispatching equipment to Beauty Point from the EGS offices in Perth and Hong Kong. Welding of the single beam bracket onto the vessel was conducted during the mobilisation process.

5.3 MOBILISATION

Mobilisation of the survey equipment on the Bluefin was conducted whilst the vessel was alongside The Australian Maritime College at Beauty Point, Tasmania. This commenced on Monday 9th October 2006 and was completed late evening Tuesday the 10th October 2006. All calibrations were completed prior to the vessel departing the jetty in Beauty Point.
During the mobilisation local tradesmen were used to weld the single beam bracket onto the starboard side of the Bluefin.

5.4 CONTROL

5.4.1 Horizontal Control

The survey vessel was located by C-NAV GPS receiver unit, for which system C-NAV GcGPS (GLOBALLY CORRECTED GPS) offers worldwide sub-metre accuracy.

The control used for the calibrations was acquired from the Department of Primary Industry's Water and Environment, Tasmania web site. The site lists all of the station summary information throughout Tasmania. The control stations were checked to ensure that the correct co-ordinate system was used.

5.4.2 Vertical Control

Predicted tides were used throughout the survey. The tidal information for the area was calculated at Metocean Engineers in Perth.

5.5 COVERAGE

Apache determined the coverage of the survey in there scope of work received by EGS. This was also confirmed at the pre start meeting held on the 4th October 2006.

5.6 ECHO SOUNDER

The Knudsen 320M dual frequency echo sounder was used throughout the survey. A sound velocity profile was conducted in the survey areas prior to collection of data. A speed of sound through the water of 1492 m/s was determined for the Coelacanth-1 survey site and 1490m/s for the Wasabi-1 survey site, these were entered into the echo sounder. Appendix E displays the sound velocity data.

5.7 SEISMIC REFLECTION SURVEY

The recording/survey parameters for the seismic reflection survey were as follows:

- Vessel Speed 1.9 – 2.8 m/sec
- Fix Interval 50m
- Layback 30m
- Output Power 200J/Pulse
- Pulse Rate 4/sec
- Sweep 200ms or approx 150m
- Gain setting 1

All seismic data was logged using the C-View Seabed Data Management Package (SDMP) and simultaneously recorded with navigation, fix, vessel heading. The data was printed via the Octopus printer, as a backup.

Following acquisition of the first line of data it became apparent that there was a high level of noise that 'masked' reflectors to a high degree, making the data uninterpretable. It was not immediately clear what was causing the high noise levels and hence test variations of the tow configuration were assessed and instruments were changed in an attempt to mitigate the noise. Following investigations into the noise source it was discovered that the frequency of the noise coincided with the emitting frequency bandwidth of the boomer system and that if the vessel engines were turned off the noise ceased. It was therefore deemed that the noise originated from the propeller and as such the propellers pitch was altered but no reduction in the noise level could be measured.

The Boomer plate and hydrophone were towed from the stern of the survey vessel, at a distance such that noise from the vessel was minimised, whilst maintaining positional accuracy (see Appendix F vessel Layout Diagram). Survey operations proceeded with the hope that more focused analysis and post-processing of the data would yield better results.

5.8 SIDE-SCAN SONAR

A digital dual frequency (100/500kHz) Klein 2000 Side-scan Sonar (SSS) was used throughout the survey. The following operation parameters were applied:

- Frequency : 500 and 100kHz
- Range : 150m per channel
- Cable deployed : Coelacanth-1=210m, Wasabi-1=30m
- Towing offset from datum(x) : +4.4m
- Towing offset from datum(y) : -14.7m plus cable out

A depressor and weights were attached to the side-scan tow-fish while surveying the Coelacanth-1 survey site in order to maintain a reasonable altitude above the seabed.

The side-scan sonar system was used to locate and identify seabed features and potential obstructions and to investigate surficial sediment properties and boundaries. The system was operated at both 100 and 500kHz on all survey lines to provide the best resolution possible.

The side-scan sonar performed well for the duration of the survey and the reliability of the sensors was very good.

5.9 DEMOBALISATION

Demobilisation commenced when the vessel was in the Tamar River and not during the transit from Coelacanth-1 site due to the weather conditions making conditions unsafe to perform those duties. Demobilisation was completed by 1500 on Saturday 14th of October.

6 DATA PROCESSING AND INTERPRETATION

6.1 ECHO SOUNDER

The influence of wave action was corrected in real time by the DMS-H motion sensor from the sounding data. The Qinsy processing software was used to remove data spikes from the collected raw data. The cleaned sounding data was then reduced using predicted tidal data from Metocean Engineers.

6.2 SEISMIC DATA

All processing and interpretation of the seismic data was carried out using the C-View processing and interpretation software.

6.2.1 Processing

All offsets and laybacks are automatically calculated by the C-View system. Processing of the Sub-bottom Profiler (SBP) data included band pass filtering, time-varying gain (TVG), trace averaging, and swell filtering. These processes were applied with parameters set to best enhance the quality and clarity of the image and aid interpretation. Despite this the general ability to draw interpretations from the data remained poor.

6.2.2 Interpretation

Seismic data collected from the Coelacanth-1 site was particularly bad quality with only occasional short sections of sub-horizontal reflectors identifiable surrounded by large line sections containing no identifiable reflectors at all (Figure 1). This quality of data is not sufficient to make any geological interpretations as to the rock/sediment types present, or their structure.

At the Wasabi-1 site, the data is also of a poor quality, however due to the shallower water depths, and improved sea conditions, a slightly greater signal-to-noise ratio is observed and as a result sub-horizontal reflectors can be identified on most lines (Figure 2). The interpretation and significance of these reflectors however is not possible to comment upon. A uniform seismic velocity of 1600m/s was used for the material underlaying the seabed.

Aspects of seismic interpretation such as stratigraphic assessment and attribute analysis were not feasible from any of the data collected.

6.3 SIDE-SCAN SONAR

All processing and interpretation of the side-scan sonar data was carried out using the C-View processing and interpretation software.

6.3.1 Processing

All offsets and laybacks are automatically calculated by the C-View system. Gain settings were adjusted to enhance data quality and clarity.

6.3.2 Interpretation

The ranges achieved with the sonar provided good overlapping coverage. The quality of the side-scan sonar data guaranteed significant feature detection based upon backscatter intensity and observation of seabed features.

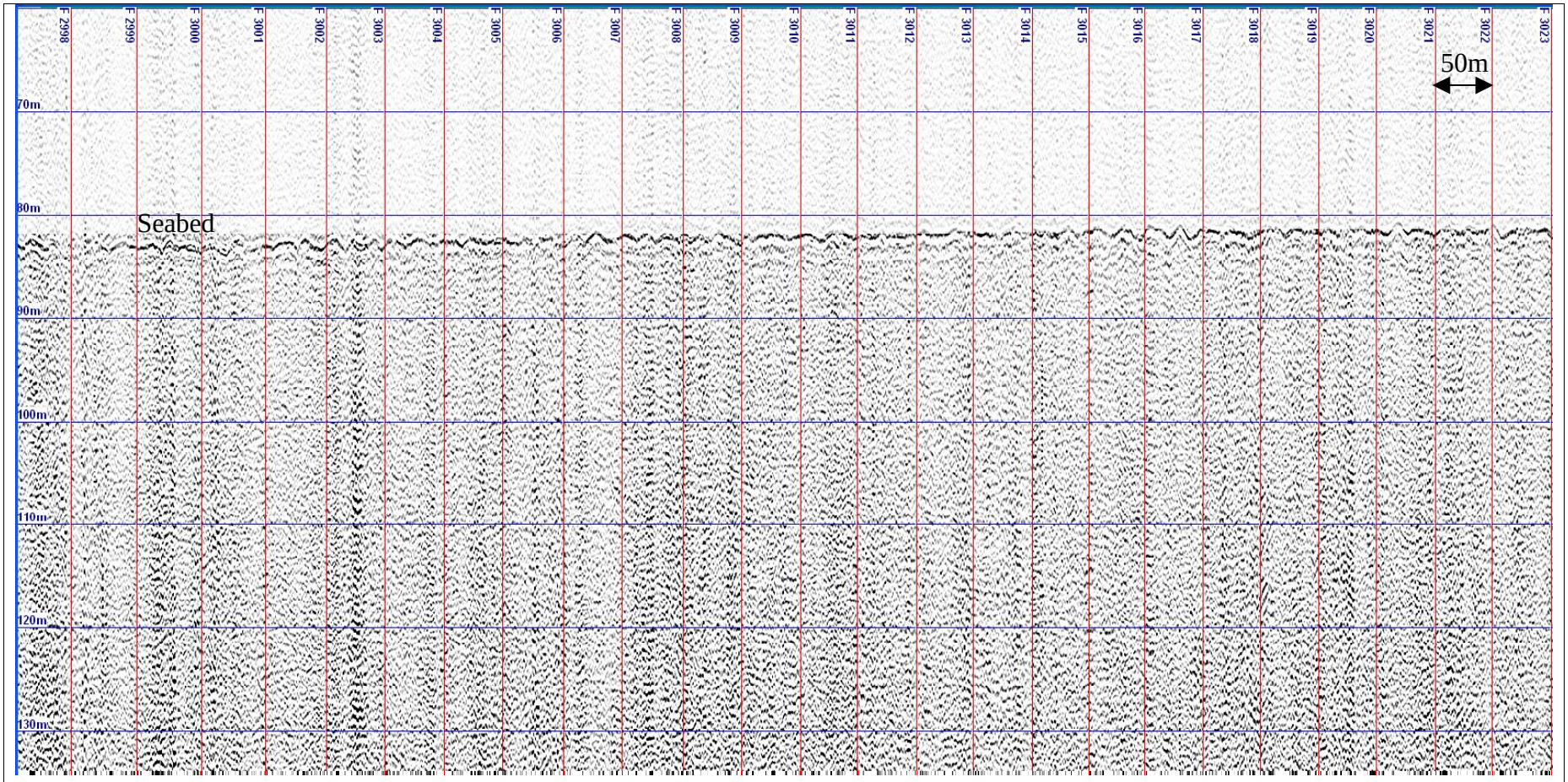

Figure 1: Typical example of post-processed SBP data from Coelacanth-1. (Line 400).

No reflectors are identifiable.

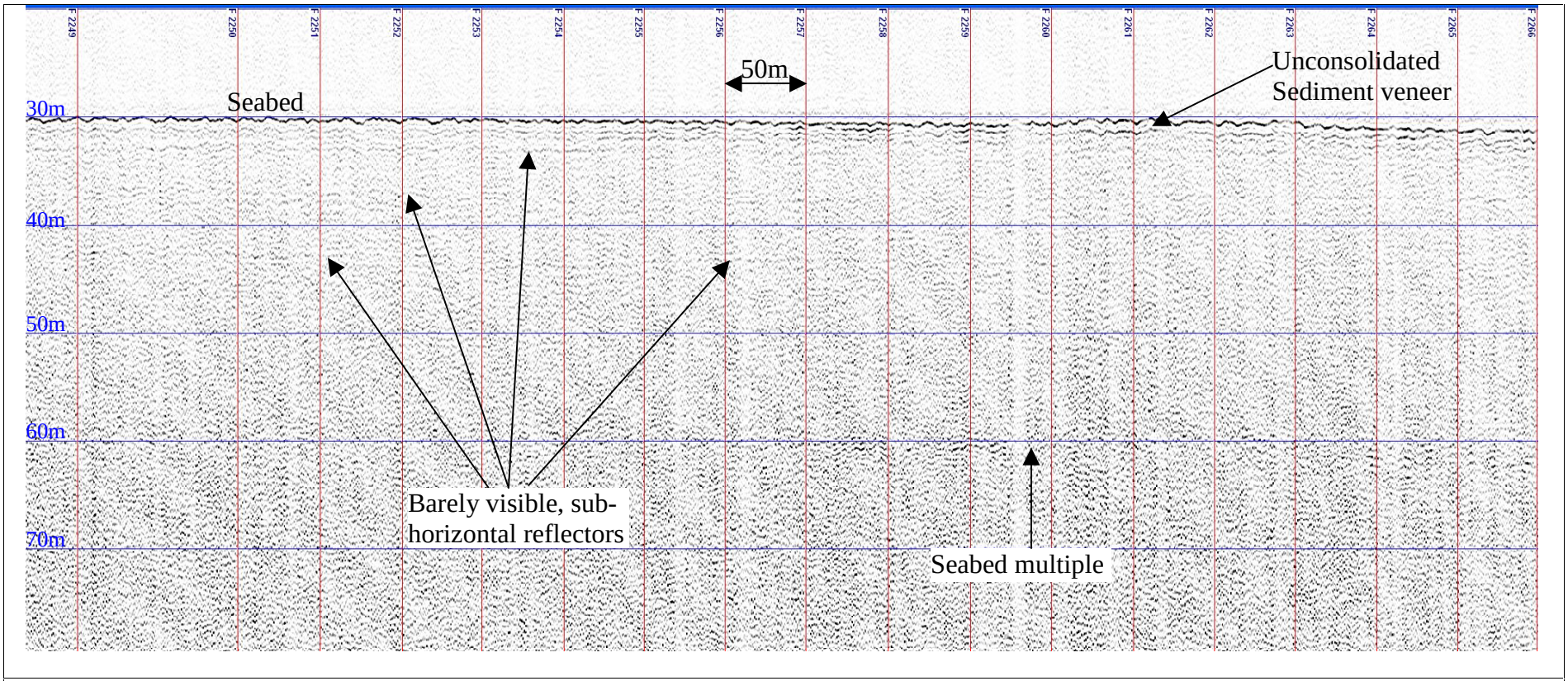

Figure 2: Typical example of post-processed SBP data from Wasabi-1. (Line 400)

Showing sub-horizontal reflectors.

7 RESULTS

7.1 PRESENTATION

The results for the survey have been presented as follows:

DRAWINGS
10033-C-001 Wasabi-1 Site Survey Composite Drawing
10033-C-002 Coelacanth-1 Site Survey Composite Drawing

7.2 BATHYMETRY

7.2.1 Coelacanth-1

The water depths range from approximately 87m(CD) in the south-west to 107m(CD) in the north-east.

The seabed topography is relatively flat in the west of the survey area, east of the 89m contour the seafloor slopes moderately reaching a maximum depth of 107m.

7.2.2 Wasabi-1

Water depths range from approximately 24m(CD) at the Western side to 29m(CD) at the Eastern side.

The seabed topography dips very gently to the east-southeast to a maximum of 29m.

7.3 BACKGROUND GEOLOGY

The study areas are located within the Gippsland Basin. Holdgate et al. (2003) reveals the findings of a study into the near surface sediments within this basin. The following text summarises relevant details from this study.

The Pliocene and Pleistocene sediments of the Gippsland shelf are dominated by mixed carbonates and siliciclastics. Stratigraphic analyses of eight oil and gasfield foundation bores drilled to 150 m below the seabed revealed three principal facies types: (i) Facies A is fine-grained limestone and limey marl deeper than 50 m below the seabed, of Late Pliocene age (ii) Facies B is a fine–coarse pebble quartz–carbonate sand that occurs 10–50 m below the seabed in the inner shelf, grading down into Facies A in wells in the outer shelf, and is of Early–Middle Pleistocene age and (iii) discontinuous horizons of Facies C composed of carbonate-poor carbonaceous and micaceous fine quartz sand occurring 10–50 m below the seabed. Holocene sands dominate the upper 1.5–2.5 m of the Gippsland shelf and disconformably overlie cemented limestones with aragonite dissolution. Airborne magnetic imaging across the Gippsland shelf and onshore provides details of buried magnetic palaeoriver channels and barrier systems. The river systems trend south-southeast across the shelf. Seismic surveys show the magnetic palaeochannels as seismic 'smudges' 20–40 m below the seabed. They appear to correspond to Facies C lenses (i.e. are Early to Middle Pleistocene features). Magnetic palaeobarrier systems trending south-southwest in the inner shelf and onshore beneath the Gippsland Lakes are orientated 15° different to the modern Ninety Mile Beach barrier trend. Offshore, they correlate

stratigraphically to progradation packages of Facies B. Analysis of bore data in the adjacent onshore Gippsland Lakes suggests that a Pliocene barrier sequence 100–120 m below surface is overlain by fluvial sand–gravel and lacustrine mud facies. The ferruginous sandstone beds resemble offshore Facies C, and are located where magnetic palaeoriver channel systems occur.

7.4 SUB-BOTTOM PROFILES

7.4.1 Coelacanth-1

Due to the lack of any identifiable reflectors it has not been possible to make any geological interpretation of this site based on the seismic data.

7.4.2 Wasabi-1

Sub-bottom Profiles for all lines acquired on the Wasabi-1 site can be seen in Appendix I

Reflectors identified occur at depths ranging between 1m and 16m below the seabed. Reflector 1 (Red) indicates that a resolvable veneer of unconsolidated material/sediment exists on the eastern side of the site (observable on lines 001 to 500, and between Fix 2387 to 2397 on Cross-line 3). To the west of the site the sediment veneer is too thin to resolve in profile records. The sediment veneer thickens to the east reaching a maximum of 2m (Line 001) and likely relates to the Holocene sands mentioned above.

The deeper regional reflectors identified are generally sub-horizontal in nature, and can be traced across the entire site. Reflector 2 (Green) generally parallels the seabed and occurs at ~ 3m beneath the seabed. Reflector 3 (Magenta) occurs between 7-9m beneath the seabed and has a more undulatory nature. This reflector was generally the most easily identifiable on the seismic sections and hence likely indicates a significant change in the lithology. Reflector 4 (Blue) marks an indistinct reflector observable between 14 and 16m beneath the seabed.

Note:

- As mentioned above, a conservative seismic velocity of 1600m/s was used in this interpretation and hence reflector depths described are minimum depths and actual depths may be up to 2/3 meters deeper.
- The geological strata described here is based upon poor quality data. The actual geological strata may be more complex.

7.5 SURFICIAL SEDIMENTS AND SEABED FEATURES

This section provides the results of seabed characterisation, sonar contacts and seabed features and is based on interpretation of 100kHz and 500kHz side-scan sonar (SSS) data. No geotechnical sampling was acquired as part of the scope of work. However, a seabed sample was taken near the centre of each site using a ship made dredge. Given that very limited sampling was carried out comments regarding the geotechnical properties of seabed sediments are inferred and require confirmation by a full geotechnical survey of the both sites.

7.4.1 Seabed Sediment Classification

The following classifications are used in this report;

- Slightly gravelly, fine SAND
- Gravelly, fine to coarse SAND
- Gravelly, medium to coarse SAND
- HARDPAN – thin layers (with up to 1m relief in places) of partially consolidated calcareous sediments forming a crust on the seabed..

It should be noted that HARDPAN classification is not acoustic basement or indicative of bedrock. It represents, as a minimum, partially consolidated or desiccated sediments. Locally it may have been subject to colonisation by calcareous organisms or partial cementation. There is potential for these layers of hard material to have a geotechnical classification equivalent to a weak rock, over thin intervals. HARDPAN occurs as a thin crust sitting on top of unconsolidated sediments.

7.4.2 Coelacanth-1

The seabed in the south and west of the Coelacanth-1 survey area is predominately flat with depths between 87-90m. The east of the site slopes moderately to the east deepening to 100m. From the 100m contour the slope becomes gentle and the seabed deepens to a maximum of 107m at the eastern extreme. No sonar contacts were identified in the survey area. In the east and south of the survey area there is evidence of trawling activity in the form of trawl scars on the seabed.

Seabed sediment throughout the Coelacanth-1 survey area is fine to coarse, gravelly SAND (Figure 3). A sediment sample taken near the centre of the site (GS-COE001, Appendix H) returned gravelly, fine to coarse SAND.

The seabed is featureless throughout most of the survey area with the exception of several areas of low-amplitude megaripples, one in the north (Figure 4) and 3 in the south. Megaripple orientations vary across the survey area and heights are consistently below 0.5m suggesting that the currents responsible for transporting the sediments are low and intermittent.

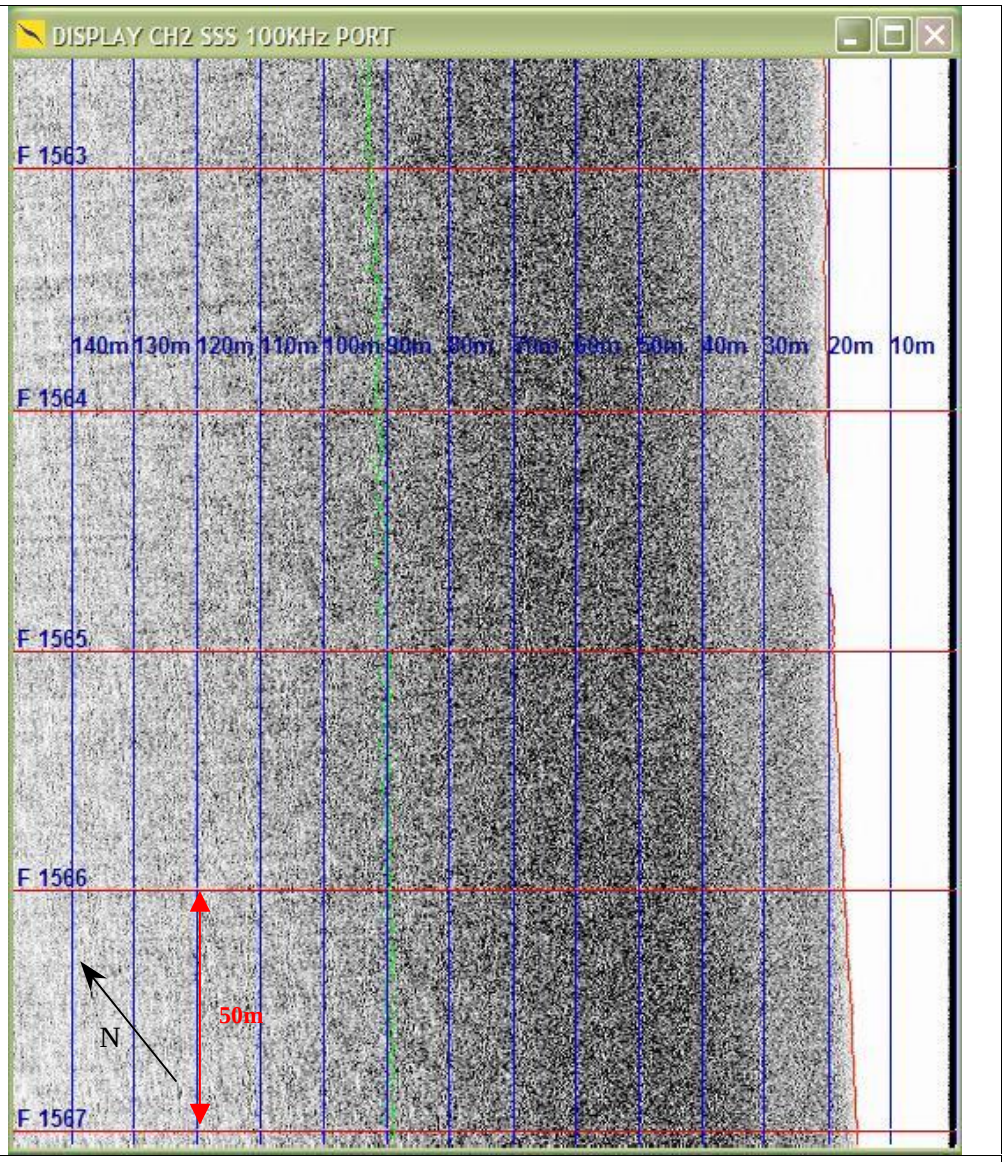

Figure 3: SSS image of featureless seabed of fine to coarse, gravelly SAND.

Location of Fix 1565 is approximately 613685E, 5714639N.

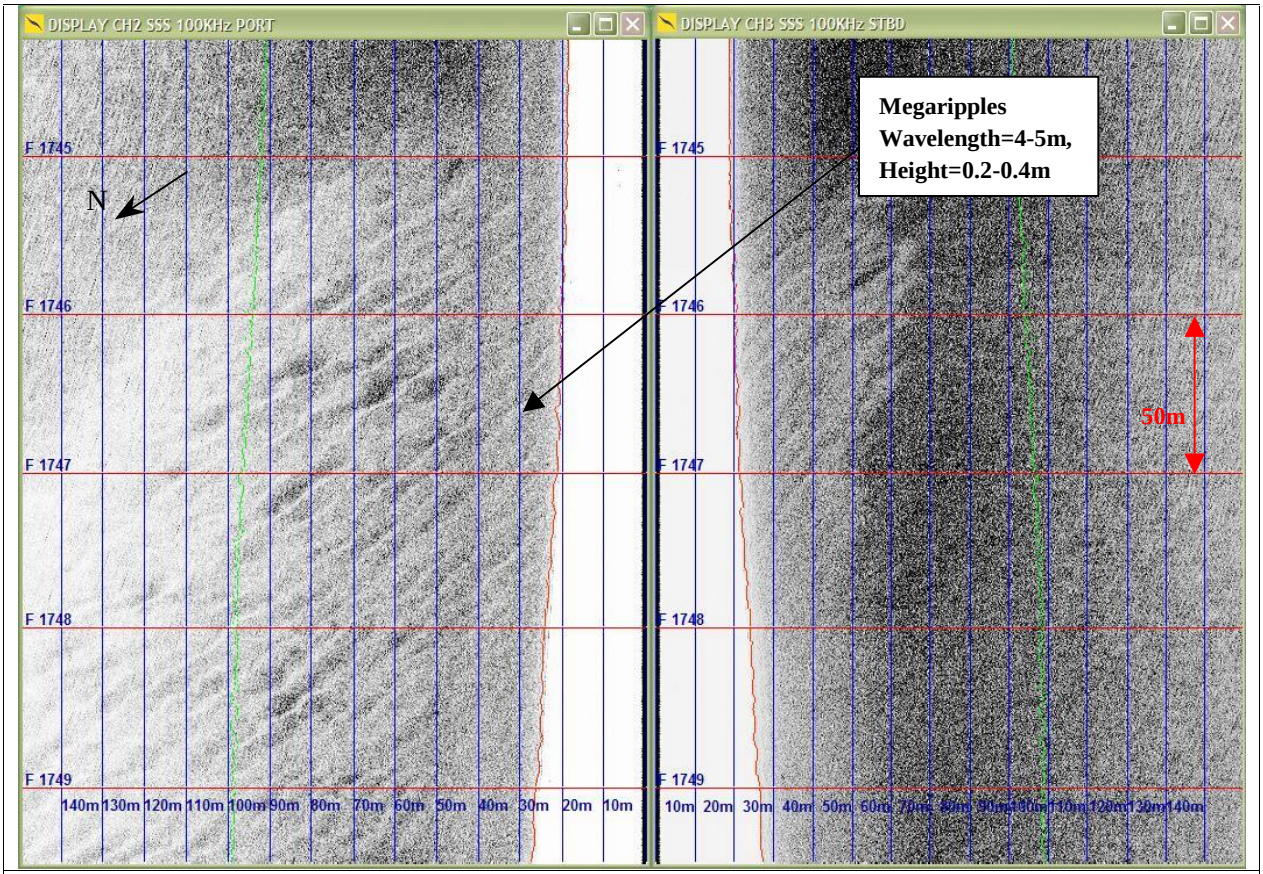

Figure 4: SSS image showing area of north-south orientated megaripples.

Location of fix 1745 is approximately 613337E, 5715114N.

7.4.3 Wasabi-1

The seabed in the Wasabi-1 survey area dips very gently to the east-southeast, depths range from 24.5m in the northwest to 29.7m in the south-east. No sonar contacts were identified in the survey area.

Seabed sediments and features can be broadly divided into 3 areas;

The west of the site is dominated by HARDPAN with slightly gravelly fine SAND and biological growth between exposures (Figure 5). HARDPAN occurence is irregular but has a broadly linear trend mirroring the Victorian coastline which runs north-east to south-west approximately 12.5km from the centre of the Wasabi-1 site.

The centre and northeast of the site is characterised by featureless low reflectivity SAND with a speckled texture (Figure 6). The speckled texture is interpreted as biological growth. A seabed sample taken in this area (GS-WA001, Appendix H) returned poorly graded, slightly gravelly fine SAND along with some vegetation. Occasional HARDPAN exposures are present particularly in the far northeast of this area.

The south/southeast of the site is characterised by megaripples with a wavelength typically between 10-15m and height of up to 0.6m. Megaripples become less pronounced to the northeast. Pockets of fine SAND have formed to the lee of HARDPAN exposures indicating a dominant north-east current direction (Figure 7). Sediment in the far south-east of the site comprises slightly gravelly, medium to coarse SAND. Further west sediment is slightly gravelly, fine SAND. The boundary between the fine and coarser material is demonstrated in Figure 7 where coarser sediments show higher reflectivity. Small irregular patches of HARDPAN are also evident throughout the south-east of the survey area.

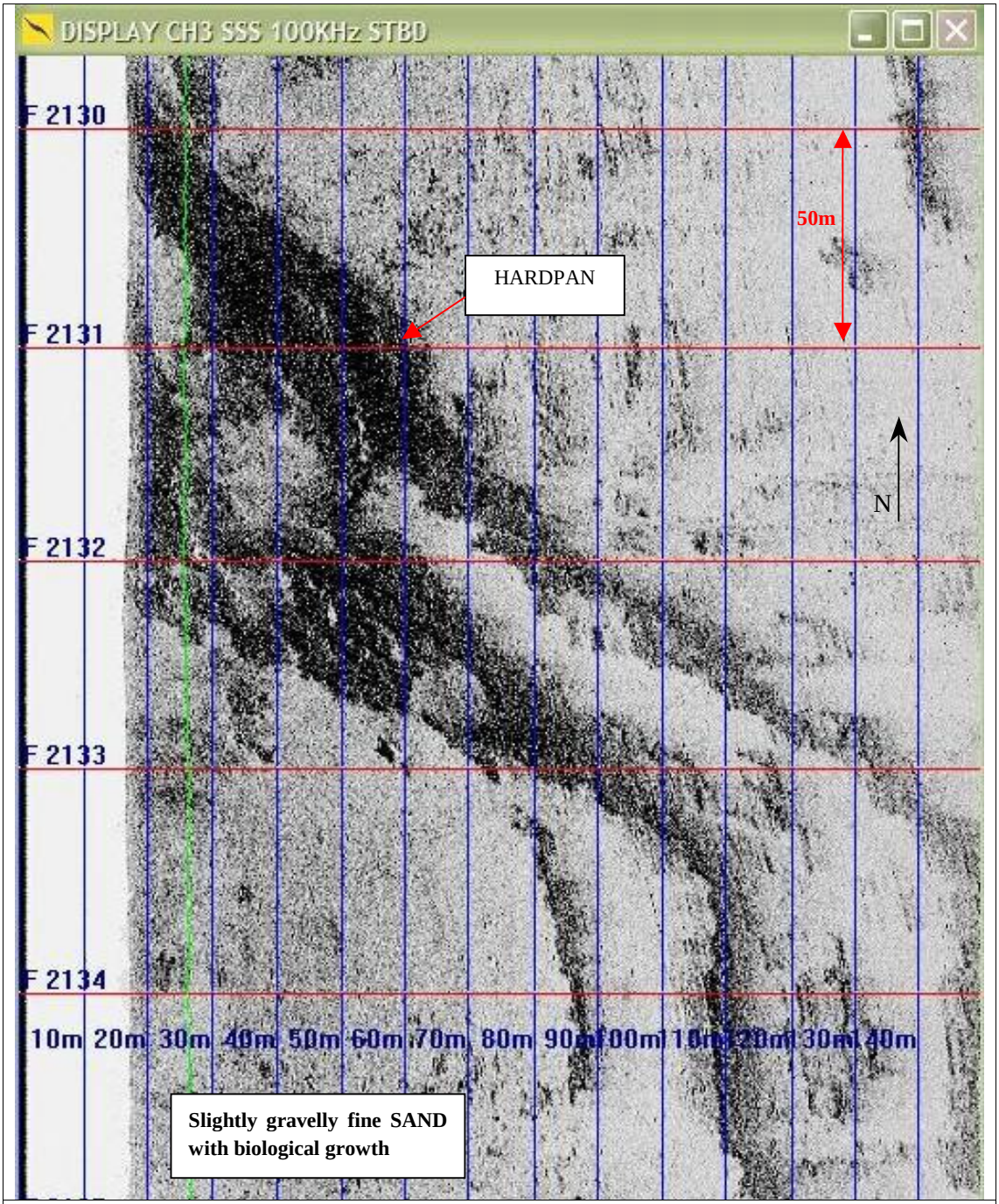

Figure 5: SSS image of HARDPAN exposure in SAND.

Location of fix 2130 is approximately 522371E, 5740562N.

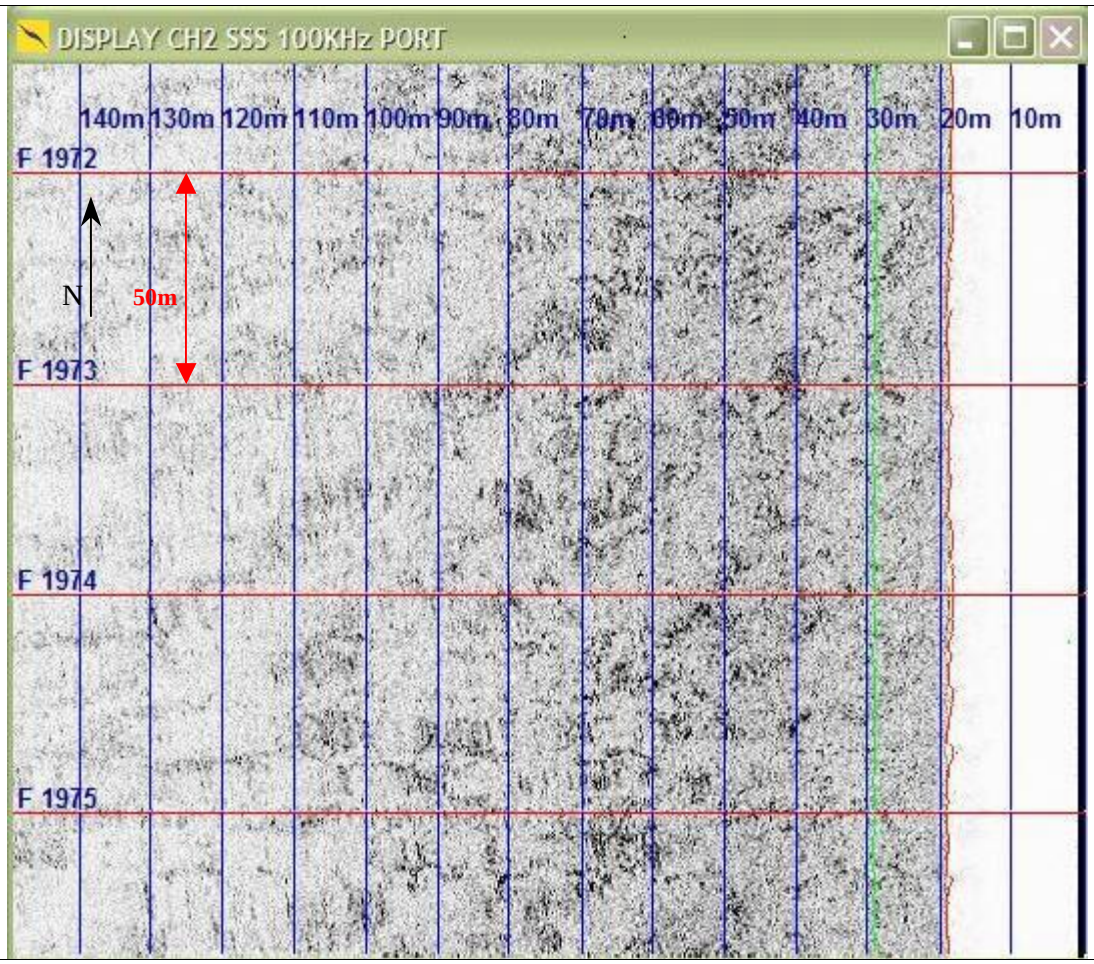

Figure 6: SSS image showing speckled texture of biological growth on slightly gravelly fine SAND.

Location of fix 1975 is approximately 522857E, 5740425N.

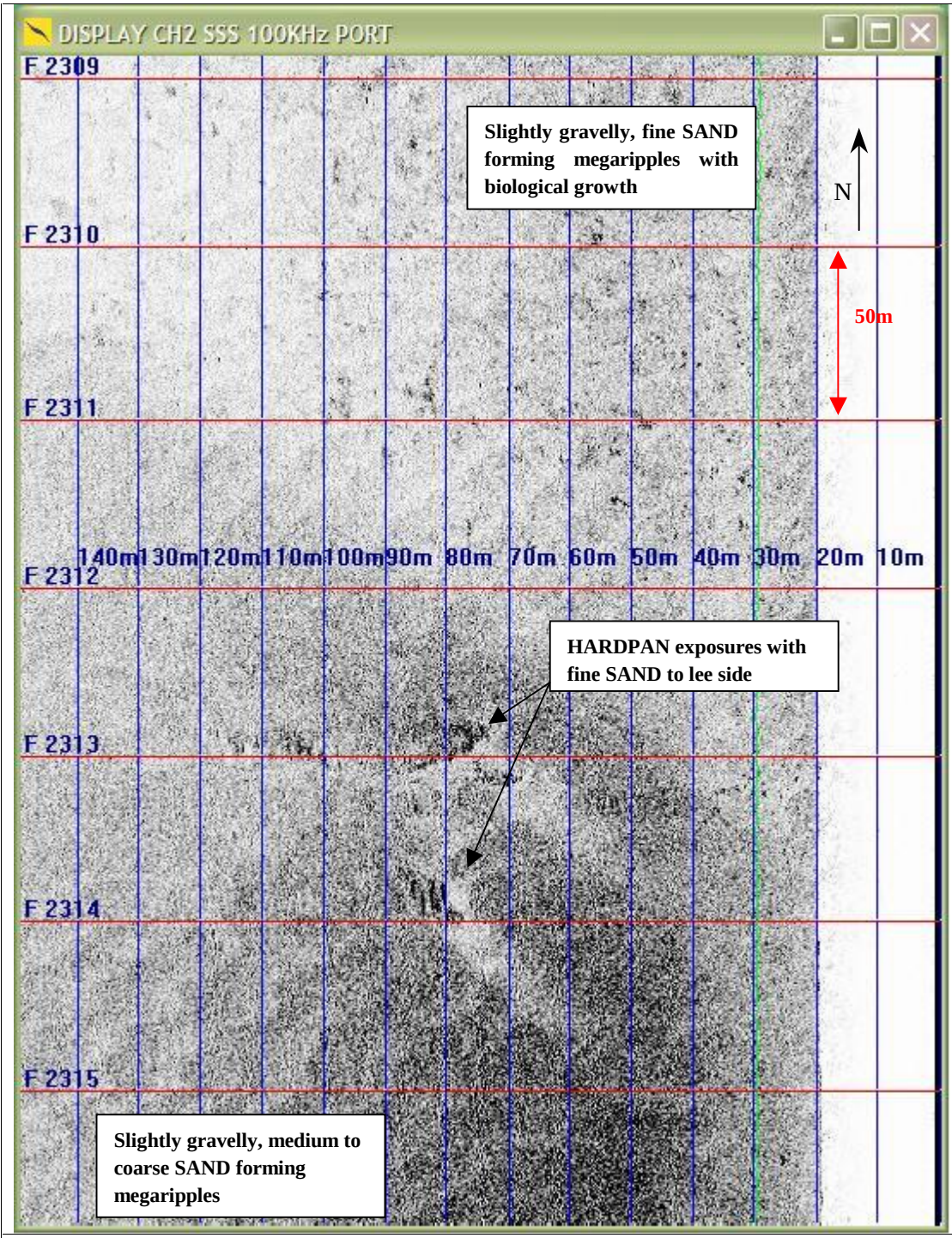

Figure 7: SSS image of medium to coarse/fine SAND boundary.

Also showing megaripples and fine sand to lee of HARDPAN exposure indicating a predominant current from the northeast.
Location of fix 2310 is approximately 523360E, 5740059N.

8 PROJECT HEALTH AND SAFETY

8.1 SITE SAFETY

All EGS personnel involved with this project were in receipt of offshore safety certificates and had completed a vessel induction course in accordance with EGS Safety Procedures.

For the purpose of the contract, EGS operated using the vessels management system.

A vessel induction was completed prior to any mobilisation activities.

No incidents were reported for the entire duration of the project.

EGS personnel attended all vessel drills during the course of the project.

8.2 JOB HAZARD ANALYSIS AND TOOLBOX MEETINGS

Prior to any installation works the on shift EGS personnel attended a job hazard analyses or toolbox meetings with regards to that installation and where the chance of a hazard occurring during the implementation of a task was present. Prior to mobilisation and demobilisation a toolbox was held to ensure all work was carried out in a safe and controlled manner.

9 CONCLUSION

The survey was completed in a safe and professional manner. Some problems were encountered during the mobilisation with the installation of the single beam echo sounder pole. This problem was rectified by modifications being performed by the boilermaker with no loss of time. Also there were continual problems with the boomer data and this was initially assumed to be a result of the choppy seas. Many modifications and testing were performed to raise the quality of the boomer data without any real success. It was later discovered that in fact the noise from the vessel propulsion was the sole reason for the poor quality of boomer data captured. This was noted and the source and severity of the problem was made known to the client representative.

The seismic data acquired at the Coelacanth-1 site was unable to yield any geological interpretations. The profiles of the Wasabi-1 site depict a relatively simple geological structure of the survey area. A veneer of unconsolidated material, up to 2m thick, exists on the eastern side of the site. Beneath this, the material likely comprises limestone (Holgate et.al 2003), with changes in the lithology (possibly significant) at various depths ranging between 2m to 16m beneath the seabed. Due to the poor data quality used in making these observations, the profiles and corresponding discussion should be taken as a rough guide only.

Side-scan sonar data quality was good throughout. Seabed sediment at the Coelacanth-1 site is a fine to coarse gravelly SAND. The seabed is predominately featureless with some areas of low relief megaripples. Several trawl scars are seen on the seabed. No sonar contacts or hazards were identified. The seabed at the Wasabi-1 site is predominately slightly fine to medium SAND with occurrences of HARDPAN – especially to the west of the site. Low relief megaripples are seen across the southeast of the site. No sonar contacts or hazards were identified.

Rod Farrawell
Party Chief
EGS Survey
October 2006

Noel Cowley
Chief Surveyor
EGS Survey

APPENDIX A

DAILY OPERATIONS REPORTS

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

108 Stirling Street, Perth, Western Australia, 6000
Tel: +618 9228 6800
Fax:+618 9228 6806
www.egssurvey.com

PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	001			**DATE**	8-Oct-06		
Status at 24:00 LT				**Latitude**	°		S
Local Time (LT) = UTC + 8.0 **Hrs**				**Longitude**	°		E
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	0	Tool Box	0	0		0	0
	Inspection	0	0	Induction	0	0		0	0
Drills	Fire	0	0	Emerg. Must	0	0	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments:

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	0	0	**Comments:**
Permit to Work	0	0	**Comments:**
Survey Man days	1	1	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	TEMP °C	Mb	FORECAST FOR NEXT 24 HRS	
6:00						**WIND**	
12:00							
18:00							
24:00							

CC ACTIVITY SUMMARY

Start	End	Status	Activity
06:10			EGS Personnel departed Perth for Launceston
19:00	23:59		Personnel arrived Beauty Point, checked into accomodation on stand by

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	0.0	0%		0%	
Calibration	CAL	0.0	0%		0%	
Equipment deployment	DEP	0.0	0%		0%	
Survey Operations	SOP	0.0	0%		0%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	0.0	0%		0%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	0%	0.0	0%	

CC EQUIPMENT SUMMARY

1		**8**	
2		**9**	
3		**10**	
4		**11**	
5		**12**	
6		**13**	
7		**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)			0	0%		0%	
Survey line (km)							
6m Piston Coring							
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)				0%		0%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%		####	
Development lines (km)				0%		####	

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor						
2	D. Struthers	Surveyor						
3	L. Minty	Geophysicist						
4	I. Wright	Geophysicist						
5	G.Wong	Engineer						
6	A. Leung	Engineer						

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	0	0	0	0	
Survey crew	6	0	0	6	
Client	0	0	0	0	
Others	0	0	0	0	
Total	6	0	0	6	

HH PROGRAM

Program for next 24 hrs	(1) Mobilise boat (2) (3)

Survey at "Area" Estimated days to survey completion		Actual date of completion Actual days taken to complete work	

II CONTRACTOR COMMENTS

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

108 Stirling Street, Perth, Western Australia, 6000
Tel: +618 9228 6800
Fax:+618 9228 6806
www.egssurvey.com

PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	003			**DATE**	9-Oct-06		
Status at 24:00 LT				**Latitude**	°		S
Local Time (LT) = UTC + 11.0 **Hrs**				**Longitude**	°		E
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	1	Tool Box	2	3		0	0
	Inspection	0	0	Induction	0	1		0	0
Drills	Fire	0	0	Emerg. Must	0	0	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments: Vessel Induction and Mob JHA and toolbox meetings

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	0	1	**Comments:**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	TEMP °C	Mb	FORECAST FOR NEXT 24 HRS	
6:00						**WIND**	Weather is expected to increase
12:00							on Wednesday night
18:00							
24:00							

CC ACTIVITY SUMMARY

Start	End	Status	Activity
07:50			Checked out of Accomodation
08:00	08:30		EGS personnel joined vessel conducted a brief vessel induction
08:30			Commenced mobilisation conducted mobilisation JHA
13:00	13:15		Welders arrived to size ES bracket
16:00	17:20		Welders arrived to fit ES bracket
19:00			Client Rep arrived
20:00			Mobilisation Completed for the day.

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	12.0	100%		0%	60% of Mob completed
Calibration	CAL	0.0	0%		0%	
Equipment deployment	DEP	0.0	0%		0%	
Survey Operations	SOP	0.0	0%		0%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	0.0	0%		0%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	0%	0.0	0%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)			0	0%		0%	
Survey line (km)							
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)				0%		0%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%		####	
Development lines (km)				0%		####	

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	0	39008	
Survey crew	6	9-Oct	0	39005	
Client	1	9-Oct	0	39000	
Others	2	9-Oct	9-Oct	2	
Total	18	155996	38999	117015	

HH PROGRAM

Program for next 24 hrs	(1) Continue with Mobilisation (2) Sail For survey (3)

Survey at "Area" Estimated days to survey completion		Actual date of completion Actual days taken to complete work	

II COMMENTS

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

108 Stirling Street, Perth, Western Australia, 6000
Tel: +618 9228 6800
Fax:+618 9228 6806
www.egssurvey.com

PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	003			**DATE**	10-Oct-06		
Status at 24:00 LT				**Latitude**	°		S
Local Time (LT) = UTC + 11.0 **Hrs**				**Longitude**	°		E
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	1	2	Tool Box	2	3		0	0
	Inspection	0	0	Induction	1	2		0	0
Drills	Fire	0	0	Emerg. Must	1	1	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments: Vessel Induction and Mob JHA and toolbox meetings

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	0	0	**Comments:**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	TEMP °C	Mb	FORECAST FOR NEXT 24 HRS	
6:00						**WIND**	Weather is expected to increase
12:00							on Wednesday night
18:00							
24:00							

CC ACTIVITY SUMMARY

Start	End	Status	Activity
08:00			Re-commenced Mobilisation
09:00	09:30		Welders Arrived to make adjustments to ES pole
10:30			ES pole fitted and operational.
17:00			All equipment tested and calibrated
17:40	18:30		Vessel safety meeting/induction and muster drill
18:30			Vessel departed Wharf
19:16	21:00		Wet testing all equipment in Bell Bay
21:00	23:59		Equipment functioning correctly, on passage to Coelacanth-1

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	12.0	100%		0%	
Calibration	CAL	1.0	8%		0%	
Equipment deployment	DEP	0.8	7%		0%	
Survey Operations	SOP	0.0	0%		0%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	3.0	25%		0%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	0%	0.0	0%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)			0	0%		0%	
Survey line (km)							
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)				0%		0%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%		####	
Development lines (km)				0%		####	

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	0	39008	
Survey crew	6	9-Oct	0	39005	
Client	1	10-Oct	0	39001	
Others	2	10-Oct	10-Oct	2	
Total	18	155998	39000	117016	

HH PROGRAM

Program for next 24 hrs	(1) Arrive Coelacanth-1 and commence survey (2) (3)

Survey at "Area" Estimated days to survey completion		Actual date of completion Actual days taken to complete work	

II COMMENTS

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

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PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys							
JOB NO	10033							
CLIENT	Apache							
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin			
REPORT NO	004			**DATE**	11-Oct-06			
Status at 24:00 LT				**Latitude**	38° 43.105'	S		
Local Time (LT) = UTC +	11.0 **Hrs**			**Longitude**	148° 17.704'	E		
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0		

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	2	Tool Box	5	8		0	0
	Inspection	0	0	Induction	0	2		0	0
Drills	Fire	0	0	Emerg. Must	0	1	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments: Personnel always reminded to watch for bights in line when deploying equipment.

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	0	0	**Comments:**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	TEMP °C	Mb	FORECAST FOR NEXT 24 HRS	
6:00	NW/10	1		12.8	1025	**WIND**	Weather is expected to increase
12:00	N/10	1		13.2	1025		
18:00	N/10	1.5		15.7	1022		
24:00	NE/16						

CC ACTIVITY SUMMARY

Start	End	Status	Activity
00:00	14:43		On transit to Coelacanth-1
14:45	15:00		On Location, rigging for an SVP
15:00	15:05		Deployed SVP, mean sv=1492
15:10	16:00		Deploying SSS, Boomer, Hydrophone, and ES pole
16:00	17:35		Fine tuning equipment, sounding speed 2.5kts due to SSS Cable length
17:35	19:20		Conducting survey ops
19:20	21:40		Testing different methods to get the SSS lower to the seabed.
21:40	22:05		Conducting survey ops
22:05	23:10		Boomer data poor due to weather, trying different methods to resolve noise issue
23:10	23:59		Conducting survey ops

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	0.0	0%		100%	
Calibration	CAL	0.0	0%		100%	
Equipment deployment	DEP	2.3	10%		10%	
Survey Operations	SOP	6.0	25%		25%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	14.7	61%		54%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	1.1	5%		5%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	100%	0.0	293%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)	8			24%		24%	
Survey line (km)							
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)	0			0%		0%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%		####	
Development lines (km)				0%		####	

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	0	39008	
Survey crew	6	9-Oct	0	39005	
Client	1	10-Oct	0	39001	
Others	2	10-Oct	10-Oct	2	
Total	18	155998	39000	117016	

HH PROGRAM

Program for next 24 hrs	(1) Complete Coelacanth and commence Wasabi (2) (3)

Survey at "Area" Estimated days to survey completion	Coelacanth 2	Actual date of completion Actual days taken to complete work	

II COMMENTS

Experienced difficulties in getting the SSS to within 20m of the bottom. Currently have 40kg of extra weight on the soft cable. 10kg 1m from SSS, then 10kg at 90m,100m, and 110m. Also experieced bad weather for CDP quality.
Continued running lines with SSS and ES, with the boomer still running and logging.

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

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PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	005			**DATE**	12-Oct-06		
Status at 24:00 LT				**Latitude**	38° 28.94'	S	
Local Time (LT) = UTC + 11.0 **Hrs**				**Longitude**	148° 16.29'	E	
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	2	Tool Box	2	10		0	0
	Inspection	0	0	Induction	0	2		0	0
Drills	Fire	0	0	Emerg. Must	0	1	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments: Personnel always reminded to watch for bights in line when deploying equipment.

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	0	0	**Comments:**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	Sea Temp ℃	Mb	FORECAST FOR NEXT 24 HRS
6:00	NE/10	1.2		15.1	1020	Weather is expected to remain in a favourable
12:00	NW/15	1.2		13.2	1017	survey condition.
18:00	N/10	1		14.3	1014	
24:00	SW/10	1		13.9	1013	

CC ACTIVITY SUMMARY

Start	End	Status	Activity
00:00	09:10		Conducting Survey ops on Coelacanth-1
09:10	09:45		Completed Coelacanth, recovering equipment
09:45	15:15		On transit to Wasabi-1
15:15	15:35		Conducting SVP observatios
15:35	15:55		Deploying SBES pole,SSS, CDP and Hydrophone
15:55	23:59		Conducting Survey ops on Wasabi-1

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	0.0	0%		100%	
Calibration	CAL	0.0	0%		100%	
Equipment deployment	DEP	1.0	4%		4%	
Survey Operations	SOP	###	73%		90%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	5.5	23%		77%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	100%	0.0	371%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)	66			66%		90%	The remaining is for boomer re-runs
Survey line (km)							at Coelacanth-1
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)	0			0%		0%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%		####	
Development lines (km)				0%		####	

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	0	39008	
Survey crew	6	9-Oct	0	39005	
Client	1	10-Oct	0	39001	
Others	2	10-Oct	10-Oct	2	
Total	18	155998	39000	117016	

HH PROGRAM

Program for next 24 hrs	(1) Complete Coelacanth Boomer Re-runs (2) (3)

Survey at "Area" Estimated days to survey completion	Coelacanth 2	Actual date of completion Actual days taken to complete work	

II COMMENTS

Made good progress during the day. It is hoped to finish the survey tomorrow.

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

108 Stirling Street, Perth, Western Australia, 6000
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Fax:+618 9228 6806
www.egssurvey.com

PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	006			**DATE**	13-Oct-06		
Status at 24:00 LT				**Latitude**	38° 28.94'	S	
Local Time (LT) = UTC + 11.0 **Hrs**				**Longitude**	148° 16.29'	E	
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	2	Tool Box	9	19		0	0
	Inspection	0	0	Induction	0	2		0	0
Drills	Fire	0	0	Emerg. Must	0	1	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments:

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	1	3	**Comments: Conducted JHA for seabed sampling**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	Sea Temp °C	Mb	FORECAST FOR NEXT 24 HRS
6:00						
12:00						
18:00						
24:00						

CC ACTIVITY SUMMARY

Start	End	Status	Activity
00:00	00:20		Conducting survey operations at Wasabi-1
00:20	00:35		Recovering SBES pole, SSS, Boomer and Hydrophone
00:35	00:55		Conducted seabed sample.
00:55	06:55		On transit to Coelacanth-1 for Boomer re-runs
06:55	07:10		Deployed Boomer and Hydrophone.
07:10	08:10		Conducting boomer re-runs
08:10	08:30		Adjusting hydrophone for better data quality
08:30	09:35		Conducting boomer re-runs
09:35	10:30		Conducting vessel noise tests, which indicated high noise from vessel causing poor
			boomer data
10:30	15:25		Conducting boomer re-runs
15:25	15:35		Recovering Boomer and hydrophone
15:35	16:00		Conducting seabed sample
16:00	23:59		On transit to Beauty Point

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	0.0	0%		100%	
Calibration	CAL	0.0	0%		100%	
Equipment deployment	DEP	1.0	4%		8%	
Survey Operations	SOP	8.9	37%		100%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	14.0	58%		90%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	100%	0.0	398%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)	66			66%		90%	The remaining is for boomer re-runs
Survey line (km)							at Coelacanth-1
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)	39			0%		100%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%			
Development lines (km)				0%			

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	0	39008	
Survey crew	6	9-Oct	0	39005	
Client	1	10-Oct	0	39001	
Others	2	10-Oct	10-Oct	2	
Total	18	155998	39000	117016	

HH PROGRAM

Program for next 24 hrs	(1) Complete Demob (2) (3)

Survey at "Area" Estimated days to survey completion	Coelacanth 1	Actual date of completion Actual days taken to complete work	

II COMMENTS

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

EGS Survey Pty Ltd
DAILY PROGRESS REPORT

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www.egssurvey.com

PROJECT	Wasabi-1 & Coelacanth-1 Site Surveys						
JOB NO	10033						
CLIENT	Apache						
CONTRACTOR	EGS Survey Pty Ltd			**VESSEL**	Bluefin		
REPORT NO	007			**DATE**	13-Oct-06		
Status at 24:00 LT				**Latitude**	38° 28.94'	S	
Local Time (LT) = UTC + 11.0 **Hrs**				**Longitude**	148° 16.29'	E	
Fuel (Litres):	Original Bunkers	0.0	Fuel Consumpt.	0.0	Fuel Remaining	0.0	

AA HSE SUMMARY

Item	Type	Today	Total	Type	Today	Total	Type	Today	Total
Incidents	Fatality	0	0	LTI	0	0	RWC	0	0
		0	0	MTC	0	0	1st Aid	0	0
Safety	Briefing	0	2	Tool Box	1	20		0	0
	Inspection	0	0	Induction	0	2		0	0
Drills	Fire	0	0	Emerg. Must	0	1	Aban. Ship	0	0
	MOB	0	0	Medivac	0	0	Oil Spill	0	0
	Lifeboat	0	0						

Comments:

Hazard ID cards	0		**Comments:**
Job Hazard Analysis	1	4	**Comments: Conducted JHA for seabed sampling**
Permit to Work	0	0	**Comments:**
Survey Man days	0	0	**Comments:**

BB WEATHER SUMMARY

LT	WIND	SEA	VIS	Sea Temp °C	Mb	FORECAST FOR NEXT 24 HRS
6:00						
12:00						
18:00						
24:00						

CC ACTIVITY SUMMARY

Start	End	Status	Activity
00:00	10:00		On Transit to Beauty Point
10:00	15:00		Demob
15:00			EGS Personnel depart vessel for return to Perth.

DD TIME SUMMARY (decimal hours)

Activity	Code	Today		Cumulative		Comments
Mob/Demob	MOB	5.0	42%		100%	
Calibration	CAL	0.0	0%		100%	
Equipment deployment	DEP	1.0	4%		8%	
Survey Operations	SOP	0.0	0%		100%	
Geotechnical Sampling	SAMP	0.0	0%		0%	
Port Call	PRT	0.0	0%		0%	
Transit	TRN	10.0	42%		100%	
Standby	STB	0.0	0%		0%	
Downtime - weather	DTW	0.0	0%		0%	
Downtime - survey	DTS	0.0	0%		0%	
Downtime - vessel	DTV	0.0	0%		0%	
Development	DEV	0.0	0%		0%	
	TOTAL	0.0	88%	0.0	408%	

CC EQUIPMENT SUMMARY

1	**Knudsen Dual Freq SBES**	**8**	DMS-H Heave Compensator
2	**Low Voltage C-Boom & Associated Equipment**	**9**	2 x C-Nav DGPS units
3	**Klein 2000 SSS & Associated Equipment**	**10**	Valeport SVP
4	**2 x UPS**	**11**	Hydrophone
5	**Robinson Gyro**	**12**	
6	**2 x Computers**	**13**	
7	**CSP300 High Voltage Boomer**	**14**	

EE PRODUCTION SUMMARY 1 — Phase 2: Platform Site Survey

Item	Estimated		Today		Cumulative		Comments
Survey line (km)	0			0%		100%	The remaining is for boomer re-runs
Survey line (km)							at Coelacanth-1
Development lines (km)							

Survey Location Map reference:

FF PRODUCTION SUMMARY 2 — Phase 3: Pipeline Survey

Item	Estimated		Today		Cumulative		Comments
Survey line - (km)				0%		100%	
Survey line - (km)				0%		0%	
6m Piston Coring				0%		0%	
Development lines (km)				0%		0%	

GG PRODUCTION SUMMARY 3 — AUV Reconnaissance Survey

Item	Estimated		Today		Cumulative		Comments
MBES survey line (km)				0%			
Development lines (km)				0%			

GG EGS PERSONNEL ONBOARD

1	R. Farrawell	PC/Surveyor					
2	D. Struthers	Surveyor					
3	L. Minty	Geophysicist					
4	I. Wright	Geophysicist					
5	G.Wong	Engineer					
6	A. Leung	Engineer					

LAST 24HRS	START	JOIN	LEAVE	END	Remarks
Boat crew	9	9-Oct	14-Oct	6	
Survey crew	6	9-Oct	14-Oct	6	
Client	1	10-Oct	14-Oct	5	
Others	2	10-Oct	10-Oct	1	
Total	18	155998	156012	18	

HH PROGRAM

Program for next 24 hrs	(1) (2) (3)

Survey at "Area" Estimated days to survey completion	Coelacanth 0	Actual date of completion Actual days taken to complete work	

II COMMENTS

JJ CLIENT COMMENTS

KK SIGNATURES

Title	Name	Signature	Title	Name	Signature
EGS Party Chief	R. Farrawell		"Client" Representative	D. Khoo	

APPENDIX B

GYROCOMPASS CALIBRATION

Gyrocompass Calibration

Date: 10 October 2006
Job Name: Apache Site Surveys
Job Number: 10033
Vessel: Bluefin
Ellipsoid: GRS80
Projection: GDA-MGA
Central Meridian: 147°
Scale Factor: 0.9996

Calibration location	Easting (m)	Northing (m)	Height (m)
Beauty Point	485344.15	5443659.02	Unknown

Calculated Grid Convergence: 0° 06' 53.9"
Negative - West of Central Meridian

Known Wharf Alignment (True): 340° 00' 00.0"

Gyrocompass Type and Identifier: Robertson Gyro
Measurements To: Fwd and Aft hull locations
Baseline Distance (m): 14.5

Time (hh:mm:ss)	Observed Position	Measured Distance (m)	Calculated (C) True Heading	Observed (O) Gyro True Heading	C-O
14:25:30	Fwd	1.400	341.74°	242.50°	99.24°
14:25:30	Aft	1.840			
14:26:00	Fwd	1.530	340.63°	241.80°	98.83°
14:26:00	Aft	1.690			
14:26:30	Fwd	1.120	341.90°	242.80°	99.10°
14:26:30	Aft	1.600			
14:27:00	Fwd	1.950	340.59°	242.50°	98.09°
14:27:00	Aft	2.100			
14:30:00	Fwd	1.960	339.45°	242.80°	96.65°
14:30:00	Aft	1.820			
14:32:00	Fwd	1.930	340.99°	243.70°	97.29°
14:32:00	Aft	2.180			
14:34:00	Fwd	1.460	341.34°	243.40°	97.94°
14:34:00	Aft	1.800			
14:34:30	Fwd	1.240	341.82°	243.20°	98.62°
14:34:30	Aft	1.700			
14:35:30	Fwd	1.400	340.55°	243.20°	97.35°
14:35:30	Aft	1.540			
14:36:00	Fwd	1.540	341.46°	242.80°	98.66°
14:36:00	Aft	1.910			
				Mean C-O	**98.18°**
				Stdev.	**0.86**

Surveyor: Client Representative:

APPENDIX C

DGPS VERIFICATION

Differential Global Positioning System Check

Date: 10 October 2006
Job Name: Apache Site Surveys
Job Number: 10033
Vessel: Bluefin
Ellipsoid: GRS80
Projection: GDA-MGA
Central Meridian: 147°
Scale Factor: 0.9996

Setup Station	Easting (m)	Northing (m)	Height (m)
10051	485215.984	5443626.87	Unknown
Backsight Station	**Easting (m)**	**Northing (m)**	**Height (m)**
10061	484909.874	5443666.562	Unknown

Calculated Plane Bearing: 277° 23' 17.1"
Calculated Grid Convergence: 0° 06' 57.5"
Negative - West of Central Meridian

Time (hh:mm:ss)	Plane Distance (m)	Plane Bearing			Calculated (C)		Observed (O) Positioning System DGPS Co-ordinates				
					Easting (m)	Northing (m)	Easting (m)	Northing (m)	dE (C-O)	dN (C-O)	DRMS
15:23:22	137.343	72°	07'	18"	485346.695	5443669.034	485346.730	5443669.020	-0.035	0.014	0.037
15:23:45	137.246	72°	08'	12"	485346.614	5443668.970	485346.520	5443668.920	0.094	0.050	0.106
15:24:05	137.259	72°	05'	34"	485346.594	5443669.074	485346.590	5443669.050	0.004	0.024	0.024
15:24:30	137.259	72°	07'	28"	485346.617	5443669.002	485346.660	5443669.020	-0.043	-0.018	0.046
15:25:06	137.349	72°	06'	07"	485346.686	5443669.081	485346.700	5443669.080	-0.014	0.001	0.014
15:25:22	137.502	72°	06'	08"	485346.832	5443669.127	485346.780	5443669.110	0.052	0.017	0.055
15:25:40	137.436	72°	06'	08"	485346.769	5443669.107	485346.740	5443669.110	0.029	-0.003	0.030
15:26:00	137.585	72°	05'	32"	485346.904	5443669.175	485346.870	5443669.170	0.034	0.005	0.034
15:26:23	137.469	72°	06'	10"	485346.801	5443669.116	485346.760	5443669.100	0.041	0.016	0.044
15:26:40	137.447	72°	05'	31"	485346.772	5443669.134	485346.770	5443669.130	0.002	0.004	0.004
15:26:57	137.287	72°	05'	31"	485346.620	5443669.085	485346.600	5443669.090	0.020	-0.005	0.021
15:27:18	137.362	72°	05'	55"	485346.696	5443669.092	485346.680	5443669.100	0.016	-0.008	0.018
15:27:36	137.531	72°	05'	23"	485346.850	5443669.165	485346.790	5443669.140	0.060	0.025	0.065
15:27:51	137.385	72°	05'	34"	485346.714	5443669.113	485346.770	5443669.140	-0.056	-0.027	0.062
15:28:15	137.515	72°	05'	43"	485346.839	5443669.147	485346.780	5443669.130	0.059	0.017	0.062
							Mean		**0.02**	**0.01**	**0.04**
							Stdev.		**0.04**	**0.02**	**0.03**

Surveyor: Client Representative:

Differential Global Positioning System Check

EARTH SCIENCES & SURVEYING

Date: 10 October 2006
Job Name: Apache Site Surveys
Job Number: 10033
Vessel: Bluefin
Ellipsoid: GRS80
Projection: GDA-MGA
Central Meridian: 147°
Scale Factor: 0.9996

Setup Station	Easting (m)	Northing (m)	Height (m)
10051	485215.984	5443626.87	N/A
Backsight Station	**Easting (m)**	**Northing (m)**	**Height (m)**
10061	484909.874	5443666.562	N/A

Calculated Plane Bearing: 277° 23' 17.1"
Calculated Grid Convergence: 0° 06' 57.5"

PRIMARY AND SECONDAY C-NAV COMPARISON

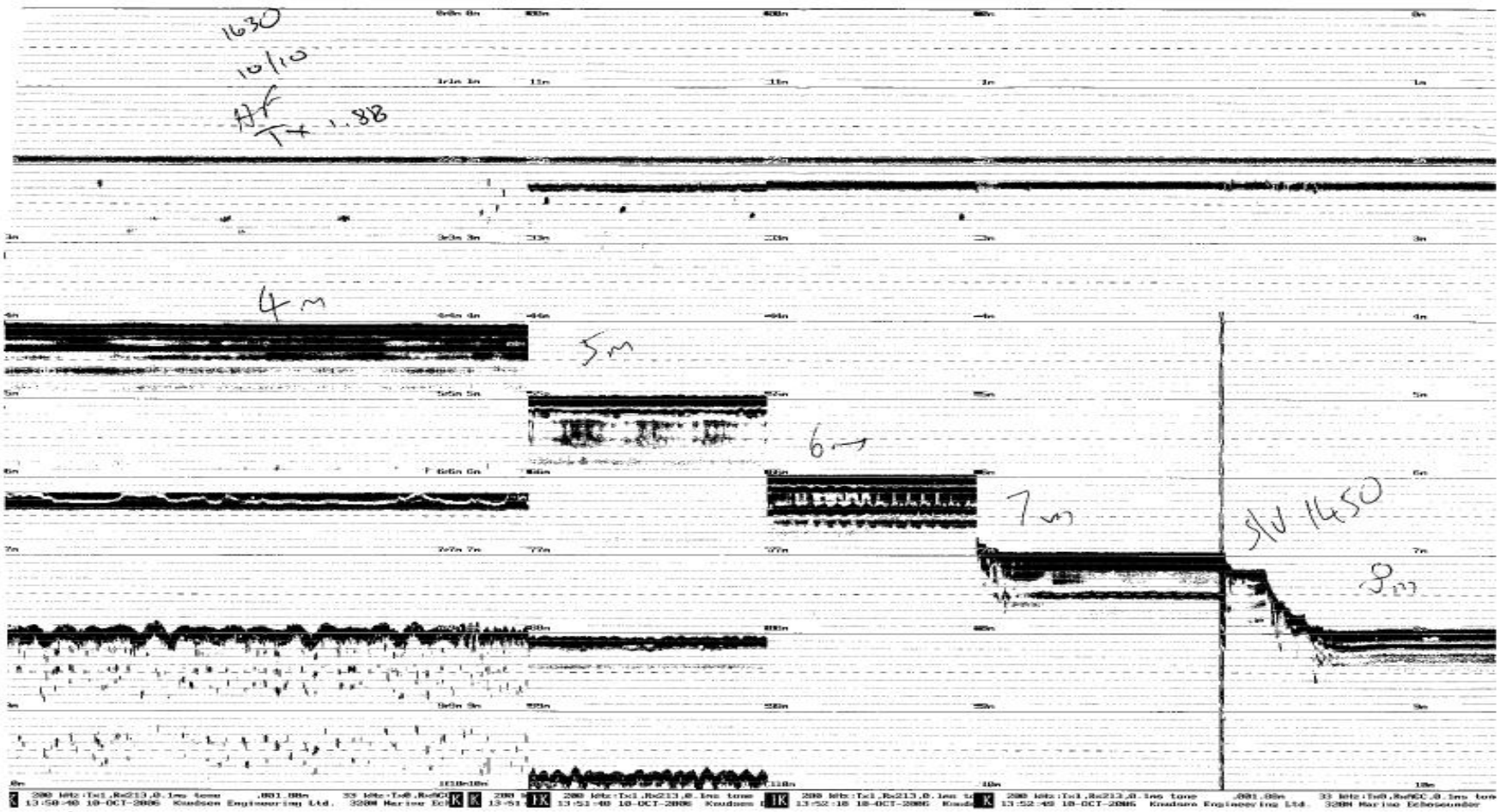
E Primary	N Primary	Time	E Secondary	N Secondary		Delta E	Delta N
608162.930	5698117.680	3:00:11	608162.870	5698117.710		0.060	-0.030
608181.040	5698161.440	3:00:21	608180.970	5698161.490		0.070	-0.050
608197.860	5698205.970	3:00:31	608197.790	5698205.980		0.070	-0.010
608211.480	5698251.920	3:00:41	608211.400	5698251.930		0.080	-0.010
608224.380	5698297.930	3:00:51	608224.320	5698297.960		0.060	-0.030
608241.310	5698342.740	3:01:01	608241.250	5698342.780		0.060	-0.040
608259.790	5698386.680	3:01:11	608259.700	5698386.710		0.090	-0.030
608274.510	5698431.860	3:01:21	608274.440	5698431.870		0.070	-0.010
608286.920	5698477.980	3:01:31	608286.860	5698478.010		0.060	-0.030
608302.410	5698523.100	3:01:41	608302.340	5698523.130		0.070	-0.030
608320.650	5698567.110	3:01:51	608320.570	5698567.140		0.080	-0.030
608336.560	5698612.080	3:02:01	608336.500	5698612.110		0.060	-0.030
608349.270	5698658.160	3:02:11	608349.190	5698658.190		0.080	-0.030
608363.630	5698703.940	3:02:21	608363.560	5698703.960		0.070	-0.020
608381.900	5698747.990	3:02:31	608381.840	5698748.030		0.060	-0.040
608400.350	5698792.030	3:02:41	608400.280	5698792.080		0.070	-0.050
608413.190	5698837.720	3:02:51	608413.110	5698837.770		0.080	-0.050
608425.950	5698884.170	3:03:01	608425.900	5698884.230		0.050	-0.060
608442.350	5698929.160	3:03:11	608442.290	5698929.190		0.060	-0.030
608460.910	5698973.010	3:03:21	608460.840	5698973.050		0.070	-0.040
608477.380	5699017.930	3:03:31	608477.300	5699017.990		0.080	-0.060
608489.940	5699063.800	3:03:41	608489.870	5699063.850		0.070	-0.050
608504.060	5699109.710	3:03:51	608504.000	5699109.760		0.060	-0.050
608521.660	5699154.440	3:04:01	608521.590	5699154.470		0.070	-0.030
608539.270	5699198.480	3:04:11	608539.200	5699198.540		0.070	-0.060
608552.910	5699244.310	3:04:21	608552.840	5699244.360		0.070	-0.050
608565.640	5699290.240	3:04:31	608565.580	5699290.290		0.060	-0.050
608582.040	5699334.870	3:04:41	608581.970	5699334.900		0.070	-0.030
608600.210	5699379.010	3:04:51	608600.160	5699379.070		0.050	-0.060
608616.080	5699423.840	3:05:01	608616.010	5699423.890		0.070	-0.050
608628.590	5699469.830	3:05:11	608628.520	5699469.870		0.070	-0.040
					AVG	**0.068**	**-0.038**
					STDEV	**0.009**	**0.015**

APPENDIX D

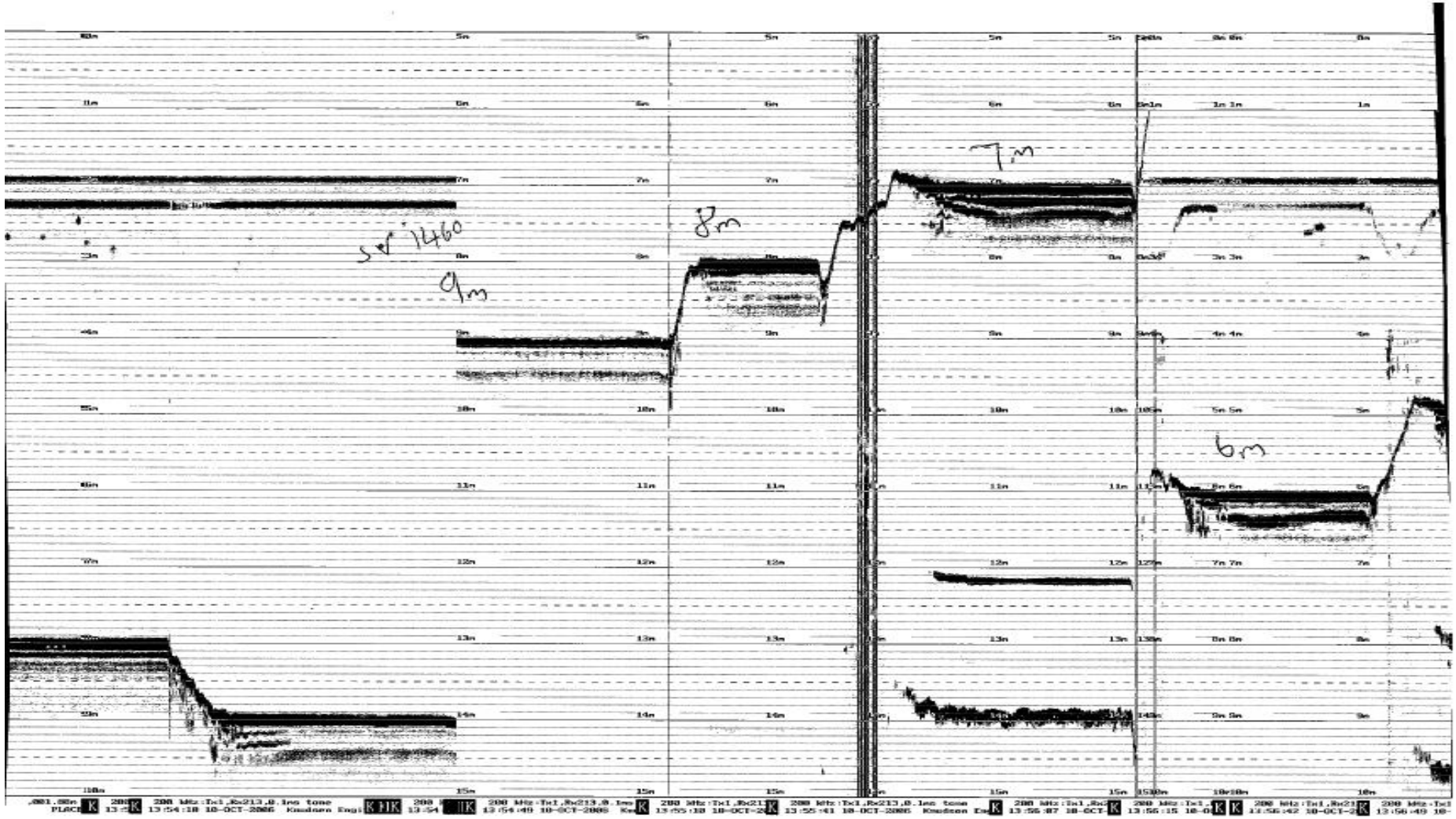
BAR CHECK

Apache Energy Limited
Coelacanth-1 & Wasabi-1 Site Survey
Bass Strait, Victoria

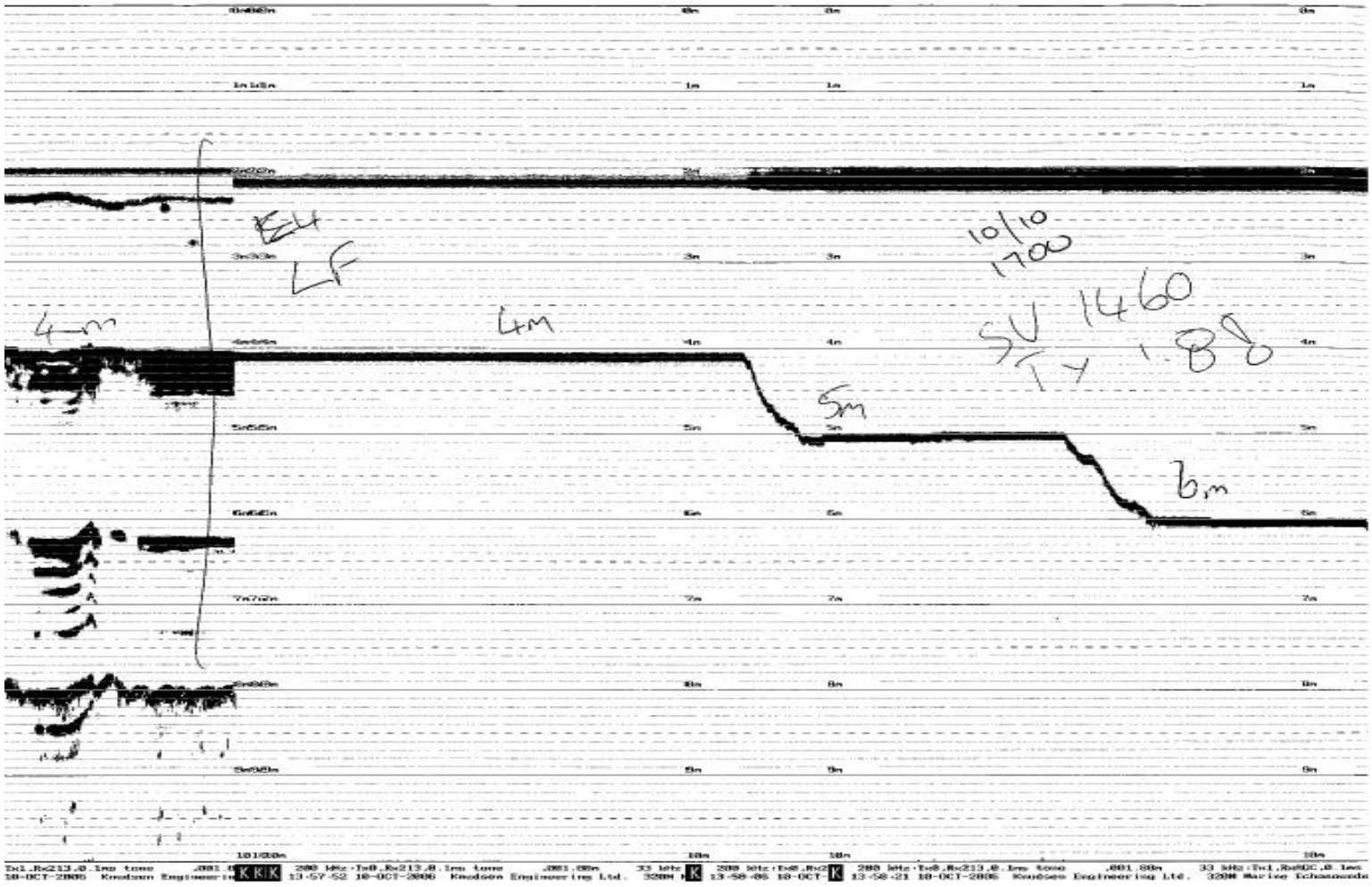
Bar Check Conducted on Site 10th of October 2006



Apache Energy Limited
Coelacanth-1 & Wasabi-1 Site Survey
Bass Strait, Victoria



Apache Energy Limited
Coelacanth-1 & Wasabi-1 Site Survey
Bass Strait, Victoria

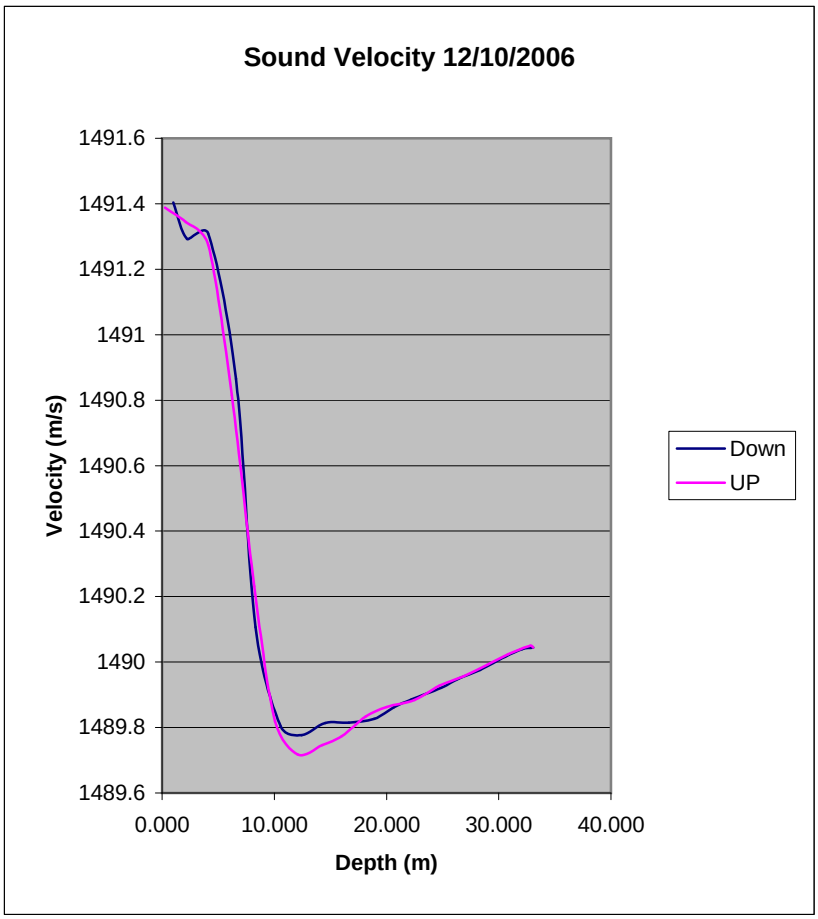


APPENDIX E

SOUND VELOCITY PROFILES

EARTH SCIENCES & SURVEYING	**Sound Velocity Profile** **21/08/06**	**Project:** Wasabi 1 **Job #:** 10033 **Client:** Apache **Vessel:** Bluefin

Sound Velocity	Depth
1491.404	0.994
1491.293	2.237
1491.309	4.101
1490.865	6.587
1490.107	8.327
1489.803	10.564
1489.777	12.428
1489.814	14.541
1489.815	16.654
1489.826	18.891
1489.862	20.631
1489.886	22.246
1489.921	24.856
1489.95	26.472
1489.976	28.336
1490.016	30.573
1490.039	32.064
1490.044	33.058
1490.044	33.058
1490.05	32.810
1490.024	30.821
1489.991	28.957
1489.956	26.845
1489.928	24.732
1489.884	22.495
1489.863	20.009
1489.833	18.145
1489.774	16.033
1489.746	14.293
1489.718	12.056
1489.819	10.067
1490.232	8.203
1490.815	6.214
1491.275	4.101
1491.344	2.113
1491.388	0.249



Mean Sound Velocity **1490.205**

APPENDIX F

VESSEL OFFSET DIAGRAM

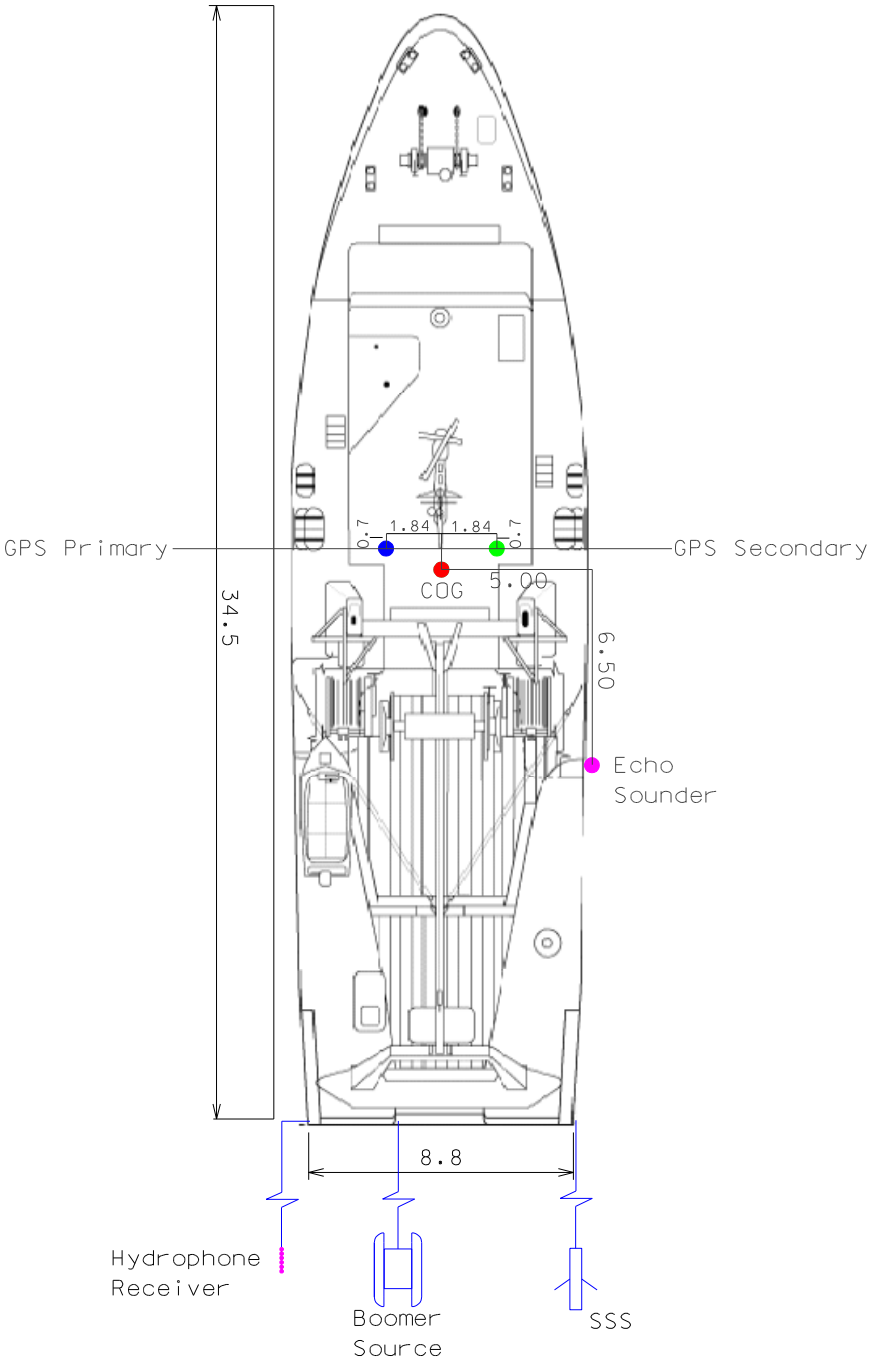
EGS (Australia) Pty Ltd

108 Stirling Street Perth, Western Australia 6000
Tel +618 9228 6800 Fax +618 9228 6806
www.egssurvey.com

Vessel Offset Diagram	
Vessel: FTV Bluefin	
Job No.:	10033
Project:	Coelacanth 1 & Wasabi 1 Site Survey
Date:	11th October 2006

Offset Diagram

Tow Configuration for FTV Bluefin



...\bluefin.dgn 24/10/2006 4:52:58 PM

APPENDIX G

TIDAL DATA

TIDE HEIGHT PREDICTIONS

LOCATION : Wasabi Site
LATITUDE : 38 29 6 S
LONGITUDE : 147 15 38 E
CLIENT : Apache Energy limited
TIME ZONE : UTC
DATUM : LAT (~0.95M < MSL)
PERIOD : 1/10/2006 - 31/10/2006
INTERVAL : 10 MINUTES

HH:MM	Day	Month	Year	Height
0:00	8	10	2006	1.49
0:10	8	10	2006	1.49
0:20	8	10	2006	1.49
0:30	8	10	2006	1.48
0:40	8	10	2006	1.46
0:50	8	10	2006	1.45
1:00	8	10	2006	1.43
1:10	8	10	2006	1.41
1:20	8	10	2006	1.38
1:30	8	10	2006	1.35
1:40	8	10	2006	1.32
1:50	8	10	2006	1.29
2:00	8	10	2006	1.26
2:10	8	10	2006	1.22
2:20	8	10	2006	1.18
2:30	8	10	2006	1.14
2:40	8	10	2006	1.10
2:50	8	10	2006	1.06
3:00	8	10	2006	1.02
3:10	8	10	2006	0.97
3:20	8	10	2006	0.93
3:30	8	10	2006	0.89
3:40	8	10	2006	0.85
3:50	8	10	2006	0.80
4:00	8	10	2006	0.76
4:10	8	10	2006	0.73
4:20	8	10	2006	0.69
4:30	8	10	2006	0.65
4:40	8	10	2006	0.62
4:50	8	10	2006	0.58
5:00	8	10	2006	0.55
5:10	8	10	2006	0.53
5:20	8	10	2006	0.50
5:30	8	10	2006	0.48
5:40	8	10	2006	0.46
5:50	8	10	2006	0.44
6:00	8	10	2006	0.42
6:10	8	10	2006	0.41
6:20	8	10	2006	0.41
6:30	8	10	2006	0.40
6:40	8	10	2006	0.40
6:50	8	10	2006	0.41

7:00	8	10	2006	0.41
7:10	8	10	2006	0.42
7:20	8	10	2006	0.44
7:30	8	10	2006	0.46
7:40	8	10	2006	0.48
7:50	8	10	2006	0.50
8:00	8	10	2006	0.53
8:10	8	10	2006	0.56
8:20	8	10	2006	0.59
8:30	8	10	2006	0.63
8:40	8	10	2006	0.66
8:50	8	10	2006	0.70
9:00	8	10	2006	0.74
9:10	8	10	2006	0.78
9:20	8	10	2006	0.82
9:30	8	10	2006	0.86
9:40	8	10	2006	0.90
9:50	8	10	2006	0.94
10:00	8	10	2006	0.98
10:10	8	10	2006	1.01
10:20	8	10	2006	1.05
10:30	8	10	2006	1.09
10:40	8	10	2006	1.12
10:50	8	10	2006	1.15
11:00	8	10	2006	1.18
11:10	8	10	2006	1.21
11:20	8	10	2006	1.24
11:30	8	10	2006	1.26
11:40	8	10	2006	1.29
11:50	8	10	2006	1.31
12:00	8	10	2006	1.32
12:10	8	10	2006	1.34
12:20	8	10	2006	1.35
12:30	8	10	2006	1.36
12:40	8	10	2006	1.37
12:50	8	10	2006	1.37
13:00	8	10	2006	1.37
13:10	8	10	2006	1.37
13:20	8	10	2006	1.36
13:30	8	10	2006	1.35
13:40	8	10	2006	1.34
13:50	8	10	2006	1.33
14:00	8	10	2006	1.31
14:10	8	10	2006	1.29
14:20	8	10	2006	1.27
14:30	8	10	2006	1.25
14:40	8	10	2006	1.22
14:50	8	10	2006	1.20
15:00	8	10	2006	1.17
15:10	8	10	2006	1.14
15:20	8	10	2006	1.11
15:30	8	10	2006	1.08
15:40	8	10	2006	1.05
15:50	8	10	2006	1.02
16:00	8	10	2006	0.99
16:10	8	10	2006	0.96
16:20	8	10	2006	0.93
16:30	8	10	2006	0.90
16:40	8	10	2006	0.88

16:50	8	10	2006	0.85
17:00	8	10	2006	0.82
17:10	8	10	2006	0.80
17:20	8	10	2006	0.77
17:30	8	10	2006	0.75
17:40	8	10	2006	0.73
17:50	8	10	2006	0.71
18:00	8	10	2006	0.69
18:10	8	10	2006	0.68
18:20	8	10	2006	0.67
18:30	8	10	2006	0.66
18:40	8	10	2006	0.65
18:50	8	10	2006	0.65
19:00	8	10	2006	0.65
19:10	8	10	2006	0.65
19:20	8	10	2006	0.66
19:30	8	10	2006	0.67
19:40	8	10	2006	0.68
19:50	8	10	2006	0.70
20:00	8	10	2006	0.72
20:10	8	10	2006	0.74
20:20	8	10	2006	0.76
20:30	8	10	2006	0.79
20:40	8	10	2006	0.82
20:50	8	10	2006	0.85
21:00	8	10	2006	0.88
21:10	8	10	2006	0.91
21:20	8	10	2006	0.95
21:30	8	10	2006	0.98
21:40	8	10	2006	1.02
21:50	8	10	2006	1.05
22:00	8	10	2006	1.08
22:10	8	10	2006	1.12
22:20	8	10	2006	1.15
22:30	8	10	2006	1.18
22:40	8	10	2006	1.21
22:50	8	10	2006	1.24
23:00	8	10	2006	1.27
23:10	8	10	2006	1.30
23:20	8	10	2006	1.32
23:30	8	10	2006	1.35
23:40	8	10	2006	1.37
23:50	8	10	2006	1.39
0:00	9	10	2006	1.40
0:10	9	10	2006	1.42
0:20	9	10	2006	1.43
0:30	9	10	2006	1.44
0:40	9	10	2006	1.45
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19:50	12	10	2006	1.24
20:00	12	10	2006	1.21
20:10	12	10	2006	1.19
20:20	12	10	2006	1.16
20:30	12	10	2006	1.13
20:40	12	10	2006	1.10
20:50	12	10	2006	1.07
21:00	12	10	2006	1.04
21:10	12	10	2006	1.01
21:20	12	10	2006	0.99
21:30	12	10	2006	0.96
21:40	12	10	2006	0.93
21:50	12	10	2006	0.91
22:00	12	10	2006	0.88
22:10	12	10	2006	0.86
22:20	12	10	2006	0.84
22:30	12	10	2006	0.83
22:40	12	10	2006	0.81
22:50	12	10	2006	0.80
23:00	12	10	2006	0.79
23:10	12	10	2006	0.78
23:20	12	10	2006	0.78
23:30	12	10	2006	0.78
23:40	12	10	2006	0.78
23:50	12	10	2006	0.78
0:00	13	10	2006	0.79
0:10	13	10	2006	0.80
0:20	13	10	2006	0.81
0:30	13	10	2006	0.82
0:40	13	10	2006	0.83
0:50	13	10	2006	0.85
1:00	13	10	2006	0.87
1:10	13	10	2006	0.89
1:20	13	10	2006	0.91
1:30	13	10	2006	0.94
1:40	13	10	2006	0.96
1:50	13	10	2006	0.99
2:00	13	10	2006	1.02
2:10	13	10	2006	1.05
2:20	13	10	2006	1.08
2:30	13	10	2006	1.11
2:40	13	10	2006	1.14
2:50	13	10	2006	1.17
3:00	13	10	2006	1.20
3:10	13	10	2006	1.23
3:20	13	10	2006	1.26
3:30	13	10	2006	1.29
3:40	13	10	2006	1.31
3:50	13	10	2006	1.34
4:00	13	10	2006	1.36
4:10	13	10	2006	1.38
4:20	13	10	2006	1.40
4:30	13	10	2006	1.42
4:40	13	10	2006	1.43
4:50	13	10	2006	1.44

5:00	13	10	2006	1.45
5:10	13	10	2006	1.45
5:20	13	10	2006	1.46
5:30	13	10	2006	1.46
5:40	13	10	2006	1.45
5:50	13	10	2006	1.45
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6:20	13	10	2006	1.41
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6:40	13	10	2006	1.37
6:50	13	10	2006	1.35
7:00	13	10	2006	1.32
7:10	13	10	2006	1.29
7:20	13	10	2006	1.26
7:30	13	10	2006	1.22
7:40	13	10	2006	1.18
7:50	13	10	2006	1.14
8:00	13	10	2006	1.10
8:10	13	10	2006	1.05
8:20	13	10	2006	1.00
8:30	13	10	2006	0.96
8:40	13	10	2006	0.91
8:50	13	10	2006	0.85
9:00	13	10	2006	0.80
9:10	13	10	2006	0.75
9:20	13	10	2006	0.70
9:30	13	10	2006	0.65
9:40	13	10	2006	0.60
9:50	13	10	2006	0.55
10:00	13	10	2006	0.51
10:10	13	10	2006	0.47
10:20	13	10	2006	0.43
10:30	13	10	2006	0.39
10:40	13	10	2006	0.35
10:50	13	10	2006	0.32
11:00	13	10	2006	0.29
11:10	13	10	2006	0.27
11:20	13	10	2006	0.25
11:30	13	10	2006	0.23
11:40	13	10	2006	0.21
11:50	13	10	2006	0.20
12:00	13	10	2006	0.20
12:10	13	10	2006	0.19
12:20	13	10	2006	0.19
12:30	13	10	2006	0.20
12:40	13	10	2006	0.20
12:50	13	10	2006	0.21
13:00	13	10	2006	0.23
13:10	13	10	2006	0.25
13:20	13	10	2006	0.27
13:30	13	10	2006	0.29
13:40	13	10	2006	0.32
13:50	13	10	2006	0.35
14:00	13	10	2006	0.38
14:10	13	10	2006	0.41
14:20	13	10	2006	0.45
14:30	13	10	2006	0.49
14:40	13	10	2006	0.53

14:50	13	10	2006	0.57
15:00	13	10	2006	0.62
15:10	13	10	2006	0.66
15:20	13	10	2006	0.71
15:30	13	10	2006	0.76
15:40	13	10	2006	0.80
15:50	13	10	2006	0.85
16:00	13	10	2006	0.89
16:10	13	10	2006	0.94
16:20	13	10	2006	0.98
16:30	13	10	2006	1.02
16:40	13	10	2006	1.06
16:50	13	10	2006	1.10
17:00	13	10	2006	1.14
17:10	13	10	2006	1.17
17:20	13	10	2006	1.21
17:30	13	10	2006	1.24
17:40	13	10	2006	1.26
17:50	13	10	2006	1.29
18:00	13	10	2006	1.31
18:10	13	10	2006	1.33
18:20	13	10	2006	1.35
18:30	13	10	2006	1.36
18:40	13	10	2006	1.37
18:50	13	10	2006	1.38
19:00	13	10	2006	1.38
19:10	13	10	2006	1.39
19:20	13	10	2006	1.38
19:30	13	10	2006	1.38
19:40	13	10	2006	1.37
19:50	13	10	2006	1.36
20:00	13	10	2006	1.34
20:10	13	10	2006	1.32
20:20	13	10	2006	1.30
20:30	13	10	2006	1.28
20:40	13	10	2006	1.25
20:50	13	10	2006	1.23
21:00	13	10	2006	1.20
21:10	13	10	2006	1.17
21:20	13	10	2006	1.14
21:30	13	10	2006	1.10
21:40	13	10	2006	1.07
21:50	13	10	2006	1.04
22:00	13	10	2006	1.01
22:10	13	10	2006	0.98
22:20	13	10	2006	0.94
22:30	13	10	2006	0.92
22:40	13	10	2006	0.89
22:50	13	10	2006	0.86
23:00	13	10	2006	0.84
23:10	13	10	2006	0.82
23:20	13	10	2006	0.80
23:30	13	10	2006	0.79
23:40	13	10	2006	0.77
23:50	13	10	2006	0.76

APPENDIX H

SEDIMENT SAMPLE LOGS

Grab sample — GS-COE001

Latitude: 38° 42.846' S
Longitude: 148° 18.108' E
Easting: 613180
Northing: 5714145
Chart number:
13-Oct-06, 15:50
Water depth: 91m
Penetration:
Recovery:

Project name: Site Surveys
Project number: 10033
Client: Apache
Survey vessel: FTV Bluefin
Datum: GDA94
Projection: UTM

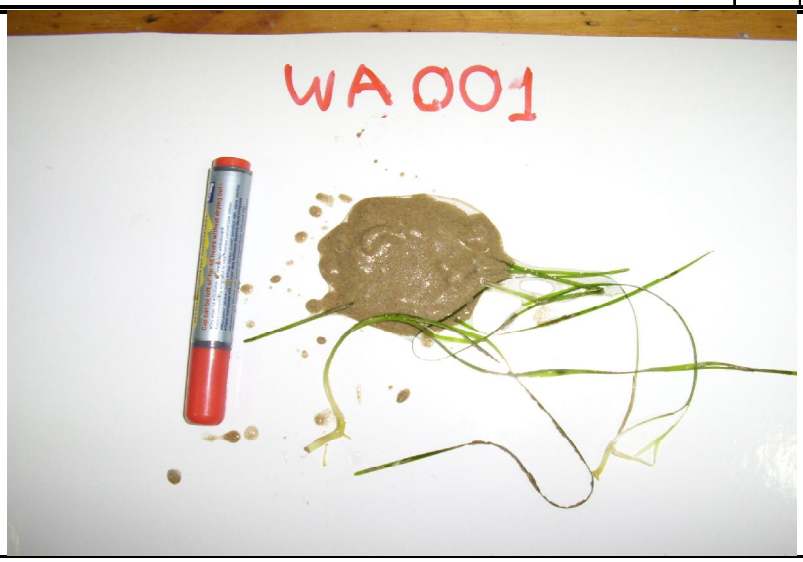
Depth	Description	Geotechnical Depth (m)	Geotechnical USS (kPa)	Geotechnical UCS (kg/cm^2)
0m	Light brown, well graded, gravelly fine to coarse SAND. Note: GRAVEL fraction comprises 100% shell and coral fragments up to 50mm in diameter			
1m				
2m				
3m	Note: Obtained with ship made dredge			

Grab sample — GS-WA001

Latitude: 38° 29.134' S
Longitude: 147° 15.581' E
Easting: 522649
Northing: 5740276
Chart number:
13-Oct-06, 00:55
Water depth: 28m
Penetration:
Recovery:

Project name: Site Surveys
Project number: 10033
Client: Apache
Survey vessel: FTV Bluefin
Datum: GDA94
Projection: UTM

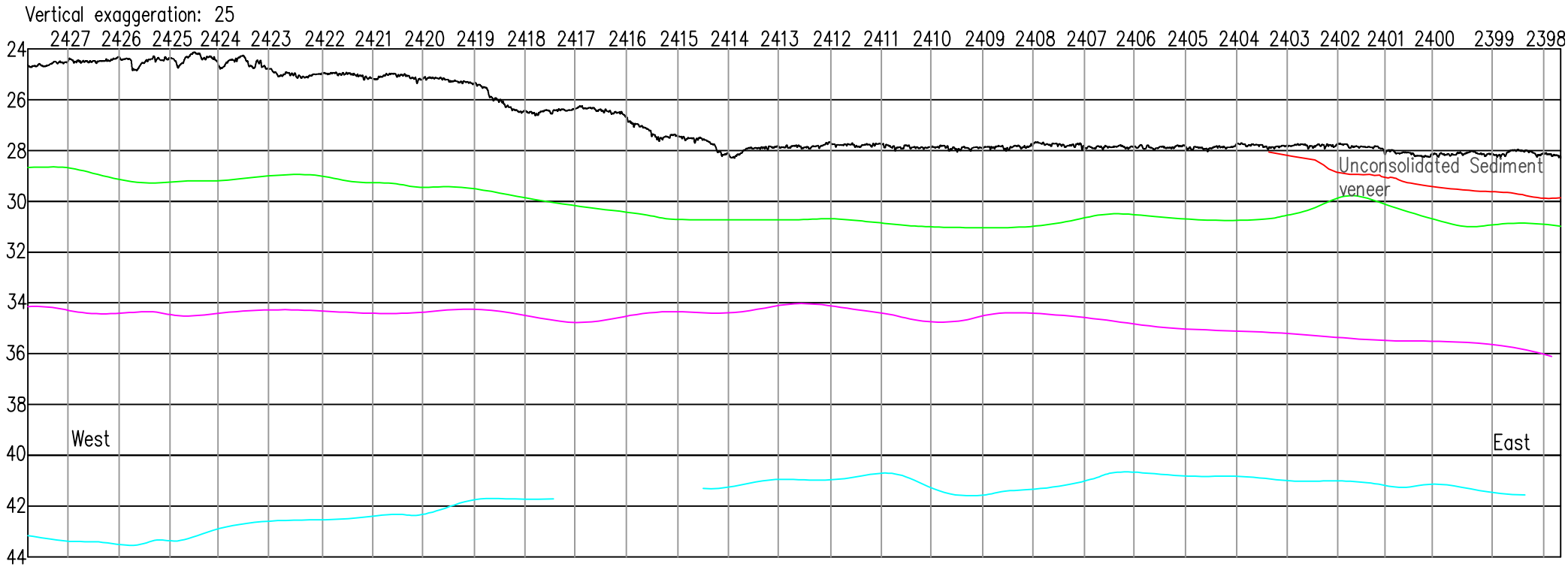
Depth	Description	Geotechnical		
		Depth (m)	USS (kPa)	UCS (kg/cm^2)
0m	Light brown, poorly graded, slightly gravelly, fine SAND			
1m				
2m				
3m	Note: Obtained with ship made dredge			

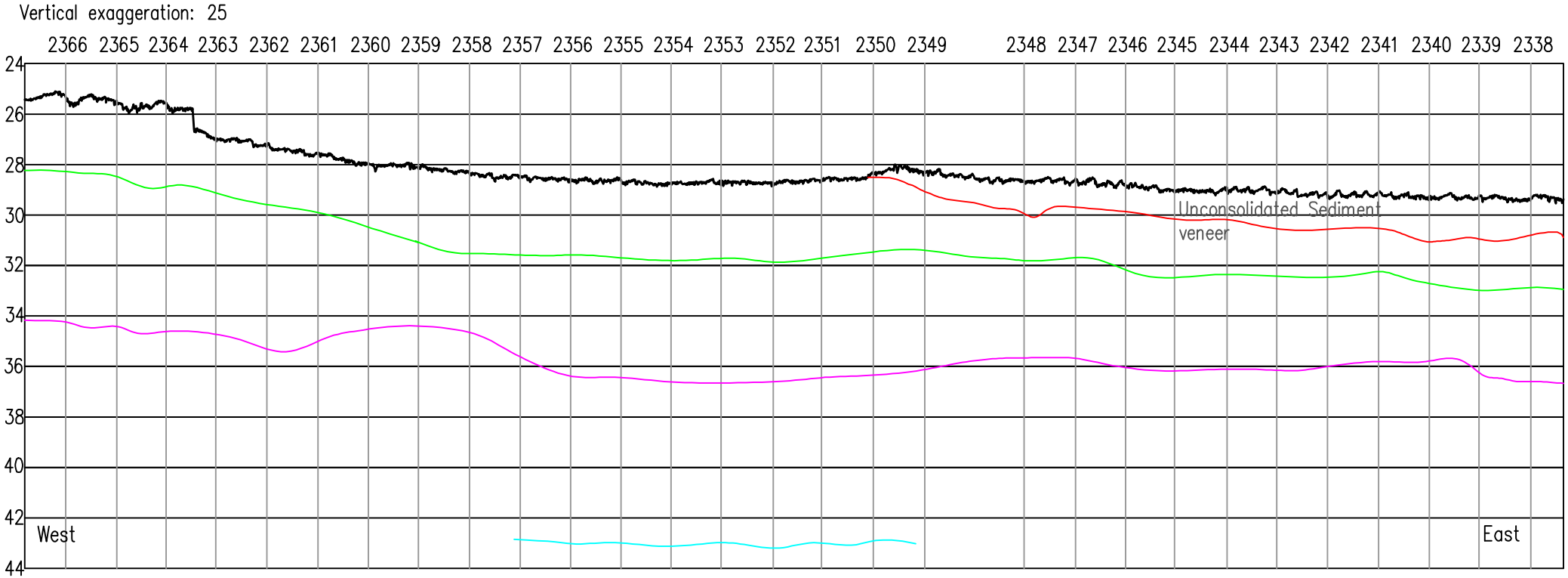


APPENDIX I

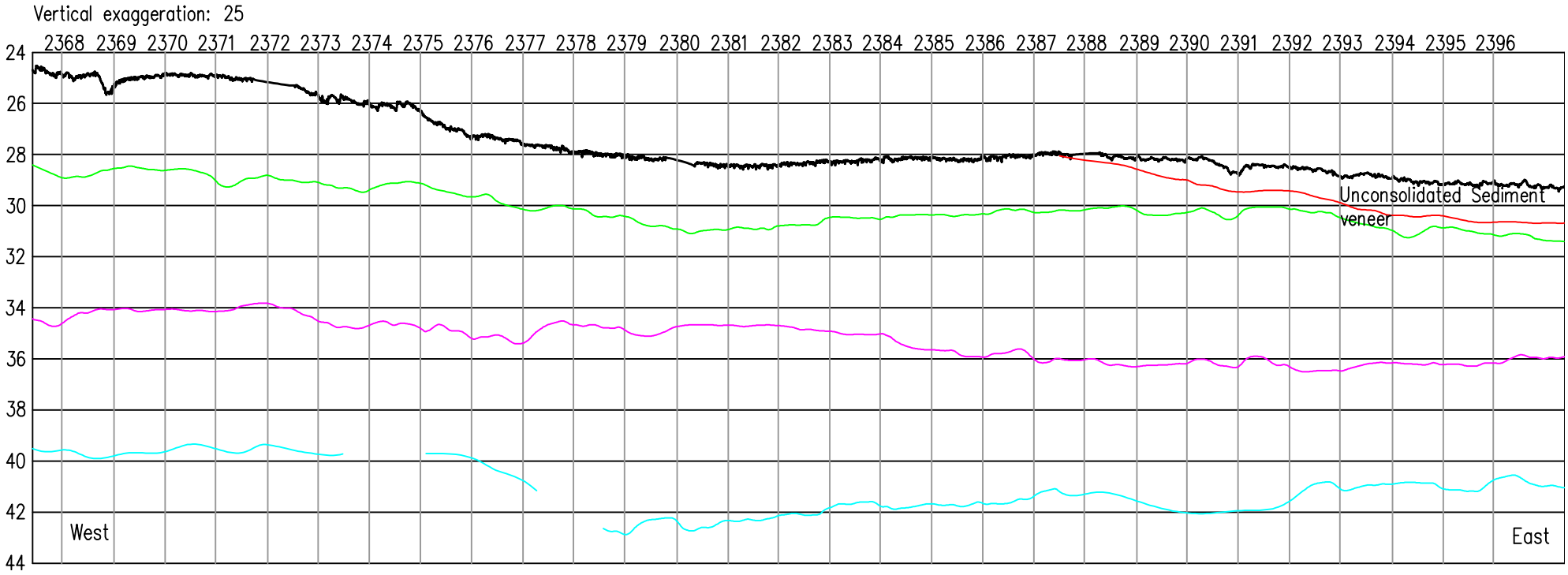
WASABI-1 PROFILES

Crossline 1


Vertical exaggeration: 25
2427 2426 2425 2424 2423 2422 2421 2420 2419 2418 2417 2416 2415 2414 2413 2412 2411 2410 2409 2408 2407 2406 2405 2404 2403 2402 2401 2400 2399 2398
24
26
28
30
32
34
36
38
40
42
44
Unconsolidated Sediment veneer
West
East


Vertical exaggeration: 25
2366 2365 2364 2363 2362 2361 2360 2359 2358 2357 2356 2355 2354 2353 2352 2351 2350 2349 2348 2347 2346 2345 2344 2343 2342 2341 2340 2339 2338
24
26
28
30
32
34
36
38
40
42
44
Unconsolidated Sediment
veneer
West
East

Crossline 3


Vertical exaggeration: 25
2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396
24
26
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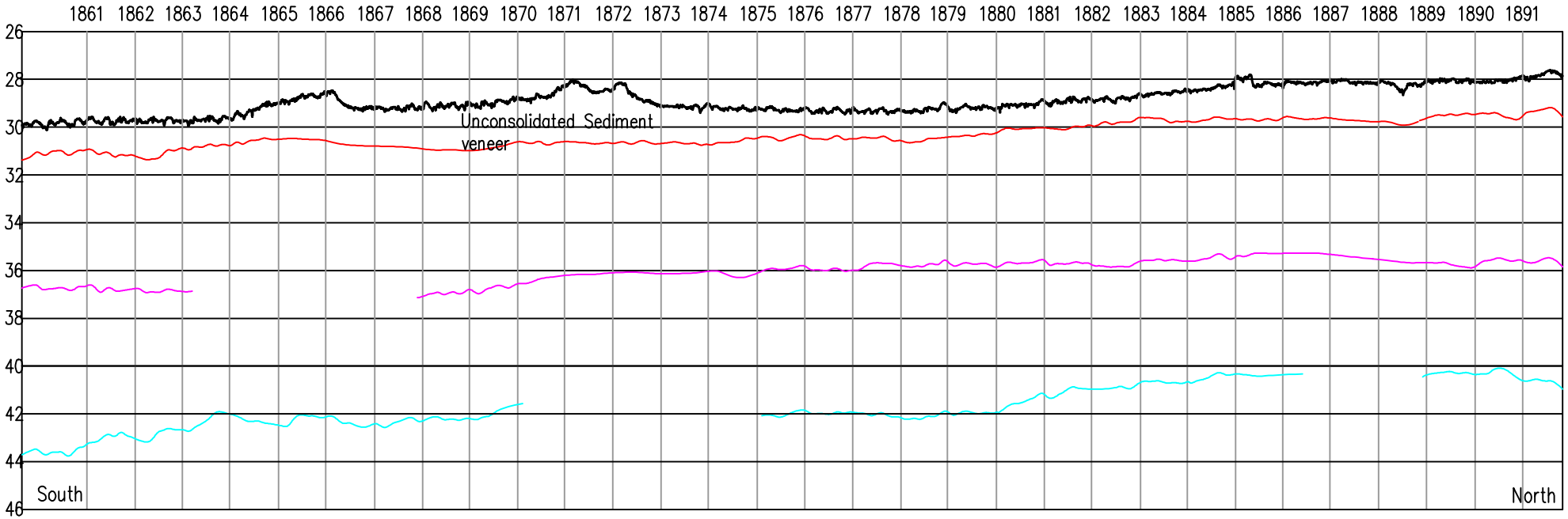
38
40
42
44
Unconsolidated Sediment veneer
West
East

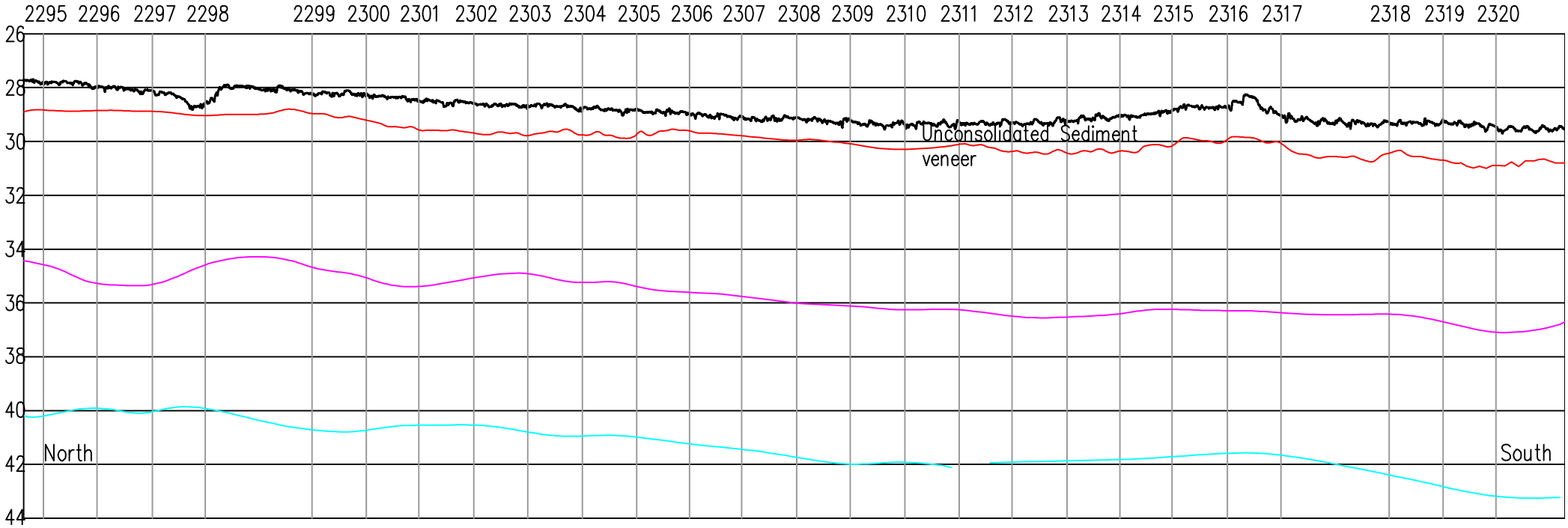
Line 001

Vertical exaggeration: 25

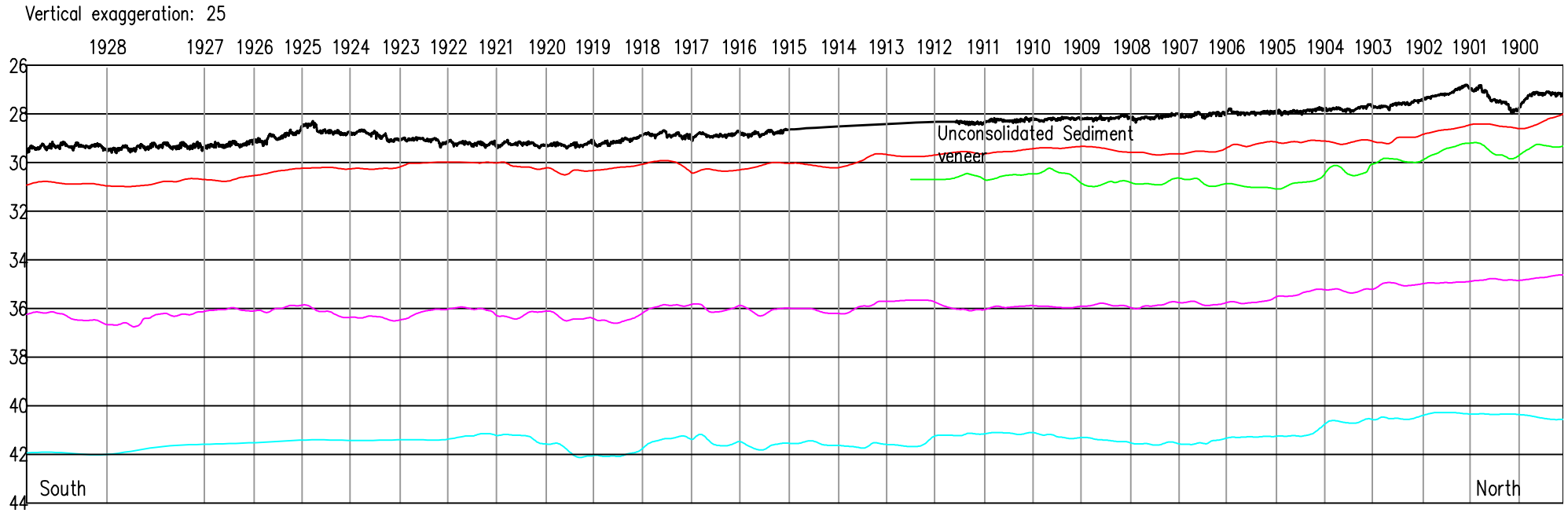


Line 100

Vertical exaggeration: 25



Line 200


Vertical exaggeration: 25
1928
1927
1926
1925
1924
1923
1922
1921
1920
1919
1918
1917
1916
1915
1914
1913
1912
1911
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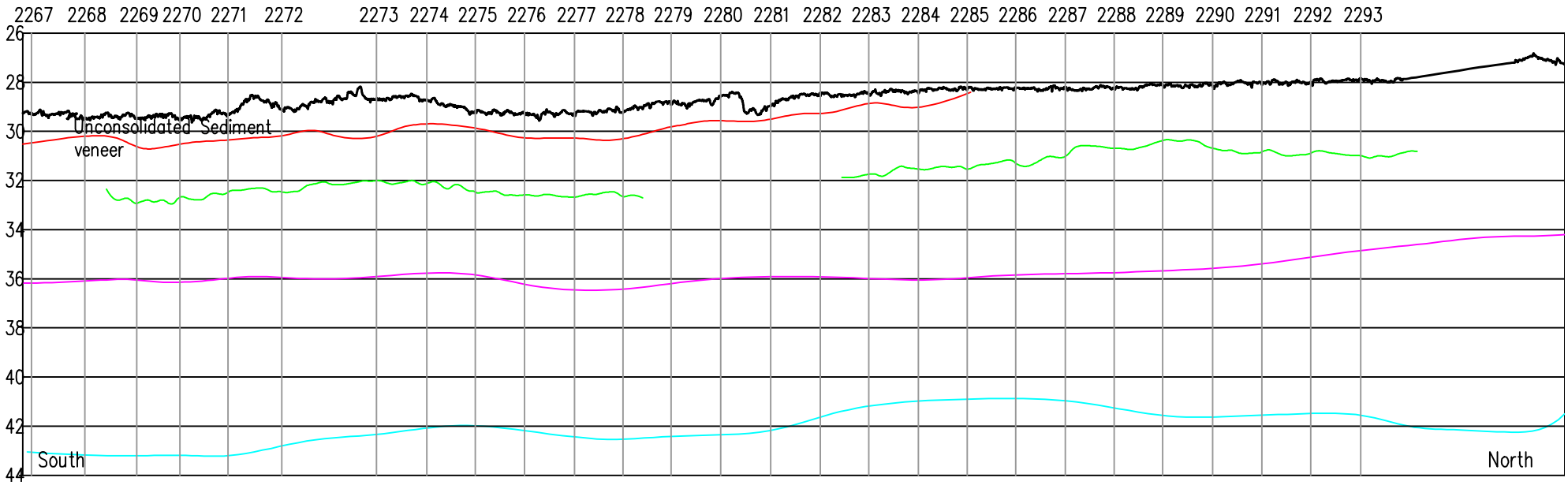
1908
1907
1906
1905
1904
1903
1902
1901
1900
26
28
30
32
34
36
38
40
42
44
Unconsolidated Sediment
veneer
South
North

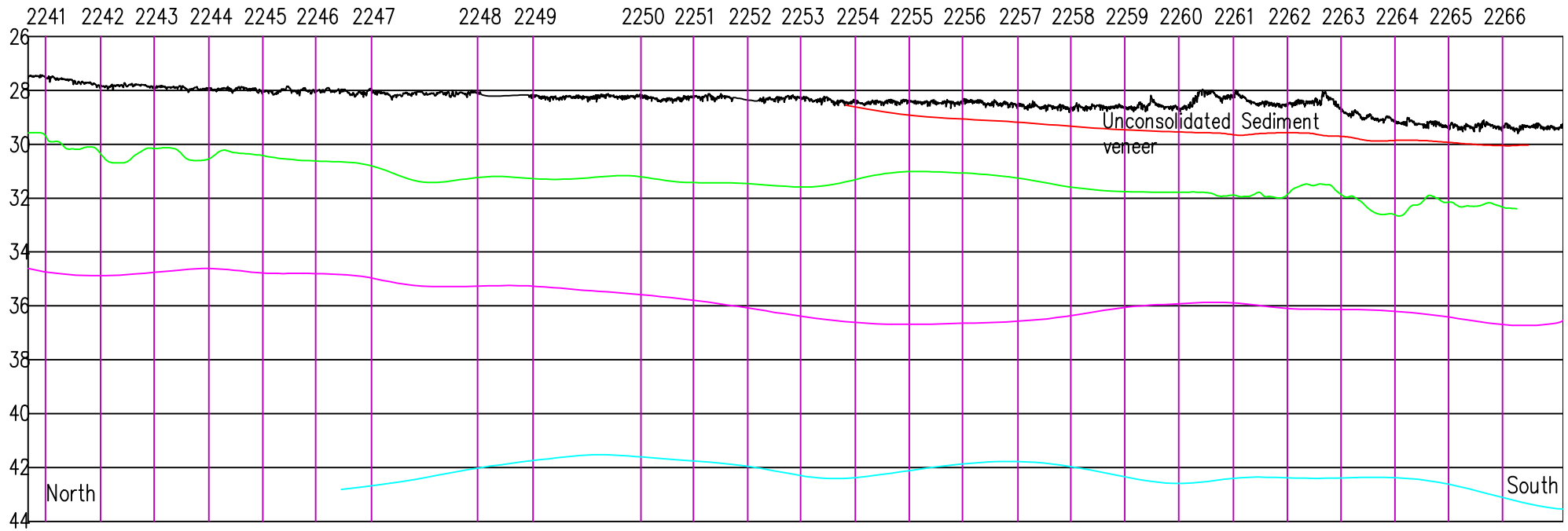
Line 300

Vertical exaggeration: 25

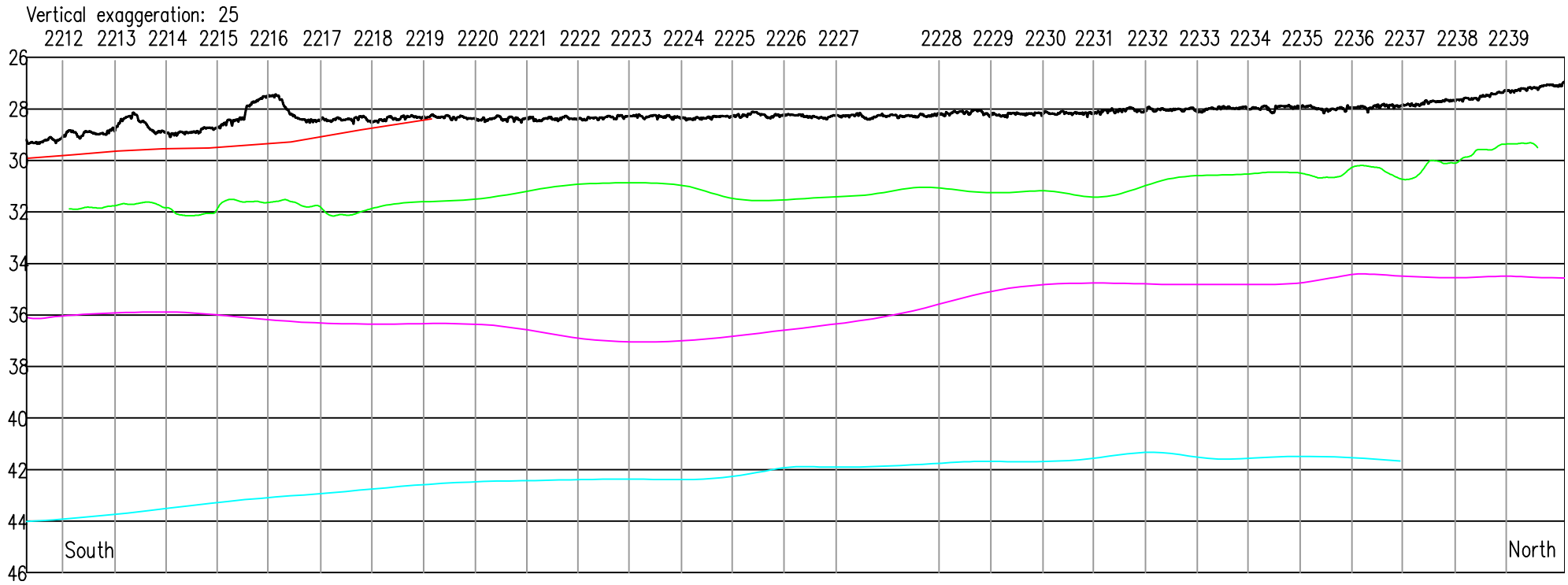


Line 400

Vertical exaggeration: 25



Line 500


Vertical exaggeration: 25
2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239
26
28
30
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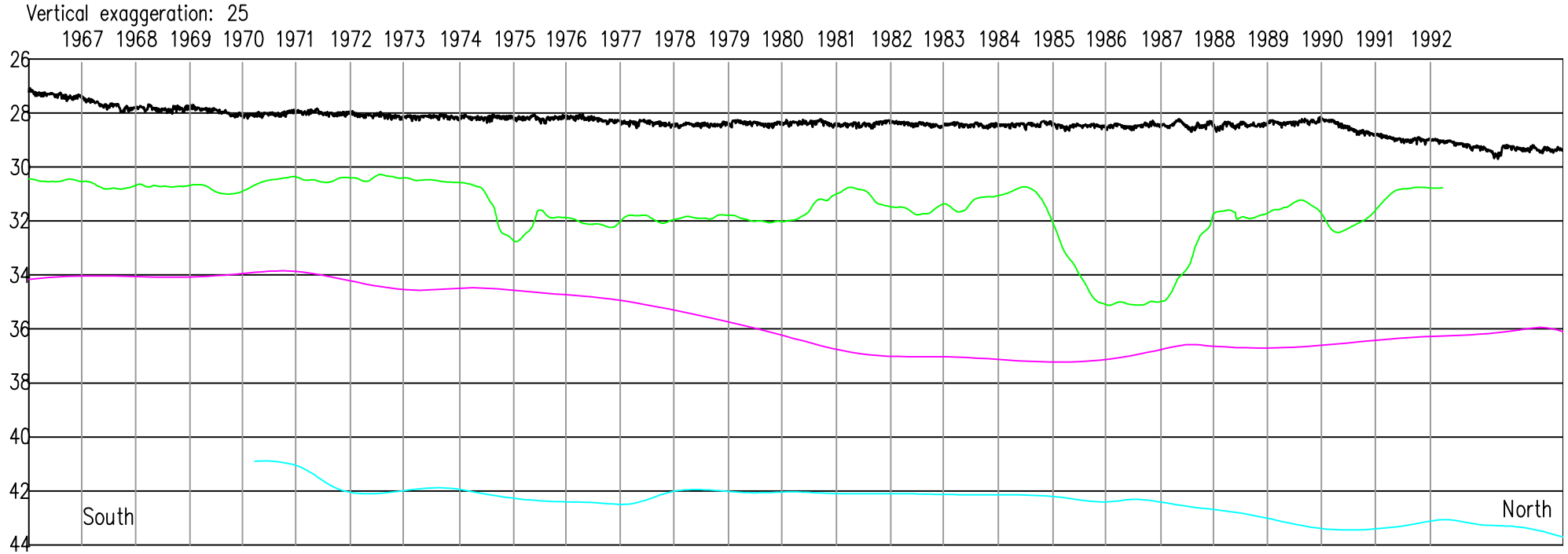
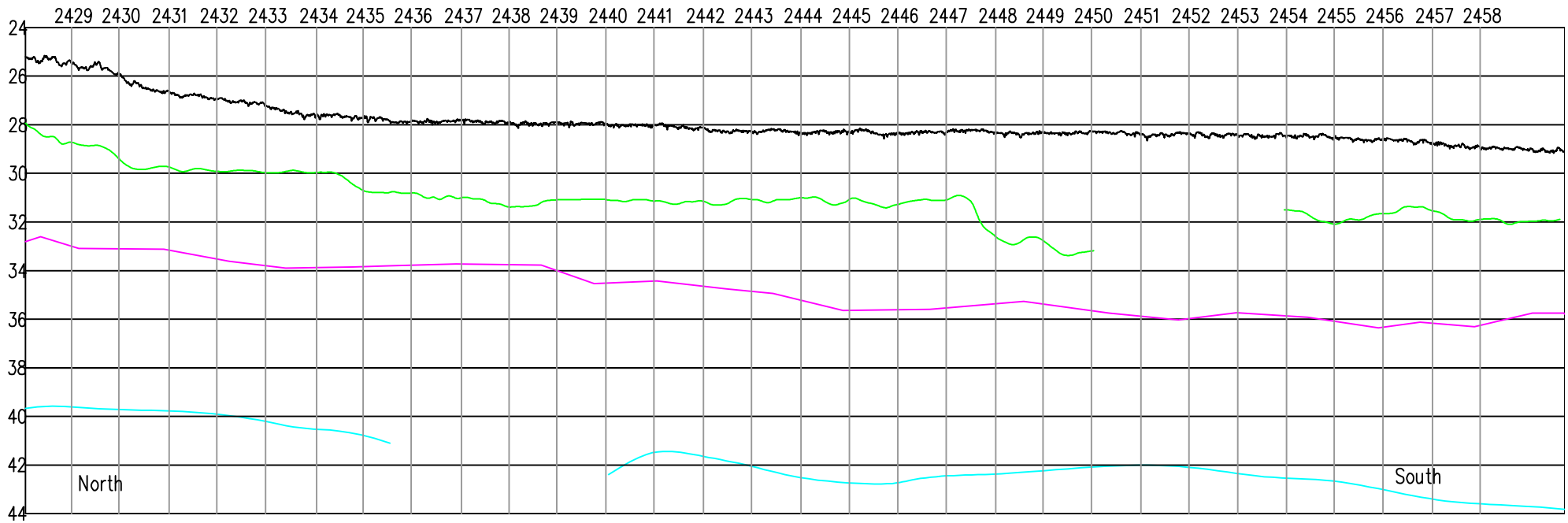
34
36
38
40
42
44
46
South
North

Line 600

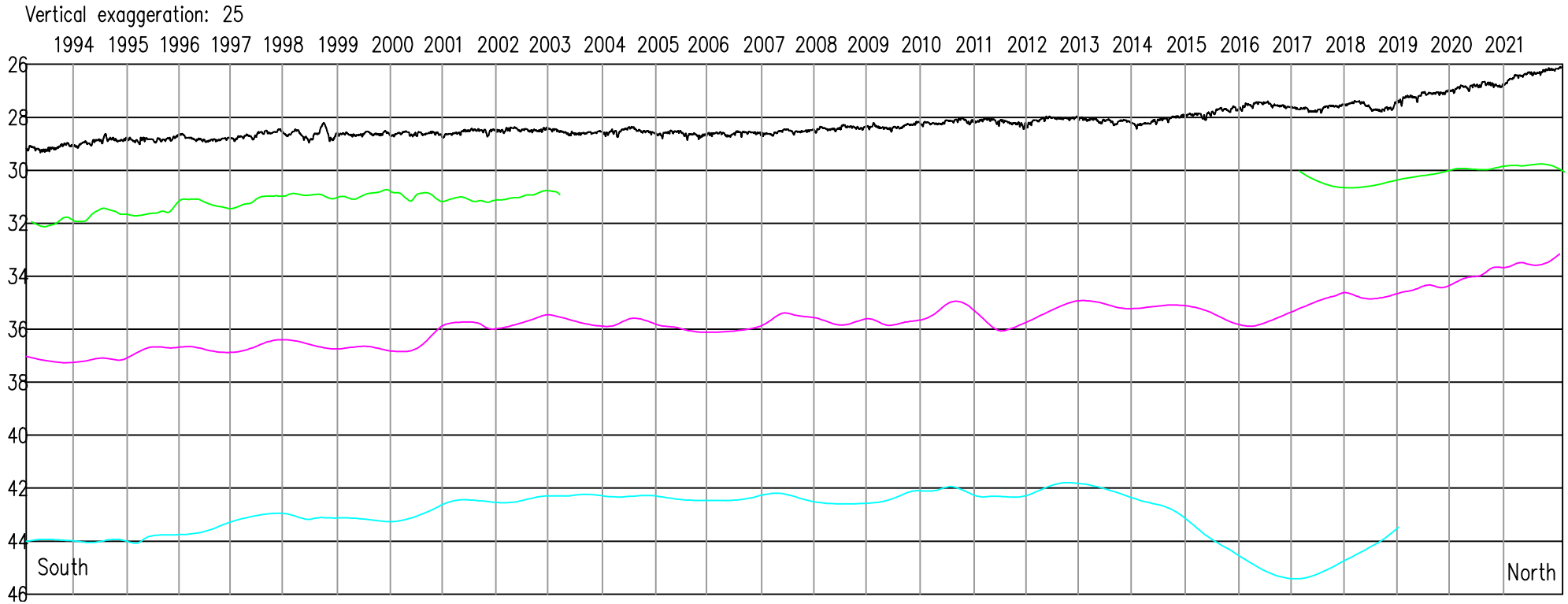

Vertical exaggeration: 25
1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992
26
28
30
32
34
36
38
40
42
44
South
North

Line 700

Vertical exaggeration: 25



Line 800


Vertical exaggeration: 25
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
26
28
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32
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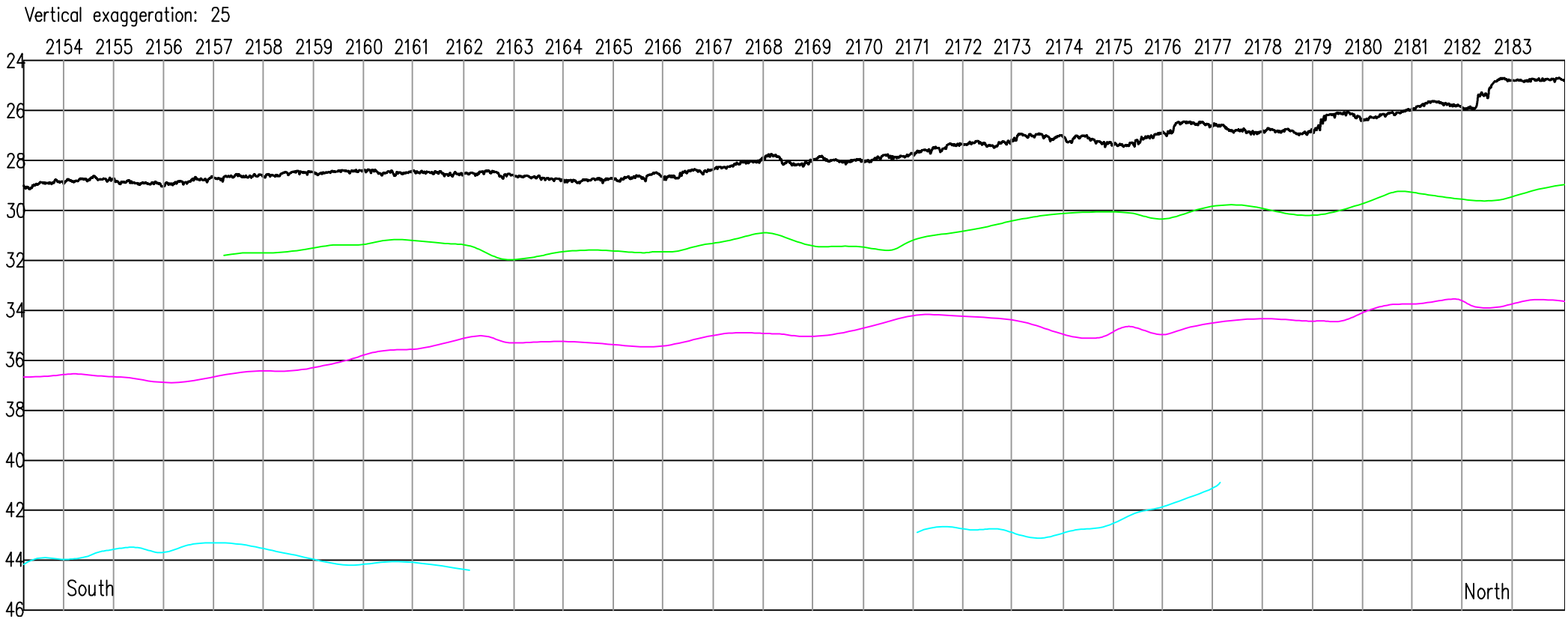
38
40
42
44
46
South
North

Line 900


Vertical exaggeration: 25
2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183
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32
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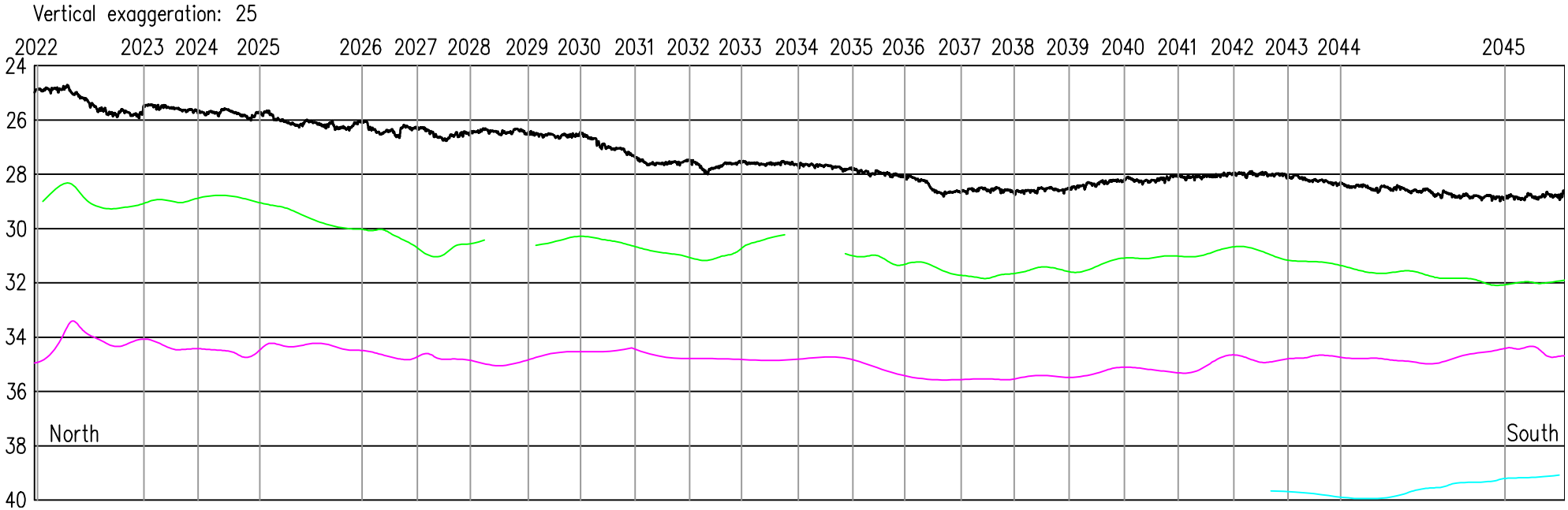
36
38
40
42
44
46
South
North

Line 1000


Vertical exaggeration: 25
2022
2023
2024
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2035
2036
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32
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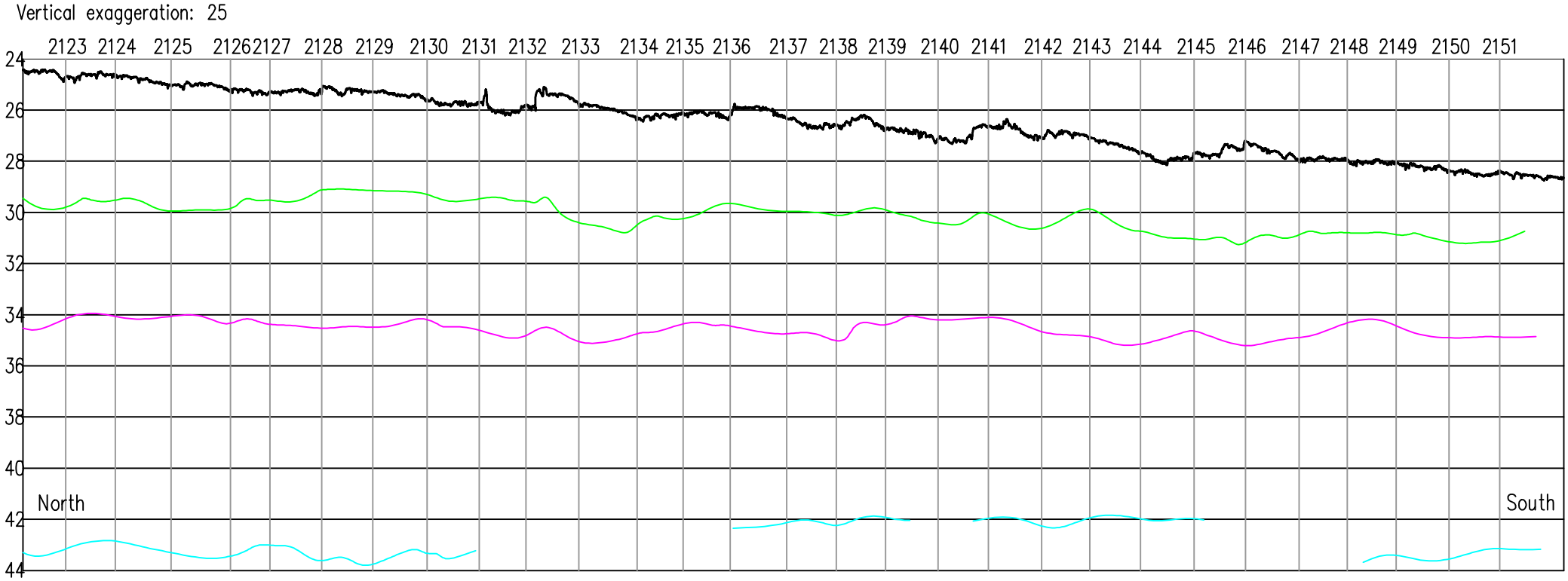
36
38
40
North
South


Vertical exaggeration: 25
2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151
24
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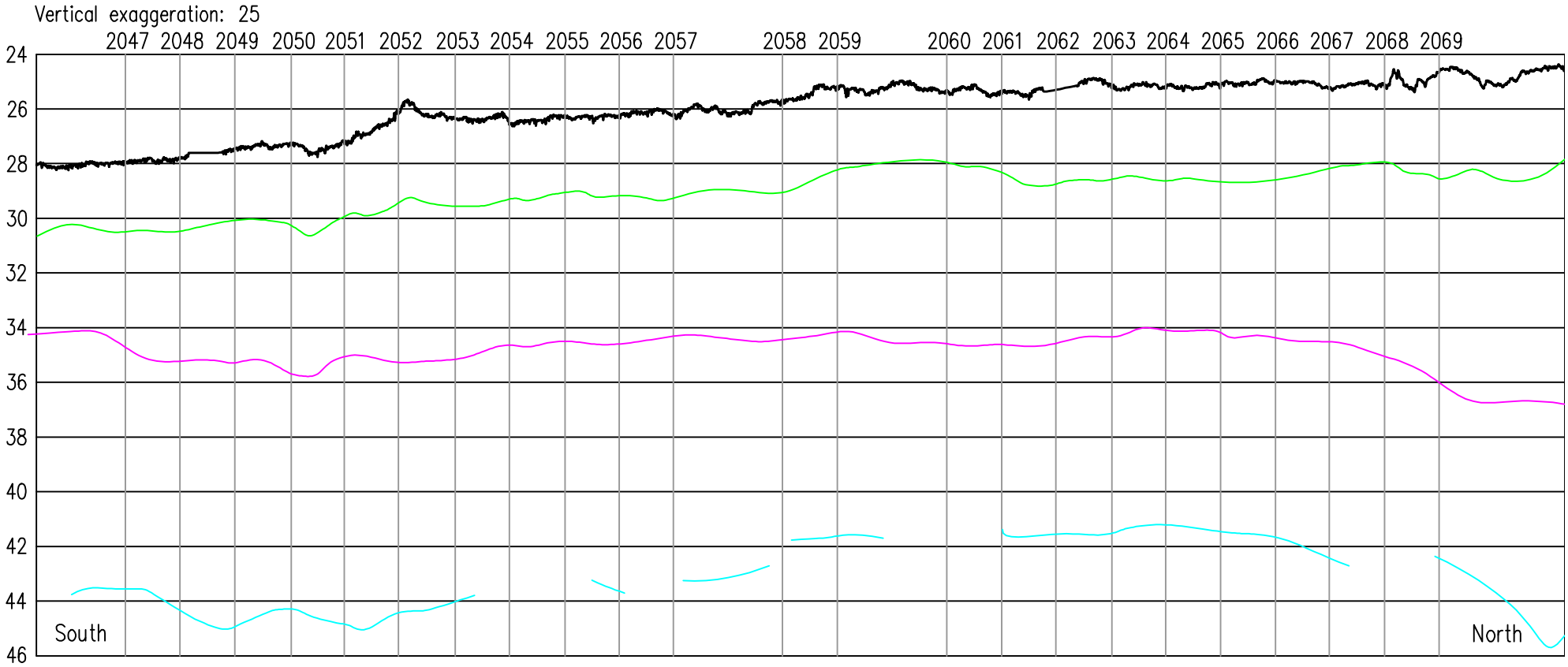
42
44
North
South

Line 1200


Vertical exaggeration: 25
2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069
24
26
28
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32
34
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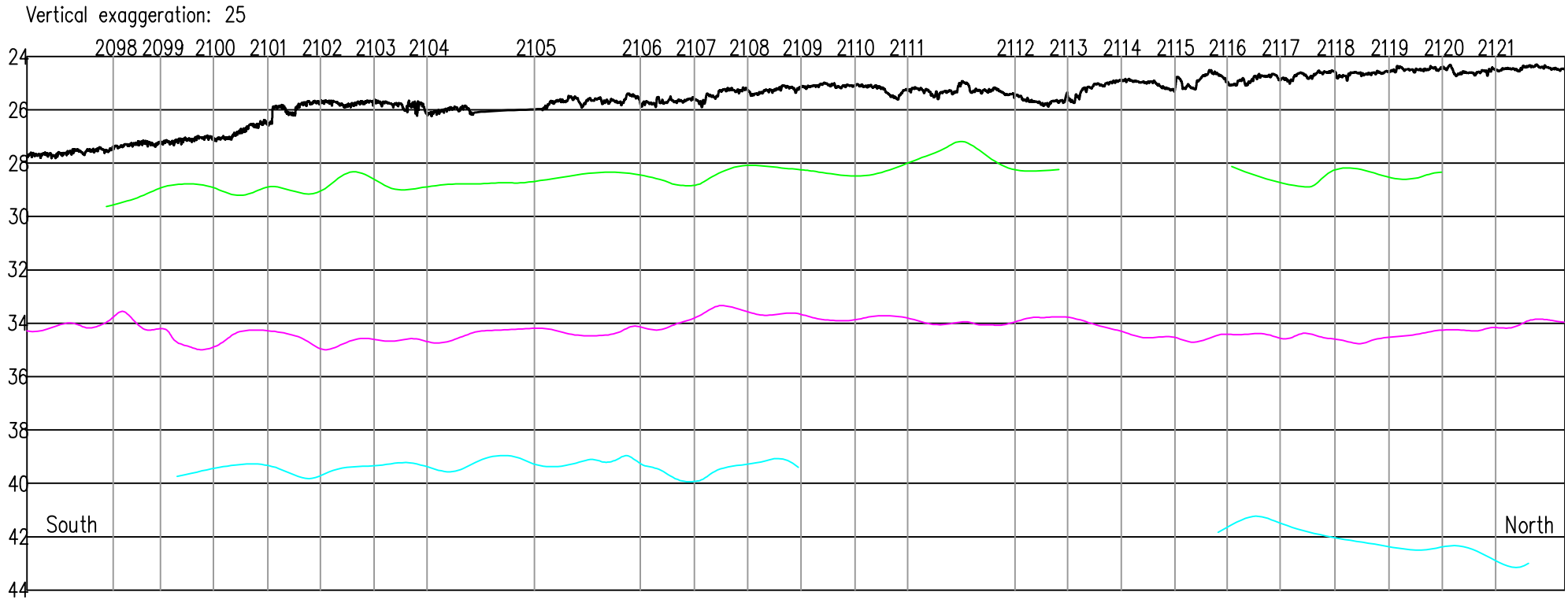
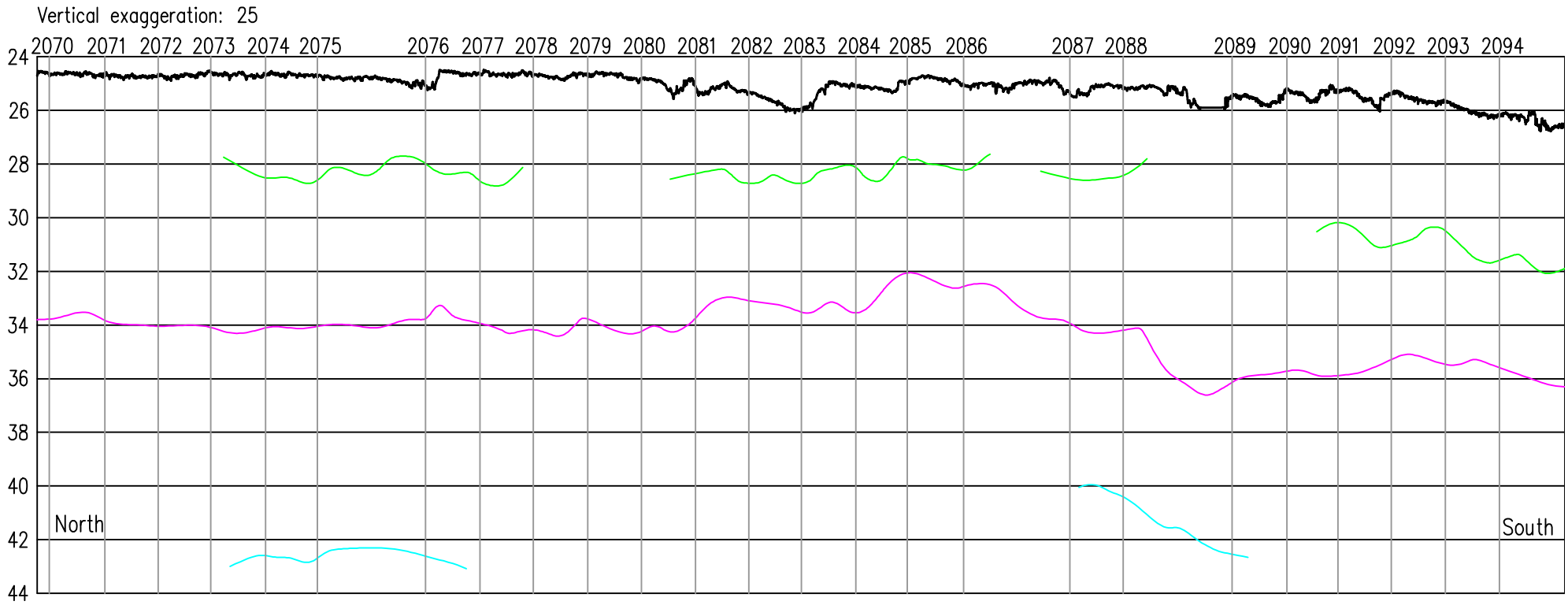
38
40
42
44
46
South
North

Line 1300


Vertical exaggeration: 25
2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121
24
26
28
30
32
34
36
38
40
42
44
South
North

Line 1400


Vertical exaggeration: 25
2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094
24
26
28
30
32
34
36
38
40
42
44
North
South

Apache Northwest Pty Ltd

Cuttings Descriptions Report

Well Name : Wasabi-1	**Print Date** 5/03/2008
Wellsite Geologist(s) : A Cruickshank H Little	

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
Main				
862.0 - 875.0	80	**CALCARENITE:** off white, light to medium grey, light brownish grey in part, arenaceous, common pale grey argillaceous matrix, abundant fossils, common very coarse frosted & iron stained quartz grains, trace nodular pyrite, rare glauconite specks, moderately hard aggregates, tight visible porosity, trace mineral fluorescence. **FLUORESCENCE : (Trace)** pale yellow mineral fluorescence.	75	
	20	**CALCILUTITE:** light to medium grey, off white to pale grey, trace grey, soft to dispersive, moderately hard in part, sub-blocky, argillaceous, trace microcrystalline, minor micro fossils		
875.0 - 885.0	70	**CALCARENITE:** as above, common silty matrix & locally grading to calcisiltite.	74	8
	30	**CALCISILTITE:** very light grey to light grey, medium to dark grey in part, firm, sub-blocky to blocky, commonly argillaceous & locally grading to calcilutite, common micro fossils, minor very fine glauconite, locally arenaceous.		
885.0 - 895.0	50	**CALCARENITE:** as above, trace to minor very coarse translucent to frosted quartz grains.		
	50	**CALCISILTITE:** as above		
895.0 - 910.0	60	**CALCARENITE:** as above, occasional very coarse lithics.	68	5
	20	**CALCISILTITE:** as above, common to locally abundant micro fossils.		
	20	**CALCILUTITE:** as above, commonly pale brown to tan.		
910.0 - 920.0	75	**CALCARENITE:** as above		
	20	**CALCISILTITE:** as above		
	5	**CALCILUTITE:** as above		
920.0 - 930.0	60	**ARGILLACEOUS CALCARENITE:** as above, common argillaceous matrix and grading to calcilutite.	64	6
	20	**CALCILUTITE:** as above, dominantly light to medium grey, common off white.		
	20	**CALCISILTITE:** as above, dominantly light to medium grey, common off white.		
930.0 - 940.0	60	**ARGILLACEOUS CALCARENITE:** as above		
	20	**CALCILUTITE:** as above		
	20	**CALCISILTITE:** as above		
940.0 - 950.0	70	**ARGILLACEOUS CALCARENITE:** as above, rare sponge spicules, rare coral fragments, rare rounded frosted quartz grains		
	20	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above		
950.0 - 970.0	40	**CALCISILTITE:** very light grey to light grey, medium to dark grey in part, firm, sub-blocky to blocky, commonly argillaceous & locally grading to calcilutite, common micro fossils, minor very fine glauconite, locally arenaceous, common black carbonaceous material	61	4
	40	**ARGILLACEOUS CALCARENITE:** dominantly as above with common colourless to white calcite crystals, minor sponge spicules, rare bivalve casts		
	20	**CALCILUTITE:** as above		
970.0 - 980.0	50	**ARGILLACEOUS CALCARENITE:** as above		
	30	**CALCISILTITE:** as above		
	20	**CALCILUTITE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
980.0 - 990.0	50	**CALCISILTITE:** as above	47	1
	30	**ARGILLACEOUS CALCARENITE:** as above		
	20	**CALCILUTITE:** as above		
990.0 - 1000.0	50	**CALCISILTITE:** as above	35	1
	30	**ARGILLACEOUS CALCARENITE:** off white, light to medium grey, light brownish grey in part, sub blocky to dominantly blocky, soft to firm, dominantly firm, arenaceous, common pale grey argillaceous matrix, abundant fossils, common very coarse frosted & iron stained quartz grains, trace nodular pyrite, rare glauconite specks, moderately hard aggregates, tight visible porosity, trace mineral fluorescence.		
	20	**CALCILUTITE:** as above		
1000.0 - 1010.0	40	**CALCISILTITE:** as above		
	40	**ARGILLACEOUS CALCARENITE:** as above		
	20	**CALCILUTITE:** as above		
1010.0 - 1020.0	50	**CALCISILTITE:** as above		
	30	**ARGILLACEOUS CALCARENITE:** as above		
	20	**CALCILUTITE:** as above		
1020.0 - 1030.0	50	**ARGILLACEOUS CALCARENITE:** as above, rare pyrite		
	30	**CALCILUTITE:** as above		
	20	**CALCISILTITE:** as above		
1030.0 - 1040.0	60	**ARGILLACEOUS CALCARENITE:** as above	38	3
	30	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above		
1040.0 - 1050.0	60	**ARGILLACEOUS CALCARENITE:** as above		
	30	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above		
1050.0 - 1060.0	60	**ARGILLACEOUS CALCARENITE:** as above	34	
	30	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above		
1060.0 - 1070.0	60	**ARGILLACEOUS CALCARENITE:** as above		
	30	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above, rare dark green glauconite		
1070.0 - 1080.0	50	**ARGILLACEOUS CALCARENITE:** off white, light to medium grey, light brownish grey in part, sub blocky to dominantly blocky, soft to firm, dominantly firm, rare moderately hard, arenaceous, common pale grey argillaceous matrix, abundant fossils, common very coarse frosted & iron stained quartz grains, trace nodular pyrite, rare glauconite specks, tight visible porosity, trace mineral fluorescence.		
	40	**CALCISILTITE:** as above		
	10	**CALCILUTITE:** as above		
1080.0 - 1090.0	40	**CALCISILTITE:** as above	30	0
	30	**ARGILLACEOUS CALCARENITE:** as above		
	30	**CALCILUTITE:** as above		
1090.0 - 1100.0	40	**CALCISILTITE:** as above		
	30	**CALCILUTITE:** as above		
	30	**ARGILLACEOUS CALCARENITE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1100.0 - 1110.0	40	**CALCISILTITE:** as above		
	30	**ARGILLACEOUS CALCARENITE:** as above		
	30	**CALCILUTITE:** as above		
1110.0 - 1120.0	50	**CALCISILTITE:** as above	30	1
	30	**CALCILUTITE:** as above		
	20	**ARGILLACEOUS CALCARENITE:** as above		
1120.0 - 1130.0	50	**CALCISILTITE:** as above	29	1
	30	**CALCILUTITE:** as above		
	20	**ARGILLACEOUS CALCARENITE:** as above, very rare well rounded spheroidal quartz grains greater than very course		
1130.0 - 1140.0	50	**CALCISILTITE:** as above		
	30	**CALCILUTITE:** as above		
	20	**ARGILLACEOUS CALCARENITE:** as above		
1140.0 - 1150.0	40	**CALCISILTITE:** as above		
	40	**CALCILUTITE:** as above		
	20	**ARGILLACEOUS CALCARENITE:** as above		
1150.0 - 1160.0	50	**CALCILUTITE:** as above	34	
	40	**CALCISILTITE:** as above		
	10	**ARGILLACEOUS CALCARENITE:** as above		
1160.0 - 1170.0	50	**CALCILUTITE:** as above, rare black carbonaceous material		
	40	**CALCISILTITE:** as above		
	10	**ARGILLACEOUS CALCARENITE:** as above		
1170.0 - 1180.0	50	**CALCILUTITE:** as above		
	40	**CALCISILTITE:** as above		
	10	**ARGILLACEOUS CALCARENITE:** as above		
1180.0 - 1190.0	40	**CALCILUTITE:** as above	28	3
	40	**CALCISILTITE:** as above		
	20	**ARGILLACEOUS CALCARENITE:** as above		
1190.0 - 1200.0	40	**CALCISILTITE:** as above		
	40	**CALCILUTITE:** as above, trace black carbonaceous material, rare round reddish brown lithic grains		
	20	**ARGILLACEOUS CALCARENITE:** as above		
1200.0 - 1210.0	100	**MARL:** pale to medium grey, very argillaceous, occasional calcareous fragments, locally arenaceous, firm to moderately hard, sub-blocky to blocky.	25	
1210.0 - 1230.0	100	**MARL:** as above, minor carbonaceous material.	25	1
1230.0 - 1240.0	100	**MARL:** as above	23	2
1240.0 - 1250.0	80	**CALCAREOUS SANDSTONE:** pale brown, light grey brown, translucent in part, very fine to coarse, dominantly very fine to fine, poor to moderately sorted, sub-angular to sub-rounded, locally angular coarse grains, common strong calcareous cement, common pale grey argillaceous matrix & locally grading to arenaceous SILTSTONE, common carbonaceous specks, locally common very fine glauconite, minor disseminated & nodular pyrite, generally loose grains, very hard aggregates, poor visible porosity.	4	1
	20	**CALCAREOUS SILTSTONE:** pale to medium grey, very argillaceous & commonly grading to calcareous claystone, minor calcareous fragments, firm to moderately hard, sub-blocky to blocky.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1250.0 - 1260.0	90	**CALCAREOUS SANDSTONE:** medium grey, occasionally off white to pale green, very fine to coarse, dominantly medium, poorly sorted, angular to sub-rounded, minor moderately strong calcareous cement, locally common light brown grey argillaceous matrix, common to abundant disseminated pyrite, common glauconite, generally loose grains, very hard aggregates, poor to fair visible porosity, fair to good inferred porosity.		
	10	**CALCAREOUS SILTSTONE:** as above, common to abundant disseminated pyrite, common very fine glauconite specks.		
1260.0 - 1270.0	100	**CALCAREOUS SANDSTONE:** clear to translucent, frosted, off white, fine to very coarse, poorly sorted, angular to sub-angular, minor weak calcareous cement, rare pale grey argillaceous matrix, common nodular and disseminated pyrite, common glauconite, generally loose clean quartz grains, good visible and inferred porosity.		
1270.0 - 1280.0	95	**CALCAREOUS SANDSTONE:** clear to translucent, frosted, off white, fine to coarse, dominantly medium, poor sorted, angular to sub-rounded, minor weak calcareous cement, rare pale grey argillaceous matrix, generally loose clean quartz grains, good visible and inferred porosity.	1	3
	5	**CALCAREOUS SILTSTONE:** light to medium grey brown, light to medium grey, argillaceous, minor calcareous material, common carbonaceous specks, common nodular and disseminated pyrite, common very fine glauconite specks, locally micaceous, firm, sub-blocky to blocky.		
1280.0 - 1290.0	90	**CALCAREOUS SANDSTONE:** as above.		
	10	**CALCAREOUS SILTSTONE:** as above.		
1290.0 - 1300.0	95	**SANDSTONE:** clear to translucent, pale brown, fine to very coarse, poorly sorted, angular to sub-rounded, trace weak calcareous cement, locally medium brown argillaceous matrix, common iron stained coarse grains, common carbonaceous fragments, occasional nodular pyrite and glauconite specks, generally loose clean quartz grains, good visible and inferred porosity.		
	5	**SILTSTONE:** as above.		
1300.0 - 1310.0	100	**SANDSTONE:** as above		
1310.0 - 1320.0	90	**SANDSTONE:** as above.		
	10	**SILTSTONE:** light to medium grey, light bluish grey, argillaceous and locally grading to claystone, occasional lithics and carbonaceous specks, trace nodular pyrite, trace micromicaceous, minor calcareous material, firm to moderately hard, sub-fissile to sub-blocky.		
1320.0 - 1330.0	95	**SANDSTONE:** clear to translucent, frosted, medium to very coarse, dominantly coarse, moderately well sorted, angular to sub-angular, rare weak calcareous cement, no visible matrix, occasional carbonaceous fragments, abundant loose clean quartz grains, good inferred porosity		
	5	**SILTSTONE:** medium to dark grey, occasional light grey, argillaceous, common carbonaceous material, locally arenaceous and grading to very fine sandstone, minor micaceous flecks, moderately hard to hard, sub-blocky to sub-fissile.		
1330.0 - 1340.0	70	**SANDSTONE:** clear to translucent, pale to medium brown grey, very fine to coarse, poorly sorted, angular to sub-angular to sub-angular, minor weak calcareous cement, locally common light brown grey argillaceous matrix where fine grained and grading to arenaceous siltstone, common carbonaceous laminations and specks, generally loose grains, moderately hard fine grained aggregates, poor visible porosity, fair to good inferred porosity.	2	3
	25	**SILTSTONE:** medium to dark grey, argillaceous, common carbonaceous material and locally grading to coal stringers, minor micaceous flecks, moderately hard to hard, sub-blocky to sub-fissile.		
	5	**COAL:** dark grey to black, sub-vitreous, dull to earthy in part, common silty laminations and locally grading to carbonaceous siltstone, friable to moderately hard, sub-fissile to sub-blocky, locally sub-conchoidal.		
1340.0 - 1350.0	95	**SANDSTONE:** clear to translucent, frosted, medium to very coarse grained, poorly sorted, angular to sub-angular, trace weak calcareous cement, minor localised pale grey brown argillaceous matrix, common carbonaceous specks, generally loose grains, good inferred porosity.		
	5	**SILTSTONE:** as above.		
1350.0 - 1360.0	90	**SANDSTONE:** as above, nil visible matrix.		
	10	**SILTSTONE:** as above, occasionally off white to pale bluish grey, locally		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		arenaceous and grading to very fine sandstone.		
1360.0 - 1370.0	85	**SANDSTONE:** as above	1	1
	15	**SILTSTONE:** as above		
1370.0 - 1380.0	85	**SANDSTONE:** clear to translucent, frosted, fine to very coarse, poor sorted, angular to sub-rounded, minor weak calcareous cement, rare pale grey argillaceous matrix, occasional carbonaceous material, trace very fine glauconite specks, generally loose grains, good inferred porosity.		
	15	**SILTSTONE:** as above, occasionally micromicaceous.		
1380.0 - 1390.0	40	**COAL:** black, dark grey, vitreous to sub-vitreous, silty in part and locally grading to very dark brown carbonaceous siltstone, hackly in part, friable to moderately hard, conchoidal to sub-conchoidal fracture, sub-blocky in part.		
	40	**SILTSTONE:** medium brown, me grey brown, tan, argillaceous, locally arenaceous laminations, common to abundant carbonaceous material and locally grading to coal, trace micromicaceous, firm to moderately hard, sub-blocky to sub-fissile.		
	20	**SANDSTONE:** pale brown, light grey brown, very fine to medium, occasional very coarse angular frosted grains, poor sorted, sub-angular to sub-rounded, minor pale grey argillaceous matrix and locally grading to arenaceous siltstone, generally loose, hard aggregates, poor visible porosity.		
1390.0 - 1400.0	80	**COAL:** black, dark grey, vitreous to sub-vitreous, silty in part and locally grading to very dark brown carbonaceous siltstone, hackly in part, friable to moderately hard, conchoidal to sub-conchoidal fracture, sub-blocky in part.		
	15	**SILTSTONE:** as above, occasionally light grey.		
	5	**SANDSTONE:** as above, very fine to very coarse, poor sorted, minor light brown argillaceous matrix.		
1400.0 - 1410.0	50	**COAL:** as above		
	45	**SILTSTONE:** as above, arenaceous and locally grading to very fine sandstone.		
	5	**SANDSTONE:** as above		
1410.0 - 1420.0	75	**SANDSTONE:** light grey brown, translucent, fine to coarse, poor sorted, sub-angular to sub-rounded, minor moderately strong calcareous cement, minor nodular pyrite, generally loose grains, fair to good inferred porosity.		
	10	**CALCAREOUS CLAYSTONE:** pale bluish grey, siliceous, common to abundant calcareous material, hard to very hard, sub-fissile.		
	10	**SILTSTONE:** medium grey brown, medium grey brown, light brown, arenaceous and locally grading to very fine sandstone, occasionally argillaceous, common lithics, common carbonaceous laminations, moderately hard to hard, sub-blocky to blocky.		
	5	**COAL:** as above, common silty laminations and grading to carbonaceous siltstone.		
1420.0 - 1425.0	70	**SANDSTONE:** clear to translucent, pale grey, very fine to very coarse, dominantly fine to medium, poorly sorted, angular to sub-rounded, minor weak calcareous cement, localised pale grey argillaceous matrix, common to locally abundant disseminated pyrite and glauconite specks, generally loose, hard aggregates, poor visible porosity, fair to good inferred porosity.	4	4
	20	**COAL:** as above.		
	10	**SILTSTONE:** as above.		
1425.0 - 1430.0	80	**COAL:** as above.	2	
	20	**SILTSTONE:** as above.		
1430.0 - 1435.0	50	**SILTSTONE:** dark brown grey, dark grey, argillaceous, abundant carbonaceous material and laminations, common grading to coal, occasional siderite cement, hard to very hard, sub-fissile.		
	50	**COAL:** as above		
1435.0 - 1440.0	95	**SILTSTONE:** light grey brown, light to medium brown, arenaceous & locally grading to very fine sandstone, occasional micromicaceous, trace calcareous material, common carbonaceous material, hard to very hard, sub-blocky, locally sub-fissile.		
	5	**COAL:** as above, commonly grading to carbonaceous siltstone.		
1440.0 - 1445.0	95	**SANDSTONE:** clear to translucent, frosted, Fe stained, medium to very coarse, dominantly coarse to very coarse, generally well sorted, angular to sub-angular, minor sub-rounded, abundant clean quartz grains, very good visible & inferred		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		porosity.		
	5	**SILTSTONE:** as above.		
1445.0 - 1450.0	90	**SANDSTONE:** as above, trace weak calcareous cement.		
	10	**SILTSTONE:** pale grey, pale bluish grey, pale brown to tan, siliceous, minor calcareous material, trace micromicaceous, hard to very hard, sub-fissile.		
1450.0 - 1455.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
1455.0 - 1460.0	100	**SANDSTONE:** as above		
1460.0 - 1470.0	95	**SANDSTONE:** as above		
	5	**COAL:** black, vitreous lustre, hard, blocky, conchoidal fracture in part		
1470.0 - 1475.0	70	**SANDSTONE:** as above		
	30	**COAL:** dominantly as above with rare localised brown argillaceous micro laminations		
1475.0 - 1480.0	80	**SANDSTONE:** dominantly as above with 20% white to off white, fine to medium, dominantly fine, angular, well sorted, weakly calcareous cemented aggregates, trace very light grey argillaceous matrix, commonly fractured aggregates creating loose quartz angular grains, poor to moderate inferred porosity		
	20	**COAL:** as above		
1480.0 - 1485.0	90	**SANDSTONE:** as above, dominately loose, 10% fine grained aggregates	0	3
	10	**CLAYSTONE:** light blue grey to medium blue grey, firm to moderately hard, blocky, moderately calcareous		
1485.0 - 1490.0	70	**SANDSTONE:** as above		
	20	**COAL:** as above		
	10	**CLAYSTONE:** as above, with localised white fleck throughout		
1490.0 - 1495.0	90	**COAL:** as above		
	10	**SANDSTONE:** as above		
1495.0 - 1500.0	70	**COAL:** as above		
	30	**SANDSTONE:** clear, transparent, loose, very fine to fine grained, dominantly fine, well sorted, sub angular to sub round, dominantly sub angular, spheroidal, rare nodular pyrite, moderate to good inferred porosity, no show		
1500.0 - 1505.0	100	**SANDSTONE:** white, entirely pulverised, rock flour, non calc		
1505.0 - 1510.0	100	**SANDSTONE:** dominantly white, minor transparent, loose, coarse to very coarse, dominantly very coarse, very well sorted, sub angular to rounded, dominantly rounded, spherical, good to very good inferred porosity, no show		
1510.0 - 1515.0	100	**SANDSTONE:** as above		
1515.0 - 1520.0	100	**SANDSTONE:** as above		
1520.0 - 1525.0	95	**SANDSTONE:** dominantly pulverised quartz grains, white rock flour, minor loose, fine to coarse, dominantly medium, sub rounded, spherical grains, no show	1	
	5	**CLAYSTONE:** light olive grey to light brown grey, soft, sub blocky, slightly calcareous		
1525.0 - 1530.0	100	**SANDSTONE:** white, transparent, colourless, loose, fine to very coarse, predominantly very coarse, well sorted, sub rounded to rounded, dominantly sub rounded, spherical, very good inferred porosity, no show		
1530.0 - 1535.0	80	**SANDSTONE:** off white, pale grey to pale brown, very fine to fine, occasionally medium to coarse grains, generally well sorted, sub-rounded, minor sub-angular, trace weak calcareous cement, common to abundant pale grey brown silty matrix and commonly grading to arenaceous siltstone, common silty laminations, common to rock flour, common carbonaceous material, generally loose grains, poor visible porosity.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1530.0 - 1535.0	20	**SILTSTONE:** pale brown, pale grey brown, arenaceous and common grading to very fine sandstone, occasional carbonaceous material, firm, sub-blocky.		
1535.0 - 1540.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
1540.0 - 1545.0	100	**CLAYSTONE:** medium brown, medium orange brown, very dark brown grey, trace arenaceous in part, trace calcareous material, common carbonaceous material where very dark brown grey, firm to hard, dispersive to sub-blocky, sub-fissile in part.		
1545.0 - 1550.0	90	**SANDSTONE:** translucent, frosted, pale brown, very fine to very coarse, poorly sorted, angular to sub-angular, minor sub-rounded, minor weak calcareous cement, trace pale brown silty matrix, generally loose clean grains, good inferred porosity.	3	
	10	**SILTSTONE:** as above, rare disseminated pyrite.		
1550.0 - 1555.0	100	**SANDSTONE:** translucent, frosted, very fine to very coarse, generally coarse to very coarse, moderately well sorted, angular to sub-angular, trace weak calcareous cement, minor moderately strong siliceous cement, trace off white to light brown argillaceous matrix, trace disseminated pyrite, generally loose grains, good inferred porosity.		
1555.0 - 1560.0	100	**SANDSTONE:** as above, common off white to pale brown argillaceous matrix.		
1560.0 - 1565.0	100	**SANDSTONE:** as above		
1565.0 - 1570.0	80	**SANDSTONE:** as above		
	20	**CLAYSTONE:** off white to pale brown, tan, siliceous, trace medium grey silty laminations, hard to very hard, sub-blocky to sub-fissile. Possibly tuff?		
1570.0 - 1575.0	90	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
1575.0 - 1580.0	80	**SANDSTONE:** as above.		
	10	**COAL:** black, very dark grey, vitreous, sub vitreous in part, minor silty laminations and locally grading to carbonaceous siltstone, firm to hard, brittle in part, conchoidal to sub-conchoidal fracture, sub-blocky in part.		
	10	**CLAYSTONE:** as above, dominantly bluish grey.		
1580.0 - 1585.0	50	**SANDSTONE:** as above	3	
	40	**COAL:** as above		
	10	**CLAYSTONE:** as above		
1585.0 - 1590.0	95	**SANDSTONE:** pale brown, translucent, frosted, fine to very coarse, poorly sorted, angular to sub-angular, generally loose clean grains, good inferred porosity.		
	5	**CLAYSTONE:** as above.		
1590.0 - 1600.0	80	**SANDSTONE:** as above.		
	20	**CLAYSTONE:** off white to pale brown, tan, siliceous, trace medium grey silty laminations, hard to very hard, sub-blocky to sub-fissile.		
1600.0 - 1605.0	90	**SANDSTONE:** as above	1	
	10	**CLAYSTONE:** as above		
1605.0 - 1620.0	100	**SANDSTONE:** as above, translucent and frosted, minor weak calcareous cement.		
1620.0 - 1635.0	80	**SANDSTONE:** as above, minor calcareous, trace fossil fragments, trace nodular pyrite.		
	20	**CLAYSTONE:** as above.		
1635.0 - 1645.0	85	**SANDSTONE:** as above, translucent and frosted, minor weak calcareous cement.	3	
	15	**CLAYSTONE:** as above.		
1645.0 - 1650.0	55	**CLAYSTONE:** as above		
	45	**SANDSTONE:** as above.		
1650.0 - 1660.0	60	**SANDSTONE:** as above, minor weak calcareous cement.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1650.0 - 1660.0	20	**SILTSTONE:** pale to medium grey, medium bluish grey, siliceous, argillaceous and grd to claystone in part, occasional calcareous material, minor carbonaceous specks, trace micromicaceous, trace lithics, hard to very hard, sub-fissile to sub-blocky.		
	20	**CLAYSTONE:** as above		
1660.0 - 1665.0	80	**SANDSTONE:** as above, dominantly coarse to very coarse, moderately sorted.	4	
	15	**SILTSTONE:** as above		
	5	**CLAYSTONE:** as above		
1665.0 - 1670.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
1670.0 - 1675.0	85	**SANDSTONE:** pale brown, clear to translucent, frosted, very fine to very coarse, dominantly fine to medium, poorly sorted, sub-angular to sub-rounded, angular where coarse, trace weak calcareous cement, common pale brown argillaceous matrix & locally grading to arenaceous siltstone, common carbonaceous laminations, minor nodular pyrite, generally loose, moderately hard to hard aggregates, tight to poor visible porosity, fair inferred porosity.		
	10	**SILTSTONE:** pale to medium brown, arenaceous and commonly grading to very fine sandstone, common micromicaceous, trace calcareous material, common carbonaceous laminations and specks, common nodular pyrite, hard, sub-blocky.		
	5	**COAL:** as above, common grading to carbonaceous siltstone.		
1675.0 - 1680.0	95	**SANDSTONE:** clear to translucent, off white in part, fine to very coarse, poorly sorted, angular to subangular, subround where fine, trace weak calcareous cement, nil visible matrix, occasional carbonaceous material, occasional nodular pyrite, good inferred porosity		
	5	**SILTSTONE:** as above		
1680.0 - 1685.0	100	**SANDSTONE:** dominantly as above, frosted, translucent, minor off white to pale brown argillaceous matrix, no calcareous cement		
1685.0 - 1690.0	100	**SANDSTONE:** as above		
1690.0 - 1695.0	100	**SANDSTONE:** as above	1	
1695.0 - 1700.0	60	**SANDSTONE:** as above		
	40	**SILTSTONE:** off white to pale brown, locally pale brownish grey, hard to very hard, subblocky, common very fine sand grains, common lithics and carbonaceous material		
1700.0 - 1705.0	90	**SANDSTONE:** dominantly as above, dominantly coarse to very coarse, generally well sorted		
	10	**SILTSTONE:** as above		
1705.0 - 1710.0	95	**SILTSTONE:** off white, off white to pale grey, occasional light blue grey, hard to very hard, sub-blocky to sub-fissile, locally arenaceous, very fine Sand grains, locally argillaceous, trace lithics fragments, trace carbonaceous material		
	5	**SANDSTONE:** as above		
1710.0 - 1720.0	60	**SANDSTONE:** as above		
	40	**SILTSTONE:** as above		
1720.0 - 1725.0	100	**SANDSTONE:** off white, white, translucent, bi-modal, fine to medium, angular to subangular, dominantly subangular, moderately to well sorted, > very coarse, sub round to round, very well sorted, rare nodular pyrite, rare coral fragments, rare shl fragments, nil visible cement, moderate visible porosity		
1725.0 - 1730.0	70	**SANDSTONE:** as above	3	
	20	**CLAYSTONE:** pale blue grey, light grey, firm to moderately hard, blocky, slightly calcareous,		
	10	**SILTSTONE:** medium grey to dark grey, greenish grey, firm, blocky, sub fissile in part, arenaceous in part, moderately calcareous		
1730.0 - 1735.0	80	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1730.0 - 1735.0	10	**SILTSTONE:** as above		
1735.0 - 1745.0	100	**SANDSTONE:** as above		
1745.0 - 1750.0	95	**SANDSTONE:** as above	3	4
	5	**SILTSTONE:** dominantly green grey, moderately hard, blocky, moderately to very calcareous		
1750.0 - 1755.0	100	**SANDSTONE:** dominantly as above with 30% very fine to fine grained aggregates, weak silica cement, in part grading to SILTSTONE		
1755.0 - 1760.0	70	**SANDSTONE:** as above		
	30	**SILTSTONE:** dominantly as above with rare glauconite, carbonaceous material, lithics		
1760.0 - 1765.0	70	**SANDSTONE:** off white, white, translucent, loose, fine to > very course, angular to subangular, dominantly subangular, poor sorted, rare shell fragments, trace nodular pyrite, rare Foraminifera, nil visible cement, moderate visible porosity	1	
	20	**CLAYSTONE:** pale yellowish brown to yellowish grey, soft to firm, dominantly firm, blocky, sub blocky in part, non calcareous		
	10	**SILTSTONE:** as above		
1765.0 - 1770.0	100	**SANDSTONE:** as above, trace rock flour		
1770.0 - 1775.0	100	**SANDSTONE:** as above		
1775.0 - 1780.0	90	**SANDSTONE:** off white, white, translucent, fine to >very coarse, dominantly medium to very coarse, angular to subround, dominantly subangular, poor sorted, rare nodular pyrite, rare coal fragments, rare shell fragments, nil visible cement, moderate inferred porosity	1	
	10	**SILTSTONE:** as above		
1780.0 - 1785.0	100	**SANDSTONE:** as above		
1785.0 - 1790.0	100	**SANDSTONE:** as above		
1790.0 - 1795.0	100	**SANDSTONE:** as above, common rock flour		
1795.0 - 1805.0	60	**CALCAREOUS CLAYSTONE:** light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, locally carbonaceous material, common to abundant calcareous material, trace nodular pyrite, hard to very hard, sub-blocky to sub-fissile.		
	40	**SANDSTONE:** translucent, clear, frosted, fine to very coarse, poorly sorted, angular to sub-angular, common weak calcareous cement, locally pale grey brown argillaceous matrix, occasional coal laminations, minor nodular pyrite, generally loose clean grains, frto good inferred porosity.		
1805.0 - 1810.0	50	**CALCAREOUS CLAYSTONE:** light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, locally carbonaceous material, common to abundant calcmat, trace nodular pyrite, hard to very hard, sub-blocky to sub-fissile.	1	
	50	**SANDSTONE:** translucent, clear, frosted, fine to very coarse, poorly sorted, angular to sub-angular, common weak calcareous cement, locally pale grey brown argillaceous matrix, occasional coal laminations, minor nodular pyrite, generally loose clean grains, fair to good inferred porosity.		
1810.0 - 1815.0	60	**CALCAREOUS SANDSTONE:** Off white to pale brown, translucent to clear, very fine to very coarse, poorly sorted, angular to sub-angular, sub-rounded where fine grained, common moderately strong calcareous cement, locally common pale brown grey argillaceous matrix where fine grained, common rock flour, generally loose grains, very hard fine grained aggregates, poor visible porosity, fair inferred porosity where coarse.		
	40	**CALCAREOUS CLAYSTONE:** light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, localised carbonaceous material, common to abundant calcareous material, trace nodular pyrite, hard to very hard, sub-blocky to sub-fissile.		
1815.0 - 1820.0	75	**SANDSTONE:** Off white to pale brown, translucent to clear, very fine to very coarse, poorly sorted, angular to sub-angular, sub-rounded where fine grained, minor weak calcareous cement, locally common pale brown grey argillaceous matrix where fine grained, common rock flour, generally loose grains, very hard fine grained aggregates, poor visible porosity, fair inferred porosity where coarse.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1815.0 - 1820.0	20	**CLAYSTONE:** light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, localised carbonaceous material, minor calcareous material, trace nodular pyrite, hard to very hard, sub-blocky to sub-fissile.		
	5	**COAL:** black, vitreous, hackly, very hard, conchoidal fracture.		
1820.0 - 1825.0	80	**SANDSTONE:** as above		
	20	**CLAYSTONE:** as above		
1825.0 - 1830.0	90	**SANDSTONE:** clear to translucent, frosted in part, fine to coarse, occasional very coarse angular grains, poor sorted, sub-angular to sub-rounded, minor weak calcareous cement, trace pale brown silty matrix, minor carbonaceous specks & laminations, minor nodular pyrite, generally loose clean grains, good inferred porosity.		
	10	**CLAYSTONE:** light bluish grey, green grey, pale grey, siliceous, occasionally micromicaceous, minor calcareous material, hard to very hard, sub-blocky to sub-fissile.		
1830.0 - 1835.0	85	**SANDSTONE:** pale brown grey, clear to translucent, frosted where very coarse grained, very fine to very coarse, dominantly fine to medium grained, poor sorted, sub-angular to sub-rounded, angular where very coarse, minor weak calcareous cement, common pale brown silty matrix where fine grained, common coal laminations, occasional nodular pyrite, commonly loose, very hard fine grained aggregates, tight to poor visible porosity.	2	
	10	**CLAYSTONE:** as above with trace micro fossils.		
	5	**COAL:** as above, localised silty laminations and grading to dark brown carbonaceous siltstone.		
1835.0 - 1840.0	85	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
	5	**COAL:** as above		
1840.0 - 1850.0	85	**SANDSTONE:** as above and locally grading to arenaceous siltstone.		
	5	**SILTSTONE:** medium brown, medium grey, arenaceous and common grading to very fine sandstone, commonly micromicaceous, common lithics and carbonaceous laminations, hard to very hard, sub-blocky.		
	5	**CLAYSTONE:** as above.		
	5	**COAL:** as above, commonly calcareous, trace micro fossils.		
1850.0 - 1855.0	85	**SANDSTONE:** pale brown grey, clear to translucent, frosted where very coarse grained, very fine to very coarse, dominantly fine grained, moderately sorted, sub-angular to sub-rounded, angular where very coarse, trace weak calcareous cement, common pale brown silty matrix where fine grained, occasional coal laminations, trace nodular pyrite, commonly loose, very hard fine grained aggregates, tight to poor visible porosity.		
	10	**SILTSTONE:** as above.		
	5	**CLAYSTONE:** light grey, light bluish grey, light green grey in part, siliceous, minor calcareous material, trace micro fossils, hard, sub-blocky to sub-fissile.		
1855.0 - 1860.0	90	**SANDSTONE:** clear to translucent, minor pale grey brown, very fine to very coarse, poorly sorted, angular to sub-rounded, trace weak calcareous cement, locally pale brown silty matrix where fine grained, localised coal laminations, trace nodular pyrite, generally loose grains, hard fine grained aggregates, poor visible porosity, good inferred porosity, no fluorescence.	1	
	5	**COAL:** black, dark brown, vitreous to sub-vitreous, silty in part and grading to dark brown carbonaceous siltstone, common silty laminations, hard, sub-blocky to sub-fissile, conchoidal to sub-conchoidal where vitreous.		
	5	**CLAYSTONE:** as above.		
1860.0 - 1865.0	90	**SANDSTONE:** as above		
	5	**SILTSTONE:** pale grey brown, light to medium brown, dark brown in part, arenaceous and commonly grading to very fine sandstone, common carbonaceous laminations and specks, minor platy micas, trace lithics, hard, sub-blocky.		
	5	**CLAYSTONE:** as above		
1865.0 - 1870.0	95	**SANDSTONE:** off white to pale brown, translucent, very fine to very coarse, poorly sorted, angular to sub-rounded, trace weak calcareous cement, common pale brown		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		silty matrix where fine grained and locally grading to arenaceous siltstone, occasional coal laminations, common rock flour, hard fine grained aggregates, poor visible porosity, fair inferred porosity.		
	5	**COAL:** as above.		
1870.0 - 1880.0	90	**SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
	5	**CLAYSTONE:** as above		
1880.0 - 1890.0	70	**SANDSTONE:** as above	1	
	25	**SILTSTONE:** as above		
	5	**CLAYSTONE:** light bluish grey, green grey, hard to very hard, sub-blocky to sub-fissile, siliceous, minor micromicaceous, localised carbonaceous material, minor calcareous material, trace nodular pyrite		
1890.0 - 1895.0	50	**SANDSTONE:** as above		
	45	**SILTSTONE:** as above		
	5	**CLAYSTONE:** as above		
1895.0 - 1900.0	55	**SILTSTONE:** as above		
	40	**SANDSTONE:** as above		
	5	**CLAYSTONE:** as above		
1900.0 - 1905.0	40	**CLAYSTONE:** light bluish grey, green grey, moderately hard to hard, sub-blocky to blocky, rare sub-fissile, siliceous, minor micromicaceous, localised trace carbonaceous material, minor calcareous material, trace nodular pyrite		
	40	**SILTSTONE:** light grey to medium grey, brownish grey, blocky, moderately hard to hard, very fine grained arenaceous, carbonaceous, micromicaceous, rare Foraminifera and shell fragments		
	20	**SANDSTONE:** off white to pale brown, translucent, dominantly loose, very fine to very coarse, poorly sorted, angular to sub-rounded, minor weak calcareous cement, common pale brown silty matrix where fine grained and locally grading to arenaceous siltstone, occasional coal laminations, dominantly carbonaceous, poor visible porosity, fair inferred porosity.		
1905.0 - 1910.0	50	**SILTSTONE:** as above		
	40	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
1910.0 - 1915.0	40	**SILTSTONE:** as above	9	
	30	**SANDSTONE:** as above		
	30	**CLAYSTONE:** as above		
1915.0 - 1920.0	40	**SANDSTONE:** as above		
	40	**CLAYSTONE:** dominantly as above, increasingly grading to moderately calcareous SILTSTONE, arenaceous, common Foraminifera		
	20	**SILTSTONE:** as above		
1920.0 - 1925.0	50	**SANDSTONE:** off white to pale brown, translucent, common loose, increasingly siliceous aggregates, very fine to very coarse, dominantly fine to medium, poorly sorted, angular to sub-rounded, minor weak calcareous cement, common siliceous cement, common pale brown silty matrix where fine grained and locally grading to arenaceous siltstone, dominantly carbonaceous, minor Foraminifera, poor visible porosity, poor inferred porosity.		
	40	**CLAYSTONE:** as above		
	10	**SILTSTONE:** as above, common Foraminifera, shell fragments,		
1925.0 - 1930.0	60	**CLAYSTONE:** as above		
	30	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1930.0 - 1935.0	45	**SANDSTONE:** as above	9	
	30	**SILTSTONE:** as above		
	20	**CLAYSTONE:** becoming medium grey to light greenish grey, medium bluish grey, blocky, firm, moderately calcareous, silty, arenaceous, minor Foraminifera, increasingly grading to SLTST		
	5	**COAL:** very dark grey to black, sub blocky to blocky, crumbly, silty, poor lustre		
1935.0 - 1940.0	80	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	10	**CLAYSTONE:** as above		
1940.0 - 1945.0	100	**SANDSTONE:** off white to pale brown, translucent, 90% loose, 10% aggregates, very fine to very coarse, dominantly fine to medium, poorly sorted, moderately sorted in part, angular to sub-rounded, minor weak calcareous cement, trace siliceous cement, common very light grey to off white argillaceous matrix, minor Foraminifera, poor visible porosity, poor inferred porosity.		
1945.0 - 1950.0	100	**SANDSTONE:** as above		
1950.0 - 1955.0	100	**SANDSTONE:** as above		
1955.0 - 1960.0	100	**SANDSTONE:** as above with trace nodular pyrite	7	
1960.0 - 1965.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** light brownish grey, brownish grey, hard to very hard, blocky, non calcareous, very fine arenaceous		
1965.0 - 1970.0	100	**SANDSTONE:** off white, colourless, translucent, loose, very fine to very coarse, dominantly medium, poorly sorted, angular to sub-rounded, common very light grey to off white argillaceous matrix, good inferred porosity		
1970.0 - 1975.0	100	**SANDSTONE:** as above		
1975.0 - 1980.0	100	**SANDSTONE:** as above		
1980.0 - 1985.0	100	**SANDSTONE:** dominantly as above, trace aggregates with white to very light grey calcareous argillaceous matrix, rare brownish black lithic fragments		
1985.0 - 1990.0	100	**SANDSTONE:** as above		
1990.0 - 1995.0	100	**SANDSTONE:** as above		
1995.0 - 2000.0	100	**SANDSTONE:** as above		
2000.0 - 2005.0	70	**SANDSTONE:** as above		
	30	**CLAYSTONE:** medium grey to brownish grey, medium dark grey, very soft to firm, dominantly soft, amorphous to blocky, dominantly sub blocky, dispersive in part, non calcareous, minor grading to SLTST		
2005.0 - 2010.0	60	**SANDSTONE:** as above, rare nodular pyrite		
	40	**CLAYSTONE:** as above		
2010.0 - 2015.0	70	**SANDSTONE:** as above	0	
	30	**SILTSTONE:** medium grey to brownish grey, medium dark grey, firm to moderately hard, dominantly firm, sub-blocky to blocky, dominantly sub-blocky, non calcareous, commonly grading to SST		
2015.0 - 2025.0	70	**SANDSTONE:** off white, colourless, translucent, 90% loose, very fine to very coarse, dominantly fine to medium, poorly sorted, angular to sub-rounded, spheroidal, 10% aggregates with weak calcareous cement, light to medium grey, abundant very light grey to off white argillaceous matrix, minor carbonaceous material, poor-fair inferred porosity		
	25	**SILTSTONE:** as above		
	5	**COAL:** very dark grey, black, hard, blocky, dull vitreous lustre, dominantly sub-conchoidal fracture, rare conchoidal fracture		
2025.0 - 2030.0	70	**SANDSTONE:** dominantly as above with 30% aggregates		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2025.0 - 2030.0	30	**SILTSTONE:** as above		
2030.0 - 2035.0	60	**SANDSTONE:** as above		
	30	**SILTSTONE:** as above		
	10	**CLAYSTONE:** light brownish grey, light olive grey, very soft to soft, amorphous, dispersive, very calcareous		
2035.0 - 2040.0	85	**SANDSTONE:** pale grey to off white, clear to translucent, very fine to very coarse, dominantly fine to medium, poorly sorted, sub-angular to sub-rounded, angular where coarse grained, common moderate calcareous cement, minor pale grey argillaceous matrix & locally grading to arenaceous silttone, minor carbonaceous laminations, occasional disseminated and nodular pyrite, generally loose grains, fair to good inferred porosity.		
	10	**SILTSTONE:** medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, common coal laminations, occasional nodular pyrite, firm, sub-blocky.		
	5	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub-conchoidal.		
2040.0 - 2050.0	95	**SANDSTONE:** pale grey to off white, clear to translucent, very fine to very coarse, dominantly fine to medium, poorly sorted, sub-angular to sub-rounded, angular where coarse grained, minor weak calcareous cement, minor pale grey argillaceous matrix & locally grading to arenaceous siltstone, minor carbonaceous laminations, occasional disseminated and nodular pyrite, generally loose grains, fair to good inferred porosity.		
	5	**SILTSTONE:** medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, common coal laminations, occasional nodular pyrite, firm, sub-blocky.		
2050.0 - 2055.0	95	**SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2055.0 - 2060.0	85	**SANDSTONE:** pale grey to off white, clear to translucent, very fine to very coarse, dominantly fine to medium, poorly sorted, sub-angular to sub-rounded, angular where coarse grained, minor weak calcareous cement, minor pale grey argillaceous matrix & locally grading to arenaceous siltstone, minor carbonaceous laminations, occasional disseminated and nodular pyrite, generally loose grains, fair to good inferred porosity.		
	15	**SILTSTONE:** medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, occasional calcareous material, minor coal laminations, occasional nodular pyrite, firm, sub-blocky.		
2060.0 - 2065.0	95	**SANDSTONE:** clear to translucent, off white to pale grey, very fine to very coarse, dominantly very fine to fine, moderately sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, locally common pale grey argillaceous matrix and common grading to arenaceous siltstone, common carbonaceous specks, minor rock flour, generally loose grains, fair to good inferred porosity.		
	5	**SILTSTONE:** medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, occasional calcareous material, minor coal laminations, occasional nodular pyrite, firm, sub-blocky.		
2065.0 - 2070.0	95	**SANDSTONE:** clear to translucent, off white to pale grey, very fine to very coarse, poorly sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.		
	5	**SILTSTONE:** light to medium grey, light to medium brown grey, arenaceous and generally grading to very fine sandstone, occasional calcareous material, trace flakey micas, minor coal laminations, occasional nodular pyrite, firm, sub-blocky.		
2070.0 - 2075.0	95	**SANDSTONE:** clear to translucent, off white to pale grey, very fine to very coarse, poorly sorted, angular to sub-angular, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.		
	5	**SILTSTONE:** as above		
2075.0 - 2085.0	95	**SANDSTONE:** as above with common moderate calcareous cement and minor coal laminations.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2075.0 - 2085.0	5	**SILTSTONE:** as above		
2085.0 - 2090.0	95	**SANDSTONE:** as above, dominantly fine to medium, poor to moderate sorting.		
	5	**SILTSTONE:** as above		
2090.0 - 2095.0	90	**SANDSTONE:** clear to translucent, off white to pale grey, very fine to very coarse, dominantly fine to medium, poor to moderately sorted, angular to sub-angular, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.		
	5	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub-conchoidal.		
	5	**SILTSTONE:** medium grey, light to medium brown grey, argillaceous in part, generally arenaceous and grading to very fine sandstone, occasional calcareous material, common micromicaceous, common carbonaceous material, occasional nodular pyrite, firm, sub-blocky.		
2095.0 - 2100.0	70	**SANDSTONE:** clear to translucent, off white to pale grey, very fine to very coarse, dominantly fine to medium, poor to moderately sorted, angular to sub-angular, minor weak calcareous cement, localised pale grey argillaceous matrix and occasionally grading to arenaceous siltstone, trace coal laminations, minor nodular and disseminated pyrite, common rock flour, generally loose grains, good inferred porosity.	0	
	25	**SILTSTONE:** medium grey, light to medium brown grey, argillaceous in part, generally arenaceous and grading to very fine sandstone, occasional calcareous material, common micromicaceous, common carbonaceous material, occasional nodular pyrite, firm, sub-blocky.		
	5	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub-conchoidal.		
2100.0 - 2110.0	70	**SILTSTONE:** light to medium grey, medium to dark grey, medium brown grey, argillaceous and locally grading to silty claystone, arenaceous in part, common carbonaceous material, occasional nodular pyrite, minor micromicaceous, firm to hard, sub-blocky to blocky.		
	20	**SANDSTONE:** pale brown grey, clear to translucent in part, very fine to very coarse, poorly sorted, sub-angular to sub-rounded, angular where very coarse, minor moderately strong calcareous cement, common pale grey argillaceous matrix and locally grading to arenaceous siltstone, trace disseminated pyrite, generally loose grains, poor inferred porosity.		
2110.0 - 2115.0	80	**SANDSTONE:** clear to translucent, pale grey, fine to medium, occasional coarse to very coarse, moderately sorted, angular to sub-angular, minor weak calcareous cement, nil visible matrix, occasional carbonaceous specks, common nodular and disseminated pyrite, loose, good inferred porosity.		
	20	**SILTSTONE:** light to medium grey, dark grey, medium brown grey in part, locally arenaceous, common carbonaceous material and grading to carbonaceous siltstone, occasional micromicaceous, firm to hard, sub-blocky to blocky.		
2115.0 - 2125.0	50	**SANDSTONE:** Sweep returns - contaminated sample		
	40	**SILTSTONE:** Sweep returns - contaminated sample		
	10	**COAL:** Sweep returns - contaminated sample Sweep returns - Sample contaminated		
2125.0 - 2135.0	60	**SANDSTONE:** light to medium grey, very fine to very coarse, poor sorted, angular to sub-rounded, minor weak calcareous cement, occasional pale grey argillaceous matrix, locally grading to arenaceous siltstone, common carbonaceous material, common nodular pyrite, generally loose grains, fair inferred porosity.		
	30	**SILTSTONE:** medium grey, medium to dark grey, medium brown grey, arenaceous and occasionally grading to very fine sandstone, argillaceous in part, common carbonaceous laminations and specks, commonly micromicaceous, locally grading to carbonaceous siltstone, firm to hard, sub-blocky, occasionally sub-fissile.		
	10	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, trace disseminated pyrite, firm to moderately hard, fissile in part, sub-conchoidal.		
	5	**CLAYSTONE:** pale green grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky.		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2135.0 - 2145.0	70	**SANDSTONE:** as above		
	20	**SILTSTONE:** as above		
	5	**COAL:** as above		
	5	**CLAYSTONE:** pale green grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky.		
2140.0 - 2145.0	70	**SANDSTONE:** light to medium grey, clear to translucent in part, very fine to very coarse, frosted where very coarse, poorly sorted, angular to sub-rounded, minor weak calcareous cement, occasional pale grey argillaceous matrix, locally grading to arenaceous siltstone, common carbonaceous material, common nodular pyrite, generally loose grains, fair inferred porosity.		
	20	**SILTSTONE:** light to medium grey, medium to dark olive grey, medium brown grey, arenaceous and commonly grading to very fine sandstone, argillaceous in part, common carbonaceous laminations and specks, commonly micromicaceous, locally grading to carbonaceous siltstone, firm to hard, sub-blocky, occasionally sub-fissile.		
	5	**CLAYSTONE:** pale green grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky.		
	5	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, common disseminated pyrite, firm to moderately hard, fissile in part, sub-conchoidal.		
2145.0 - 2150.0	45	**SILTSTONE:** light to medium grey, medium brown grey, arenaceous and commonly grading to very fine sandstone, locally argillaceous and grading to silty claystone in part, common carbonaceous laminations and specks, commonly micromicaceous, firm to hard, sub-blocky to blocky.		
	40	**SANDSTONE:** pale to medium grey, translucent to frosted in part, very fine to very coarse, dominantly fine, poorly sorted, sub-angular to sub-rounded, angular where coarse grained, minor weak calcareous cement, common pale grey argillaceous matrix & locally grading to arenaceous siltstone, common carbonaceous specks, minor disseminated pyrite, loose, poor to fair inferred porosity.		
	5	**COAL:** black, dark grey, dark brown grey, vitreous to sub-vitreous, occasionally silty and grading to carbonaceous siltstone, trace disseminated pyrite, firm to moderately hard, fissile in part, sub-conchoidal.		
2150.0 - 2155.0	65	**SANDSTONE:** as above		
	20	**SILTSTONE:** as above		
	10	**COAL:** as above		
	5	**CLAYSTONE:** as above.		
2155.0 - 2160.0	85	**SANDSTONE:** clear to translucent, frosted, very fine to very coarse, poorly sorted, angular to sub-rounded, trace weak calcareous cement, rare pale grey argillaceous matrix, common nodular pyrite, generally loose grains, fair to good inferred porosity.		
	5	**CLAYSTONE:** pale green grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky.		
	5	**SILTSTONE:** light to medium grey, medium brown grey, arenaceous and commonly grading to very fine sandstone, common carbonaceous laminations and specks, commonly micromicaceous, firm to hard, sub-blocky to blocky.		
	5	**COAL:** black, dark grey, vitreous to sub-vitreous, locally silty and grading to carbonaceous siltstone, trace disseminated pyrite, firm to moderately hard, fissile in part, sub-conchoidal.		
2160.0 - 2165.0	90	**SANDSTONE:** as above		
	5	**COAL:** as above		
	5	**SILTSTONE:** as above		
2165.0 - 2175.0	85	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	5	**COAL:** aa		
2175.0 - 2180.0	100	**CAVINGS:** Cavings, cleaned out header box above sample collecting area		
2180.0 - 2185.0	50	**SILTSTONE:** light to medium grey, medium brown grey, soft to firm, dominantly	0	

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		soft, amorphous to blocky, dominantly blocky, arenaceous and commonly grading to very fine sandstone, slightly calcareous, common carbonaceous laminations and specks, commonly micromicaceous, rare glauconite		
	30	**SANDSTONE:** as above		
	20	**CLAYSTONE:** pale greenish grey, light blue grey, siliceous, hard to very hard, sub-fissile to sub-blocky, slightly to moderately calcareous.		
2185.0 - 2190.0	70	**SILTSTONE:** as above		
	20	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
2190.0 - 2195.0	65	**SILTSTONE:** as above		
	20	**CLAYSTONE:** as above		
	10	**SANDSTONE:** as above		
	5	**COAL:** as above, in part grading to Carbonaceous SLTST		
2195.0 - 2200.0	70	**SILTSTONE:** as above		
	20	**CLAYSTONE:** as above		
	10	**SANDSTONE:** as above		
2200.0 - 2205.0	60	**SILTSTONE:** as above		
	30	**CLAYSTONE:** dominantly as above, light to medium grey, very soft to soft, amorphous, commonly in tray as gloopy matrix, possibly being washed out		
	10	**SANDSTONE:** clear to translucent, frosted, very fine to very coarse, dominantly very fine to medium, poorly sorted, angular to sub-rounded, trace weak calcareous cement, common pale grey argillaceous matrix, minor nodular pyrite, generally loose grains, fair inferred porosity.		
2205.0 - 2210.0	60	**SANDSTONE:** as above		
	30	**SILTSTONE:** as above		
	10	**CLAYSTONE:** as above		
2210.0 - 2215.0	50	**SILTSTONE:** light to medium grey, medium brown grey, firm to moderately hard, dominantly moderately hard, sub-blocky to blocky, dominantly blocky, arenaceous and commonly grading to very fine sandstone, slightly calcareous, common carbonaceous laminations and specks, minor micromicaceous	0	
	40	**SANDSTONE:** clear to translucent, frosted, very fine to very coarse, dominantly fine to medium, poorly to moderately sorted, angular to sub-rounded, trace weak calcareous cement, common pale grey argillaceous matrix, trace nodular pyrite, generally loose grains, fair to good inferred porosity.		
	10	**CLAYSTONE:** as above		
2215.0 - 2225.0	50	**SILTSTONE:** as above		
	40	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
2225.0 - 2230.0	60	**SANDSTONE:** as above		
	40	**SILTSTONE:** very dark grey, brownish black, soft to firm, sub-blocky, slightly calcareous, very finely arenaceous, carbonaceous, minor nodular pyrite		
2230.0 - 2235.0	50	**SANDSTONE:** as above.		
	45	**SILTSTONE:** as above		
	5	**CLAYSTONE:** pale greenish grey, light blue grey, hard to very hard, sub-blocky to blocky, moderately calcareous.		
2235.0 - 2240.0	80	**SANDSTONE:** clear to translucent, frosted, loose, dominantly very fine to fine, common medium, rare coarse to very coarse, poorly to moderately sorted, well sorted in part, angular to sub-angular, minor sub-rounded, trace nodular pyrite, trace mica, fair inferred porosity.		
	20	**SILTSTONE:** as above		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2240.0 - 2245.0	75	**SANDSTONE:** clear to translucent, frosted, very fine to coarse, poor sorted, angular to sub-rounded, minor weak calcareous cement, nil visible matrix, minor nodular and disseminated pyrite, occasional rock flour, generally loose grains, fair inferred porosity.	0	
	10	**SILTSTONE:** medium brown, light to medium brown grey, medium grey in part, arenaceous and locally grading to very fine sandstone, common carbonaceous laminations and specks, hard, sub-blocky, locally sub-fissile.		
	5	**VOLCANIC:** off white to pale grey, very pale green grey, argillaceous, weathered, minor dark minerals, trace siliceous, moderately hard to hard, very hard where siliceous, sub-blocky.		
2245.0 - 2250.0	80	**SANDSTONE:** clear to translucent, frosted, very fine to coarse, poor sorted, angular to sub-rounded, minor weak calcareous cement, rare light grey argillaceous matrix, occasional nodular and disseminated pyrite, occasional rock flour, generally loose grains, fair inferred porosity.		
	10	**VOLCANIC:** off white to pale grey, very pale green grey, light to medium blu green, argillaceous, weathered, minor dark minerals, trace siliceous, moderately hard to hard, very hard where siliceous, sub-blocky.		
	10	**SILTSTONE:** medium brown, light to medium brown grey, medium grey in part, arenaceous and locally grading to very fine sandstone, common carbonaceous laminations and specks, hard, sub-blocky, locally sub-fissile.		
2250.0 - 2255.0	50	**VOLCANIC:** Tuffite, pale grey green, off white to pale green, light to medium blue green, minor dark green, siliceous groundmass, common feldspars, occasional dark green minerals (olivine?) argillaceous where weathered, localised reworked carbonaceous fragments, angular, sub-blocky where weathered.		
	30	**SANDSTONE:** clear to translucent, pale grey, very fine to coarse, poor sorted, angular to sub-rounded, common weak calcareous cement, minor pale grey argillaceous matrix, common lithics and carbonaceous specks, common nodular and disseminated pyrite, loose, poor inferred porosity.		
	10	**CLAYSTONE:** pale grey, light to medium grey, siliceous, minor silty laminations and locally grading to argillaceous siltstone, trace carbonaceous material, occasionally micromicaceous, moderately hard to hard, sub-blocky to sub-fissile.		
	10	**CLAYSTONE:** medium brown, redish brown, minor carbonaceous material, firm, sub-blocky, dispersive.		
2255.0 - 2260.0	50	**VOLCANIC:** pale grey green, off white to pale green, light to medium blue green, minor dark green, siliceous groundmass, common feldspars, occasional dark green minerals, argillaceous where weathered, sub-blocky.		
	30	**SANDSTONE:** pale grey, frosted, very fine to medium, common coarse frosted grains, moderately sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, common pale grey argillaceous matrix and grading to arenaceous siltstone in part, common lithics and carbonaceous specks, hard aggregates, tight to poor visible porosity.		
	20	**CLAYSTONE:** medium brown, medium reddish brown, medium grey brown, siliceous where medium grey, minor carbonaceous laminations and specks, firm to very hard, sub-blocky.		
2260.0 - 2265.0	60	**VOLCANIC:** pale grey green, off white to pale green, light to medium blue green, minor dark green, generally weathered - argillaceous, minor siliceous groundmass, common feldspars, occasional dark green minerals, sub-blocky.		
	30	**SANDSTONE:** as above		
	10	**CLAYSTONE:** as above		
2265.0 - 2270.0	35	**VOLCANIC:** as above, light blue grey, light green grey, very weathered and grading to claystone.		
	30	**CLAYSTONE:** as above, pale to medium grey, medium reddish brown, dispersive.		
	30	**SANDSTONE:** as above, generally loose scattered grains.		
	5	**COAL:** black, dark grey, dark brown grey, vitreous to sub-vitreous, occasionally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub-conchoidal. (possible that any free fragments are cavings).		
2270.0 - 2275.0	60	**CLAYSTONE:** as above, minor calcareous material.		
	30	**VOLCANIC:** as above, weathered and generally grading to claystone.		
	10	**SANDSTONE:** as above.		
2275.0 - 2280.0	70	**CLAYSTONE:** off white, pale brown grey, very pale green grey, very pale blue grey,		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		trace disseminated pyrite, trace chert fragments, firm to hard in part, sub-blocky, dispersive. (Probable weathered tuff).		
	10	**VOLCANIC:** as above		
	10	**SANDSTONE:** as above, rare coarse to very coarse, well sorted.		
	5	**COAL:** as above.		
	5	**SILTSTONE:** medium grey, light to medium brown grey, argillaceous and commonly grading to silty claystone, minor arenaceous, locally common carbonaceous laminations & specks, minor calcareous material, trace disseminated pyrite, moderately hard to hard, sub-blocky, minor sub-fissile.		
2280.0 - 2285.0	75	**CLAYSTONE:** as above	0	
	10	**SANDSTONE:** as above		
	10	**VOLCANIC:** as above		
	5	**COAL:** as above		
2285.0 - 2290.0	60	**CLAYSTONE:** as above		
	30	**SANDSTONE:** as above		
	5	**VOLCANIC:** as above		
	5	**COAL:** as above		
2290.0 - 2295.0	80	**SANDSTONE:** clear to translucent, pale very fine to very coarse, dominantly medium, moderately sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, trace pale grey argillaceous matrix, occasional calcareous fragments, trace nodular pyrite, occasional carbonaceous material, loose, fair to good inferred porosity.		
	10	**VOLCANIC:** off white, pale brown grey, very pale green grey, dark grey in part, mottled, minor dark green minerals, commonly weathered to claystone, common feldspars, firm to hard, very hard in part, sub-blocky.		
	10	**CLAYSTONE:** off white, pale brown grey, very pale green grey, very pale blue grey, trace disseminated pyrite, trace chert fragments, firm to hard in part, sub-blocky, dispersive.		
2295.0 - 2300.0	80	**SANDSTONE:** clear to translucent, pale very fine to very coarse, poorly sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, trace pale grey argillaceous matrix, occasional calcareous fragments, trace nodular pyrite, loose, fair to good inferred porosity.		
	10	**CLAYSTONE:** pale to medium grey, medium brown, minor light brown grey, siliceous, trace lithics and carbonaceous specks, trace micromicaceous, hard, sub-fissile to sub-blocky.		
	10	**VOLCANIC:** off white, pale to medium grey, medium to dark green mottling, minor light brown grey, siliceous, minor dark green minerals, commonly weathered to claystone, common feldspars, firm to hard, very hard in part, sub-blocky.		
2300.0 - 2305.0	90	**SANDSTONE:** clear to translucent, pale very fine to very coarse, dominantly fine to medium, poor to moderately sorted, sub-angular to sub-rounded, angular where coarse, minor weak calcareous cement, trace pale grey argillaceous matrix, occasional calcareous fragments, minor nodular pyrite, occasional carbonaceous material, loose, fair to good inferred porosity.		
	5	**CLAYSTONE:** pale to medium grey, medium brown, minor light brown grey, siliceous, trace lithics and carbonaceous specks, trace micromicaceous, hard, sub-fissile to sub-blocky.		
	5	**VOLCANIC:** as above.		
2305.0 - 2310.0	75	**SANDSTONE:** as above		
	15	**CLAYSTONE:** as above		
	10	**VOLCANIC:** as above		
2310.0 - 2313.0	65	**SANDSTONE:** as above	0	
	30	**CLAYSTONE:** as above		
	15	**VOLCANIC:** as above		

Apache Northwest Pty Ltd

SIDE WALL CORE DESCRIPTIONS

Well Name :	Wasabi-1	**Service Company :**	Schlumberger
Suite Number :	1	**Engineers :**	K. Albarhi, A. Dandi, M. Dawson
Run Number :	4	**Geologists :**	A. Cruickshank, H. Little
Run Date :	3/03/2008		
Hole Size :	311 (mm)		

Lost:	0	**Empty:**	1	**Rejected:**	0	**Bought:**	29	**Misfired:**	0

Shot No.	SWC No	SWC Depth (m)	Rec. Length (cm)	Shot Type	Lithology / Shows
1	1	1477.2	3.0	Evaluation	**SANDSTONE:** 100% medium brown to dark brown, off white, translucent, very fine to very coarse, poorly sorted, angular to sub-rounded, trace weak calcareous cement, common medium brown silt matrix and locally grading to arenaceous SILTSTONE, trace lithics, hard aggregates, poor to fair visible porosity, no fluorescence.
2	2	1448.1	1.0	Evaluation	**ARGILLACEOUS SANDSTONE:** 100% light to medium brown, meb brown grey, very fine to coarse, predominantly fine grained, moderately sorted, sub-angular to dominantly sub-rounded, common moderately calcareous cement, common pyritic cementing, common to abundant medium brown argillaceous matrix and common grading to arenaceous SILTSTONE, common platy micas, firm aggregates, poor visible porosity, no fluorescence.
3	3	1438.4	3.0	Palynology	**CARBONACEOUS SILTSTONE:** 90% medium brown, medium grey brown, dark brown to very dark grey, trace arenaceous, common carbonaceous material and grading to COAL, common micromicaceous, minor sideritic cement, firm to hard. **COAL:** 10% dark grey to black, sub-vitreous, commonly dull and earthy, grading to carbonaceous SILTSTONE, sub-conchoidal fracture.
4	4	1417.5	2.5	Evaluation	**SANDSTONE:** 100% medium brown, medium grey brown, translucent, fine to very coarse, poor sorted, angular to sub-angular, minor sub-rounded, minor medium brown silty matrix, friable, weak aggregates, poor to fair visible porosity, no fluorescence.
5	5	1410.4	3.7	Evaluation	**SANDSTONE:** 100% pale brown, minor off white, translucent, very fine to coarse, poor sorted, angular to sub-angular, trace weak calcareous cement, common pale brown to off white argillaceous matrix, minor lithics and carbonaceous specks, firm aggregates, poor to fair inferred porosity, no fluorescence.
7	7	1379.3	3.7	Palynology	**SILTY SANDSTONE:** 100% medium brown, medium to dark grey brown, very fine to coarse, dominantly fine to medium, moderately sorted, sub-angular to sub-rounded, trace weak calcareous cement, common to locally abundant medium brown silty matrix and grd to arenaceous SILTSTONE, minor carbonaceous material, occasional silty laminations, hard, poor visible porosity, no fluorescence.
8	8	1374.2	2.5	Evaluation	**SANDSTONE:** 100% off white to pale grey, translucent, fine to medium grained, occasional coarse, poor to moderately sorted, and to sub-rounded, minor moderately strong calcareous and siliceous cement, common off white to pale grey argillaceous matrix, occasional lithics and carbonaceous specks, hard aggregates, poor tight fair visible porosity. no fluorescence.
9	9	1354.1	2.6	Evaluation	**SILTY SANDSTONE:** 100% medium grey, medium olive grey, very fine to fine, well sorted, sub-rounded, minor weak siliceous cement, common silty matrix and grading to arenaceous SILTSTONE, trace very fine lithics & carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.

Lost:	0	Empty:	1	Rejected:	0	Bought:	29	Misfired:	0

Shot No.	SWC No	SWC Depth (m)	Rec. Length (cm)	Shot Type	Lithology / Shows
10	10	1350.0	2.0	Evaluation	**SANDSTONE:** 100% pale grey to off white, translucent, pale brown, very fine to coarse, trace very coarse, poor sorted, angular to sub-rounded, common pale grey to off white argillaceous matrix, hard aggregates, poor visible porosity, no fluorescence.
11	11	1344.4	2.7	Evaluation	**SILTY SANDSTONE:** 100% medium grey, medium olive grey, very fine to fine, well sorted, sub-rounded, common silty matrix and grading to arenaceous SILTSTONE, trace very fine lithics & carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.
12	12	1331.0	2.2	Palynology	**CARBONACEOUS SILTSTONE:** 100% medium brown, medium grey brown, dark brown to very dark grey, trace arenaceous, common carbonaceous material commonly micromicaceous, minor sideritic cement, firm to hard.
13	13	1329.5	2.9	Evaluation	**SANDSTONE:** 100% medium brown, medium brown grey, dark brown in part, translucent in part, fine to coarse, dominantly medium, poor to moderately sorted, angular to sub-angular, trace weak calcareous cement, minor moderately strong siliceous cement, trace medium brown grey silty matrix, hard aggregates, poor to fair visible porosity, no fluorescence.
14	14	1329.0	1.2	Evaluation	**SILTY SANDSTONE:** 100% medium brown, medium brown grey, dark brown in part, translucent in part, fine to coarse, poorly sorted, angular to sub-angular, minor moderate calcareous cement, trace moderately strong siliceous cement, common medium brown grey silty matrix, minor carbonaceous material, hard aggregates, poor to fair visible porosity.
15	15	1328.5	3.0	Evaluation	**SILTY SANDSTONE:** 100% medium brown, medium brown grey, medium orange brown, dark brown in part, translucent in part, fine to coarse, poorly sorted, angular to sub-angular, minor moderately strong siliceous cement, common medium brown grey silty matrix, minor carbonaceous material, hard aggregates, poor to fair visible porosity.
16	16	1327.3	2.0	Palynology	**CARBONACEOUS SILTSTONE:** 100% medium brown, medium grey brown, dark brown to very dark grey, trace arenaceous, common carbonaceous material, commonly micromicaceous, minor lithics, firm to hard.
17	17	1319.2	1.7	Evaluation	**SILTY SANDSTONE:** 100% medium brown grey, medium grey, translucent, very fine to medium, minor coarse grains, moderately well to well sorted, sub-angular to sub-rounded, minor moderately siliceous cement, minor medium grey brown silty matrix, hard aggregates, poor visible porosity, no fluorescence.
18	18	1314.4	2.0	Evaluation	**SANDSTONE:** 100% off white, medium brown grey, translucent to frosted, very fine to coarse, dominantly medium, poor to moderately sorted, angular to sub-rounded, trace moderate calcareous cement, minor moderate siliceous cement, common off white to medium brown argillaceous matrix, hard aggregates, poor to fair visible porosity, no fluorescence.
19	19	1303.0	2.5	Evaluation	**SILTY SANDSTONE:** 100% medium grey, medium olive grey, very fine to fine, well sorted, sub-rounded, common silty matrix and grading to arenaceous SILTSTONE, trace very fine lithics & carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.

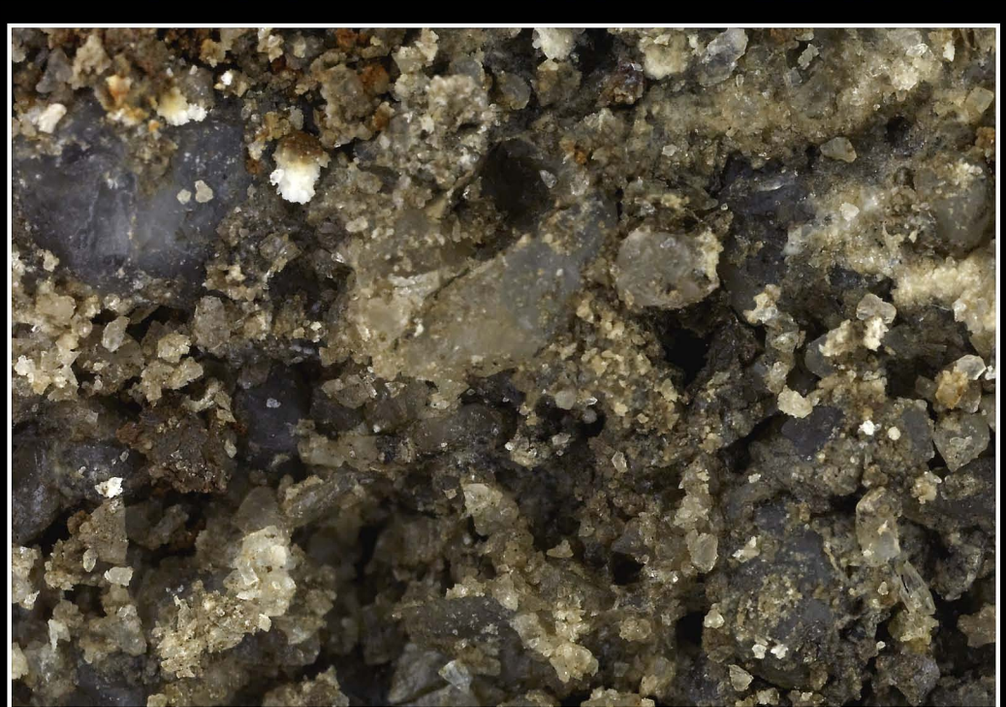
Lost:	0	Empty:	1	Rejected:	0	Bought:	29	Misfired:	0

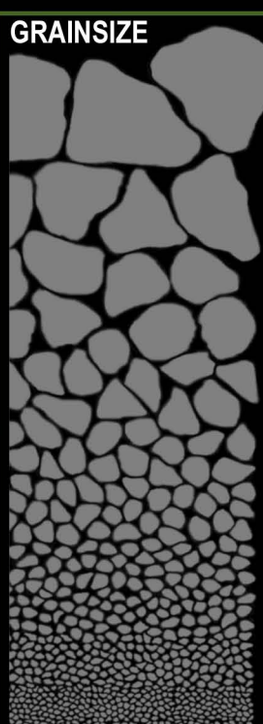
Shot No.	SWC No	SWC Depth (m)	Rec. Length (cm)	Shot Type	Lithology / Shows
20	20	1298.2	2.2	Evaluation	**SILTY SANDSTONE:** 100% medium grey, medium olive grey, dark brown grey, very fine to fine, trace coarse, well sorted, sub-rounded, common silty matrix and grading to arenaceous SILTSTONE, trace carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.
21	21	1295.2	2.0	Palynology	**SILTY SANDSTONE:** 100% light to medium brown, medium grey, medium olive grey, minor dark grey, very fine to fine, well sorted, sub-rounded, common to abundant silty matrix commonly grading to arenaceous SILTSTONE, common silty laminations, occasional lithics, common carbonaceous laminations, occasional platy micas, hard aggregates, poor visible porosity, no fluorescence.
22	22	1288.0	3.1	Evaluation	**SILTY SANDSTONE:** 100% medium brown, medium olive grey, very fine to fine, well sorted, sub-rounded, common silty matrix, minor moderately strong siliceous cement, occasional lithics, occasional platy micas, hard aggregates, poor visible porosity, no fluorescence.
23	23	1276.8	2.7	Evaluation	**SILTY SANDSTONE:** 100% medium brown, medium olive grey, very fine to fine, well sorted, sub-rounded, common silty matrix, common moderately strong calcareous cement and minor moderately strong siliceous cement, occasional lithics, occasional platy micas, hard aggregates, poor visible porosity, no fluorescence.
24	24	1264.5	2.7	Evaluation	**SILTY SANDSTONE:** 100% light to medium grey, medium grey brown, translucent, very fine to fine, well sorted, sub-rounded, minor to common moderately strong calcareous cement, common to abundant medium brown grey silty matrix and locally grading to arenaceous SILTSTONE, occasional carbonaceous material, hard aggregates, poor visible porosity, no fluorescence.
25	25	1262.9	2.5	Evaluation	**SANDSTONE:** 100% light to medium grey, translucent, fine to medium, dominantly fine, well sorted, sub-angular to sub-rounded, trace weak calcareous cement, minor moderately strong siliceous cement, trace carbonaceous material, hard aggregates, fair visible porosity, no fluorescence.
26	26	1261.3	1.7	Evaluation	**SANDSTONE:** 100% light to medium grey, translucent, fine to medium, dominantly fine, well sorted, sub-angular to sub-rounded, trace weak calcareous cement, minor moderately strong siliceous cement, trace silty matrix, hard aggregates, fair visible porosity, no fluorescence.
27	27	1259.3	2.4	Evaluation	**SANDSTONE:** 100% medium to dark grey, translucent, very fine to fine, trace medium, well sorted, sub-angular to sub-rounded, common moderately strong siliceous cement, trace weak calcareous cement, rare argillaceous matrix, occasional carbonaceous specks, hard aggregates, fair visible porosity, no fluorescence.
28	28	1258.1	3.3	Evaluation	**SILTY SANDSTONE:** 100% medium grey, medium olive grey, dark grey, very fine to fine and grading to arenaceous SILTSTONE, very well sorted, sub-rounded, minor weak calcareous cement, common silty matrix, occasional carbonaceous specks and flakey micas, hard aggregates, poor visible porosity, no fluorescence.
29	29	1256.4	3.0	Palynology	**PYRITIC MARL:** 50% medium to dark grey, dark green, silver, very argillaceous, abundant disseminated pyrite, abundant fine dark green glauconite, common dispersed very coarse quartz grains, interbedded with poorly sorted SANDSTONE. **PYRITIC SANDSTONE:** 50% see marl description - very fine to very coarse grains, poorly sorted, common calcareous moderately hard, tight visible porosity, no fluorescence.

Lost:	0	Empty:	1	Rejected:	0	Bought:	29	Misfired:	0

Shot No.	SWC No	SWC Depth (m)	Rec. Length (cm)	Shot Type	Lithology / Shows
30	30	1250.0	3.7	Palynology	**MARL:** 100% medium grey brown ,medium grey, common to abundant calcareous material, common dark green glauconite, common disseminated pyrite, minor micromicaceous, hard.

Apache Energy Ltd
WASABI - 1
SWC # 1 Depth 1477.2 m





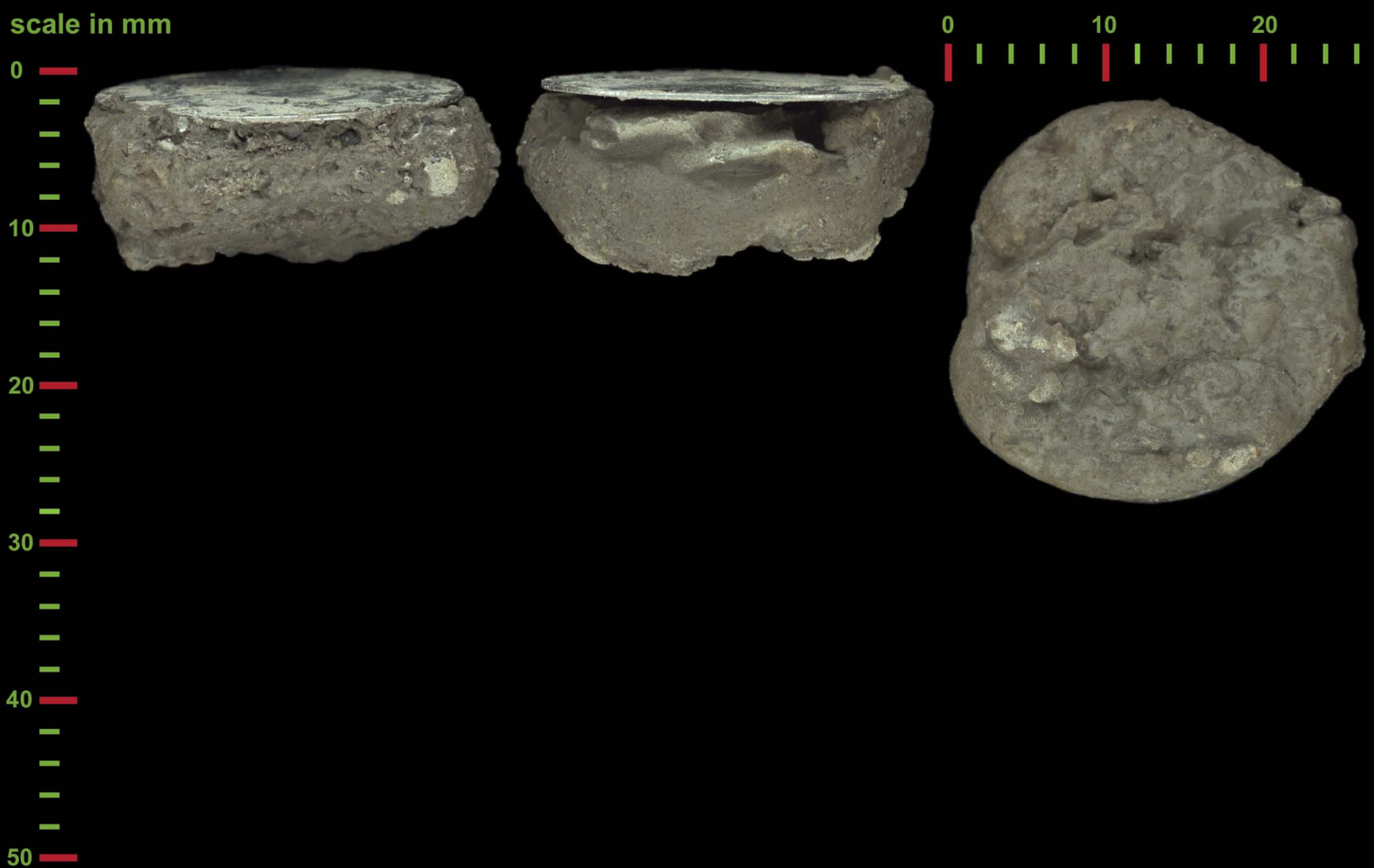
WELLSITE DESCRIPTION

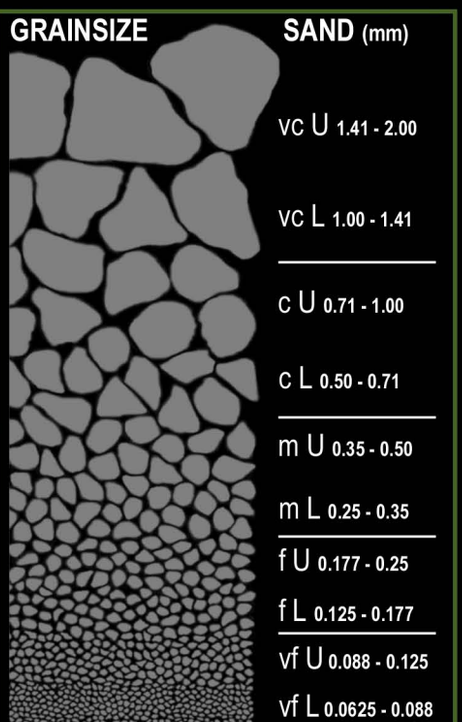
SANDSTONE (100%): medium brown to dark brownish grey, off white in part, mainly translucent quartz grains, very fine to granular, poorly sorted, angular to sub-rounded, trace weak calcareous cement, common medium brown siliciclastic silt matrix and locally grading to arenaceous SILTSTONE, trace lithics, hard aggregates, poor to fair visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 2 Depth 1448.1 m

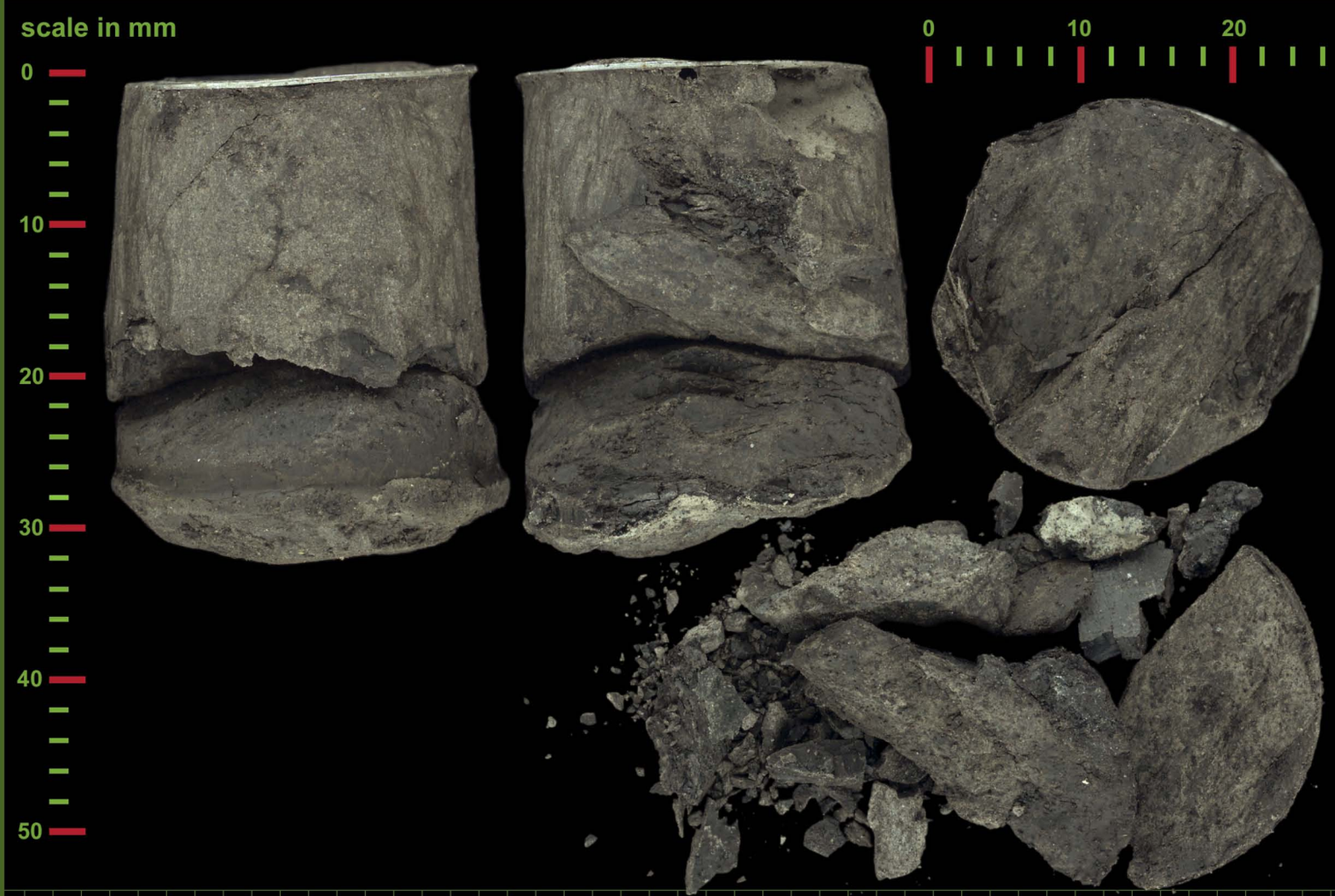


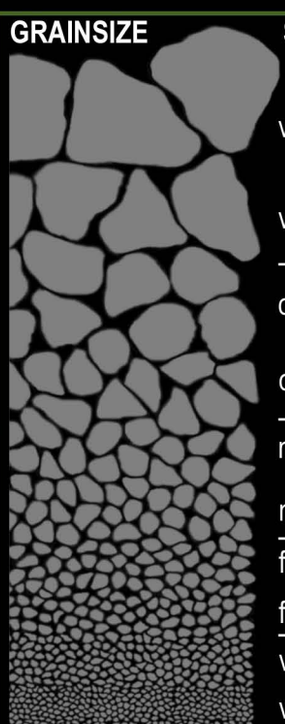


WELLSITE DESCRIPTION

ARGILLACEOUS SANDSTONE (100%): light to medium brown, medium brownish grey, very fine to lower granular, poorly sorted, sub-angular to dominantly sub-rounded, common moderately calcareous cement, common pyritic cement, common to abundant medium brown argillaceous matrix and commonly grades to arenaceous SILTSTONE, common platy micas, firm aggregates, poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 3 Depth 1438.4 m





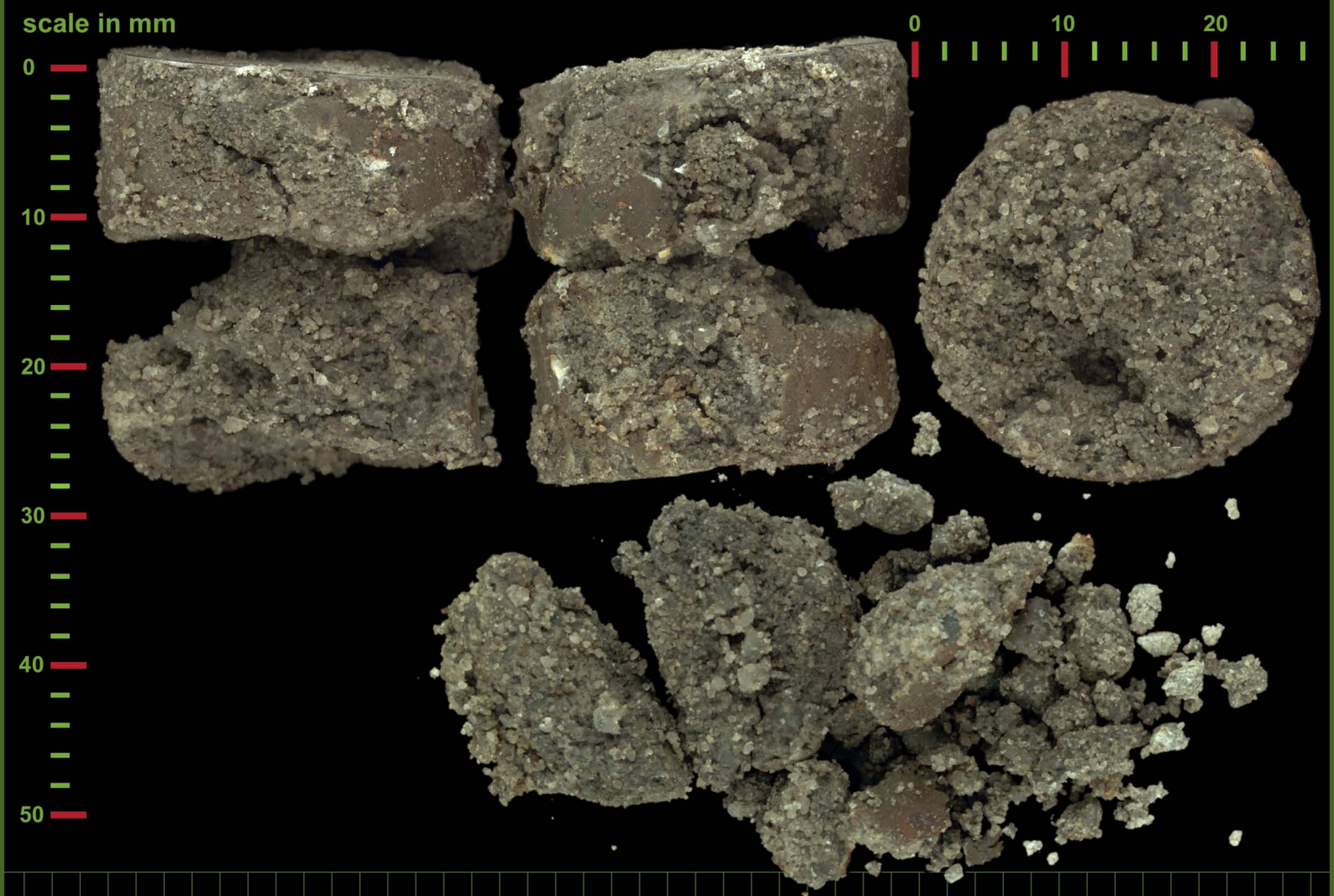
WELLSITE DESCRIPTION

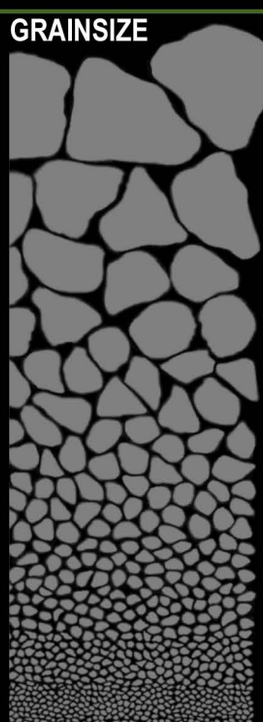
CARBONACEOUS SILTSTONE (90%): medium brown, medium greyish brown, dark brown to very dark grey, trace arenaceous, common carbonaceous material and grading to COAL, common micromicaceous, minor sideritic cement, firm to hard.
COAL (10%): dark grey to black, sub-vitreous, commonly dull and earthy, grading to carbonaceous SILTSTONE, sub-conchoidal fracture.

Apache Energy Ltd

WASABI - 1

SWC # 4 Depth 1417.5 m





WELLSITE DESCRIPTION

SANDSTONE (100%): medium brown, medium greyish brown, mainly translucent quartz grains, fine to lower granular, poorly sorted, angular to sub-angular, minor sub-rounded, minor medium brown silty matrix, friable, weak aggregates, poor to fair visible porosity, no fluorescence.

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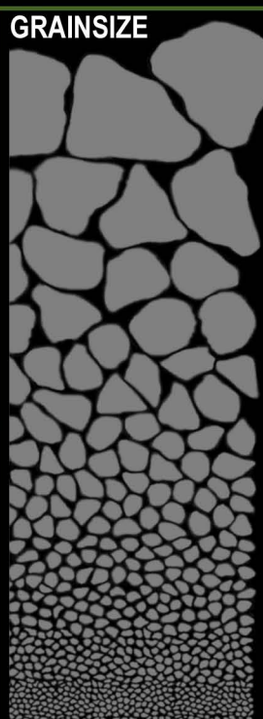
WASABI - 1
SWC # 5 Depth 1410.4 m



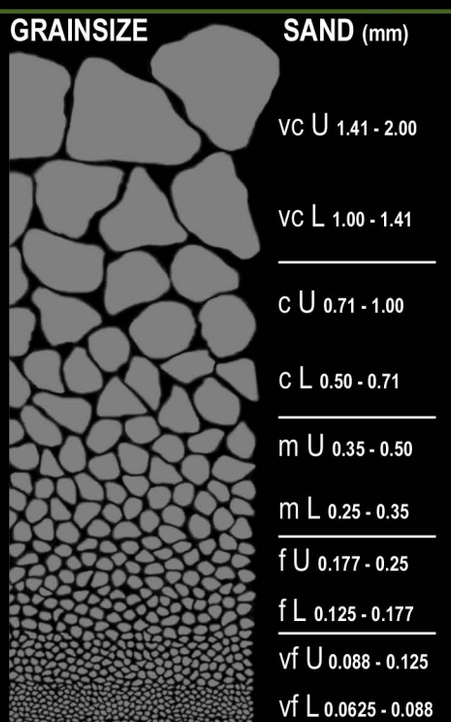
WELLSITE DESCRIPTION

SANDSTONE (100%): pale brownish grey, minor off white speckles, mainly translucent quartz grains, very fine to lower very coarse, predominantly medium, moderately sorted, angular to sub-rounded, trace weak calcareous cement, common pale brown to off white argillaceous matrix, minor lithics and carbonaceous specks, firm aggregates, poor to fair inferred porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 7 Depth 1379.3 m



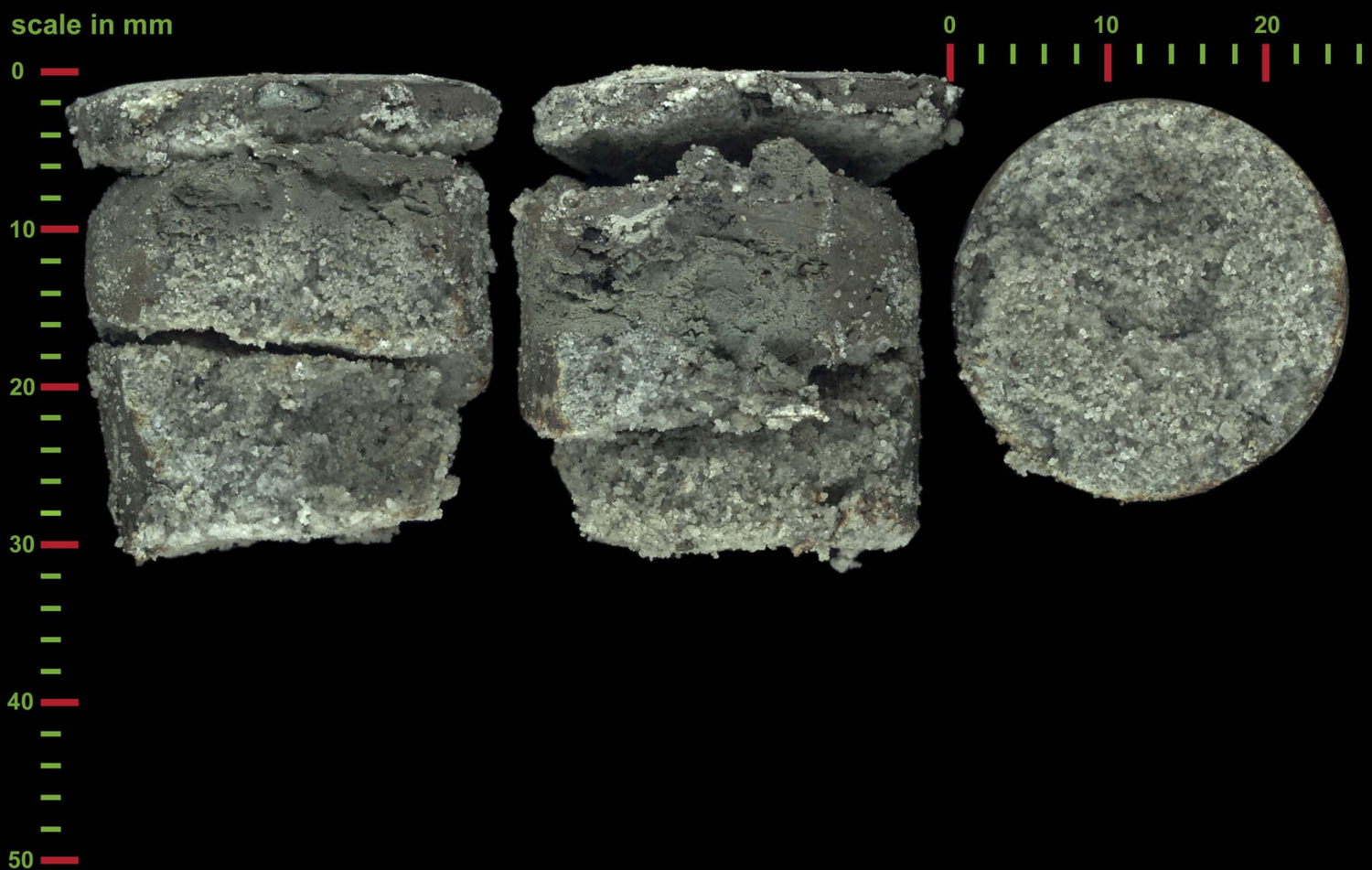
WELLSITE DESCRIPTION

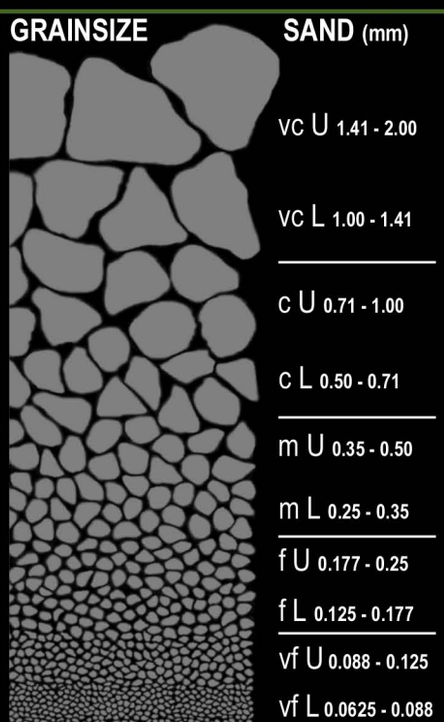
SILTY SANDSTONE (100%): medium brown, medium to dark greyish brown, very fine to coarse, predominantly fine to medium, poorly to moderately sorted, sub-angular to sub-rounded, trace weak calcareous cement, common to locally abundant medium brown siliciclastic silty matrix and grades to arenaceous SILTSTONE, minor to locally common undifferentiated clay, minor carbonaceous material, occasional silty laminations, hard, poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 8 Depth 1374.2 m

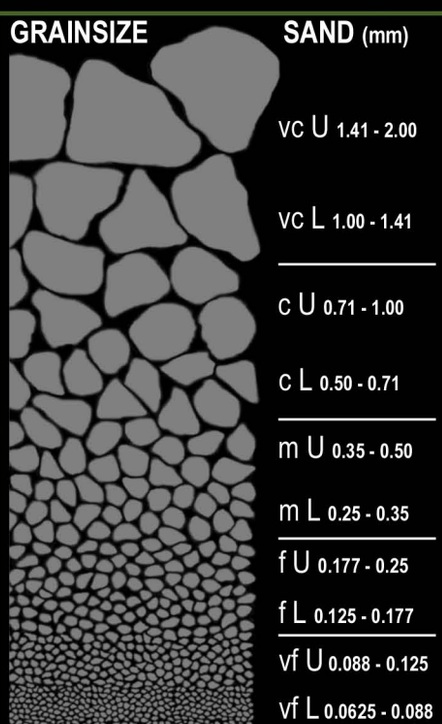




WELLSITE DESCRIPTION

SANDSTONE (100%): pale grey, common off white speckling, mainly translucent quartz grains, predominantly fine to medium, occasional coarse grains, moderately sorted, sub-angular to sub-rounded, minor moderately strong calcareous and siliceous cement, common off white to pale grey argillaceous matrix, occasional lithics and carbonaceous specks, hard aggregates, poor to fair visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 9 Depth 1354.1 m



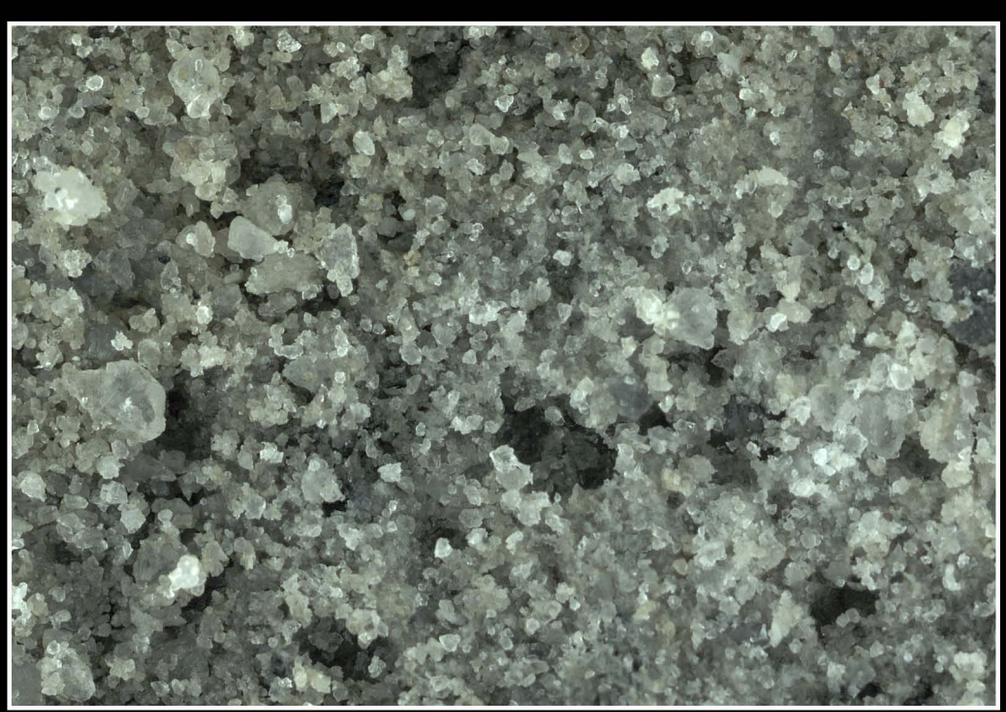
WELLSITE DESCRIPTION

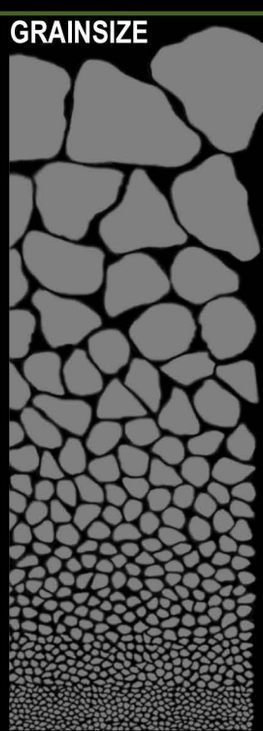
SILTY SANDSTONE (100%): medium grey, medium olive grey, clear to translucent quartz grains, very fine to fine, well sorted, sub-rounded, minor weak siliceous cement, common siliciclastic silty matrix and in part grades to arenaceous SILTSTONE, trace very fine lithics and carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 10 Depth 1350.0 m

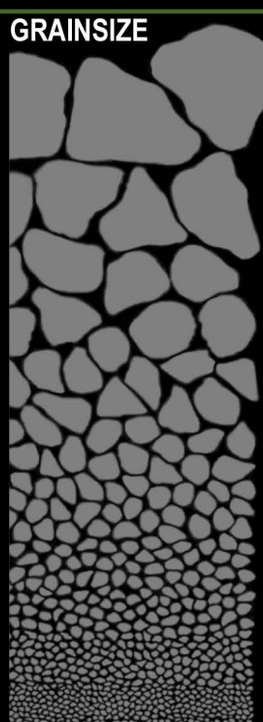




WELLSITE DESCRIPTION

SANDSTONE (100%): pale grey, off white speckling, mainly translucent quartz grains, very fine to coarse, trace very coarse, poorly sorted, angular to sub-rounded, common pale grey to off white argillaceous matrix, hard aggregates, poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 11 Depth 1344.4 m



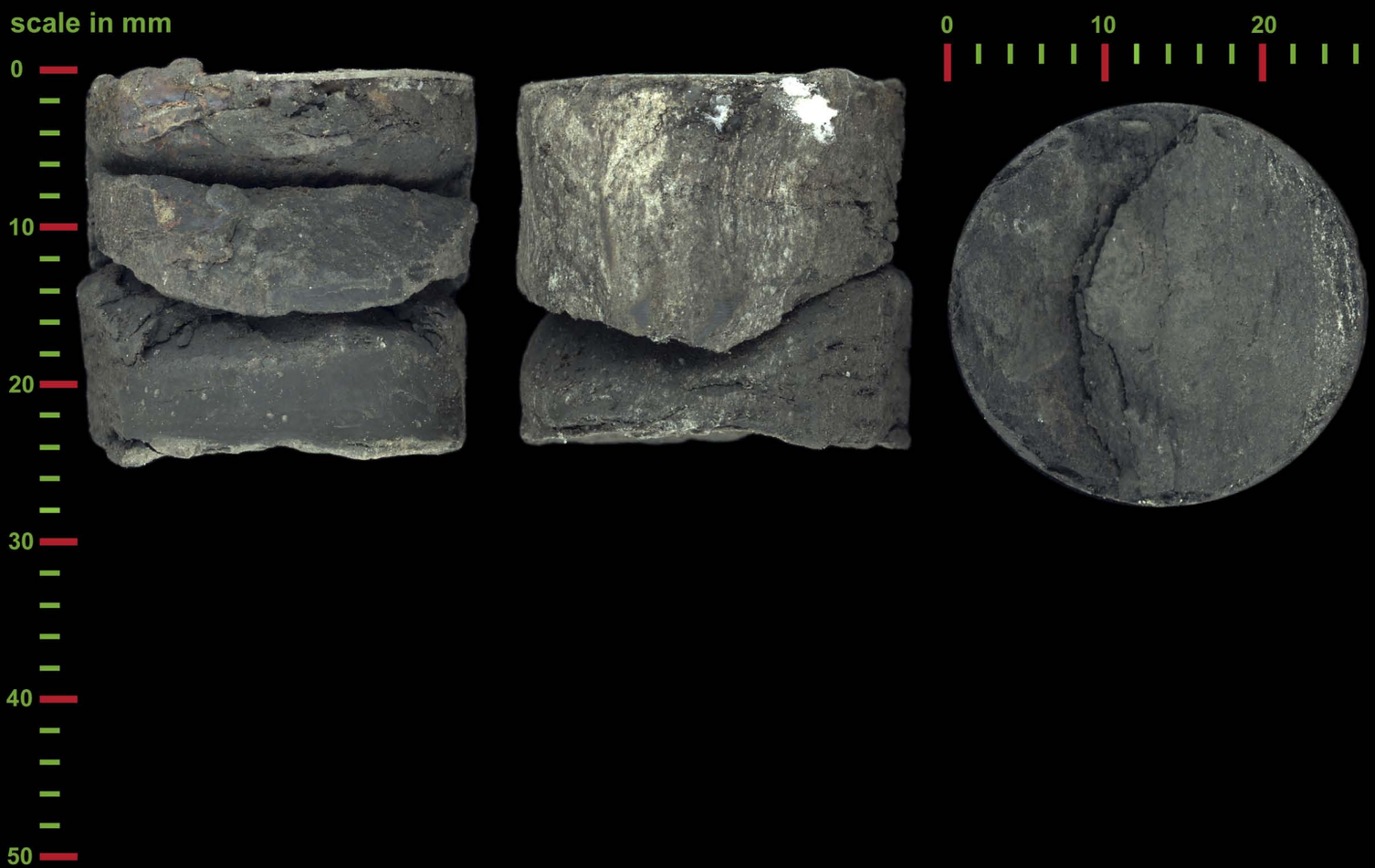
WELLSITE DESCRIPTION

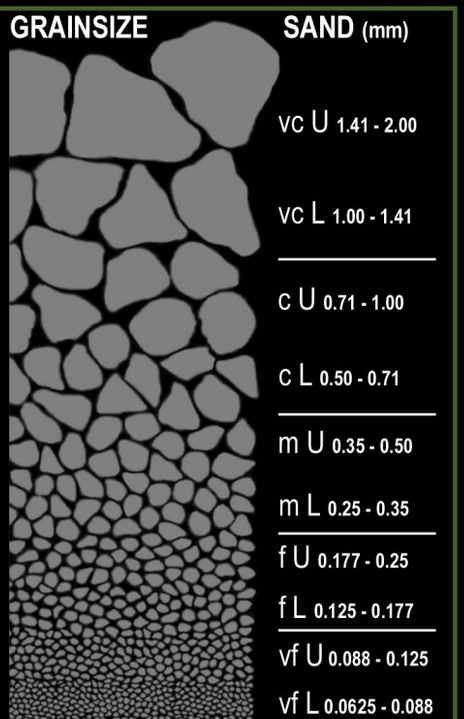
SILTY SANDSTONE (100%): medium grey, medium olive grey, clear to translucent quartz grains, very fine to fine, well sorted, sub-rounded, common siliciclastic silty matrix and in part grades to arenaceous SILTSTONE, trace very fine lithics and carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 12 Depth 1331.0 m





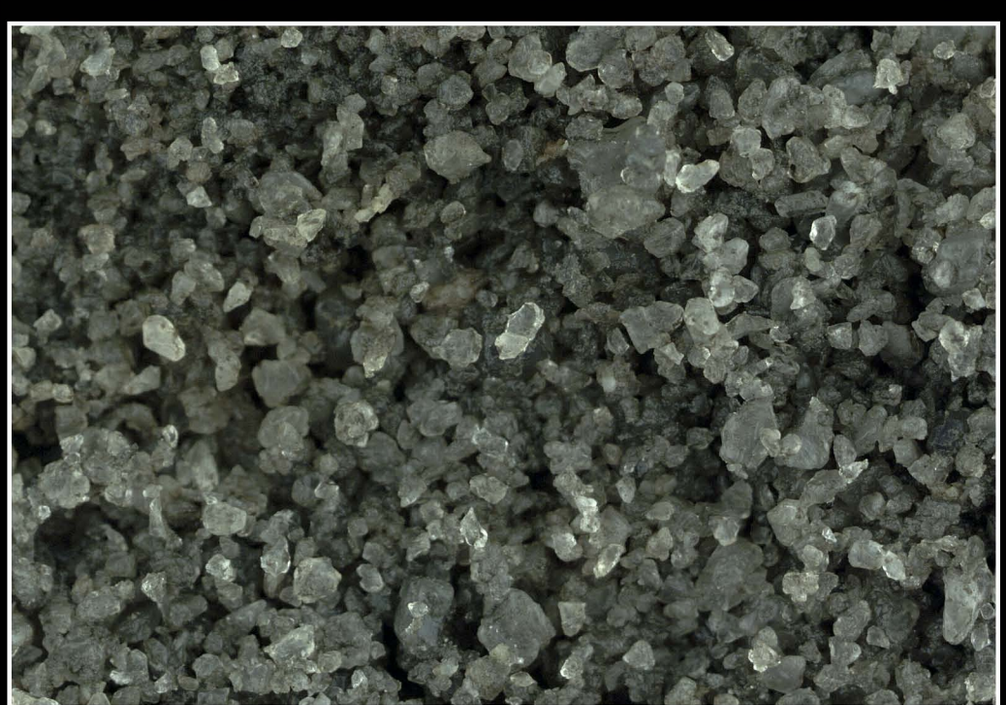
WELLSITE DESCRIPTION

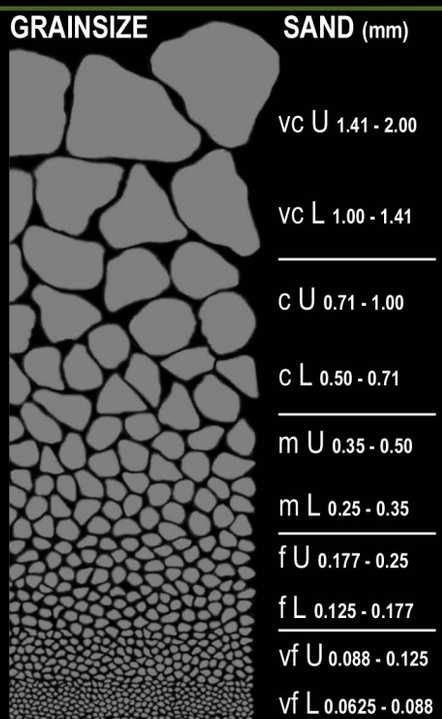
CARBONACEOUS ARGILLACEOUS SILTSTONE (100%): medium brown, medium grey brown, dark brown to very dark grey, trace siliciclastic grains up to coarse sand-size, common carbonaceous material as coaly specks and in argillaceous microlaminations, commonly micromicaceous, minor sideritic cement, firm to hard.

Apache Energy Ltd

WASABI - 1

SWC # 13 Depth 1329.5 m

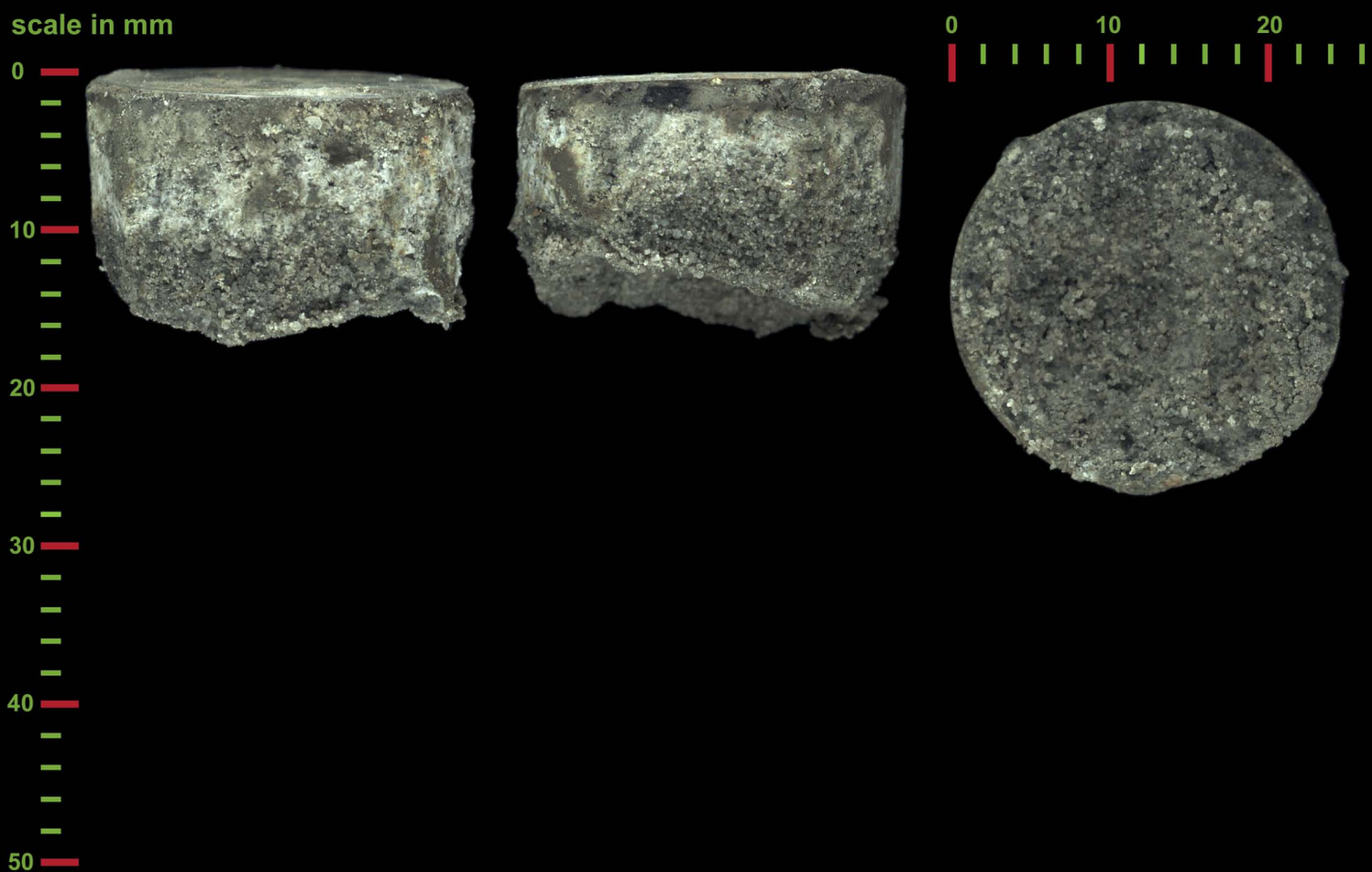


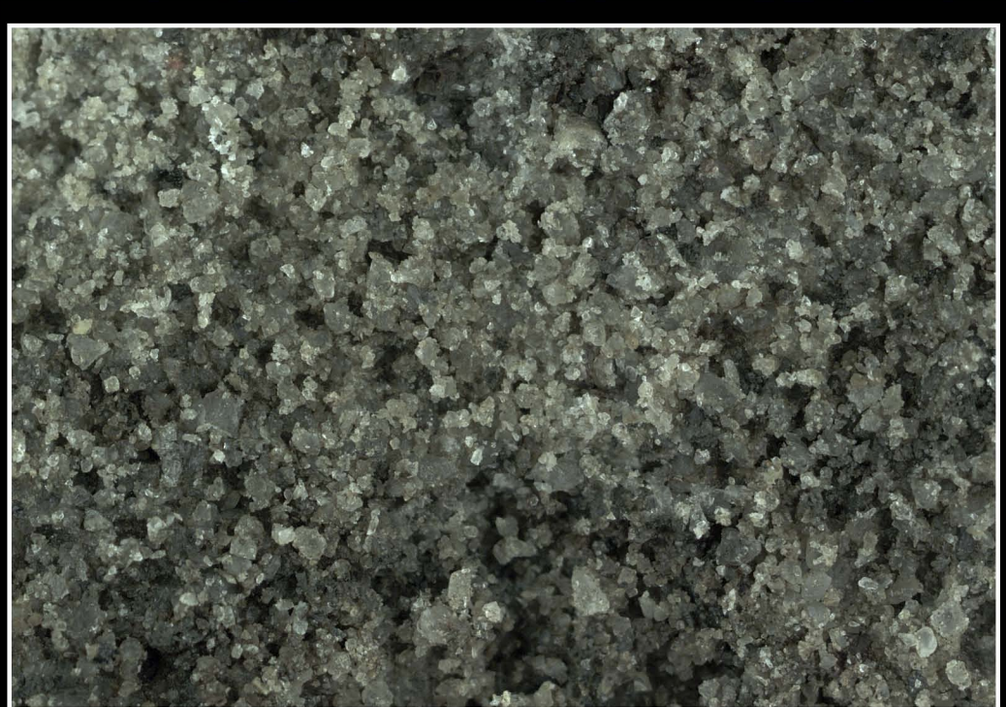


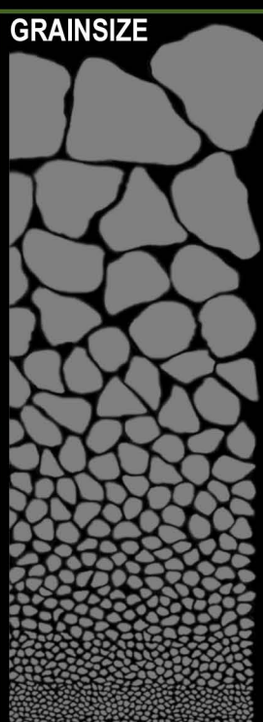
WELLSITE DESCRIPTION

SANDSTONE (100%): grey to medium brownish grey, dark brown stained in part, mainly translucent quartz grains, fine to coarse, predominantly medium, poorly to moderately sorted, angular to sub-angular, trace weak calcareous cement, minor moderately strong siliceous cement, trace medium brownish grey siliciclastic silt matrix, hard aggregates, poor to fair visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 14 Depth 1329.0 m







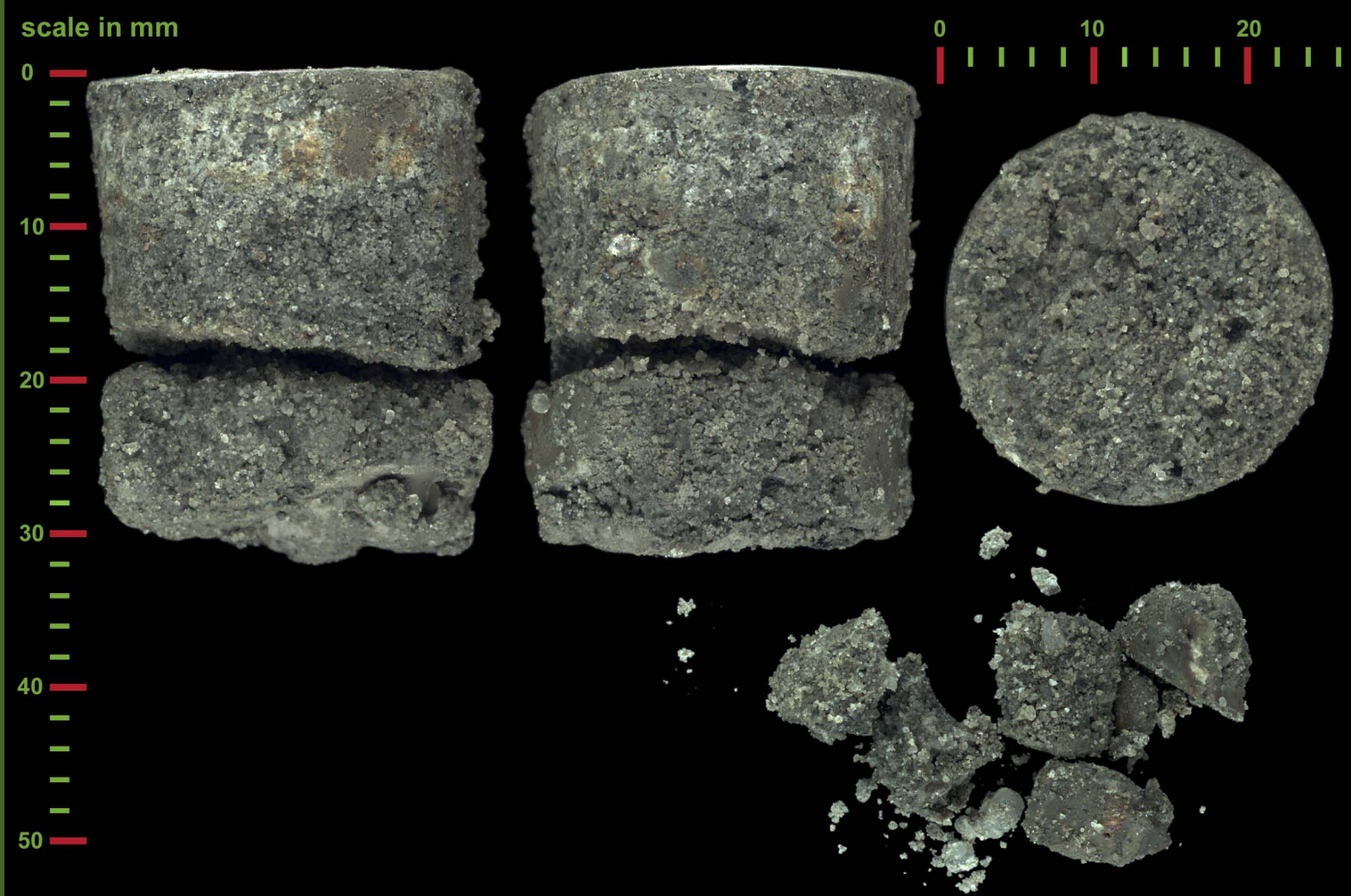
WELLSITE DESCRIPTION

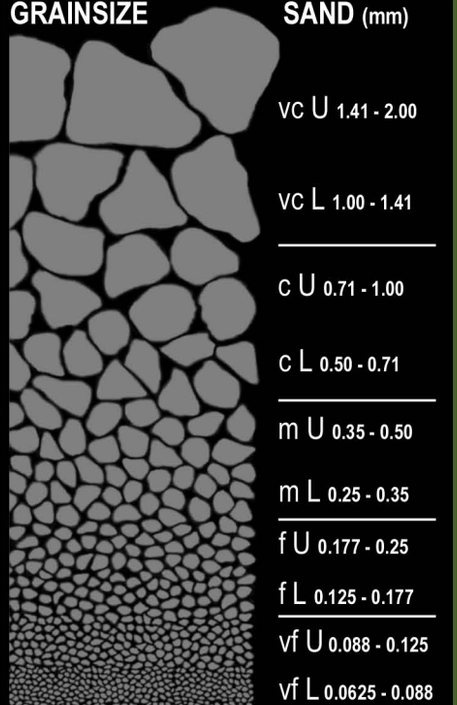
SILTY SANDSTONE (100%): medium brownish grey, dark brown stained in part, mainly translucent quartz grains, fine to coarse, poorly sorted, angular to sub-angular, minor moderate calcareous cement, trace moderately strong siliceous cement, common medium brownish grey siliciclastic silt matrix, trace undifferentiated clays, trace carbonaceous material, hard aggregates, poor to fair visible porosity.

Apache Energy Ltd

WASABI - 1

SWC # 15 Depth 1328.5 m

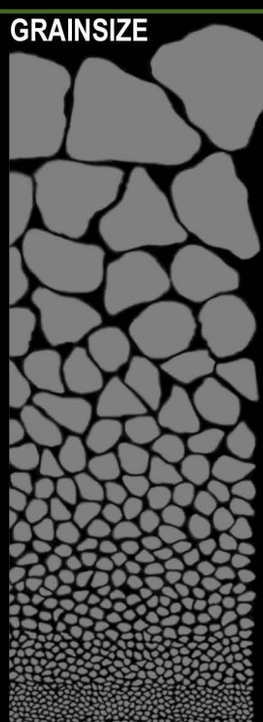




WELLSITE DESCRIPTION

SILTY SANDSTONE (100%): medium brownish grey, medium orange brown to dark brown stained in part, mainly translucent quartz grains, fine to upper coarse, poorly sorted, angular to sub-rounded, minor moderately strong siliceous cement, common medium brownish grey siliciclastic silt matrix, trace undifferentiated clays, trace carbonaceous material, hard aggregates, poor to fair visible porosity.

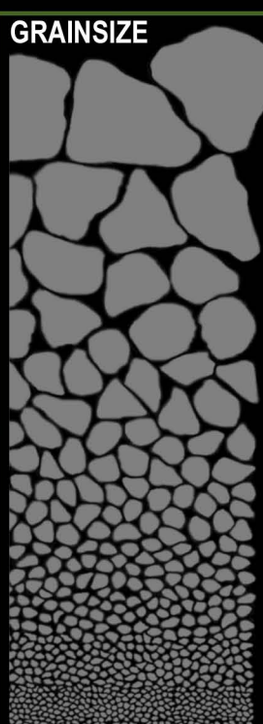
Apache Energy Ltd
WASABI - 1
SWC # 16 Depth 1327.3 m



WELLSITE DESCRIPTION

CARBONACEOUS ARGILLACEOUS SILTSTONE (100%): medium olive grey to brownish grey, dark brown to very dark grey in part, trace mainly very fine quartz sand, common disseminated carbonaceous material, common undifferentiated clays, commonly micromicaceous, minor lithics, firm to hard.
Note: surficial development of secondary gypsum.

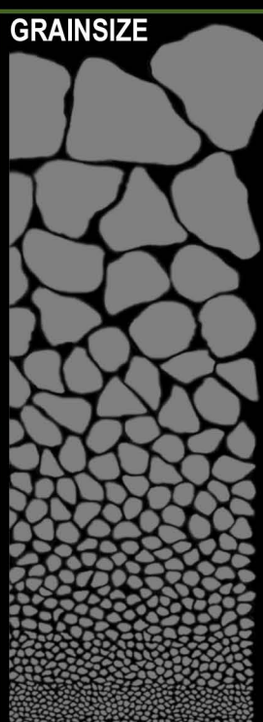
Apache Energy Ltd
WASABI - 1
SWC # 17 Depth 1319.2 m



WELLSITE DESCRIPTION

SANDSTONE (100%): medium brownish grey, medium grey, quartz grains clear to mainly translucent, very fine to medium, minor coarse grains, moderately well to well sorted, sub-angular to sub-rounded, minor moderately siliceous cement, minor medium greyish brown siliciclastic silt matrix, hard aggregates, fair to mainly poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 18 Depth 1314.4 m



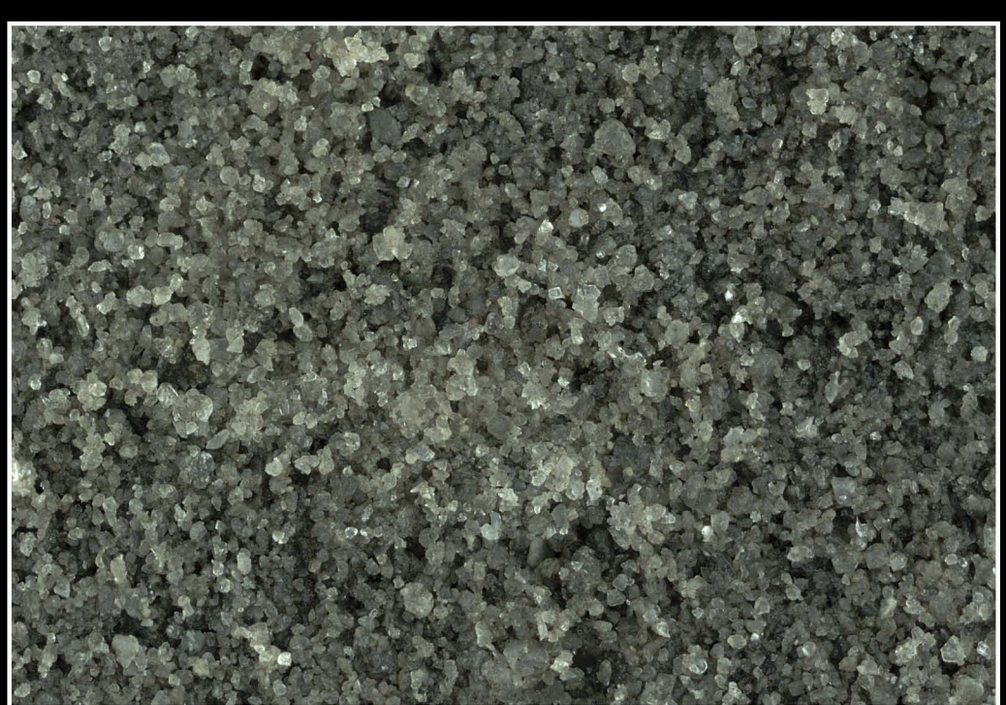
WELLSITE DESCRIPTION

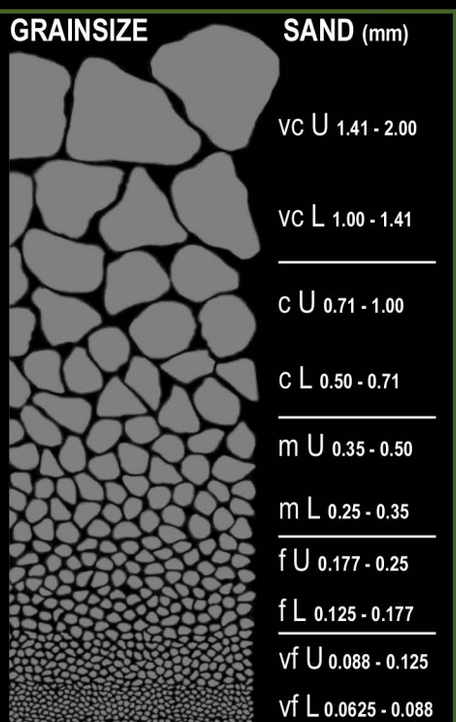
SANDSTONE (100%): grey to medium brownish grey, translucent to frosted quartz grains, very fine to coarse, predominantly medium, poorly to moderately sorted, angular to sub-rounded, trace moderate calcareous cement, minor moderate siliceous cement, common off white to medium brownish grey argillaceous matrix, hard aggregates, poor to fair visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 19 Depth 1303.0 m

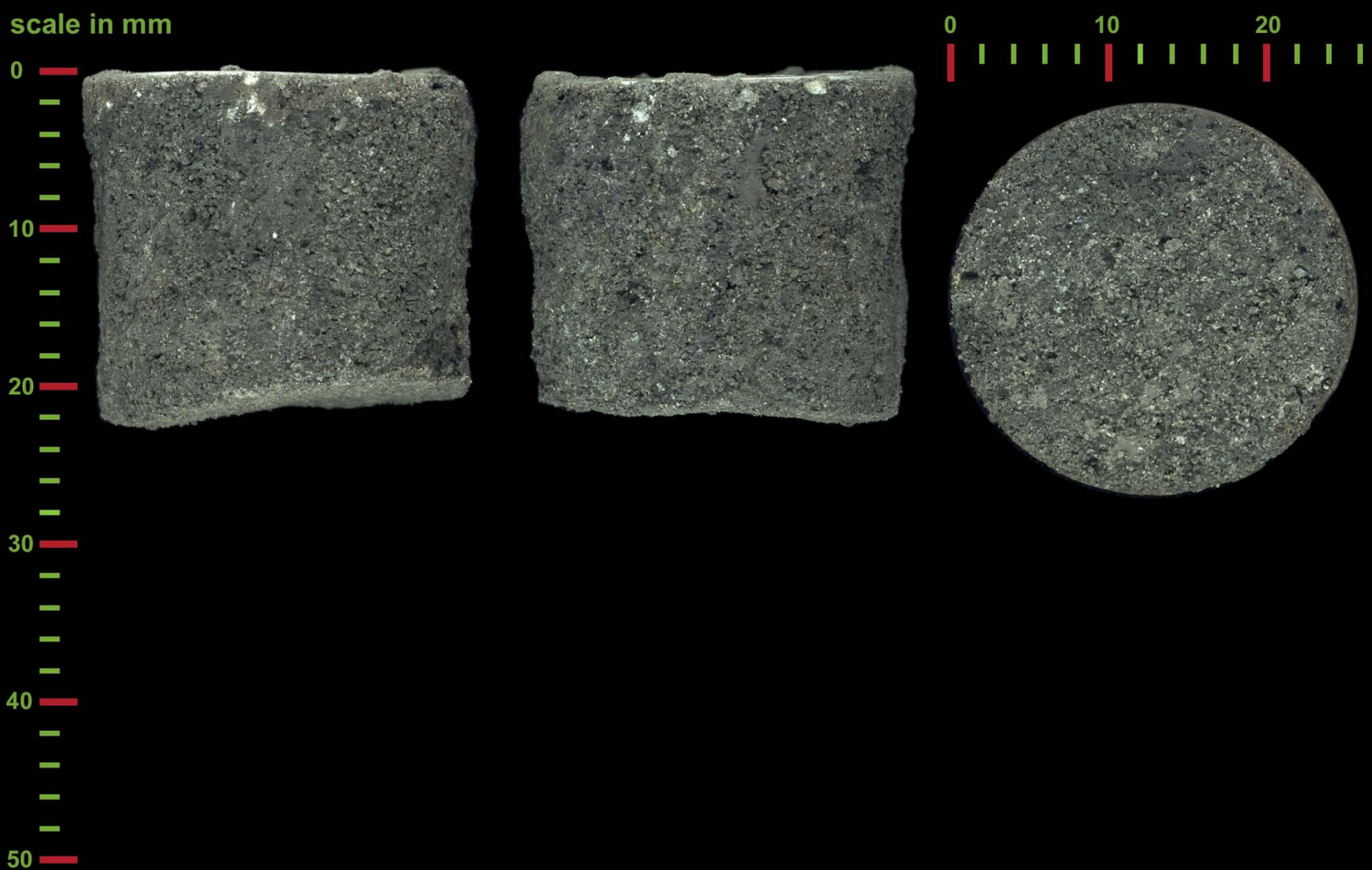


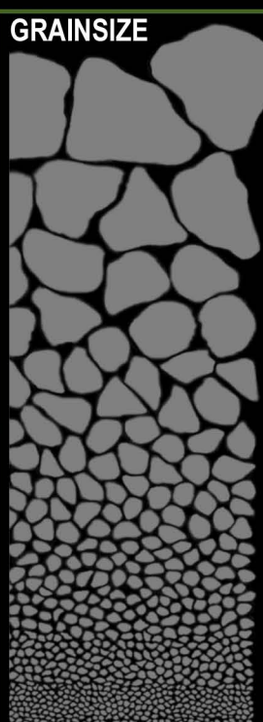


WELLSITE DESCRIPTION

SILTY SANDSTONE (100%): medium grey, medium olive grey, clear to translucent quartz grains, very fine to lower medium, mainly fine, well sorted, sub-rounded, common silty matrix and in part may grade to arenaceous SILTSTONE, trace very fine lithics, trace carbonaceous specks, hard aggregates, fair to mainly poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 20 Depth 1298.2 m





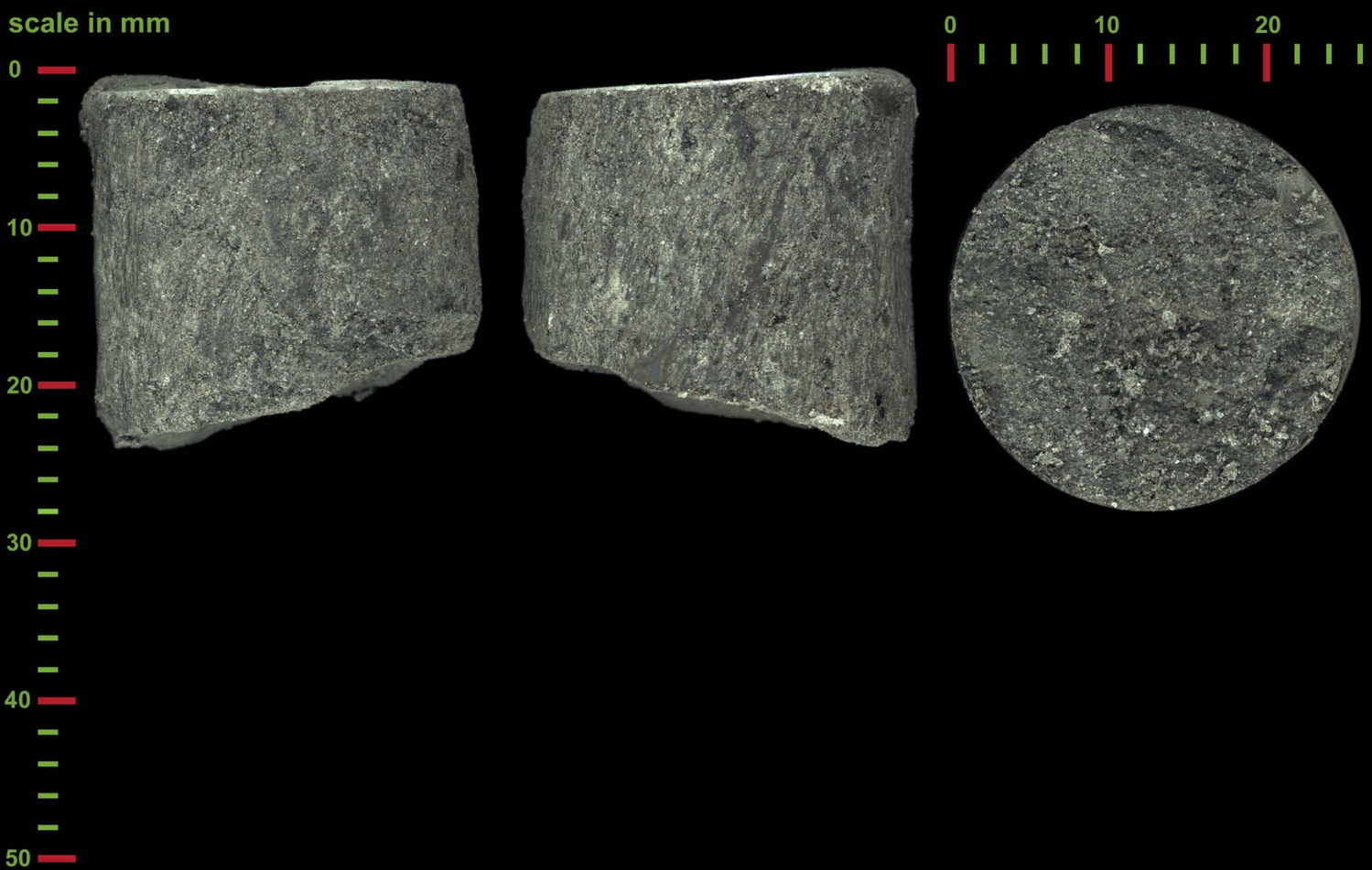
WELLSITE DESCRIPTION

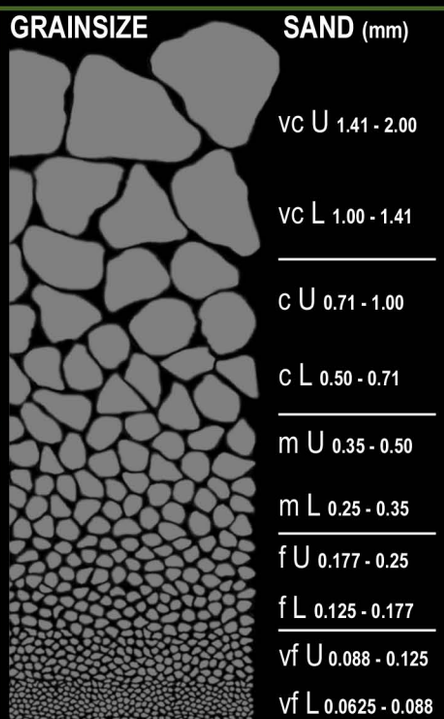
ARGILLACEOUS SILTY SANDSTONE (100%): medium grey, medium olive grey, dark brownish grey stained in part, mainly very fine to fine, minor scattered medium to very coarse framework grains, poorly to moderately sorted, sub-angular to sub-rounded, common undifferentiated clays, common siliciclastic silty matrix, grades to arenaceous SILTSTONE, trace carbonaceous specks, hard aggregates, poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 21 Depth 1295.2 m





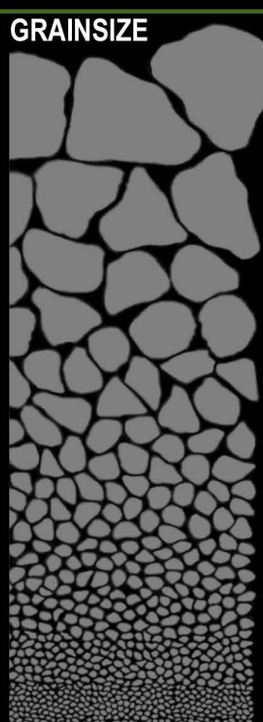
WELLSITE DESCRIPTION

ARGILLACEOUS SILTY SANDSTONE (100%): light to medium olive grey, brownish grey stained in part, very fine to fine, well sorted, sub-angular to sub-rounded, common undifferentiated siliceous clays, common to abundant silty matrix and overall grades to arenaceous SILTSTONE, silt and clay concentrations typically present as disturbed microlaminations, occasional lithics, minor carbonaceous matter in some microlaminations, occasionally micromicaceous, hard aggregates in places, poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 22 Depth 1288.0 m



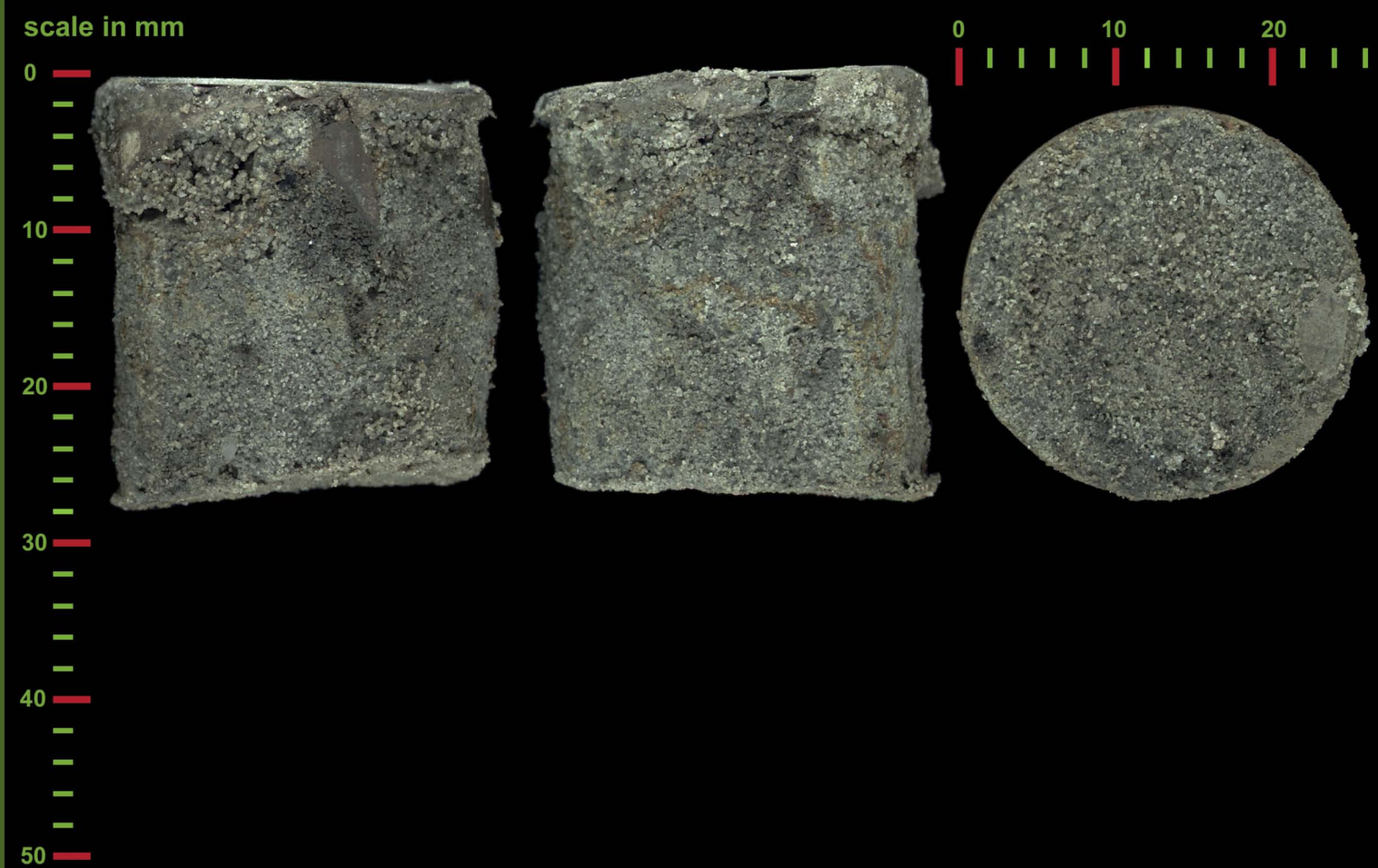
WELLSITE DESCRIPTION

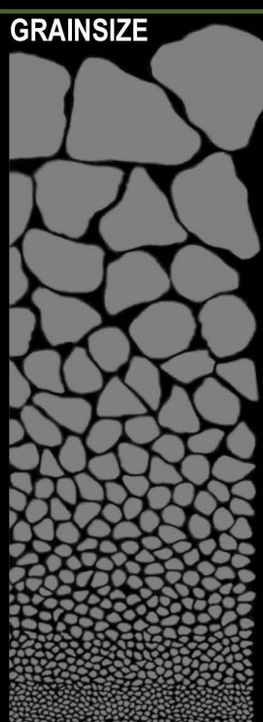
SANDSTONE (100%): grey to medium olive grey, brownish grey stained in part, clear to mainly translucent quartz grains, very fine to medium, mainly upper fine to lower medium, well sorted, sub-rounded, minor to common silty matrix, minor moderately strong siliceous cement, occasional lithics, trace mica, hard aggregates in places, fair to poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 23 Depth 1276.8 m

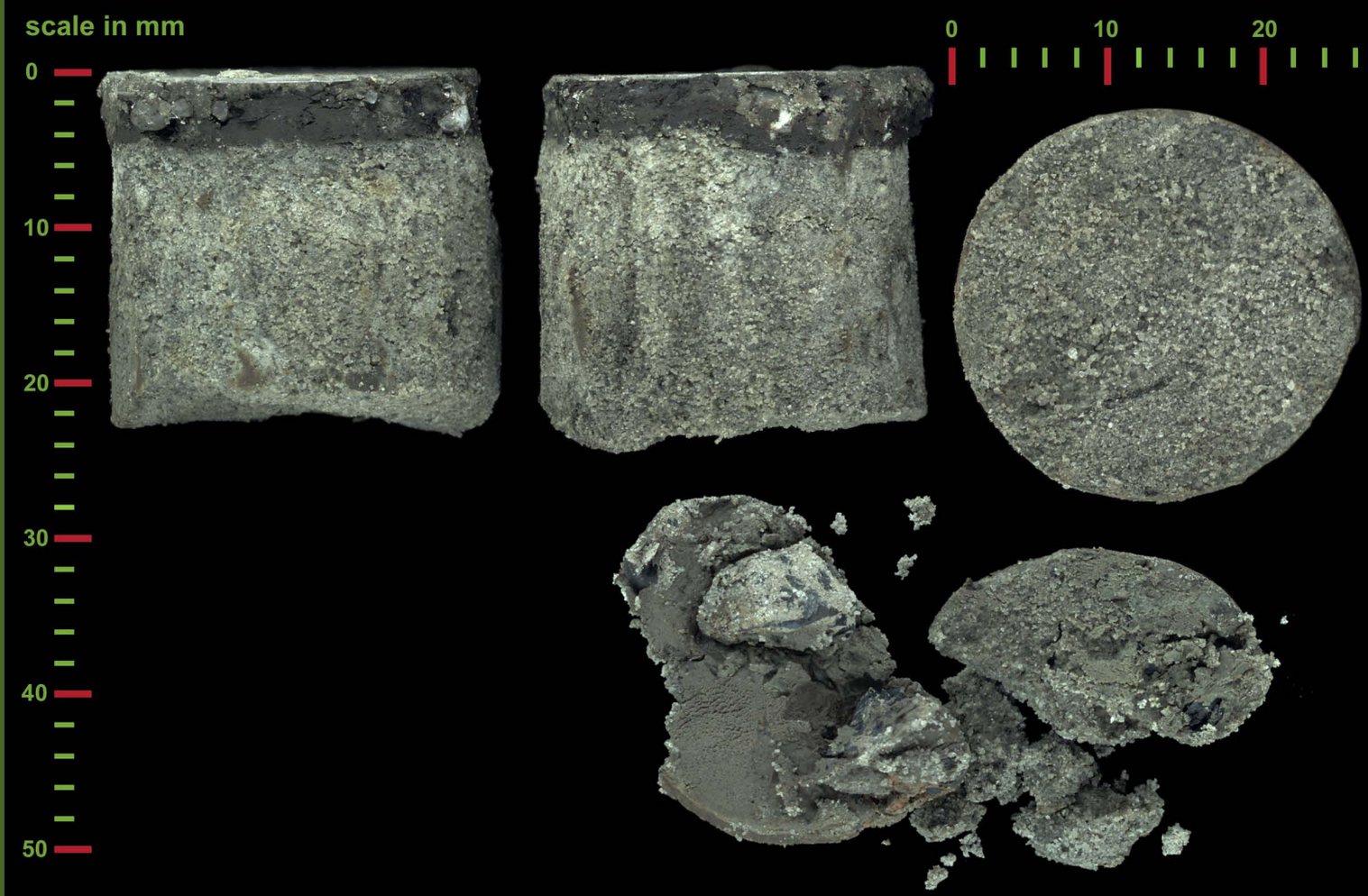


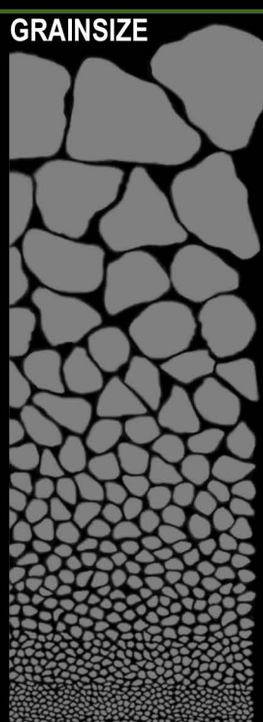


WELLSITE DESCRIPTION

SILTY SANDSTONE (100%): medium grey to olive grey, brownish grey stained in part, mainly very fine to fine, rare medium grains, well sorted, sub-rounded, common silty matrix, trace undifferentiated clays, common moderately strong calcareous cement and minor moderately strong siliceous cement, occasional lithics, trace mica, hard aggregates in places, fair to mainly poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 24 Depth 1264.5 m





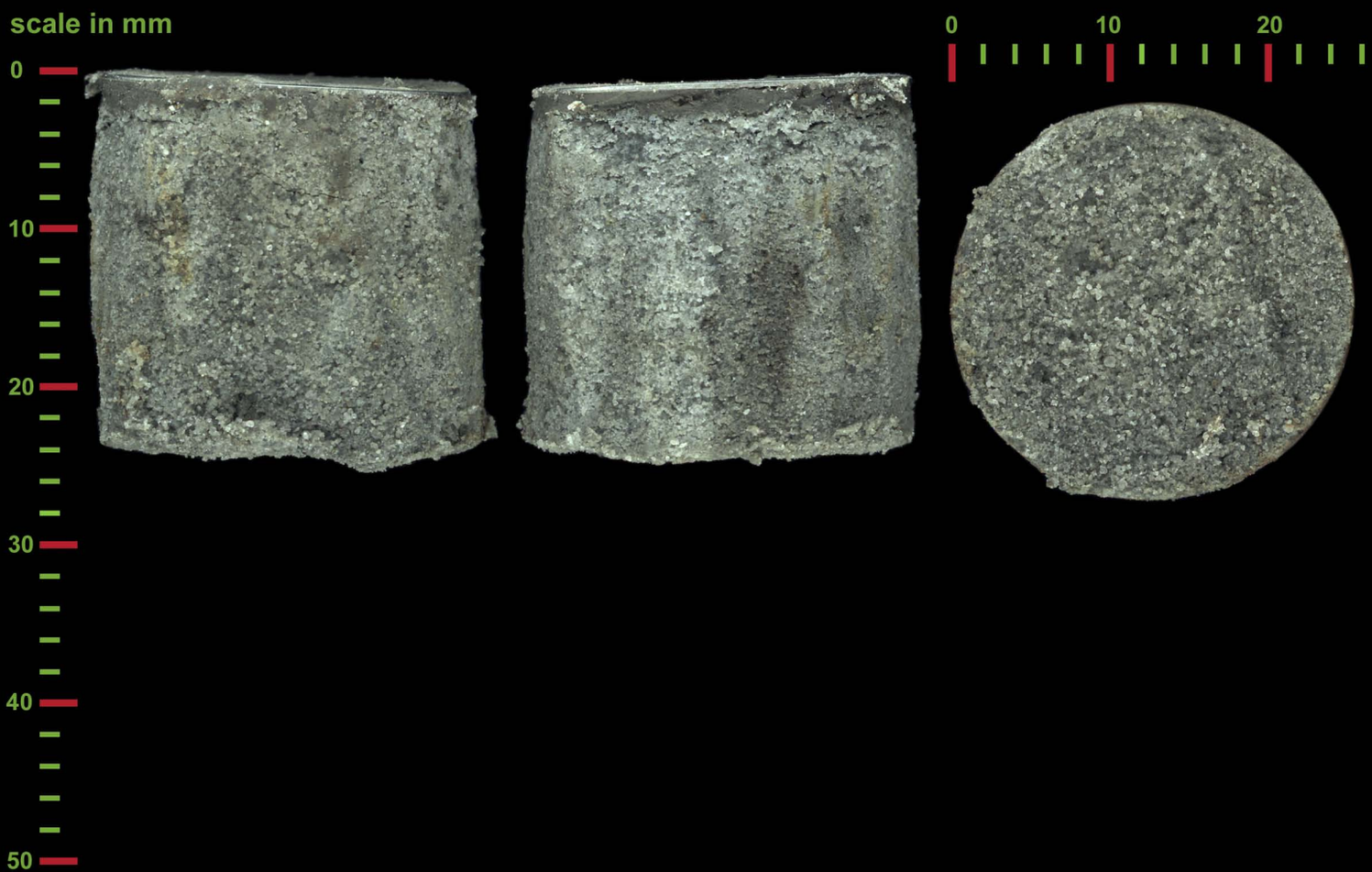
WELLSITE DESCRIPTION

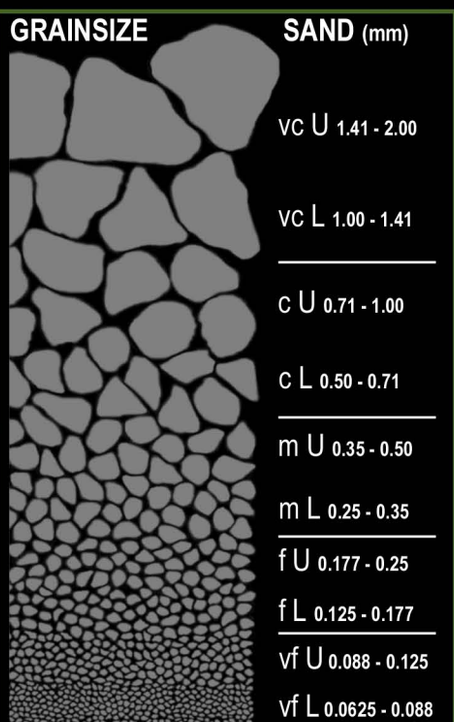
SILTY SANDSTONE (100%): light to medium grey, medium greyish brown stained in places, mainly translucent quartz grains, very fine to lower medium, mainly very fine to lower fine, well sorted, sub-rounded, minor to common moderately strong calcareous cement, common to abundant medium brownish grey siliciclastic silt matrix, locally grades to arenaceous SILTSTONE, occasional carbonaceous material, trace undifferentiated clays, hard aggregates in places, generally poor visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 25 Depth 1262.9 m

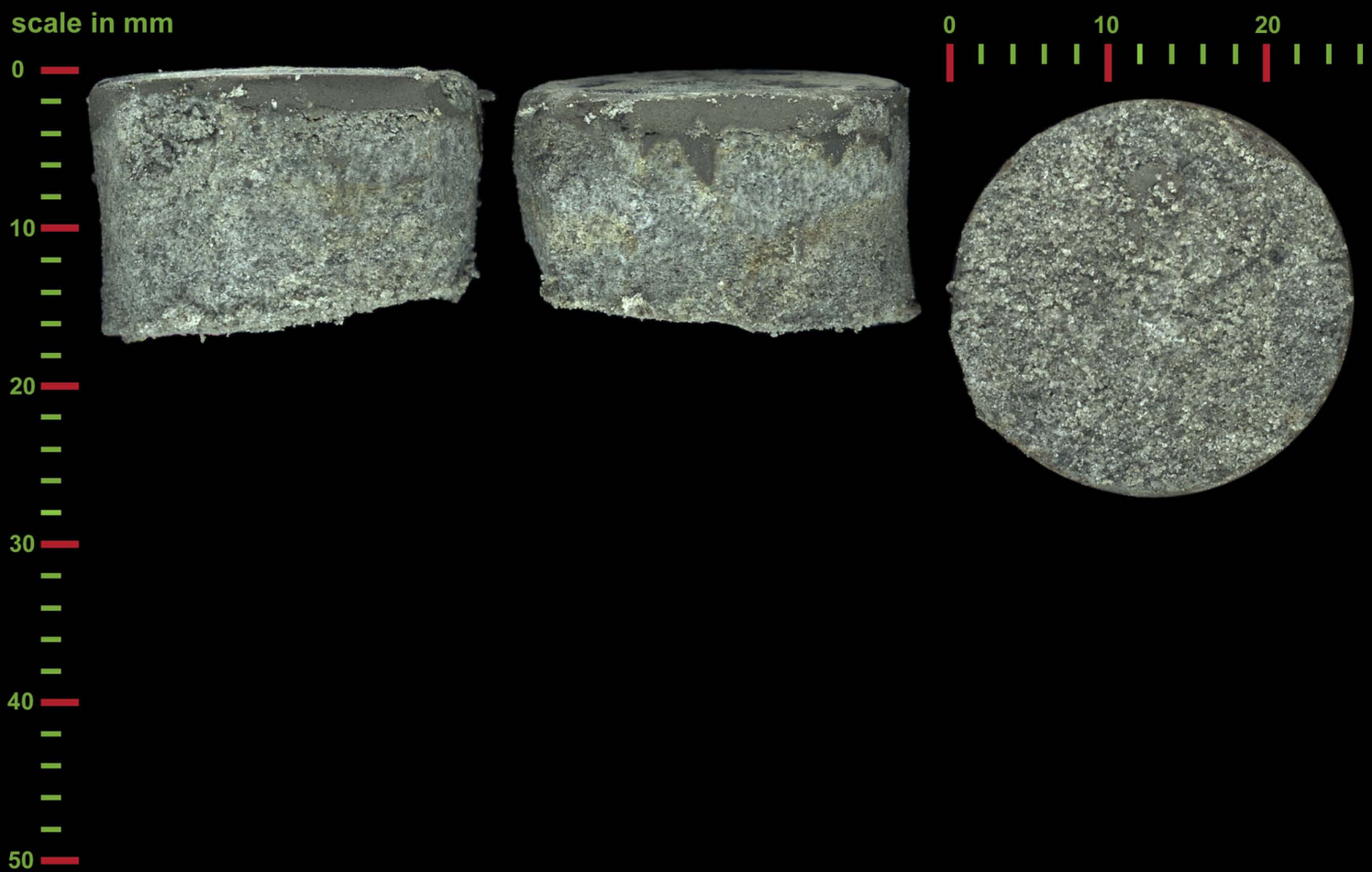


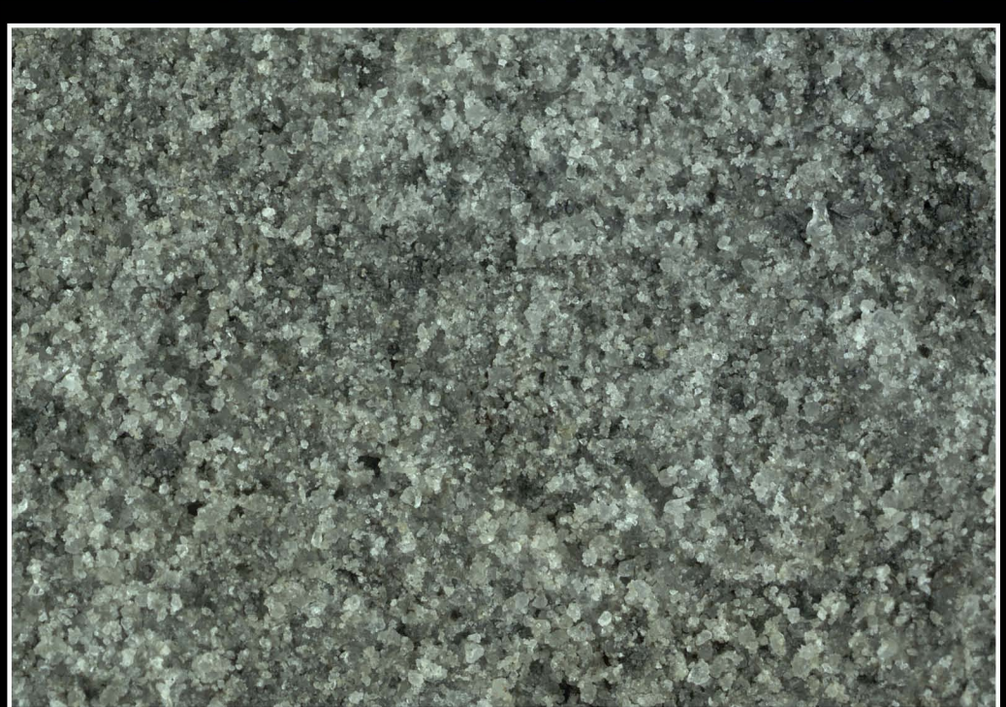


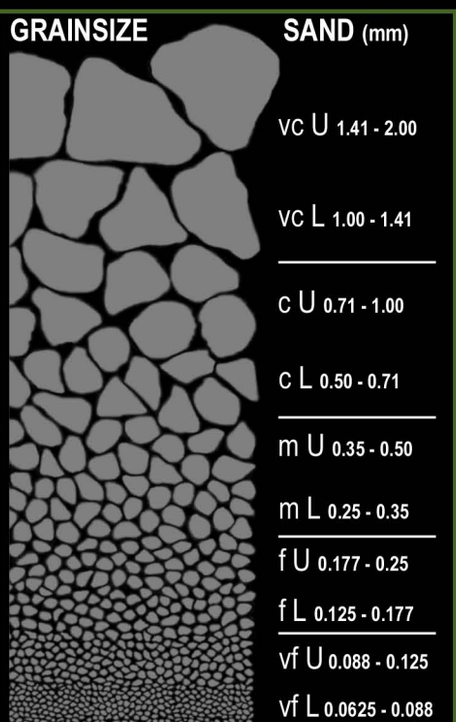
WELLSITE DESCRIPTION

SANDSTONE (100%): light to medium grey, clear to mainly translucent quartz grains, fine to medium, predominantly upper fine, well sorted, sub-angular to sub-rounded, trace siliciclastic silt, trace weak calcareous cement, minor moderately strong siliceous cement, trace carbonaceous material, hard aggregates in places, fair visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 26 Depth 1261.3 m



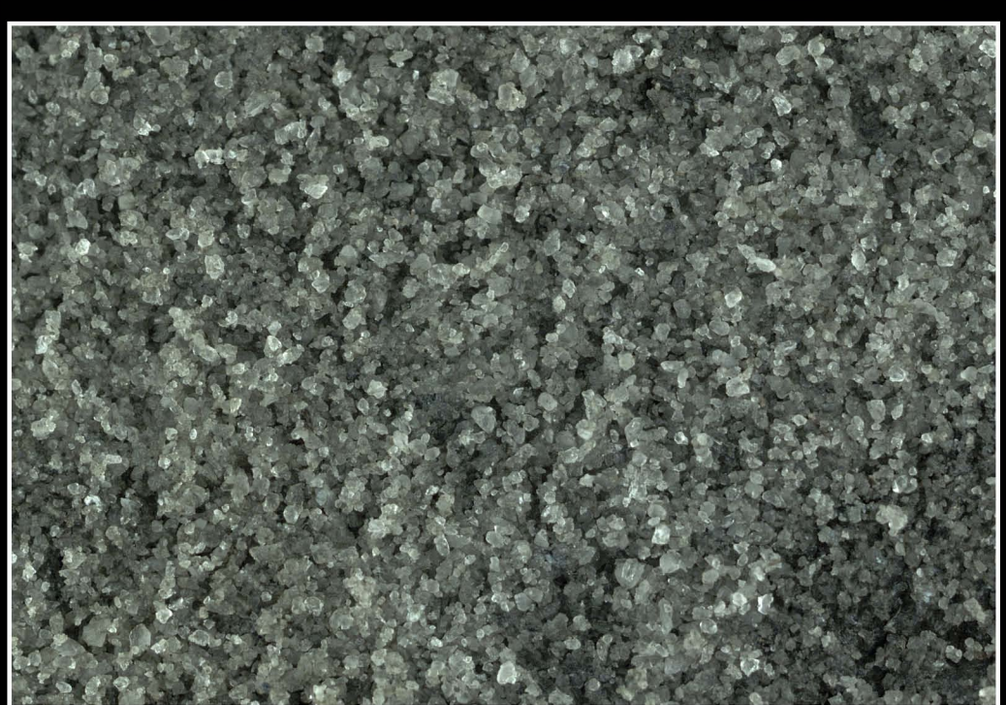


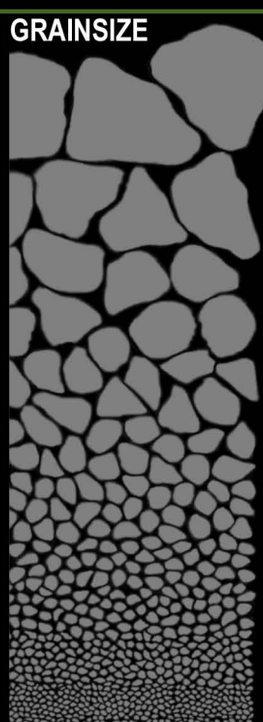


WELLSITE DESCRIPTION

SILTY SANDSTONE (100%): light to medium grey, mainly translucent quartz grains, fine to medium, predominantly upper very fine, well sorted, sub-angular to sub-rounded, very poorly defined layering, common siliciclastic silt, trace weak calcareous cement, minor moderately strong siliceous cement, hard aggregates in places, poor to fair visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 27 Depth 1259.3 m





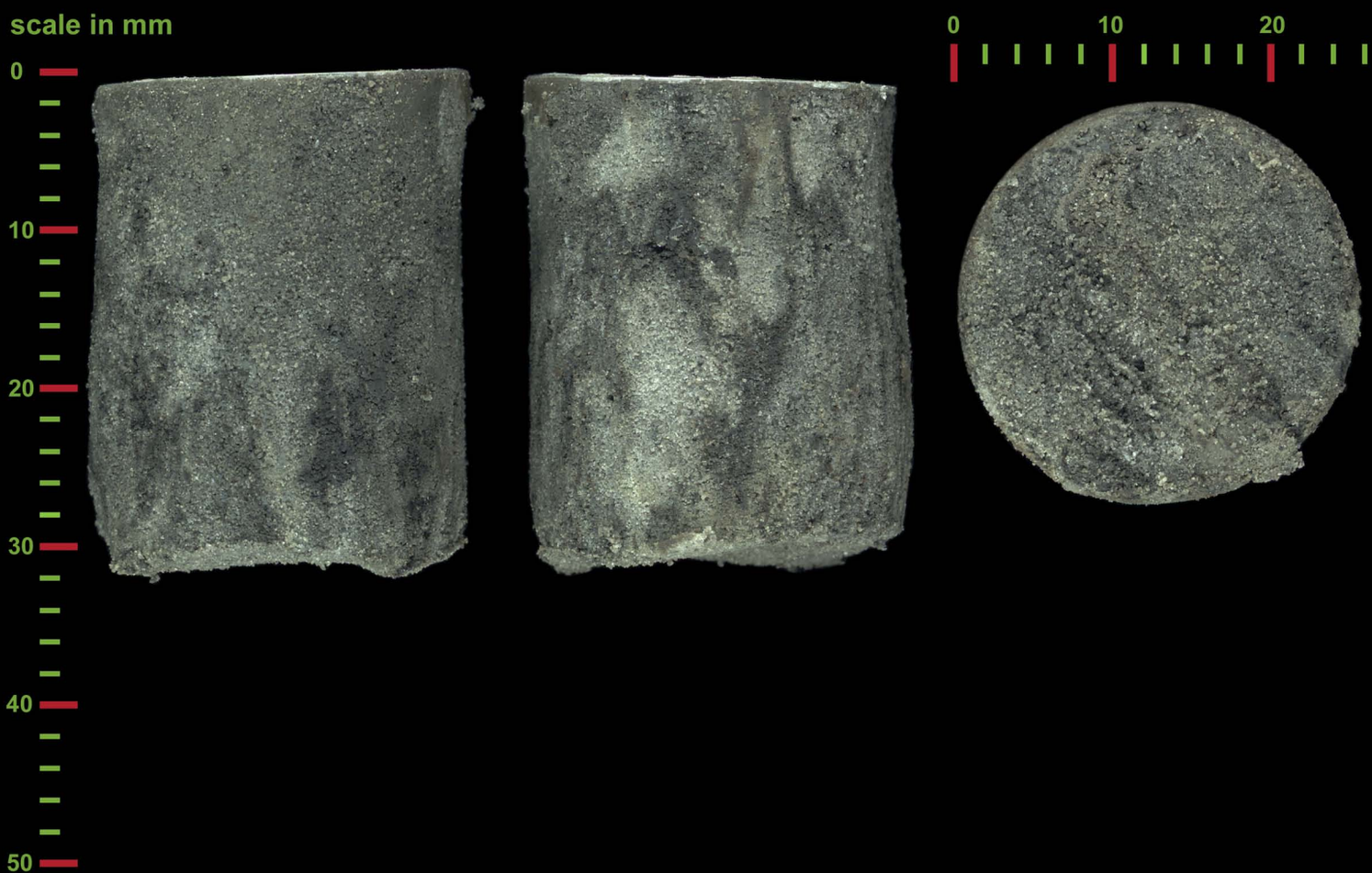
WELLSITE DESCRIPTION

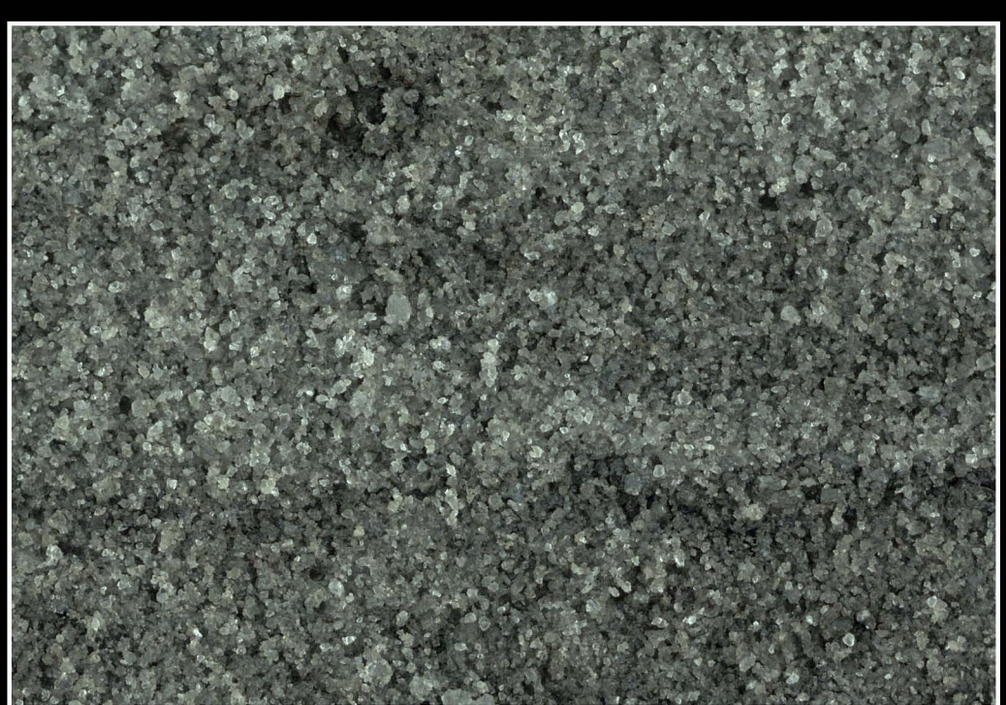
SANDSTONE (100%): medium to dark grey, clear to mainly translucent quartz grains, very fine to fine, predominantly fine, trace medium, well sorted, sub-angular to sub-rounded, faintly defined layering in part, common moderately strong siliceous cement, trace weak calcareous cement, rare argillaceous matrix, occasional carbonaceous specks, hard aggregates in places, fair visible porosity, no fluorescence.

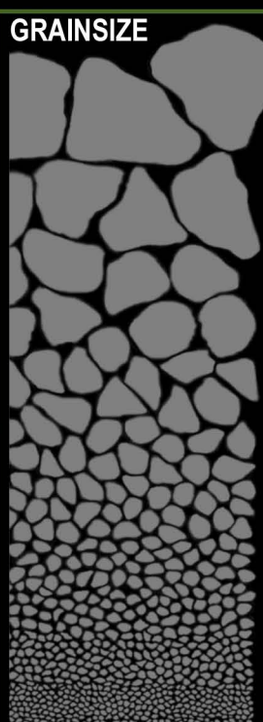
Apache Energy Ltd

WASABI - 1

SWC # 28 Depth 1258.1 m



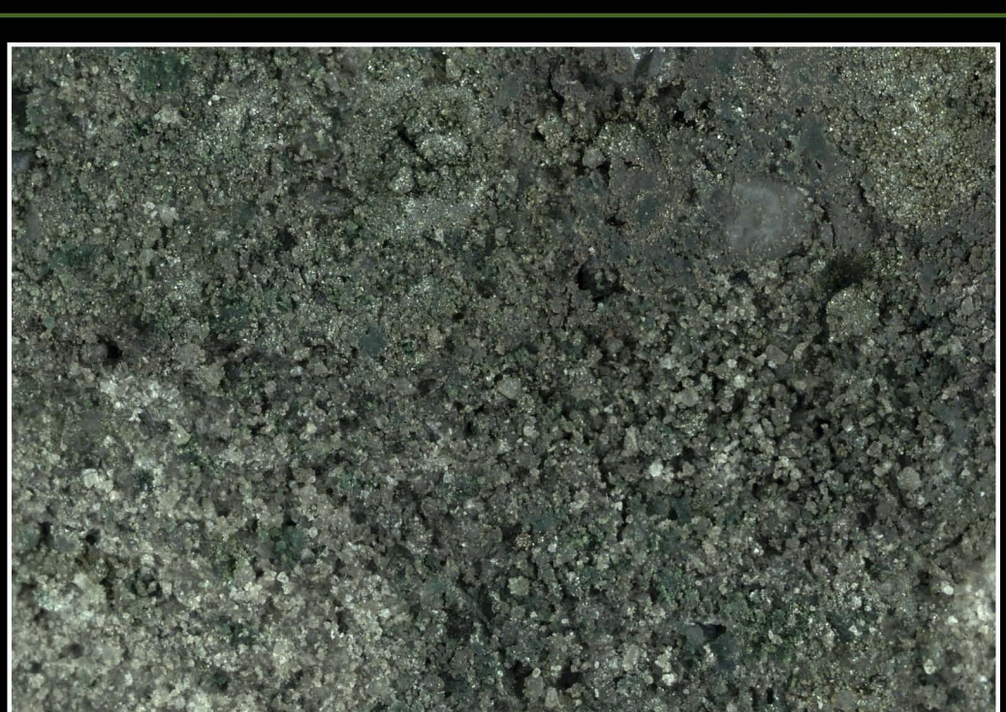


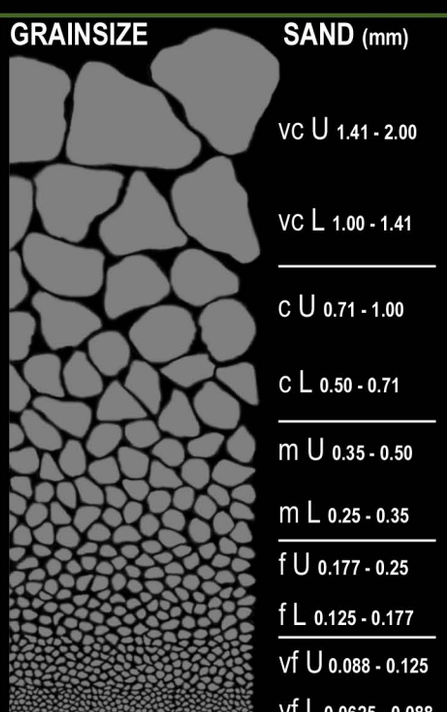


WELLSITE DESCRIPTION

SILTY SANDSTONE (100%): medium grey, medium olive grey, dark grey in part, very fine to fine, common siliciclastic silt and may grade to arenaceous SILTSTONE, very well sorted, sub-rounded, minor weak calcareous cement, trace amounts of undifferentiated clays, carbonaceous specks, and mica, occasional hard aggregates, fair to poor visible porosity, no fluorescence.

Apache Energy Ltd
WASABI - 1
SWC # 29 Depth 1256.4 m





WELLSITE DESCRIPTION

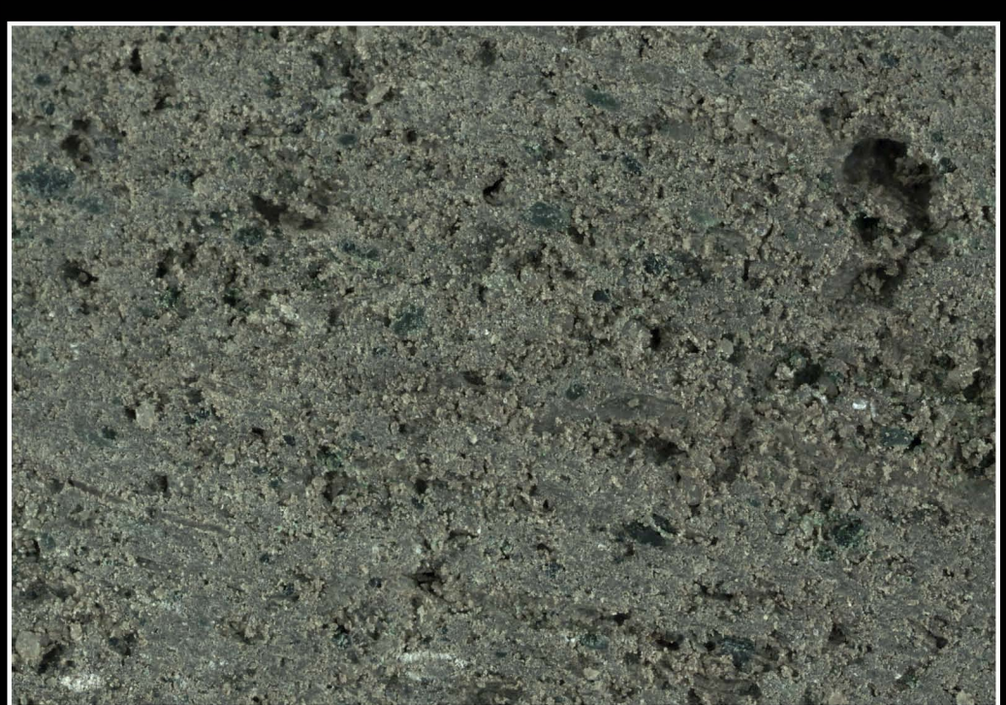
PYRITIC GLAUCONITIC MARL (50%): medium to dark grey, speckled dark green, silver, very argillaceous, abundant disseminated pyrite, abundant fine dark green glauconite, common dispersed very coarse quartz grains, interbedded with poorly sorted SANDSTONE.

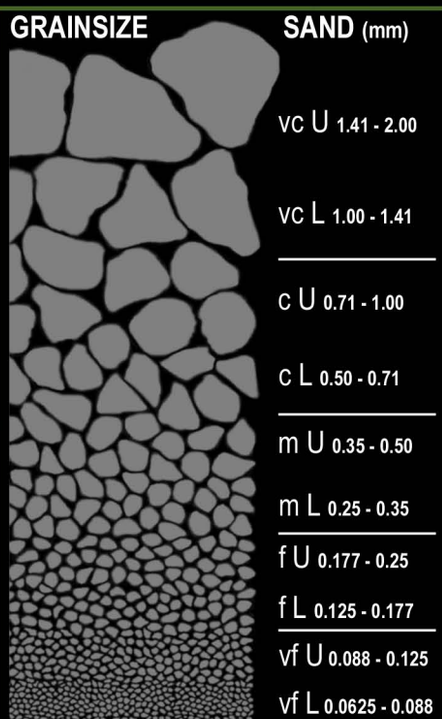
PYRITIC GLAUCONITIC CALCAREOUS SANDSTONE (50%): very fine to very coarse quartz grains, poorly sorted, common calcareous clay, common glauconite, moderately hard, tight visible porosity, no fluorescence.

Apache Energy Ltd

WASABI - 1

SWC # 30 Depth 1250.0 m





WELLSITE DESCRIPTION

ARENACEOUS GLAUCONITIC MARL (100%): medium grey brown, medium grey, common to abundant calcareous material, common dark green glauconite grains up to medium sand-size, common irregularly disseminated quartz sand, common disseminated pyrite, minor micromica, hard.

FINAL WELL REPORT

Apache Northwest Pty Ltd

Wasabi-1

14 February – 06 March 2008

by

BAKER HUGHES INTEQ

Wasabi-1

Final Well Report

SECTION 1

WELL SUMMARY

1 Well Data Summary

Well Name	Wasabi-1
Rig Name:	MODU West Triton
Rig Type:	Jack-Up
Drilling Contractor:	Seadrill
Drilling Datum:	Rotary Table
RT to AHD:	39.0 mMDRT
RT to Seabed:	66.0 mMDRT
Surface Coordinates:	Lat 38° 29’ 18.157” S Long 147° 15’ 49.147” E
Grid Coordinates: (DATUM GDA94)	E 522 993.588 m N 5 739 963.350 m
Permit:	VIC/P-58
Well Type:	Exploration
Spud Date:	14 February 2008
Spud Depth:	66.0 mMDRT
Total Depth:	2313.0 mMDRT
TD Date:	01 March 2008
Well Status:	Plugged & Abandoned

Baker Hughes INTEQ Crew:

Data Engineers:	Deelip Mahajan, Yeong Chen Wong, John Mancarella, Exequiel Discipulo
Logging Geologists:	Avadhut Gholap, Rebecca Houston

1.1 Well Summary
Wasabi-1

Baker Hughes INTEQ SLS provided formation evaluation, drill monitoring services for Wasabi-1 from the spud depth at 66.0 mMDRT on 14 February 2008 to 2313.0 mMDRT on 01 March 2008. Data was processed and stored using **Advantage version 2.10U2** software. All depths are measured depth below Rotary Table (mMDRT) referenced to Australian Height Datum (AHD) unless otherwise stated.

Wasabi-1 was planned as an exploration well to be drilled in the Wasabi field to assess the La Trobe, Intra La Trobe, L Balmei and Golden Beach formations and was programmed to TD below the Golden Beach formation. The well was spudded on 14 February 2008, using a 660 mm Smith XR+C bit. The hole was drilled from the seabed at 66.0 to 135.0 mMDRT. The hole was drilled using seawater and hi-vis gel sweeps, with cuttings dumped to the seabed.

The 406 mm hole was drilled vertically to from 135.0m to 862.0 mMDRT with a Reed T11CDH bit. The section was drilled riserless, with seawater and hi-vis sweeps pumped every stand. Before pulling the BHA to surface, the hole was displaced to 1.15 sg gel mud. After pulling the BHA to surface, the 508 x 340 mm casing was run. When running in the 508 x 340 mm casing from 135.0 mMDRT to 139.0 mMDRT a 10k drag was observed. The 508 x 340 mm casing was pull out of hole and bit 3RR2 Reed T11CDH was run to wash and ream the tight section. Then the 508 mm x 340 mm casing was run and cemented with the 340 mm casing shoe set at 857.0 mMDRT.

The BOPs and marine riser were run and latched to the PGB. The BOPs were pressure-tested and the diverter installed. The 311 mm hole section was drilled in three bit runs. A Smith Mi616VBPX bit (NB4) was made up to a directional drilling BHA with MWD tools. After tagging the cement high at 855.0 mMDRT, the bit drilled out the shoe track, 340 mm casing shoe at 857.0 mMDRT and two meters of new formation to 864.0 mMDRT. The hole was displaced to a KCl-Polymer water-based mud system initially weighted to 1.15 sg. Pulling back into the shoe, a Leak Off Test (LOT) was performed with 1.15 sg mud yielding an Equivalent Mud Weight (EMW) of 1.91 sg. The first bit run was drilled at an average 24.3 m/hr. At 1797.0 mMDRT, the bit was pulled to surface. A new fixed cutter bit (NB5) was made up to the previous directional drilling assembly with MWD tools and run in to directionally drill 311 mm to 1900.0 mMDRT. The bit was pulled out and replaced because of the need to build more angle before the target was reached. A new tricone bit (NB6) was made up to the previous directional drilling assembly with MWD tools. Directional drilling of the 311 mm hole was resumed from 1900.0 m to the well reached TD at 2313.0 mMDRT. The bit was pulled out to make way for wireline logging.

The wireline logging tools were not able to reach the target due to obstructions in the well. So a wiper trip was performed and the target area logged with LWD tools. Once the wiper trip was completed, wireline logging was successfully completed.

Three cement plugs were set after wireline logging on 06 March 2008. The first cement plug was set at 1210.0 mMDRT to 1270.0 mMDRT. The second cement plug was set across the 340 mm casing shoe from 797.0 mMDRT to 887.0 mMDRT while the final cement plug was set from 76.0 mMDRT to 121.0 mMDRT

The MODU West Triton was towed off location on 08 March 2008.

SECTION 2

DRILLING & ENGINEERING

Wasabi-1

2.1 Drilling & Engineering
660 mm (26”) Hole Section
14 - 15 February 2008

Bit Run No. 1 Summary

Bit No.	NB1
Bit Size, mm	660
Bit Type	Smith XR+C
Serial Number	MZ1716
Jets	4 x 18
Depth In, mMDRT	66.0
Depth Out, mMDRT	135.0
Bit Grading	1-1-WT-A-E-I-NO-TD

Drilling Parameters

WOB, mt	0.3 – 5.4
RPM Surf	30 – 103
Pump Pressure, kPa	2068 – 16788
Flow In, lpm	757 – 4572
Torque, kNm	0.71 – 3.45

Mud

Seawater	1.06 sg

High viscosity gel sweeps

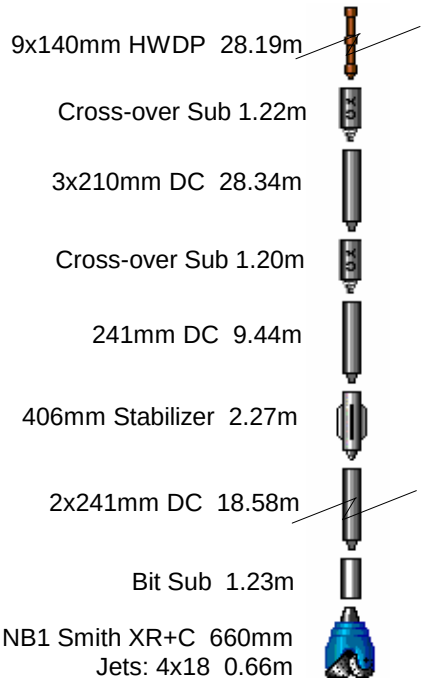
Lithology

Returns to seabed.

Drilling Summary

This spud assembly was made up, run in, tagging the seabed at 66.0 mMDRT. Wasabi-1 was spudded at 2300hrs on 14 February 2008, drilling 660 mm hole from seabed to 135.0 mMDRT. At TD, a PHG mud pill was pumped around the hole before displacing the hole to PHG mud.

BHA No. 1 147.54m



406 mm (16”) Hole Section
16 - 17 February 2008

Bit Run No. 2 Summary

Bit No.	NB2
Bit Size, mm	406
Bit Type	Reed T11CDH
Serial Number	1369484
Jets	3x18, 1x16
Depth In, mMDRT	135.0
Depth Out, mMDRT	862.0
Bit Grading	1-2-WT-A-E-I-NO-TD

Drilling Parameters

WOB, mt	0.5 – 16.6
RPM Surf	45 – 103
Pump Pressure, kPa	7108 – 16954
Flow In, lpm	3293 – 5245
Torque, kNm	0.1 – 12.4

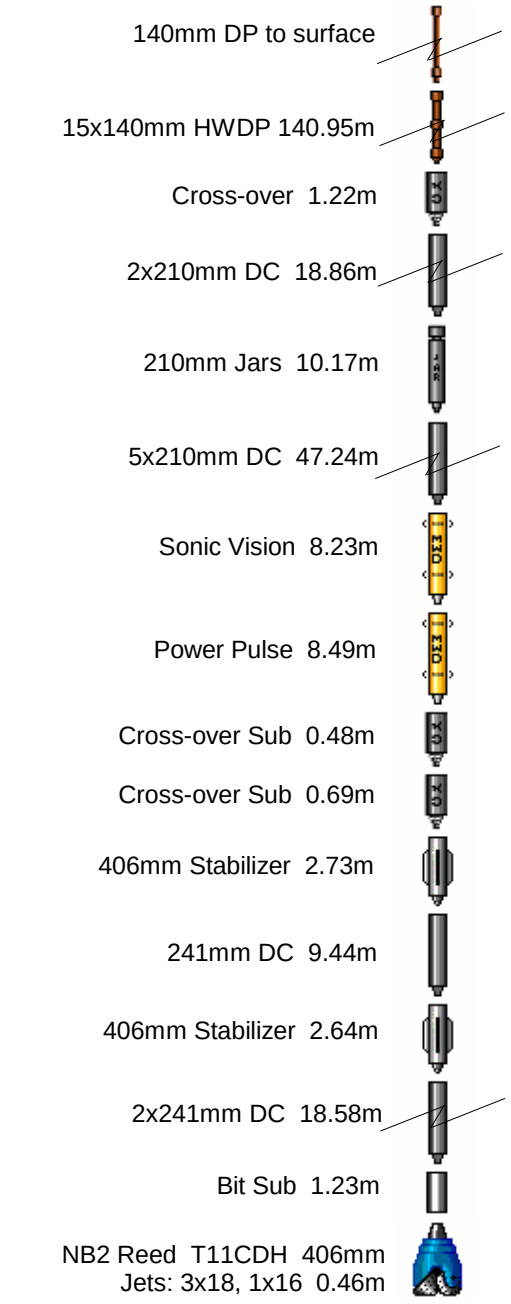
Mud

Seawater	1.06 sg
High viscosity gel sweeps	

Lithology
Returns to seabed.

Drilling Summary
The 406 mm hole section was vertically drilled with a Reed T11CDH bit, plus a directional MWD tool. Seawater with hi-vis gel sweeps every stand drilled was used to clean the hole. Cuttings were dumped to the seabed. Then the 406 mm hole was drilled to TD of 862.0 mMDRT. At TD, a PHG mud pill was pumped around the hole before displacing the hole to 1.15 sg PHG mud. A directional survey was taken prior to pulling out of hole.

BHA No. 2 271.41m



406 mm (16”) Hole Section
18 February 2008

Bit Run No. 3 Summary

Bit No.	3RR2
Bit Size	406 mm (16”)
Bit Type	Reed T11CDH
Serial Number	1369484
Jets	3x18, 1x16
Depth In, MDRT	862.0
Depth Out, mMDRT	862.0
Bit Grading	1-2-WT-A-E-I-NO-TD

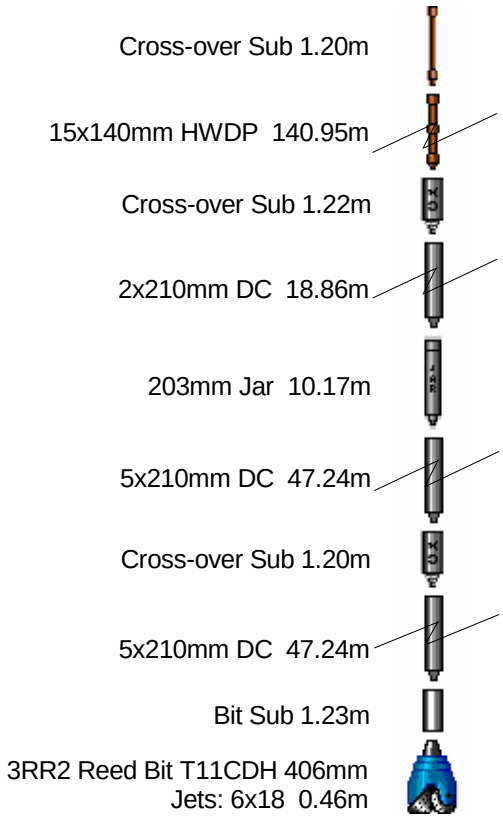
Drilling Parameters
Wiper Trip Only

Mud
Seawater 1.06 sg
High viscosity gel sweeps

Lithology
Returns to seabed

Wiper Trip Summary
A 10k drag was observed when running in the 508 x 340 mm casing at depths of 135.0 mMDRT to 189.0 mMDRT. A wiper trip assembly was made up with the previous Reed T11CDH bit to wash and ream the tight section.

BHA No.3 249.35m



311 mm (12.25”) Hole Section
22 - 26 February 2008

Bit Run No. 4 Summary

Bit No.	NB4
Bit Size	311 mm (12.25”)
Bit Type	Smith Mi616VBPX
Serial Number	SCC 985
Jets	6x18
Depth In, MDRT	862.0 mMDRT
Depth Out, mMDRT	1797.0 mMDRT
Bit Grading	2-6-BT-S-X-I-RO-BHA

Drilling Parameters

WOB mt	0.6 – 16.9
RPM Surf	0 – 67
Pump Pressure kPa	8646– 25765
Flow In lpm	2021 – 6037
Torque kNm	0 – 22.5

Mud

KCl-Polymer 1.15 sg

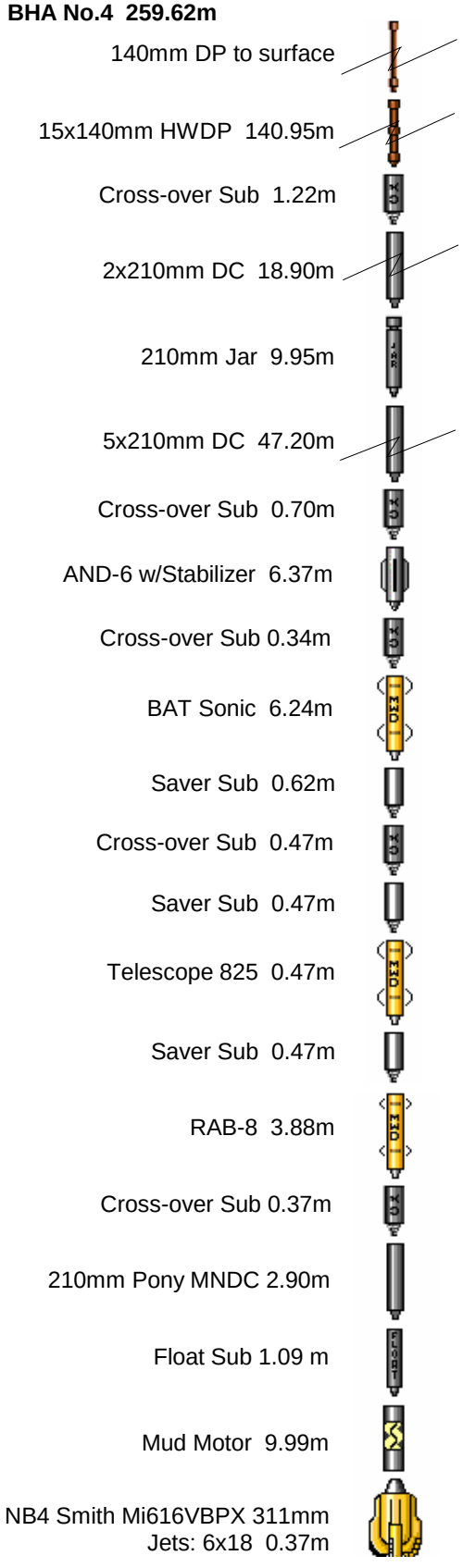
Lithology

Limestone, Sandstone, Siltstone & Coal

Drilling Summary

A Smith Mi616VBPX bit was made up to a directional drilling BHA with MWD tools. After tagging the cement high at 855.0 mMDRT, the bit drilled out the shoe track, 340 mm casing shoe at 857.0 mMDRT and two meters of new formation to 864.0 mMDRT. The hole was displaced to a KCl-Polymer water-based mud system initially weighted to 1.15 sg. Pulling back into the shoe, a Leak Off Test (LOT) was performed with 1.15 sg mud yielding an Equivalent Mud Weight (EMW) of 1.91 sg. This first bit run was drilled at an average 24.3 m/hr. At 1797.0 mMDRT, the bit was pulled to surface.

BHA No.4 259.62m



311 mm (12.25”) Hole Section
26 - 27 February 2008

Bit Run No. 5 Summary

Bit No.	NB5
Bit Size	311 mm (12.25”)
Bit Type	Smith Mi616VBPX
Serial Number	SCC991
Jets	9x14
Depth In, MDRT	1797.0
Depth Out, mMDRT	1900.0
Bit Grading	2-4-CT-T-X-I-WT-BHA

Drilling Parameters

WOB mt	0.1 – 7.3
RPM Surf	0 – 50
Pump Pressure kPa	12463 – 25088
Flow In lpm	3406 – 4451
Torque kNm	0 – 17.3

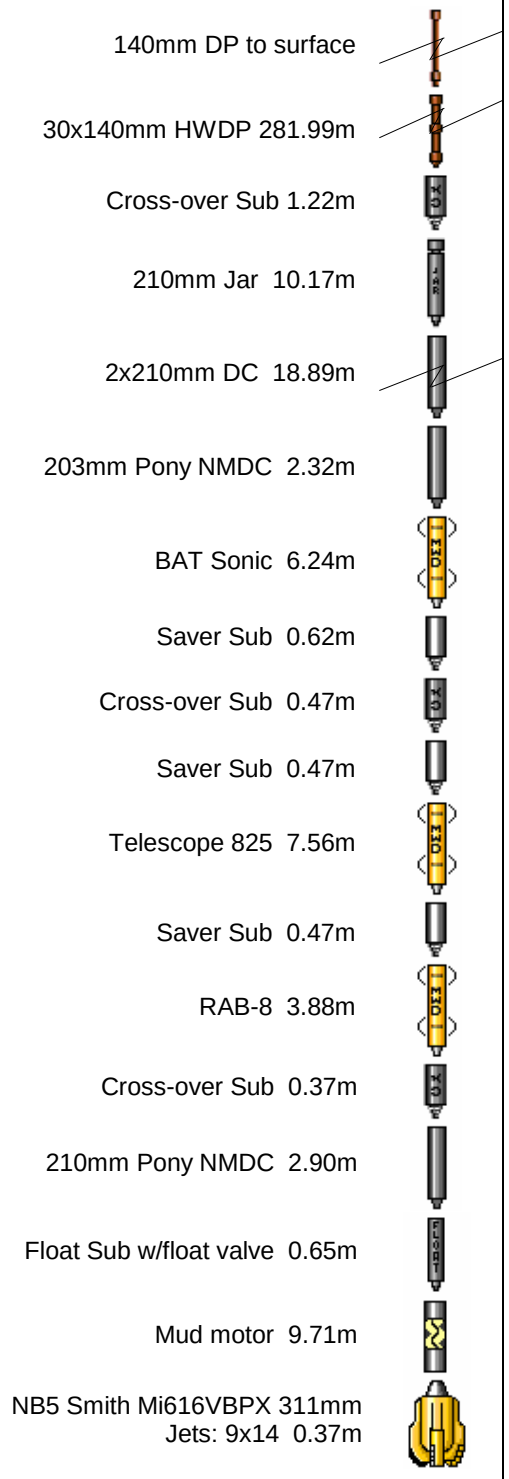
Mud

KCl-Polymer	1.15 –1.16 sg

Lithology
Sandstone, Siltstone, Claystone & Coal

Drilling Summary
A new fixed cutter bit was made up to the previous directional drilling assembly with MWD tools and run in to directionally drilled 311 mm to 1900.0 mMDRT. The bit was pulled out and replaced because of the need to build more angle before the target was reached.

BHA No.5 348.30m



311 mm (12.25”) Hole Section
27 February - 1 March 2008

Bit Run No. 6 Summary

Bit No.	NB6
Bit Size	216 mm (12.25”)
Bit Type	Hughes MXL-1X
Serial Number	6065524
Jets	3x24
Depth In, mMDRT	1900.0
Depth Out, mMDRT	2313.0
Bit Grading	2-8-WT-A-4-16-CT-PR

Drilling Parameters

WOB mt	2.1 – 26.4
RPM Surf	0 – 85
Pump Pressure kPa	9622 – 26388
Flow In lpm	2112 – 4300
Torque kNm	0 – 15.0

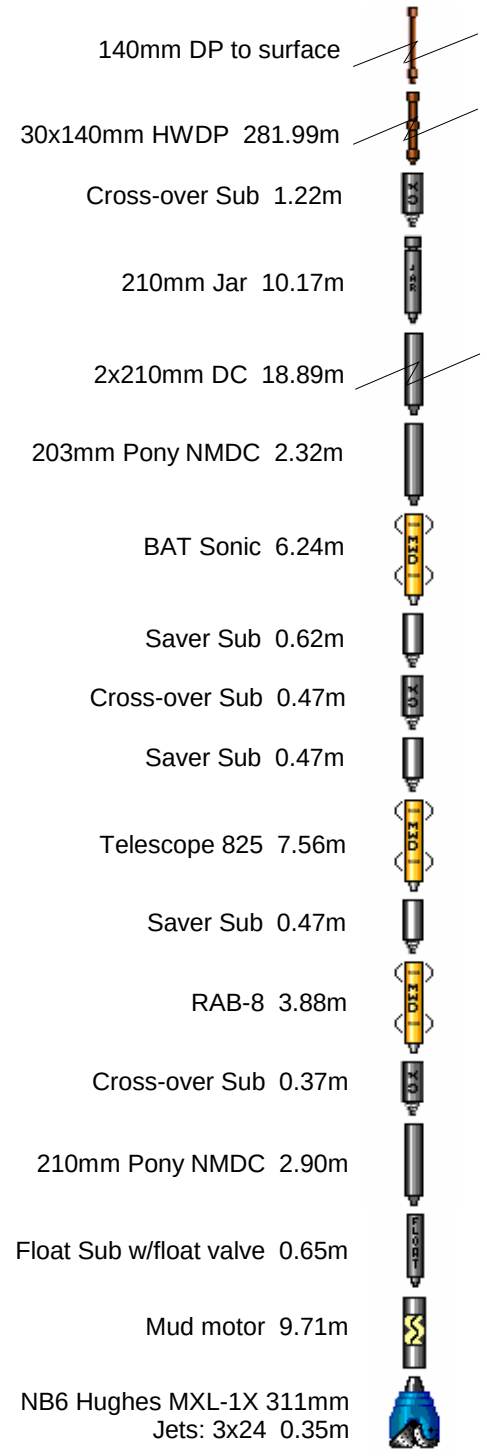
Mud

KCl-Polymer	1.15 – 1.21 sg

Lithology
Sandstone, Siltstone, Volcanics, Claystone & Coal

Drilling Summary
A new tricone bit was made up to the previous directional drilling assembly with MWD tools. Directional drilling of the 311 mm hole was resumed from 1900.0 m to the well TD at 2313.0 mMDRT.

BHA No. 6 348.27m



2.2 Casing and Cementing

508 x 340 mm (20”x 13.375”) Casing 18 – 20 February 2008

Hole Size: 660 mm (26”)
Depth: 135.0 mMDRT

Hole Size: 406 mm (16”)
Depth: 862.0 mMDRT

Casing Details

OD	508 mm (20”)
Grade / Wt:	X56 193 kg/m
Joints:	7 x 508 mm joint
OD	340 mm (13.375”)
Grade / Wt:	L80 101 kg/m
Joints:	1 x 340 mm shoe joint
	57 x 340 mm joint
	1 x cross-over joint
Shoe:	857.0 mMDRT

Cement Details

LEAD SLURRY:

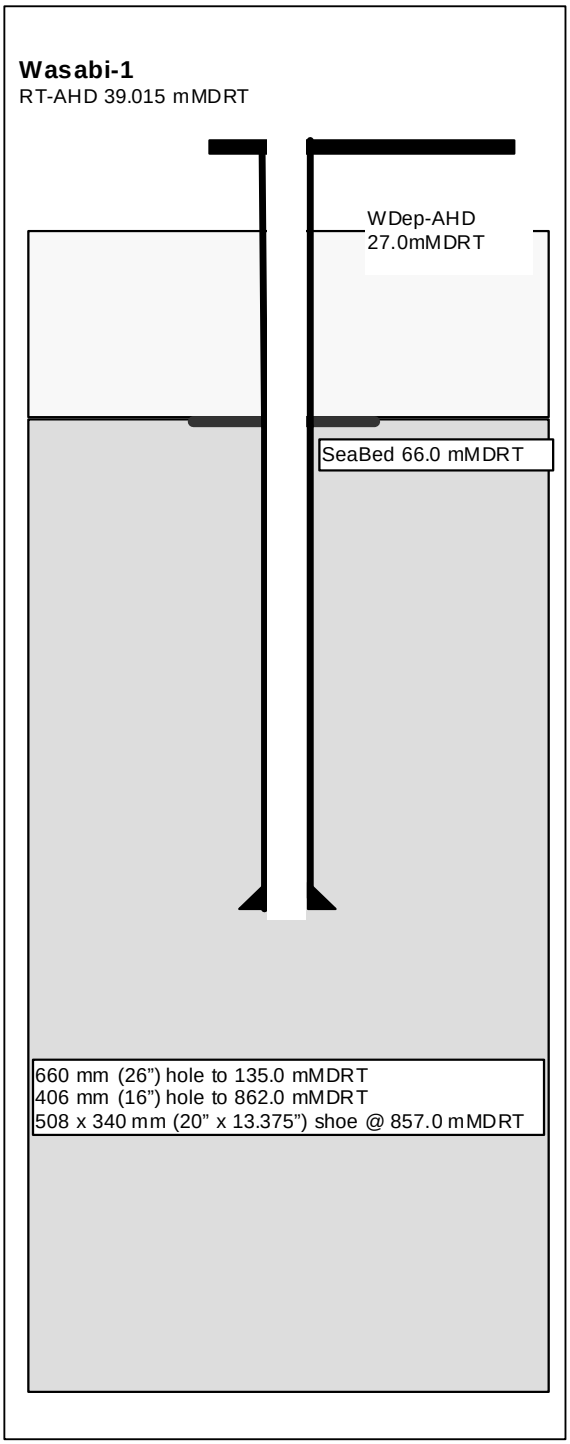
Type:	Class G
Weight:	1.5 sg
Slurry Volume:	117.6 m^3

TAIL SLURRY:

Type:	Class G
Weight:	1.9 sg
Slurry Volume:	7.2 m^3

Summary

The 508 x 340 mm casing string was run on 18 February 2008. Each joint of casing was filled with sea water. The 340 mm shoe was set and cemented at 857.0 mMDRT as per the cementing program. After the cement had set, the cement stinger and the 140 mm drill pipe were pulled to surface.



Cement Plug
06 March 2008

Hole Size: 311 mm (12.25")
Depth: 2313.0 mMDRT

Cement Plug Details

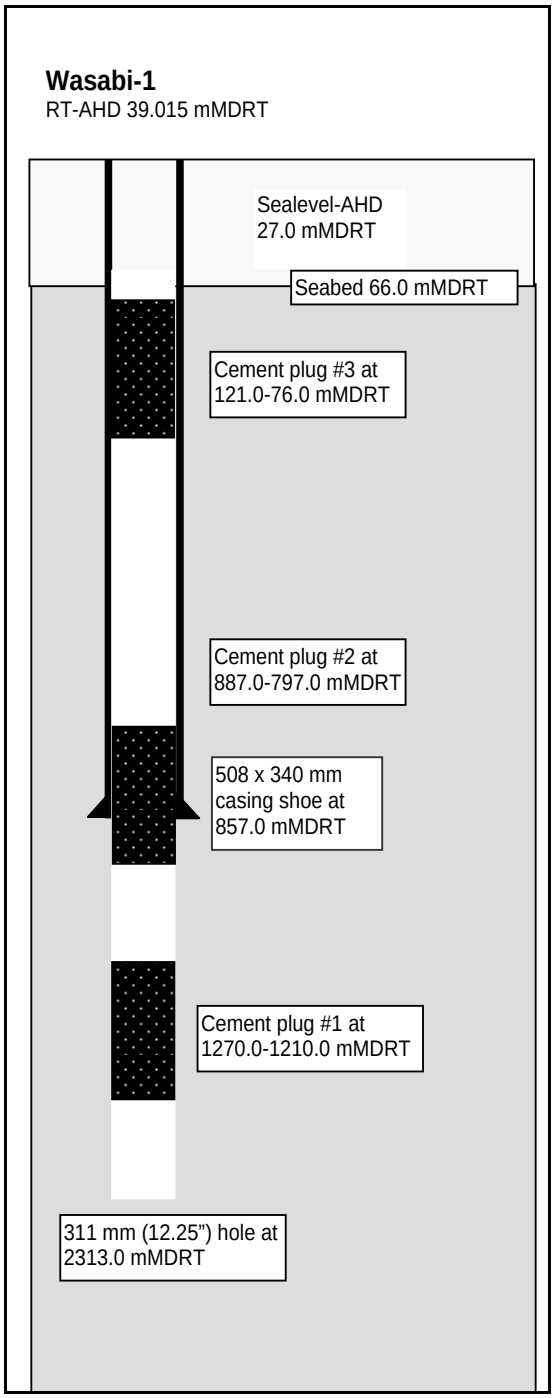
CEMENT PLUG #1:
- Type: Class G
- Weight: 1.89 sg
- Slurry Vol: 7.47 m^3

CEMENT PLUG #2:
- Type: Class G
- Weight: 1.89 sg
- Slurry Vol: 7.00 m^3

CEMENT PLUG #3:
- Type: Class G
- Weight: 1.89 sg
- Slurry Vol: 7.95 m^3

Summary

The cement stinger made up of 140 mm drill pipe was run in hole as per Apache's program. Circulated to condition mud and spotted 30 bbl hi-vis pill at 1330.0 mMDRT. The line was tested to 1000 psi prior to pumping all 3 cement plugs The first cement plug was set from 1270.0 mMDRT to 1210.0 mMDRT. The second cement plug was set across the 340 mm casing shoe from 887.0 mMDRT to 797.0 mMDRT while the final cement plug was set at 121.0 mMDRT to 76.0 mMDRT. Reverse circulations of 2 times 140 mm drill pipe volume were done after every cement plug.



SECTION 3

GEOLOGY & SHOWS

3.1 Geology and Shows

Wasabi-1

Geological formation evaluation for Wasabi-1 commenced from the start of the 311 mm hole section at 862.0 mMDRT to the well's Total Depth at 2313.0 mMDRT. All depths given are measured depths from the Rotary Table (mMDRT).

All gas monitoring equipment was calibrated before drilling each hole section and checked regularly. Calcimetry analysis on cuttings samples was performed at the request of the Wellsite Geologists.

The lithologies encountered at Wasabi-1 are described below. For more detailed descriptions, see Appendix 1: Formation Evaluation Log. Please note that the lithological descriptions on the Formation Evaluation Log were provided by the Apache Wellsite Geologists, with input from the BHI mudloggers.

Sampling Intervals:

862 – 870 m	8 m interval
870 – 2310 m	5 m interval
2310 – 2313 m	3 m interval

Formation Description:

660 mm Section (66.0 – 135.0 mMDRT)

Returns to seabed. No samples.

406 mm Section (135.0 – 862.0 mMDRT)

Returns to seabed. No samples.

311 mm Section (862.0 – 2313.0 mMDRT)

862.0 to 1200.0 mMDRT.
Interbedded CALCISILTITE and CALCILUTITE with CALCARENITE

ARGILLACEOUS CALCARENITE (10 to 80%): off white, light to medium grey, light brownish grey in part, arenaceous, common pale grey, argillaceous matrix, abundant fossils, common very coarse frosted & iron stained quartz grains, trace nodular pyrite, rare glauconite specks, moderately hard aggregates, poor visible porosity, common silty matrix & locally grading to calcisiltite, trace mineral fluorescence, rare pyrite.

CALCILUTITE (5 to 40%): Light medium grey, very light grey to light grey, off white to pale grey, firm, sub-blocky to blocky, trace dark grey, argillaceous, trace microcrystalline, common microfossil, soft to dispersive, moderately hard in parts, , commonly argillaceous & locally grading to calcilutite, minor very fine glauconite, locally arenaceous, trace black carbonaceous material, rare round reddish brown lithic grains.

CALCISILTITE (20 to 50%): very light grey to light grey, medium to dark grey in part, firm, sub-blocky to blocky, commonly argillaceous & locally grading to calcilutite , minor very fine glauconite, locally arenaceous, common to locally abundant micro fossils, common black carbonaceous material.

1200.0 to 1290.0 mMDRT.
Interbedded CALCAREOUS SANDSTONE and CALCAREOUS SILTSTONE

CALCAREOUS SANDSTONE (80 to 100%): pale brown, light grey brown, medium grey, occasionally off white to pale green, translucent in part, very fine to coarse, dominantly very fine to fine, poor to moderately sorted, sub angular to sub rounded, locally angular coarse grains, dominantly medium, poorly sorted, angular to sub rounded,
common strong calcareous cement, common pale grey argillaceous matrix & locally grading to arenaceous SILTSTONE, common carbonaceous specks, locally common very fine glauconite, minor disseminated & nodular pyrite, generally loose grains, very hard aggregates, poor visible porosity, fair to good inferred porosity.

CALCAREOUS SILTSTONE (5 to 20%): light to medium grey brown, light to medium grey, argillaceous, minor calcareous material, common carbonaceous specks, common nodular and disseminated pyrite, common very fine glauconite specks, locally micaceous, firm, sub blocky to blocky.

1290.0 to 1385.0 mMDRT.
Interbedded SANDSTONE and SILTSTONE with minor COAL.

SANDSTONE (20 to 100%): Clear to translucent, pale brown, frosted, fine to very coarse, poorly sorted, dominantly coarse, moderately well sorted, angular to sub rounded, trace weak calcareous cement, locally medium brown argillaceous matrix, common iron stained coarse grains, common carbonaceous fragments, occasional nodular pyrite and glauconite specks, generally loose clean quartz grains, good visible and inferred porosity, rare weak calcareous cement, no visible matrix.

SILTSTONE (0 to 40%): Light to medium grey, light bluish grey, argillaceous and locally grading to claystone, occasional lithics and carbonaceous specks, trace nodular pyrite, trace micromicaceous, minor calcareous material, firm to moderately hard, moderately hard to hard, sub fissile to sub-blocky, locally arenaceous and grading to very fine sandstone, minor micaceous flecks.

COAL (0 to 5%): dark grey to black, sub to vitreous, dull to earthy in part, common silty laminations and locally grading to carbonaceous siltstone, friable to moderately hard, sub fissile to sub blocky, locally sub conchoidal.

1385.0 to 1795.0 mMDRT.
Interbedded CALCAREOUS SILTSTONE and CALCAREOUS CLAYSTONE with trace CALCILUTITE

SANDSTONE (0 to 100%): Pale brown, light grey brown, clear to translucent, frosted, very fine to very coarse, dominantly fine to medium, poorly sorted, sub angular to sub-rounded, angular where coarse, angular frosted grains, trace weak calcareous cement, common pale brown argillaceous matrix & locally grading to arenaceous siltstone, common carbonaceous laminations, minor nodular pyrite, generally loose, moderately hard to hard aggregates, tight to poor visible porosity, fair inferred porosity.

SILTSTONE (0 to 95%): Light grey brown, light to medium brown, pale to medium grey, medium bluish grey arenaceous & locally grading to very fine sandstone, occasional micromicaceous, trace calcareous material, trace lithics common carbonaceous material, siliceous, argillaceous and grading to claystone in part, hard to very hard, sub blocky, locally sub fissile.

CLAYSTONE (0 to 100%): Medium brown, medium orange brown, very dark brown grey, trace arenaceous in part, trace calcareous material, common carbonaceous material where very dark brown grey, firm to hard, dispersive to sub blocky, sub fissile in part.

CALCAREOUS CLAYSTONE (10%): pale bluish grey, siliceous, common to abundant calcareous material, hard to very hard, sub fissile.

COAL (0 to 40%): Black, dark grey, vitreous to sub-vitreous, silty in part and locally grading to very dark brown carbonaceous siltstone, friable to moderately hard, conchoidal to sub to conchoidal fracture, sub to blocky in part.

1795.0 to 2207.0 mMDRT.
Predominantly SANDSTONE interbedded with SILTSTONE and CLAYSTONE with COAL

SANDSTONE (0 to 100%): off white to pale grey, light to medium grey, frosted, clear to translucent, very fine to very coarse, predominantly poorly sorted, poor to moderately sorted i/p, predominately angular to subrounded, subrounded to sub angular, sub-rounded where fine grained, angular where very coarse, trace to common weak calcareous cement, locally pale grey brown argillaceous matrix and locally grading to arenaceous siltstone, trace to minor nodular and disseminated pyrite, trace to common coal laminations, fair to good inferred porosity, poor visual porosity, generally loose grains, poorly sorted.

CALCAREOUS CLAYSTONE (0 to 40%): light bluish grey, green grey, siliceous, occasional micro fossils, commonly micromicaceous, and locally carbonaceous material, common to abundant calcareous mat, trace nodular pyrite, hard to very hard, sub blocky to sub-fissile.

SILTSTONE (5 to 70%): Light to medium grey, medium to dark olive grey, medium brown grey, pale grey brown, light to medium brown, dark brown in part, arenaceous and commonly grading to very fine sandstone, argillaceous in part, common carbonaceous laminations and specks, commonly micromicaceous, locally grading to carbonaceous siltstone, locally grading to silty claystone, firm to hard, sub-blocky, occasionally sub-fissile, occasional nodular pyrite, trace lithics, minor platy micas.

COAL (0 to 20%): Black, very dark grey, dark brown, dull vitreous to sub vitreous, slty in part and grading to dark brown carbonaceous siltstone, common silty and grading to carbonaceous siltstone, trace disseminated pyrite, laminations, hard, sub-blocky to sub fissile, conchoidal to sub conchoidal where vitreous, rare conchoidal fracture

2207.0 to 2313.0 mMDRT.
Interbedded SANDSTONE,CLAYSTONE and VOLCANIC with Minor SILTSTONE AND COAL

SANDSTONE (10 to 90%): Clear to translucent, frosted, pale very fine to very coarse, dominantly medium, moderately sorted, poor sorted, sub angular to sub rounded, angular where coarse, minor weak calcareous cement, trace pale grey argillaceous matrix, occasional calcareous fragments, trace nodular pyrite, occasional rock flour, trace mica, occasional carbonaceous material, loose, fair to good inferred porosity.

SILTSTONE (5 to 50%): medium brown, light to medium brown grey, medium grey in part, arenaceous and locally grading to very fine sandstone, common carbonaceous laminations and specks, hard, sub blocky, locally sub fissile, minor micromicaceous.

VOLCANIC (5 to 50%): Tuffite, pale grey green, off white to pale green, light to medium blue green, dark grey in part, minor dark green minerals,, siliceous groundmass, common feldspars, occasional dark green minerals (olivine?) argillaceous where weathered, localised reworked carbonaceous fragments, common feldspars, firm to hard, very hard in part, sub blocky. angular, sub blocky where weathered.

CLAYSTONE (5 to 75%): Pale grey, light to medium grey, medium brown, reddish brown, siliceous, minor silty and locally grading to argillaceous siltstone, minor carbonaceous laminations and specks, occasionally micromicaceous, moderately hard to hard, sub blocky to sub fissile.

COAL (0 -5%): Black, dark grey, dark brown grey, vitreous to sub-vitreous, occasionally silty and grading to carbonaceous siltstone, firm to moderately hard, fissile in part, sub conchoidal. (Possible that any free fragments are cavings).

ROP and Gas Readings:

311 mm Section (862.0 – 2313.0 mMDRT)

Interval (m)	ROP range (m/hr)	ROP average (m/hr)	Total Gas range (%)	Total Gas average (%)
862 – 1200	9 – 98	74	0.015 – 0.0026	0.0022
1200 – 1290	8 – 142	62	0.0021 – 0.0028	0.0024
1290 – 1385	2 – 182	76	0.0015 – 0.0048	0.0023
1385 – 1795	6 – 181	52	0 – 0.2833	0.0068
1795 – 2207	3 – 92	23	0 – 0.0285	0.0039
2207 – 2313	3 – 28	10	0.003 – 0.0176	0.0072

Minimum – Maximum Chromatograph Readings:

311 mm Section (862.0 – 2313.0 mMDRT)

Interval (m)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	iC5 (ppm)	nC5 (ppm)
862 – 1200	2 – 10	0 – 2	0 – 1	0	0	0	0
1200 – 1290	3 – 14	0	0	0	0	0	0
1290 – 1385	2 – 9	0	0	0	0	0	0
1385 – 1795	0 – 540	0 – 23	0 - 2	0 - 3	0 – 2	0	0
1795 – 2207	0 – 690	0 – 5	0	0	0	0	0
2207 – 2313	7 – 590	0 – 103	0 - 1	0	0	0	0

Sampling Summary and Record of Distribution:

Wasabi-1

Cuttings samples were collected at the intervals tabulated below as advised by the Well site Geologists.

862 – 870 m	8 m interval
870 – 2310 m	5 m interval
2310 – 2313 m	3 m interval

Samples were missed from the following depths:

Due to high ROP:
875m, 900m, 915m, 920m, 925m, 935m, 945m, 955m, 965m, 975m, 985m, 995m, 1005m, 1015m, 1025m, 1035m, 1045m, 1055m, 1065m, 1075m, 1085m, 1095m, 1110m, 1105m, 1115m, 1125m, 1135m, 1145m, 1155m, 1165m, 1175m, 1185m, 1200m, 1215m, 1225m, 1235m, 1245m, 1255m, 1265m, 1275m, 1285m, 1295m, 1305m, 1315m, 1325m, 1335m, 1345m, 1355m, 1365m, 1375m, 1395m, 1405m, 1415m, 1435m, 1555m, 1595m, 1615m, 1625m, 1635m, 1640m, 1655m, 1665m, 1685m, 1740m, 1925m, 2020m, 2045m,

Loggers running carbide bomb:
1845m

Sample Destination:

Set A (200g Washed & Dried Drill Cuttings in polythene bags) to be forwarded to:

Apache Energy Ltd c/o Core Laboratories Pty Ltd
447-449 Belmont Avenue
KEWDALE, WA 6105 (Attn: Mr. Paul Stephenson)

Set B (200g Washed & Dried Drill Cuttings in polythene bags) to be forwarded to:

DPI c/o Core Laboratories Pty Ltd
447-449 Belmont Avenue
KEWDALE, WA 6105 (Attn: Mr. Paul Stephenson)

Set C (200g Washed & Dried Drill Cuttings in polythene bags) to be forwarded to:

AGSO c/o Core Laboratories Pty Ltd
447-449 Belmont Avenue
KEWDALE, WA 6105 (Attn: Mr. Paul Stephenson)

Mud Samples to be forwarded to:

Apache Energy Ltd c/o Core Laboratories Pty Ltd
447-449 Belmont Avenue
KEWDALE, WA 6105 (Attn: Mr. Paul Stephenson)

SAMPLE TYPE	Well	No. of Sets	INTERVAL			PACKING DETAILS
			Large Box No.	Small Box No.	Interval (m)	
DRILL CUTTINGS minimum 200g: Washed & Air Dried (polythene bags) Sets **A, B** & **C** from **862 – 2313 m**	Wasabi-1	**3**	**1**	1	862 – 1640	Max. 8 small boxes per large box. Large boxes marked as Set A, B, C
				2	1640 – 1740	
				3	1740 - 1850	
				4	1850 – 1960	
				5	1960 – 2070	
				6	2070 – 2180	
				7	2180 – 2290	
				8	2290 – 2400	
			2	9	2400 – 2510	
				10	2510 - 2620	
				11	2620 – 2730	
				12	2730 - 2840	
				13	2840 - 2940	
				14	2940 - 3060	
				15	3060 - 3170	
				16	3170 – 3230	
				17	3230 – 3274	
SAMPLEX TRAYS: Set **D**	Wasabi-1	**1**	**1**	1	862 – 2313	Packed in one wooden box marked as Set D
MUD SAMPLES: Set **E**	Wasabi-1	**1**	**1**	(50ml)	870, 1290, 1355, 1400, 1800, 1820, 2121, 2305	Packed in one Box marked as Set E
				(500ml)	2030, 2313	

Samples Packed and Sent Off the Rig in Container # 6214

TABLES

OPERATOR	WELL NAME	LOCATION	CONTRACTOR	RIG
Apache Northwest Pty Ltd	**Wasabi-1**	**VIC/P-58**	**Seadrill**	**(MODU) West Triton**

Mud Pump Data
Pumps 1, 2, and 3
165 mm 6.5" Liners
355 mm 14" Stroke
97% Efficiency, 16.03 litre/stk
(0.1394 bbl/stk)

BIT DULL CHARACTERISTICS

BC - Broken Cone	CI - Cone Interference	JD - Junk Damage	PB - Pinched Bit	SS - Self-Sharpening
BT - Broken Teeth	CR - Cored	LC - Lost Cone	PN - Plugged Nozzle	TR - Tracking
BU - Balled Up	CT - Chipped Teeth	LN - Lost Nozzle	RG - Rounded Gauge	WO - Washed-Out Bit
CC - Cracked Cone	FC - Flat Crested Wear	LT - Lost Teeth	RO - Ring Out	WT - Worn Teeth
CD - Cone Dragged	HC - Heat Checking	OC - Off-Center Wear	SD - Shirttail Damage	NO - No Dull Characs.

REASONS PULLED

BHA - Bottomhole Assembly	LOG - Run Logs	FM - Formation Change	TD - Total / Csg depth
DMF - Downhole Motor failure	RIG - Rig repair	HP - Hole Problems	TQ - Torque
DSF - Drill String failure	CM - Condition Mud	HR - Hours	TW - Twist-Off
DST - Drill Stem Test	CP - Core Point	PP - Pump Pressure	WC - Weather Conditions
DTF - Downhole Tool Failure	DP - Drill Plug	PR - Penetration rate	WO - Washout - Drill String

BHA #	BIT No.	MAKE	TYPE	TFA sq.in.	JETS	SERIAL No.	DEPTH IN m	METRES ON BIT	HRS ON BOTTOM	AV ROP m/hr	CIRC HRS	WOB tonne	RPM Surf/Motor	TBR krev	SPP kPa	FLOW lpm	TQ kNm	GRADE I	O	D	L	B	G	O	R	MW SG	REMARKS
					Wasabi-1																						
	660 mm (26") Hole Section 66.0 - 135.0 mMDRT																										
1	NB1	Smith	XR+C	0.9940	4x18	MZ1716	66	69	2.5	27.6	5.1	3.4	30-103	9.1	2068-16788	757-4572	0.71-3.45	1	1	WT	A	E	In	NO	TD	SW (1.06)	Spud
	406 mm (16") Hole Section 135.0 - 862.0 mMDRT																										
2	NB2	Reed	T11CDH	0.9419	3x18,1x16	1369484	135	727	13.9	52.3	23.3	5.5	45-103	76.6	7108-16954	3293-5245	0.1-12.4	1	2	WT	A	E	I	NO	TD	SW (1.06)	Casing point
3	3RR2	Reed	T11CDH	0.9419	3x18,1x16	1369484	862	-	-	-	-	-	-	-	-	-	-	1	2	WT	A	E	I	NO	TD	SW (1.06)	Wiper Trip
	311 mm (12.25") Hole Section 862.0 - 2313.0 mMDRT TD																										
4	NB4	Smith	Mi616VBPX	1.4910	6x18	SCC985	862	935	38.4	24.3	57.9	8.5	0-67/58-222	280.6	8646-25765	2021-6037	0-22.5	2	6	BT	S	X	I	RO	BHA	1.15	Bit Change
5	NB5	Smith	Mi616VBPX	1.3530	9x14	SCC991	1797	103	11.1	9.3	11.9	2.3	0-50/118-173	45.4	12463-25088	3406-4451	0-17.3	2	4	CT	T	X	I	WT	BHA	1.16	Bit Change
6	NB6	Hughes Christensen	MXL-1X	1.3254	3x24	6065524	1900	413	37.1	11.1	53.2	16.7	0-85/93-205	390.1	9622-26388	2112-4300	0-15.0	2	8	WT	A	4	16	CT	PR	1.21	TD

RT-AHD (m)	39.0	m
RT - Seabed	66.0	mMDRT
Total Depth (m)	2313.0	mMDRT

BAKER HUGHES INTEQ

Bit Hydraulics Summary

Apache ENERGY

Operator	Well Name	Location	Drilling Contractor	Rig
Apache Northwest Pty Ltd	**Wasabi-1**	**VIC/P-58**	**Seadrill**	**MODU West Triton**

Drillstring Abbreviations

N Normal
M MWD
P Positive Displacement Motor
A Adjustable Gauge Stabilizer
S Powerdrive
T TRACS Tool
C Core

Hydraulics Models

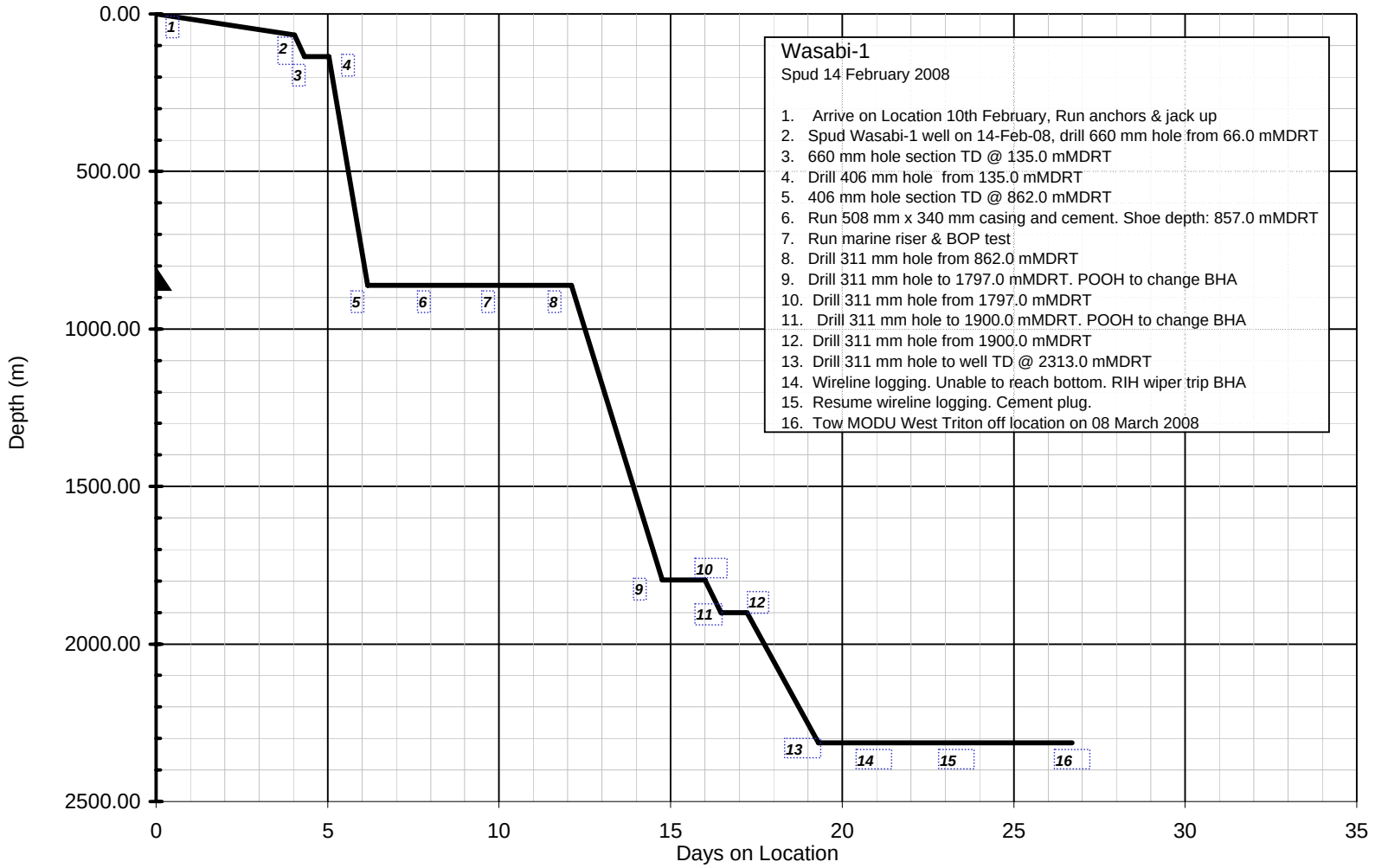
Power Law Model used for drilling with Mud
Bingham Model used for coring and drilling with seawater

Bit No.	Depth AHD (m)	Hole Size in	Jets x 1/32"	Drill String Type	Mud Type	Mud Density sg	PV mPas	YP Pa	Flow Rate lpm	Jet Vel m/sec	Impact Force lbf / in^2	Hydraulic Power hhp	Power/ Area hp/sq in	Bit Loss KPa	Bit Loss %	Pipe* Loss Kpa	ECD sg	Annular Velocities DP OH m/sec	Annular Velocities DC OH m/sec	Annular Velocities DP Max Dia m/sec
Wasabi-1																				
660 mm (26") Hole Section 66.0 - 135.0 mMDRT																				
NB1	135	26"	4x18	N	SW	1.06	-	-	4353	28.6	0.9	1570	0.08	421	2.6	11824	1.060	0.22	0.24	-
406 mm (16") Hole Section 135.0 m - 862.0 mMDRT																				
NB2	862	16"	3 x28, 1x16	N	SW	1.06	-	-	4164	70.7	5.8	1328	1.19	2544	17.8	1441	1.062	0.61	0.83	0.44
3RR2	862	16"	3 x28, 1x16	N	SW	1.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-
311 mm (12.25") Hole Section 862.0 m - 2313.0 mMDRT																				
NB4	1797	12.25"	6x18	N, M, P	KCl-Polymer	1.15	26	26.8	4164	72.1	11.0	1910	2.30	2875	14.0	9115	1.195	1.14	1.67	0.43
NB5	1900	12.25"	9x14	N, M, P	KCl-Polymer	1.15	24	24.9	4164	72.1	11.4	2089	2.30	2875	12.8	9666	1.206	1.14	1.14	0.43
NB6	2313	12.25"	3x24	N, M, P	KCl-Polymer	1.21	24	24.9	4012	78.2	12.1	2319	2.74	3557	13.7	12258	1.262	1.10	1.10	0.41

* Note: Pipe Loss includes DP,HWDP, DC, MWD, Motor,Additional tools, surf equipment

Table: 3 Time and Depth Curve

Apache Northwest Pty Ltd
Wasabi-1
Time vs. Depth



Wasabi-1
Spud 14 February 2008

1. Arrive on Location 10th February, Run anchors & jack up
2. Spud Wasabi-1 well on 14-Feb-08, drill 660 mm hole from 66.0 mMDRT
3. 660 mm hole section TD @ 135.0 mMDRT
4. Drill 406 mm hole from 135.0 mMDRT
5. 406 mm hole section TD @ 862.0 mMDRT
6. Run 508 mm x 340 mm casing and cement. Shoe depth: 857.0 mMDRT
7. Run marine riser & BOP test
8. Drill 311 mm hole from 862.0 mMDRT
9. Drill 311 mm hole to 1797.0 mMDRT. POOH to change BHA
10. Drill 311 mm hole from 1797.0 mMDRT
11. Drill 311 mm hole to 1900.0 mMDRT. POOH to change BHA
12. Drill 311 mm hole from 1900.0 mMDRT
13. Drill 311 mm hole to well TD @ 2313.0 mMDRT
14. Wireline logging. Unable to reach bottom. RIH wiper trip BHA
15. Resume wireline logging. Cement plug.
16. Tow MODU West Triton off location on 08 March 2008

FORMATION EVALUATION LOG

1:500

BAKER HUGHES INTEQ

Apache ENERGY

Company	**Apache Northwest Pty Ltd**
Well	**Wasabi-1**
Permit	**VIC/P-58**
Region	**Gippsland Basin**
Designation	**Exploration**
Coordinates	**Lat 38° 29' 18.157" S Long 147° 15' 49.147" E**
Ref Elevation	**RT 39.0 mMDRT (AHD)**
Total Depth	**2313.0 mMDRT**
Contractor	**Seadrill**
Rig	**MODU West Triton**
Type	**Jack-Up**

LOG INTERVAL	
Depth	**66.0 - 2313.0 mMDRT**
Date	**14 February - 01 March 2008**
Scale	**1 : 500**
Data Engineers	**D. Mahajan, Y.C. Wong, J. Mancarella, E. Discipulo**
Logging Geologists	**A. Gholap, R. Houston**

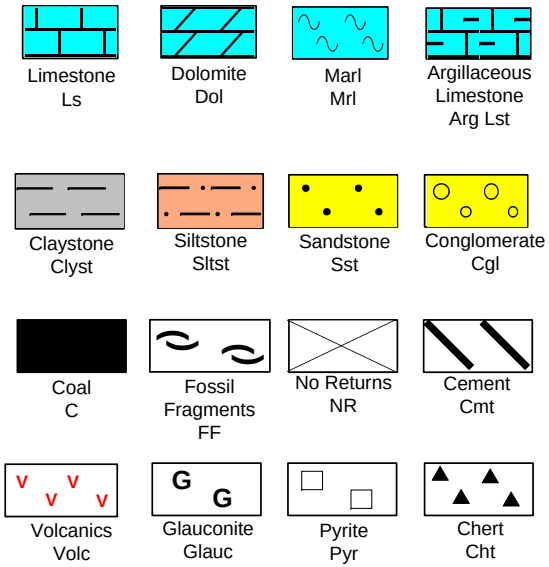
INTEQ LOG SUITE

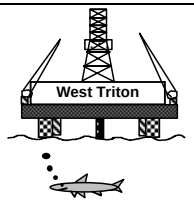
Formation Evaluation
Drilling Data Plot
Gas Ratio Plot
Drilling Data Pressure Plot

ABBREVIATIONS

NB	New Bit	MD	Measured Depth
RB	Rerun Bit	GPM	Gallons per Min
CB	Core Bit	PP	Pump Pressure
WOB	Weight on Bit	MW	Mud Weight sg
RPM	Revs per Minute	FV	Funnel Viscosity
FLC	Flow Check	F	Filtrate - API
FCG	Flow Check Gas	FC	Filter Cake
PR	Poor Returns	PV	Plastic Viscosity
NR	No Returns	YP	Yield Point
BG	Background Gas	Sol	Solids %
WTG	Wiper Trip Gas	Sd	Sand %
TG	Trip Gas	Cl	Chlorides
POG	Pumps Off Gas	RM	Mud Resistivity
CG	Connection Gas	RMF	Filtrate Resistivty
SWG	Swab Gas	TVD	True Vertical Depth

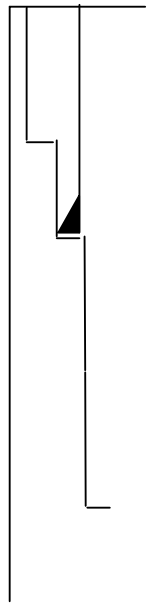
LITHOLOGY SYMBOLS





RT- AHD 39.0 mMDRT

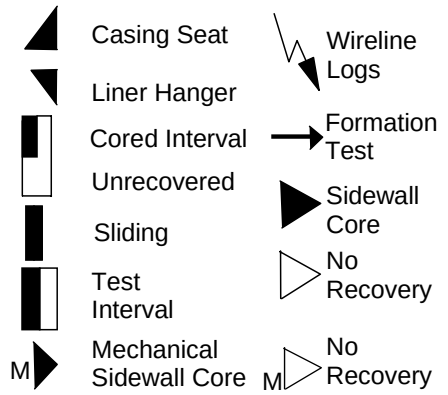
W Dep – AHD 27.0 mMDRT



Seabed @ 66.0 mMDRT (AHD)

340 X 508mm Casing to 857.0 mMDRT
660 mm (26") hole to 135.0 m
406 mm (16") hole to 862.0 m
Drilling Fluid: Seawater/Hi-vis sweeps

311 mm (12.25") hole to 2313.0m
Drill Fluid : KCl Polymer 1.15-1.21 sg



BAKER HUGHES INTEQ

Company : Apache Northwest Pty Ltd
Well : Wasabi-1
Interval : 50.00 - 2315.06 meters
Created : 06/Mar/2008 6:35:32 AM

Apache ENERGY

FORMATION EVALUATION LOG

TVDRT meters

Drilling Rate
ROP (m/hr)
200 180 160 140 120 100 80 60 40 20
ROP (m/hr)
400 380 360 340 320 300 280 260 240 220
Gamma Ray
0 200
GAPI

MD meters 1:500

Cuttings Lithology

Visual Inferred Porosity
P F G

Oil Show
P F G

Gas Data
Gas Hydrocarbon Avg %
0.01 0.1 1 10
Resistivity Shall
0.2 2000
OHMM
Resistivity Deep
0.2 2000
OHMM

Chromatograph Data
Methane ppm 1 100000
Ethane ppm 1 100000
Propane ppm 1 100000
iso-Butane ppm 1 100000
n-Butane ppm 1 100000
iso-Pentane ppm 1 100000
n-Pentane ppm 1 100000

Calcimetry
CaCO3 %
20 40 60 80 100
MgCO3 %
100 80 60 40 20

Interpreted Lithology

Lithology Description

0 60 70 80 90 100 110 120 130 140

14/02/2008

NB1: 660 mm (26")
Smith
Type: XR+C
Jets: 4x18
Depth In: 66.0 mMDRT
Depth out: 135.0 mMDRT
Drilled 69.0 m in 2.5 hrs
Grade:
1-1-WT-A-E-I-NO-TD

Survey @ 115.0 mMDRT
Inc: 0.14 Azi: 336.08
TVD: 115.45 mRT

NB2: 406 mm (16")
Reed
Type: T11GDH

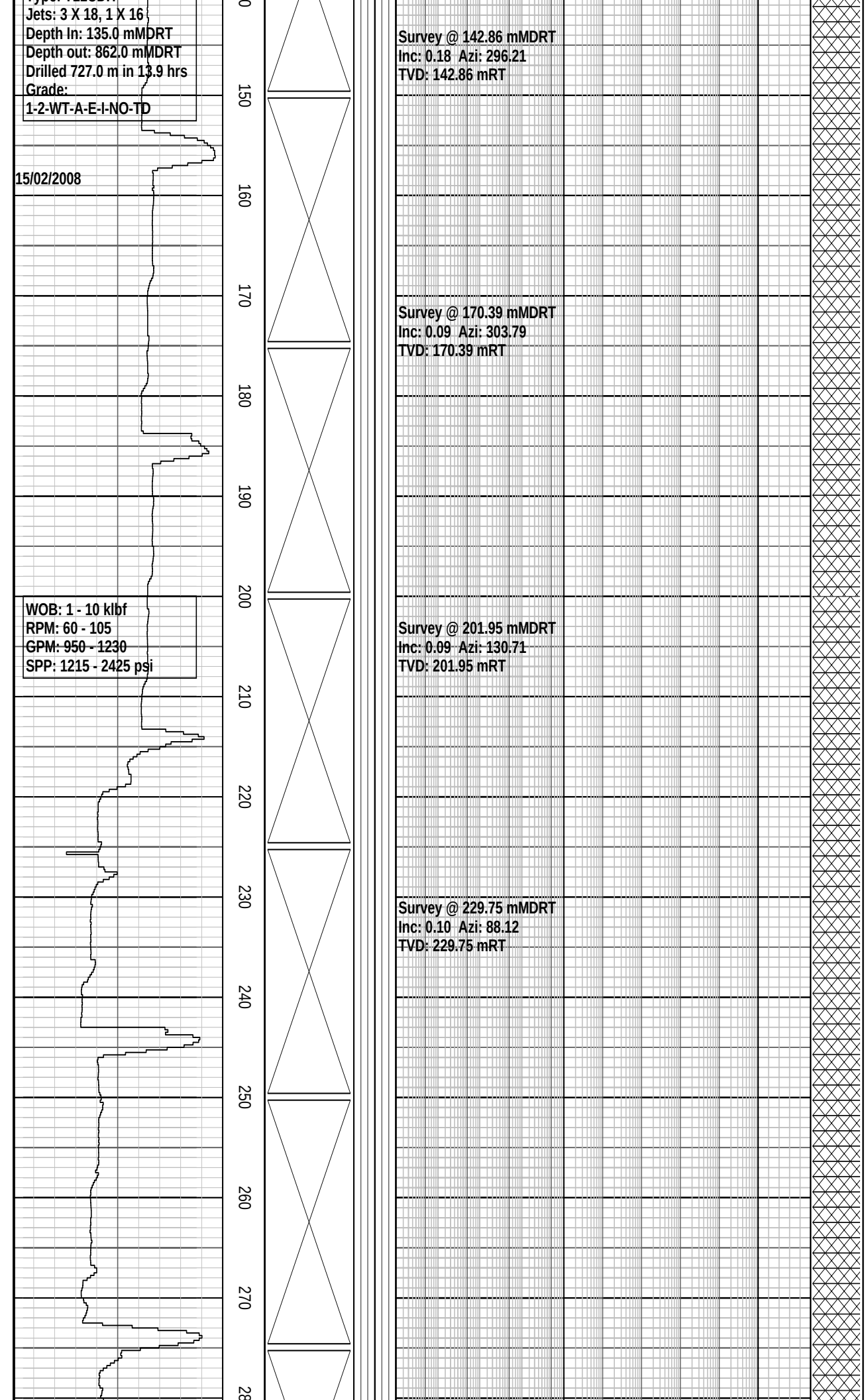
RT - AHD: 39.015 mMDRT
Water Depth: 26.985 mMDRT
RT-Sea bed: 66.0 mMDRT

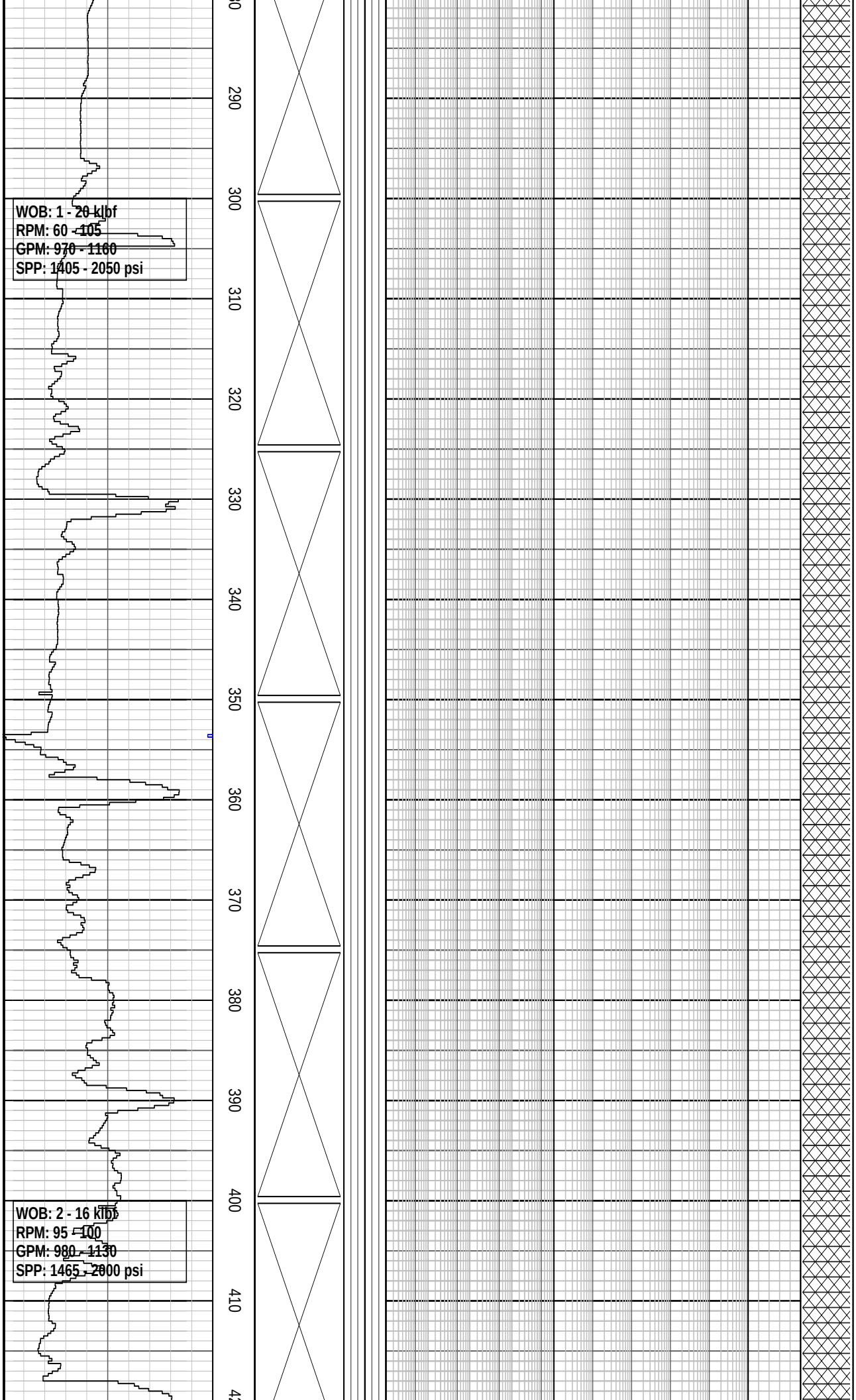
Spud Wasabi-1@ 2300 hrs on 14/02/2008

MW: 1.06 sg FV: 300
PV: 15 YP: 103
Gel: 80/110/113 pH: 9.2

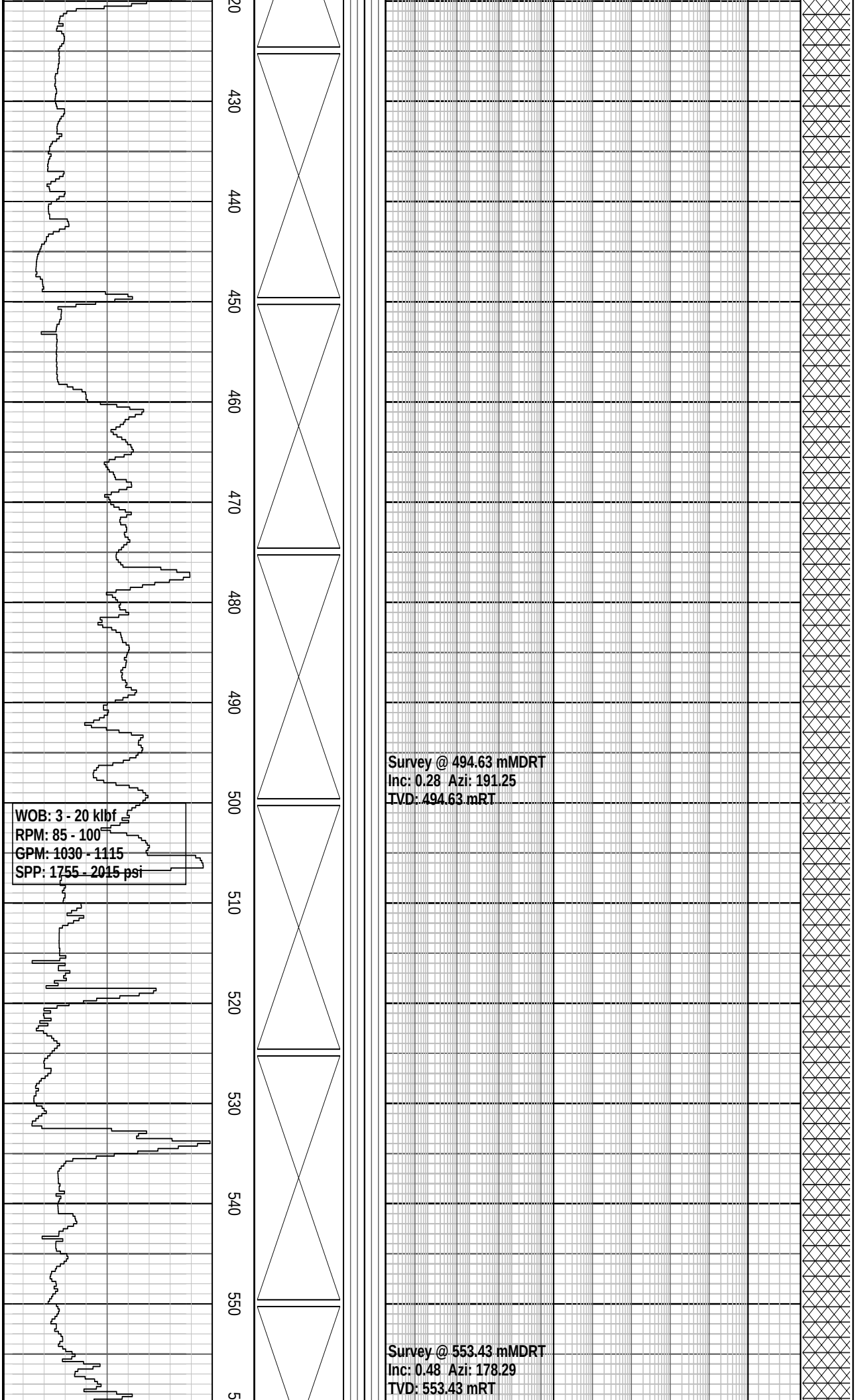
Drill with sea water and hi-vis pills, returns to sea bed from 66.0 m to 862.0 mMDRT

660 mm (26") Section TD @ 135.0 mMDRT on 15/02/08


Jets: 3 X 18, 1 X 16
Depth In: 135.0 mMDRT
Depth out: 862.0 mMDRT
Drilled 727.0 m in 13.9 hrs
Grade:
1-2-WT-A-E-I-NO-TD
15/02/2008
WOB: 1 - 10 klbf
RPM: 60 - 105
GPM: 950 - 1230
SPP: 1215 - 2425 psi
150
160
170
180
190
200
210
220
230
240
250
260
270
Survey @ 142.86 mMDRT
Inc: 0.18 Azi: 296.21
TVD: 142.86 mRT
Survey @ 170.39 mMDRT
Inc: 0.09 Azi: 303.79
TVD: 170.39 mRT
Survey @ 201.95 mMDRT
Inc: 0.09 Azi: 130.71
TVD: 201.95 mRT
Survey @ 229.75 mMDRT
Inc: 0.10 Azi: 88.12
TVD: 229.75 mRT

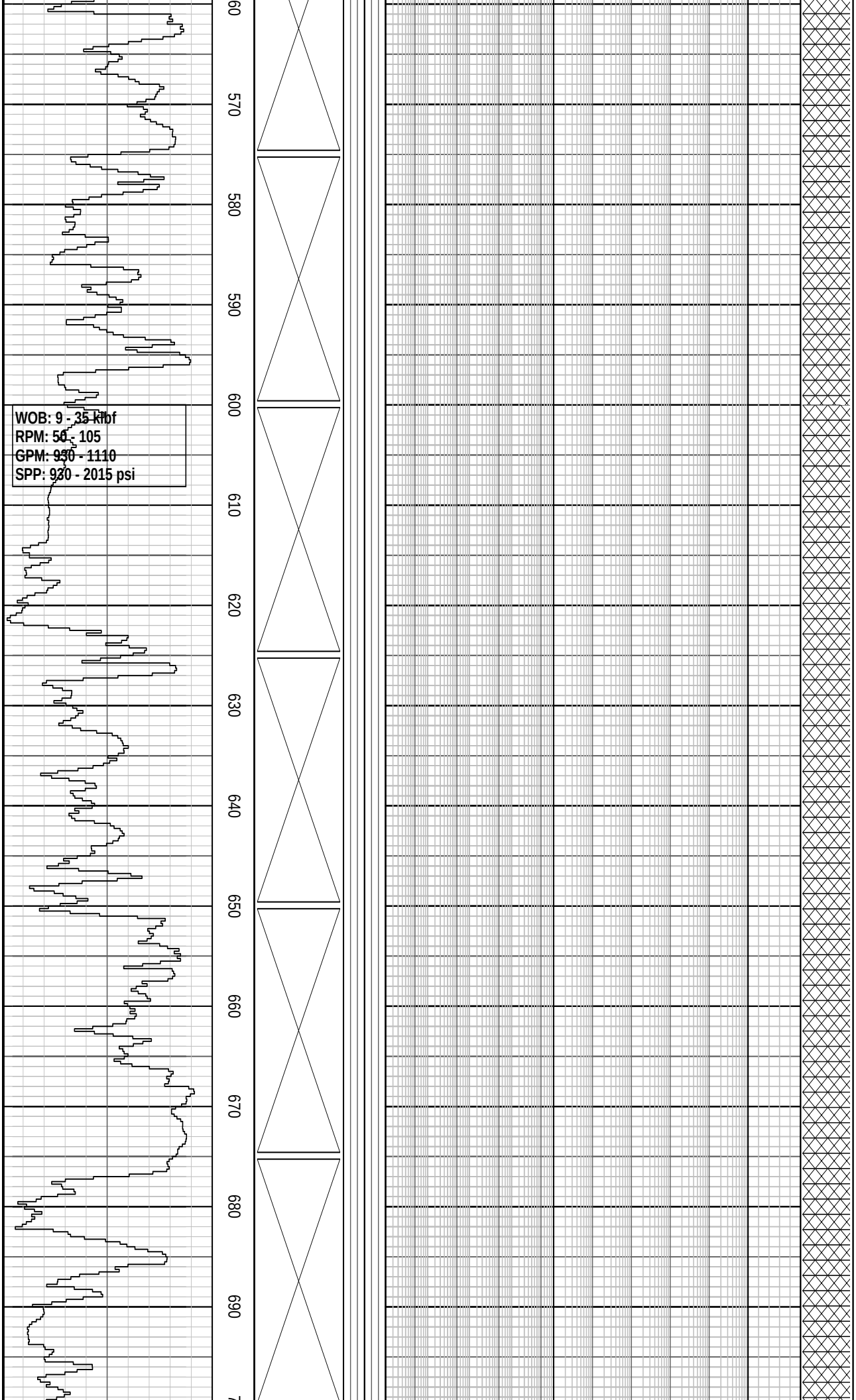


Drill with sea water and hi-vis pills, returns to sea bed from 66.0 m to 862.0 mMDRT

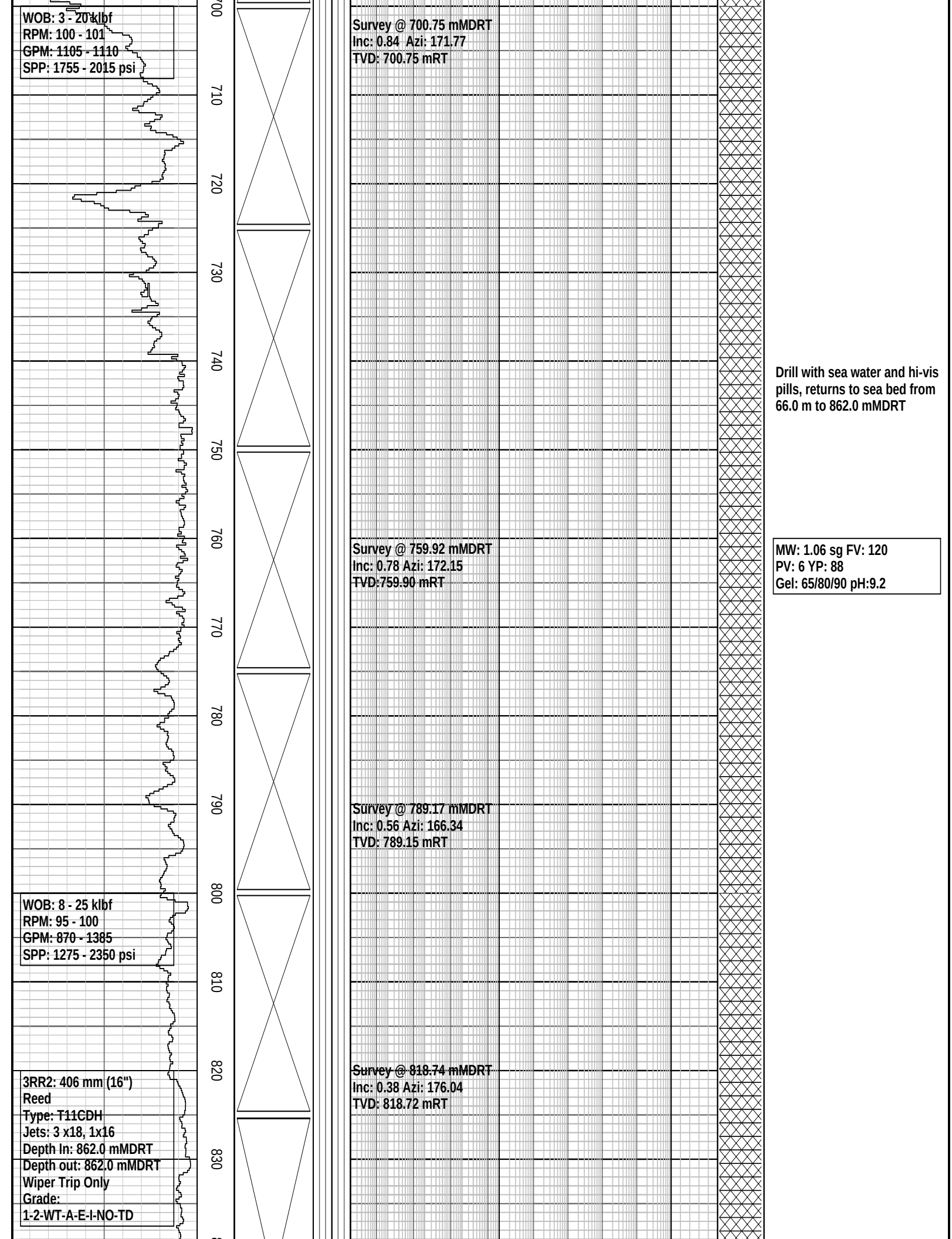


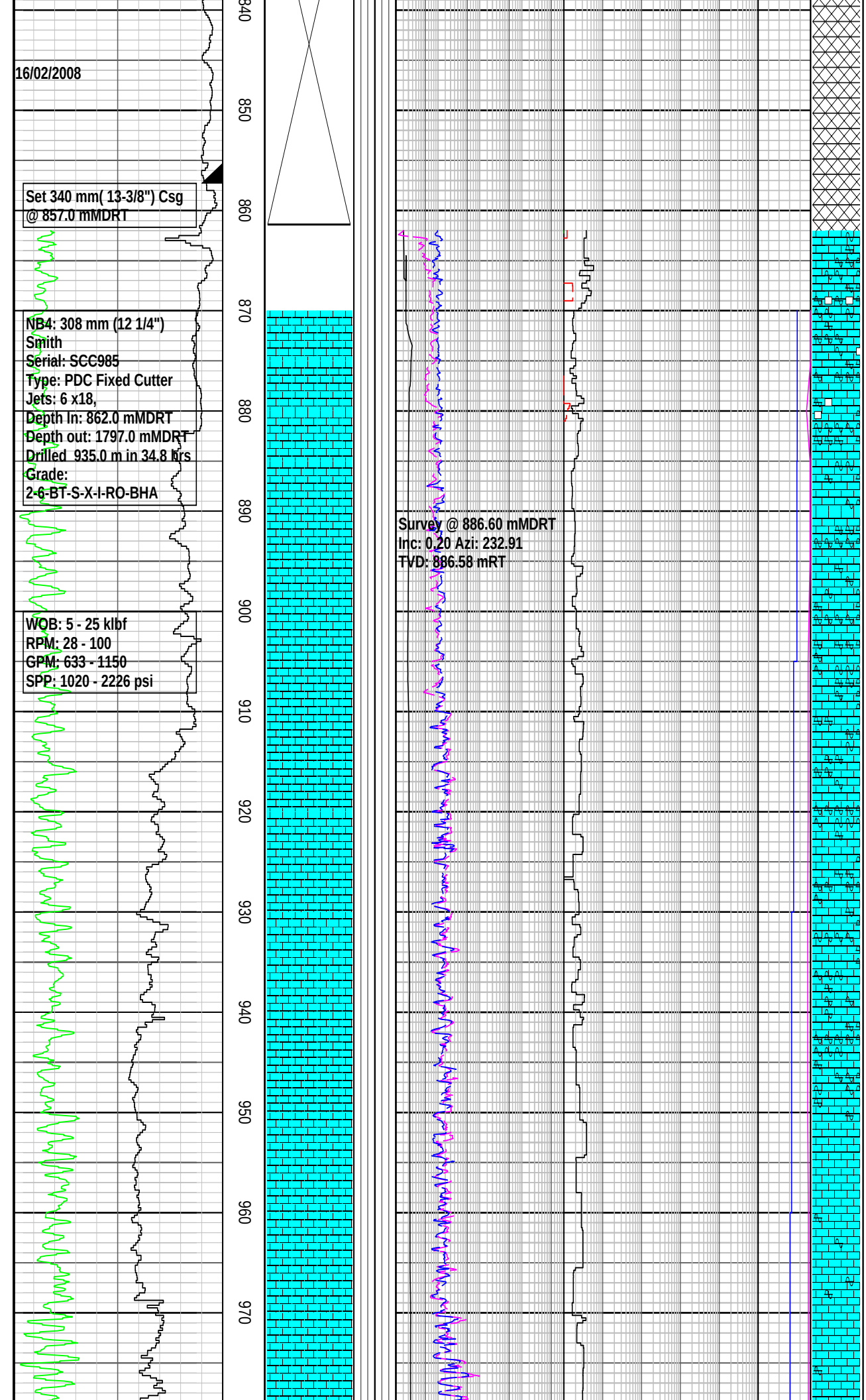
Drill with sea water and hi-vis pills, returns to sea bed from 66.0 m to 862.0 mMDRT

MW:1.06 sg FV: 120
PV: 6 YP: 88
Gel: 65/80/90 pH: 9.2



Drill with sea water and hi-vis pills, returns to sea bed from 66.0 m to 862.0 mMDRT


WOB: 3 - 20 klbf
RPM: 100 - 101
GPM: 1105 - 1110
SPP: 1755 - 2015 psi
700
710
720
730
740
750
760
770
780
790
800
810
820
830
Survey @ 700.75 mMDRT
Inc: 0.84 Azi: 171.77
TVD: 700.75 mRT
Drill with sea water and hi-vis pills, returns to sea bed from 66.0 m to 862.0 mMDRT
Survey @ 759.92 mMDRT
Inc: 0.78 Azi: 172.15
TVD:759.90 mRT
MW: 1.06 sg FV: 120
PV: 6 YP: 88
Gel: 65/80/90 pH:9.2
Survey @ 789.17 mMDRT
Inc: 0.56 Azi: 166.34
TVD: 789.15 mRT
WOB: 8 - 25 klbf
RPM: 95 - 100
GPM: 870 - 1385
SPP: 1275 - 2350 psi
Survey @ 818.74 mMDRT
Inc: 0.38 Azi: 176.04
TVD: 818.72 mRT
3RR2: 406 mm (16")
Reed
Type: T11CDH
Jets: 3 x18, 1x16
Depth In: 862.0 mMDRT
Depth out: 862.0 mMDRT
Wiper Trip Only
Grade:
1-2-WT-A-E-I-NO-TD



406 mm (16") Section TD @ 862.0 mMDRT on 17/02/08

FIT: EMW = 1.91 sg @ 925 psi

MW: 1.15 sg FV: 90
PV: 18 YP: 24
Gel: 9/11/14 pH: 9.6

CALCARENITE: off wh, lt-med gy, lt brn i/p, aren, abd microfos, com v crs & Fe stn qtz gr, com pl gy slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min fluor

CALCILUTITE: lt m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p

CALCISILTITE: gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky

CALCILUTITE: lt-m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p

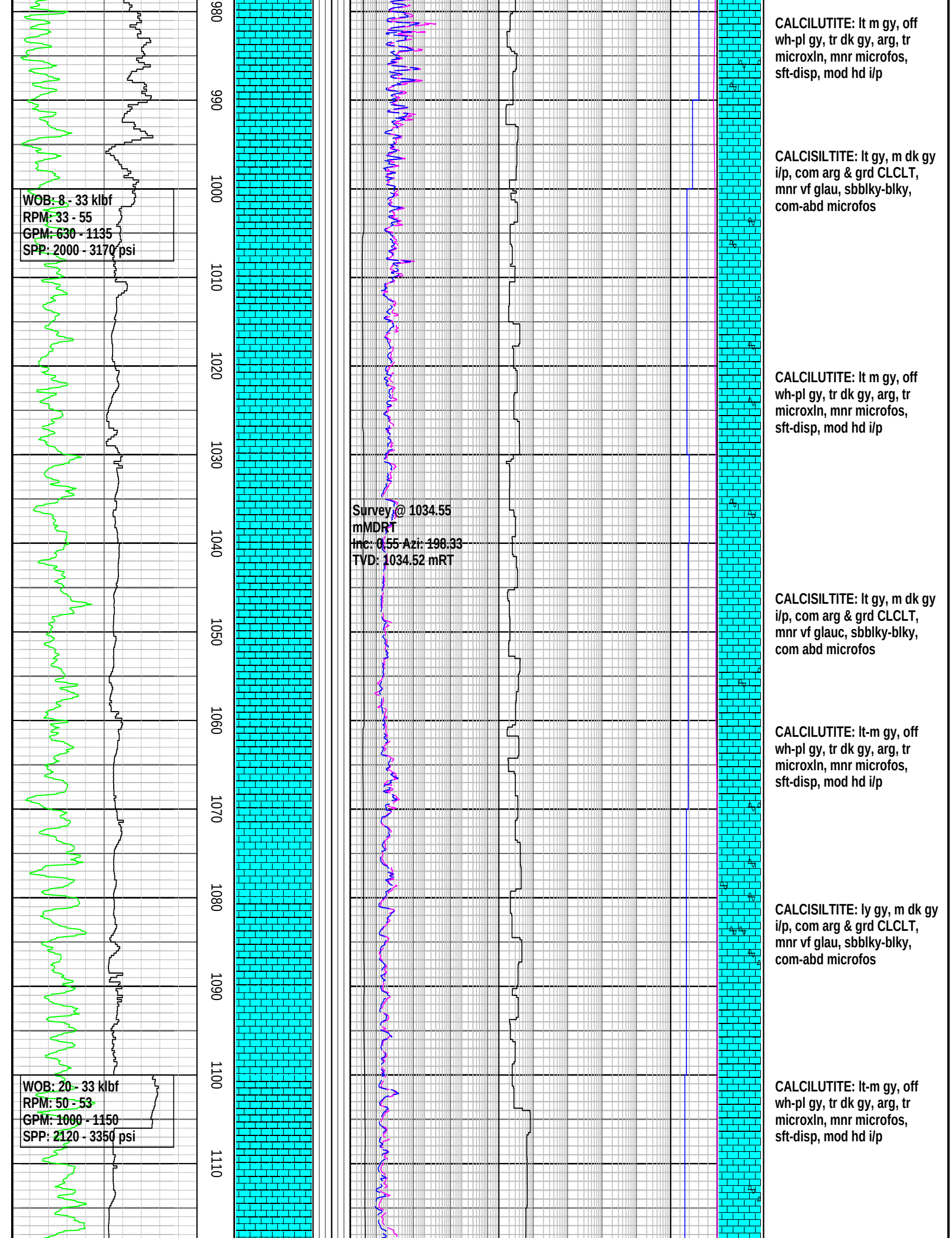
CALCARENITE: off wh, lt-m gy, lt brn i/p, aren, abd microfos, com v crs & Fe stn qtz gr, com slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min fluor

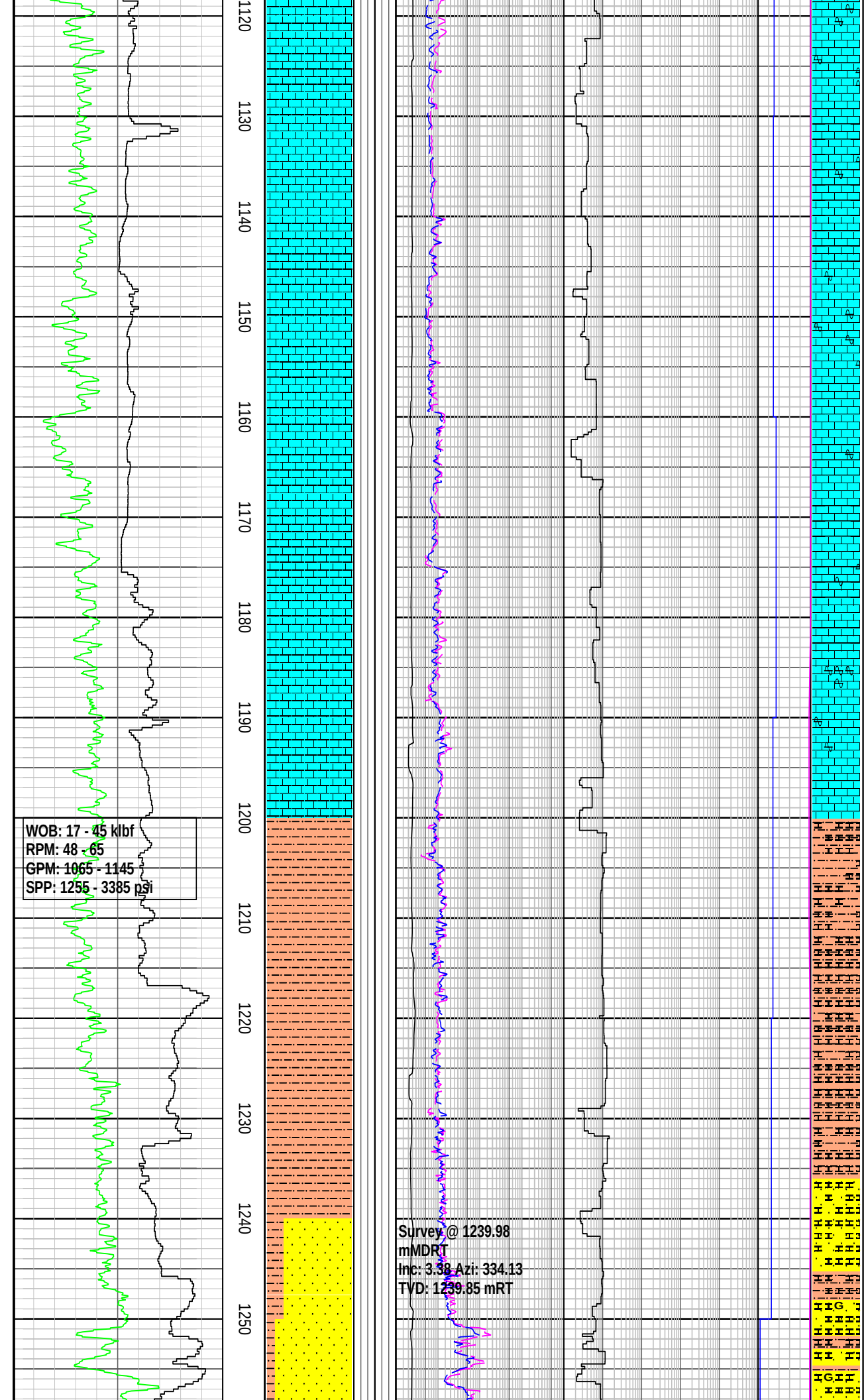
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky, com abd microfos

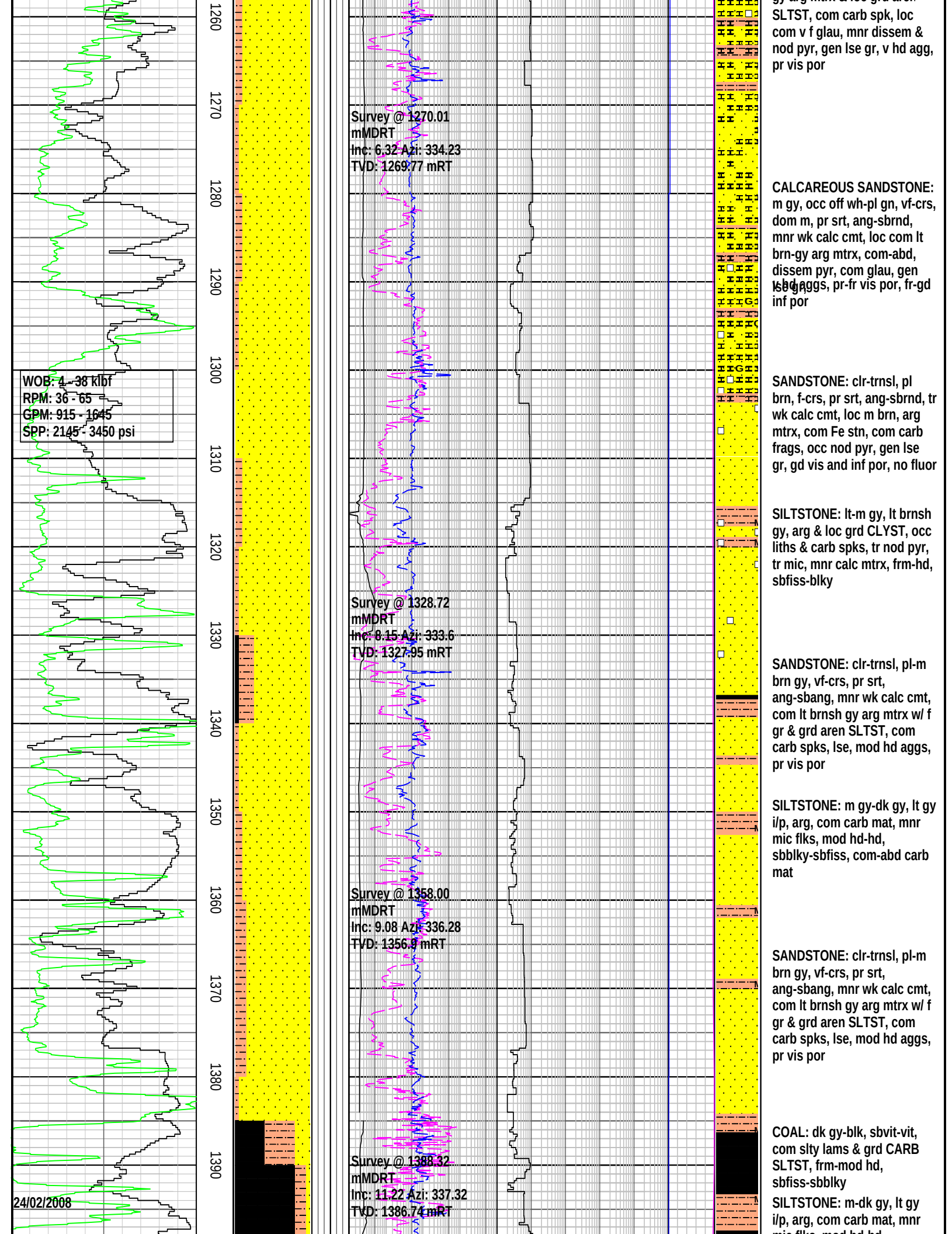
CALCILUTITE: lt-m gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr microfos, sft-disp, mod hd i/p

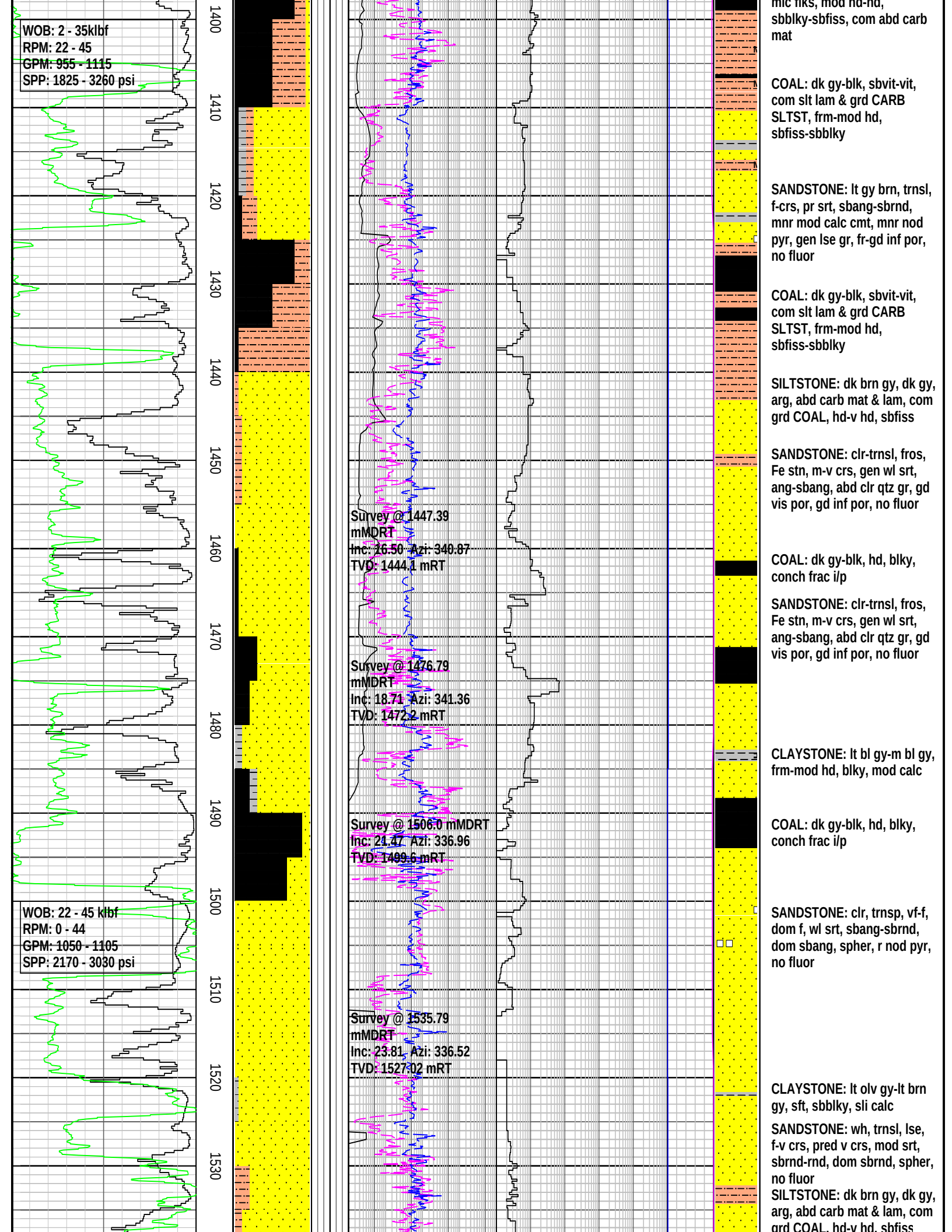
CALCARENITE: off wh, lt-m gy, lt brn i/p, aren, abd microfoss, com v crs & Fe stn qtz gr, com slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min fluor

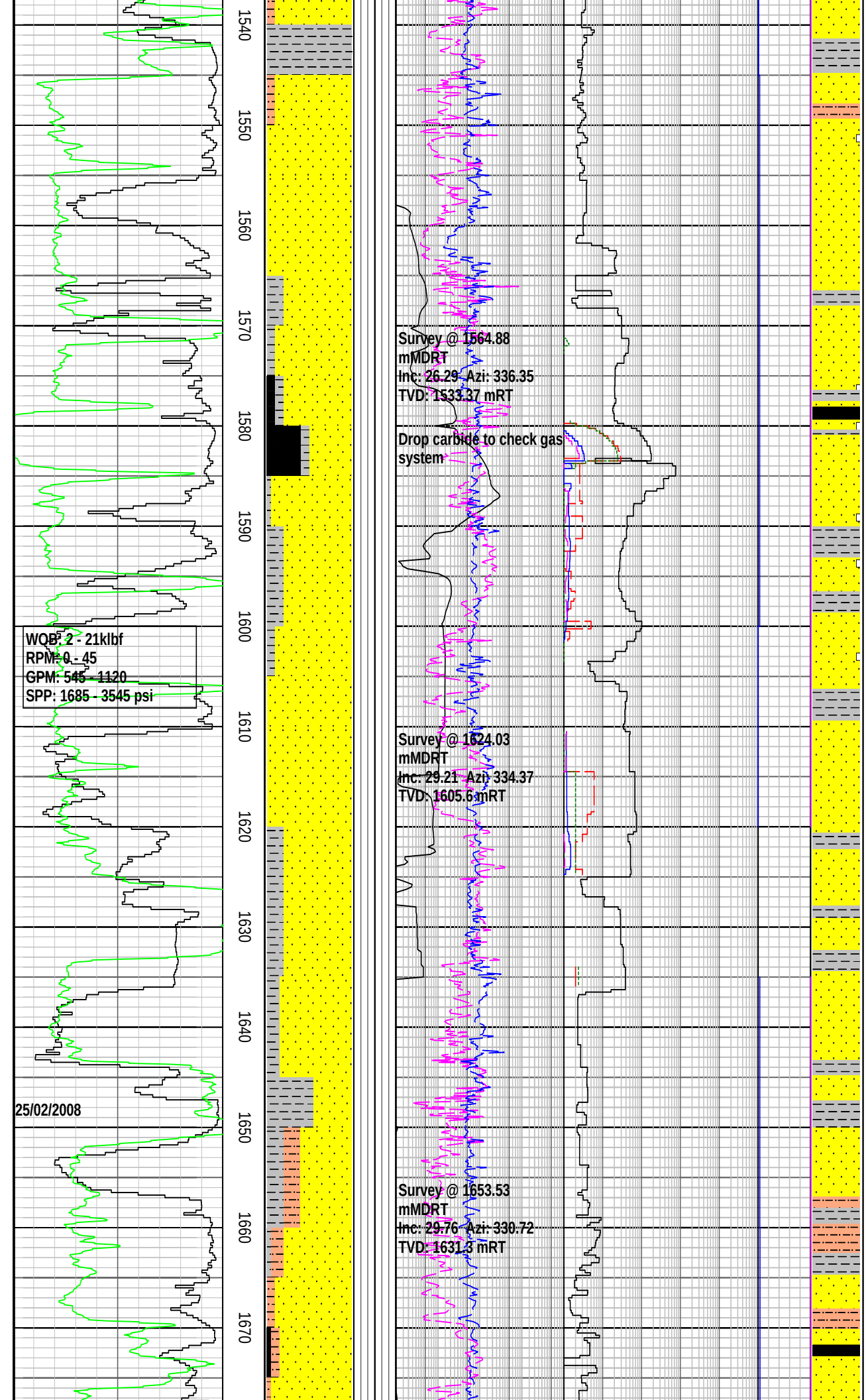
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glauc, sbblky-blky

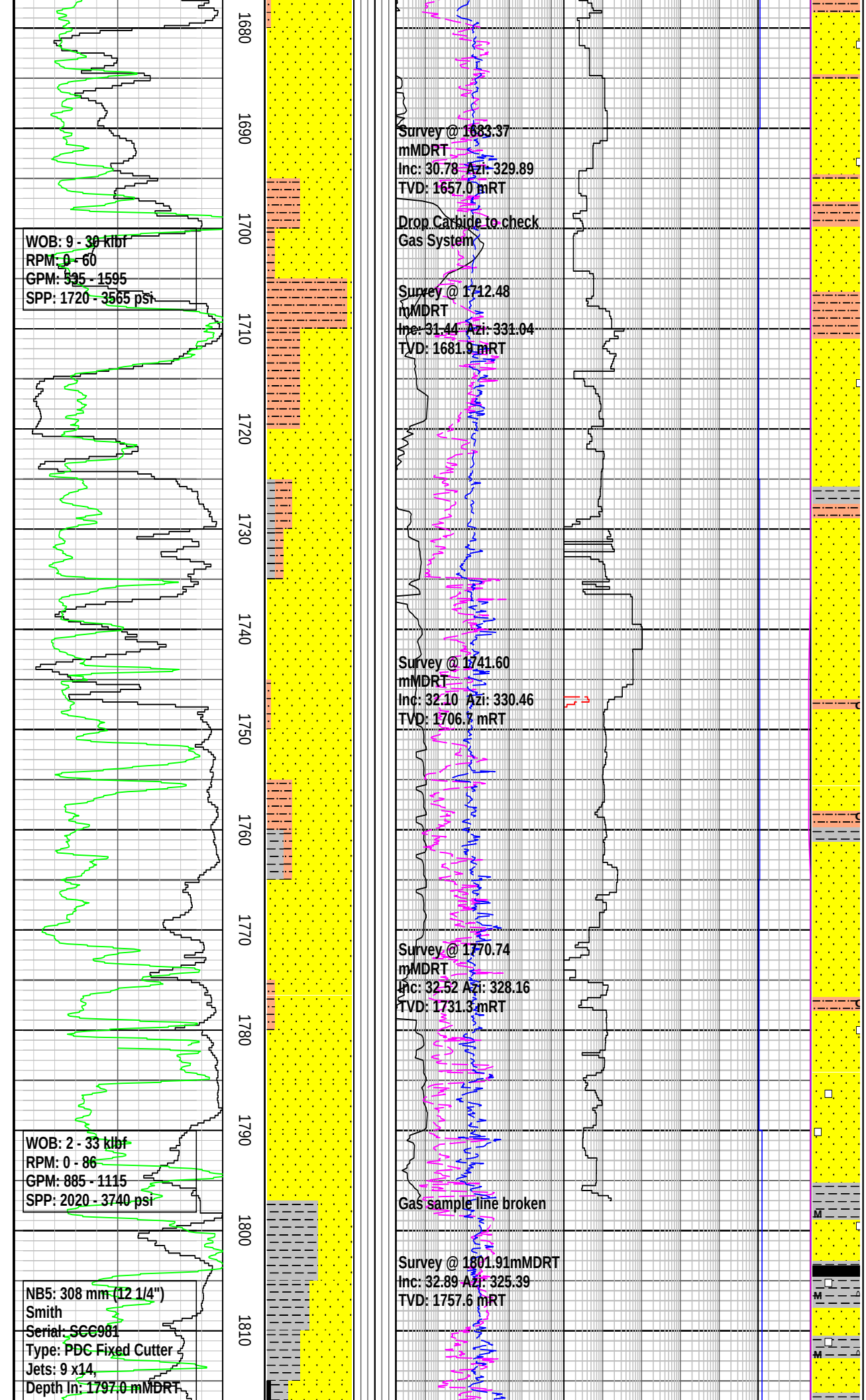

980
990
1000
1010
1020
1030
1040
1050
1060
1070
1080
1090
1100
1110
WOB: 8 - 33 klbf
RPM: 33 - 55
GPM: 630 - 1135
SPP: 2000 - 3170 psi
Survey @ 1034.55
mMDRT
Inc: 0.55 Azi: 198.33
TVD: 1034.52 mRT
WOB: 20 - 33 klbf
RPM: 50 - 53
GPM: 1000 - 1150
SPP: 2120 - 3350 psi
CALCILUTITE: lt m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky, com-abd microfos
CALCILUTITE: lt m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glauc, sbblky-blky, com abd microfos
CALCILUTITE: lt-m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p
CALCISILTITE: ly gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky, com-abd microfos
CALCILUTITE: lt-m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p

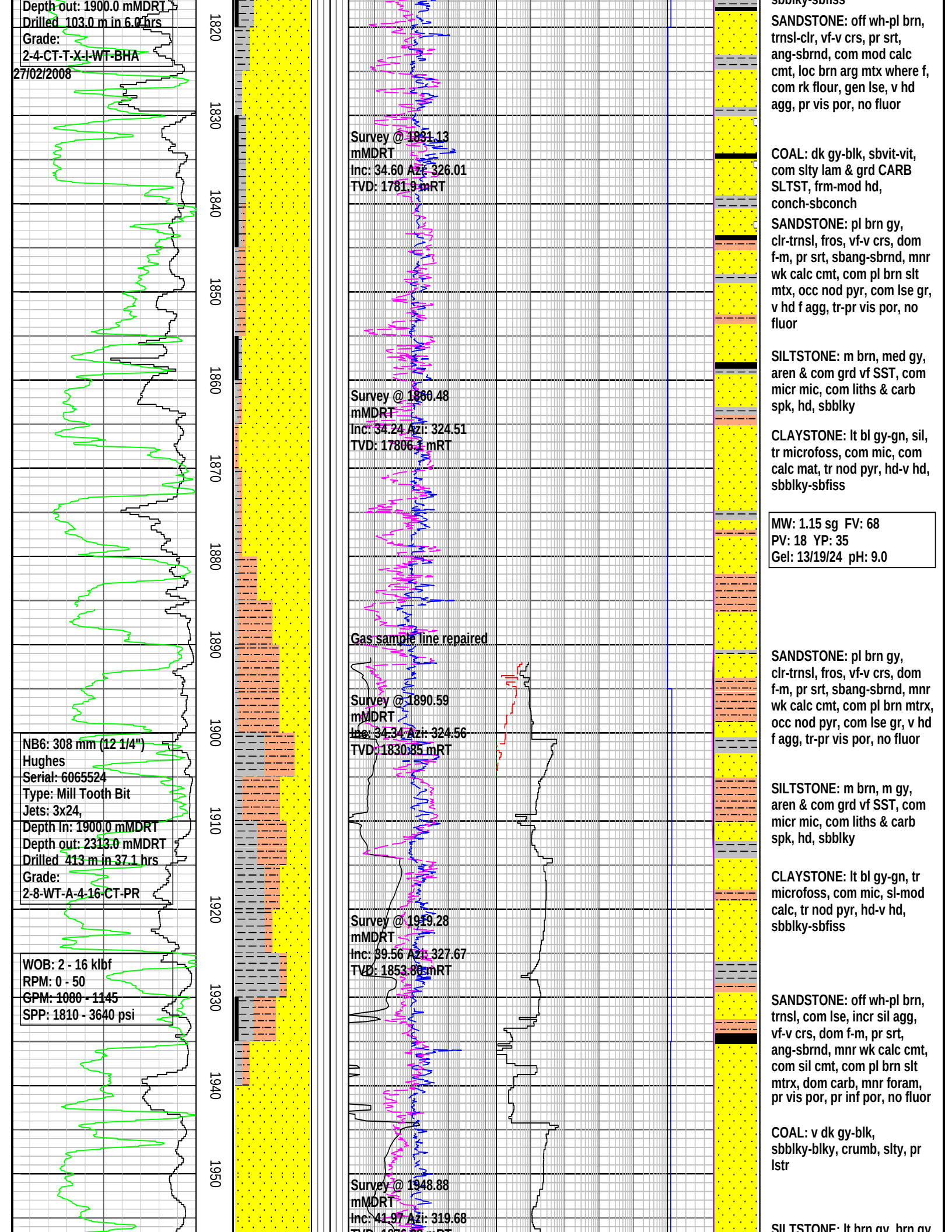

1120
1130
1140
1150
1160
1170
1180
1190
1200
1210
1220
1230
1240
1250
WOB: 17 - 45 klbf
RPM: 48 - 65
GPM: 1065 - 1145
SPP: 1255 - 3385 psi
Survey @ 1239.98 mMDRT
Inc: 3.38 Azi: 334.13
TVD: 1239.85 mRT
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky, com abd microfos
CALCILUTITE: lt m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p
CALCISILTITE: lt gy, m dk gy i/p, com arg & grd CLCLT, mnr vf glau, sbblky-blky, com abd microfos
CALCILUTITE: lt m gy, off wh-pl gy, tr dk gy, arg, tr microxln, mnr microfos, sft-disp, mod hd i/p
CALCAREOUS SILTSTONE: pl-m gy, v arg & com grd CALC CLYST, mnr calc frag, frm-mod hd, sbblky-blky
CALCAREOUS SILTSTONE: pl-m gy, v arg & com grd CALC CLYST, mnr calc frag, frm-mod hd, sbblky-blky
MW: 1.15 sg FV: 74
PV: 13 YP: 29
Gel: 11/14/16 pH: 9.4
CALCAREOUS SANDSTONE: pl brn, lt gy brn, trnsl i/p, vf-crs, dom vf-f, pr-mod srt, sbang-sbrnd, loc ang crs gr, com strng calc cmt, com pl

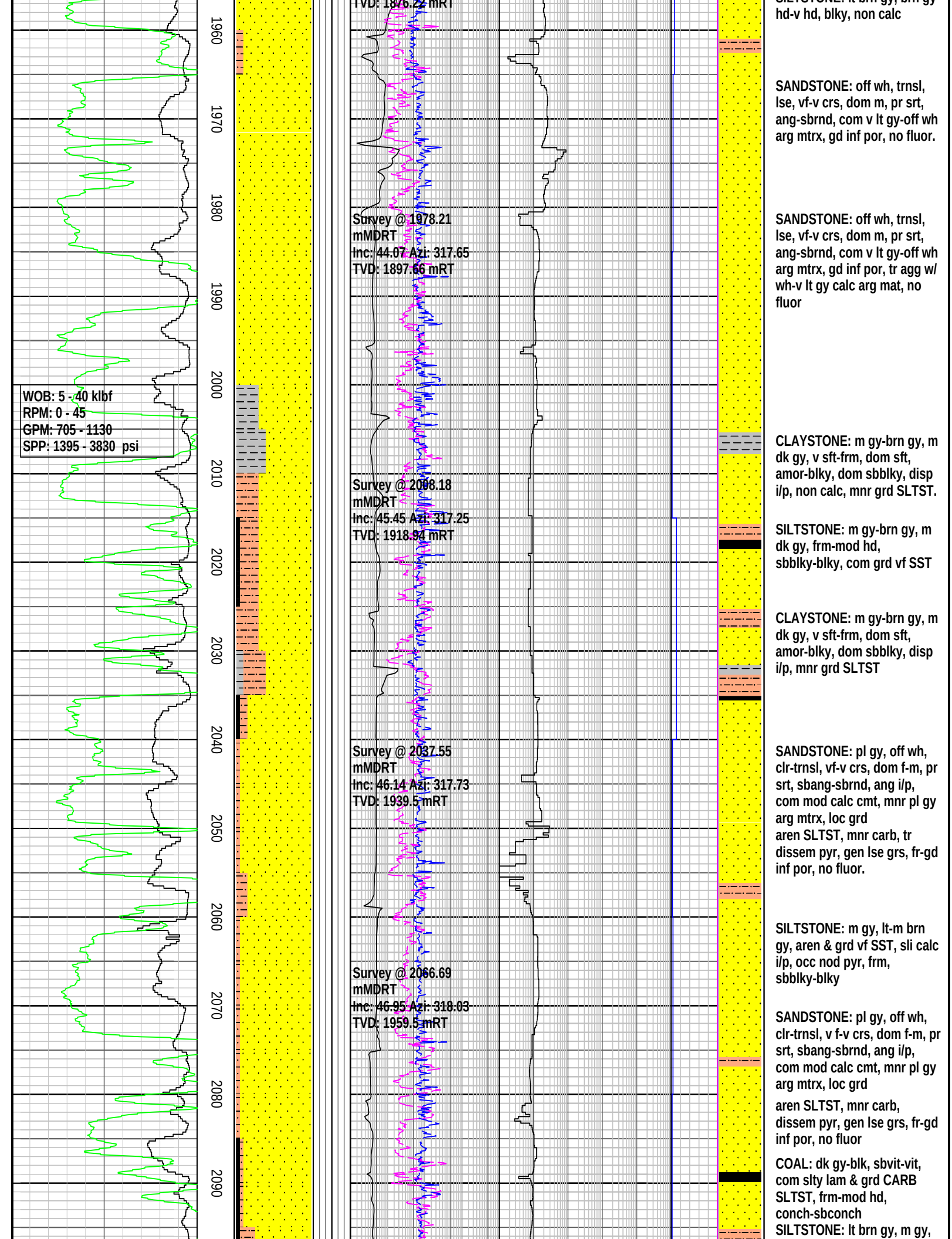

1260
1270
1280
1290
1300
1310
1320
1330
1340
1350
1360
1370
1380
1390
WOB: 4 - 38 klbf
RPM: 36 - 65
GPM: 915 - 1645
SPP: 2145 - 3450 psi
Survey @ 1270.01
mMDRT
Inc: 6.32 Azi: 334.23
TVD: 1269.77 mRT
Survey @ 1328.72
mMDRT
Inc: 8.15 Azi: 333.6
TVD: 1327.95 mRT
Survey @ 1358.00
mMDRT
Inc: 9.08 Azi: 336.28
TVD: 1356.9 mRT
Survey @ 1388.32
mMDRT
Inc: 11.22 Azi: 337.32
TVD: 1386.74 mRT
24/02/2008
SLTST, com carb spk, loc com v f glau, mnr dissem & nod pyr, gen lse gr, v hd agg, pr vis por
CALCAREOUS SANDSTONE: m gy, occ off wh-pl gn, vf-crs, dom m, pr srt, ang-sbrnd, mnr wk calc cmt, loc com lt brn-gy arg mtrx, com-abd, dissem pyr, com glau, gen lse gr, v hd aggs, pr-fr vis por, fr-gd inf por
SANDSTONE: clr-trnsl, pl brn, f-crs, pr srt, ang-sbrnd, tr wk calc cmt, loc m brn, arg mtrx, com Fe stn, com carb frags, occ nod pyr, gen lse gr, gd vis and inf por, no fluor
SILTSTONE: lt-m gy, lt brnsh gy, arg & loc grd CLYST, occ liths & carb spks, tr nod pyr, tr mic, mnr calc mtrx, frm-hd, sbfiss-blky
SANDSTONE: clr-trnsl, pl-m brn gy, vf-crs, pr srt, ang-sbang, mnr wk calc cmt, com lt brnsh gy arg mtrx w/ f gr & grd aren SLTST, com carb spks, lse, mod hd aggs, pr vis por
SILTSTONE: m gy-dk gy, lt gy i/p, arg, com carb mat, mnr mic flks, mod hd-hd, sbblky-sbfiss, com-abd carb mat
SANDSTONE: clr-trnsl, pl-m brn gy, vf-crs, pr srt, ang-sbang, mnr wk calc cmt, com lt brnsh gy arg mtrx w/ f gr & grd aren SLTST, com carb spks, lse, mod hd aggs, pr vis por
COAL: dk gy-blk, sbvit-vit, com slty lams & grd CARB SLTST, frm-mod hd, sbfiss-sbblky
SILTSTONE: m-dk gy, lt gy i/p, arg, com carb mat, mnr

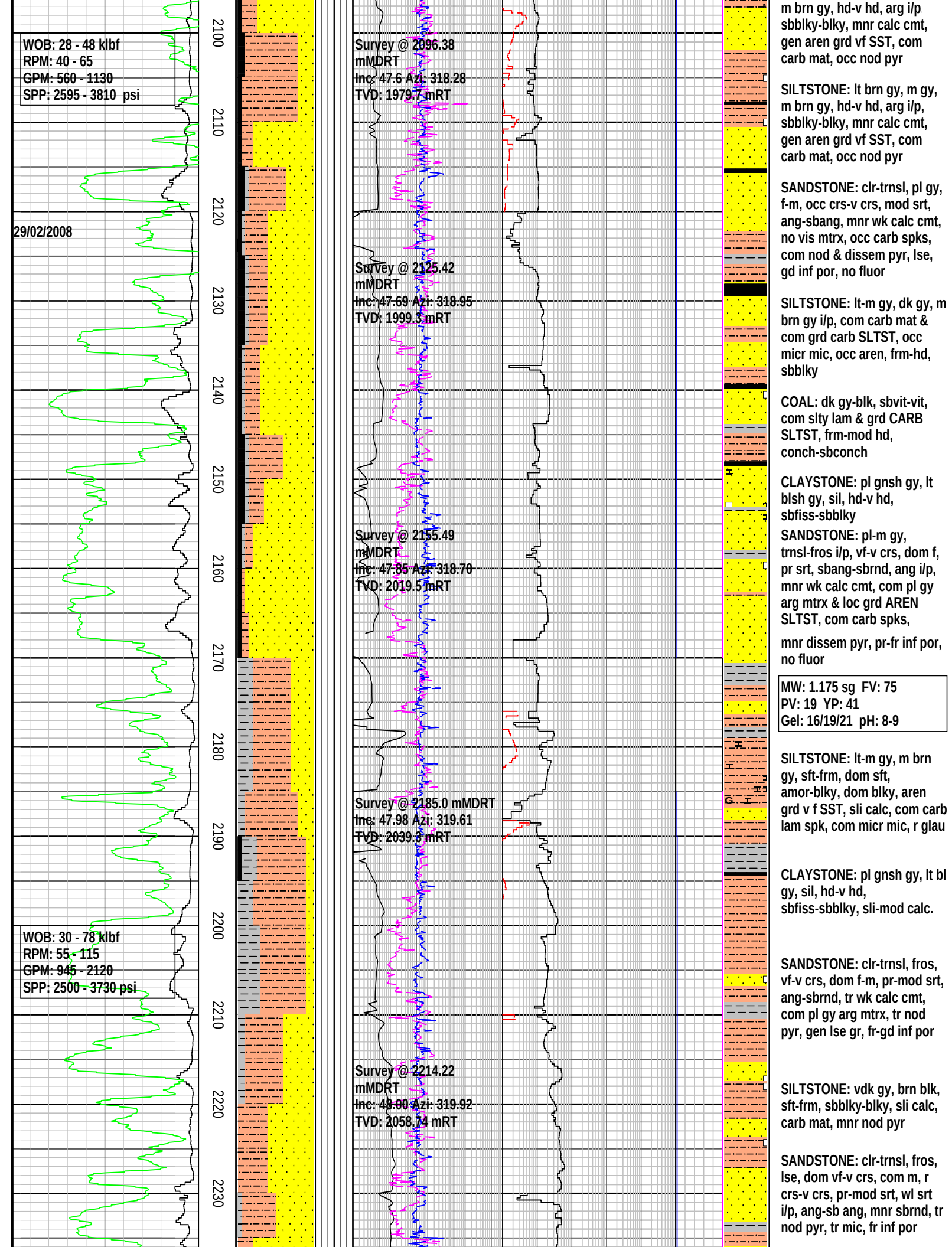

WOB: 2 - 35klbf
RPM: 22 - 45
GPM: 955 - 1115
SPP: 1825 - 3260 psi
1400
1410
1420
1430
1440
1450
1460
1470
1480
1490
1500
1510
1520
1530
Survey @ 1447.39 mMDRT
Inc: 16.50 Azi: 340.87
TVD: 1444.1 mRT
Survey @ 1476.79 mMDRT
Inc: 18.71 Azi: 341.36
TVD: 1472.2 mRT
Survey @ 1506.0 mMDRT
Inc: 21.47 Azi: 336.96
TVD: 1499.6 mRT
Survey @ 1535.79 mMDRT
Inc: 23.81 Azi: 336.52
TVD: 1527.02 mRT
WOB: 22 - 45 klbf
RPM: 0 - 44
GPM: 1050 - 1105
SPP: 2170 - 3030 psi
mic flks, mod hd-hd, sbblky-sbfiss, com abd carb mat
COAL: dk gy-blk, sbvit-vit, com slt lam & grd CARB SLTST, frm-mod hd, sbfiss-sbblky
SANDSTONE: lt gy brn, trnsl, f-crs, pr srt, sbang-sbrnd, mnr mod calc cmt, mnr nod pyr, gen lse gr, fr-gd inf por, no fluor
COAL: dk gy-blk, sbvit-vit, com slt lam & grd CARB SLTST, frm-mod hd, sbfiss-sbblky
SILTSTONE: dk brn gy, dk gy, arg, abd carb mat & lam, com grd COAL, hd-v hd, sbfiss
SANDSTONE: clr-trnsl, fros, Fe stn, m-v crs, gen wl srt, ang-sbang, abd clr qtz gr, gd vis por, gd inf por, no fluor
COAL: dk gy-blk, hd, blky, conch frac i/p
SANDSTONE: clr-trnsl, fros, Fe stn, m-v crs, gen wl srt, ang-sbang, abd clr qtz gr, gd vis por, gd inf por, no fluor
CLAYSTONE: lt bl gy-m bl gy, frm-mod hd, blky, mod calc
COAL: dk gy-blk, hd, blky, conch frac i/p
SANDSTONE: clr, trnsp, vf-f, dom f, wl srt, sbang-sbrnd, dom sbang, spher, r nod pyr, no fluor
CLAYSTONE: lt olv gy-lt brn gy, sft, sbblky, sli calc
SANDSTONE: wh, trnsl, lse, f-v crs, pred v crs, mod srt, sbrnd-rnd, dom sbrnd, spher, no fluor
SILTSTONE: dk brn gy, dk gy, arg, abd carb mat & lam, com grd COAL, hd-v hd, sbfiss

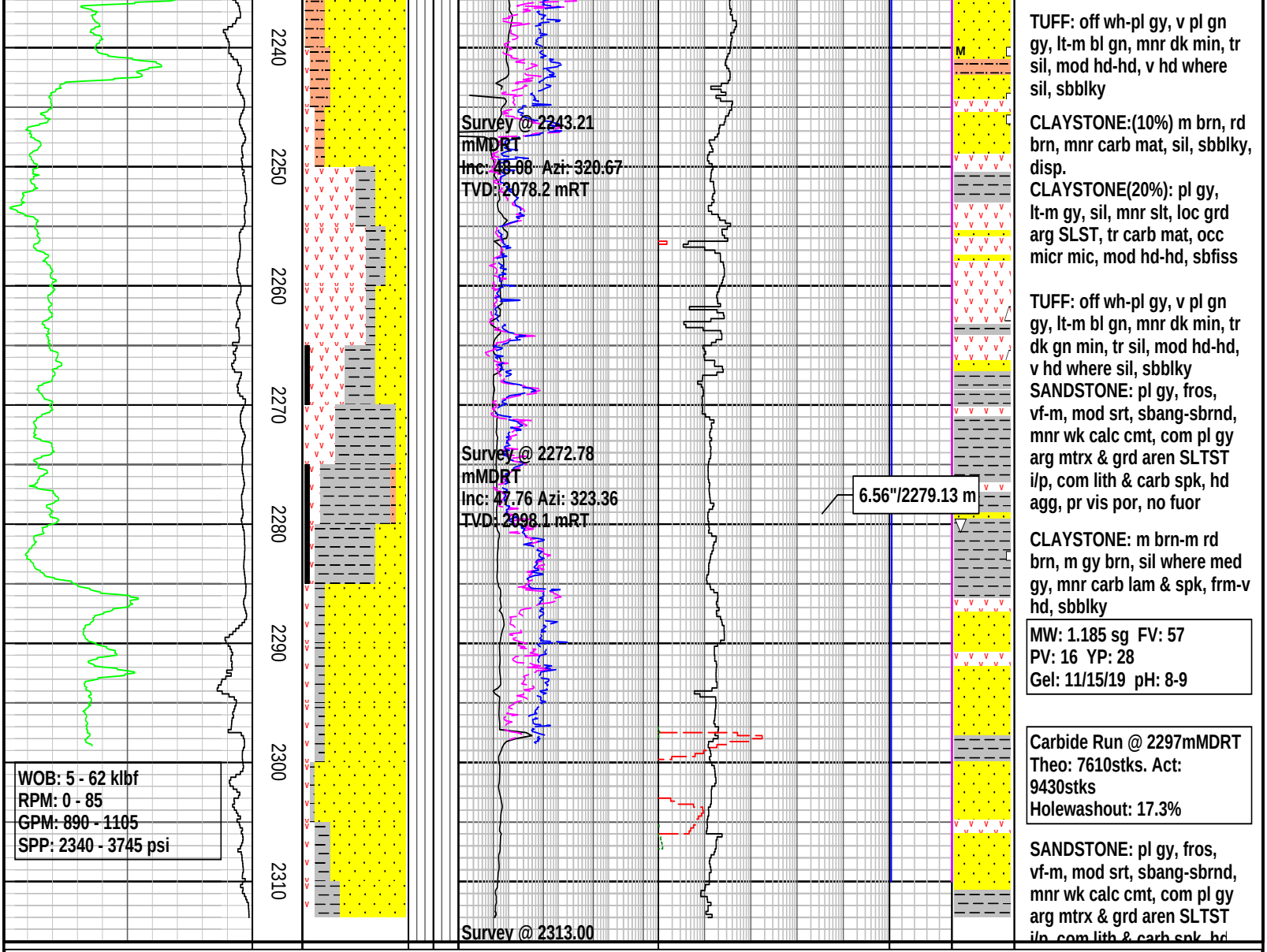

1540
1550
1560
1570
1580
1590
1600
1610
1620
1630
1640
1650
1660
1670
WOB: 2 - 21klbf
RPM: 0 - 45
GPM: 545 - 1120
SPP: 1685 - 3545 psi
25/02/2008
Survey @ 1564.88 mMDRT
Inc: 26.29 Azi: 336.35
TVD: 1533.37 mRT
Drop carbide to check gas system
Survey @ 1624.03 mMDRT
Inc: 29.21 Azi: 334.37
TVD: 1605.6 mRT
Survey @ 1653.53 mMDRT
Inc: 29.76 Azi: 330.72
TVD: 1631.3 mRT
CLAYSTONE: m brn, or brn, v dk brn gy, tr aren i/p, tr calc mtrx, com carb mat, grd CARB CLYST, frm-hd, disp, sbblky, sbfiss i/p
SANDSTONE: trnsl-fros, vf-v crs, gen crs, mod srt, ang-sbang, tr wk calc cmt, mnr off wh-lt brn arg mtrx, tr dissem pyr, gen lse gr, gd inf por, no fluor.
MW: 1.15 sg FV: 63
PV: 20 YP: 25
Gel: 9/14/16 pH: 9.5
COAL: dk gy-blk, sbvit-vit, com slt lam & grd CARB SLTST, frm-mod hd, conch-sbconch
Carbide Run @ 1589mMDRT
Theo: 5250stks. Act: 6350stks
Hole Washout = 20.9%
SILTSTONE: dk brn gy, dk gy, arg, abd carb mat & lam, com grd COAL, hd-v hd, sbfiss
CLAYSTONE: off wh-pl brn, tr m gy, tr slt lam, hd-v hd, sblky-sbfiss
SANDSTONE: trnsl-fros, f-v crs, pr srt, ang-sbang, gen lse clr grs, gd inf por, no fluor
CLAYSTONE: off wh-v pl brn, tr m gy, tr slt lam, tr foss frag, com calc, hd-v hd, sblky-sbfiss
SANDSTONE: pl brn, trnsl-fros, f-v crs, pr srt, ang-sbang, gen lse clr grs, gd inf por, no fluor
CLAYSTONE: off wh-v pl brn, tr m gy, tr slt lam, tr foss frag, com calc, hd-v hd, sblky-sbfiss
SILTSTONE: pl-m gy, m brn gy, mnr arg, grd CLYST, occ calc mat, mnr carb spk, tr mic, tr lith, hd-v hd, sbfiss-sbblky
COAL: dk gy-blk, sbvit-vit, com slt lam, grd CARB SLTST, frm-mod hd, conch-sbconch


1680
1690
1700
1710
1720
1730
1740
1750
1760
1770
1780
1790
1800
1810
WOB: 9 - 30 klbf
RPM: 0 - 60
GPM: 535 - 1595
SPP: 1720 - 3565 psi
WOB: 2 - 33 klbf
RPM: 0 - 86
GPM: 885 - 1115
SPP: 2020 - 3740 psi
NB5: 308 mm (12 1/4")
Smith
Serial: SCC981
Type: PDC Fixed Cutter
Jets: 9 x14,
Depth In: 1797.0 mMDRT
Survey @ 1683.37 mMDRT
Inc: 30.78 Azi: 329.89
TVD: 1657.0 mRT
Drop Carbide to check Gas System
Survey @ 1712.48 mMDRT
Inc: 31.44 Azi: 331.04
TVD: 1681.9 mRT
Survey @ 1741.60 mMDRT
Inc: 32.10 Azi: 330.46
TVD: 1706.7 mRT
Survey @ 1770.74 mMDRT
Inc: 32.52 Azi: 328.16
TVD: 1731.3 mRT
Gas sample line broken
Survey @ 1801.91mMDRT
Inc: 32.89 Azi: 325.39
TVD: 1757.6 mRT
SANDSTONE: pl brn, clr-trnsl, fros, vf-v crs, dom f-med, pr srt, sbang-sbrnd, tr wk calc cmt, com pl brn arg mtrx, com carb lam, mnr nod pyr, gen lse, mod hd aggs, tr-pr vis por
SILTSTONE: off wh-pl brn, loc pl brn gy, aren, com grd vf SST, com lith, carb spk, hd-v hd, sbblky
Carbide Run @ 1707mMDRT
Theo: 6200stks. Act: 7130stks
Hole washout = 15.0%.
SANDSTONE: off wh, wh, trnsl, bimod, f-med, ang-sbang, dom sbang, mod-wl sort, v crs, sbrnd-rnd, v wl srt, r nod pyr, r carb frag, r shl frag
SILTSTONE: m gy-dk gy, grn gy, frm, blky, sbfiss i/p, aren i/p, mod calc
CLAYSTONE: pl bl gy, lt gy, frm-mod hd, blky, sli calc
SANDSTONE: off wh, wh, trnsl, bimod, f-m, ang-sbang, dom sbang, mod-wl srt, v crs, sbrnd-rnd, v wl srt, r nod pyr, r carb frag, r shl frag, no fluor
CLAYSTONE: pl yel brn-yel gy, sft-frm, dom frm, blk, sbblky, non calc
SILTSTONE: m gy-dk gy, grnsh gy, frm, blky, sbfiss i/p, aren i/p, mod calc, r glau, com carb mat
SANDSTONE: of wh, wh, trnsl, f-v crs, dom m-v crs, ang-sbrnd, dom sbang, pr srt, r nod pyr, r shl frag, no vis cmt, mod inf por
SANDSTONE: trnsl-clr, fros, f-v crs, dom m crs, pr srt, ang-sbang, com wk calc cmt, pl gy-brn arg mtx, occ COAL lam, mnr nod pyr, gen lse gr, tr-gd inf por, no fluor
CLAYSTONE: lt bl gy-grn gy, occ microfoss, com mic, loc carb mat, com-abd calc mat, tr nod pyr, hd-v hd, sbblky-sbfiss


Depth out: 1900.0 mMDRT
Drilled 103.0 m in 6.0 hrs
Grade:
2-4-CT-T-X-I-WT-BHA
27/02/2008
1820
1830
1840
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1950
NB6: 308 mm (12 1/4")
Hughes
Serial: 6065524
Type: Mill Tooth Bit
Jets: 3x24,
Depth In: 1900.0 mMDRT
Depth out: 2313.0 mMDRT
Drilled 413 m in 37.1 hrs
Grade:
2-8-WT-A-4-16-CT-PR
WOB: 2 - 16 klbf
RPM: 0 - 50
GPM: 1080 - 1145
SPP: 1810 - 3640 psi
Survey @ 1831.13 mMDRT
Inc: 34.60 Azi: 326.01
TVD: 1781.9 mRT
Survey @ 1860.48 mMDRT
Inc: 34.24 Azi: 324.51
TVD: 17806.1 mRT
Gas sample line repaired
Survey @ 1890.59 mMDRT
Inc: 34.34 Azi: 324.56
TVD: 1830.85 mRT
Survey @ 1919.28 mMDRT
Inc: 39.56 Azi: 327.67
TVD: 1853.80 mRT
Survey @ 1948.88 mMDRT
Inc: 41.97 Azi: 319.68
SANDSTONE: off wh-pl brn, trnsl-clr, vf-v crs, pr srt, ang-sbrnd, com mod calc cmt, loc brn arg mtx where f, com rk flour, gen lse, v hd agg, pr vis por, no fluor
COAL: dk gy-blk, sbvit-vit, com slty lam & grd CARB SLTST, frm-mod hd, conch-sbconch
SANDSTONE: pl brn gy, clr-trnsl, fros, vf-v crs, dom f-m, pr srt, sbang-sbrnd, mnr wk calc cmt, com pl brn slt mtx, occ nod pyr, com lse gr, v hd f agg, tr-pr vis por, no fluor
SILTSTONE: m brn, med gy, aren & com grd vf SST, com micr mic, com liths & carb spk, hd, sbblky
CLAYSTONE: lt bl gy-gn, sil, tr microfoss, com mic, com calc mat, tr nod pyr, hd-v hd, sbblky-sbfiss
MW: 1.15 sg FV: 68
PV: 18 YP: 35
Gel: 13/19/24 pH: 9.0
SANDSTONE: pl brn gy, clr-trnsl, fros, vf-v crs, dom f-m, pr srt, sbang-sbrnd, mnr wk calc cmt, com pl brn mtrx, occ nod pyr, com lse gr, v hd f agg, tr-pr vis por, no fluor
SILTSTONE: m brn, m gy, aren & com grd vf SST, com micr mic, com liths & carb spk, hd, sbblky
CLAYSTONE: lt bl gy-gn, tr microfoss, com mic, sl-mod calc, tr nod pyr, hd-v hd, sbblky-sbfiss
SANDSTONE: off wh-pl brn, trnsl, com lse, incr sil agg, vf-v crs, dom f-m, pr srt, ang-sbrnd, mnr wk calc cmt, com sil cmt, com pl brn slt mtrx, dom carb, mnr foram, pr vis por, pr inf por, no fluor
COAL: v dk gy-blk, sbblky-blky, crumb, slty, pr lstr


TVD: 1876.22 mRT
hd-v hd, blky, non calc
1960
SANDSTONE: off wh, trnsl, lse, vf-v crs, dom m, pr srt, ang-sbrnd, com v lt gy-off wh arg mtrx, gd inf por, no fluor.
1970
1980
Survey @ 1978.21 mMDRT
Inc: 44.07 Azi: 317.65
TVD: 1897.66 mRT
SANDSTONE: off wh, trnsl, lse, vf-v crs, dom m, pr srt, ang-sbrnd, com v lt gy-off wh arg mtrx, gd inf por, tr agg w/ wh-v lt gy calc arg mat, no fluor
1990
2000
WOB: 5 - 40 klbf
RPM: 0 - 45
GPM: 705 - 1130
SPP: 1395 - 3830 psi
CLAYSTONE: m gy-brn gy, m dk gy, v sft-frm, dom sft, amor-blky, dom sbblky, disp i/p, non calc, mnr grd SLTST.
2010
Survey @ 2008.18 mMDRT
Inc: 45.45 Azi: 317.25
TVD: 1918.94 mRT
SILTSTONE: m gy-brn gy, m dk gy, frm-mod hd, sbblky-blky, com grd vf SST
2020
CLAYSTONE: m gy-brn gy, m dk gy, v sft-frm, dom sft, amor-blky, dom sbblky, disp i/p, mnr grd SLTST
2030
2040
Survey @ 2037.55 mMDRT
Inc: 46.14 Azi: 317.73
TVD: 1939.5 mRT
SANDSTONE: pl gy, off wh, clr-trnsl, vf-v crs, dom f-m, pr srt, sbang-sbrnd, ang i/p, com mod calc cmt, mnr pl gy arg mtrx, loc grd aren SLTST, mnr carb, tr dissem pyr, gen lse grs, fr-gd inf por, no fluor.
2050
2060
SILTSTONE: m gy, lt-m brn gy, aren & grd vf SST, sli calc i/p, occ nod pyr, frm, sbblky-blky
Survey @ 2066.69 mMDRT
Inc: 46.95 Azi: 318.03
TVD: 1959.5 mRT
2070
SANDSTONE: pl gy, off wh, clr-trnsl, v f-v crs, dom f-m, pr srt, sbang-sbrnd, ang i/p, com mod calc cmt, mnr pl gy arg mtrx, loc grd
2080
aren SLTST, mnr carb, dissem pyr, gen lse grs, fr-gd inf por, no fluor
COAL: dk gy-blk, sbvit-vit, com slty lam & grd CARB SLTST, frm-mod hd, conch-sbconch
2090
SILTSTONE: lt brn gy, m gy,


WOB: 28 - 48 klbf
RPM: 40 - 65
GPM: 560 - 1130
SPP: 2595 - 3810 psi
29/02/2008
WOB: 30 - 78 klbf
RPM: 55 - 115
GPM: 945 - 2120
SPP: 2500 - 3730 psi
2100
2110
2120
2130
2140
2150
2160
2170
2180
2190
2200
2210
2220
2230
Survey @ 2096.38 mMDRT
Inc: 47.6 Azi: 318.28
TVD: 1979.7 mRT
Survey @ 2125.42 mMDRT
Inc: 47.69 Azi: 318.95
TVD: 1999.3 mRT
Survey @ 2155.49 mMDRT
Inc: 47.85 Azi: 318.70
TVD: 2019.5 mRT
Survey @ 2185.0 mMDRT
Inc: 47.98 Azi: 319.61
TVD: 2039.3 mRT
Survey @ 2214.22 mMDRT
Inc: 48.00 Azi: 319.92
TVD: 2058.74 mRT
m brn gy, hd-v hd, arg i/p, sbblky-blky, mnr calc cmt, gen aren grd vf SST, com carb mat, occ nod pyr
SILTSTONE: lt brn gy, m gy, m brn gy, hd-v hd, arg i/p, sbblky-blky, mnr calc cmt, gen aren grd vf SST, com carb mat, occ nod pyr
SANDSTONE: clr-trnsl, pl gy, f-m, occ crs-v crs, mod srt, ang-sbang, mnr wk calc cmt, no vis mtrx, occ carb spks, com nod & dissem pyr, lse, gd inf por, no fluor
SILTSTONE: lt-m gy, dk gy, m brn gy i/p, com carb mat & com grd carb SLTST, occ micr mic, occ aren, frm-hd, sbblky
COAL: dk gy-blk, sbvit-vit, com slty lam & grd CARB SLTST, frm-mod hd, conch-sbconch
CLAYSTONE: pl gnsh gy, lt blsh gy, sil, hd-v hd, sbfiss-sbblky
SANDSTONE: pl-m gy, trnsl-fros i/p, vf-v crs, dom f, pr srt, sbang-sbrnd, ang i/p, mnr wk calc cmt, com pl gy arg mtrx & loc grd AREN SLTST, com carb spks,
mnr dissem pyr, pr-fr inf por, no fluor
MW: 1.175 sg FV: 75
PV: 19 YP: 41
Gel: 16/19/21 pH: 8-9
SILTSTONE: lt-m gy, m brn gy, sft-frm, dom sft, amor-blky, dom blky, aren grd v f SST, sli calc, com carb lam spk, com micr mic, r glau
CLAYSTONE: pl gnsh gy, lt bl gy, sil, hd-v hd, sbfiss-sbblky, sli-mod calc.
SANDSTONE: clr-trnsl, fros, vf-v crs, dom f-m, pr-mod srt, ang-sbrnd, tr wk calc cmt, com pl gy arg mtrx, tr nod pyr, gen lse gr, fr-gd inf por
SILTSTONE: vdk gy, brn blk, sft-frm, sbblky-blky, sli calc, carb mat, mnr nod pyr
SANDSTONE: clr-trnsl, fros, lse, dom vf-v crs, com m, r crs-v crs, pr-mod srt, wl srt i/p, ang-sb ang, mnr sbrnd, tr nod pyr, tr mic, fr inf por



FORMATION EVALUATION LOG

TVDRT meters

Drilling Rate

ROP (m/hr)

200 180 160 140 120 100 80 60 40 20

ROP (m/hr)

400 380 360 340 320 300 280 260 240 220

Gamma Ray

0 200

GAPI

MD meters 1:500

Cuttings Lithology

Visual Inferred Porosity

P F G

Oil Show

P F G

Gas Data

Gas Hydrocarbon Avg %

0.01 0.1 1 10

Resistivity Shall

0.2 2000

OHMM

Resistivity Deep

0.2 2000

OHMM

Chromatograph Data

Methane ppm 1 100000

Ethane ppm 1 100000

Propane ppm 1 100000

iso-Butane ppm 1 100000

n-Butane ppm 1 100000

iso-Pentane ppm 1 100000

n-Pentane ppm 1 100000

Calcimetry

CaCO3 %

20 40 60 80 100

MgCO3 %

100 80 60 40 20

Interpreted Lithology

Lithology Description

DRILLING DATA PLOT

1:1000

BAKER HUGHES INTEQ

Apache ENERGY

Company	**Apache Northwest Pty Ltd**
Well	**Wasabi-1**
Permit	**VIC/P-58**
Region	**Gippsland Basin**
Designation	**Exploration**
Coordinates	**Lat 38° 29' 18.157" S Long 147° 15' 49.147" E**
Ref Elevation	**RT 39.0 mMDRT (AHD)**
Total Depth	**2313.0 mMDRT**
Contractor	**Seadrill**
Rig	**MODU West Triton**
Type	**Jack-Up**

LOG INTERVAL	
Depth	**66.0 - 2313.0 mMDRT**
Date	**14 February - 01 March 2008**
Scale	**1 : 500**
Data Engineers	**D. Mahajan, Y.C. Wong, J. Mancarella, E. Discipulo**
Logging Geologists	**A. Gholap, R. Houston**

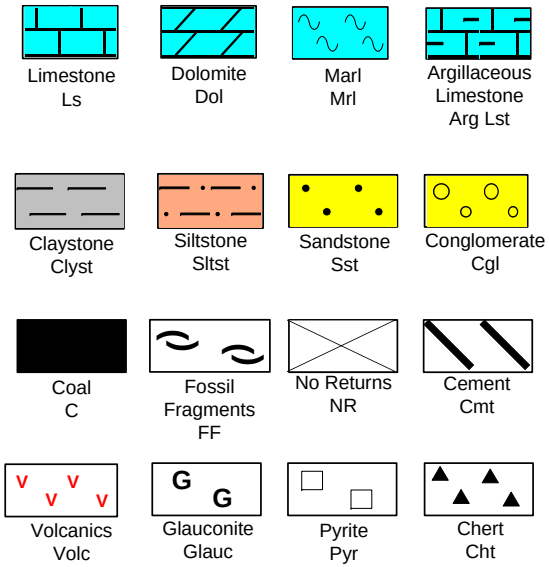
INTEQ LOG SUITE

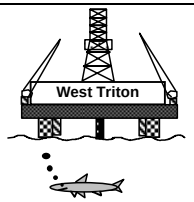
Formation Evaluation
Drilling Data Plot
Gas Ratio Plot
Drilling Data Pressure Plot

ABBREVIATIONS

NB	New Bit	MD	Measured Depth
RB	Rerun Bit	GPM	Gallons per Min
CB	Core Bit	PP	Pump Pressure
WOB	Weight on Bit	MW	Mud Weight sg
RPM	Revs per Minute	FV	Funnel Viscosity
FLC	Flow Check	F	Filtrate - API
FCG	Flow Check Gas	FC	Filter Cake
PR	Poor Returns	PV	Plastic Viscosity
NR	No Returns	YP	Yield Point
BG	Background Gas	Sol	Solids %
WTG	Wiper Trip Gas	Sd	Sand %
TG	Trip Gas	Cl	Chlorides
POG	Pumps Off Gas	RM	Mud Resistivity
CG	Connection Gas	RMF	Filtrate Resistivty
SWG	Swab Gas	TVD	True Vertical Depth

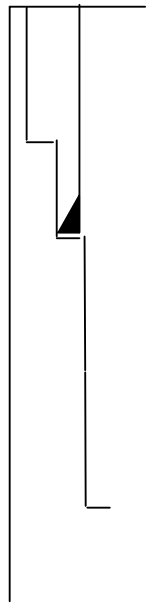
LITHOLOGY SYMBOLS





RT- AHD 39.0 mMDRT

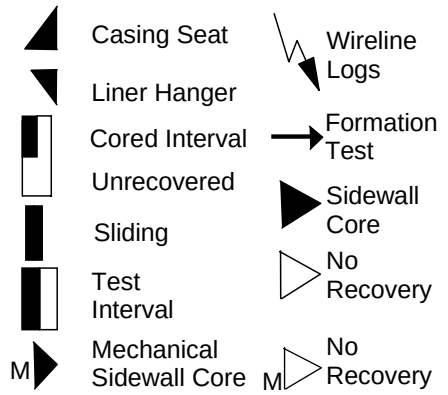
W Dep – AHD 27.0 mMDRT



Seabed @ 66.0 mMDRT (AHD)

340 X 508mm Casing to 857.0 mMDRT
660 mm (26") hole to 135.0 m
406 mm (16") hole to 862.0 m
Drilling Fluid: Seawater/Hi-vis sweeps

311 mm (12.25") hole to 2313.0m
Drill Fluid : KCl Polymer 1.15-1.21 sg

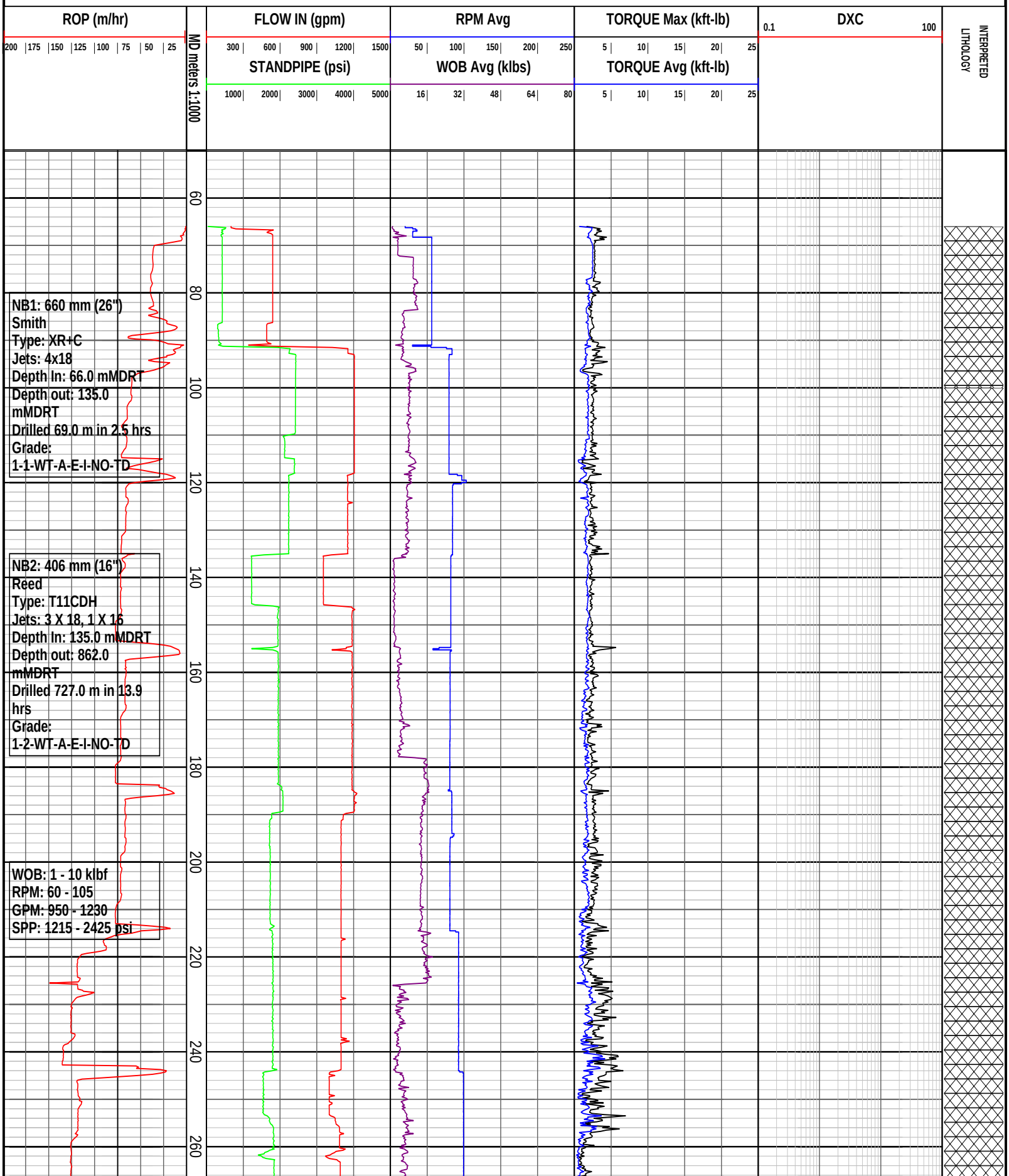


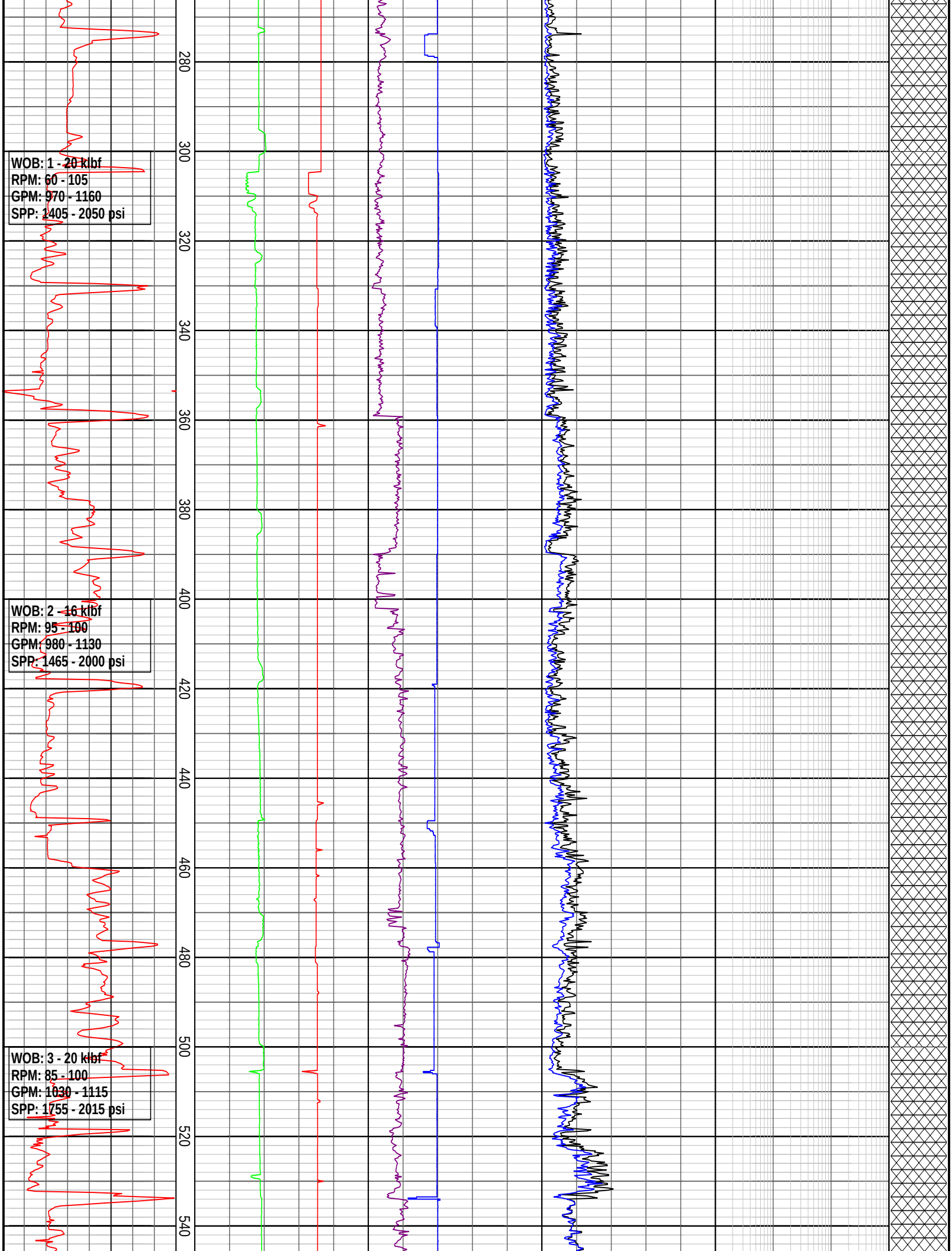
BAKER HUGHES
INTEQ

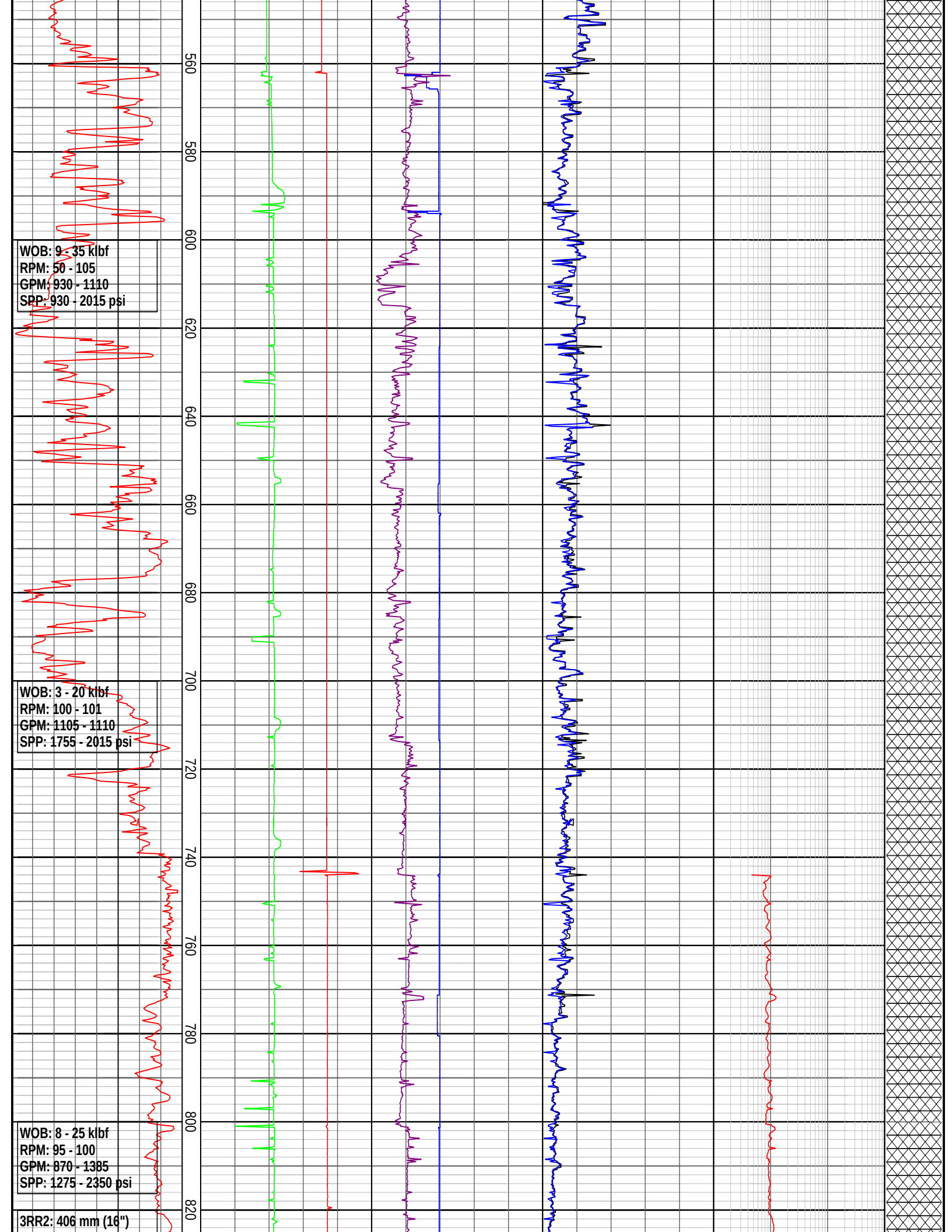
Company : Apache Northwest Pty Ltd
Well : Wasabi-1
Interval : 50.00 - 2315.06 meters
Created : 06/Mar/2008 6:35:32 AM

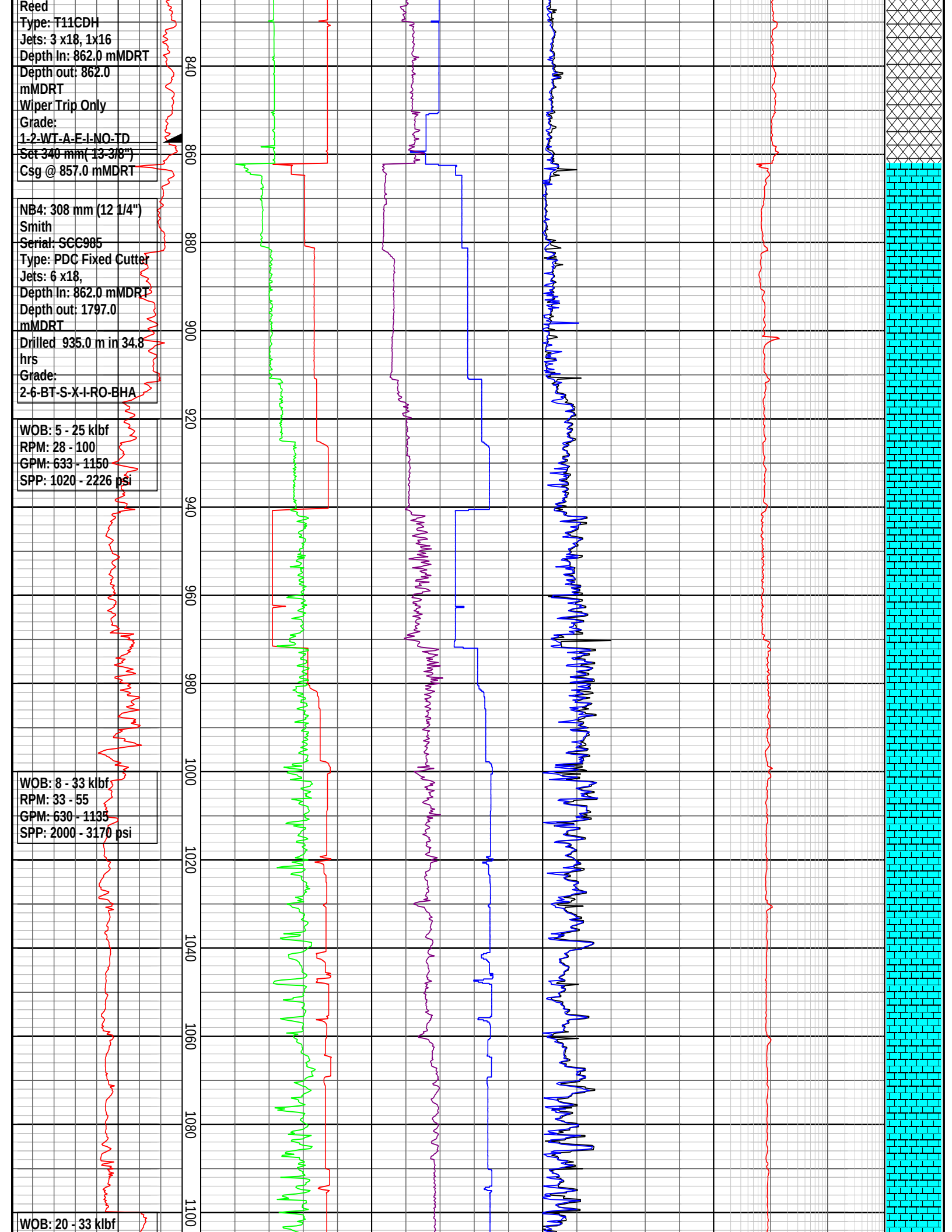
Apache ENERGY

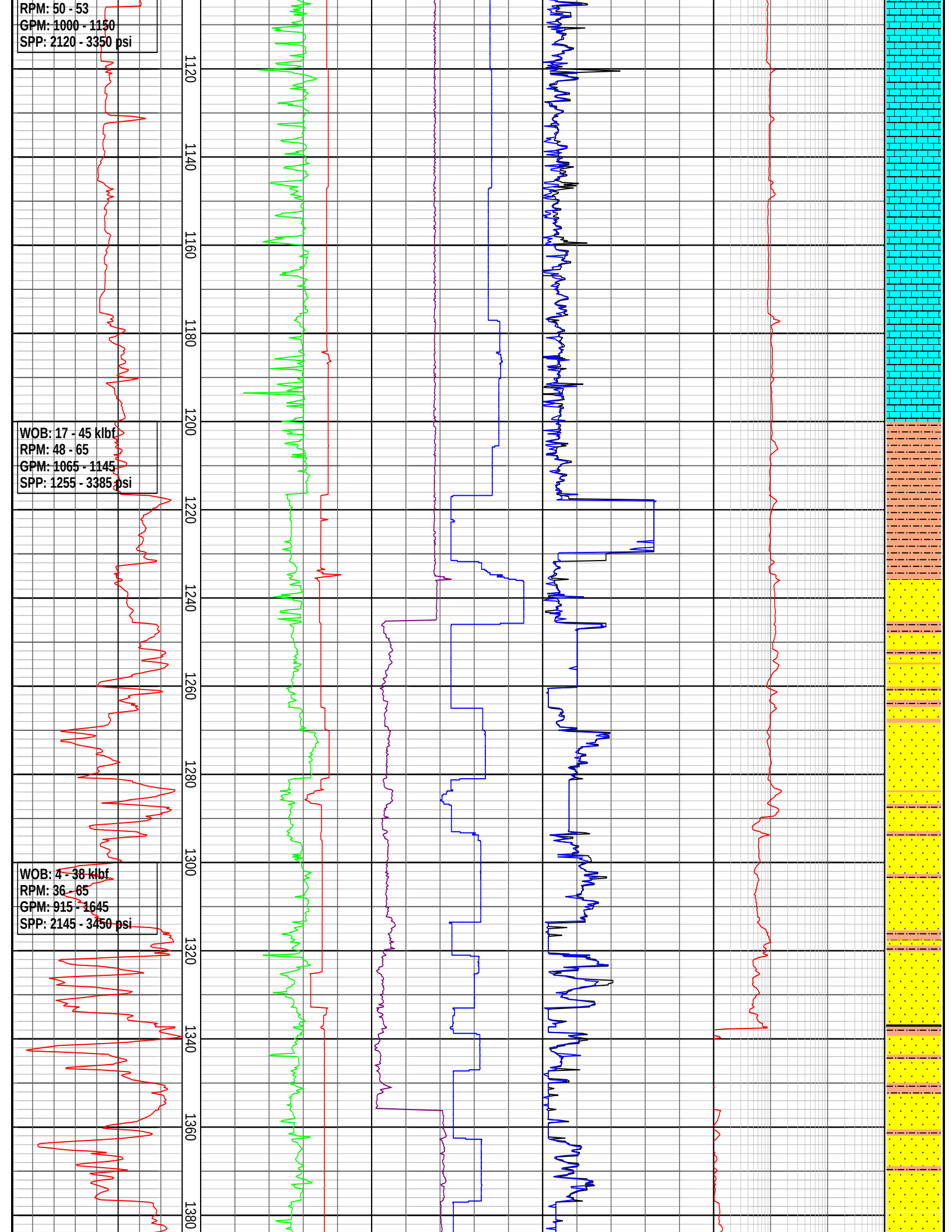
DRILLING DATA PLOT

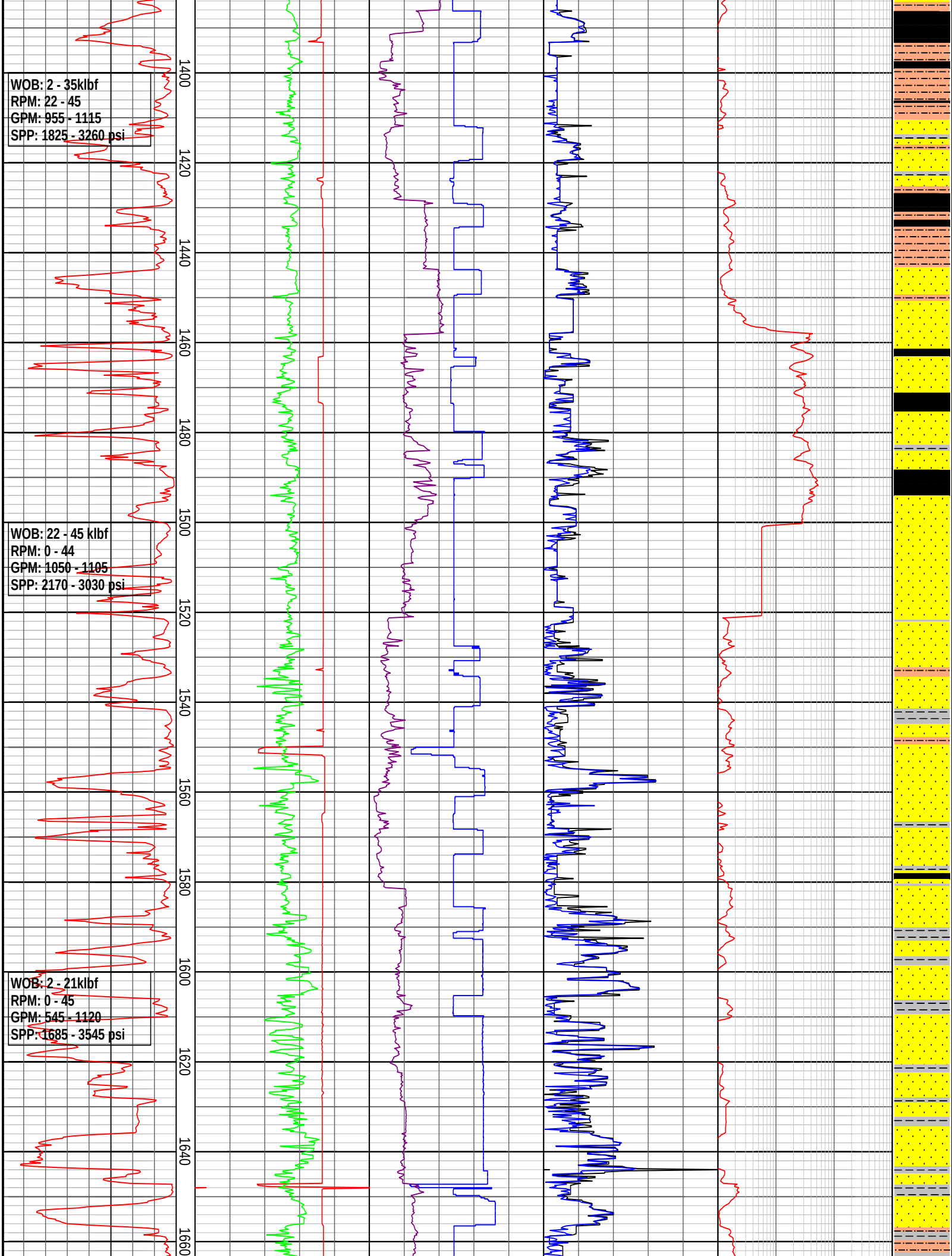


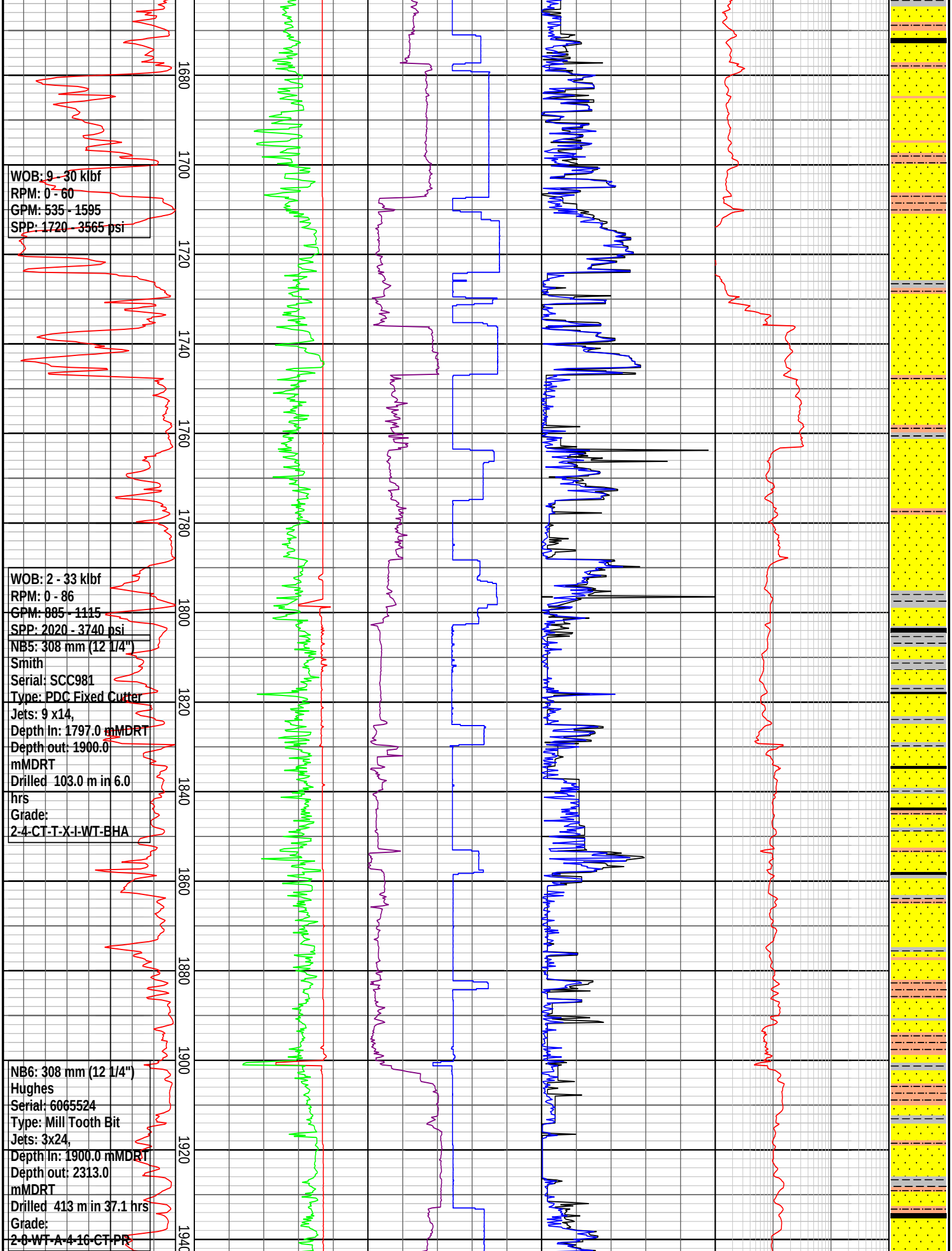

WOB: 1 - 20 klbf
RPM: 60 - 105
GPM: 970 - 1160
SPP: 2405 - 2050 psi
WOB: 2 - 16 klbf
RPM: 95 - 100
GPM: 980 - 1130
SPP: 1465 - 2000 psi
WOB: 3 - 20 klbf
RPM: 85 - 100
GPM: 1030 - 1115
SPP: 1755 - 2015 psi
280
300
320
340
360
380
400
420
440
460
480
500
520
540

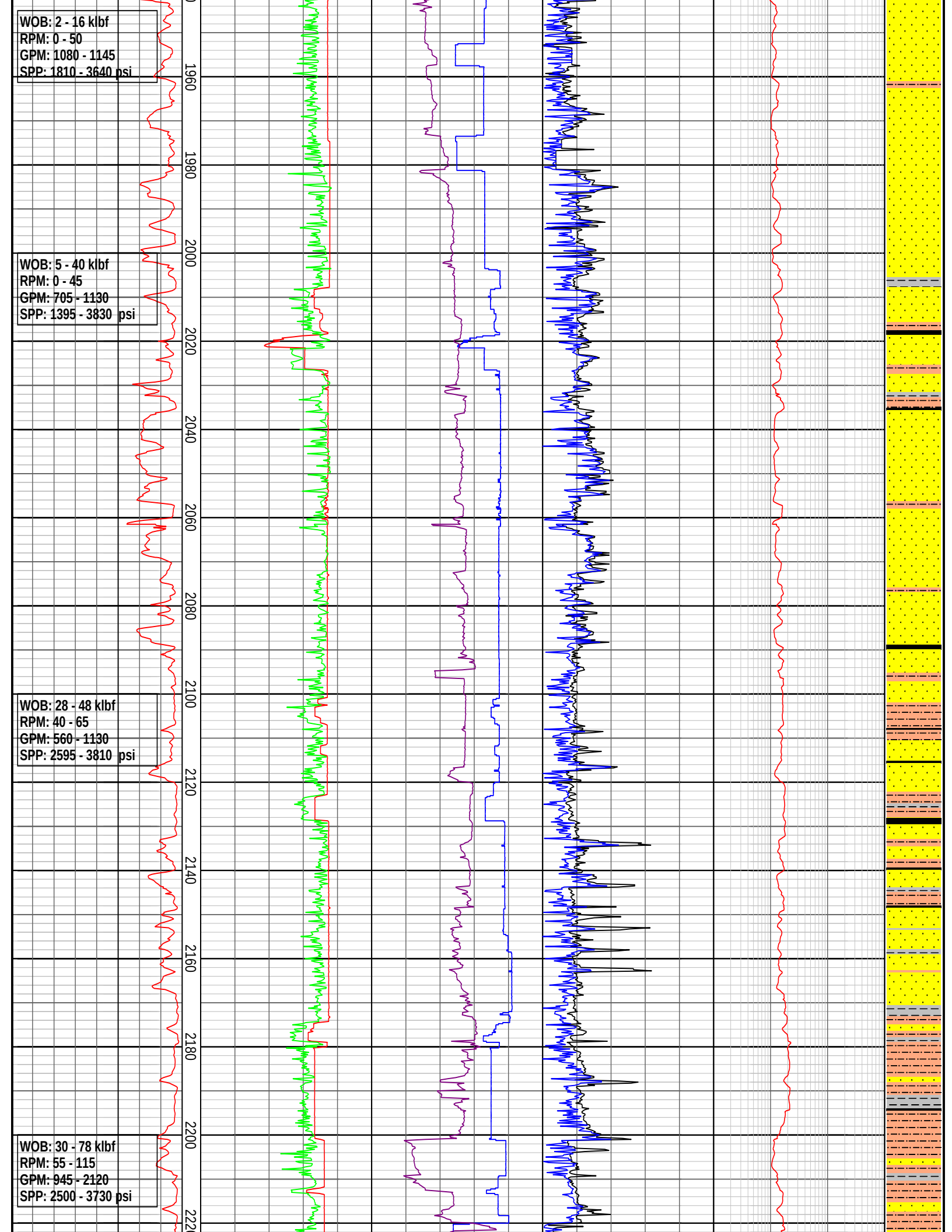

WOB: 9 - 35 klbf
RPM: 50 - 105
GPM: 930 - 1110
SPP: 930 - 2015 psi
WOB: 3 - 20 klbf
RPM: 100 - 101
GPM: 1105 - 1110
SPP: 1755 - 2015 psi
WOB: 8 - 25 klbf
RPM: 95 - 100
GPM: 870 - 1385
SPP: 1275 - 2350 psi
3RR2: 406 mm (16")
560
580
600
620
640
660
680
700
720
740
760
780
800
820

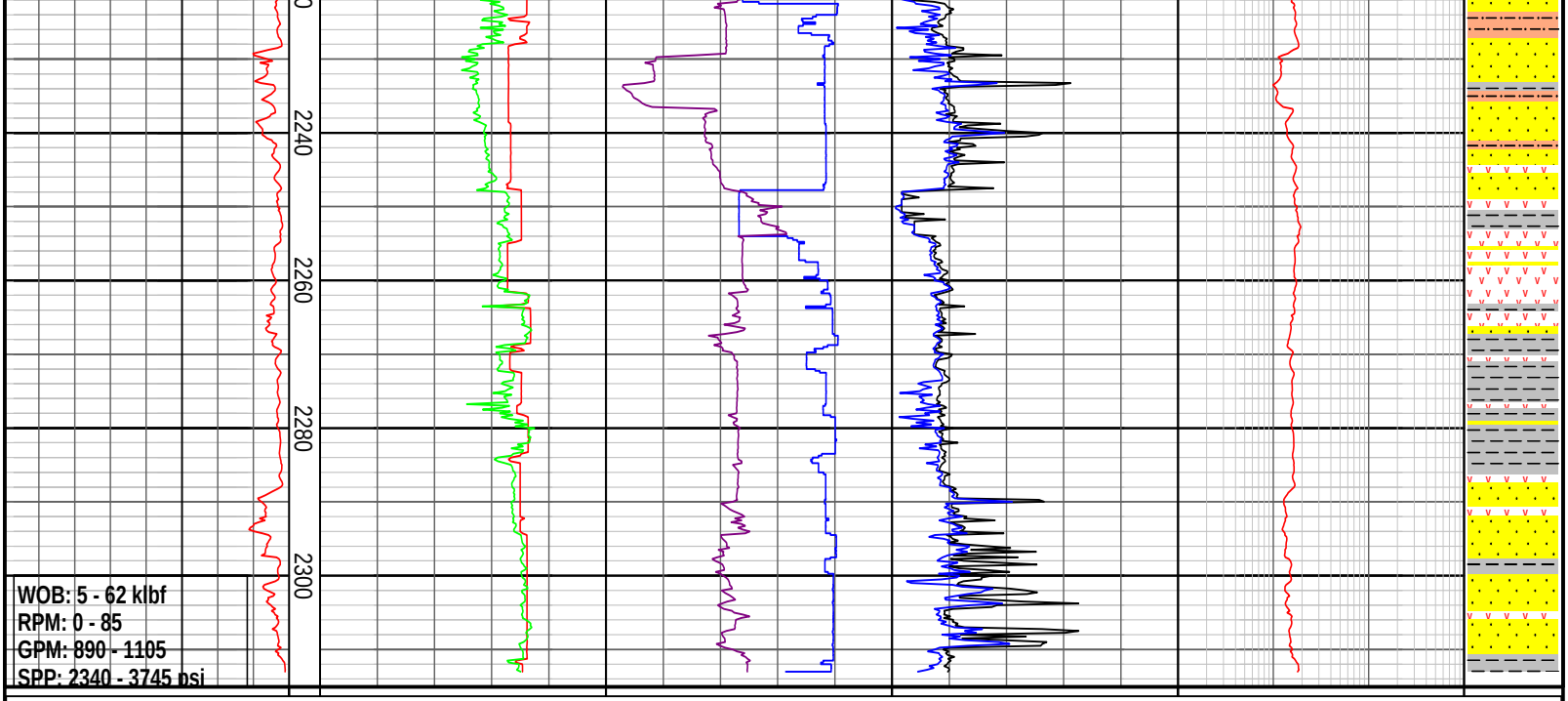

Reed
Type: T11CDH
Jets: 3 x18, 1x16
Depth In: 862.0 mMDRT
Depth out: 862.0 mMDRT
Wiper Trip Only
Grade:
1-2-WT-A-E-I-NO-TD
Set 340 mm(13-3/8")
Csg @ 857.0 mMDRT
NB4: 308 mm (12 1/4")
Smith
Serial: SCC985
Type: PDC Fixed Cutter
Jets: 6 x18,
Depth In: 862.0 mMDRT
Depth out: 1797.0 mMDRT
Drilled 935.0 m in 34.8 hrs
Grade:
2-6-BT-S-X-I-RO-BHA
WOB: 5 - 25 klbf
RPM: 28 - 100
GPM: 633 - 1150
SPP: 1020 - 2226 psi
WOB: 8 - 33 klbf
RPM: 33 - 55
GPM: 630 - 1135
SPP: 2000 - 3170 psi
WOB: 20 - 33 klbf
840
860
880
900
920
940
960
980
1000
1020
1040
1060
1080
1100


RPM: 50 - 53
GPM: 1000 - 1150
SPP: 2120 - 3350 psi
WOB: 17 - 45 klbf
RPM: 48 - 65
GPM: 1065 - 1145
SPP: 1255 - 3385 psi
WOB: 4 - 38 klbf
RPM: 36 - 65
GPM: 915 - 1645
SPP: 2145 - 3450 psi
1120
1140
1160
1180
1200
1220
1240
1260
1280
1300
1320
1340
1360
1380


WOB: 2 - 35klbf
RPM: 22 - 45
GPM: 955 - 1115
SPP: 1825 - 3260 psi
WOB: 22 - 45 klbf
RPM: 0 - 44
GPM: 1050 - 1105
SPP: 2170 - 3030 psi
WOB: 2 - 21klbf
RPM: 0 - 45
GPM: 545 - 1120
SPP: 1685 - 3545 psi
1400
1420
1440
1460
1480
1500
1520
1540
1560
1580
1600
1620
1640
1660


WOB: 9 - 30 klbf
RPM: 0 - 60
GPM: 535 - 1595
SPP: 1720 - 3565 psi
WOB: 2 - 33 klbf
RPM: 0 - 86
GPM: 885 - 1115
SPP: 2020 - 3740 psi
NB5: 308 mm (12 1/4")
Smith
Serial: SCC981
Type: PDC Fixed Cutter
Jets: 9 x14,
Depth In: 1797.0 mMDRT
Depth out: 1900.0 mMDRT
Drilled 103.0 m in 6.0 hrs
Grade:
2-4-CT-T-X-I-WT-BHA
NB6: 308 mm (12 1/4")
Hughes
Serial: 6065524
Type: Mill Tooth Bit
Jets: 3x24,
Depth In: 1900.0 mMDRT
Depth out: 2313.0 mMDRT
Drilled 413 m in 37.1 hrs
Grade:
2-8-WT-A-4-16-CT-PR
1680
1700
1720
1740
1760
1780
1800
1820
1840
1860
1880
1900
1920
1940


WOB: 2 - 16 klbf
RPM: 0 - 50
GPM: 1080 - 1145
SPP: 1810 - 3640 psi
WOB: 5 - 40 klbf
RPM: 0 - 45
GPM: 705 - 1130
SPP: 1395 - 3830 psi
WOB: 28 - 48 klbf
RPM: 40 - 65
GPM: 560 - 1130
SPP: 2595 - 3810 psi
WOB: 30 - 78 klbf
RPM: 55 - 115
GPM: 945 - 2120
SPP: 2500 - 3730 psi
1960
1980
2000
2020
2040
2060
2080
2100
2120
2140
2160
2180
2200



DRILLING DATA PLOT

ROP (m/hr)	MD meters 1:1000	FLOW IN (gpm) / STANDPIPE (psi)	RPM Avg / WOB Avg (klbs)	TORQUE Max (kft-lb) / TORQUE Avg (kft-lb)	DXC	INTERPRETED LITHOLOGY
200 175 150 125 100 75 50 25		300 600 900 1200 1500 1000 2000 3000 4000 5000	50 100 150 200 250 16 32 48 64 80	5 10 15 20 25 5 10 15 20 25	0.1 — 100	

PRESSURE EVALUATION PLOT

1:1000

BAKER HUGHES INTEQ

Apache ENERGY

Company	**Apache Northwest Pty Ltd**
Well	**Wasabi-1**
Permit	**VIC/P-58**
Region	**Gippsland Basin**
Designation	**Exploration**
Coordinates	**Lat 38° 29' 18.157" S Long 147° 15' 49.147" E**
Ref Elevation	**RT 39.0 mMDRT (AHD)**
Total Depth	**2313.0 mMDRT**
Contractor	**Seadrill**
Rig	**MODU West Triton**
Type	**Jack-Up**

LOG INTERVAL	
Depth	**66.0 - 2313.0 mMDRT**
Date	**14 February - 01 March 2008**
Scale	**1 : 500**
Data Engineers	**D. Mahajan, Y.C. Wong, J. Mancarella, E. Discipulo**
Logging Geologists	**A. Gholap, R. Houston**

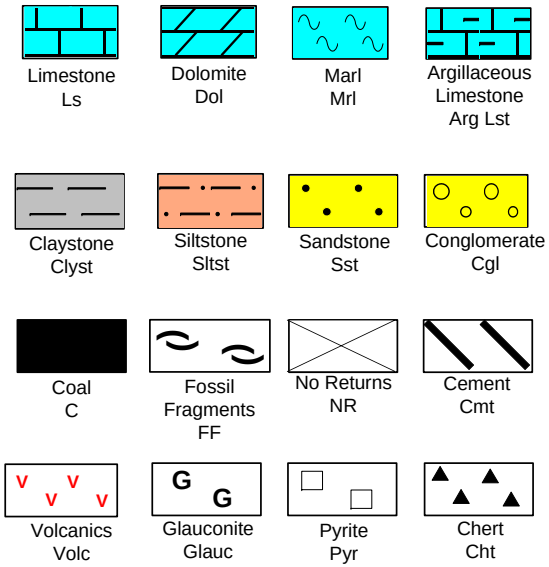
INTEQ LOG SUITE

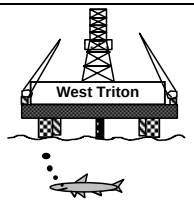
Formation Evaluation
Drilling Data Plot
Gas Ratio Plot
Drilling Data Pressure Plot

ABBREVIATIONS

NB	New Bit	MD	Measured Depth
RB	Rerun Bit	GPM	Gallons per Min
CB	Core Bit	PP	Pump Pressure
WOB	Weight on Bit	MW	Mud Weight sg
RPM	Revs per Minute	FV	Funnel Viscosity
FLC	Flow Check	F	Filtrate - API
FCG	Flow Check Gas	FC	Filter Cake
PR	Poor Returns	PV	Plastic Viscosity
NR	No Returns	YP	Yield Point
BG	Background Gas	Sol	Solids %
WTG	Wiper Trip Gas	Sd	Sand %
TG	Trip Gas	Cl	Chlorides
POG	Pumps Off Gas	RM	Mud Resistivity
CG	Connection Gas	RMF	Filtrate Resistivty
SWG	Swab Gas	TVD	True Vertical Depth

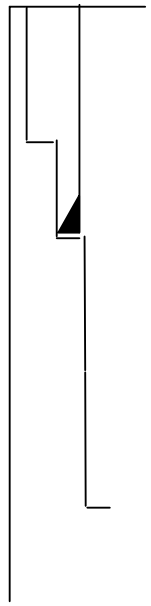
LITHOLOGY SYMBOLS





RT- AHD 39.0 mMDRT

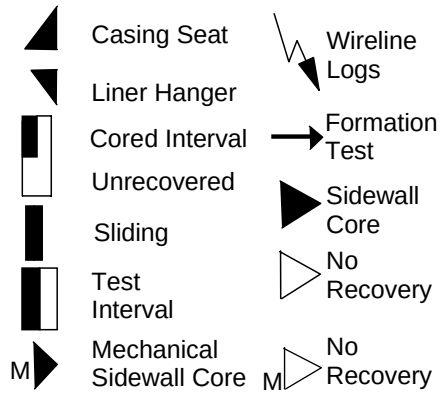
W Dep – AHD 27.0 mMDRT



Seabed @ 66.0 mMDRT (AHD)

340 X 508mm Casing to 857.0 mMDRT
660 mm (26") hole to 135.0 m
406 mm (16") hole to 862.0 m
Drilling Fluid: Seawater/Hi-vis sweeps

311 mm (12.25") hole to 2313.0m
Drill Fluid : KCl Polymer 1.15-1.21 sg

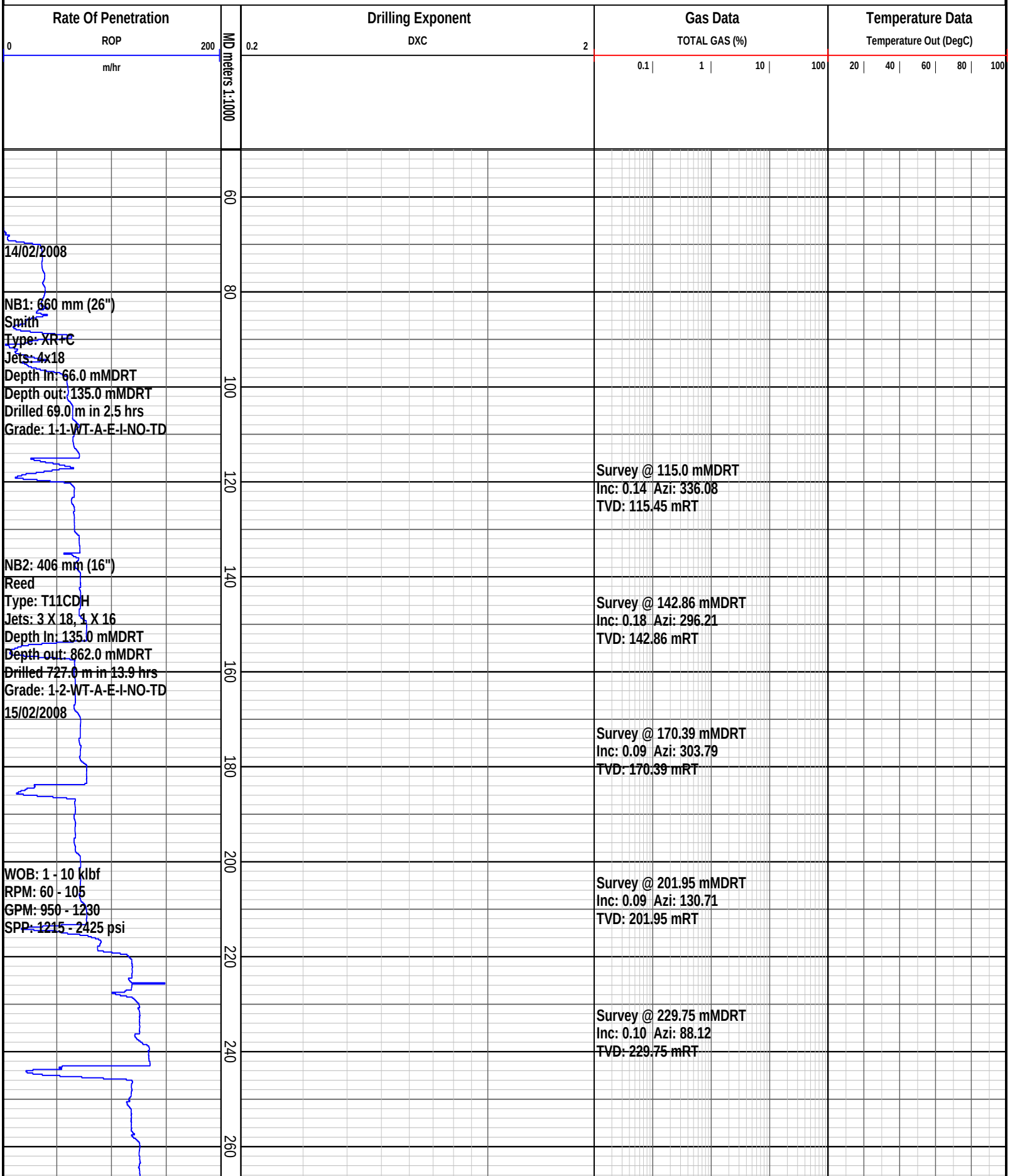


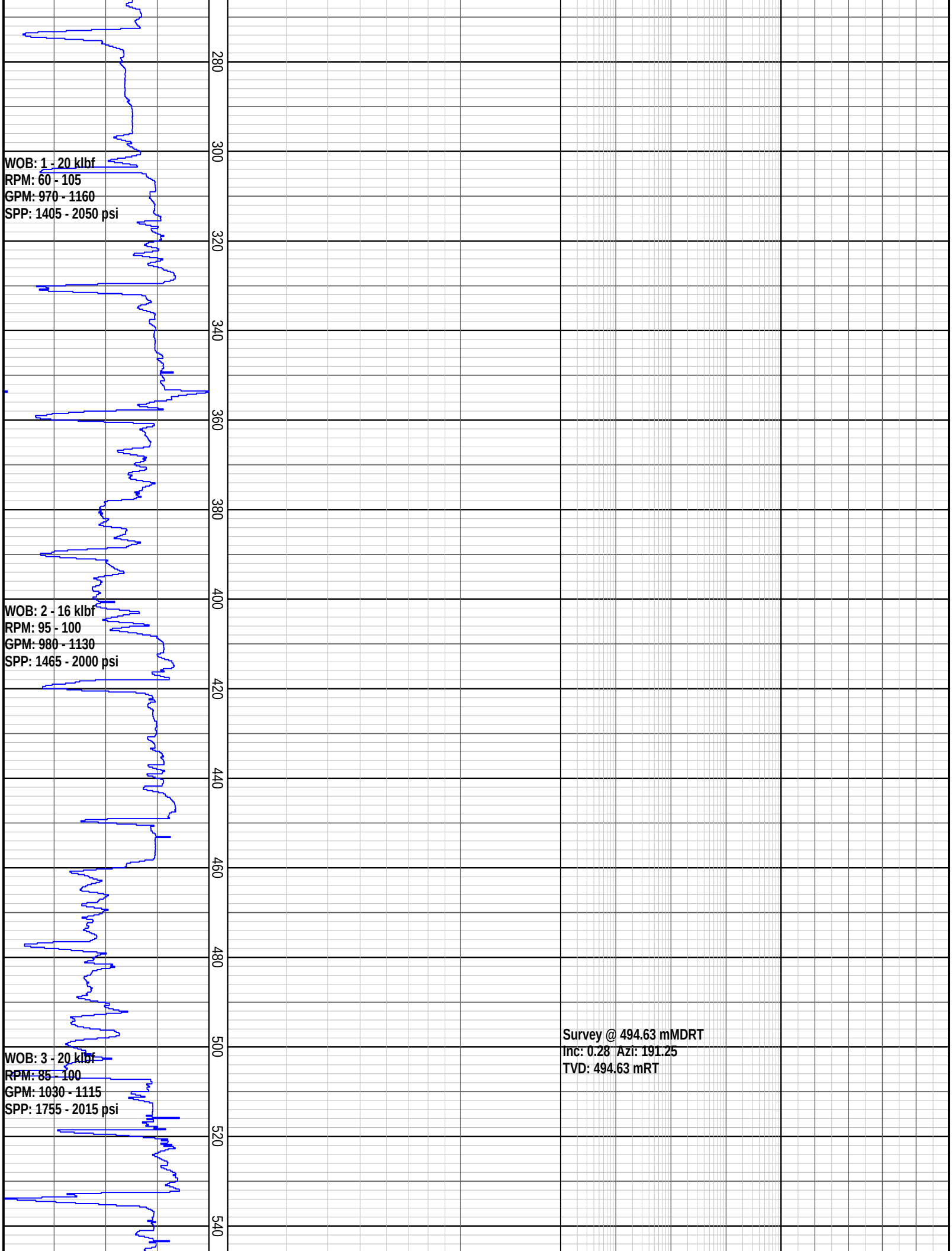
BAKER HUGHES
INTEQ

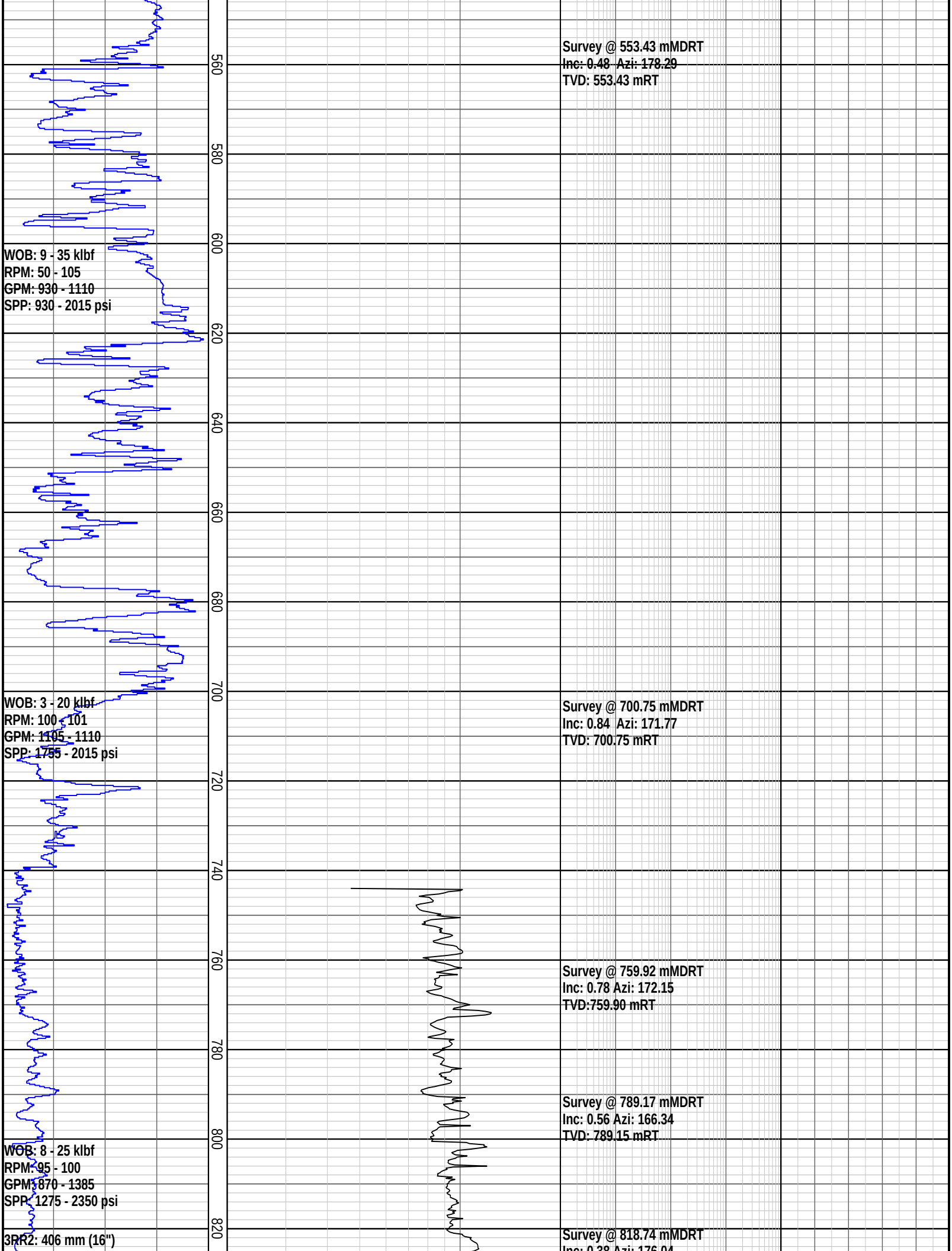
Company : Apache Northwest Pty Ltd
Well : Wasabi-1
Interval : 50.00 - 2315.06 meters
Created : 06/Mar/2008 6:35:32 AM

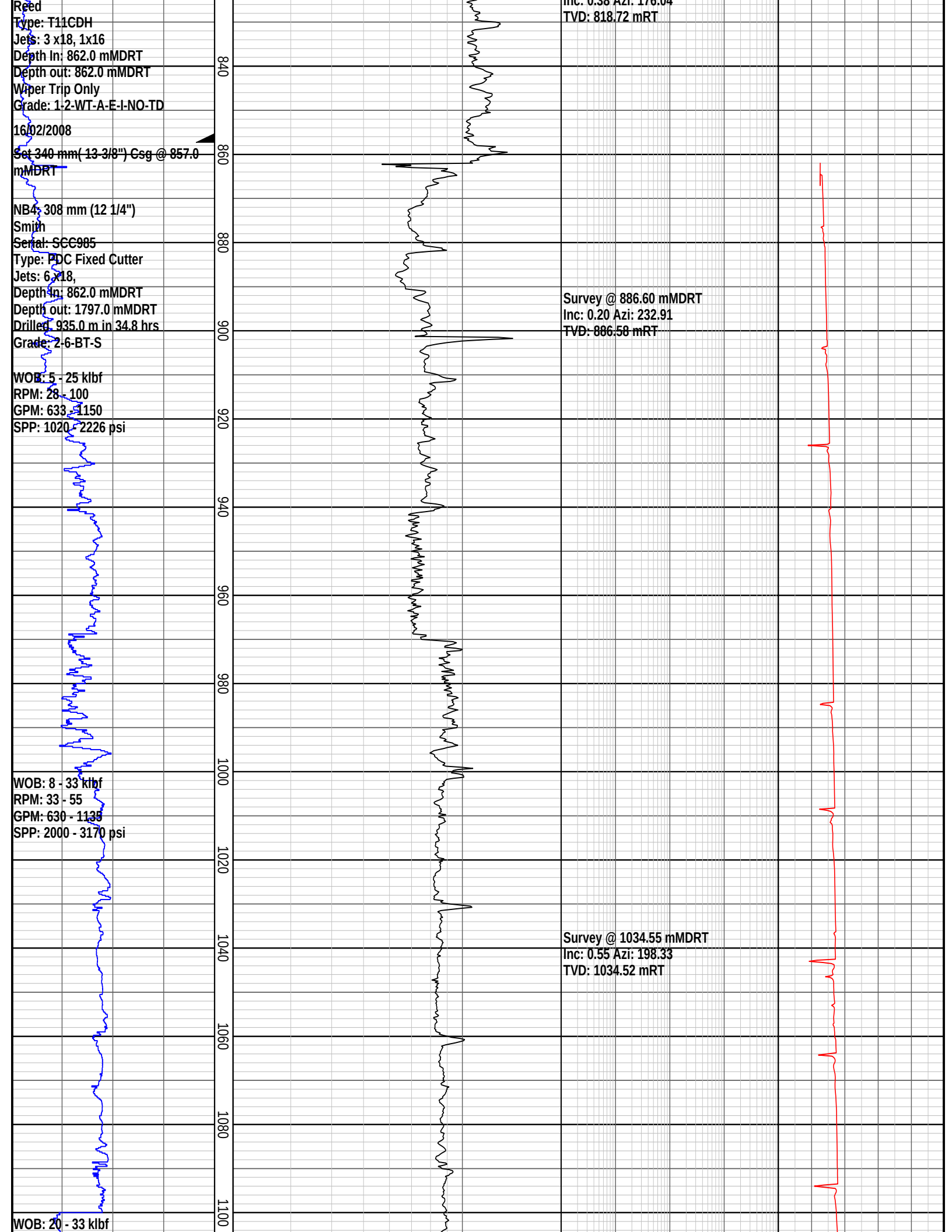
Apache ENERGY

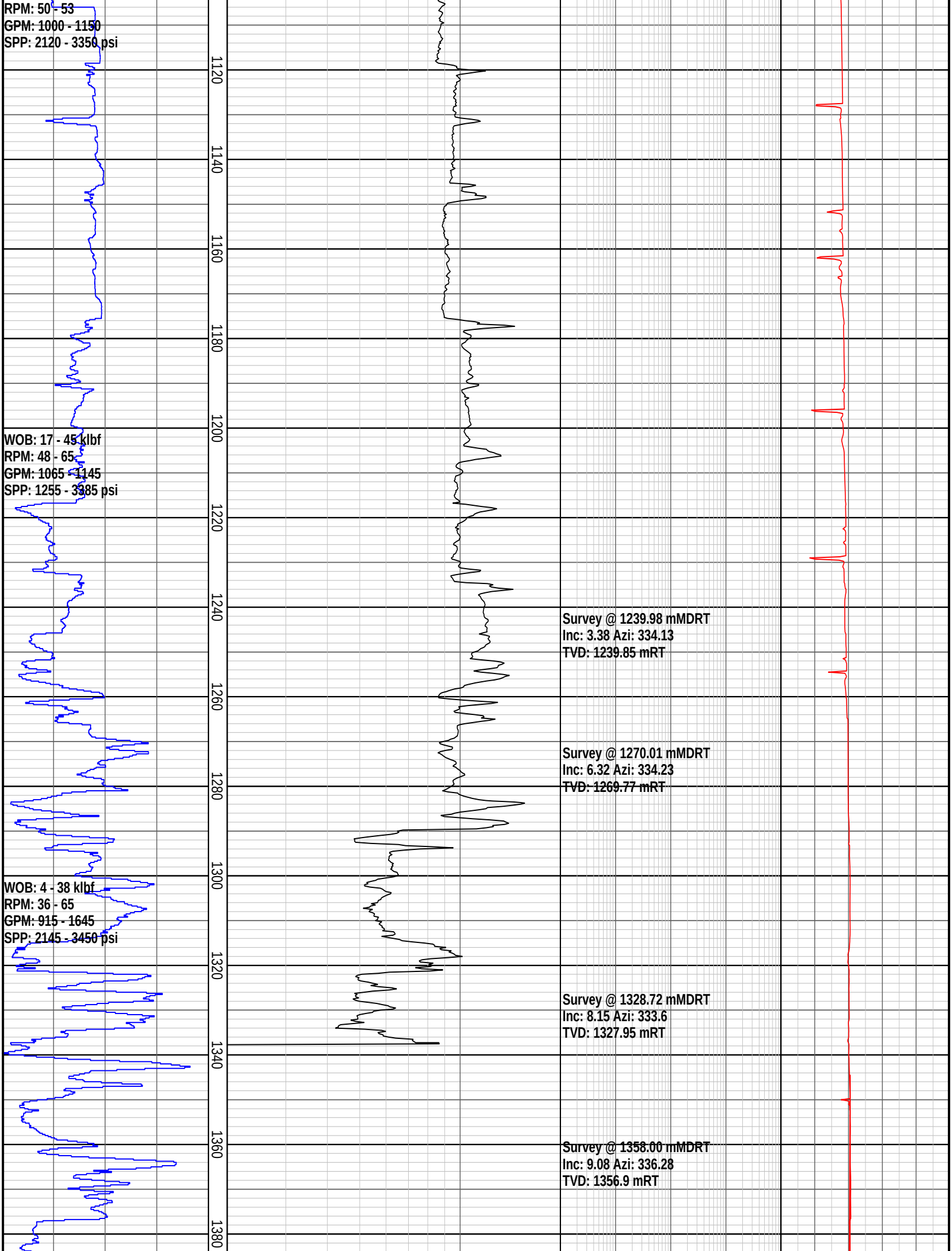
PRESSURE DATA PLOT

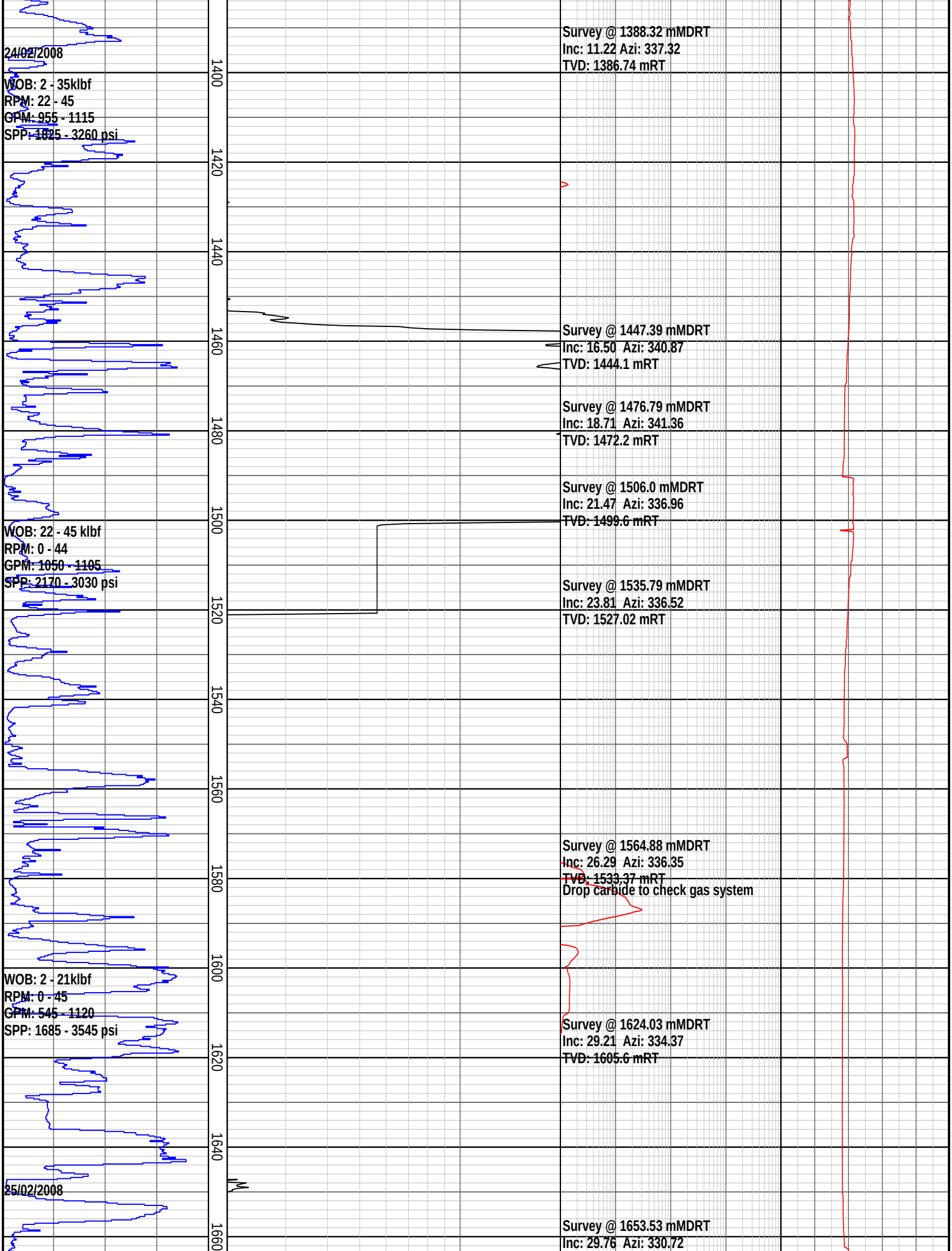


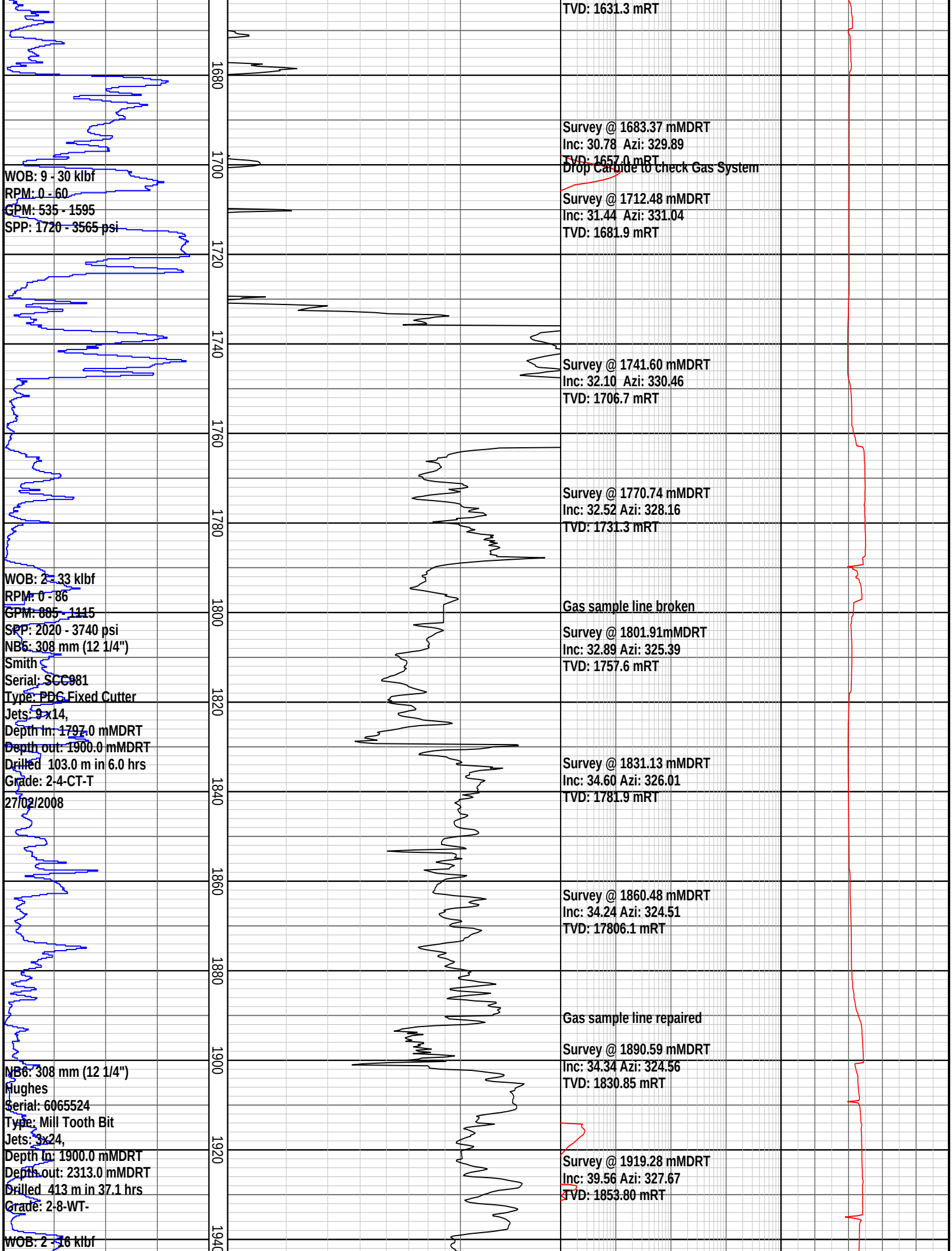

280
300
320
340
360
380
400
420
440
460
480
500
520
540
WOB: 1 - 20 klbf
RPM: 60 - 105
GPM: 970 - 1160
SPP: 1405 - 2050 psi
WOB: 2 - 16 klbf
RPM: 95 - 100
GPM: 980 - 1130
SPP: 1465 - 2000 psi
WOB: 3 - 20 klbf
RPM: 85 - 100
GPM: 1030 - 1115
SPP: 1755 - 2015 psi
Survey @ 494.63 mMDRT
Inc: 0.28 Azi: 191.25
TVD: 494.63 mRT

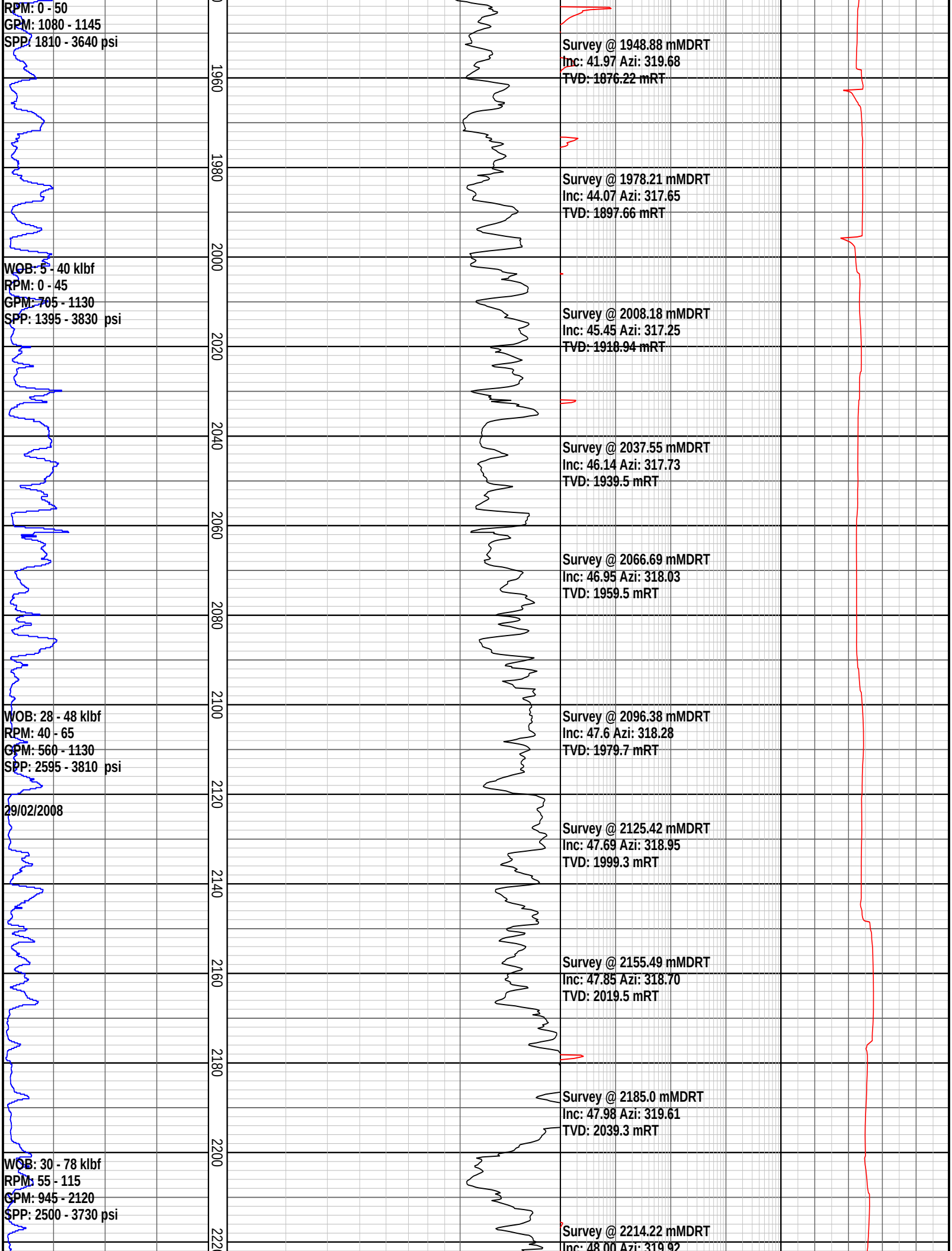

560
580
600
620
640
660
680
700
720
740
760
780
800
820
WOB: 9 - 35 klbf
RPM: 50 - 105
GPM: 930 - 1110
SPP: 930 - 2015 psi
WOB: 3 - 20 klbf
RPM: 100 - 101
GPM: 1105 - 1110
SPP: 1755 - 2015 psi
WOB: 8 - 25 klbf
RPM: 95 - 100
GPM: 870 - 1385
SPP: 1275 - 2350 psi
3RR2: 406 mm (16")
Survey @ 553.43 mMDRT
Inc: 0.48 Azi: 178.29
TVD: 553.43 mRT
Survey @ 700.75 mMDRT
Inc: 0.84 Azi: 171.77
TVD: 700.75 mRT
Survey @ 759.92 mMDRT
Inc: 0.78 Azi: 172.15
TVD:759.90 mRT
Survey @ 789.17 mMDRT
Inc: 0.56 Azi: 166.34
TVD: 789.15 mRT
Survey @ 818.74 mMDRT

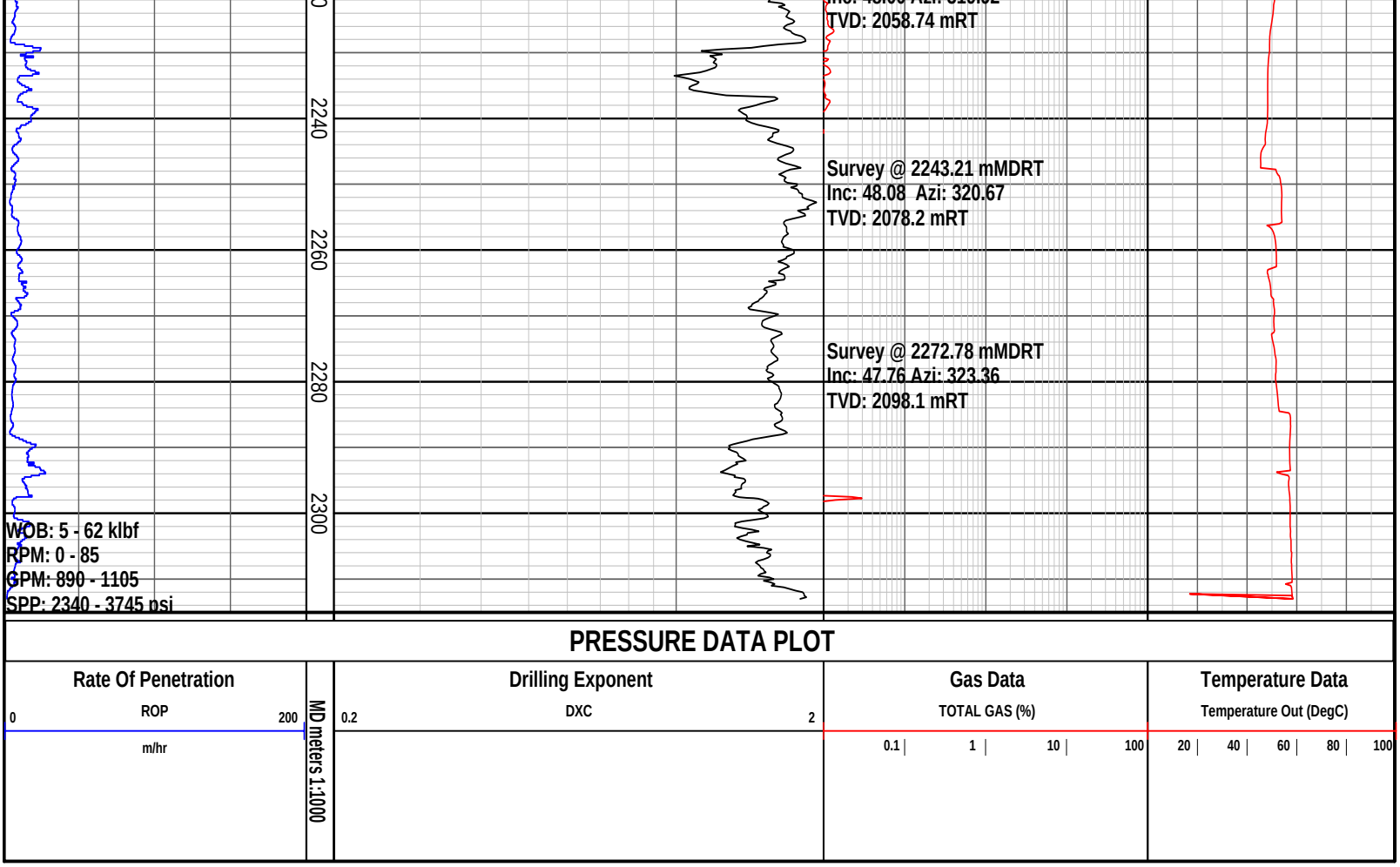

Reed
Type: T11CDH
Jets: 3 x18, 1x16
Depth In: 862.0 mMDRT
Depth out: 862.0 mMDRT
Wiper Trip Only
Grade: 1-2-WT-A-E-I-NO-TD
16/02/2008
Set 340 mm(13-3/8") Csg @ 857.0 mMDRT
NB4: 308 mm (12 1/4")
Smith
Serial: SCC985
Type: PDC Fixed Cutter
Jets: 6 x18,
Depth In: 862.0 mMDRT
Depth out: 1797.0 mMDRT
Drilled: 935.0 m in 34.8 hrs
Grade: 2-6-BT-S
WOB: 5 - 25 klbf
RPM: 28 - 100
GPM: 633 - 1150
SPP: 1020 - 2226 psi
WOB: 8 - 33 klbf
RPM: 33 - 55
GPM: 630 - 1135
SPP: 2000 - 3170 psi
WOB: 20 - 33 klbf
Inc: 0.38 Azi: 176.04
TVD: 818.72 mRT
Survey @ 886.60 mMDRT
Inc: 0.20 Azi: 232.91
TVD: 886.58 mRT
Survey @ 1034.55 mMDRT
Inc: 0.55 Azi: 198.33
TVD: 1034.52 mRT
840
860
880
900
920
940
960
980
1000
1020
1040
1060
1080
1100


RPM: 50 - 53
GPM: 1000 - 1150
SPP: 2120 - 3350 psi
WOB: 17 - 45 klbf
RPM: 48 - 65
GPM: 1065 - 1145
SPP: 1255 - 3385 psi
WOB: 4 - 38 klbf
RPM: 36 - 65
GPM: 915 - 1645
SPP: 2145 - 3450 psi
1120
1140
1160
1180
1200
1220
1240
1260
1280
1300
1320
1340
1360
1380
Survey @ 1239.98 mMDRT
Inc: 3.38 Azi: 334.13
TVD: 1239.85 mRT
Survey @ 1270.01 mMDRT
Inc: 6.32 Azi: 334.23
TVD: 1269.77 mRT
Survey @ 1328.72 mMDRT
Inc: 8.15 Azi: 333.6
TVD: 1327.95 mRT
Survey @ 1358.00 mMDRT
Inc: 9.08 Azi: 336.28
TVD: 1356.9 mRT


24/02/2008
WOB: 2 - 35klbf
RPM: 22 - 45
GPM: 955 - 1115
SPP: 1825 - 3260 psi
WOB: 22 - 45 klbf
RPM: 0 - 44
GPM: 1050 - 1105
SPP: 2170 - 3030 psi
WOB: 2 - 21klbf
RPM: 0 - 45
GPM: 545 - 1120
SPP: 1685 - 3545 psi
25/02/2008
1400
1420
1440
1460
1480
1500
1520
1540
1560
1580
1600
1620
1640
1660
Survey @ 1388.32 mMDRT
Inc: 11.22 Azi: 337.32
TVD: 1386.74 mRT
Survey @ 1447.39 mMDRT
Inc: 16.50 Azi: 340.87
TVD: 1444.1 mRT
Survey @ 1476.79 mMDRT
Inc: 18.71 Azi: 341.36
TVD: 1472.2 mRT
Survey @ 1506.0 mMDRT
Inc: 21.47 Azi: 336.96
TVD: 1499.6 mRT
Survey @ 1535.79 mMDRT
Inc: 23.81 Azi: 336.52
TVD: 1527.02 mRT
Survey @ 1564.88 mMDRT
Inc: 26.29 Azi: 336.35
TVD: 1533.37 mRT
Drop carbide to check gas system
Survey @ 1624.03 mMDRT
Inc: 29.21 Azi: 334.37
TVD: 1605.6 mRT
Survey @ 1653.53 mMDRT
Inc: 29.76 Azi: 330.72


TVD: 1631.3 mRT
1680
Survey @ 1683.37 mMDRT
Inc: 30.78 Azi: 329.89
TVD: 1657.0 mRT
1700
Drop Carbide to check Gas System
WOB: 9 - 30 klbf
RPM: 0 - 60
GPM: 535 - 1595
SPP: 1720 - 3565 psi
Survey @ 1712.48 mMDRT
Inc: 31.44 Azi: 331.04
TVD: 1681.9 mRT
1720
1740
Survey @ 1741.60 mMDRT
Inc: 32.10 Azi: 330.46
TVD: 1706.7 mRT
1760
Survey @ 1770.74 mMDRT
Inc: 32.52 Azi: 328.16
TVD: 1731.3 mRT
1780
WOB: 2 - 33 klbf
RPM: 0 - 86
GPM: 885 - 1115
SPP: 2020 - 3740 psi
NB5: 308 mm (12 1/4")
Smith
Serial: SCC981
Type: PDC Fixed Cutter
Jets: 9 x14,
Depth In: 1797.0 mMDRT
Depth out: 1900.0 mMDRT
Drilled 103.0 m in 6.0 hrs
Grade: 2-4-CT-T
27/02/2008
1800
Gas sample line broken
Survey @ 1801.91mMDRT
Inc: 32.89 Azi: 325.39
TVD: 1757.6 mRT
1820
Survey @ 1831.13 mMDRT
Inc: 34.60 Azi: 326.01
TVD: 1781.9 mRT
1840
1860
Survey @ 1860.48 mMDRT
Inc: 34.24 Azi: 324.51
TVD: 17806.1 mRT
1880
Gas sample line repaired
Survey @ 1890.59 mMDRT
Inc: 34.34 Azi: 324.56
TVD: 1830.85 mRT
1900
NB6: 308 mm (12 1/4")
Hughes
Serial: 6065524
Type: Mill Tooth Bit
Jets: 3x24,
Depth In: 1900.0 mMDRT
Depth out: 2313.0 mMDRT
Drilled 413 m in 37.1 hrs
Grade: 2-8-WT-
1920
Survey @ 1919.28 mMDRT
Inc: 39.56 Azi: 327.67
TVD: 1853.80 mRT
WOB: 2 - 16 klbf
1940


RPM: 0 - 50
GPM: 1080 - 1145
SPP: 1810 - 3640 psi
1960
Survey @ 1948.88 mMDRT
Inc: 41.97 Azi: 319.68
TVD: 1876.22 mRT
1980
Survey @ 1978.21 mMDRT
Inc: 44.07 Azi: 317.65
TVD: 1897.66 mRT
2000
WOB: 5 - 40 klbf
RPM: 0 - 45
GPM: 705 - 1130
SPP: 1395 - 3830 psi
Survey @ 2008.18 mMDRT
Inc: 45.45 Azi: 317.25
TVD: 1918.94 mRT
2020
2040
Survey @ 2037.55 mMDRT
Inc: 46.14 Azi: 317.73
TVD: 1939.5 mRT
2060
Survey @ 2066.69 mMDRT
Inc: 46.95 Azi: 318.03
TVD: 1959.5 mRT
2080
2100
WOB: 28 - 48 klbf
RPM: 40 - 65
GPM: 560 - 1130
SPP: 2595 - 3810 psi
Survey @ 2096.38 mMDRT
Inc: 47.6 Azi: 318.28
TVD: 1979.7 mRT
29/02/2008
2120
Survey @ 2125.42 mMDRT
Inc: 47.69 Azi: 318.95
TVD: 1999.3 mRT
2140
2160
Survey @ 2155.49 mMDRT
Inc: 47.85 Azi: 318.70
TVD: 2019.5 mRT
2180
Survey @ 2185.0 mMDRT
Inc: 47.98 Azi: 319.61
TVD: 2039.3 mRT
2200
WOB: 30 - 78 klbf
RPM: 55 - 115
GPM: 945 - 2120
SPP: 2500 - 3730 psi
Survey @ 2214.22 mMDRT
Inc: 48.00 Azi: 319.92



PRESSURE DATA PLOT

Rate Of Penetration	MD meters 1:1000	Drilling Exponent	Gas Data	Temperature Data
0 ROP 200		0.2 DXC 2	TOTAL GAS (%)	Temperature Out (DegC)
m/hr			0.1 | 1 | 10 | 100	20 | 40 | 60 | 80 | 100

GAS RATIO PLOT

1:500

BAKER HUGHES INTEQ

Apache ENERGY

Company	**Apache Northwest Pty Ltd**
Well	**Wasabi-1**
Permit	**VIC/P-58**
Region	**Gippsland Basin**
Designation	**Exploration**
Coordinates	**Lat 38° 29' 18.157" S Long 147° 15' 49.147" E**
Ref Elevation	**RT 39.0 mMDRT (AHD)**
Total Depth	**2313.0 mMDRT**
Contractor	**Seadrill**
Rig	**MODU West Triton**
Type	**Jack-Up**

LOG INTERVAL	
Depth	**66.0 - 2313.0 mMDRT**
Date	**14 February - 01 March 2008**
Scale	**1 : 500**
Data Engineers	**D. Mahajan, Y.C. Wong, J. Mancarella, E. Discipulo**
Logging Geologists	**A. Gholap, R. Houston**

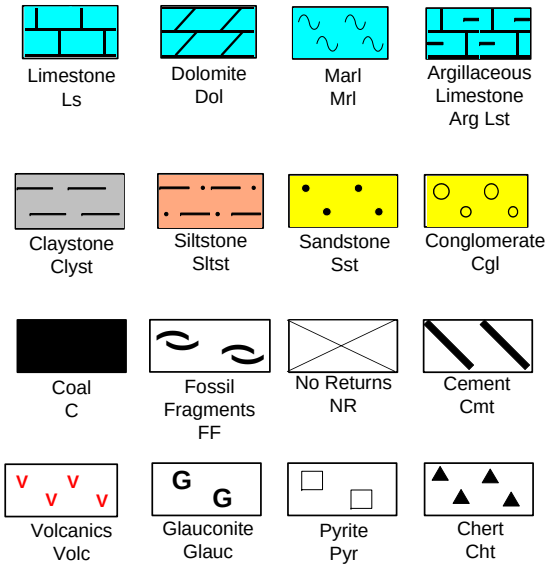
INTEQ LOG SUITE

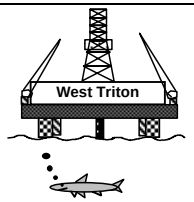
Formation Evaluation
Drilling Data Plot
Gas Ratio Plot
Drilling Data Pressure Plot

ABBREVIATIONS

NB	New Bit	MD	Measured Depth
RB	Rerun Bit	GPM	Gallons per Min
CB	Core Bit	PP	Pump Pressure
WOB	Weight on Bit	MW	Mud Weight sg
RPM	Revs per Minute	FV	Funnel Viscosity
FLC	Flow Check	F	Filtrate - API
FCG	Flow Check Gas	FC	Filter Cake
PR	Poor Returns	PV	Plastic Viscosity
NR	No Returns	YP	Yield Point
BG	Background Gas	Sol	Solids %
WTG	Wiper Trip Gas	Sd	Sand %
TG	Trip Gas	Cl	Chlorides
POG	Pumps Off Gas	RM	Mud Resistivity
CG	Connection Gas	RMF	Filtrate Resistivty
SWG	Swab Gas	TVD	True Vertical Depth

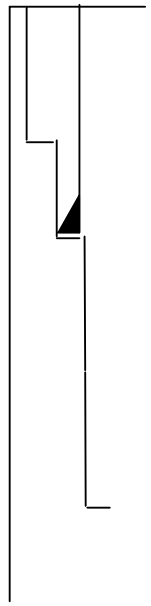
LITHOLOGY SYMBOLS





RT- AHD 39.0 mMDRT

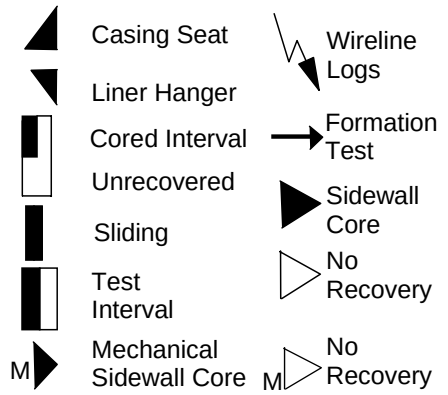
W Dep – AHD 27.0 mMDRT



Seabed @ 66.0 mMDRT (AHD)

340 X 508mm Casing to 857.0 mMDRT
660 mm (26") hole to 135.0 m
406 mm (16") hole to 862.0 m
Drilling Fluid: Seawater/Hi-vis sweeps

311 mm (12.25") hole to 2313.0m
Drill Fluid : KCl Polymer 1.15-1.21 sg

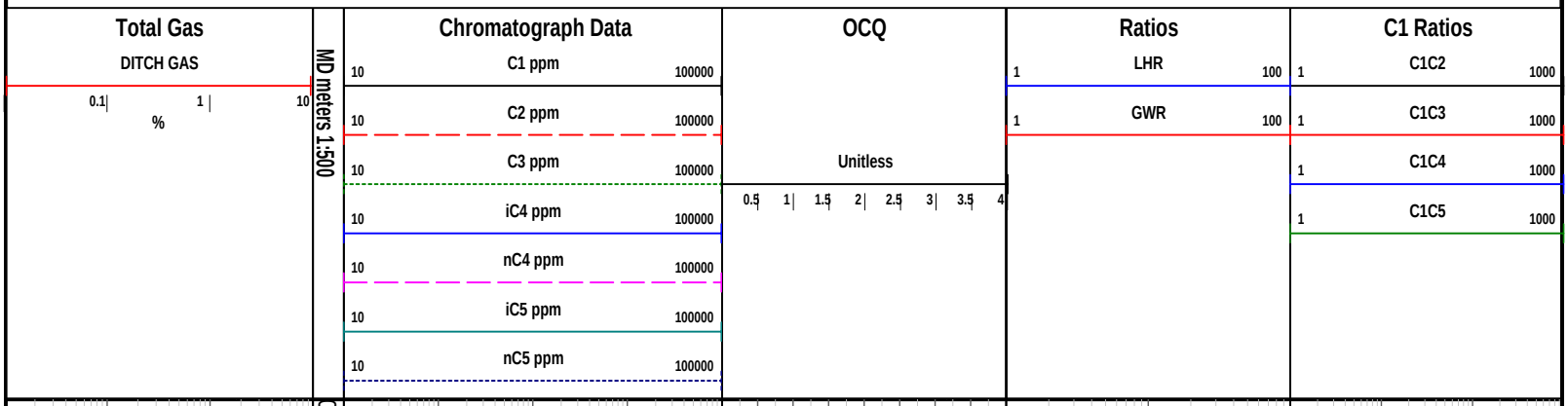


BAKER HUGHES
INTEQ

Company : Apache Northwest Pty Ltd
Well : Wasabi-1
Interval : 50.00 - 2315.06 meters
Created : 06/Mar/2008 6:35:32 AM

Apache ENERGY

GAS RATIO PLOT



Survey @ 115.45 mMDRT
Inc: 0.14 Azi: 336.08
TVD: 115.45 mRT

Survey @ 142.86 mMDRT
Inc: 0.18 Azi: 296.21

TVD: 142.86 mRT

150

160

170

Survey @ 170.39 mMDRT
Inc: 0.09 Azi: 303.79
TVD: 170.39 mRT

180

190

200

Survey @ 201.95 mMDRT
Inc: 0.09 Azi: 130.71
TVD: 201.95 mRT

210

220

230

Survey @ 229.75 mMDRT
Inc: 0.10 Azi: 88.12
TVD: 229.75 mRT

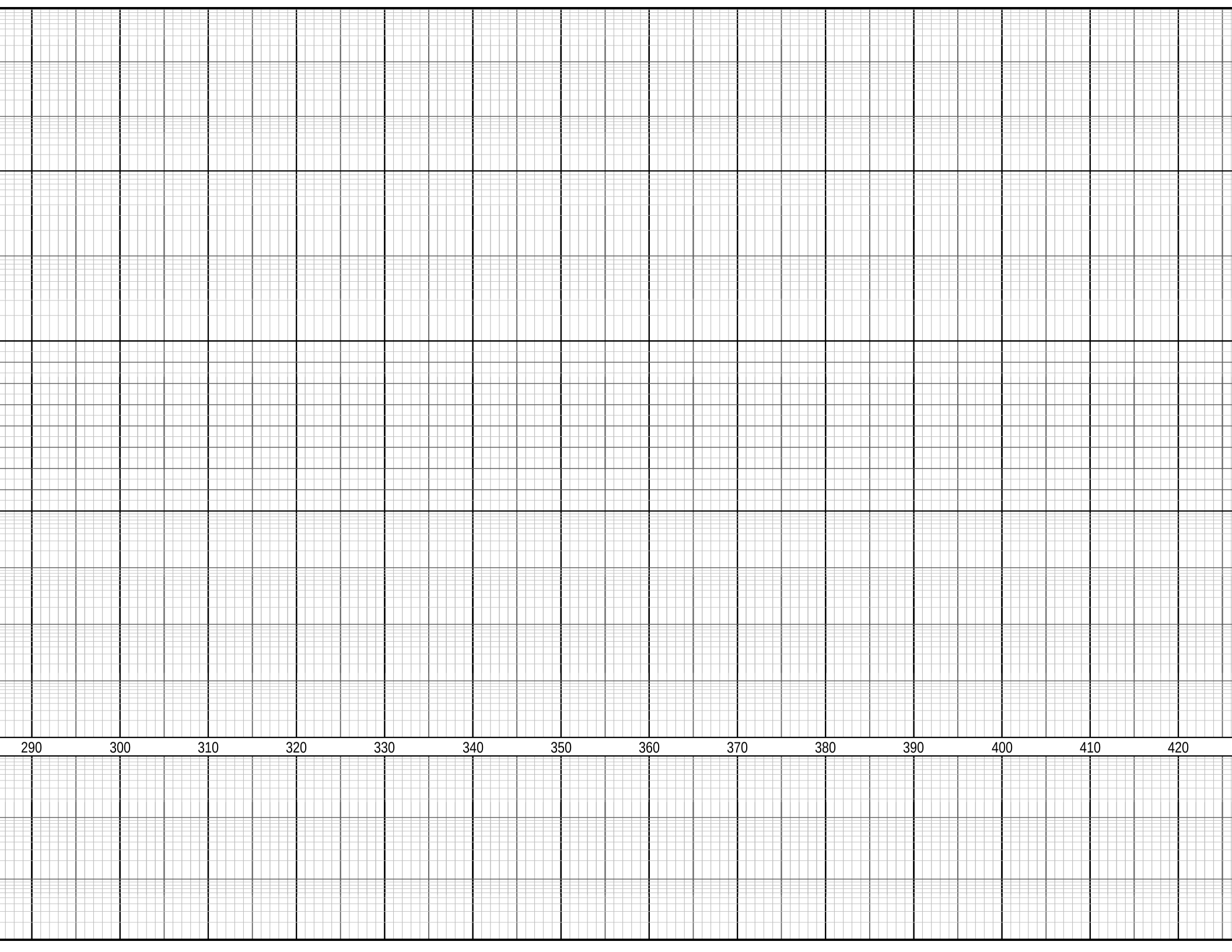
240

250

260

270

280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300
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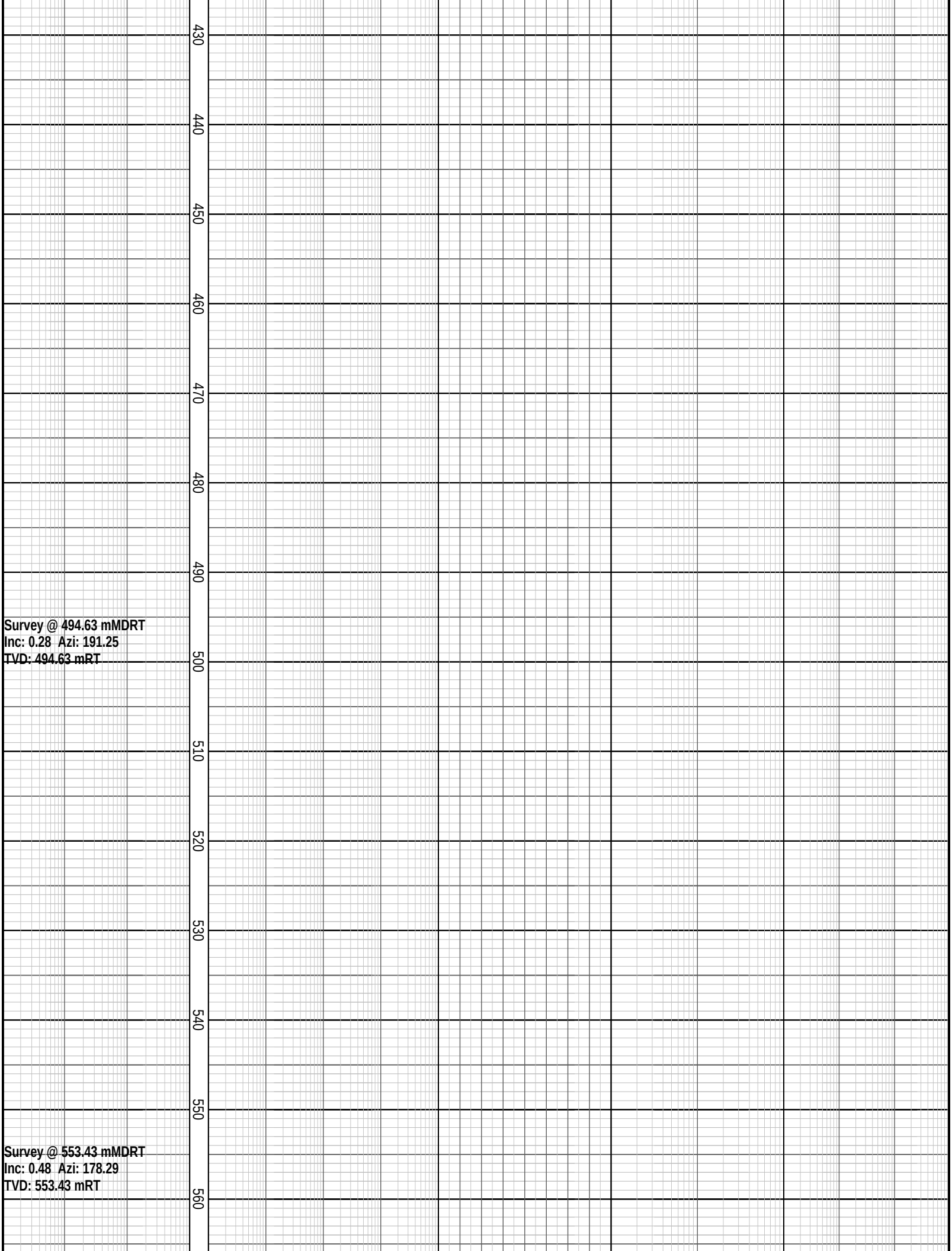
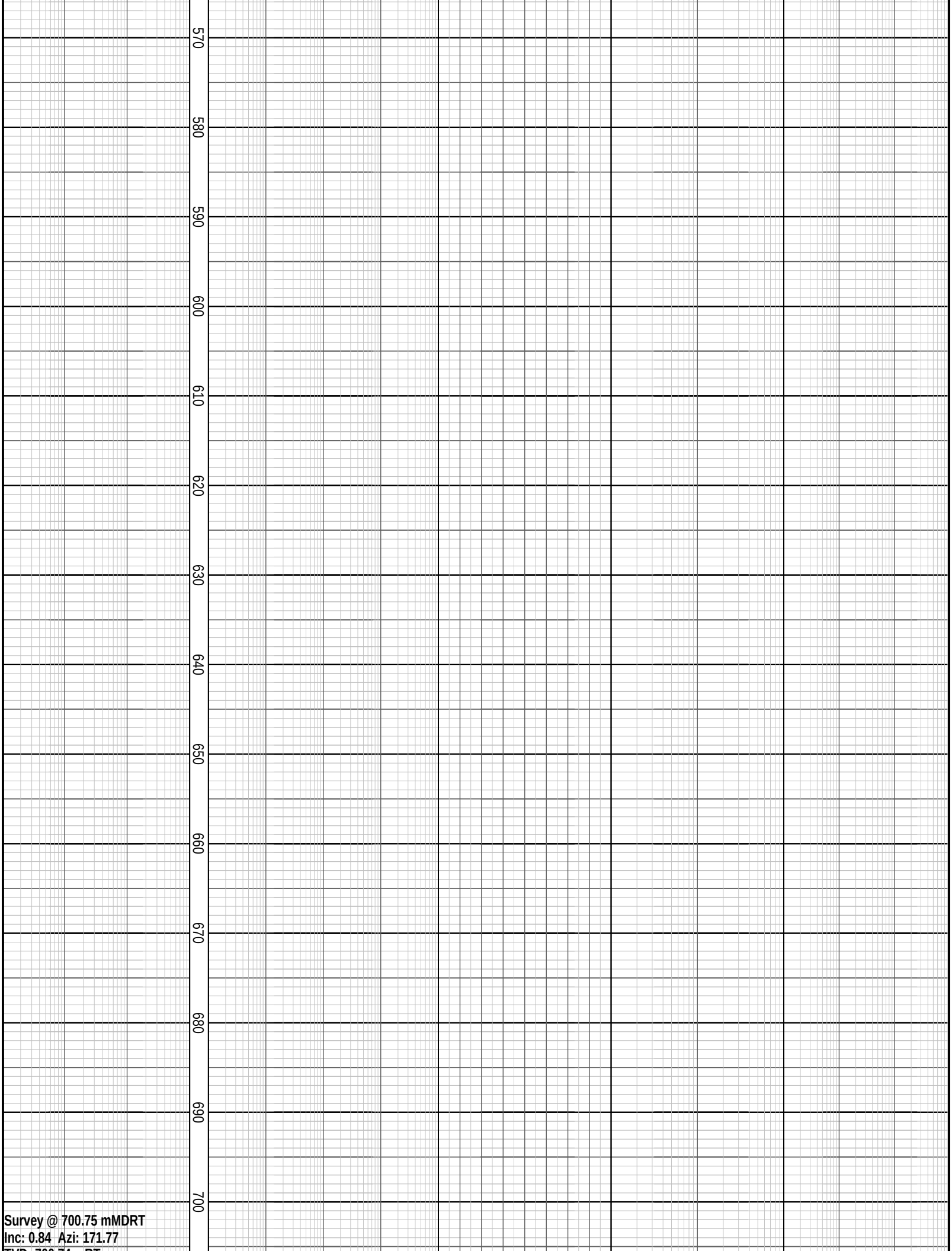
360
370
380
390
400
410
420


430
440
450
460
470
480
490
Survey @ 494.63 mMDRT
Inc: 0.28 Azi: 191.25
TVD: 494.63 mRT
500
510
520
530
540
550
Survey @ 553.43 mMDRT
Inc: 0.48 Azi: 178.29
TVD: 553.43 mRT
560


570
580
590
600
610
620
630
640
650
660
670
680
690
700
Survey @ 700.75 mMDRT
Inc: 0.84 Azi: 171.77

TVD: 700.74 mRT

710

720

730

740

750

760

Survey @ 759.92 mMDRT
Inc: 0.78 Azi: 172.15
TVD:759.90 mRT

770

780

790

Survey @ 789.17 mMDRT
Inc: 0.56 Azi: 166.34
TVD: 789.15 mRT

800

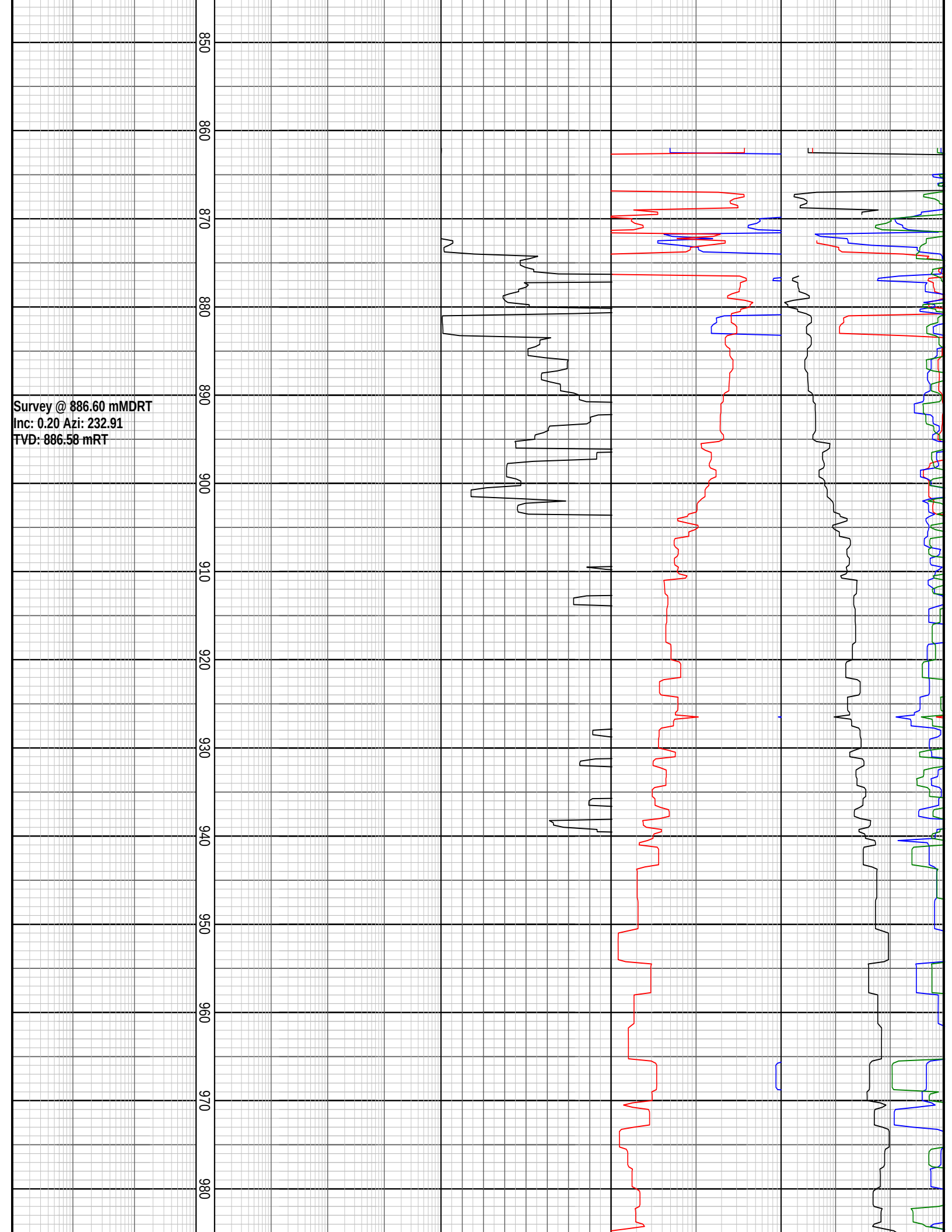
810

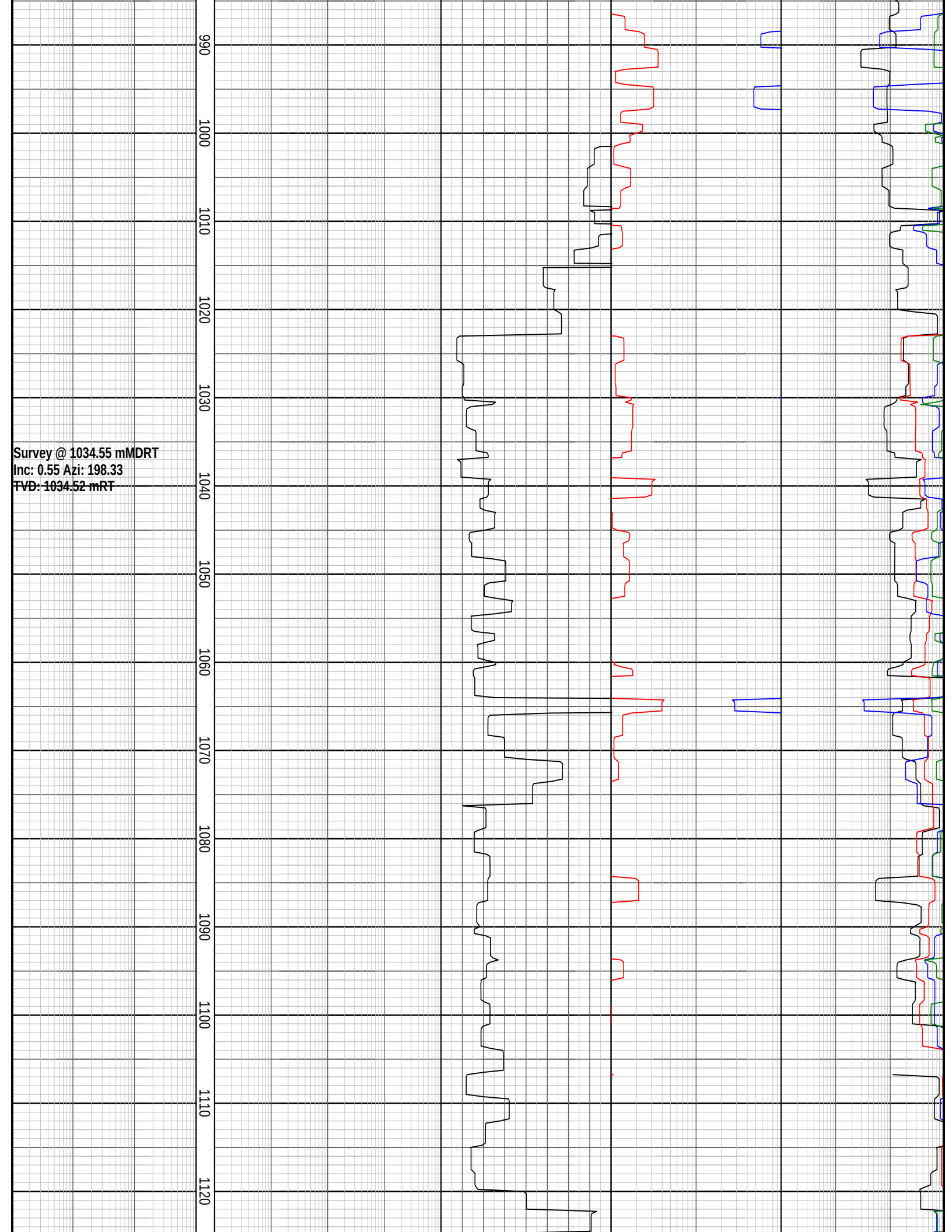
820

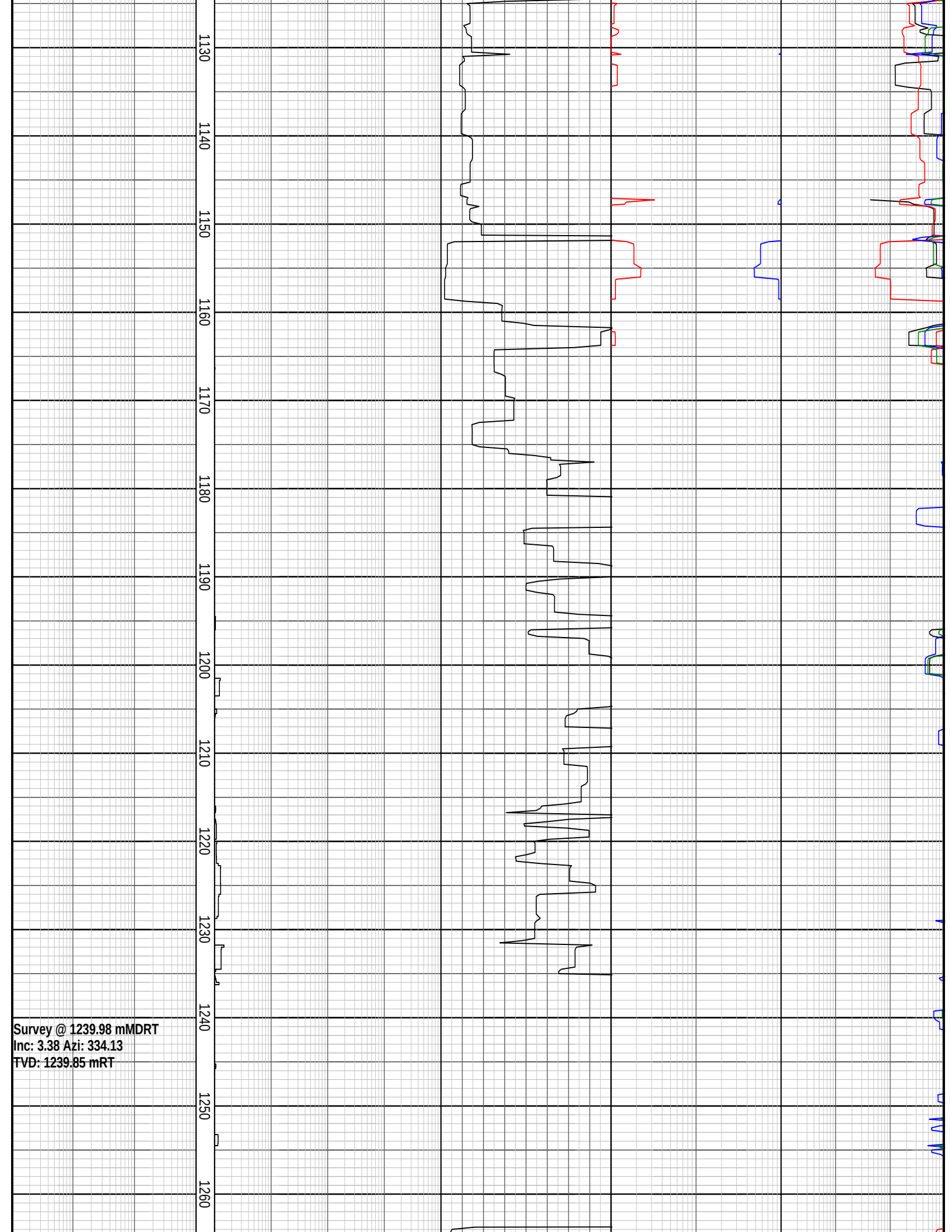
Survey @ 818.74 mMDRT
Inc: 0.38 Azi: 176.04
TVD: 818.72 mRT

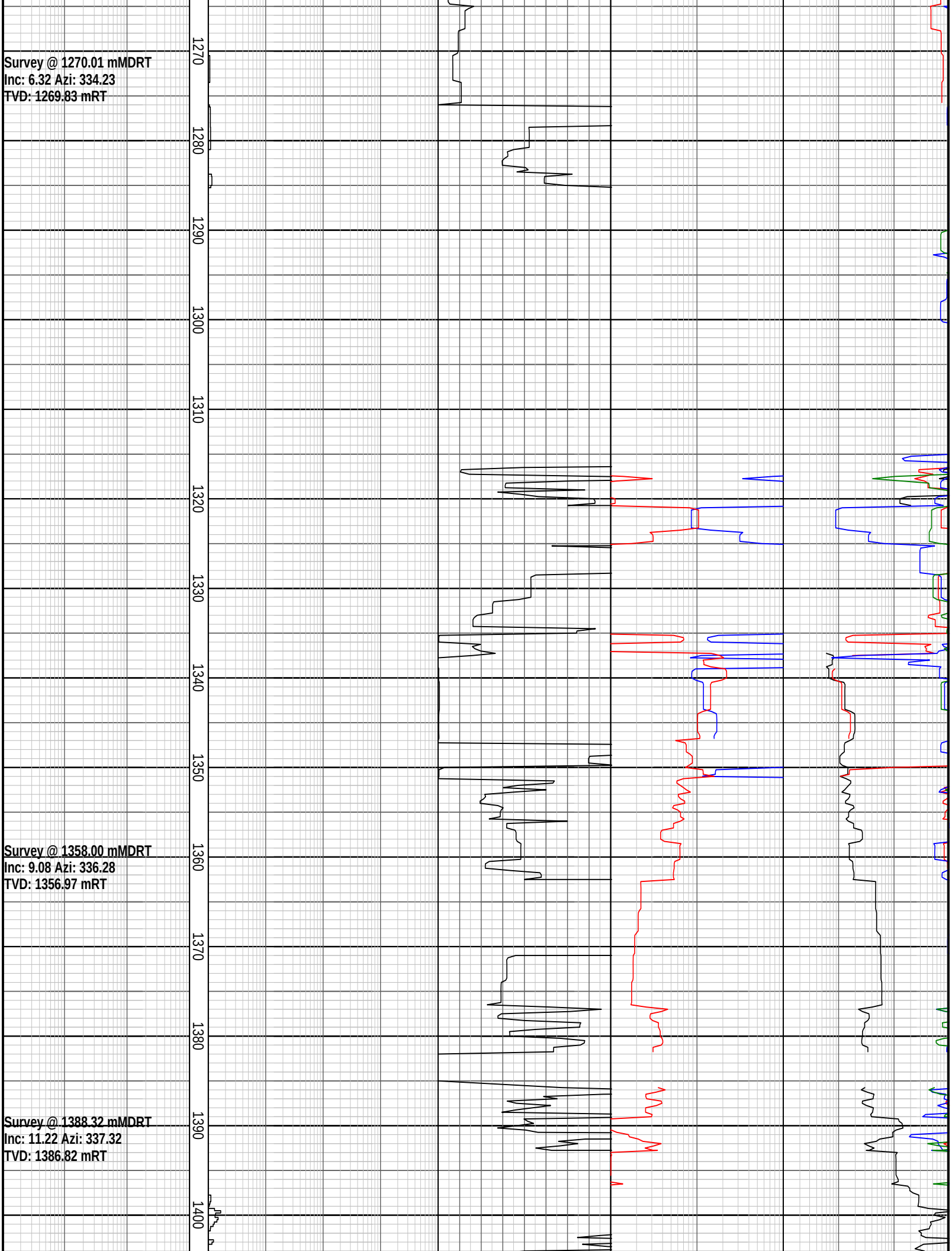
830

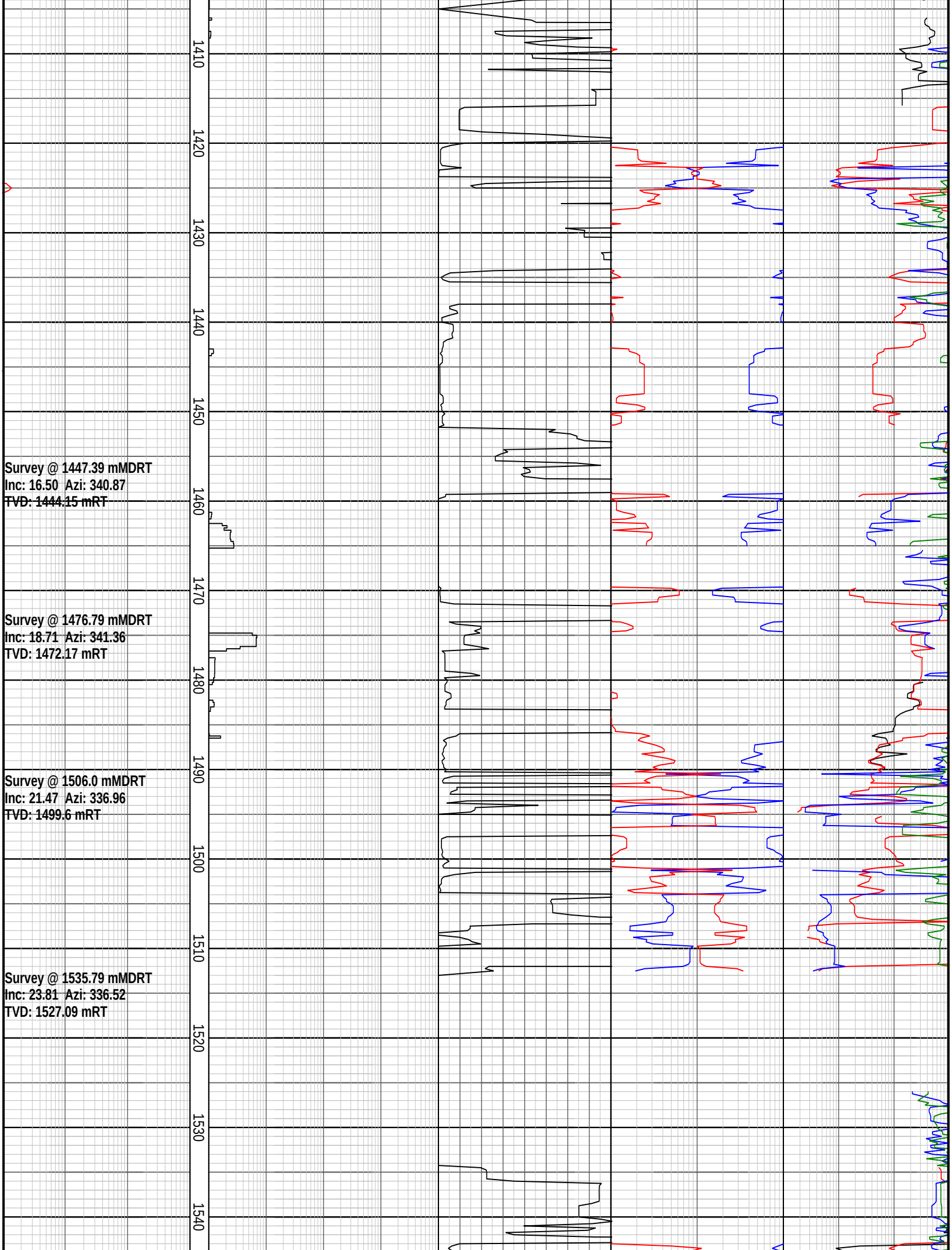
840

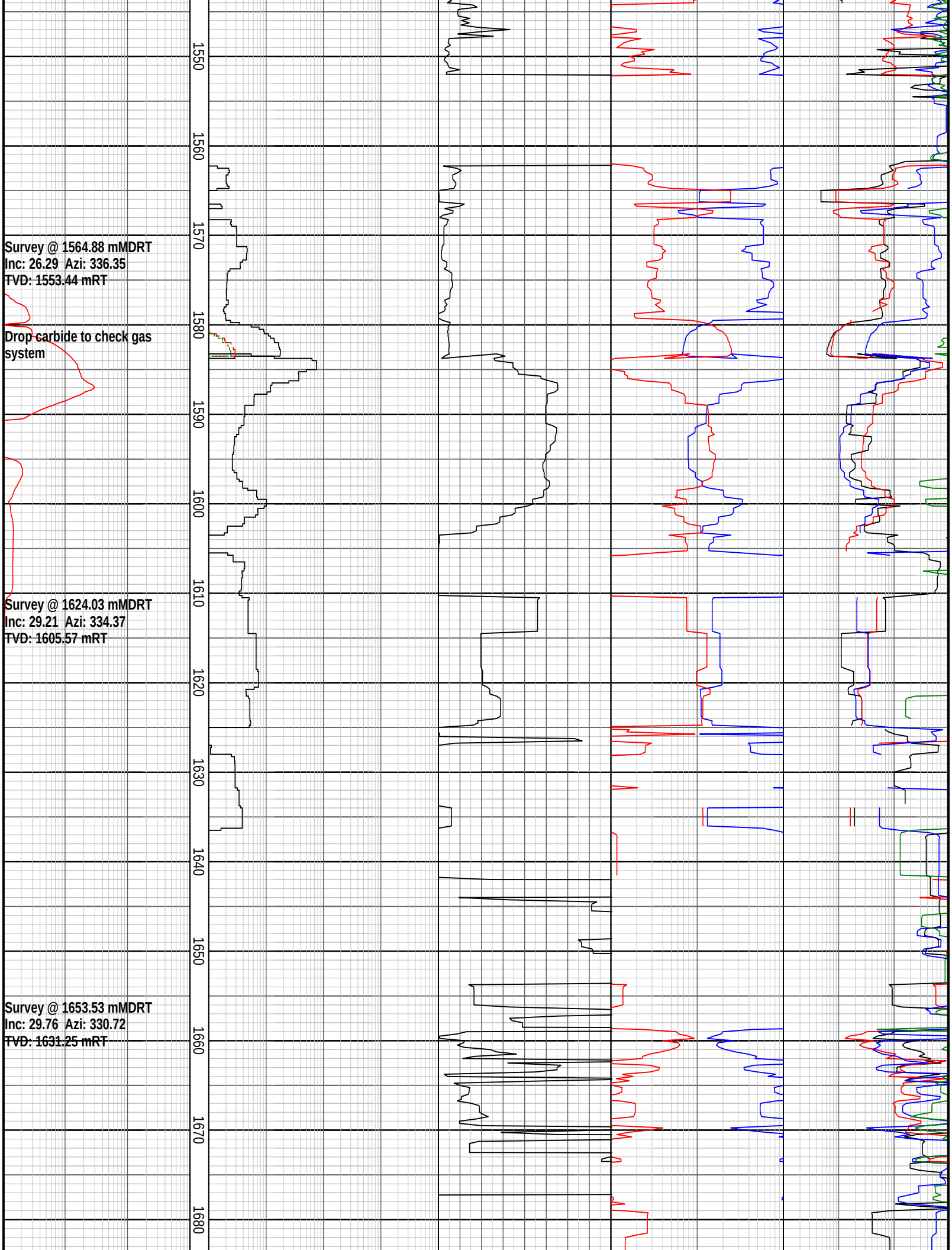

850
860
870
880
890
900
910
920
930
940
950
960
970
980
Survey @ 886.60 mMDRT
Inc: 0.20 Azi: 232.91
TVD: 886.58 mRT

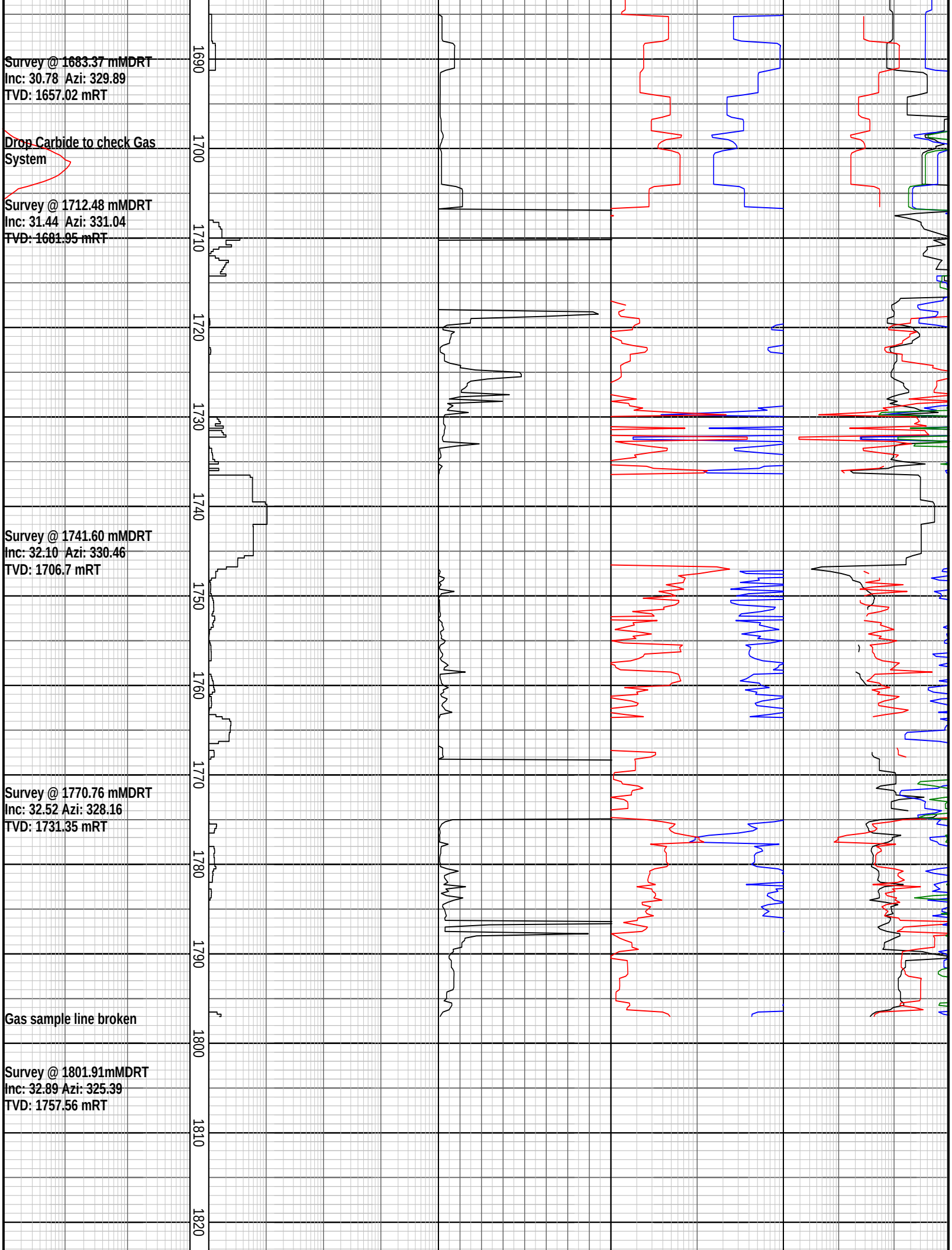

990
1000
1010
1020
1030
1040
1050
1060
1070
1080
1090
1100
1110
1120
Survey @ 1034.55 mMDRT
Inc: 0.55 Azi: 198.33
TVD: 1034.52 mRT

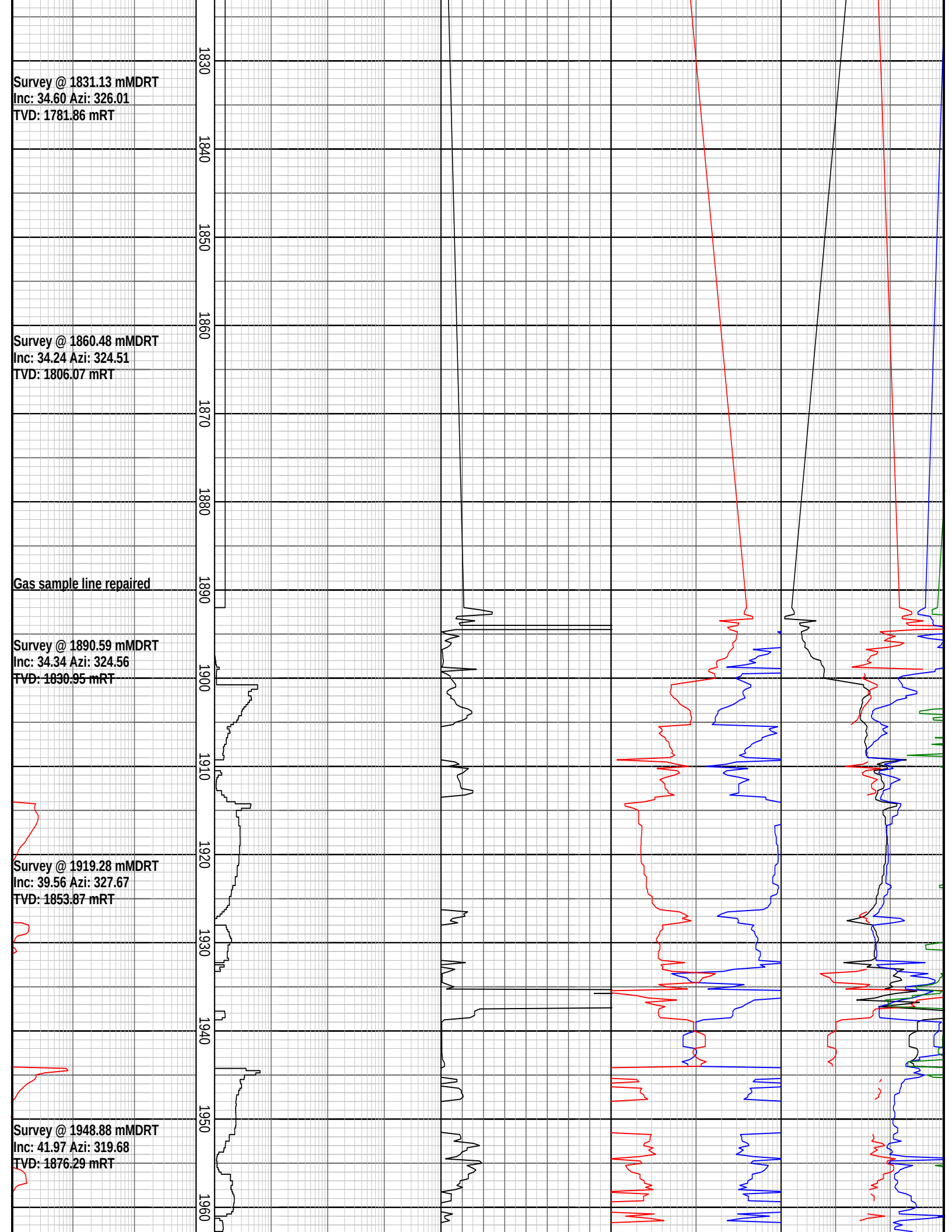

1130
1140
1150
1160
1170
1180
1190
1200
1210
1220
1230
1240
1250
1260
Survey @ 1239.98 mMDRT
Inc: 3.38 Azi: 334.13
TVD: 1239.85 mRT

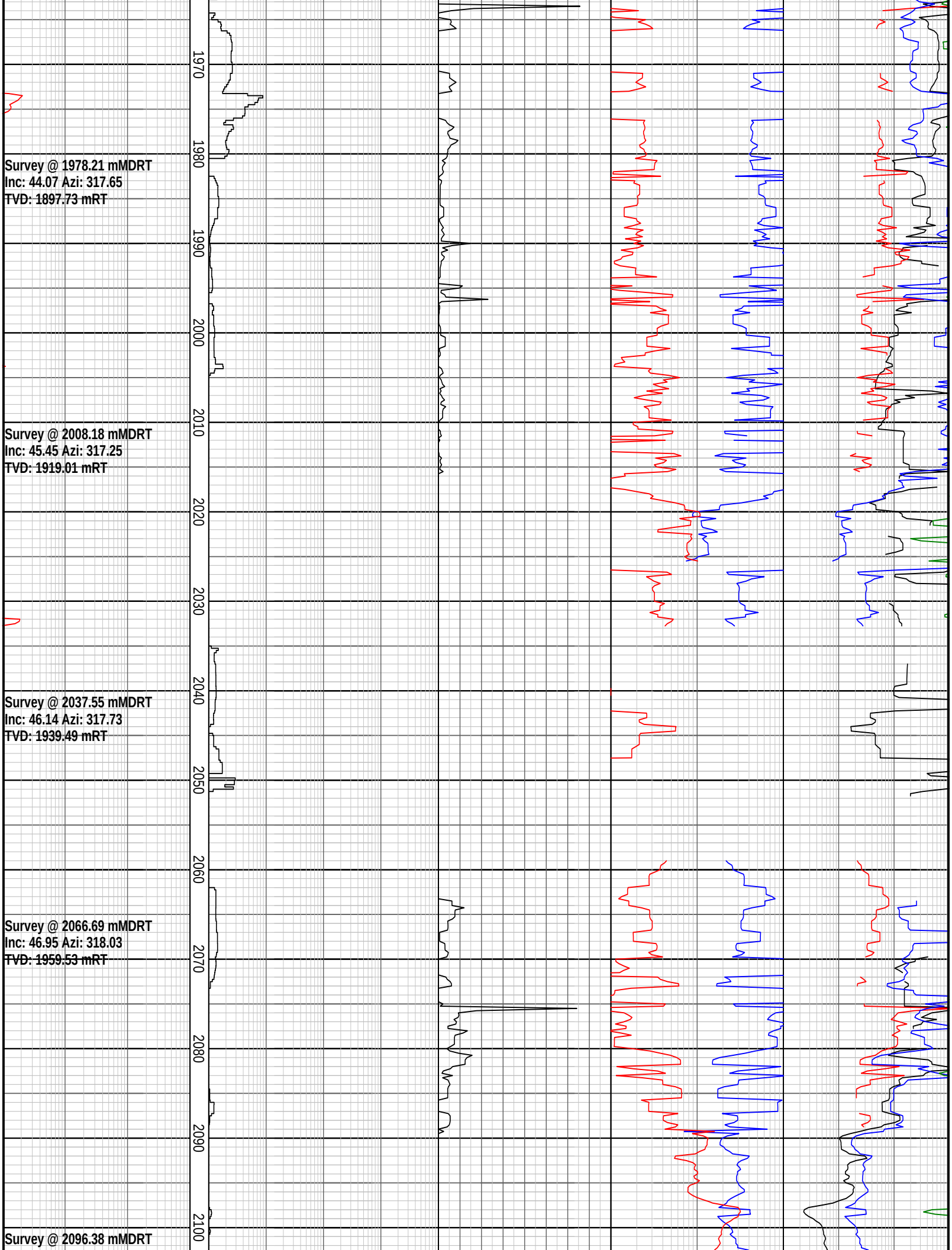

Survey @ 1270.01 mMDRT
Inc: 6.32 Azi: 334.23
TVD: 1269.83 mRT
Survey @ 1358.00 mMDRT
Inc: 9.08 Azi: 336.28
TVD: 1356.97 mRT
Survey @ 1388.32 mMDRT
Inc: 11.22 Azi: 337.32
TVD: 1386.82 mRT
1270
1280
1290
1300
1310
1320
1330
1340
1350
1360
1370
1380
1390
1400

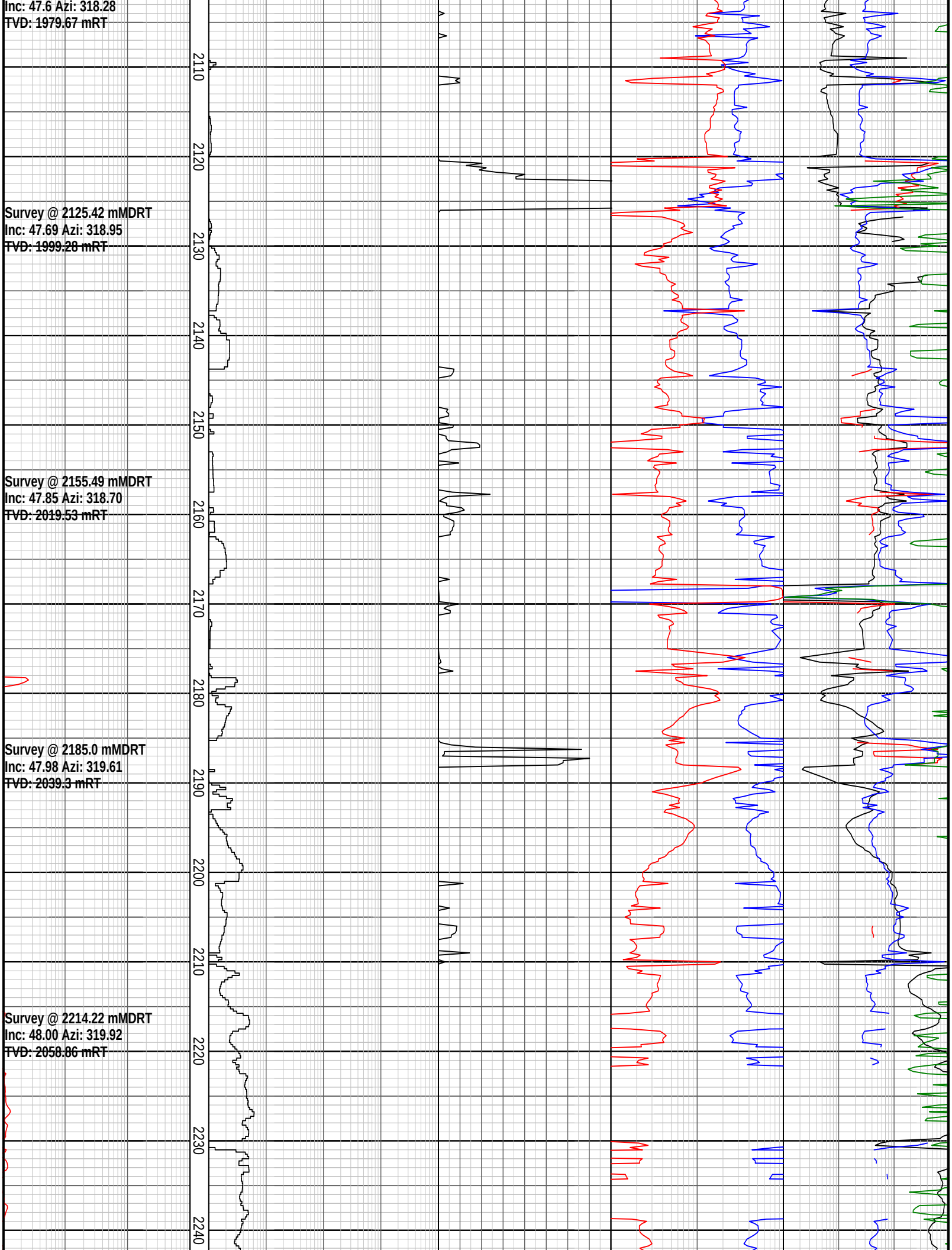

1410
1420
1430
1440
1450
1460
1470
1480
1490
1500
1510
1520
1530
1540
Survey @ 1447.39 mMDRT
Inc: 16.50 Azi: 340.87
TVD: 1444.15 mRT
Survey @ 1476.79 mMDRT
Inc: 18.71 Azi: 341.36
TVD: 1472.17 mRT
Survey @ 1506.0 mMDRT
Inc: 21.47 Azi: 336.96
TVD: 1499.6 mRT
Survey @ 1535.79 mMDRT
Inc: 23.81 Azi: 336.52
TVD: 1527.09 mRT

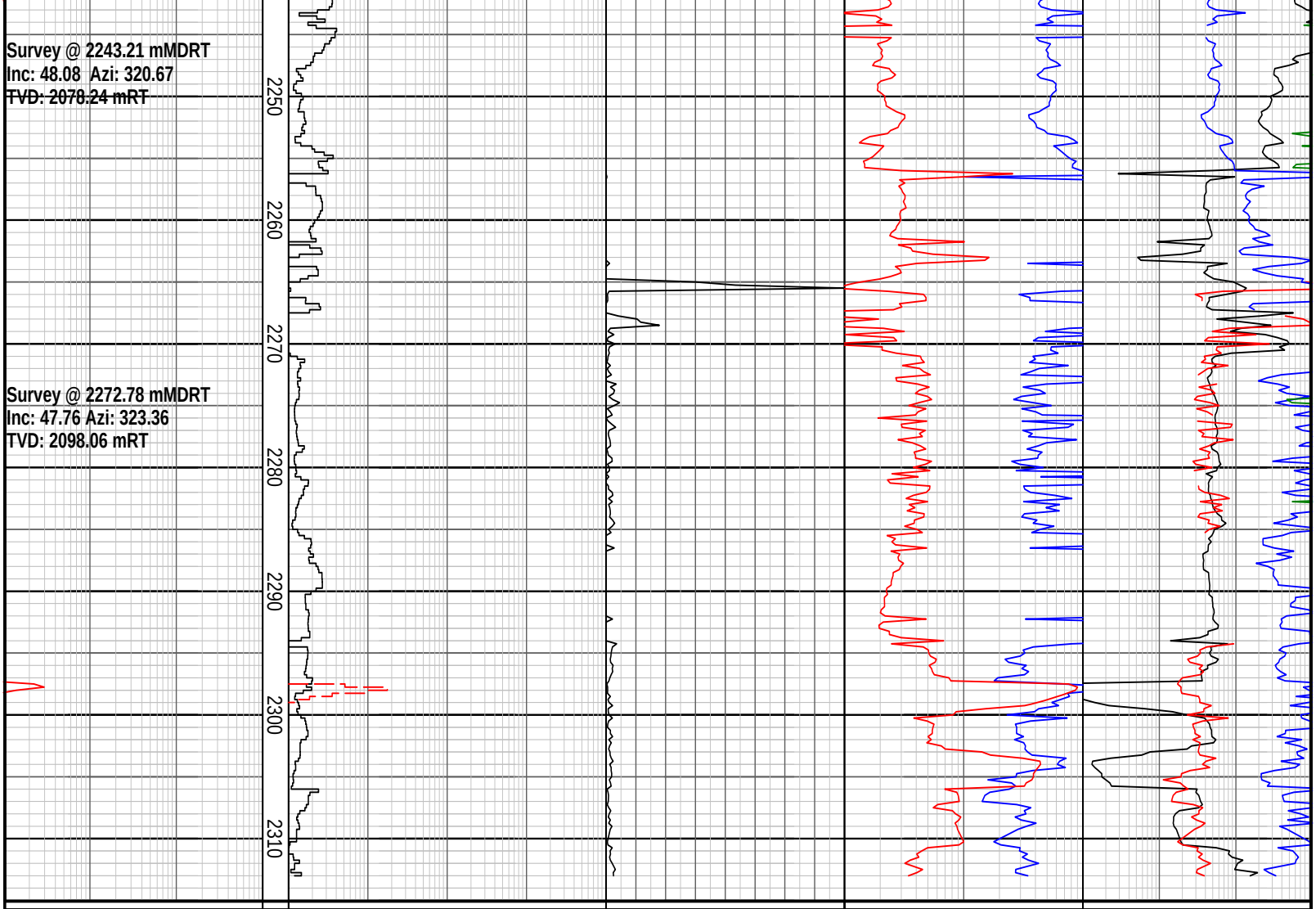

1550
1560
1570
1580
1590
1600
1610
1620
1630
1640
1650
1660
1670
1680
Survey @ 1564.88 mMDRT
Inc: 26.29 Azi: 336.35
TVD: 1553.44 mRT
Drop carbide to check gas system
Survey @ 1624.03 mMDRT
Inc: 29.21 Azi: 334.37
TVD: 1605.57 mRT
Survey @ 1653.53 mMDRT
Inc: 29.76 Azi: 330.72
TVD: 1631.25 mRT


Survey @ 1683.37 mMDRT
Inc: 30.78 Azi: 329.89
TVD: 1657.02 mRT
Drop Carbide to check Gas System
Survey @ 1712.48 mMDRT
Inc: 31.44 Azi: 331.04
TVD: 1681.95 mRT
Survey @ 1741.60 mMDRT
Inc: 32.10 Azi: 330.46
TVD: 1706.7 mRT
Survey @ 1770.76 mMDRT
Inc: 32.52 Azi: 328.16
TVD: 1731.35 mRT
Gas sample line broken
Survey @ 1801.91mMDRT
Inc: 32.89 Azi: 325.39
TVD: 1757.56 mRT
1690
1700
1710
1720
1730
1740
1750
1760
1770
1780
1790
1800
1810
1820


Survey @ 1831.13 mMDRT
Inc: 34.60 Azi: 326.01
TVD: 1781.86 mRT
Survey @ 1860.48 mMDRT
Inc: 34.24 Azi: 324.51
TVD: 1806.07 mRT
Gas sample line repaired
Survey @ 1890.59 mMDRT
Inc: 34.34 Azi: 324.56
TVD: 1830.95 mRT
Survey @ 1919.28 mMDRT
Inc: 39.56 Azi: 327.67
TVD: 1853.87 mRT
Survey @ 1948.88 mMDRT
Inc: 41.97 Azi: 319.68
TVD: 1876.29 mRT
1830
1840
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960


1970
1980
1990
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100
Survey @ 1978.21 mMDRT
Inc: 44.07 Azi: 317.65
TVD: 1897.73 mRT
Survey @ 2008.18 mMDRT
Inc: 45.45 Azi: 317.25
TVD: 1919.01 mRT
Survey @ 2037.55 mMDRT
Inc: 46.14 Azi: 317.73
TVD: 1939.49 mRT
Survey @ 2066.69 mMDRT
Inc: 46.95 Azi: 318.03
TVD: 1959.53 mRT
Survey @ 2096.38 mMDRT


Inc: 47.6 Azi: 318.28
TVD: 1979.67 mRT
2110
2120
Survey @ 2125.42 mMDRT
Inc: 47.69 Azi: 318.95
TVD: 1999.28 mRT
2130
2140
2150
Survey @ 2155.49 mMDRT
Inc: 47.85 Azi: 318.70
TVD: 2019.53 mRT
2160
2170
2180
Survey @ 2185.0 mMDRT
Inc: 47.98 Azi: 319.61
TVD: 2039.3 mRT
2190
2200
2210
Survey @ 2214.22 mMDRT
Inc: 48.00 Azi: 319.92
TVD: 2058.86 mRT
2220
2230
2240



GAS RATIO PLOT

Total Gas	MD meters 1:500	Chromatograph Data	OCQ	Ratios	C1 Ratios
DITCH GAS		C1 ppm 10 – 100000		LHR 1 – 100	C1C2 1 – 1000
0.1 – 1 – 10		C2 ppm 10 – 100000		GWR 1 – 100	C1C3 1 – 1000
%		C3 ppm 10 – 100000	Unitless		C1C4 1 – 1000
		iC4 ppm 10 – 100000	0.5 1 1.5 2 2.5 3 3.5 4		C1C5 1 – 1000
		nC4 ppm 10 – 100000			
		iC5 ppm 10 – 100000			
		nC5 ppm 10 – 100000			

Schlumberger

Wasabi-1
End of Well Report

	Name	Signature	Date
Schlumberger QC	Iain McCourt		
Client approval	Steve Bunton		

Schlumberger

Apache ENERGY

Contents

Schlumberger

Apache ENERGY

General Information

Well Name:	Wasabi-1	
Rig:	West Triton	
Field:	Vic-P58	
Location:	Bass Strait	
Country:	Australia	
Cell Members:	Anagh Kohli	Cell Manager
	Chris Hibberson	MWD/LWD Engineer
	Dallas Perkins	MWD/LWD Trainee
	Vedat Ali Degirmenci	Directional Driller
	Jason Patterson	Directional Driller
Town Contacts:	Dwight Hennings	AWA Operations Manager
	Iain McCourt	Field Services Manager
	Arnis Ahmed	Service Quality Coach
Company Representatives:	Bill Openshaw	Company Man
	Paul Callaghar	Company Man
	Stefan Schmidt	Company Man
	Richard Moore	Company Man
	Hamish Little	Wellsite Geologist
	Adam Cruickshank	Wellsite Geologist

Schlumberger

Apache ENERGY

Geomagnetic and Survey Reference Criteria

Geomagnetic Data

Magnetic Model:	**BGGM version 2007**
Magnetic Date:	29 Nov 2007
Magnetic Field Strength:	60140 HCNT
Magnetic Declination:	12.805 degrees
Magnetic Dip:	-69.07 degrees

Survey Reference Criteria

Reference G:	1000.05 mgal
Reference H:	1202.69 HCNT
Reference Dip:	-69.07 degrees
G value Tolerance:	2.50 mgal
H value Tolerance:	6.00 HCNT
Dip Tolerance:	0.45 degrees

Survey Corrections Applied

Reference North:	Grid North
Magnetic Declination:	12.80 degrees
Grid Convergence:	-0.16 degrees
Total Azimuth Correction:	12.96 degrees
Vertical Section Azimuth:	322.47 degrees

Survey Reference Location

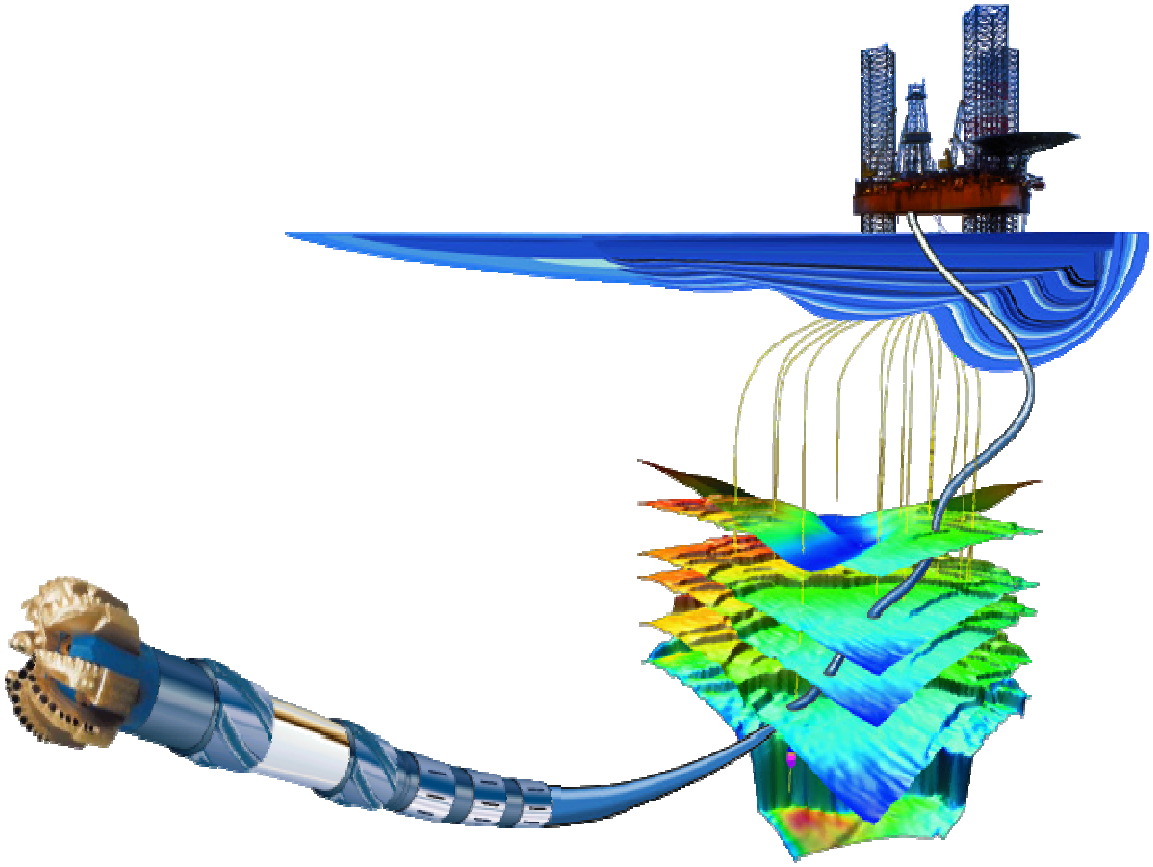
Location Coordinates

Latitude:	38° 29' 18.157"	South
Longitude:	147° 15' 49.147"	East
Easting:	522993.588 m	
Northing:	5739963.350 m	
MGA:	GDA94/MGA94 Zone 55	

Schlumberger

Apache ENERGY

Definitive Survey



Schlumberger

Wasabi-1 Final Geodetic Survey

Report Date:	March 27, 2008	Survey / DLS Computation Method:	Minimum Curvature / Lubinski
Client:	APACHE ENERGY LTD	Vertical Section Azimuth:	322.470°
Field:	Apache/VIC-P58/WASABI-1	Vertical Section Origin:	N 0.000 m, E 0.000 m
Structure / Slot:	WASABI-1 / WASABI-1	TVD Reference Datum:	RKB
Well:	WASABI-1	TVD Reference Elevation:	39.0 m relative to AHD
Borehole:	WASABI-1	Sea Bed / Ground Level Elevation:	-37.000 m relative to AHD
UWI/API#:		Magnetic Declination:	12.802°
Survey Name / Date:	Wasabi-1 Survey / February 26, 2008	Total Field Strength:	60133.779 nT
Tort / AHD / DDI / ERD ratio:	63.724° / 557.97 m / 5.104 / 0.263	Magnetic Dip:	-69.072°
Grid Coordinate System:	GDA94/MGA94 Zone 55	Declination Date:	February 26, 2008
Location Lat/Long:	S 38 29 18.157, E 147 15 49.147	Magnetic Declination Model:	BGGM 2007
Location Grid N/E Y/X:	N 5739963.350 m, E 522993.588 m	North Reference:	Grid North
Grid Convergence Angle:	-0.16408596°	Total Corr Mag North -> Grid North:	+12.966°
Grid Scale Factor:	0.99960651	Local Coordinates Referenced To:	Well Head

Comments	Measured Depth (m)	Inclination (deg)	Azimuth Grid (deg)	TVD (m)	Vertical Section (m)	NS Grid North (m)	EW Grid North (m)	DLS (deg/30 m)	Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5739963.35	522993.59	S 38 29 18.157	E 147 15 49.146
	115.45	0.14	336.08	115.45	0.14	0.13	-0.06	0.04	5739963.48	522993.53	S 38 29 18.153	E 147 15 49.144
	142.86	0.18	296.21	142.86	0.21	0.18	-0.11	0.13	5739963.53	522993.48	S 38 29 18.152	E 147 15 49.142
	170.39	0.09	303.79	170.39	0.27	0.21	-0.17	0.10	5739963.56	522993.42	S 38 29 18.151	E 147 15 49.140
	201.95	0.09	130.71	201.95	0.27	0.21	-0.17	0.17	5739963.56	522993.42	S 38 29 18.151	E 147 15 49.139
	229.75	0.10	88.12	229.75	0.23	0.19	-0.13	0.08	5739963.54	522993.46	S 38 29 18.151	E 147 15 49.141
	494.63	0.28	191.25	494.63	-0.33	-0.43	-0.02	0.04	5739962.92	522993.57	S 38 29 18.171	E 147 15 49.146
	553.43	0.48	178.29	553.43	-0.62	-0.82	-0.04	0.11	5739962.53	522993.54	S 38 29 18.184	E 147 15 49.145
	700.75	0.84	171.77	700.74	-2.07	-2.51	0.13	0.07	5739960.84	522993.72	S 38 29 18.239	E 147 15 49.152
	759.92	0.78	172.15	759.90	-2.79	-3.33	0.25	0.03	5739960.02	522993.83	S 38 29 18.265	E 147 15 49.157
	789.17	0.56	166.34	789.15	-3.10	-3.67	0.31	0.24	5739959.68	522993.90	S 38 29 18.276	E 147 15 49.160
	818.74	0.38	176.04	818.72	-3.31	-3.91	0.35	0.20	5739959.44	522993.94	S 38 29 18.284	E 147 15 49.161
	886.60	0.20	232.91	886.58	-3.50	-4.20	0.27	0.14	5739959.15	522993.86	S 38 29 18.294	E 147 15 49.158
	1034.55	0.55	198.33	1034.52	-3.90	-5.03	-0.16	0.08	5739958.32	522993.43	S 38 29 18.321	E 147 15 49.140
	1180.90	0.38	233.51	1180.87	-4.28	-5.99	-0.77	0.07	5739957.36	522992.82	S 38 29 18.352	E 147 15 49.115
	1239.98	3.38	334.13	1239.92	-2.57	-4.54	-1.69	1.76	5739958.81	522991.90	S 38 29 18.305	E 147 15 49.077
	1270.01	6.32	334.23	1269.83	-0.09	-2.25	-2.79	2.94	5739961.10	522990.80	S 38 29 18.231	E 147 15 49.031
	1298.75	8.02	326.45	1298.35	3.46	0.84	-4.59	2.04	5739964.19	522989.00	S 38 29 18.130	E 147 15 48.957
	1328.72	8.15	333.60	1328.02	7.63	4.49	-6.69	1.01	5739967.84	522986.90	S 38 29 18.012	E 147 15 48.870
	1358.00	9.08	336.28	1356.97	11.91	8.46	-8.54	1.04	5739971.81	522985.05	S 38 29 17.884	E 147 15 48.793
	1388.32	11.22	337.32	1386.82	17.09	13.37	-10.64	2.13	5739976.72	522982.95	S 38 29 17.725	E 147 15 48.706
	1447.39	16.50	340.87	1444.15	30.61	26.61	-15.61	2.71	5739989.95	522977.98	S 38 29 17.296	E 147 15 48.499
	1476.79	18.71	341.36	1472.17	39.04	35.03	-18.49	2.26	5739998.36	522975.11	S 38 29 17.023	E 147 15 48.380
	1506.00	21.47	336.96	1499.60	48.65	44.39	-22.08	3.23	5740007.72	522971.52	S 38 29 16.720	E 147 15 48.230
	1535.79	23.81	336.52	1527.09	59.76	54.92	-26.61	2.36	5740018.25	522966.99	S 38 29 16.379	E 147 15 48.042
	1564.88	26.29	336.35	1553.44	71.71	66.21	-31.53	2.56	5740029.53	522962.07	S 38 29 16.013	E 147 15 47.838
	1594.25	28.63	333.72	1579.50	84.93	78.48	-37.26	2.69	5740041.80	522956.35	S 38 29 15.616	E 147 15 47.600
	1624.03	29.21	334.37	1605.57	99.04	91.43	-43.56	0.66	5740054.74	522950.05	S 38 29 15.196	E 147 15 47.338
	1653.53	29.76	330.72	1631.25	113.33	104.30	-50.25	1.91	5740067.61	522943.35	S 38 29 14.779	E 147 15 47.061
	1683.37	30.78	329.89	1657.02	128.23	117.37	-57.71	1.11	5740080.67	522935.90	S 38 29 14.356	E 147 15 46.752
	1712.48	31.44	331.04	1681.95	143.12	130.45	-65.12	0.92	5740093.75	522928.49	S 38 29 13.933	E 147 15 46.444
	1741.60	32.10	330.46	1706.70	158.30	143.83	-72.61	0.75	5740107.12	522921.01	S 38 29 13.499	E 147 15 46.133
	1770.76	32.52	328.16	1731.35	173.77	157.23	-80.57	1.34	5740120.52	522913.05	S 38 29 13.066	E 147 15 45.804
	1801.91	32.89	325.39	1757.56	190.55	171.31	-89.79	1.48	5740134.59	522903.84	S 38 29 12.610	E 147 15 45.421
	1831.13	34.60	326.01	1781.86	206.75	184.72	-98.93	1.79	5740147.99	522894.69	S 38 29 12.176	E 147 15 45.043
	1860.48	34.24	324.51	1806.07	223.32	198.35	-108.39	0.94	5740161.62	522885.25	S 38 29 11.735	E 147 15 44.651
	1890.59	34.34	324.56	1830.95	240.28	212.16	-118.23	0.10	5740175.43	522875.41	S 38 29 11.288	E 147 15 44.243
	1919.28	39.56	321.67	1853.87	257.51	225.93	-128.59	5.75	5740189.20	522865.04	S 38 29 10.842	E 147 15 43.814
	1948.88	41.97	319.68	1876.29	276.82	240.88	-140.85	2.77	5740204.13	522852.80	S 38 29 10.359	E 147 15 43.307
	1978.21	44.07	317.65	1897.73	296.79	255.90	-154.07	2.57	5740219.15	522839.58	S 38 29 9.873	E 147 15 42.759
	2008.18	45.45	317.25	1919.01	317.81	271.44	-168.34	1.41	5740234.68	522825.32	S 38 29 9.370	E 147 15 42.169
	2037.55	46.14	317.73	1939.49	338.78	286.96	-182.56	0.79	5740250.20	522811.10	S 38 29 8.868	E 147 15 41.580
	2066.69	46.95	318.03	1959.53	359.87	302.65	-196.75	0.86	5740265.88	522796.92	S 38 29 8.360	E 147 15 40.993
	2096.38	47.60	318.28	1979.67	381.62	318.90	-211.30	0.68	5740282.12	522782.37	S 38 29 7.835	E 147 15 40.390
	2125.42	47.49	318.95	1999.28	402.99	334.98	-225.46	0.52	5740298.19	522768.21	S 38 29 7.315	E 147 15 39.804

	2155.49	47.85	318.70	2019.53	425.18	351.71	-240.10	0.40	5740314.92	522753.58	S 38 29 6.773	E 147 15 39.198
	2185.00	47.98	319.61	2039.30	447.04	368.28	-254.42	0.70	5740331.48	522739.27	S 38 29 6.237	E 147 15 38.605
	2214.22	48.00	319.92	2058.86	468.73	384.85	-268.45	0.24	5740348.05	522725.25	S 38 29 5.701	E 147 15 38.025
	2230.00	48.04	320.29	2069.41	480.45	393.85	-275.97	0.53	5740357.04	522717.73	S 38 29 5.410	E 147 15 37.713
	2243.21	48.08	320.67	2078.24	490.27	401.43	-282.22	0.65	5740364.62	522711.48	S 38 29 5.165	E 147 15 37.454
	2272.78	47.76	323.36	2098.06	512.21	418.72	-295.73	2.05	5740381.91	522697.98	S 38 29 4.605	E 147 15 36.895
Projected to TD	2313.00	48.00	323.50	2125.04	542.04	442.68	-313.50	0.20	5740405.86	522680.21	S 38 29 3.830	E 147 15 36.159

Survey Type: Non-Def Survey

Survey Error Model: **SLB ISCWSA version 24 *** 3-D 95.00% Confidence 2.7955 sigma**

Surveying Prog:

MD From (m)	MD To (m)	EOU Freq	Survey Tool Type	Borehole -> Survey
0.00	76.00	Act-Stns	SLB_ZERO-Depth Only	WASABI-1 -> Wasabi-1 Survey
76.00	115.45	Act-Stns	SLB_ZERO	WASABI-1 -> Wasabi-1 Survey
115.45	2272.78	Act-Stns	SLB_MWD+DMAG	WASABI-1 -> Wasabi-1 Survey
2272.78	2313.00	Act-Stns	SLB_BLIND+TREND	WASABI-1 -> Wasabi-1 Survey

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Drilling and Logging Overview

Schlumberger Drilling and Measurements provided, MWD and sonicVISION for 406 mm (16") and Motor-PowerPak and MWD/LWD for 311 mm (12.25").

Well Objectives:

Wasabi-1 is an exploration well to be drilled in the Wasabi field, located in permit Vic-P58. The well will be assessing the La Trobe, Intra La Trobe, L Balmei and Golden Beach formations and is programed to TD below the Golden Beach formation.

In order to meet the geological objectives Wasabi-1 will be a directional well.

Wasabi-1 shall commence when the drilling MODU, West Triton is 1km from the planned well surface location. Wasabi-1 will be the first well to be drilled using the West Triton.

The well will be spudded with a 660mm (26") bit which will drill to +/-60m below the seabed. A 406mm (16") hole will be then drilled riserless to +/-900m in the lower Gippsland Limestone and a tapered 508mm x 340mm (20" x 13-3/8") conductor will be set. The 476mm (18-3/4") unitized wellhead housing will be landed in the conductor tensioner, prior to cementation using the inner string method. GR/Sonic LWD shall be run for formation evaluation in this section.

After testing the BOP, the 311mm (12 ¼") hole will be directional drilled to TD at +/-2652m MD (+/-2548m TVD). Quad combo (including GVR-8) + BAT sonic LWD shall be run for formation evaluation.

At TD, wireline logs consisting of a VSP shall be run to surface. RFT (pressures and samples) and RSCT will be contingent on the initial evaluation. Image logs will be contingent on the quality of the GVR-8 LWD log.

No well test is planned. However, the well may be sidetracked for coring if significant hydrocarbon is present. A revised drilling program will be issued should the well be sidetracked. The well shall be be plugged and abandoned.

The well shall be drilled with water based fluids throughout, therefore no cuttings injection will be undertaken and no cuttings dryer installed. Wasabi-1 is not in close proximity to any marine parks or environmentally sensitive areas.

Wasabi-1 ends when the rig is 1km from the surface location.

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BHA # 1: MWD / sonicVISION Assembly

406 mm (16") Hole Section – Vertical(135.00 m MD- 862.00 m MD)

The following 406mm (16") MWD/sonicVISION Assembly was made up and run in hole:

406mm (16") Milled Tooth Bit (Type: Reed T11C, Jets 3 x 18,1 x 16)

9 1/2" Bit Sub

2 X 9 ½"DC

16" Stabalizer

9 ½"DC

8 ¼" X-Over

8 ¼" X-Over

8 ¼" Telescope* MWD

8 ¼" sonicVision* LWD (9½" ILS attached)

5 X 8 ¼" DC

8" JAR

2 X 8 ¼" DC

8 ¼" X-Over

Drilling Summary

MWD/LWD Summary

The Telescope* MWD tool was programmed with 12Hz/6bps configuration, to enable transmission of real time data uphole, providing Directional Survey information (Azimuth & Inclination). Only 1 SPT was used as the Delivery order for the proper T-piece for West Triton got delayed.

Successful Shallow Hole test was performed just before tagging bottom. Drilling commenced after tagging sea bed at 135.0mMD. Due to lack of non mags in the BHA a lot of magnetic interference was observed in the surveys. Surveys were used as inclination check. The run started with some signal issues. Harmonic from pump 3 was sitting on the carrier frequency of 12hz. Staggered pumps worked good for the signal.

sonicVISION was programmed at 5 seconds record rate hence no real time data.

TD was called at 862m MD. It was tried to Downlink to sonicVISION from 5 second record rate to 1 second record rate. However we were unable to do so due to the rigs automated system not having rheostat or the potential to change from high to low point in a short amount of time.

After dumping SonicVISION it was realized that post dumping waveform from the tool does not match the pre initialization waveforms. While laying out sonicVISION sparking was observed from the transmitter. Techlogs generated from the dumped data looked good though. The tool might have failed in between stopping acquisition and laying out BHA. Further investigation needs to be carried out once the tool gets back to the base.

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BHA # 2: Motor-PowerPak and MWD/LWD Assembly

311 mm (12.25") Hole Section – (862.00 m MD- 1796.00 m MD)

The following 311mm (12.25") Motor-PowerPak and MWD/LWD Assembly was made up and run in hole:

311mm (12.25") PDC Bit (Type: Smith Mi616BPX, Jets: 6x 18)

9 6/8" PowerPak-A962 with sleeve

8" Float Sub

8 1/8" Monel

8 1/4" GVR LWD

8 1/4" TeleScope* MWD

8 3/8" X-Over

8 1/4" BAT Sonic

8 1/2" X-Over

8 ¼" sadnVISION* LWD

8 1/2" X-Over

6 X 8 ½ "DC

8" JAR

2X 8 ½" DC

8 ½" X-Over

5 X 5 1/2" HWDP

Drilling Summary

MWD/LWD Summary

The TeleScope* MWD tool was programmed with 12Hz/6bps configuration, to enable transmission of real time data uphole, providing Directional Survey information (Azimuth & Inclination).

GeoVISION and sadnVISION LWD tools were programmed at 5 second record rate each. sadnVISION was only run in recorded mode.

Successful Shallow Hole test was performed after making up first joint of heavy weight drillpipe. Drilling commenced after tagging cement at 862.00mMD. Signal problems were experienced throughout the run resulting in intermittent RT data. We experienced problems getting surveys as the automated pumps were slowly brought up and not in a single go. The issue was resolved after a talk with the driller.

We kicked off at 1239.00m MD. We mostly slid from 1239.00m MD to 1796.00m MD and hence were unable to get any good images in that interval.

Signal issue was temporarily resolved by pumping around the 1050-1100 GPM mark and maintained using pump stroke canceller and notch filter when required. Root cause of the signal issue was the lack of second SPT on goose neck which could have enabled us to read even a low signal from the tool.

Sliding was difficult throughout the run, however became a real struggle towards the end of the run. Upon bit inspection back at surface, the bit was quite worn, explaining the struggle to slide towards the end of the run.

Drilling and pump noise was also experienced in the run, along with some electrical noise due to cables being ran in cable trays that contains other electrical cables. This issue was mentioned to Company man, Toolpusher and Maintanance supervisor, however they insisted that cabling be 'Out of sight' as much as possible therefore cables were ran through cable trays.

After dumping sadnVISION porosity was found to be spiky. Some of the spikes can be correlated to coal beds but not all. Techlogs on SADN looked good however HEHV channel moved a bit which might be the cause of porosity spikes. There may be a triple HV failure. A further analysis would be done once the tool reaches the workshop.

Huge washouts were detected by sadnVISION which were later confirmed by wireline logs.

GeoVISION LWD experienced real time data failure throughout this run. After tool tagged bottom at 862.00mMD it was noticed that BIT_RES, RING_RES (Bit Resistivity, Ring Resistivity) were demodulating as 0 in HSPM surface system computer. This was in turn causing the real time curves to flat line on IDEAL real time depth log. After the tool was laid out on deck, all recorded memory was recovered from the GeoVISION tool and a recorded mode log was submitted to well site geologist including BIT_RES, RING_RES curves. Ring resistivity showed a faulty reading for about 100m outside the shoe.

After further investigation into the route cause of the real time BIT_RES, RING_RES failure from GeoVISION LWD tool it was noticed that the tool configuration file was programmed with internal coding to be ran in oil base mud, when in actual fact the well was being drilled with water base mud. This caused the tools internal algorithm used to calculate BIT_RES, RING_RES to produce incorrect values in real time, and in turn flat line on IDEAL real time display. Resulting in the loss of real time data.

It was getting very difficult to slide with the PDC bit and thus was decided to POOH and run in with a slick BHA which will allow the inclination to drop to the desired value.

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BHA # 3: Motor-PowerPak and MWD/LWD Assembly

311 mm (12.25") Hole Section – (1796.00 m MD- 1900.00 m MD)

The following 311mm (12.25") Motor-PowerPak and MWD/LWD Assembly was made up and run in hole:

311mm (12.25") PDC Bit (Type: Smith Mi616VHBPX, Jets: 9x 14)

9 6/8" PowerPak-A962 without any sleeve

8" Float Sub

8 1/8" Monel

8 1/4" GVR LWD

8 1/4" TeleScope* MWD

8 3/8" X-Over

8 1/4" BAT Sonic

8 1/2" X-Over

8" Monel

2 X 8 ½ "DC

8" JAR

8 ½" X-Over

9 X 5 1/2" HWDP

Drilling Summary

MWD/LWD Summary

Same tools were run as from the last BHA. sadnVISION was taken off from the BHA as it was interrupting with the BHA build/drop rates. As per Apache orders no Shallow Hole Test was carried out.

After running in the hole it was realized that the formation tops previously used were wrong and hence a plan was issued after we were almost about to tag bottom. We had made a drop assembly and the new plan wanted to build more. To summarize we changed from a S well to a normal directional well which required building upto 43 degrees.

GeoVISION LWD tool was programmed at 5 second record rate as in the last run.

Telescope was found to be switching off as soon as the motor got stalled. Tool was also found not to get into sync below 1100gpm. This could be attributed to we having just 1 SPT and signal strength being low from the tool. It was also noted on application of more WOB while sliding the tool lost sync though we were able to physically see tool working in the spectrogram. A differential pressure of about 300 psi was making signal go out .The signal strength was around0.8-1.3 psi for the run. The entire above mentioned signal issues resulted in intermittent RT data.

GeoVISION LWD tool on dumping showed failed medium button resistivity sensor. The root cause is still unknown as the tool has not reached the base yet. The whole run involved sliding hence we did not get any images from GVR. It was decided to pull out of the hole and change the bit as rate of penetration really slowed down.

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BHA # 4: Motor-PowerPak and MWD/LWD Assembly

311 mm (12.25") Hole Section – (1900.00 m MD- 2313.00 m MD)

The following 311mm (12.25") Motor-PowerPak and MWD/LWD Assembly was made up and run in hole:

311mm (12.25") MillTooth Bit (Type: Hughes Christianson MXL1, Jets: 3x 24)

9 6/8" PowerPak-A962 with sleeve

8" Float Sub

8 1/8" Monel

8 1/4" GVR LWD

8 1/4" TeleScope* MWD

8 3/8" X-Over

8 1/4" BAT Sonic

8 1/2" X-Over

8" Monel

2 X 8 ½ "DC

8" JAR

8 ½" X-Over

9 X 5 1/2" HWDP

Drilling Summary

MWD/LWD Summary

We only changed the bit from the last run and added a sleeve to the motor. Same tools were run in the hole. All programming rates remained as from the last run. We went in with a new Milltooth bit to get the desired inclination and azimuth. We started sliding according to the new plan. Tool face was steady and we drilled in the right direction.

Signal issues continued from the last run. Signal was intermittent all through the run and would go out of sync in rotary even when there was no harmonic or noise in the bandwidth. TD was called at 2313.00m MD. Button resistivity showed high value in real time hence confirming failed status from the last run.

At TD it was decided to Re-log for images from 2100-1770 m. We pumped out of the hole using Rop of 150m/hr rotating at 50 rpm. High stick and slip was observed while pumping out of the whole. Compnay man was informed of the ROP limitations for the re-logging section. It was also conveyed to the client that since we had been sliding from 1240m till 1776 m we may not have images in that interval. Long time to re- log and urgency to run wireline as the hole was washed out made the company man to decide against re-logging for images for the above mentioned interval.

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BHA # 5: Motor-PowerPak and MWD/LWD Assembly

311 mm (12.25") Hole Section – WiperTrip(2313.00 m MD- 2313.00 m MD)

The following 311mm (12.25") Motor-PowerPak and MWD/LWD Assembly was made up and run in hole:

311mm (12.25") MillTooth Bit (Type: Hughes Christianson MXL1, Jets: 3x 24)

9 6/8" PowerPak-A962 without any sleeve

8" Float Sub

8 1/8" Monel

8 1/4" GVR LWD

8 1/4" TeleScope* MWD

8 3/8" X-Over

8 1/2" X-Over

8 ¼" sandVISION LWD

8" Monel

2 X 8 ½ "DC

8" JAR

8 ½" X-Over

9 X 5 1/2" HWDP

Drilling Summary

MWD/LWD Summary

After TD of the well wireline was run to do further formation evaluation. Wireline was unable to go past 1390.00m MD with their sonic scanner and 1590.00m MD with PEX. Wireline logs agreed with our logs proving the hole is washed out at many places.

It was decided to run sadnVISION with the racked back BHA from the last run and to make trip out logs. sadnVISION was programmed at a 5 second record rate. We reached bottom with some tight spots all along the way and even had to fire jars once. We circulated out of the hole at 1100 gpm, 120 m/hr rop and 50rpm and logged from 2313.00m MD to 1740.00m MD. Hole appears to be out of gauge at a lot of places. Ream out logs were made and density and porosity data was given to the client.

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BHA Run Summary

Run	Hole Size (mm)	MWD/LWD Services	Start Depth (m)	End Depth (m)	Distance (m)	Run Start Date	Run End Date
1	406	D&I,GR, Sonic-Slowness	135.0	862.0	727.0	15-Feb-08	17-Feb-08
2	311	D&I,GR,RES, Density,Porosity	862.0	1796.0	934.0	22-Feb-08	26-Feb-08
3	311	D&I,GR,RES	1796.0	1900.0	104.0	26-Feb-08	27-Feb-08
4	311	D&I,GR,RES	1900.0	2313.0	413.0	27-Feb-08	01-Mar-08
5	311	D&I,GR,RES, Density,Porosity	2313.0	2313.0	0.0	02-Mar-08	04-Mar-08

Run	BRT Hours	Drilling Hours	Circulating Hours	Max Temp (degC)	Trip for MWD	Failure type
1	49.33	13.90	23.3	38.90	No	None
2	97.00	50.40	56.9	53.40	No	BIT_RES, RING_RES in RT
3	28.00	8.44	11.10	56.30	N0	Medium Button RES
4	77.00	46.97	53.2	60.00	No	Medium Button RES
5	36.00	0	12	65.00	No	Medium Button RES

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GEOFRAME
PROCESSED
INTERPRETATION

Wasabi−1
QC Plot – SonicVision
(16" section)

*A Mark of Schlumberger

Using the following logs:

COMPANY: Apache Energy Ltd
WELL: Wasabi−1
FIELD: VIC−P58
COUNTY:
STATE:
COUNTRY: Australia
Date Logged: 17−Feb−2008 Date Processed: 18−Feb−2008
Well Location:

Elevations: KB: DF: GL:

API Number: Job Number:

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

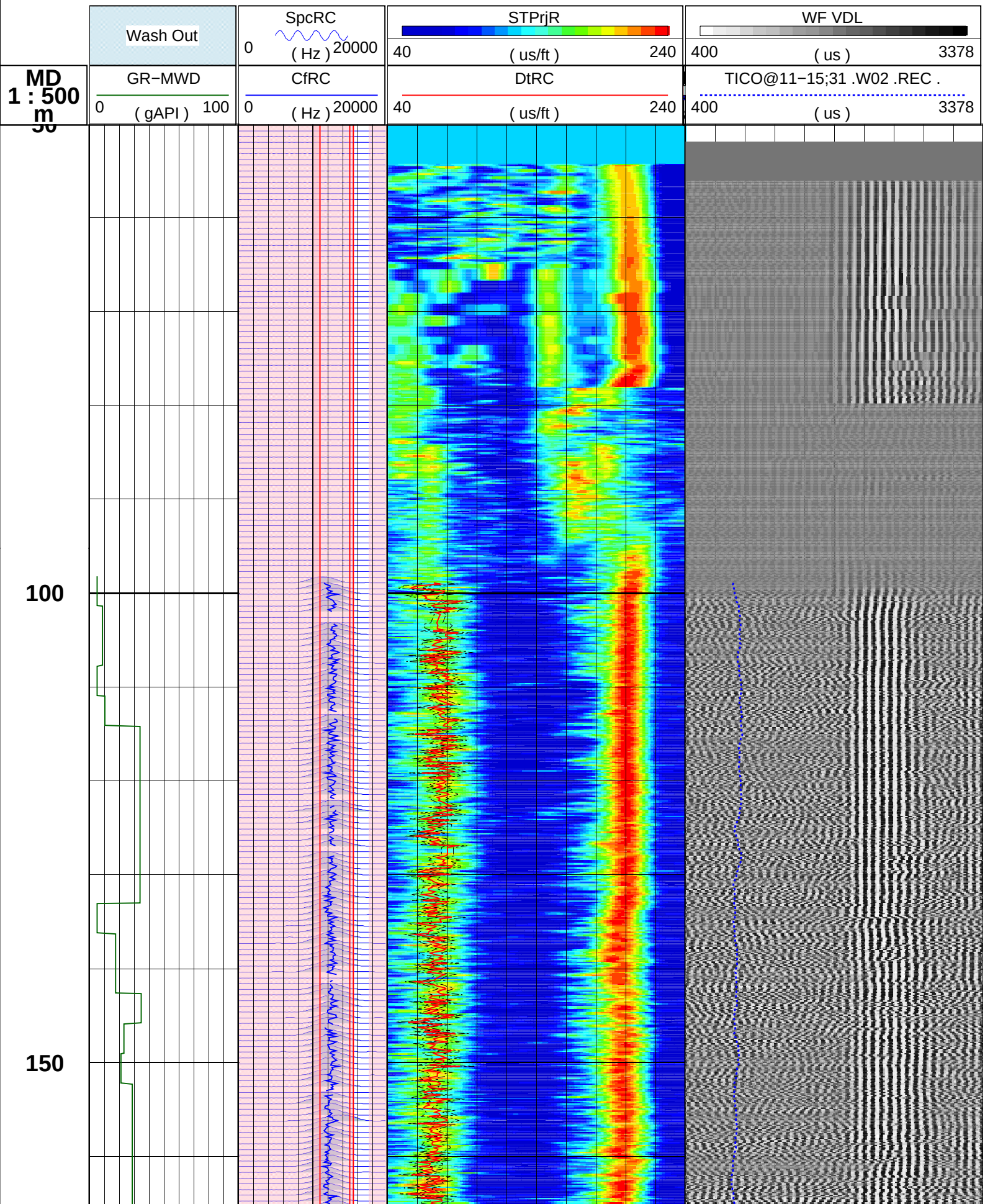
Field Recording:	Location:	Software Version: 13X0−101	Engineer:
Office Recording:	ICS Center:	Baseline: GF 4.3	Log Analyst: Taesoo Kim

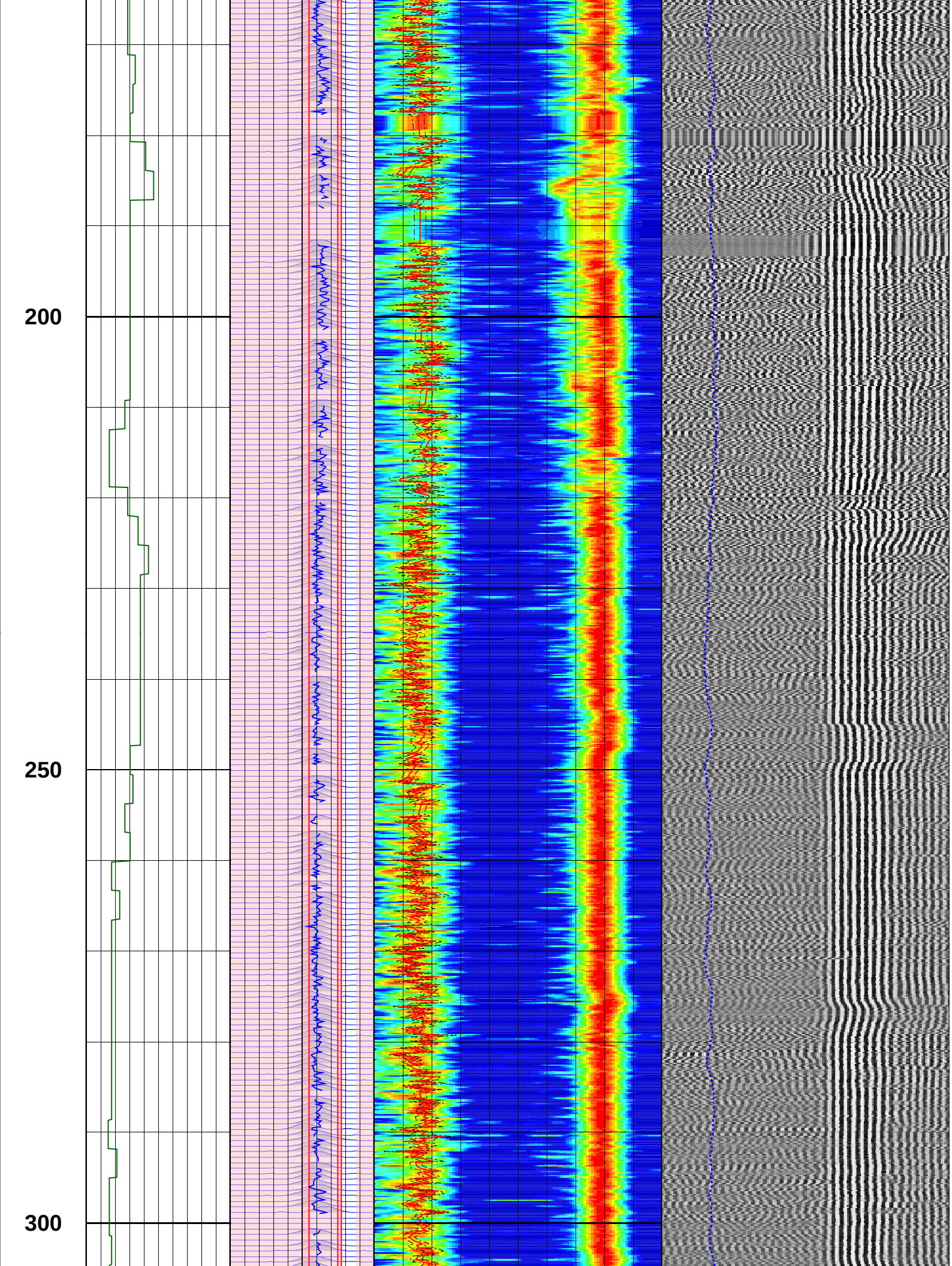
Mud and Borehole Measurements:

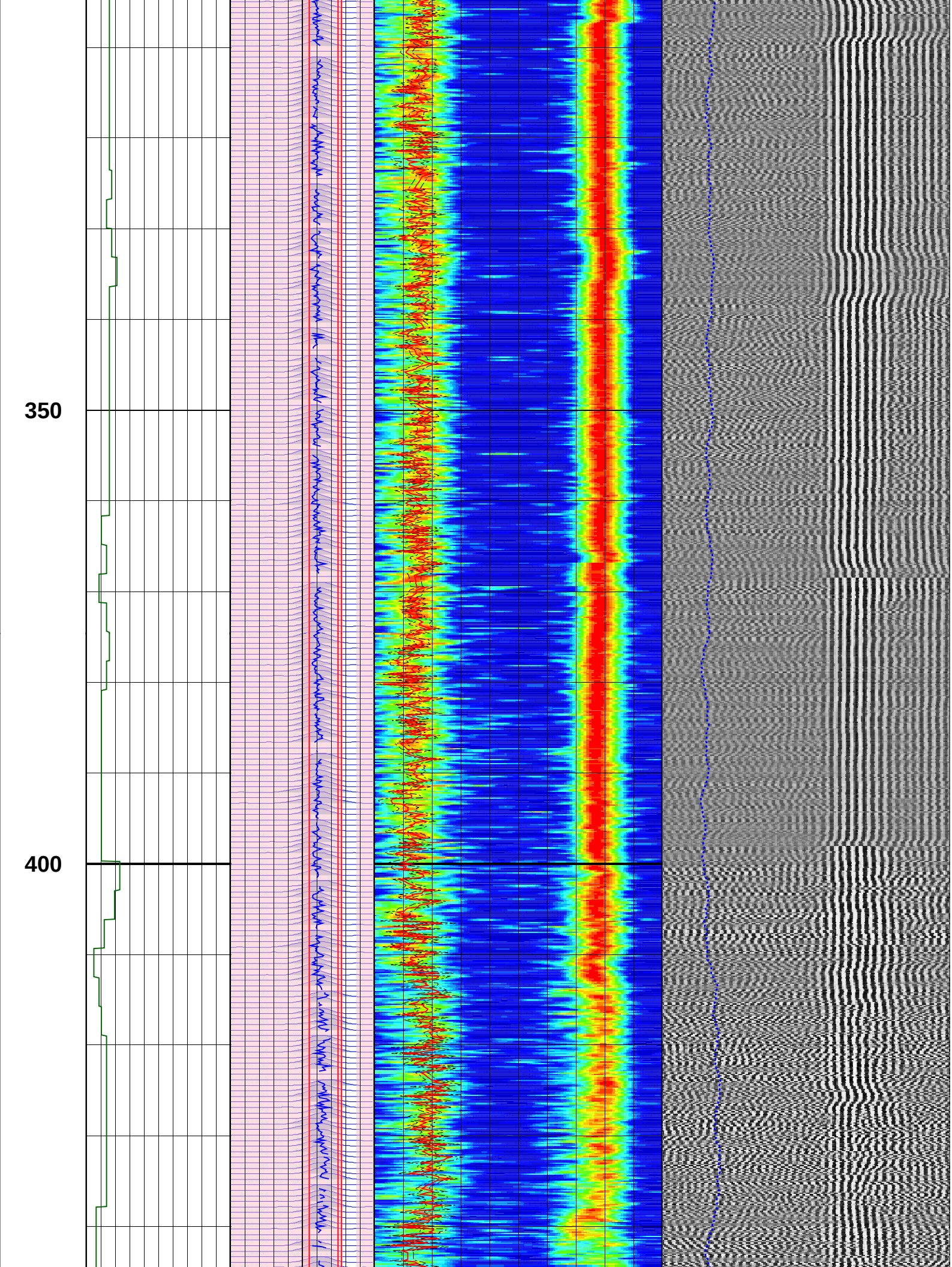
Rm @ Measured Temperature:	@	BHT:	Bitsize: 16in
Rmf @ Measured Temperature:	@	Type Fluid in Hole:	
Rmc @ Measured Temperature:	@	Mud Density: 1.35g/cm3	

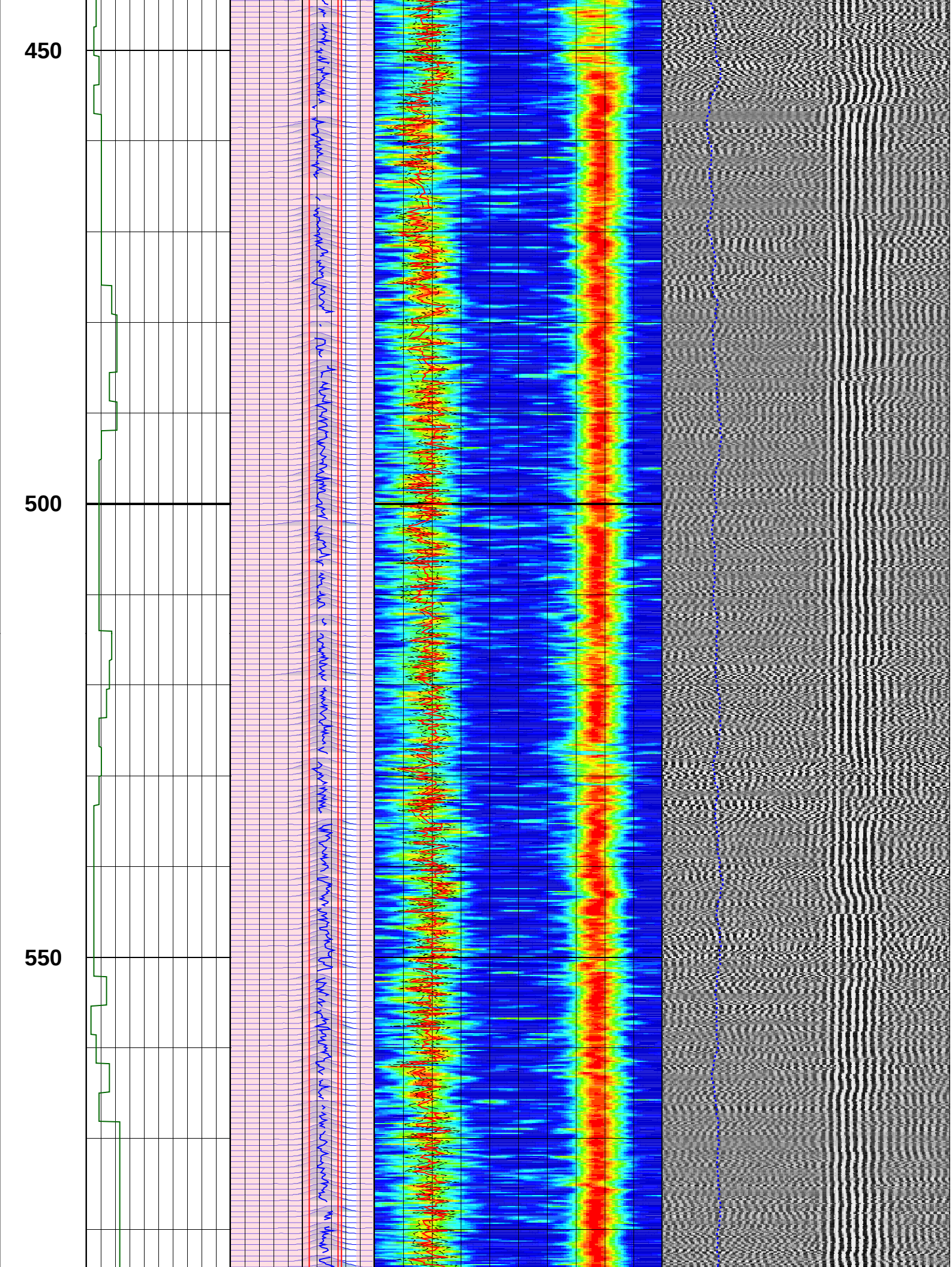
Remarks:

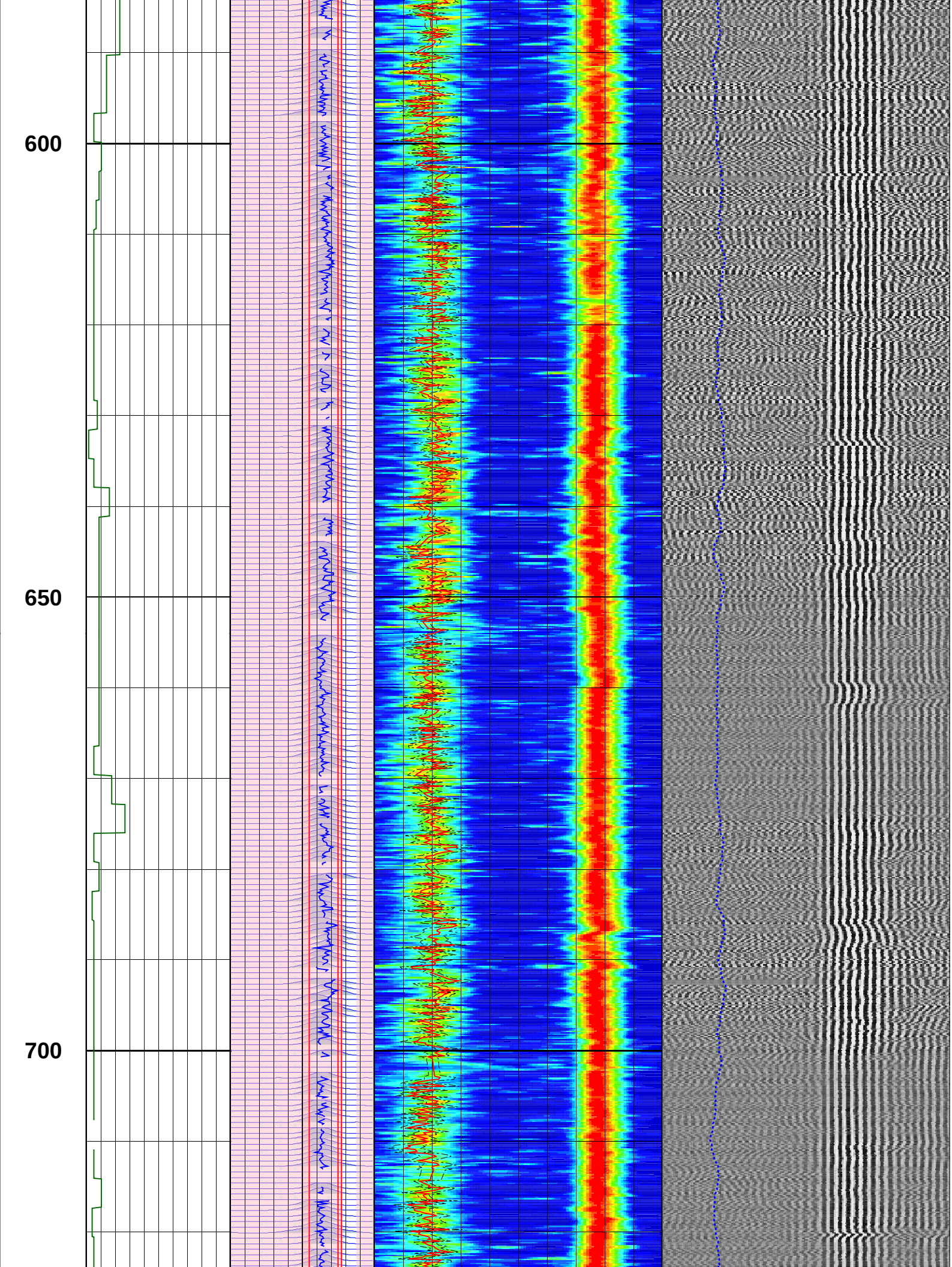
Data processed in computing center with 11−15 Khz.

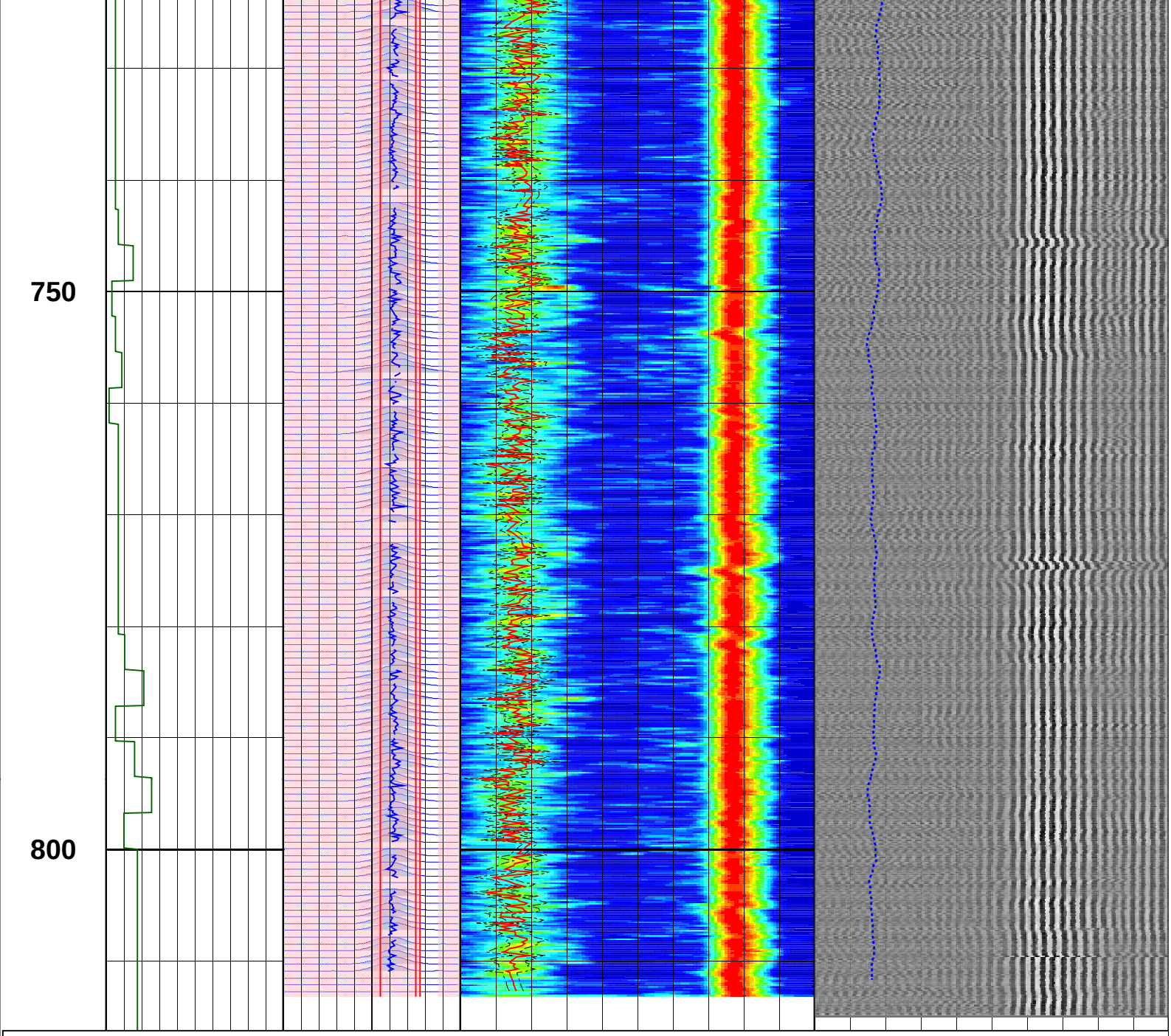

Wash Out
SpcRC
0
(Hz)
20000
STPrjR
40
(us/ft)
240
WF VDL
400
(us)
3378
MD
1 : 500
m
GR−MWD
0
(gAPI)
100
CfRC
0
(Hz)
20000
DtRC
40
(us/ft)
240
TICO@11−15;31 .W02 .REC .
400
(us)
3378
100
150


200
250
300


350
400


450
500
550


600
650
700



Customized Process: Start Depth (813.211 m), Stop Depth (50.1437 m), Logging Mode (ISONIC − MPS_WIDE)
Noise Cut Filtering(No), Casing Cut Filtering(No)
WF_FLG(1 1 1 1), MUD_TYPE(WBM), DTMUD(195), STCAL(Full Array)
TRSPAC(3.00228), RRSPAC(0 0.2032 0.4064 0.6096)
Hole Diameter (no input)
Zoning Guide (no input)
Tracking Guide (no input)

−−− Zone Top Depth (0), Zone Name (Zone1) −−·
SFTY(Intermediate), BHS(OPEN), CSIZ(13.375), HDM(Fix*), HD(16*)
TWI(238.281), SLL(39.7135), SUL(240.267), SST(1.98568), TLL(400), TUL(3219.66), TST(39.7135)
SBW(1120), SBO(160), SWD(20), TWD(840), SEM(0.45), FLENG(63), FLOW(11000*), FHIGH(15000*)
TKO_MODEL_ORDER(2), TKO_TOL(50) TKO_FLOW(0), TKO_FHIGH(12000)

MD 1 : 500 m	GR−MWD	CfRC	DtRC	TICO@11−15;31 .W02 .REC .
	0 (gAPI) 100	0 (Hz) 20000	40 (us/ft) 240	400 (us) 3378
	Wash Out	SpcRC	STPrjR	WF VDL
		0 (Hz) 20000	40 (us/ft) 240	400 (us) 3378

Schlumberger

Company: **Apache Energy Ltd**

Well: **Wasabi−1**
Field: **Vic−P58**
Rig: **West Triton** State: **Victoria**

Rig: West Triton
Field: Vic−P58
Location: Bass Strait
Well: Wasabi−1
Company: Apache Energy Ltd

GeoVISION Service
1:500 Measured Depth
Recorded Mode Data, Composite Log

Location

Total depth:	2313.00 m	Elevation K.B.	Top Drive
Spud date:	14−Feb−08	G.L.	−37.00 m
Runs:	1 To 5	D.F.	38.00 m

Permanent datum:	AHD	Elev.:	0.00 m
Log measured from:	Drill Floor	38.00 m above Perm. datum	
Depth reference:	Driller's Depth		

API serial no.	N 5 739 963.350 m	Longitude	Latitude
07ASQ0028	E 522 993.588 m	E 147° 15'49.147"	S 38° 29'18.157"

Depth logged:	85.48 m	To	2298.36 m	Mag decl: 12.801 deg.	Other services:
Date logged:	15−Feb−08	To	03−Mar−08	Mag dip: −69.071 deg.	See Remarks

Bore hole record

Hole size	from	to
406 mm	135.00 m	862.00 m
311 mm	862.00 m	2313.00 m

Casing record

Size	Density	from	to
508 mm	193 lbm/m	Well Head	135.00 m
440 mm	101 lbm/m	Well Head	857.00 m

Mud record

Type	from	to
Sea Water	135.00 m	862.00 m
WBM	862.00 m	2313.00 m

Borehole deviation record

Min	Max	from	to
0.18 deg.	0.84 deg.	135.00 m	862.00 m
0.20 deg.	48.08 deg.	862.00 m	2313.00 m

Surface equipment

Unit	OLU−KC−0702
Depth system	DWE & CLT

Software record

IDEAL Wis	ID13_0c_05		
SPM	hspm13_0c_03		
LWD	See Remarks		
MWD	See Remarks		

OTHER SERVICES FOR RUN1
sonicVISION Service

REMARKS: RUN NUMBER 1
Depth is referenced to driller's depth.

SonicVISION Data is presented separately.

Run Objective: Drill 406mm hole section
POOH: Section TD

OTHER SERVICES FOR RUN2
Directional Surveys

REMARKS: RUN NUMBER 2
Depth is referenced to driller's depth.
GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.
GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

SADN Thermal Neutron Porosity (TNPH) is corrected for the effects of bit size, temperature, mud salinity, and mud hydrogen index (a factor of mud weight, mud temperature, and pressure).
Gaps in TNPG data , from 1295m to 1750m, due to unstable detector high voltage

OTHER SERVICES FOR RUN3
Directional Surveys

REMARKS: RUN NUMBER 3
Depth is referenced to driller's depth

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

Neutron Porosity is calculated using a limestone matrix with a matrix density of 2.71 g/cm^3

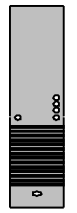
GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

EQUIPMENT DESCRIPTION

RUN1

DOWNHOLE EQUIPMENT



sonicVISION8 — 53.74
S/N: 34888 RX array — 49.91
Software Ver.: V6.6B04

308mm In−Line Stabiliser — 46.06

Telescope — 44.74
S/N: FB46
Software Ver.: 9.2C02
D&I — 40.36

Crossover — 36.25

Crossover — 35.77

406mm Stabilizer — 35.08

Drill Collar — 32.35

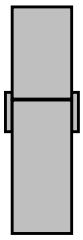
406mm Stabiliser — 22.91

Drill Collar — 20.27

Drill Collar — 11.10

RUN2

DOWNHOLE EQUIPMENT



adnVISION8s — 40.70
S/N: 42714
Software Ver: V8.3A02
Blade OD: 305mm
NSR−T 06−01 Neutron Porosity — 39.22
GSR−Z 06−01
Bulk Density — 37.36
Ultra Sonic — 37.17

Crossover — 34.33
S/N: SBD4865

BAT Sonic — 33.99
S/N: PA9016356106

Crossover — 27.13
S/N: ASQ8005

TeleScope — 26.66
S/N: VR 53
Software Ver.: 9.2C02
D&I — 22.28

geoVISION8 — 18.16
S/N: 42184
Software Ver.: V9.1B14
Shallow — 15.88
Deep — 15.57
GR — 15.10

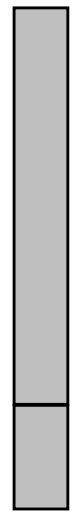
Monel Drill Collar — 13.91
S/N:9710422

Float Sub — 11.01
S/N: CMP2051

A962 PowerPak Motor — 10.36
S/N: N7504

RUN3

DOWNHOLE EQUIPMENT



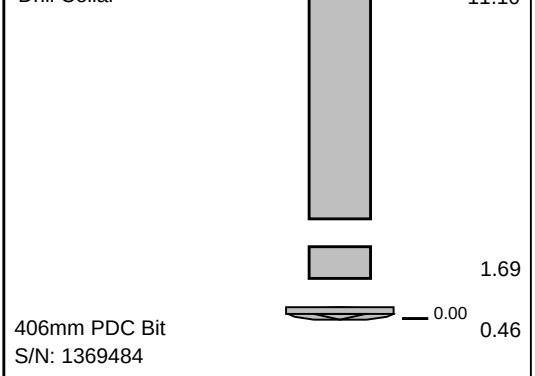
TeleScope — 26.38
S/N: VR 53
Software Ver.: 9.2C02
D&I — 22.00

geoVISION8 — 17.88
S/N: 42184
Software Ver.: V9.1B14
Shallow — 15.60
Deep — 15.29
GR — 14.82

Monel Drill Collar — 13.63
S/N:9710422

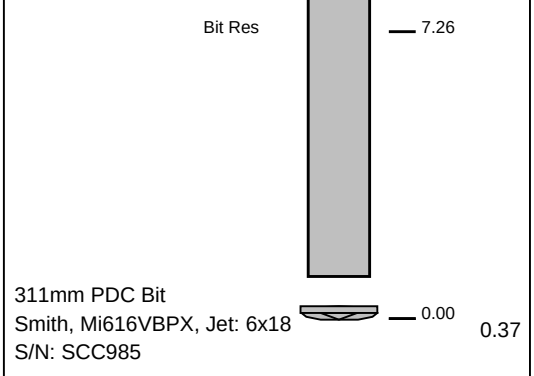
Float Sub — 10.73
S/N: CMP 2051

A962 PowerPak Motor — 10.08
S/N: N7504
Bit Res — 7.12



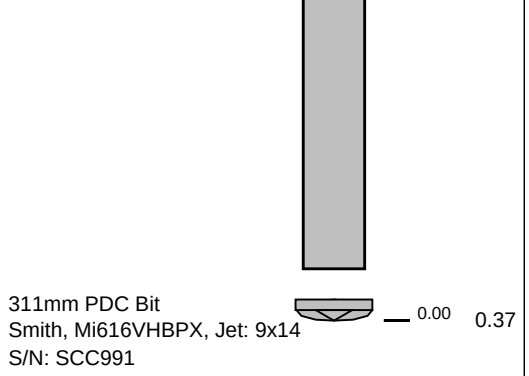
406mm PDC Bit
S/N: 1369484

Maximum string diameter 406mm
All lengths in Meters



311mm PDC Bit
Smith, Mi616VBPX, Jet: 6x18
S/N: SCC985

Maximum string diameter 311mm
All lengths in Meters



311mm PDC Bit
Smith, Mi616VHBPX, Jet: 9x14
S/N: SCC991

Maximum string diameter 311mm
All lengths in Meters

OTHER SERVICES FOR RUN4
Directional Surveys

OTHER SERVICES FOR RUN5
Directional Surveys

REMARKS: RUN NUMBER 4
Depth is referenced to driller's depth.

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

REMARKS: RUN NUMBER 5
Depth is referenced to driller's depth.

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

SADN Thermal Neutron Porosity (TNPH) is corrected for the effects of bit size, temperature, mud salinity, and mud hydrogen index (a factor of mud weight, mud temperature, and pressure).

Neutron Porosity is calculated using a limestone matrix with a matrix density of 2.71 g/cm^3

GVR RING and Medium Button resistivities are not presented due to sensor failures.
Run Objective: Open hole logging from TD to 1756.68m
POOH: End of logging

EQUIPMENT DESCRIPTION

RUN4

DOWNHOLE EQUIPMENT

RUN5

DOWNHOLE EQUIPMENT

Telescope
S/N: VR 53
Software Ver.: 9.2C02

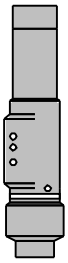
D&I — 22.03

26.41

geoVISION8
S/N: 42184
Software Ver.: 9.1B14

Shallow — 15.63
Deep — 15.32
GR — 14.85

17.91



Pony Monel Drill Collar
S/N: 9710422

13.66

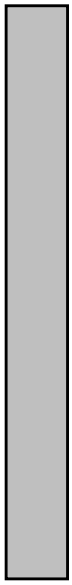
Float Sub
S/N: CMP 2051

10.76

A962 PowerPak Motor
S/N:N7504

Bit Res — 7.13

10.11



311mm Milled Tooth Bit
Jet: 3x24

0.00

0.40

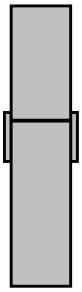
Maximum string diameter 311mm
All lengths in Meters

adnVISION8s
S/N: 42709

Neutron Porosity — 32.11
Bulk Density — 30.13
UltraSonic — 29.96

Blade OD: 305mm
NSR−T 06−01
GSR−Z 06−01

33.51



Crossover
S/N: S27947

27.14

Crossover
S/N: ASQ005

26.80

Telescope
S/N: VR 53
Software Ver.: 9.2C02

D&I — 21.95

26.33

geoVISION8
S/N: 42184
Software ver.: 9.1B14

Shallow — 15.55
Deep — 15.24
GR — 14.77

17.83

Pony Monel Drill Collar
S/N: 9710422

13.58

Float Sub
S/N: CMP 2051

10.68

A962 PowerPak Motor
S/N: N7504

Bit Res — 7.09

10.03

311mm Milled Tooth Bit
Jet: 1x21, 3x24

0.00

0.32

Maximum string diameter 311mm
All lengths in Meters

Bit Run Summary

Run number		1	2	3	4	5
Bit size	mm	406	311	311	311	311
Bit start depth	m	135	862	1796	1900	2313
Bit end depth	m	862	1796	1900	2313	2313
Top interval logged	m	85.48	822.68	1777.19	1881.19	1703.89
Bottom interval logged	m	812.48	1756.68	1881.19	2294.19	2298.36
Begin log: time		21:53	23:21	22:15	03:44	10:04
Begin log: date		15−Feb−08	22−Feb−08	26−Feb−08	28−Feb−08	03−Mar−08
End log: time		01:52	16:06	08:47	05:30	20:12
End log: date		17−Feb−08	25−Feb−08	27−Feb−08	01−Mar−08	03−Mar−08
Mud data						
Depth	m	862	1796	1900	2313	2313
Type		Sea Water	WBM	WBM	WBM	WBM
Mud weight	ppg	8.85	9.6	9.64	10.02	10.02
Solids	%	4.7	4.1	3.9	5.1	5.1
Chlorides	mg/L	2000	48000	50000	49000	49000
Rm	ohm.m@ºC	n/a	0.085@27	0.086@27	0.084@27	0.086@27
Rmf	ohm.m@ºC	n/a	0.070@27	0.074@27	0.074@27	0.073@27
Rmc	ohm.m@ºC	n/a	0.097@27	0.094@27	0.098@27	0.098@27
Potassium	%	n/a	4.33	4.58	4.4	4.4
Environmental data						
GR						
Mud weight	ppg	8.85	9.6	9.64	10.02	10.35
Bit size	mm	406	311	311	311	311
Resistivity						
Neutron porosity						
Hole Size	mm	406	311	311	311	311
Mud weight	ppg	8.85	9.6	9.64	10.02	10.35
Temperature	ºC	24.31	55.7	58.8	65.9	59.61
Mud salinity	ppk	n/a	n/a	n/a	n/a	n/a
Formation salinity		n/a	n/a	n/a	n/a	n/a
Recording rate 1	SEC	5 (SON)	5 (GVR)	5 (GVR)	5 (GVR)	5 (GVR)
Recording rate 2	SEC	n/a	5 (SADN)	n/a	n/a	5 (SADN)
Filtering GR		3 pts	3 pts	3 pts	3 pts	3 pts
Filtering density		3 pts	3 pts	3 pts	3 pts	3 pts
Filtering Neutron		3 pts	3 pts	3 pts	3 pts	3 pts
Company representative		B.Openshaw	S.Schmidt			
Anadrill personnel		A.Kohli	C.Hibberson	D.Perkins	J.Patterson	A.Vedat

Variable Name	Variable Description	Run Name & Value		
	Run Number	2	3	
	General Information			
BHT_RM	Bottom Hole Temperature (RM)	DEGC	65.000	65.000
BSAL_RM	Mud Salinity (RM)	PPK	95.000	95.000
BS_RM	Bit Size (RM)	IN	12.250	12.250
COEF_M	User Defined FEXP in Clean Sand	----	1.650	1.650
C_WS	Overpressure correction to Sw and M	----	1.000	1.000
FEXP	Formation Factor Exponent(RM)	----	2.000	2.000
FNUM	Formation Factor Enumerator(RM)	----	1.000	1.000
FPHI_RM	Formation Factor Porosity Source (RM)	----	XPLOT	XPLOT
MST_RM	Mud Sample temperature (RM)	DEGC	20.400	20.400
MW_RM	Mud Weight (RM)	LB/G	9.530	9.530
OBMF_RM	Oil Based Mud (RM)	----	NO	NO
RHOF_RM	Mud Filtrate Density (RM)	G/C3	1.000	1.000
RHOM_RM	Matrix density (RM)	G/C3	2.710	2.710
RMS_RM	Resistivity of Mud Sample (RM)	OHMM	0.085	0.085
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			

RWA_RES_IN Rwa computation resistivity input
RWS_RM Resistivity of Connate Water (RM) OHMM 1.000 1.000
SHT_RM Ground Level Temperature (Mud−Line When Offshore) (RM) DEGC 15.000 15.000
TD_RM Total Measured Depth (RM) M 1796.000 1900.000
TWS_RM Temperature of Connate Water (RM) DEGC 23.889 23.889
VF_ILLI Fraction of illite in shales ---- 0.500 0.500
VF_KAOL Fraction of kaolinite in shales ---- 0.500 0.500
VF_MONT Fraction of montmorillonite in shales ---- 0.000 0.000
XPDM_RM Cross plot density porosity multiplier ---- 0.675 0.675
XPNM_RM Cross plot neutron porosity multiplier ---- 0.325 0.325

SAD
ADN_CHASSIS_STR Type String Chassis ADN
ADN_COLLAR_STR Type String Collar ADN
ADN_DATA_FIX ADN: Create A Corrected ADN Time Data File ---- NO
ADN_DATA_LTB ADN: Create An ADN LTB Data File ---- NO
ADN_STAB_STR ADN Stabilizer Type String ---- NO
ALPHA_COMPUTE_D Perform Density Enhanced Vertical Resolution process ? ---- NO
ALPHA_COMPUTE_N Perform Neutron Enhanced Vertical Resolution process ? ---- NO
AVE_ADN ADN/Array Channels: perform averaging(RM) : ---- YES
A_DHS ADN Down Hole Software Version String ---- YES
CHI_RM Caliper High limit from BS (RM) IN 3.000
CLO_RM Caliper Low limit from BS (RM) IN 0.000
DEVI Well Section Deviation DEG 12.300
DTIK_SEL ADN: Density Tick Channel Name ---- LSAZ
DTMUD Delta−T for Mud US/F 189.320
DYN_IMG_COMPUTE Generate Dynamic Normalized Image? ---- NO
ENVCOR Neutron Processing: Environmental Correction? ---- YES
EVRL EVR Process averaging number of samples (RM) ---- 49
FAZ1_AVAIL ADN8 Neutron Far Tube 1 Available? ---- YES
FAZ2_AVAIL ADN8 Neutron Far Tube 2 Available? ---- YES
FAZ3_AVAIL ADN8 Neutron Far Tube 3 Available? ---- YES
FCD Future Casing (Outer) Diameter IN 0.000
GCSE Generalized Caliper Selection ---- BS
IDQT Image Derived Quality Threshold ---- 0.400
IHVS Integrated Hole Volume Start Value(RM) F3 0.000
IMAGE_MAX_SOA Image SOA (Quadrant) Right Scale IN 2.500
IMAGE_MAX_SPEF Image PEF(Segment) Right Scale ---- 6.000
IMAGE_MAX_SRHOB Image RHOB(Segment) Right Scale G/C3 2.650
IMAGE_MIN_SOA Image SOA (Quadrant) Left Scale IN 0.000
IMAGE_MIN_SPEF Image PEF(Segment) Left Scale ---- 2.000
IMAGE_MIN_SRHOB Image RHOB(Segment) Left Scale G/C3 2.050
JSD_ADN ADN Acquisition start date G/C3 2.050
LITHO_TYPE_ADN Lithology (RM) ---- LIME
N1FTU_6_RM ADN: Neutron Bank 1 Far Tubes used : ---- 1−2−3
N2FTU_6_RM ADN: Neutron Bank 2 Far Tubes used : ---- 1−2−3
NNTU_8_RM ADN: Neutron Near Tube used : ---- 1−2−3
NTIK_SEL ADN: Neutron Tick Channel Name ---- FAZ1
RSD LWD run start date dd−mmm−yy OHMM 0.085 0.085
RWA_COMP_MOD Rwa computation model ---- BASIC BASIC
RWA_DEN_ADN Rwa Density Input ---- RHOB RHOB
RWA_DEN_CDN Rwa Density Input ---- RHOB RHOB
RWA_DEN_INPUT Rwa Density Input ---- RHOB RHOB
RWA_FORM_MOD Rwa computation formation model ---- CLASTIC CLASTIC
RWA_RES_INPUT Rwa computation resistivity input ---- RT RT
SOCNL Standoff Distance of the CNL Tool ---- 1.000
SSIZ_ADN ADN Stabilizer Size IN 12.000
STOH ADN Density Top of Hole Sector (Left Boundary): ---- SECTOR_0
TRPM_RM Average Tool Rotational Speed RPM 20.000
USMIN_RM ADN:Minimum Ultrasonic standoff (RM) IN 0.180
USWF_RM ADN:Process Ultrasonic Waveform? ---- NO
VERS_ADN ADN Downhole Software Version ---- 8.300
WSDI Window Size of Dynamic Normalization Image M 4.572

RAB
RAB/BTN_SLV_SIZE/PARAMETE IN −− RAB: Button Sleeve Diameter 7/8 11 11
RAB/STAB_SIZE/PARAMETER RAB: Stabilizer Diameter IN 12−12.25 12−12.25
BDBHCA RAB: Button Deep Borehole A Factor ---- −0.035 −0.035
BDBHCB RAB: Button Deep Borehole B Factor ---- −0.018 −0.018
BHA_COEF_VER RAB: BHA Coef Generator Version ---- 2.000 2.000
BITBHCA RAB: Bit A Borehole Factor ---- 0.095 0.095
BITBHCB RAB: Bit B Borehole Factor ---- −0.075 −0.074
BIT_K_FACTOR RAB: Bit K Factor ---- 18.639 18.382
BMBHCA RAB: Button Medium Borehole A Factor ---- 0.006 0.006
BMBHCB RAB: Button Medium Borehole B Factor ---- −0.019 −0.019
BSBHCA RAB: Button Shallow Borehole A Factor ---- −0.009 −0.009
BSBHCB RAB: Button Shallow Borehole B Factor ---- −0.036 −0.036
BUT_KIMP_A RAB: Button Impedance Coeff A ---- 0.002 0.002
BUT_KIMP_B RAB: Button Impedance Coeff B ---- 0.000 0.000
DBUTTON_K_FACTO RAB: Button Deep K factor ---- 0.003 0.003
DHS_VERSION RAB: DownHole Software Version ---- −999.250 −999.250
GR_BHC_TOOLSIZE RAB: Gamma−Ray Borehole Coeff 1 ---- 8.250 8.250
HI_CSDEPTH_OUT RAB: Allow Hi−Resolution CS_DEPTH Image Data Output ---- NO NO
HI_DLIS_OUT RAB: Allow Hi−Resolution DLIS Image Data Output ---- NO NO
HI_RIVER_OUT RAB: Allow Hi−Resolution River for Image Data Output ---- NO NO
IMAGE_MAX_GR RAB: GR Image Maximum Scale Value GAPI 120.000 120.000
IMAGE_MAX_RES RAB: Image Maximum Resistivity Value OHMM 100.000 100.000
IMAGE_MIN_GR RAB: GR Image Minimum Scale Value GAPI 20.000 20.000
IMAGE_MIN_RES RAB: Image Minimum Resistivity Value OHMM 1.000 1.000
JSD_RAB RAB Acquisition start date OHMM 1.000 1.000
KPER Potassium Concentration (RM) ---- 4.900 4.900
MAG_DECL_RAB RAB: Magnetic Declination DEG 12.800 12.800
MAG_INCL_RAB RAB: Magnetic Dip DEG −69.070 −69.070
MBUTTON_K_FACTO RAB: Button Medium K Factor ---- 0.004 0.004
OBM RAB: Oil base Mud ---- NO NO
ORIENTATION_RM Rab Image Orientation ---- TOH TOH

RABBDA0	RAB: Button Deep A0 Coeff	----	-0.118	-0.118
RABBDA1	RAB: Button Deep A1 Coeff	----	0.102	0.103
RABBDA2	RAB: Button Deep A2 Coeff	----	-0.043	-0.043
RABBDA3	RAB: Button Deep A3 Coeff	----	0.009	0.009
RABBDA4	RAB: Button Deep A4 Coeff	----	-0.001	-0.001
RABBDA5	RAB: Button Deep A5 Coeff	----	0.000	0.000
RABBDMIN	RAB: Button Deep Minimum Value	----	0.038	0.038
RABBITA0	RAB: Bit A0 Coeff	----	6.244	6.097
RABBITA1	RAB: Bit A1 Coeff	----	-22.738	-21.924
RABBITA2	RAB: Bit A2 Coeff	----	96.737	91.069
RABBITA3	RAB: Bit A3 Coeff	----	-161.021	-149.094
RABBITA4	RAB: Bit A4 Coeff	----	120.518	110.251
RABBITA5	RAB: Bit A5 Coeff	----	-33.735	-30.581
RABBITMIN	RAB: Bit Minimum Value	----	22.460	22.458
RABBMA0	RAB: Button Medium A0 Coeff	----	-0.118	-0.118
RABBMA1	RAB: Button Medium A1 Coeff	----	0.096	0.097
RABBMA2	RAB: Button Medium A2 Coeff	----	-0.039	-0.040
RABBMA3	RAB: Button Medium A3 Coeff	----	0.008	0.008
RABBMA4	RAB: Button Medium A4 Coeff	----	-0.001	-0.001
RABBMA5	RAB: Button Medium A5 Coeff	----	0.000	0.000
RABBMMIN	RAB: Button Medium Minimum Value	----	0.041	0.041
RABBSA0	RAB: Button Shallow A0 Coeff	----	-0.127	-0.127
RABBSA1	RAB: Button Shallow A1 Coeff	----	0.097	0.098
RABBSA2	RAB: Button Shallow A2 Coeff	----	-0.038	-0.039
RABBSA3	RAB: Button Shallow A3 Coeff	----	0.007	0.007
RABBSA4	RAB: Button Shallow A4 Coeff	----	-0.001	-0.001
RABBSA5	RAB: Button Shallow A5 Coeff	----	0.000	0.000
RABBSMIN	RAB: Button Shallow Minimum Value	----	0.055	0.055
RABDHS	RAB Down Hole Software	----	4.000	4.000
RABEC	RAB: Resistivity Env-Cor	----	YES	YES
RABRNGA0	RAB: RING A0 Coeff	----	-0.114	-0.114
RABRNGA1	RAB: RING A1 Coeff	----	0.101	0.102
RABRNGA2	RAB: RING A2 Coeff	----	-0.043	-0.044
RABRNGA3	RAB: RING A3 Coeff	----	0.009	0.009
RABRNGA4	RAB: RING A4 Coeff	----	-0.001	-0.001
RABRNGA5	RAB: RING A5 Coeff	----	0.000	0.000
RABRNGMIN	RAB: Ring Minimum Value	----	1.150	1.150
RAB_BIT_ECAL	Bit Resistivity for ECAL_RAB?	----	YES	YES
RAB_BIT_INVERSI	Input Bit Resistivity for Inversion? (Recommended at the bit)	----	NO	NO
RAB_CALIPER_CAL	Compute ECAL_RAB?	----	NO	NO
RAB_DATA_FIX	RAB: Create A Corrected RAB Time Data File	----	NO	NO
RAB_DATA_LTB	RAB: Create An RAB LTB Data File	----	NO	NO
RAB_DEEPBTN_ECA	Deep Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_DEEPBTN_INV	Input Deep Button Resistivity for Inversion?	----	YES	YES
RAB_INVERSION	Perform Rt Inversion?	----	NO	NO
RAB_INVERSION_B	RAB Bit Sensor Weight for Inversion[0,1]	----	0.000	0.000
RAB_INVERSION_B	Ending Depth for GR Cutoff in Zone1 (default through the whole well)	M	30480.000	30480.000
RAB_INVERSION_B	Ending Depth of Zone10	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone2	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone3	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone4	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone5	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone6	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone7	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone8	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone9	M	-304.571	-304.571
RAB_INVERSION_C	Continuity Multiplier[0,1]	----	0.500	0.500
RAB_INVERSION_D	RAB Deep Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_D	RAB inversion for Dh?	----	YES	YES
RAB_INVERSION_D	RAB inversion for Di?	----	YES	YES
RAB_INVERSION_G	GR Cutoff for Shale Formation	----	75.000	75.000
RAB_INVERSION_G	GR Cutoff for Shale Formation in Zone1(default through the whole well)	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone10	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone2	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone3	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone4	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone5	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone6	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone7	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone8	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone9	GAPI	75.000	75.000
RAB_INVERSION_M	RAB Medium Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_R	Resistivity Cutoff for Shale Formation	OHMM	2.000	2.000
RAB_INVERSION_R	Resistive Invasion Allowed	----	NO	NO
RAB_INVERSION_R	RAB Ring Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_R	RAB inversion for Rmud?	----	NO	NO
RAB_INVERSION_R	RAB inversion for Rt?	----	YES	YES
RAB_INVERSION_R	Rt to R-deepest separation penalty multiplier[0,1]	----	0.500	0.500
RAB_INVERSION_R	RAB inversion for Rxo?	----	YES	YES
RAB_INVERSION_S	GR of Clean Sand Formation	----	-999.250	-999.250
RAB_INVERSION_S	GR of Shale Formation	----	-999.250	-999.250
RAB_INVERSION_S	RAB Shallow Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_T	Inversion Threshold[0, 0.3]	----	0.010	0.010
RAB_INVERSION_W	Formation Water Resistivity	OHMM	0.100	0.100
RAB_INVERSION_W	Formation Water Temperature	----	150.000	150.000
RAB_MEDIUMBTN_E	Medium Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_MEDIUMBTN_I	Input Medium Button Resistivity for Inversion?	----	YES	YES
RAB_QUAD	RAB: Process Quadrant data ?	----	YES	YES
RAB_RIGMODE_ECA	Bit on Bottom?	----	YES	YES
RAB_RING_ECAL	Ring Resistivity for ECAL_RAB?	----	YES	YES
RAB_RING_INVERS	Imput RING Resistivity for Inversion?	----	YES	YES
RAB_SHALLOWBTN_	Shallow Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_SHALLOWBTN_	Input Shallow Button Resistivity for Inversion?	----	YES	YES
RAB_TAB	RAB: Compute TAB ?	----	YES	YES
RAB_TECHLOG	RAB: Generate Techlog ?	----	YES	YES
RAB_TEMP_SELECT	RAB Temperature Selection	----	MEASURED	MEASURED

RAB_TICKS	RAB: Generate Ticks ?	----	YES	YES
READOUT_PORT_MP	RAB: ROP to Bit Face Distance		M	15.075 14.795
RINGBHCA	RAB: Ring Borehole A Factor	----	0.298	0.298
RINGBHCB	RAB: Ring Borehole B Factor	----	−0.112	−0.112
RING_KIMP_A	RAB: Ring Impedance Coeff A	----	0.000	0.000
RING_KIMP_B	RAB: Ring Impedance Coeff B	----	0.000	0.000
RING_K_FACTOR	RAB: Ring K Factor	----	0.101	0.101
SBUTTON_K_FACTO	RAB: Button Shallow K Factor	----	0.005	0.005
SCALE_IMAGES	RAB: Process Image Data	----	YES	YES
STAB	RAB: Run with Stabilizer	----	YES	YES
TFF_OFFSET_RAB	RAB Time−Frame File Time Offset		S	0.000 0.000
TIMEFRAME_FILE_	RAB: Time Frame File Name		S	0.000 0.000
TOOLTYPE	RAB: Azimuthal Tool	----	YES	YES
TS_VERSION	RAB: ToolScope Software Version	----	−999.250	−999.250
VRAB6	Rab Tool type (ENP/PILOT)	----	RAB8_ENP	RAB8_ENP
WIN_SIZE_DYN_IM	RAB: Window Size for Scaling Dynamic Image		M	0.914 0.914
WRK	to Report Potassium Concentration (RM)	----	K_by_Wgt_%	K_by_Wgt_%

Variable Name	Variable Description	Run Name & Value		
	Run Number		4	5
	General Information			
BHT_RM	Bottom Hole Temperature (RM)	DEGC	65.000	65.000
BSAL_RM	Mud Salinity (RM)	PPK	0.000	81.900
BS_RM	Bit Size (RM)	IN	12.250	12.250
COEF_M	User Defined FEXP in Clean Sand	----	1.650	1.650
C_WS	Overpressure correction to Sw and M	----	1.000	1.000
FEXP	Formation Factor Exponent(RM)	----	2.000	2.000
FNUM	Formation Factor Enumerator(RM)	----	1.000	1.000
FPHI_RM	Formation Factor Porosity Source (RM)	----	XPLOT	XPLOT
MST_RM	Mud Sample temperature (RM)	DEGC	20.400	20.700
MW_RM	Mud Weight (RM)	LB/G	9.800	10.400
OBMF_RM	Oil Based Mud (RM)	----	NO	NO
RHOF_RM	Mud Filtrate Density (RM)	G/C3	1.000	1.000
RHOM_RM	Matrix density (RM)	G/C3	2.710	2.710
RMS_RM	Resistivity of Mud Sample (RM)	OHMM	0.085	0.087
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			
RWS_RM	Resistivity of Connate Water (RM)	OHMM	1.000	1.000
SHT_RM	Ground Level Temperature (Mud−Line When Offshore) (RM)	DEGC	10.000	15.000
TD_RM	Total Measured Depth (RM)	M	2313.000	2313.000
TWS_RM	Temperature of Connate Water (RM)	DEGC	23.889	23.889
VF_ILLI	Fraction of illite in shales	----	0.500	0.500
VF_KAOL	Fraction of kaolinite in shales	----	0.500	0.500
VF_MONT	Fraction of montmorillonite in shales	----	0.000	0.000
XPDM_RM	Cross plot density porosity multiplier	----	0.675	0.675
XPNM_RM	Cross plot neutron porosity multiplier	----	0.325	0.325
	RAB			
RAB/BTN_SLV_SIZE/PARAMETE	IN −− RAB: Button Sleeve Diameter		7/8	11 11
RAB/STAB_SIZE/PARAMETER	RAB: Stabilizer Diameter		IN	12−12.25 12−12.25
BDBHCA	RAB: Button Deep Borehole A Factor	----	−0.035	−0.035
BDBHCB	RAB: Button Deep Borehole B Factor	----	−0.018	−0.018
BHA_COEF_VER	RAB: BHA Coef Generator Version	----	80012.000	80012.000
BITBHCA	RAB: Bit A Borehole Factor	----	0.095	0.095
BITBHCB	RAB: Bit B Borehole Factor	----	−0.074	−0.074
BIT_K_FACTOR	RAB: Bit K Factor	----	18.409	18.336
BMBHCA	RAB: Button Medium Borehole A Factor	----	0.006	0.006
BMBHCB	RAB: Button Medium Borehole B Factor	----	−0.019	−0.019
BSBHCA	RAB: Button Shallow Borehole A Factor	----	−0.009	−0.009
BSBHCB	RAB: Button Shallow Borehole B Factor	----	−0.036	−0.036
BUT_KIMP_A	RAB: Button Impedance Coeff A	----	0.002	0.002
BUT_KIMP_B	RAB: Button Impedance Coeff B	----	0.000	0.000
DBUTTON_K_FACTO	RAB: Button Deep K factor	----	0.003	0.003
DHS_VERSION	RAB: DownHole Software Version	----	9.100	9.100
GR_BHC_TOOLSIZE	RAB: Gamma−Ray Borehole Coeff 1	----	8.250	8.250
HI_CSDEPTH_OUT	RAB: Allow Hi−Resolution CS_DEPTH Image Data Output	----	NO	NO
HI_DLIS_OUT	RAB: Allow Hi−Resolution DLIS Image Data Output	----	NO	NO
HI_RIVER_OUT	RAB: Allow Hi−Resolution River for Image Data Output	----	NO	NO
IMAGE_MAX_GR	RAB: GR Image Maximum Scale Value	GAPI	120.000	120.000
IMAGE_MAX_RES	RAB: Image Maximum Resistivity Value	OHMM	100.000	100.000
IMAGE_MIN_GR	RAB: GR Image Minimum Scale Value	GAPI	20.000	20.000
IMAGE_MIN_RES	RAB: Image Minimum Resistivity Value	OHMM	1.000	1.000
JSD_RAB	RAB Acquisition start date	OHMM	1.000	1.000
KPER	Potassium Concentration (RM)	----	4.800	4.800
MAG_DECL_RAB	RAB: Magnetic Declination	DEG	12.800	12.800
MAG_INCL_RAB	RAB: Magnetic Dip	DEG	−69.070	−69.070
MBUTTON_K_FACTO	RAB: Button Medium K Factor	----	0.004	0.004
OBM	RAB: Oil base Mud	----	NO	NO
ORIENTATION_RM	Rab Image Orientation	----	TOH	TOH
RABBDA0	RAB: Button Deep A0 Coeff	----	−0.118	−0.118
RABBDA1	RAB: Button Deep A1 Coeff	----	0.103	0.103

RABBDA2	RAB: Button Deep A2 Coeff	----		−0.043	−0.043
RABBDA3	RAB: Button Deep A3 Coeff	----		0.009	0.009
RABBDA4	RAB: Button Deep A4 Coeff	----		−0.001	−0.001
RABBDA5	RAB: Button Deep A5 Coeff	----		0.000	0.000
RABBDMIN	RAB: Button Deep Minimum Value		----	0.038	0.038
RABBITA0	RAB: Bit A0 Coeff	----		6.113	6.071
RABBITA1	RAB: Bit A1 Coeff	----		−22.012	−21.779
RABBITA2	RAB: Bit A2 Coeff	----		91.677	90.057
RABBITA3	RAB: Bit A3 Coeff	----		−150.372	−146.964
RABBITA4	RAB: Bit A4 Coeff	----		111.351	108.418
RABBITA5	RAB: Bit A5 Coeff	----		−30.919	−30.018
RABBITMIN	RAB: Bit Minimum Value		----	22.459	22.458
RABBMA0	RAB: Button Medium A0 Coeff	----		−0.118	−0.118
RABBMA1	RAB: Button Medium A1 Coeff	----		0.096	0.097
RABBMA2	RAB: Button Medium A2 Coeff	----		−0.040	−0.040
RABBMA3	RAB: Button Medium A3 Coeff	----		0.008	0.008
RABBMA4	RAB: Button Medium A4 Coeff	----		−0.001	−0.001
RABBMA5	RAB: Button Medium A5 Coeff	----		0.000	0.000
RABBMMIN	RAB: Button Medium Minimum Value		----	0.041	0.041
RABBSA0	RAB: Button Shallow A0 Coeff	----		−0.127	−0.126
RABBSA1	RAB: Button Shallow A1 Coeff	----		0.098	0.098
RABBSA2	RAB: Button Shallow A2 Coeff	----		−0.039	−0.039
RABBSA3	RAB: Button Shallow A3 Coeff	----		0.007	0.007
RABBSA4	RAB: Button Shallow A4 Coeff	----		−0.001	−0.001
RABBSA5	RAB: Button Shallow A5 Coeff	----		0.000	0.000
RABBSMIN	RAB: Button Shallow Minimum Value		----	0.055	0.055
RABDHS	RAB Down Hole Software	----		4.000	4.000
RABEC	RAB: Resistivity Env−Cor	----		YES	YES
RABRNGA0	RAB: RING A0 Coeff	----		−0.114	−0.114
RABRNGA1	RAB: RING A1 Coeff	----		0.102	0.102
RABRNGA2	RAB: RING A2 Coeff	----		−0.044	−0.044
RABRNGA3	RAB: RING A3 Coeff	----		0.009	0.009
RABRNGA4	RAB: RING A4 Coeff	----		−0.001	−0.001
RABRNGA5	RAB: RING A5 Coeff	----		0.000	0.000
RABRNGMIN	RAB: Ring Minimum Value		----	1.150	1.150
RAB_BIT_ECAL	Bit Resistivity for ECAL_RAB?		----	YES	YES
RAB_BIT_INVERSI	Input Bit Resistivity for Inversion? (Recommended at the bit)		----	NO	NO
RAB_CALIPER_CAL	Compute ECAL_RAB?		----	NO	NO
RAB_DATA_FIX	RAB: Create A Corrected RAB Time Data File		----	NO	NO
RAB_DATA_LTB	RAB: Create An RAB LTB Data File		----	NO	NO
RAB_DEEPBTN_ECA	Deep Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_DEEPBTN_INV	Input Deep Button Resistivity for Inversion?		----	YES	YES
RAB_INVERSION	Perform Rt Inversion?	----		NO	NO
RAB_INVERSION_B	RAB Bit Sensor Weight for Inversion[0,1]		----	0.000	0.000
RAB_INVERSION_B	Ending Depth for GR Cutoff in Zone1 (default through the whole well)	M		30480.000	30480.000
RAB_INVERSION_B	Ending Depth of Zone10	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone2	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone3	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone4	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone5	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone6	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone7	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone8	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone9	M		−304.571	−304.571
RAB_INVERSION_C	Continuity Multiplier[0,1]	----		0.500	0.500
RAB_INVERSION_D	RAB Deep Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_D	RAB inversion for Dh?	----		YES	YES
RAB_INVERSION_D	RAB inversion for Di?	----		YES	YES
RAB_INVERSION_G	GR Cutoff for Shale Formation		----	75.000	75.000
RAB_INVERSION_G	GR Cutoff for Shale Formation in Zone1(default through the whole well)	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone10	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone2	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone3	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone4	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone5	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone6	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone7	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone8	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone9	GAPI		75.000	75.000
RAB_INVERSION_M	RAB Medium Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_R	Resistivity Cutoff for Shale Formation	OHMM		2.000	2.000
RAB_INVERSION_R	Resistive Invasion Allowed	----		NO	NO
RAB_INVERSION_R	RAB Ring Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_R	RAB inversion for Rmud?	----		NO	NO
RAB_INVERSION_R	RAB inversion for Rt?	----		YES	YES
RAB_INVERSION_R	Rt to R−deepest separation penalty multiplier[0,1]		----	0.500	0.500
RAB_INVERSION_R	RAB inversion for Rxo?	----		YES	YES
RAB_INVERSION_S	GR of Clean Sand Formation		----	−999.250	−999.250
RAB_INVERSION_S	GR of Shale Formation	----		−999.250	−999.250
RAB_INVERSION_S	RAB Shallow Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_T	Inversion Threshold[0, 0.3]	----		0.010	0.010
RAB_INVERSION_W	Formation Water Resistivity	OHMM		0.100	0.100
RAB_INVERSION_W	Formation Water Temperature		----	150.000	150.000
RAB_MEDIUMBTN_E	Medium Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_MEDIUMBTN_I	Input Medium Button Resistivity for Inversion?		----	YES	YES
RAB_QUAD	RAB: Process Quadrant data ?	----		YES	YES
RAB_RIGMODE_ECA	Bit on Bottom?	----		YES	YES
RAB_RING_ECAL	Ring Resistivity for ECAL_RAB?		----	YES	YES
RAB_RING_INVERS	Imput RING Resistivity for Inversion?		----	YES	YES
RAB_SHALLOWBTN_	Shallow Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_SHALLOWBTN_	Input Shallow Button Resistivity for Inversion?		----	YES	YES
RAB_TAB	RAB: Compute TAB ?	----		YES	YES
RAB_TECHLOG	RAB: Generate Techlog ?		----	YES	YES
RAB_TEMP_SELECT	RAB Temperature Selection		----	MEASURED	MEASURED
RAB_TICKS	RAB: Generate Ticks ?	----		YES	YES
READOUT_PORT_MP	RAB: ROP to Bit Face Distance			M 14.825	14.745

RINGBHCA	RAB: Ring Borehole A Factor	----	0.298	0.298
RINGBHCB	RAB: Ring Borehole B Factor	----	-0.112	-0.112
RING_KIMP_A	RAB: Ring Impedance Coeff A	----	0.000	0.000
RING_KIMP_B	RAB: Ring Impedance Coeff B	----	0.000	0.000
RING_K_FACTOR	RAB: Ring K Factor	----	0.101	0.101
RSD	LWD run start date dd-mmm-yy	OHMM	0.085	0.087
RWA_COMP_MOD	Rwa computation model	----	BASIC	BASIC
RWA_DEN_ADN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_CDN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_INPUT	Rwa Density Input	----	RHOB	RHOB
RWA_FORM_MOD	Rwa computation formation model	----	CLASTIC	CLASTIC
RWA_RES_INPUT	Rwa computation resistivity input	----	RT	RT
SBUTTON_K_FACTO	RAB: Button Shallow K Factor	----	0.005	0.005
SCALE_IMAGES	RAB: Process Image Data	----	YES	YES
STAB	RAB: Run with Stabilizer	----	YES	YES
TFF_OFFSET_RAB	RAB Time-Frame File Time Offset	S	0.000	0.000
TIMEFRAME_FILE_	RAB: Time Frame File Name	S	0.000	0.000
TOOLTYPE	RAB: Azimuthal Tool	----	YES	YES
TS_VERSION	RAB: ToolScope Software Version	----	0.000	0.000
VRAB6	Rab Tool type (ENP/PILOT)	----	RAB8_ENP	RAB8_ENP
WIN_SIZE_DYN_IM	RAB: Window Size for Scaling Dynamic Image	M	0.914	0.914
WRK	to Report Potassium Concentration (RM)	----	K_by_Wgt_%	K_by_Wgt_%

SAD

ADN_CHASSIS_STR	Type String	Chassis	ADN	
ADN_COLLAR_STR	Type String	Collar	ADN	
ADN_DATA_FIX	ADN: Create A Corrected ADN Time Data File	----	NO	
ADN_DATA_LTB	ADN: Create An ADN LTB Data File	----	NO	
ADN_STAB_STR	ADN Stabilizer Type String	----	NO	
ALPHA_COMPUTE_D	Perform Density Enhanced Vertical Resolution process ?	----	NO	
ALPHA_COMPUTE_N	Perform Neutron Enhanced Vertical Resolution process ?	----	NO	
AVE_ADN	ADN/Array Channels: perform averaging(RM) :	----	YES	
A_DHS	ADN Down Hole Software Version String	----	YES	
CHI_RM	Caliper High limit from BS (RM)	IN	3.000	
CLO_RM	Caliper Low limit from BS (RM)	IN	0.000	
DEVI	Well Section Deviation	DEG	14.100	
DTIK_SEL	ADN: Density Tick Channel Name	----	LSAZ	
DTMUD	Delta-T for Mud	US/F	167.540	
DYN_IMG_COMPUTE	Generate Dynamic Normalized Image?	----	NO	
ENVCOR	Neutron Processing: Environmental Correction?	----	YES	
EVRL	EVR Process averaging number of samples (RM)	----	49	
FAZ1_AVAIL	ADN8 Neutron Far Tube 1 Available?	----	YES	
FAZ2_AVAIL	ADN8 Neutron Far Tube 2 Available?	----	YES	
FAZ3_AVAIL	ADN8 Neutron Far Tube 3 Available?	----	YES	
FCD	Future Casing (Outer) Diameter	IN	0.000	
GCSE	Generalized Caliper Selection	----	BS	
IDQT	Image Derived Quality Threshold	----	0.400	
IHVS	Integrated Hole Volume Start Value(RM)	F3	0.000	
IMAGE_MAX_SOA	Image SOA (Quadrant) Right Scale	IN	2.500	
IMAGE_MAX_SPEF	Image PEF(Segment) Right Scale	----	6.000	
IMAGE_MAX_SRHOB	Image RHOB(Segment) Right Scale	G/C3	2.650	
IMAGE_MIN_SOA	Image SOA (Quadrant) Left Scale	IN	0.000	
IMAGE_MIN_SPEF	Image PEF(Segment) Left Scale	----	2.000	
IMAGE_MIN_SRHOB	Image RHOB(Segment) Left Scale	G/C3	2.050	
JSD_ADN	ADN Acquisition start date	G/C3	2.050	
LITHO_TYPE_ADN	Lithology (RM)	----	LIME	
N1FTU_6_RM	ADN: Neutron Bank 1 Far Tubes used :	----	1-2-3	
N2FTU_6_RM	ADN: Neutron Bank 2 Far Tubes used :	----	1-2-3	
NNTU_8_RM	ADN: Neutron Near Tube used :	----	1-2-3	
NTIK_SEL	ADN: Neutron Tick Channel Name	----	FAZ1	
SOCNL	Standoff Distance of the CNL Tool	----	1.000	
SSIZ_ADN	ADN Stabilizer Size	IN	12.000	
STOH	ADN Density Top of Hole Sector (Left Boundary):	----	SECTOR_0	
TRPM_RM	Average Tool Rotational Speed	RPM	20.000	
USMIN_RM	ADN:Minimum Ultrasonic standoff (RM)	IN	0.180	
USWF_RM	ADN:Process Ultrasonic Waveform?	----	YES	
VERS_ADN	ADN Downhole Software Version	----	8.300	
WSDI	Window Size of Dynamic Normalization Image	M	4.572	

Schlumberger Drilling & Measurements ID13 Parameter Insert Header Software version 3.0c

Wasabi-1 VISION 1:500MD Main Log

Format: Wasabi-1 GVR ADN 500MD **Vertical Scale: 1:500** **Graphics File Created: 08-Jun-2008 15:55**

PIP SUMMARY

Density Ticks, 0.1 ft

Neutron Ticks, 0.1 ft

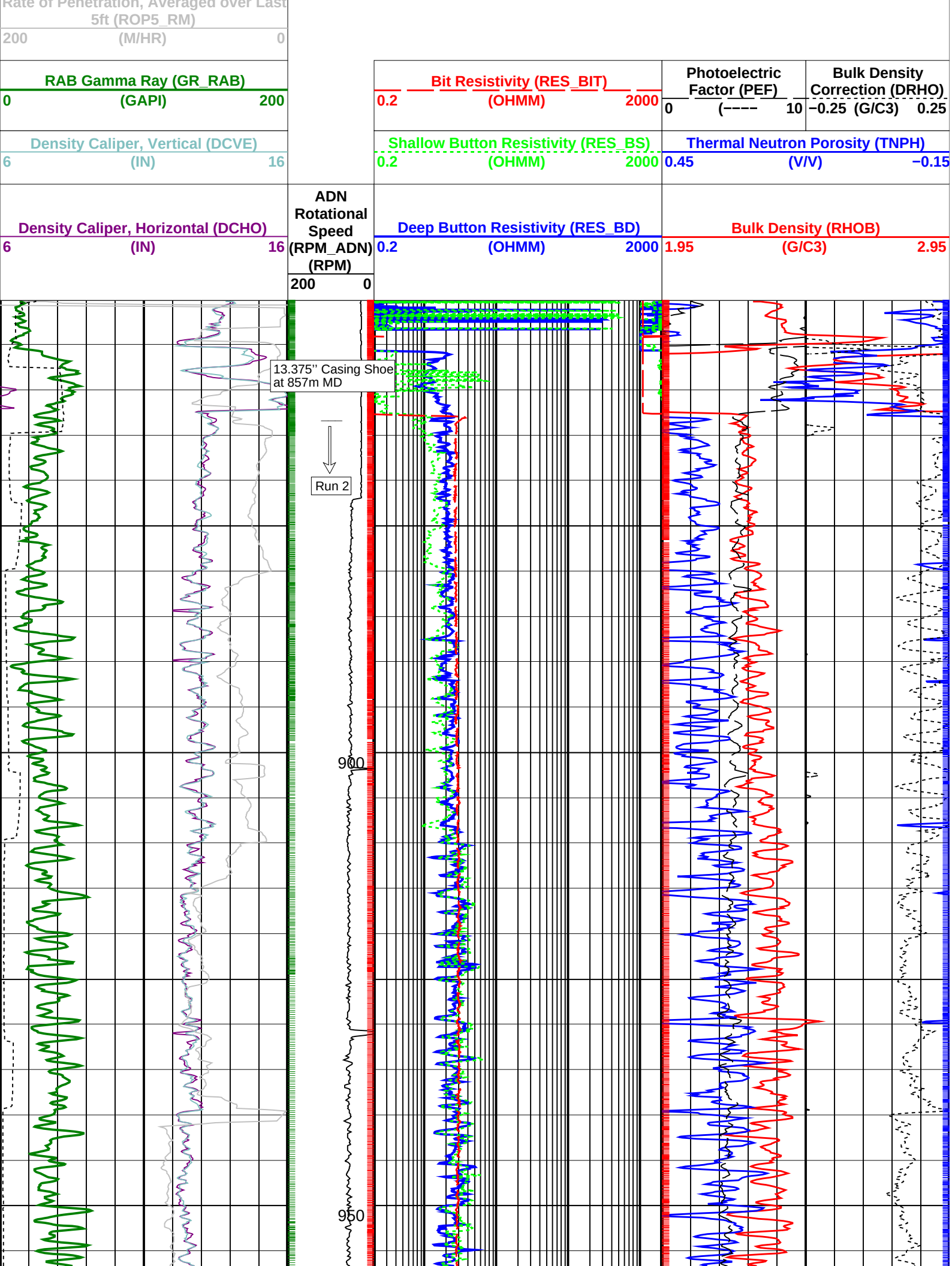
Gamma Ray Samples

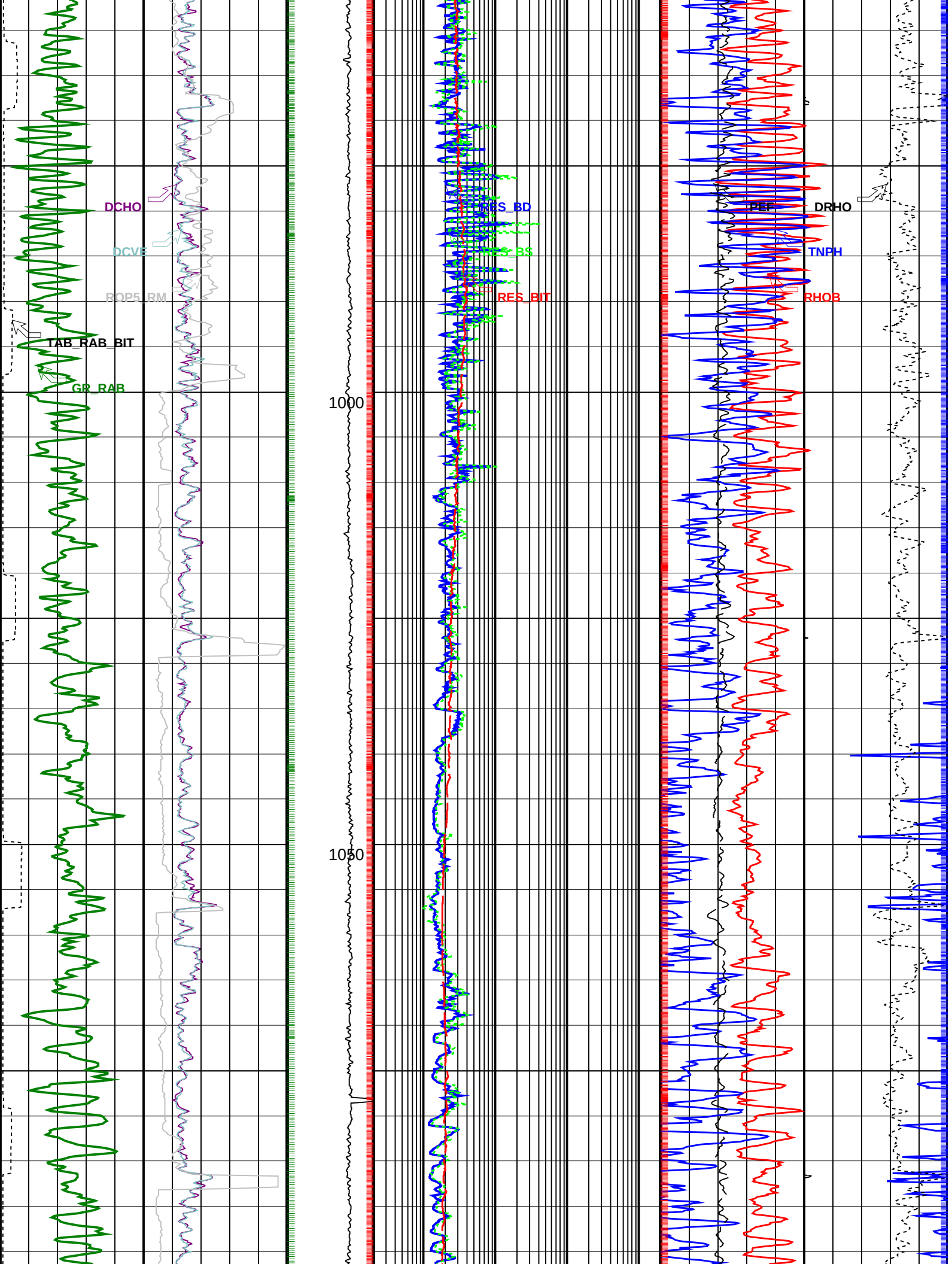
GVR Resistivity Samples

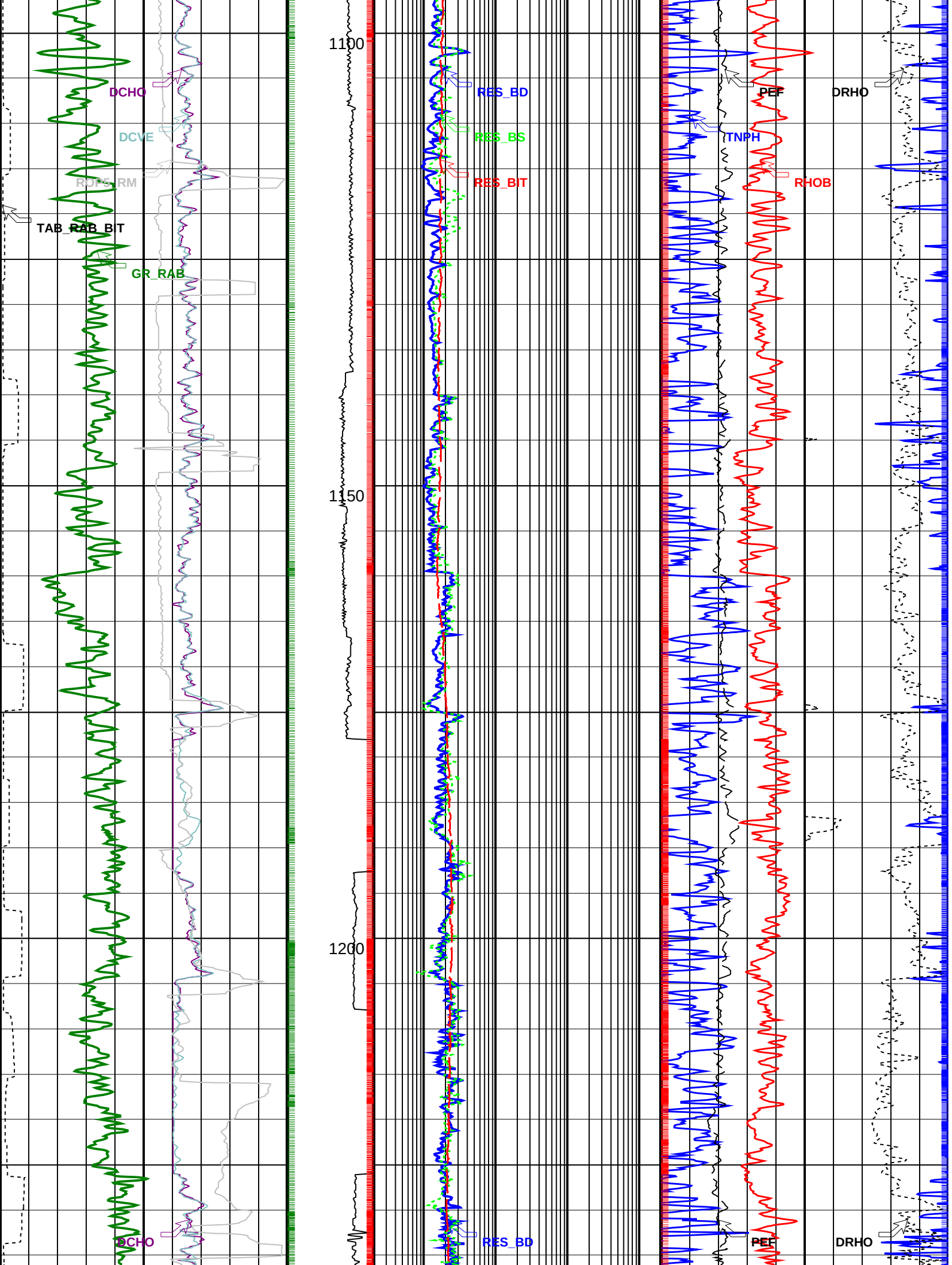
Bit Resistivity Time After Bit (TAB_RAB_BIT)

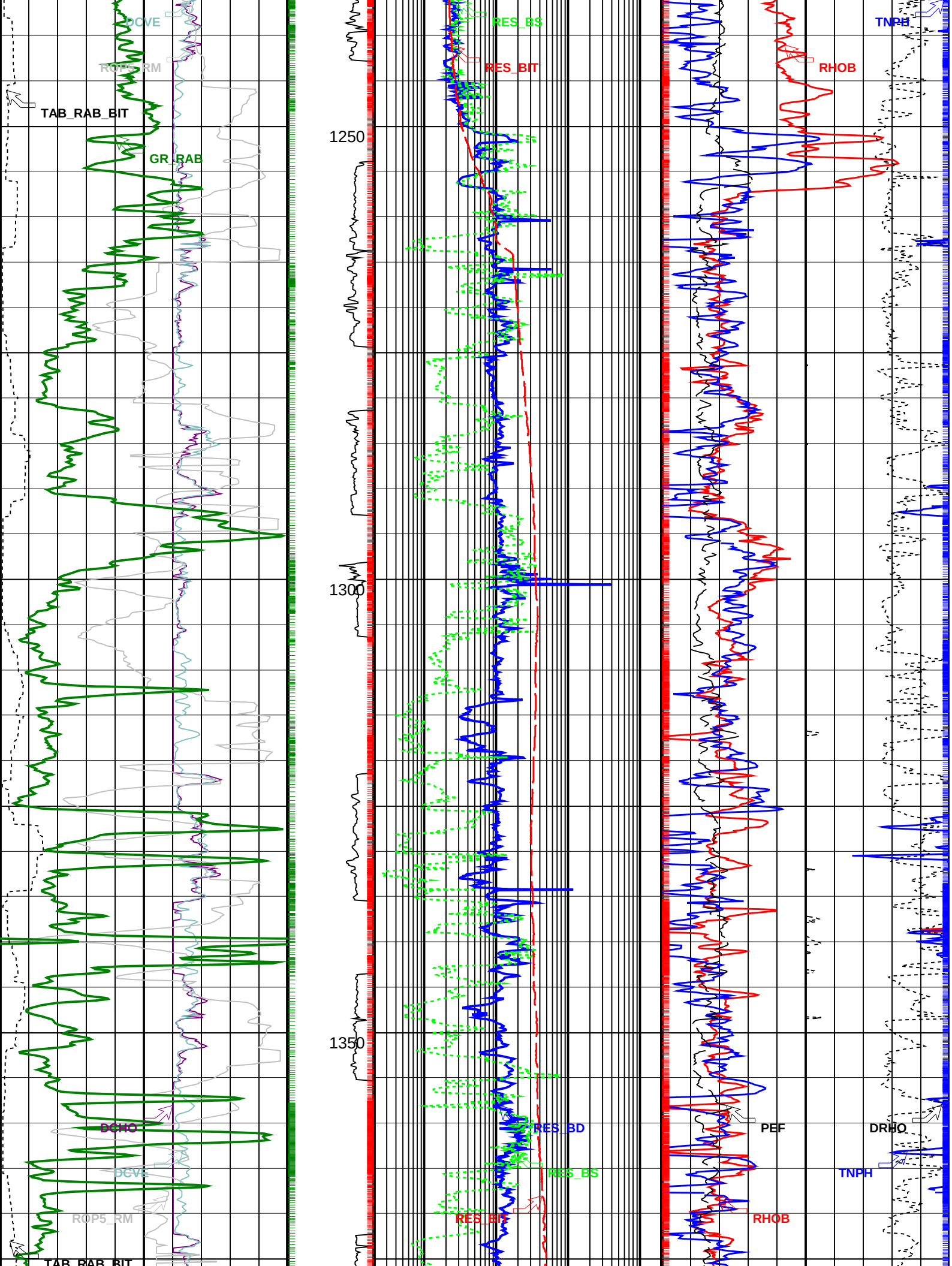
0 **(HR)** **10**

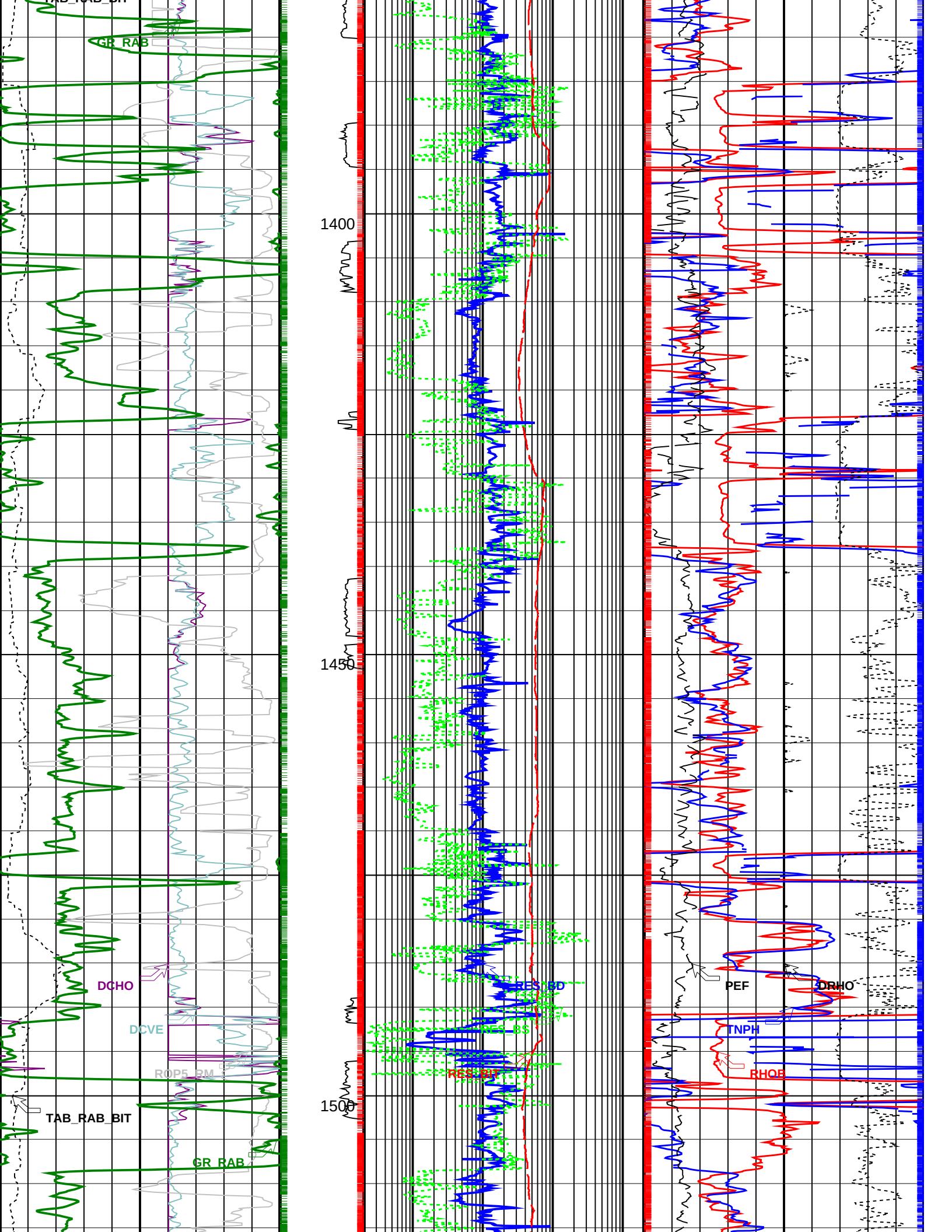
Rate of Penetration, Averaged over Last

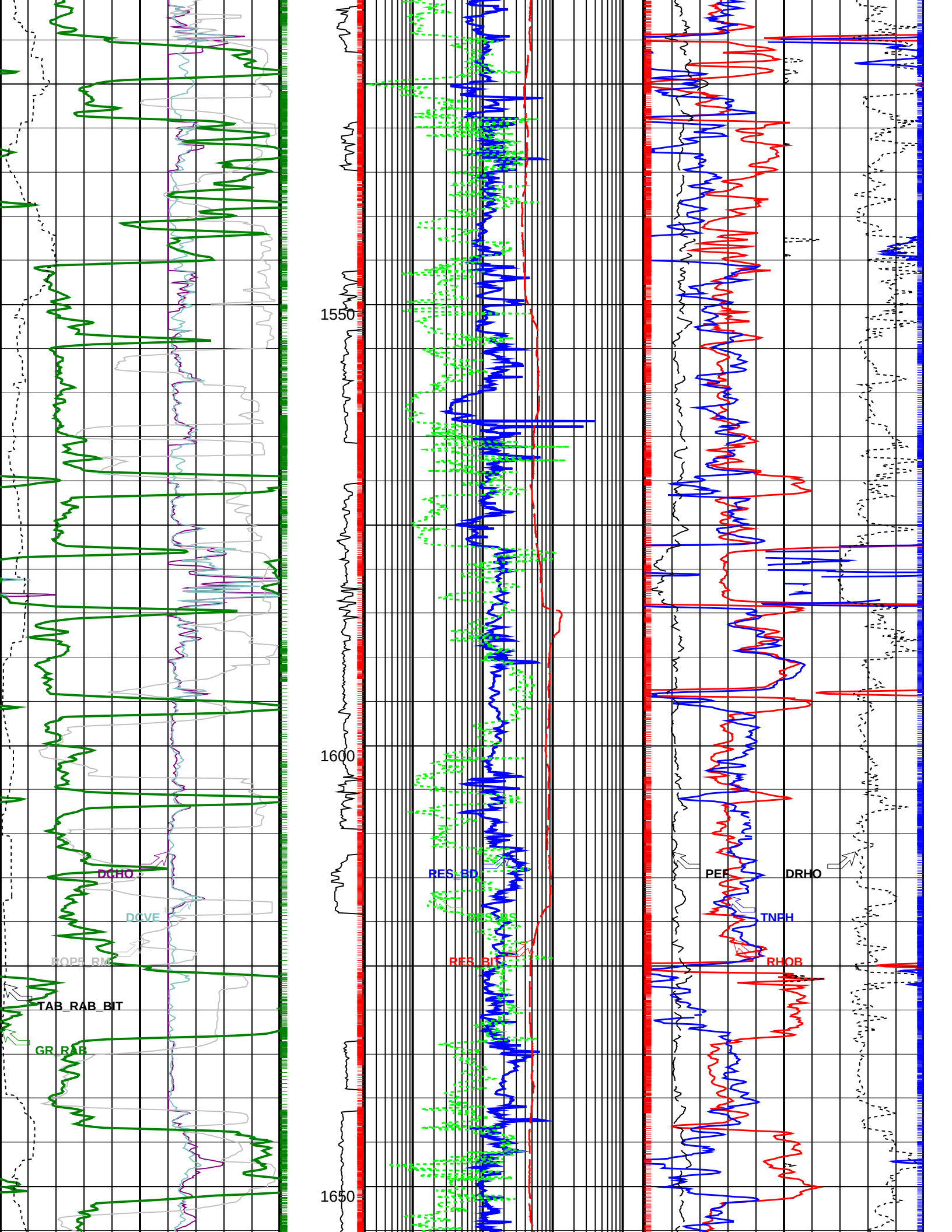

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
200 (M/HR) 0
RAB Gamma Ray (GR_RAB)
0 (GAPI) 200
Density Caliper, Vertical (DCVE)
6 (IN) 16
Density Caliper, Horizontal (DCHO)
6 (IN) 16
ADN Rotational Speed (RPM_ADN) (RPM)
200 0
Bit Resistivity (RES_BIT)
0.2 (OHMM) 2000
Shallow Button Resistivity (RES_BS)
0.2 (OHMM) 2000
Deep Button Resistivity (RES_BD)
0.2 (OHMM) 2000
Photoelectric Factor (PEF)
0 (---- 10
Bulk Density Correction (DRHO)
−0.25 (G/C3) 0.25
Thermal Neutron Porosity (TNPH)
0.45 (V/V) −0.15
Bulk Density (RHOB)
1.95 (G/C3) 2.95
13.375'' Casing Shoe at 857m MD
Run 2
900
950

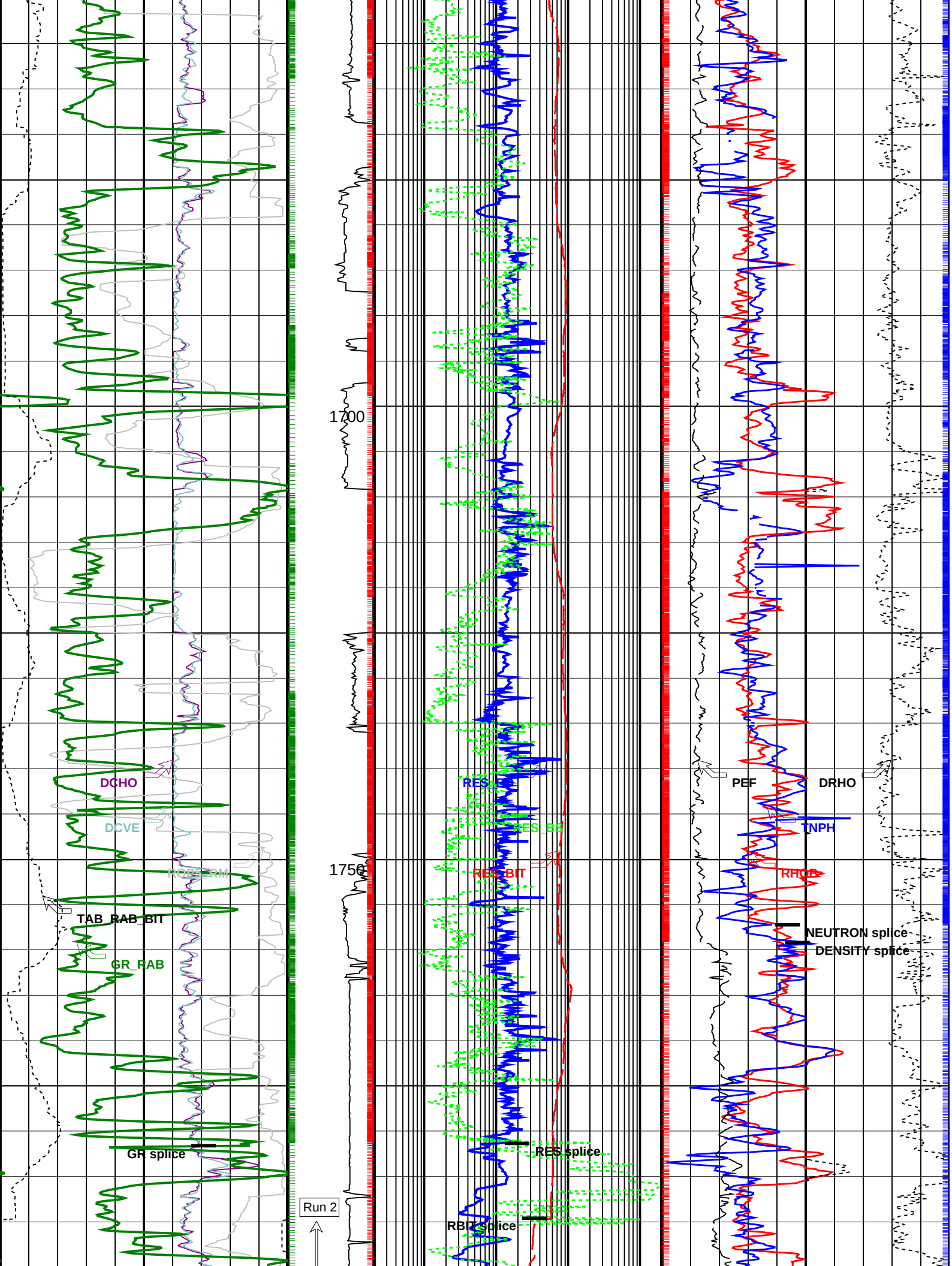

DCHO
DCVB
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB
1000
1050

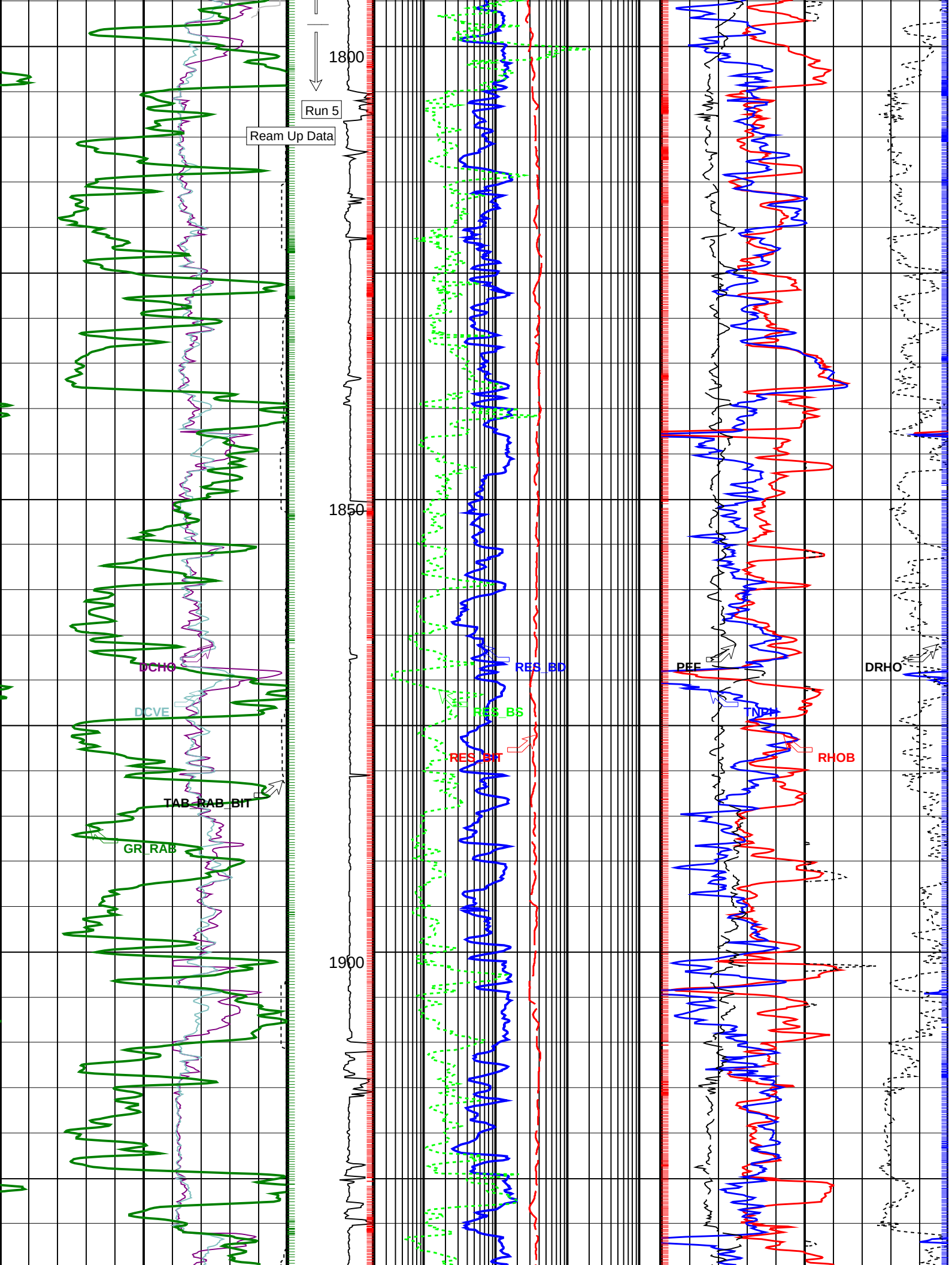

DCHO
DCVE
ROPS_RM
TAB_RAB_BIT
GR_RAB
1100
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB
1150
1200
DCHO
RES_BD
PEF
DRHO

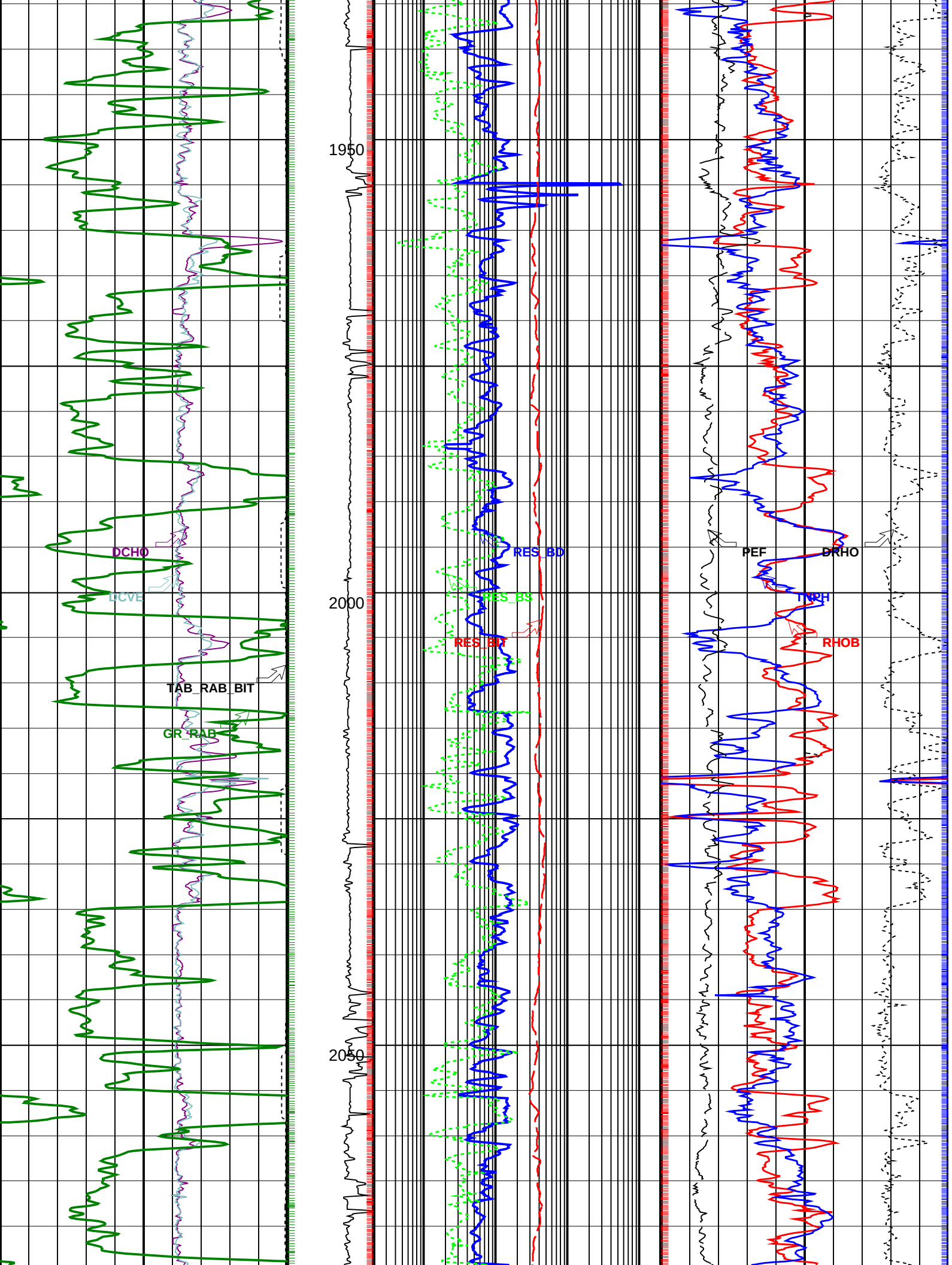

DCVE
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BS
RES_BIT
TNPH
RHOB
1250
1300
1350
DCHO
DCVE
ROP5_RM
TAB_RAB_BIT
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB

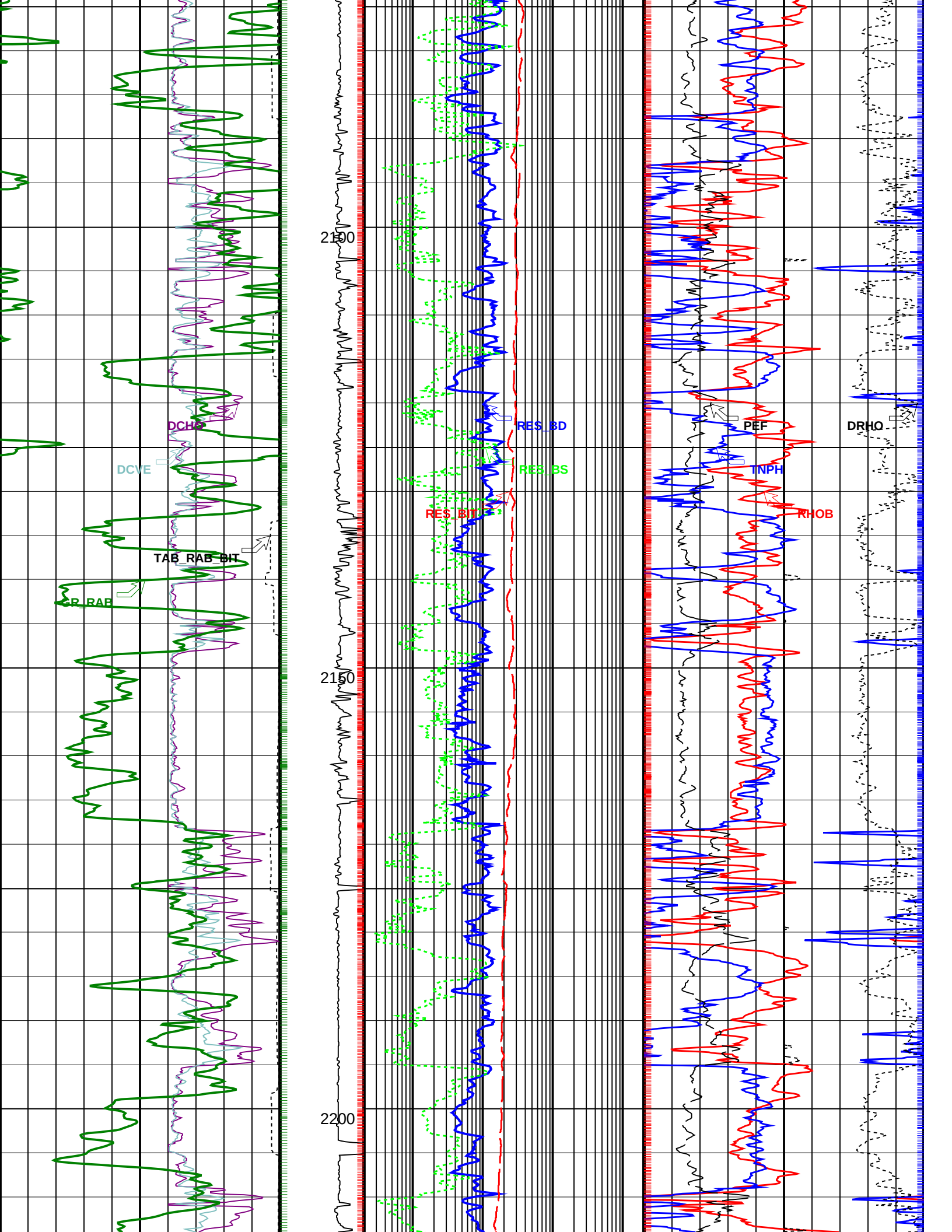

GR_RAB
1400
1450
DCHO
DCVE
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB
1500

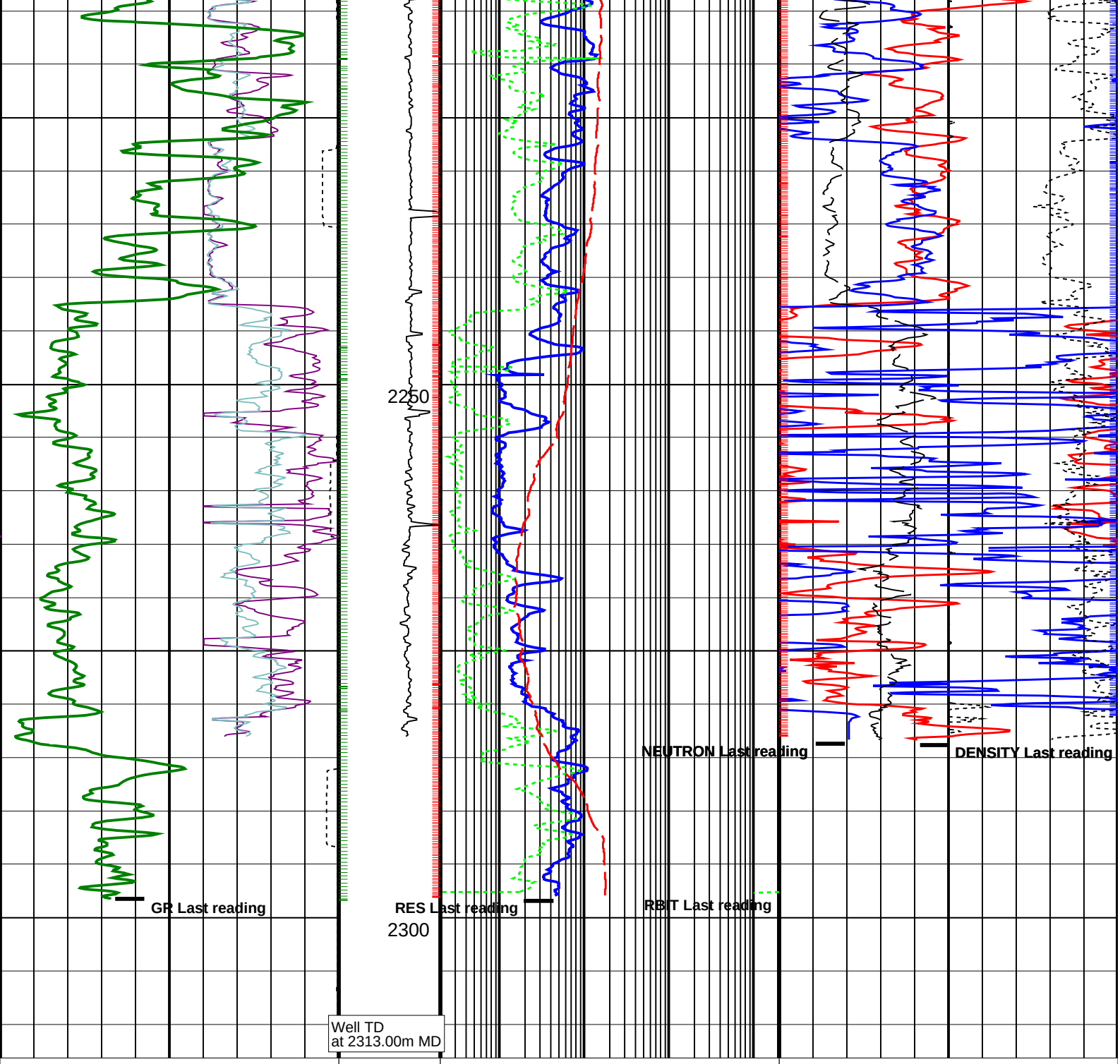

1550
1600
1650
DCHO
DCVF
ROPE_RMS
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB


1700
1750
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
GR splice
RES_BS
RES_BIT
RES splice
RBIT splice
Run 2
PEF
DRHO
TNPH
RHOB
NEUTRON splice
DENSITY splice


1800
1850
1900
Run 5
Ream Up Data
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
TNPH
RHOB
DRHO


1950
2000
2050
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB


2100
2150
2200
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB



Density Caliper, Horizontal (DCHO)	**ADN Rotational Speed (RPM_ADN)**	**Deep Button Resistivity (RES_BD)**
6 (IN) 16	200 (RPM) 0	0.2 (OHMM) 2000
Density Caliper, Vertical (DCVE)		**Shallow Button Resistivity (RES_BS)**
6 (IN) 16		0.2 (OHMM) 2000
RAB Gamma Ray (GR_RAB)		**Bit Resistivity (RES_BIT)**
0 (GAPI) 200		0.2 (OHMM) 2000
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)		
200 (M/HR) 0		
Bit Resistivity Time After Bit (TAB_RAB_BIT)		
0 (HR) 10		

Bulk Density (RHOB)		
1.95 (G/C3) 2.95		
Thermal Neutron Porosity (TNPH)		
0.45 (V/V) −0.15		
Photoelectric Factor (PEF)	**Bulk Density Correction (DRHO)**	
0 (−−−− 10	−0.25 (G/C3) 0.25	

PIP SUMMARY

Density Ticks, 0.1 ft

Neutron Ticks, 0.1 ft

Gamma Ray Samples

GVR Resistivity Samples

IDEAL Version: ID13_0C_08

IDF

Wasabi−1 VISION 1:500MD Repeat Section

Format: Wasabi 1 GVR ADN 500MD **Vertical Scale: 1:500** **Graphics File Created: 03−Jun−2008 19:02**

PIP SUMMARY

Gamma Ray Samples

GVR Resistivity Samples

Bit Resistivity Time After Bit (TAB_RAB_BIT)
0 (HR) 10

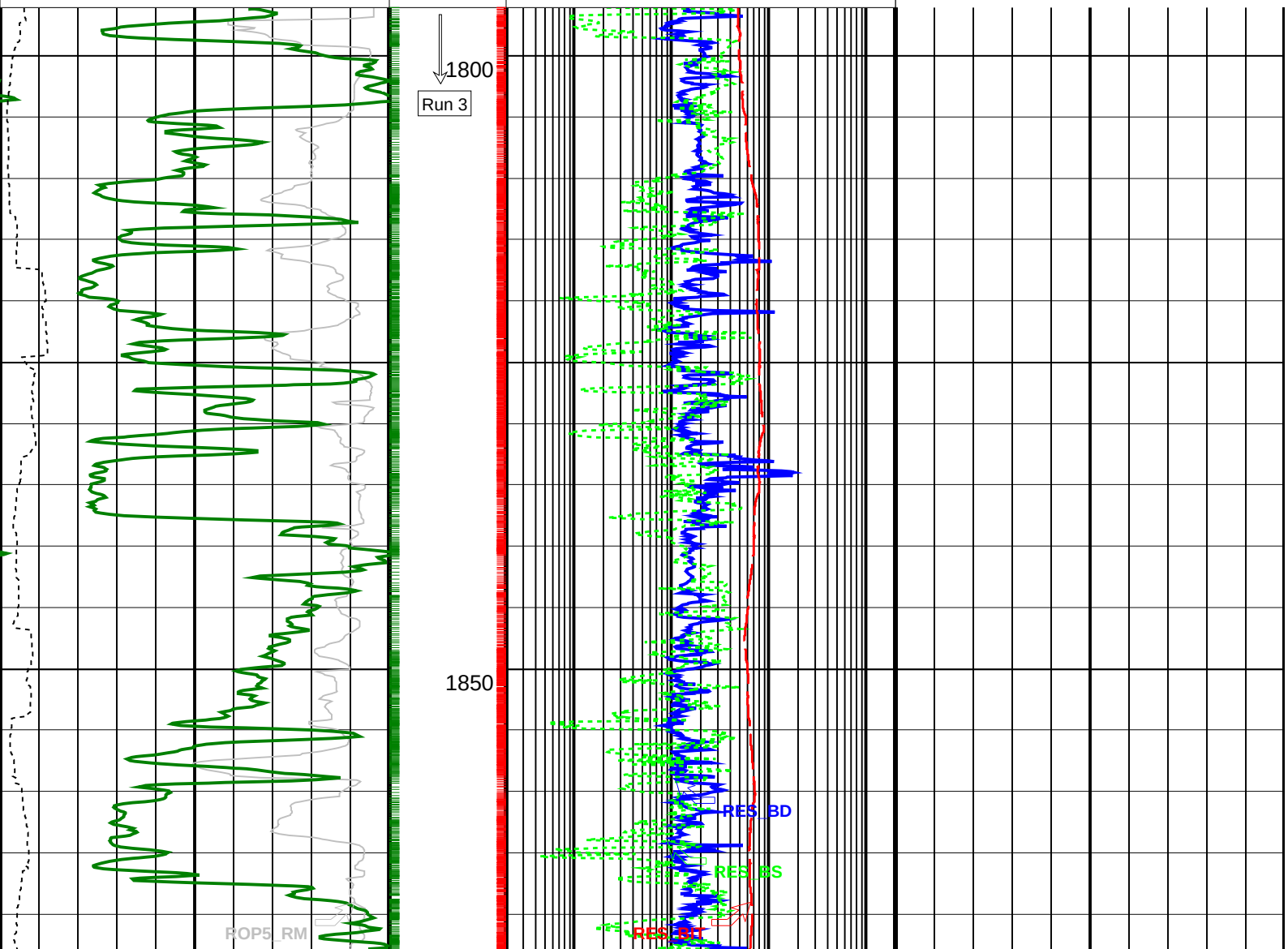
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
200 (M/HR) 0

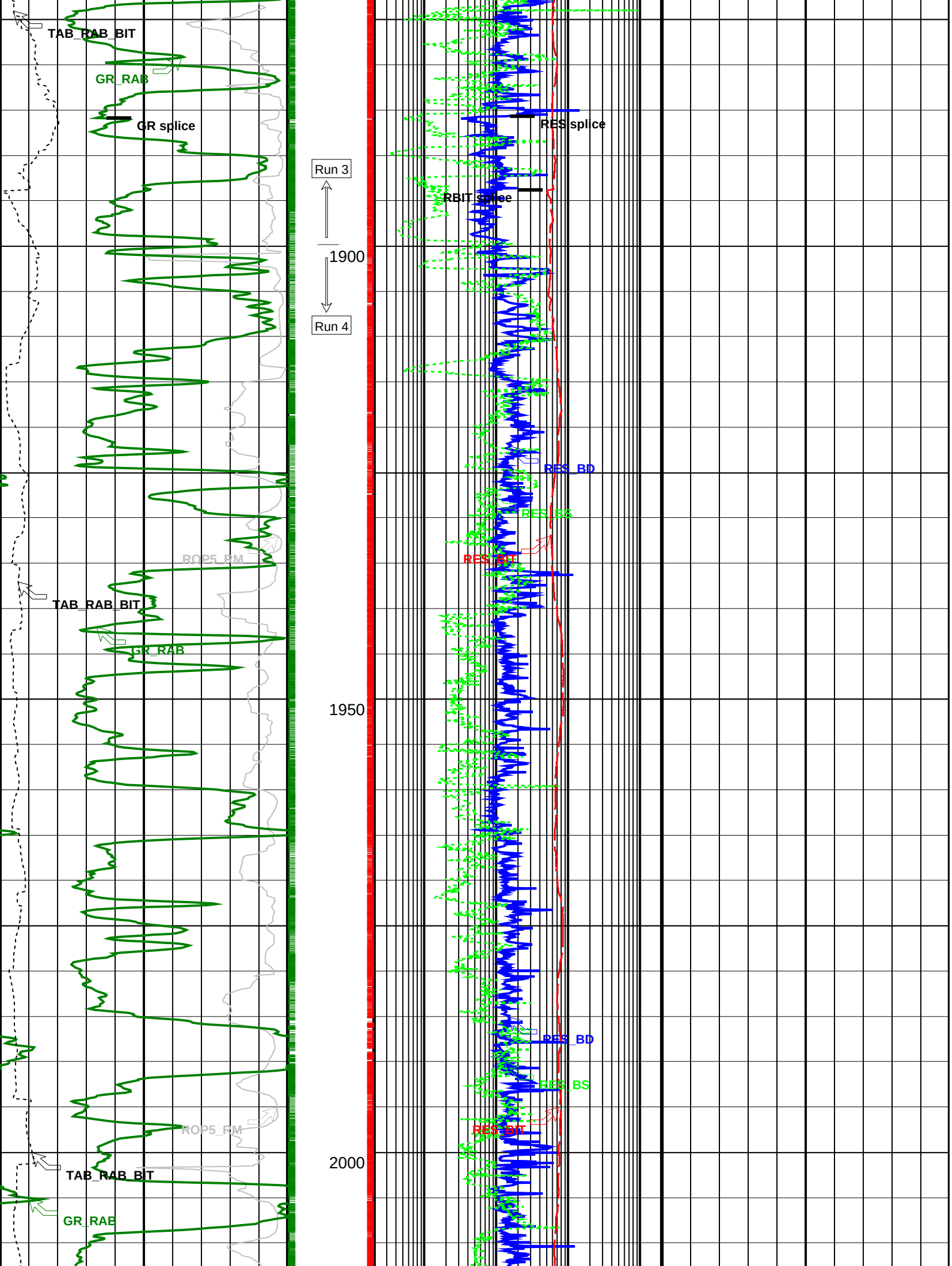
RAB Gamma Ray (GR_RAB)
0 (GAPI) 200

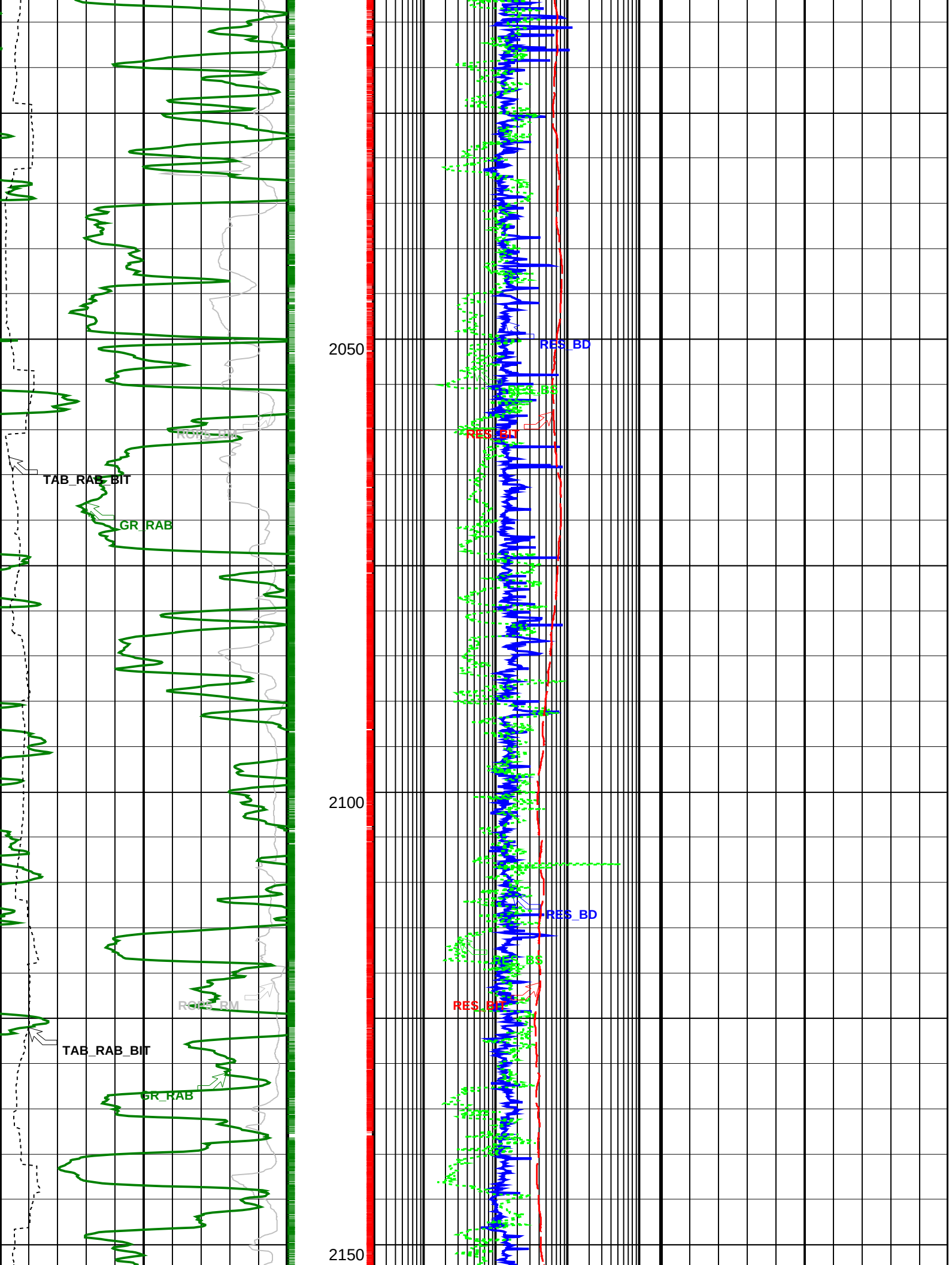
Bit Resistivity (RES_BIT)
0.2 (OHMM) 2000

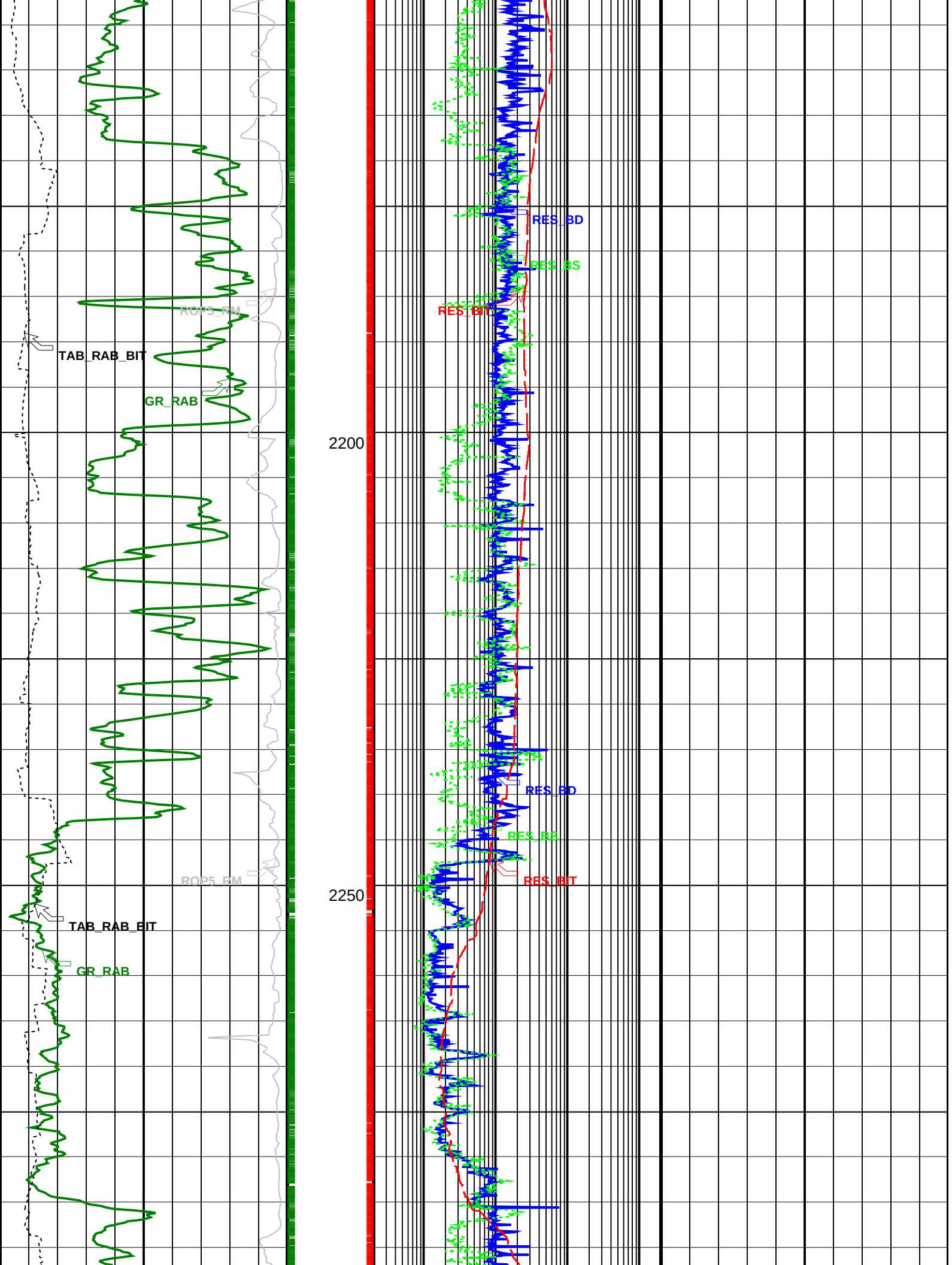
Shallow Button Resistivity (RES_BS)
0.2 (OHMM) 2000

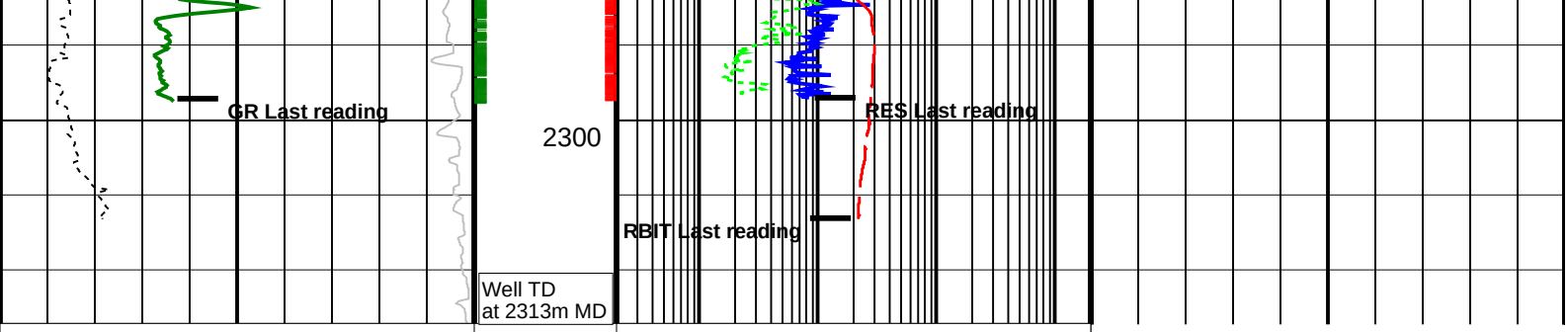
Deep Button Resistivity (RES_BD)
0.2 (OHMM) 2000




TAB_RAB_BIT
GR_RAB
GR splice
RES splice
Run 3
RBIT splice
1900
Run 4
RES_BD
RES_BS
ROP5_RM
RES_BIT
TAB_RAB_BIT
GR_RAB
1950
RES_BD
RES_BS
ROP5_RM
RES_BIT
2000
TAB_RAB_BIT
GR_RAB


2050
2100
2150
RES_BD
RES_BIT
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BIT
TAB_RAB_BIT
GR_RAB


RES_BD
RES_BS
RES_BIT
ROP5_RM
TAB_RAB_BIT
GR_RAB
2200
RES_BD
RES_BS
RES_BIT
ROP5_RM
2250
TAB_RAB_BIT
GR_RAB



RAB Gamma Ray (GR_RAB)		
0	(GAPI)	200
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)		
200	(M/HR)	0
Bit Resistivity Time After Bit (TAB_RAB_BIT)		
0	(HR)	10

Deep Button Resistivity (RES_BD)		
0.2	(OHMM)	2000
Shallow Button Resistivity (RES_BS)		
0.2	(OHMM)	2000
Bit Resistivity (RES_BIT)		
0.2	(OHMM)	2000

PIP SUMMARY

Gamma Ray Samples

GVR Resistivity Samples

IDEAL Version: ID13_0C_08

IDF

8.25−in. Stabilized Azimuthal Density Neutron / Equipment Identification

Primary Equipment:		
Tool Name and Serial Number	SADN − AA	
Collar Type and Serial Number	NDDC − CA	
Chassis Type and Serial Number	ADSE − GA	
Stabilizer Type and Serial Number	−	1
Neutron Logging Source	NSR − T	
Density Logging Source	GSR − Z	
Stabilizer Size	12.0 − in.	
Calibration Status	AUTO −	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Magnesium Block

Phase	LS window 3 − Mg CPS	Value	Phase	SS window 1 − Mg CPS	Value	Phase	SS window 3 − Mg CPS	Value
Master		931.2	Master		4487	Master		3842
40.00 (Minimum)	700.0 (Nominal)	1400 (Maximum)	300.0 (Minimum)	3620 (Nominal)	7000 (Maximum)	300.0 (Minimum)	2880 (Nominal)	5000 (Maximum)

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Aluminum Block

Phase	LS window 3 − Al CPS	Value	Phase	SS window 1 − Al CPS	Value	Phase	SS window 3 − Al CPS	Value
Master		149.7	Master		2168	Master		2557
10.00 (Minimum)	110.0 (Nominal)	200.0 (Maximum)	200.0 (Minimum)	1650 (Nominal)	3000 (Maximum)	200.0 (Minimum)	1930 (Nominal)	4000 (Maximum)

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Background

Phase	LS window 3 − Background CPS	Value	Phase	SS window 1 − Background CPS	Value	Phase	SS window 3 − Background CPS	Value
Master		67.06	Master		122.6	Master		262.4
17.00 (Minimum)	90.00 (Nominal)	170.0 (Maximum)	20.00 (Minimum)	120.0 (Nominal)	200.0 (Maximum)	50.00 (Minimum)	260.0 (Nominal)	500.0 (Maximum)

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value

Phase			Value
Master		1.062	
1.047 (Minimum)	1.062 (Nominal)	1.077 (Maximum)	

Phase			Value
Master		1.393	1.399
1.336 (Minimum)	1.393 (Nominal)	1.450 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Neutron: 3−Point Calibration

Phase	Far Tube 1 Air Point Measure CPS		Value
Master			151.2
100.0 (Minimum)	152.1 (Nominal)	190.0 (Maximum)	

Phase	Far Tube 1 Rod Point Measure CPS		Value
Master			54.11
35.00 (Minimum)	55.33 (Nominal)	69.00 (Maximum)	

Phase	Far Tube 1 Water Point Measure CPS		Value
Master			19.58
13.00 (Minimum)	20.14 (Nominal)	25.00 (Maximum)	

Phase	Far Tube 2 Air Point Measure CPS		Value
Master			151.9
100.0 (Minimum)	152.1 (Nominal)	190.0 (Maximum)	

Phase	Far Tube 2 Rod Point Measure CPS		Value
Master			53.55
35.00 (Minimum)	55.33 (Nominal)	69.00 (Maximum)	

Phase	Far Tube 2 Water Point Measure CPS		Value
Master			20.17
13.00 (Minimum)	20.14 (Nominal)	25.00 (Maximum)	

Phase	Far Tube 3 Air Point Measure CPS		Value
Master			147.7
100.0 (Minimum)	152.1 (Nominal)	190.0 (Maximum)	

Phase	Far Tube 3 Rod Point Measure CPS		Value
Master			52.66
35.00 (Minimum)	55.33 (Nominal)	69.00 (Maximum)	

Phase	Far Tube 3 Water Point Measure CPS		Value
Master			19.44
13.00 (Minimum)	20.14 (Nominal)	25.00 (Maximum)	

Phase	Near Tube 1 Air Point Measure CPS		Value
Master			1522
1100 (Minimum)	1462 (Nominal)	2000 (Maximum)	

Phase	Near Tube 1 Rod Point Measure CPS		Value
Master			1572
1200 (Minimum)	1519 (Nominal)	2000 (Maximum)	

Phase	Near Tube 1 Water Point Measure CPS		Value
Master			825.6
640.0 (Minimum)	801.5 (Nominal)	1100 (Maximum)	

Phase	Near Tube 2 Air Point Measure CPS		Value
Master			1567
1100 (Minimum)	1462 (Nominal)	2000 (Maximum)	

Phase	Near Tube 2 Rod Point Measure CPS		Value
Master			1629
1200 (Minimum)	1519 (Nominal)	2000 (Maximum)	

Phase	Near Tube 2 Water Point Measure CPS		Value
Master			867.6
640.0 (Minimum)	801.5 (Nominal)	1100 (Maximum)	

Phase	Near Tube 3 Air Point Measure CPS		Value
Master			1489
1100 (Minimum)	1462 (Nominal)	2000 (Maximum)	

Phase	Near Tube 3 Rod Point Measure CPS		Value
Master			1554
1200 (Minimum)	1519 (Nominal)	2000 (Maximum)	

Phase	Near Tube 3 Water Point Measure CPS		Value
Master			827.2
640.0 (Minimum)	801.5 (Nominal)	1100 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Neutron: Water Block Check

Phase	Far Neutron water porosity PU		Value
Master			82.38
60.00 (Minimum)	100.0 (Nominal)	120.0 (Maximum)	

8.25−in. Resistivity At−the−Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number	RAB8 − AA	876
Calibration Status	AUTO −	

Master: 11−Feb−2008 13:23

8.25−in. Resistivity At−the−Bit Calibration

Resistivity: Fixture

Phase	Ring/T1 factor -----		Value
Master			0.01087
0.009500 (Minimum)	0.01100 (Nominal)	0.01250 (Maximum)	

Phase	Ring/T2 factor -----		Value
Master			0.01084
0.009500 (Minimum)	0.01100 (Nominal)	0.01250 (Maximum)	

Phase	M0/T1 factor -----		Value
Master			1.051
0.9000 (Minimum)	1.050 (Nominal)	1.200 (Maximum)	

Phase	M0/T2 factor -----		Value
Master			1.034
0.9000 (Minimum)	1.050 (Nominal)	1.200 (Maximum)	

Phase	M2/T1 factor -----		Value
Master			0.9812
0.8500 (Minimum)	1.000 (Nominal)	1.150 (Maximum)	

Phase	M2/T2 factor -----		Value
Master			0.9042
0.8500 (Minimum)	1.000 (Nominal)	1.150 (Maximum)	

Phase	BTN shallow/T1 factor ----		Value

Phase	BTN shallow/T2 factor ----		Value

Phase	BTN medium/T1 factor ----		Value

Phase	BTN shallow/T1 factor	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN shallow/T2 factor	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN medium/T1 factor	Value
Master		0.0006630
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN medium/T2 factor ----	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN deep/T1 factor ----	Value
Master		0.0006580
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN deep/T2 factor ----	Value
Master		0.0006550
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Master: 11-Feb-2008 10:38

8.25-in. Resistivity At-the-Bit Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor ----	Value
Master		8.700
	6.500 (Minimum) 8.000 (Nominal) 9.500 (Maximum)	

SCHLUMBERGER

Survey report 4-Jun-2008 06:02:55 Page 1 of 3

Client.....: Apache Energy Ltd.
Field.....: Vic-P58

Well.....: Wasabi-1
API number.....: 07ASQ0028
Engineer.....: A.Kholi, C.Hibberson, D.Perkins

COUNTRY.....: Australia
STATE:.....: Victoria

Spud date.....: 14-Feb-08
Last survey date.....: 01-Mar-08
Total accepted surveys...: 51
MD of first survey.....: 0.00 m
MD of last survey.....: 2313.00 m

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Depth reference -----
Permanent datum.....: AHD
Depth reference.....: RKB
GL above permanent.....: -37.00 m
KB above permanent.....: 38.00 m
DF above permanent.....: 38.00 m

----- Vertical section origin-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

----- Platform reference point-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

Azimuth from Vsect Origin to target: 322.47 degrees

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2007
Magnetic date.....: 15-Feb-2008
Magnetic field strength..: 1202.69 HCNT
Magnetic dec (+E/W-).....: 12.80 degrees
Magnetic dip.....: -69.07 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.05 mGal
Reference H.....: 1202.69 HCNT
Reference Dip.....: -69.07 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 12.80 degrees
Grid convergence (+E/W-).: -0.16 degrees
Total az corr (+E/W-)....: 12.96 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

[(c)2008 IDEAL ID13_0C_08]
SCHLUMBERGER Survey Report 4-Jun-2008 06:02:55 Page 2 of 3

Seq # -	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	115.45	0.14	336.08	115.45	115.45	0.14	0.13	-0.06	0.14	336.08	0.01	PUP	None
3	142.86	0.18	296.21	27.41	142.86	0.21	0.18	-0.11	0.21	328.51	0.04	PUP	None
4	170.39	0.09	303.79	27.53	170.39	0.27	0.21	-0.17	0.27	321.61	0.03	PUP	None
5	201.95	0.09	130.71	31.56	201.95	0.27	0.21	-0.17	0.27	320.98	0.06	PUP	None
6	229.75	0.10	88.12	27.80	229.75	0.23	0.19	-0.13	0.23	326.73	0.03	PUP	None
7	494.63	0.28	191.25	264.88	494.63	-0.33	-0.43	-0.02	0.43	182.96	0.01	PUP	None
8	553.43	0.48	178.29	58.80	553.43	-0.62	-0.82	-0.04	0.82	183.01	0.04	PUP	None
9	700.75	0.84	171.77	147.32	700.74	-2.07	-2.51	0.13	2.51	177.03	0.02	PUP	None
10	759.92	0.78	172.15	59.17	759.90	-2.79	-3.33	0.25	3.34	175.76	0.01	PUP	None
11	789.17	0.56	166.34	29.25	789.15	-3.10	-3.67	0.31	3.68	175.20	0.08	PUP	None
12	818.74	0.38	176.04	29.57	818.72	-3.31	-3.91	0.35	3.92	174.90	0.07	PUP	None
13	886.60	0.20	232.91	67.86	886.58	-3.50	-4.20	0.27	4.21	176.33	0.05	PUP	None
14	1034.55	0.55	198.33	147.95	1034.52	-3.90	-5.03	-0.16	5.04	181.81	0.03	PUP	None
15	1180.90	0.38	233.51	146.35	1180.87	-4.28	-5.99	-0.77	6.04	187.33	0.02	PUP	None
16	1239.98	3.38	334.13	59.08	1239.92	-2.57	-4.54	-1.69	4.84	200.40	0.59	PUP	None
17	1270.01	6.32	334.23	30.03	1269.83	-0.09	-2.25	-2.79	3.59	231.11	0.98	PUP	None
18	1298.75	8.02	326.45	28.74	1298.35	3.46	0.84	-4.59	4.67	280.40	0.68	PUP	None
19	1328.72	8.15	333.60	29.97	1328.02	7.63	4.49	-6.69	8.06	303.86	0.34	PUP	None
20	1358.00	9.08	336.28	29.28	1356.97	11.91	8.46	-8.54	12.02	314.73	0.35	PUP	None

21	1388.32	11.22	337.32	30.32	1386.82	17.09	13.37	-10.64	17.09	321.49	0.71	PUP	None
22	1447.39	16.50	340.87	59.07	1444.15	30.61	26.61	-15.61	30.85	329.61	0.90	PUP	None
23	1476.79	18.71	341.36	29.40	1472.17	39.04	35.03	-18.49	39.60	332.18	0.75	PUP	None
24	1506.00	21.47	336.96	29.21	1499.60	48.65	44.39	-22.08	49.57	333.56	1.08	PUP	None
25	1535.79	23.81	336.52	29.79	1527.09	59.76	54.92	-26.61	61.03	334.15	0.79	PUP	None
26	1564.88	26.29	336.35	29.09	1553.44	71.71	66.21	-31.53	73.33	334.53	0.85	PUP	None
27	1594.25	28.63	333.72	29.37	1579.50	84.93	78.48	-37.26	86.87	334.60	0.90	PUP	None
28	1624.03	29.21	334.37	29.78	1605.57	99.04	91.43	-43.56	101.27	334.53	0.22	PUP	None
29	1653.53	29.76	330.72	29.50	1631.25	113.33	104.30	-50.25	115.78	334.28	0.64	PUP	None
30	1683.37	30.78	329.89	29.84	1657.02	128.23	117.37	-57.71	130.79	333.82	0.37	PUP	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
31	1712.48	31.44	331.04	29.11	1681.95	143.12	130.45	-65.12	145.80	333.47	0.31	PUP	None
32	1741.60	32.10	330.46	29.12	1706.70	158.30	143.83	-72.61	161.12	333.21	0.25	PUP	None
33	1770.74	32.52	328.16	29.14	1731.33	173.76	157.22	-80.56	176.66	332.87	0.45	PUP	None
34	1801.91	32.89	325.39	31.17	1757.56	190.55	171.31	-89.79	193.41	332.34	0.49	PUP	None
35	1831.13	34.60	326.01	29.22	1781.86	206.75	184.72	-98.93	209.54	331.83	0.60	PUP	None
36	1860.48	34.24	324.51	29.35	1806.07	223.32	198.35	-108.39	226.03	331.35	0.31	PUP	None
37	1890.59	34.34	324.56	30.11	1830.95	240.28	212.16	-118.23	242.88	330.87	0.03	PUP	None
38	1919.28	39.56	321.67	28.69	1853.87	257.51	225.93	-128.59	259.97	330.35	1.92	PUP	None
39	1948.88	41.97	319.68	29.60	1876.29	276.82	240.88	-140.85	279.03	329.68	0.92	PUP	None
40	1978.21	44.07	317.65	29.33	1897.73	296.79	255.90	-154.07	298.70	328.95	0.86	PUP	None
41	2008.18	45.45	317.25	29.97	1919.01	317.81	271.44	-168.34	319.40	328.19	0.47	PUP	None
42	2037.55	46.14	317.73	29.37	1939.49	338.78	286.96	-182.56	340.11	327.54	0.26	PUP	None
43	2066.69	46.95	318.03	29.14	1959.53	359.87	302.65	-196.75	360.98	326.97	0.29	PUP	None
44	2096.38	47.60	318.28	29.69	1979.67	381.62	318.90	-211.30	382.55	326.47	0.23	PUP	None
45	2125.42	47.49	318.95	29.04	1999.28	402.99	334.97	-225.46	403.79	326.06	0.17	PUP	None
46	2155.49	47.85	318.70	30.07	2019.52	425.18	351.71	-240.10	425.85	325.68	0.13	PUP	None
47	2185.00	47.98	319.61	29.51	2039.30	447.04	368.27	-254.42	447.61	325.36	0.23	PUP	None
48	2214.22	48.00	319.92	29.22	2058.86	468.73	384.85	-268.45	469.23	325.10	0.08	PUP	None
49	2243.21	48.08	320.67	28.99	2078.24	490.27	401.43	-282.22	490.71	324.89	0.19	PUP	None
50	2272.78	47.76	323.36	29.57	2098.06	512.21	418.73	-295.72	512.63	324.77	0.68	PUP	None
51	2313.00	47.76	323.36	40.22	2125.10	541.99	442.62	-313.49	542.39	324.69	0.00	PROJ TO TD	

[(c)2008 IDEAL ID13_0C_08]

Company: **Apache Energy Ltd**

Schlumberger

Well: **Wasabi−1**

Field: **Vic−P58**

Rig: **West Triton**

State: **Victoria**

GeoVISION Service

1:500 Measured Depth

Recorded Mode Data, Composite Log

Schlumberger

Company: **Apache Energy Ltd**

Well: **Wasabi−1**
Field: **Vic−P58**
Rig: **West Triton** State: **Victoria**

GeoVISION Service
1:500 True Vertical Depth
Recorded Mode Data, Composite Log

Rig: West Triton
Field: Vic−P58
Location: Bass Strait
Well: Wasabi−1
Company: Apache Energy Ltd

Location

Total depth:	2313.00 m	Elevation K.B.	Top Drive
Spud date:	14−Feb−08	G.L.	−37.00 m
Runs:	1 To 5	D.F.	38.00 m

Permanent datum: AHD Elev.: 0.00 m
Log measured from: Drill Floor 38.00 m above Perm. datum
Depth reference: Driller's Depth

API serial no.	N 5 739 963.350 m	Longitude Latitude
07ASQ0028	E 522 993.588 m	E 147° 15'49.147" S 38° 29'18.157"

Depth logged: 85.48 m To 2298.36 m Mag decl: 12.801 deg. Other services:
Date logged: 15−Feb−08 To 03−Mar−08 Mag dip: −69.071 deg. See Remarks

Bore hole record

Hole size	from	to
406 mm	135.00 m	862.00 m
311 mm	862.00 m	2313.00 m

Casing record

Size	Density	from	to
508 mm	193 lbm/m	Well Head	135.00 m
440 mm	101 lbm/m	Well Head	857.00 m

Mud record

Type	from	to
Sea Water	135.00 m	862.00 m
WBM	862.00 m	2313.00 m

Borehole deviation record

Min	Max	from	to
0.18 deg.	0.84 deg.	135.00 m	862.00 m
0.20 deg.	48.08 deg.	862.00 m	2313.00 m

Surface equipment

Unit	OLU−KC−0702
Depth system	DWE & CLT

Software record

IDEAL Wis	ID13_0c_05		
SPM	hspm13_0c_03		
LWD	See Remarks		
MWD	See Remarks		

OTHER SERVICES FOR RUN1
sonicVISION Service

REMARKS: RUN NUMBER 1
Depth is referenced to driller's depth.

SonicVISION Data is presented separately.

Run Objective: Drill 406mm hole section
POOH: Section TD

OTHER SERVICES FOR RUN2
Directional Surveys

REMARKS: RUN NUMBER 2
Depth is referenced to driller's depth.
GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.
GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

SADN Thermal Neutron Porosity (TNPH) is corrected for the effects of bit size, temperature, mud salinity, and mud hydrogen index (a factor of mud weight, mud temperature, and pressure).
Gaps in TNPG data , from 1295m to 1750m, due to unstable detector high voltage

OTHER SERVICES FOR RUN3
Directional Surveys

REMARKS: RUN NUMBER 3
Depth is referenced to driller's depth

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

Neutron Porosity is calculated using a limestone matrix with a matrix density of 2.71 g/cm^3

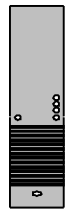
GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

EQUIPMENT DESCRIPTION

RUN1

DOWNHOLE EQUIPMENT



sonicVISION8 — 53.74
S/N: 34888 RX array — 49.91
Software Ver.: V6.6B04

308mm In−Line Stabiliser — 46.06

Telescope — 44.74
S/N: FB46
Software Ver.: 9.2C02
D&I — 40.36

Crossover — 36.25

Crossover — 35.77

406mm Stabilizer — 35.08

Drill Collar — 32.35

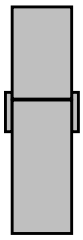
406mm Stabiliser — 22.91

Drill Collar — 20.27

Drill Collar — 11.10

RUN2

DOWNHOLE EQUIPMENT



adnVISION8s — 40.70
S/N: 42714
Software Ver: V8.3A02
Blade OD: 305mm
NSR−T 06−01 Neutron Porosity — 39.22
GSR−Z 06−01
Bulk Density — 37.36
Ultra Sonic — 37.17

Crossover — 34.33
S/N: SBD4865

BAT Sonic — 33.99
S/N: PA9016356106

Crossover — 27.13
S/N: ASQ8005

TeleScope — 26.66
S/N: VR 53
Software Ver.: 9.2C02
D&I — 22.28

geoVISION8 — 18.16
S/N: 42184
Software Ver.: V9.1B14
Shallow — 15.88
Deep — 15.57
GR — 15.10

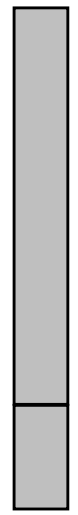
Monel Drill Collar — 13.91
S/N:9710422

Float Sub — 11.01
S/N: CMP2051

A962 PowerPak Motor — 10.36
S/N: N7504

RUN3

DOWNHOLE EQUIPMENT



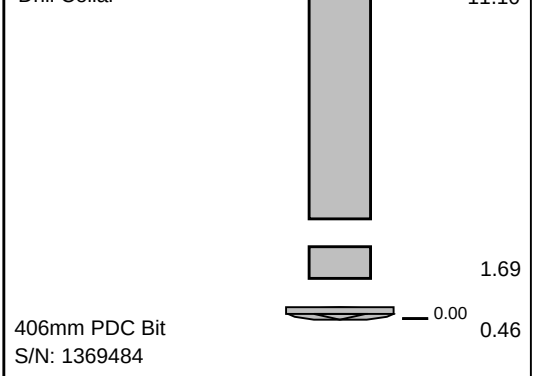
TeleScope — 26.38
S/N: VR 53
Software Ver.: 9.2C02
D&I — 22.00

geoVISION8 — 17.88
S/N: 42184
Software Ver.: V9.1B14
Shallow — 15.60
Deep — 15.29
GR — 14.82

Monel Drill Collar — 13.63
S/N:9710422

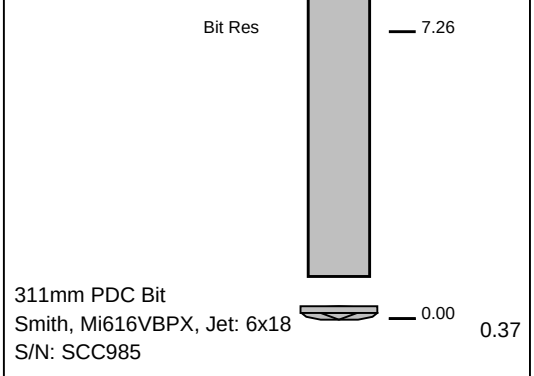
Float Sub — 10.73
S/N: CMP 2051

A962 PowerPak Motor — 10.08
S/N: N7504
Bit Res — 7.12



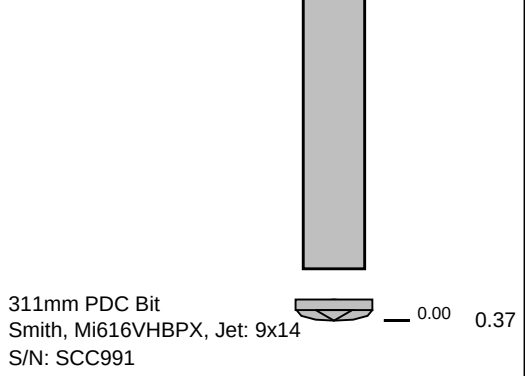
406mm PDC Bit
S/N: 1369484

Maximum string diameter 406mm
All lengths in Meters



311mm PDC Bit
Smith, Mi616VBPX, Jet: 6x18
S/N: SCC985

Maximum string diameter 311mm
All lengths in Meters



311mm PDC Bit
Smith, Mi616VHBPX, Jet: 9x14
S/N: SCC991

Maximum string diameter 311mm
All lengths in Meters

OTHER SERVICES FOR RUN4
Directional Surveys

OTHER SERVICES FOR RUN5
Directional Surveys

REMARKS: RUN NUMBER 4
Depth is referenced to driller's depth.

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

GVR RING and Medium Button resistivities are not presented due to sensor failures.

Run Objective: Drill 311mm hole section to TD
POOH: change BHA

REMARKS: RUN NUMBER 5
Depth is referenced to driller's depth.

GVR Gamma Ray is corrected for mud weight, bit size, tool collar size, and potassium content in mud.

GVR Resisitivity is not environmentally corrected.
No Borehole compensation is applied.

SADN Thermal Neutron Porosity (TNPH) is corrected for the effects of bit size, temperature, mud salinity, and mud hydrogen index (a factor of mud weight, mud temperature, and pressure).

Neutron Porosity is calculated using a limestone matrix with a matrix density of 2.71 g/cm^3

GVR RING and Medium Button resistivities are not presented due to sensor failures.
Run Objective: Open hole logging from TD to 1756.68m
POOH: End of logging

EQUIPMENT DESCRIPTION

RUN4

DOWNHOLE EQUIPMENT

RUN5

DOWNHOLE EQUIPMENT

Telescope
S/N: VR 53
Software Ver.: 9.2C02

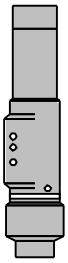
D&I — 22.03

26.41

geoVISION8
S/N: 42184
Software Ver.: 9.1B14

Shallow — 15.63
Deep — 15.32
GR — 14.85

17.91



Pony Monel Drill Collar
S/N: 9710422

13.66

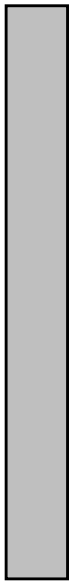
Float Sub
S/N: CMP 2051

10.76

A962 PowerPak Motor
S/N:N7504

Bit Res — 7.13

10.11



311mm Milled Tooth Bit
Jet: 3x24

0.00

0.40

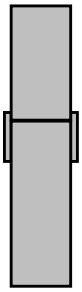
Maximum string diameter 311mm
All lengths in Meters

adnVISION8s
S/N: 42709

Neutron Porosity — 32.11
Bulk Density — 30.13
UltraSonic — 29.96

Blade OD: 305mm
NSR−T 06−01
GSR−Z 06−01

33.51



Crossover
S/N: S27947

27.14

Crossover
S/N: ASQ005

26.80

Telescope
S/N: VR 53
Software Ver.: 9.2C02

D&I — 21.95

26.33

geoVISION8
S/N: 42184
Software ver.: 9.1B14

Shallow — 15.55
Deep — 15.24
GR — 14.77

17.83

Pony Monel Drill Collar
S/N: 9710422

13.58

Float Sub
S/N: CMP 2051

10.68

A962 PowerPak Motor
S/N: N7504

Bit Res — 7.09

10.03

311mm Milled Tooth Bit
Jet: 1x21, 3x24

0.00

0.32

Maximum string diameter 311mm
All lengths in Meters

Bit Run Summary

Run number		1	2	3	4	5
Bit size	mm	406	311	311	311	311
Bit start depth	m	135	862	1796	1900	2313
Bit end depth	m	862	1796	1900	2313	2313
Top interval logged	m	85.48	822.68	1777.19	1881.19	1703.89
Bottom interval logged	m	812.48	1756.68	1881.19	2294.19	2298.36
Begin log: time		21:53	23:21	22:15	03:44	10:04
Begin log: date		15−Feb−08	22−Feb−08	26−Feb−08	28−Feb−08	03−Mar−08
End log: time		01:52	16:06	08:47	05:30	20:12
End log: date		17−Feb−08	25−Feb−08	27−Feb−08	01−Mar−08	03−Mar−08
Mud data						
Depth	m	862	1796	1900	2313	2313
Type		Sea Water	WBM	WBM	WBM	WBM
Mud weight	ppg	8.85	9.6	9.64	10.02	10.02
Solids	%	4.7	4.1	3.9	5.1	5.1
Chlorides	mg/L	2000	48000	50000	49000	49000
Rm	ohm.m@ºC	n/a	0.085@27	0.086@27	0.084@27	0.086@27
Rmf	ohm.m@ºC	n/a	0.070@27	0.074@27	0.074@27	0.073@27
Rmc	ohm.m@ºC	n/a	0.097@27	0.094@27	0.098@27	0.098@27
Potassium	%	n/a	4.33	4.58	4.4	4.4
Environmental data						
GR						
Mud weight	ppg	8.85	9.6	9.64	10.02	10.35
Bit size	mm	406	311	311	311	311
Resistivity						
Neutron porosity						
Hole Size	mm	406	311	311	311	311
Mud weight	ppg	8.85	9.6	9.64	10.02	10.35
Temperature	ºC	24.31	55.7	58.8	65.9	59.61
Mud salinity	ppk	n/a	n/a	n/a	n/a	n/a
Formation salinity		n/a	n/a	n/a	n/a	n/a
Recording rate 1	SEC	5 (SON)	5 (GVR)	5 (GVR)	5 (GVR)	5 (GVR)
Recording rate 2	SEC	n/a	5 (SADN)	n/a	n/a	5 (SADN)
Filtering GR		3 pts	3 pts	3 pts	3 pts	3 pts
Filtering density		3 pts	3 pts	3 pts	3 pts	3 pts
Filtering Neutron		3 pts	3 pts	3 pts	3 pts	3 pts
Company representative		B.Openshaw	S.Schmidt			
Anadrill personnel		A.Kohli	C.Hibberson	D.Perkins	J.Patterson	A.Vedat

Variable Name	Variable Description	Run Name & Value		
	Run Number	2	3	
	General Information			
BHT_RM	Bottom Hole Temperature (RM)	DEGC	65.000	65.000
BSAL_RM	Mud Salinity (RM)	PPK	95.000	95.000
BS_RM	Bit Size (RM)	IN	12.250	12.250
COEF_M	User Defined FEXP in Clean Sand	----	1.650	1.650
C_WS	Overpressure correction to Sw and M	----	1.000	1.000
FEXP	Formation Factor Exponent(RM)	----	2.000	2.000
FNUM	Formation Factor Enumerator(RM)	----	1.000	1.000
FPHI_RM	Formation Factor Porosity Source (RM)	----	XPLOT	XPLOT
MST_RM	Mud Sample temperature (RM)	DEGC	20.400	20.400
MW_RM	Mud Weight (RM)	LB/G	9.530	9.530
OBMF_RM	Oil Based Mud (RM)	----	NO	NO
RHOF_RM	Mud Filtrate Density (RM)	G/C3	1.000	1.000
RHOM_RM	Matrix density (RM)	G/C3	2.710	2.710
RMS_RM	Resistivity of Mud Sample (RM)	OHMM	0.085	0.085
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			

RWA_RES_IN Rwa computation resistivity input
RWS_RM Resistivity of Connate Water (RM) OHMM 1.000 1.000
SHT_RM Ground Level Temperature (Mud−Line When Offshore) (RM) DEGC 15.000 15.000
TD_RM Total Measured Depth (RM) M 1796.000 1900.000
TWS_RM Temperature of Connate Water (RM) DEGC 23.889 23.889
VF_ILLI Fraction of illite in shales ---- 0.500 0.500
VF_KAOL Fraction of kaolinite in shales ---- 0.500 0.500
VF_MONT Fraction of montmorillonite in shales ---- 0.000 0.000
XPDM_RM Cross plot density porosity multiplier ---- 0.675 0.675
XPNM_RM Cross plot neutron porosity multiplier ---- 0.325 0.325

SAD
ADN_CHASSIS_STR Type String Chassis ADN
ADN_COLLAR_STR Type String Collar ADN
ADN_DATA_FIX ADN: Create A Corrected ADN Time Data File ---- NO
ADN_DATA_LTB ADN: Create An ADN LTB Data File ---- NO
ADN_STAB_STR ADN Stabilizer Type String ---- NO
ALPHA_COMPUTE_D Perform Density Enhanced Vertical Resolution process ? ---- NO
ALPHA_COMPUTE_N Perform Neutron Enhanced Vertical Resolution process ? ---- NO
AVE_ADN ADN/Array Channels: perform averaging(RM) : ---- YES
A_DHS ADN Down Hole Software Version String ---- YES
CHI_RM Caliper High limit from BS (RM) IN 3.000
CLO_RM Caliper Low limit from BS (RM) IN 0.000
DEVI Well Section Deviation DEG 12.300
DTIK_SEL ADN: Density Tick Channel Name ---- LSAZ
DTMUD Delta−T for Mud US/F 189.320
DYN_IMG_COMPUTE Generate Dynamic Normalized Image? ---- NO
ENVCOR Neutron Processing: Environmental Correction? ---- YES
EVRL EVR Process averaging number of samples (RM) ---- 49
FAZ1_AVAIL ADN8 Neutron Far Tube 1 Available? ---- YES
FAZ2_AVAIL ADN8 Neutron Far Tube 2 Available? ---- YES
FAZ3_AVAIL ADN8 Neutron Far Tube 3 Available? ---- YES
FCD Future Casing (Outer) Diameter IN 0.000
GCSE Generalized Caliper Selection ---- BS
IDQT Image Derived Quality Threshold ---- 0.400
IHVS Integrated Hole Volume Start Value(RM) F3 0.000
IMAGE_MAX_SOA Image SOA (Quadrant) Right Scale IN 2.500
IMAGE_MAX_SPEF Image PEF(Segment) Right Scale ---- 6.000
IMAGE_MAX_SRHOB Image RHOB(Segment) Right Scale G/C3 2.650
IMAGE_MIN_SOA Image SOA (Quadrant) Left Scale IN 0.000
IMAGE_MIN_SPEF Image PEF(Segment) Left Scale ---- 2.000
IMAGE_MIN_SRHOB Image RHOB(Segment) Left Scale G/C3 2.050
JSD_ADN ADN Acquisition start date G/C3 2.050
LITHO_TYPE_ADN Lithology (RM) ---- LIME
N1FTU_6_RM ADN: Neutron Bank 1 Far Tubes used : ---- 1−2−3
N2FTU_6_RM ADN: Neutron Bank 2 Far Tubes used : ---- 1−2−3
NNTU_8_RM ADN: Neutron Near Tube used : ---- 1−2−3
NTIK_SEL ADN: Neutron Tick Channel Name ---- FAZ1
RSD LWD run start date dd−mmm−yy OHMM 0.085 0.085
RWA_COMP_MOD Rwa computation model ---- BASIC BASIC
RWA_DEN_ADN Rwa Density Input ---- RHOB RHOB
RWA_DEN_CDN Rwa Density Input ---- RHOB RHOB
RWA_DEN_INPUT Rwa Density Input ---- RHOB RHOB
RWA_FORM_MOD Rwa computation formation model ---- CLASTIC CLASTIC
RWA_RES_INPUT Rwa computation resistivity input ---- RT RT
SOCNL Standoff Distance of the CNL Tool ---- 1.000
SSIZ_ADN ADN Stabilizer Size IN 12.000
STOH ADN Density Top of Hole Sector (Left Boundary): ---- SECTOR_0
TRPM_RM Average Tool Rotational Speed RPM 20.000
USMIN_RM ADN:Minimum Ultrasonic standoff (RM) IN 0.180
USWF_RM ADN:Process Ultrasonic Waveform? ---- NO
VERS_ADN ADN Downhole Software Version ---- 8.300
WSDI Window Size of Dynamic Normalization Image M 4.572

RAB
RAB/BTN_SLV_SIZE/PARAMETE IN −− RAB: Button Sleeve Diameter 7/8 11 11
RAB/STAB_SIZE/PARAMETER RAB: Stabilizer Diameter IN 12−12.25 12−12.25
BDBHCA RAB: Button Deep Borehole A Factor ---- −0.035 −0.035
BDBHCB RAB: Button Deep Borehole B Factor ---- −0.018 −0.018
BHA_COEF_VER RAB: BHA Coef Generator Version ---- 2.000 2.000
BITBHCA RAB: Bit A Borehole Factor ---- 0.095 0.095
BITBHCB RAB: Bit B Borehole Factor ---- −0.075 −0.074
BIT_K_FACTOR RAB: Bit K Factor ---- 18.639 18.382
BMBHCA RAB: Button Medium Borehole A Factor ---- 0.006 0.006
BMBHCB RAB: Button Medium Borehole B Factor ---- −0.019 −0.019
BSBHCA RAB: Button Shallow Borehole A Factor ---- −0.009 −0.009
BSBHCB RAB: Button Shallow Borehole B Factor ---- −0.036 −0.036
BUT_KIMP_A RAB: Button Impedance Coeff A ---- 0.002 0.002
BUT_KIMP_B RAB: Button Impedance Coeff B ---- 0.000 0.000
DBUTTON_K_FACTO RAB: Button Deep K factor ---- 0.003 0.003
DHS_VERSION RAB: DownHole Software Version ---- −999.250 −999.250
GR_BHC_TOOLSIZE RAB: Gamma−Ray Borehole Coeff 1 ---- 8.250 8.250
HI_CSDEPTH_OUT RAB: Allow Hi−Resolution CS_DEPTH Image Data Output ---- NO NO
HI_DLIS_OUT RAB: Allow Hi−Resolution DLIS Image Data Output ---- NO NO
HI_RIVER_OUT RAB: Allow Hi−Resolution River for Image Data Output ---- NO NO
IMAGE_MAX_GR RAB: GR Image Maximum Scale Value GAPI 120.000 120.000
IMAGE_MAX_RES RAB: Image Maximum Resistivity Value OHMM 100.000 100.000
IMAGE_MIN_GR RAB: GR Image Minimum Scale Value GAPI 20.000 20.000
IMAGE_MIN_RES RAB: Image Minimum Resistivity Value OHMM 1.000 1.000
JSD_RAB RAB Acquisition start date OHMM 1.000 1.000
KPER Potassium Concentration (RM) ---- 4.900 4.900
MAG_DECL_RAB RAB: Magnetic Declination DEG 12.800 12.800
MAG_INCL_RAB RAB: Magnetic Dip DEG −69.070 −69.070
MBUTTON_K_FACTO RAB: Button Medium K Factor ---- 0.004 0.004
OBM RAB: Oil base Mud ---- NO NO
ORIENTATION_RM Rab Image Orientation ---- TOH TOH

RABBDA0	RAB: Button Deep A0 Coeff	----	-0.118	-0.118
RABBDA1	RAB: Button Deep A1 Coeff	----	0.102	0.103
RABBDA2	RAB: Button Deep A2 Coeff	----	-0.043	-0.043
RABBDA3	RAB: Button Deep A3 Coeff	----	0.009	0.009
RABBDA4	RAB: Button Deep A4 Coeff	----	-0.001	-0.001
RABBDA5	RAB: Button Deep A5 Coeff	----	0.000	0.000
RABBDMIN	RAB: Button Deep Minimum Value	----	0.038	0.038
RABBITA0	RAB: Bit A0 Coeff	----	6.244	6.097
RABBITA1	RAB: Bit A1 Coeff	----	-22.738	-21.924
RABBITA2	RAB: Bit A2 Coeff	----	96.737	91.069
RABBITA3	RAB: Bit A3 Coeff	----	-161.021	-149.094
RABBITA4	RAB: Bit A4 Coeff	----	120.518	110.251
RABBITA5	RAB: Bit A5 Coeff	----	-33.735	-30.581
RABBITMIN	RAB: Bit Minimum Value	----	22.460	22.458
RABBMA0	RAB: Button Medium A0 Coeff	----	-0.118	-0.118
RABBMA1	RAB: Button Medium A1 Coeff	----	0.096	0.097
RABBMA2	RAB: Button Medium A2 Coeff	----	-0.039	-0.040
RABBMA3	RAB: Button Medium A3 Coeff	----	0.008	0.008
RABBMA4	RAB: Button Medium A4 Coeff	----	-0.001	-0.001
RABBMA5	RAB: Button Medium A5 Coeff	----	0.000	0.000
RABBMMIN	RAB: Button Medium Minimum Value	----	0.041	0.041
RABBSA0	RAB: Button Shallow A0 Coeff	----	-0.127	-0.127
RABBSA1	RAB: Button Shallow A1 Coeff	----	0.097	0.098
RABBSA2	RAB: Button Shallow A2 Coeff	----	-0.038	-0.039
RABBSA3	RAB: Button Shallow A3 Coeff	----	0.007	0.007
RABBSA4	RAB: Button Shallow A4 Coeff	----	-0.001	-0.001
RABBSA5	RAB: Button Shallow A5 Coeff	----	0.000	0.000
RABBSMIN	RAB: Button Shallow Minimum Value	----	0.055	0.055
RABDHS	RAB Down Hole Software	----	4.000	4.000
RABEC	RAB: Resistivity Env-Cor	----	YES	YES
RABRNGA0	RAB: RING A0 Coeff	----	-0.114	-0.114
RABRNGA1	RAB: RING A1 Coeff	----	0.101	0.102
RABRNGA2	RAB: RING A2 Coeff	----	-0.043	-0.044
RABRNGA3	RAB: RING A3 Coeff	----	0.009	0.009
RABRNGA4	RAB: RING A4 Coeff	----	-0.001	-0.001
RABRNGA5	RAB: RING A5 Coeff	----	0.000	0.000
RABRNGMIN	RAB: Ring Minimum Value	----	1.150	1.150
RAB_BIT_ECAL	Bit Resistivity for ECAL_RAB?	----	YES	YES
RAB_BIT_INVERSI	Input Bit Resistivity for Inversion? (Recommended at the bit)	----	NO	NO
RAB_CALIPER_CAL	Compute ECAL_RAB?	----	NO	NO
RAB_DATA_FIX	RAB: Create A Corrected RAB Time Data File	----	NO	NO
RAB_DATA_LTB	RAB: Create An RAB LTB Data File	----	NO	NO
RAB_DEEPBTN_ECA	Deep Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_DEEPBTN_INV	Input Deep Button Resistivity for Inversion?	----	YES	YES
RAB_INVERSION	Perform Rt Inversion?	----	NO	NO
RAB_INVERSION_B	RAB Bit Sensor Weight for Inversion[0,1]	----	0.000	0.000
RAB_INVERSION_B	Ending Depth for GR Cutoff in Zone1 (default through the whole well)	M	30480.000	30480.000
RAB_INVERSION_B	Ending Depth of Zone10	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone2	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone3	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone4	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone5	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone6	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone7	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone8	M	-304.571	-304.571
RAB_INVERSION_B	Ending Depth of Zone9	M	-304.571	-304.571
RAB_INVERSION_C	Continuity Multiplier[0,1]	----	0.500	0.500
RAB_INVERSION_D	RAB Deep Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_D	RAB inversion for Dh?	----	YES	YES
RAB_INVERSION_D	RAB inversion for Di?	----	YES	YES
RAB_INVERSION_G	GR Cutoff for Shale Formation	----	75.000	75.000
RAB_INVERSION_G	GR Cutoff for Shale Formation in Zone1(default through the whole well)	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone10	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone2	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone3	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone4	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone5	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone6	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone7	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone8	GAPI	75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone9	GAPI	75.000	75.000
RAB_INVERSION_M	RAB Medium Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_R	Resistivity Cutoff for Shale Formation	OHMM	2.000	2.000
RAB_INVERSION_R	Resistive Invasion Allowed	----	NO	NO
RAB_INVERSION_R	RAB Ring Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_R	RAB inversion for Rmud?	----	NO	NO
RAB_INVERSION_R	RAB inversion for Rt?	----	YES	YES
RAB_INVERSION_R	Rt to R-deepest separation penalty multiplier[0,1]	----	0.500	0.500
RAB_INVERSION_R	RAB inversion for Rxo?	----	YES	YES
RAB_INVERSION_S	GR of Clean Sand Formation	----	-999.250	-999.250
RAB_INVERSION_S	GR of Shale Formation	----	-999.250	-999.250
RAB_INVERSION_S	RAB Shallow Button Sensor Weight for Inversion[0,1]	----	1.000	1.000
RAB_INVERSION_T	Inversion Threshold[0, 0.3]	----	0.010	0.010
RAB_INVERSION_W	Formation Water Resistivity	OHMM	0.100	0.100
RAB_INVERSION_W	Formation Water Temperature	----	150.000	150.000
RAB_MEDIUMBTN_E	Medium Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_MEDIUMBTN_I	Input Medium Button Resistivity for Inversion?	----	YES	YES
RAB_QUAD	RAB: Process Quadrant data ?	----	YES	YES
RAB_RIGMODE_ECA	Bit on Bottom?	----	YES	YES
RAB_RING_ECAL	Ring Resistivity for ECAL_RAB?	----	YES	YES
RAB_RING_INVERS	Imput RING Resistivity for Inversion?	----	YES	YES
RAB_SHALLOWBTN_	Shallow Button Resistivity for ECAL_RAB?	----	YES	YES
RAB_SHALLOWBTN_	Input Shallow Button Resistivity for Inversion?	----	YES	YES
RAB_TAB	RAB: Compute TAB ?	----	YES	YES
RAB_TECHLOG	RAB: Generate Techlog ?	----	YES	YES
RAB_TEMP_SELECT	RAB Temperature Selection	----	MEASURED	MEASURED

RAB_TICKS	RAB: Generate Ticks ?	----	YES	YES
READOUT_PORT_MP	RAB: ROP to Bit Face Distance		M	15.075 14.795
RINGBHCA	RAB: Ring Borehole A Factor	----	0.298	0.298
RINGBHCB	RAB: Ring Borehole B Factor	----	−0.112	−0.112
RING_KIMP_A	RAB: Ring Impedance Coeff A	----	0.000	0.000
RING_KIMP_B	RAB: Ring Impedance Coeff B	----	0.000	0.000
RING_K_FACTOR	RAB: Ring K Factor	----	0.101	0.101
SBUTTON_K_FACTO	RAB: Button Shallow K Factor	----	0.005	0.005
SCALE_IMAGES	RAB: Process Image Data	----	YES	YES
STAB	RAB: Run with Stabilizer	----	YES	YES
TFF_OFFSET_RAB	RAB Time−Frame File Time Offset		S	0.000 0.000
TIMEFRAME_FILE_	RAB: Time Frame File Name		S	0.000 0.000
TOOLTYPE	RAB: Azimuthal Tool	----	YES	YES
TS_VERSION	RAB: ToolScope Software Version	----	−999.250	−999.250
VRAB6	Rab Tool type (ENP/PILOT)	----	RAB8_ENP	RAB8_ENP
WIN_SIZE_DYN_IM	RAB: Window Size for Scaling Dynamic Image		M	0.914 0.914
WRK	to Report Potassium Concentration (RM)	----	K_by_Wgt_%	K_by_Wgt_%

Variable Name	Variable Description	Run Name & Value		
	Run Number		4	5
	General Information			
BHT_RM	Bottom Hole Temperature (RM)	DEGC	65.000	65.000
BSAL_RM	Mud Salinity (RM)	PPK	0.000	81.900
BS_RM	Bit Size (RM)	IN	12.250	12.250
COEF_M	User Defined FEXP in Clean Sand	----	1.650	1.650
C_WS	Overpressure correction to Sw and M	----	1.000	1.000
FEXP	Formation Factor Exponent(RM)	----	2.000	2.000
FNUM	Formation Factor Enumerator(RM)	----	1.000	1.000
FPHI_RM	Formation Factor Porosity Source (RM)	----	XPLOT	XPLOT
MST_RM	Mud Sample temperature (RM)	DEGC	20.400	20.700
MW_RM	Mud Weight (RM)	LB/G	9.800	10.400
OBMF_RM	Oil Based Mud (RM)	----	NO	NO
RHOF_RM	Mud Filtrate Density (RM)	G/C3	1.000	1.000
RHOM_RM	Matrix density (RM)	G/C3	2.710	2.710
RMS_RM	Resistivity of Mud Sample (RM)	OHMM	0.085	0.087
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			
RWS_RM	Resistivity of Connate Water (RM)	OHMM	1.000	1.000
SHT_RM	Ground Level Temperature (Mud−Line When Offshore) (RM)	DEGC	10.000	15.000
TD_RM	Total Measured Depth (RM)	M	2313.000	2313.000
TWS_RM	Temperature of Connate Water (RM)	DEGC	23.889	23.889
VF_ILLI	Fraction of illite in shales	----	0.500	0.500
VF_KAOL	Fraction of kaolinite in shales	----	0.500	0.500
VF_MONT	Fraction of montmorillonite in shales	----	0.000	0.000
XPDM_RM	Cross plot density porosity multiplier	----	0.675	0.675
XPNM_RM	Cross plot neutron porosity multiplier	----	0.325	0.325
	RAB			
RAB/BTN_SLV_SIZE/PARAMETE	IN −− RAB: Button Sleeve Diameter		7/8	11 11
RAB/STAB_SIZE/PARAMETER	RAB: Stabilizer Diameter		IN	12−12.25 12−12.25
BDBHCA	RAB: Button Deep Borehole A Factor	----	−0.035	−0.035
BDBHCB	RAB: Button Deep Borehole B Factor	----	−0.018	−0.018
BHA_COEF_VER	RAB: BHA Coef Generator Version	----	80012.000	80012.000
BITBHCA	RAB: Bit A Borehole Factor	----	0.095	0.095
BITBHCB	RAB: Bit B Borehole Factor	----	−0.074	−0.074
BIT_K_FACTOR	RAB: Bit K Factor	----	18.409	18.336
BMBHCA	RAB: Button Medium Borehole A Factor	----	0.006	0.006
BMBHCB	RAB: Button Medium Borehole B Factor	----	−0.019	−0.019
BSBHCA	RAB: Button Shallow Borehole A Factor	----	−0.009	−0.009
BSBHCB	RAB: Button Shallow Borehole B Factor	----	−0.036	−0.036
BUT_KIMP_A	RAB: Button Impedance Coeff A	----	0.002	0.002
BUT_KIMP_B	RAB: Button Impedance Coeff B	----	0.000	0.000
DBUTTON_K_FACTO	RAB: Button Deep K factor	----	0.003	0.003
DHS_VERSION	RAB: DownHole Software Version	----	9.100	9.100
GR_BHC_TOOLSIZE	RAB: Gamma−Ray Borehole Coeff 1	----	8.250	8.250
HI_CSDEPTH_OUT	RAB: Allow Hi−Resolution CS_DEPTH Image Data Output	----	NO	NO
HI_DLIS_OUT	RAB: Allow Hi−Resolution DLIS Image Data Output	----	NO	NO
HI_RIVER_OUT	RAB: Allow Hi−Resolution River for Image Data Output	----	NO	NO
IMAGE_MAX_GR	RAB: GR Image Maximum Scale Value	GAPI	120.000	120.000
IMAGE_MAX_RES	RAB: Image Maximum Resistivity Value	OHMM	100.000	100.000
IMAGE_MIN_GR	RAB: GR Image Minimum Scale Value	GAPI	20.000	20.000
IMAGE_MIN_RES	RAB: Image Minimum Resistivity Value	OHMM	1.000	1.000
JSD_RAB	RAB Acquisition start date	OHMM	1.000	1.000
KPER	Potassium Concentration (RM)	----	4.800	4.800
MAG_DECL_RAB	RAB: Magnetic Declination	DEG	12.800	12.800
MAG_INCL_RAB	RAB: Magnetic Dip	DEG	−69.070	−69.070
MBUTTON_K_FACTO	RAB: Button Medium K Factor	----	0.004	0.004
OBM	RAB: Oil base Mud	----	NO	NO
ORIENTATION_RM	Rab Image Orientation	----	TOH	TOH
RABBDA0	RAB: Button Deep A0 Coeff	----	−0.118	−0.118
RABBDA1	RAB: Button Deep A1 Coeff	----	0.103	0.103

RABBDA2	RAB: Button Deep A2 Coeff	----		−0.043	−0.043
RABBDA3	RAB: Button Deep A3 Coeff	----		0.009	0.009
RABBDA4	RAB: Button Deep A4 Coeff	----		−0.001	−0.001
RABBDA5	RAB: Button Deep A5 Coeff	----		0.000	0.000
RABBDMIN	RAB: Button Deep Minimum Value		----	0.038	0.038
RABBITA0	RAB: Bit A0 Coeff	----		6.113	6.071
RABBITA1	RAB: Bit A1 Coeff	----		−22.012	−21.779
RABBITA2	RAB: Bit A2 Coeff	----		91.677	90.057
RABBITA3	RAB: Bit A3 Coeff	----		−150.372	−146.964
RABBITA4	RAB: Bit A4 Coeff	----		111.351	108.418
RABBITA5	RAB: Bit A5 Coeff	----		−30.919	−30.018
RABBITMIN	RAB: Bit Minimum Value		----	22.459	22.458
RABBMA0	RAB: Button Medium A0 Coeff	----		−0.118	−0.118
RABBMA1	RAB: Button Medium A1 Coeff	----		0.096	0.097
RABBMA2	RAB: Button Medium A2 Coeff	----		−0.040	−0.040
RABBMA3	RAB: Button Medium A3 Coeff	----		0.008	0.008
RABBMA4	RAB: Button Medium A4 Coeff	----		−0.001	−0.001
RABBMA5	RAB: Button Medium A5 Coeff	----		0.000	0.000
RABBMMIN	RAB: Button Medium Minimum Value		----	0.041	0.041
RABBSA0	RAB: Button Shallow A0 Coeff	----		−0.127	−0.126
RABBSA1	RAB: Button Shallow A1 Coeff	----		0.098	0.098
RABBSA2	RAB: Button Shallow A2 Coeff	----		−0.039	−0.039
RABBSA3	RAB: Button Shallow A3 Coeff	----		0.007	0.007
RABBSA4	RAB: Button Shallow A4 Coeff	----		−0.001	−0.001
RABBSA5	RAB: Button Shallow A5 Coeff	----		0.000	0.000
RABBSMIN	RAB: Button Shallow Minimum Value		----	0.055	0.055
RABDHS	RAB Down Hole Software	----		4.000	4.000
RABEC	RAB: Resistivity Env−Cor	----		YES	YES
RABRNGA0	RAB: RING A0 Coeff	----		−0.114	−0.114
RABRNGA1	RAB: RING A1 Coeff	----		0.102	0.102
RABRNGA2	RAB: RING A2 Coeff	----		−0.044	−0.044
RABRNGA3	RAB: RING A3 Coeff	----		0.009	0.009
RABRNGA4	RAB: RING A4 Coeff	----		−0.001	−0.001
RABRNGA5	RAB: RING A5 Coeff	----		0.000	0.000
RABRNGMIN	RAB: Ring Minimum Value		----	1.150	1.150
RAB_BIT_ECAL	Bit Resistivity for ECAL_RAB?		----	YES	YES
RAB_BIT_INVERSI	Input Bit Resistivity for Inversion? (Recommended at the bit)		----	NO	NO
RAB_CALIPER_CAL	Compute ECAL_RAB?		----	NO	NO
RAB_DATA_FIX	RAB: Create A Corrected RAB Time Data File		----	NO	NO
RAB_DATA_LTB	RAB: Create An RAB LTB Data File		----	NO	NO
RAB_DEEPBTN_ECA	Deep Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_DEEPBTN_INV	Input Deep Button Resistivity for Inversion?		----	YES	YES
RAB_INVERSION	Perform Rt Inversion?	----		NO	NO
RAB_INVERSION_B	RAB Bit Sensor Weight for Inversion[0,1]		----	0.000	0.000
RAB_INVERSION_B	Ending Depth for GR Cutoff in Zone1 (default through the whole well)	M		30480.000	30480.000
RAB_INVERSION_B	Ending Depth of Zone10	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone2	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone3	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone4	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone5	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone6	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone7	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone8	M		−304.571	−304.571
RAB_INVERSION_B	Ending Depth of Zone9	M		−304.571	−304.571
RAB_INVERSION_C	Continuity Multiplier[0,1]	----		0.500	0.500
RAB_INVERSION_D	RAB Deep Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_D	RAB inversion for Dh?	----		YES	YES
RAB_INVERSION_D	RAB inversion for Di?	----		YES	YES
RAB_INVERSION_G	GR Cutoff for Shale Formation		----	75.000	75.000
RAB_INVERSION_G	GR Cutoff for Shale Formation in Zone1(default through the whole well)	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone10	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone2	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone3	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone4	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone5	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone6	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone7	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone8	GAPI		75.000	75.000
RAB_INVERSION_G	GR Cutoff in Zone9	GAPI		75.000	75.000
RAB_INVERSION_M	RAB Medium Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_R	Resistivity Cutoff for Shale Formation	OHMM		2.000	2.000
RAB_INVERSION_R	Resistive Invasion Allowed	----		NO	NO
RAB_INVERSION_R	RAB Ring Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_R	RAB inversion for Rmud?	----		NO	NO
RAB_INVERSION_R	RAB inversion for Rt?	----		YES	YES
RAB_INVERSION_R	Rt to R−deepest separation penalty multiplier[0,1]		----	0.500	0.500
RAB_INVERSION_R	RAB inversion for Rxo?	----		YES	YES
RAB_INVERSION_S	GR of Clean Sand Formation		----	−999.250	−999.250
RAB_INVERSION_S	GR of Shale Formation	----		−999.250	−999.250
RAB_INVERSION_S	RAB Shallow Button Sensor Weight for Inversion[0,1]		----	1.000	1.000
RAB_INVERSION_T	Inversion Threshold[0, 0.3]	----		0.010	0.010
RAB_INVERSION_W	Formation Water Resistivity	OHMM		0.100	0.100
RAB_INVERSION_W	Formation Water Temperature		----	150.000	150.000
RAB_MEDIUMBTN_E	Medium Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_MEDIUMBTN_I	Input Medium Button Resistivity for Inversion?		----	YES	YES
RAB_QUAD	RAB: Process Quadrant data ?	----		YES	YES
RAB_RIGMODE_ECA	Bit on Bottom?	----		YES	YES
RAB_RING_ECAL	Ring Resistivity for ECAL_RAB?		----	YES	YES
RAB_RING_INVERS	Imput RING Resistivity for Inversion?		----	YES	YES
RAB_SHALLOWBTN_	Shallow Button Resistivity for ECAL_RAB?		----	YES	YES
RAB_SHALLOWBTN_	Input Shallow Button Resistivity for Inversion?		----	YES	YES
RAB_TAB	RAB: Compute TAB ?	----		YES	YES
RAB_TECHLOG	RAB: Generate Techlog ?		----	YES	YES
RAB_TEMP_SELECT	RAB Temperature Selection		----	MEASURED	MEASURED
RAB_TICKS	RAB: Generate Ticks ?	----		YES	YES
READOUT_PORT_MP	RAB: ROP to Bit Face Distance			M 14.825	14.745

RINGBHCA	RAB: Ring Borehole A Factor	----	0.298	0.298
RINGBHCB	RAB: Ring Borehole B Factor	----	-0.112	-0.112
RING_KIMP_A	RAB: Ring Impedance Coeff A	----	0.000	0.000
RING_KIMP_B	RAB: Ring Impedance Coeff B	----	0.000	0.000
RING_K_FACTOR	RAB: Ring K Factor	----	0.101	0.101
RSD	LWD run start date dd-mmm-yy	OHMM	0.085	0.087
RWA_COMP_MOD	Rwa computation model	----	BASIC	BASIC
RWA_DEN_ADN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_CDN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_INPUT	Rwa Density Input	----	RHOB	RHOB
RWA_FORM_MOD	Rwa computation formation model	----	CLASTIC	CLASTIC
RWA_RES_INPUT	Rwa computation resistivity input	----	RT	RT
SBUTTON_K_FACTO	RAB: Button Shallow K Factor	----	0.005	0.005
SCALE_IMAGES	RAB: Process Image Data	----	YES	YES
STAB	RAB: Run with Stabilizer	----	YES	YES
TFF_OFFSET_RAB	RAB Time-Frame File Time Offset	S	0.000	0.000
TIMEFRAME_FILE_	RAB: Time Frame File Name	S	0.000	0.000
TOOLTYPE	RAB: Azimuthal Tool	----	YES	YES
TS_VERSION	RAB: ToolScope Software Version	----	0.000	0.000
VRAB6	Rab Tool type (ENP/PILOT)	----	RAB8_ENP	RAB8_ENP
WIN_SIZE_DYN_IM	RAB: Window Size for Scaling Dynamic Image	M	0.914	0.914
WRK	to Report Potassium Concentration (RM)	----	K_by_Wgt_%	K_by_Wgt_%

SAD

ADN_CHASSIS_STR	Type String	Chassis	ADN	
ADN_COLLAR_STR	Type String	Collar	ADN	
ADN_DATA_FIX	ADN: Create A Corrected ADN Time Data File	----	NO	
ADN_DATA_LTB	ADN: Create An ADN LTB Data File	----	NO	
ADN_STAB_STR	ADN Stabilizer Type String	----	NO	
ALPHA_COMPUTE_D	Perform Density Enhanced Vertical Resolution process ?	----	NO	
ALPHA_COMPUTE_N	Perform Neutron Enhanced Vertical Resolution process ?	----	NO	
AVE_ADN	ADN/Array Channels: perform averaging(RM) :	----	YES	
A_DHS	ADN Down Hole Software Version String	----	YES	
CHI_RM	Caliper High limit from BS (RM)	IN	3.000	
CLO_RM	Caliper Low limit from BS (RM)	IN	0.000	
DEVI	Well Section Deviation	DEG	14.100	
DTIK_SEL	ADN: Density Tick Channel Name	----	LSAZ	
DTMUD	Delta-T for Mud	US/F	167.540	
DYN_IMG_COMPUTE	Generate Dynamic Normalized Image?	----	NO	
ENVCOR	Neutron Processing: Environmental Correction?	----	YES	
EVRL	EVR Process averaging number of samples (RM)	----	49	
FAZ1_AVAIL	ADN8 Neutron Far Tube 1 Available?	----	YES	
FAZ2_AVAIL	ADN8 Neutron Far Tube 2 Available?	----	YES	
FAZ3_AVAIL	ADN8 Neutron Far Tube 3 Available?	----	YES	
FCD	Future Casing (Outer) Diameter	IN	0.000	
GCSE	Generalized Caliper Selection	----	BS	
IDQT	Image Derived Quality Threshold	----	0.400	
IHVS	Integrated Hole Volume Start Value(RM)	F3	0.000	
IMAGE_MAX_SOA	Image SOA (Quadrant) Right Scale	IN	2.500	
IMAGE_MAX_SPEF	Image PEF(Segment) Right Scale	----	6.000	
IMAGE_MAX_SRHOB	Image RHOB(Segment) Right Scale	G/C3	2.650	
IMAGE_MIN_SOA	Image SOA (Quadrant) Left Scale	IN	0.000	
IMAGE_MIN_SPEF	Image PEF(Segment) Left Scale	----	2.000	
IMAGE_MIN_SRHOB	Image RHOB(Segment) Left Scale	G/C3	2.050	
JSD_ADN	ADN Acquisition start date	G/C3	2.050	
LITHO_TYPE_ADN	Lithology (RM)	----	LIME	
N1FTU_6_RM	ADN: Neutron Bank 1 Far Tubes used :	----	1-2-3	
N2FTU_6_RM	ADN: Neutron Bank 2 Far Tubes used :	----	1-2-3	
NNTU_8_RM	ADN: Neutron Near Tube used :	----	1-2-3	
NTIK_SEL	ADN: Neutron Tick Channel Name	----	FAZ1	
SOCNL	Standoff Distance of the CNL Tool	----	1.000	
SSIZ_ADN	ADN Stabilizer Size	IN	12.000	
STOH	ADN Density Top of Hole Sector (Left Boundary):	----	SECTOR_0	
TRPM_RM	Average Tool Rotational Speed	RPM	20.000	
USMIN_RM	ADN:Minimum Ultrasonic standoff (RM)	IN	0.180	
USWF_RM	ADN:Process Ultrasonic Waveform?	----	YES	
VERS_ADN	ADN Downhole Software Version	----	8.300	
WSDI	Window Size of Dynamic Normalization Image	M	4.572	

Wasabi-1 VISION 1:500TVD Main Log

Format: Wasabi-1 GVR ADN 500TVD **Vertical Scale: 1:500** **Graphics File Created: 08-Jun-2008 16:41**

Bit Resistivity Time After Bit (TAB_RAB_BIT)

0 **(HR)** **10**

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)

200 (M/HR) 0

RAB Gamma Ray (GR_RAB)

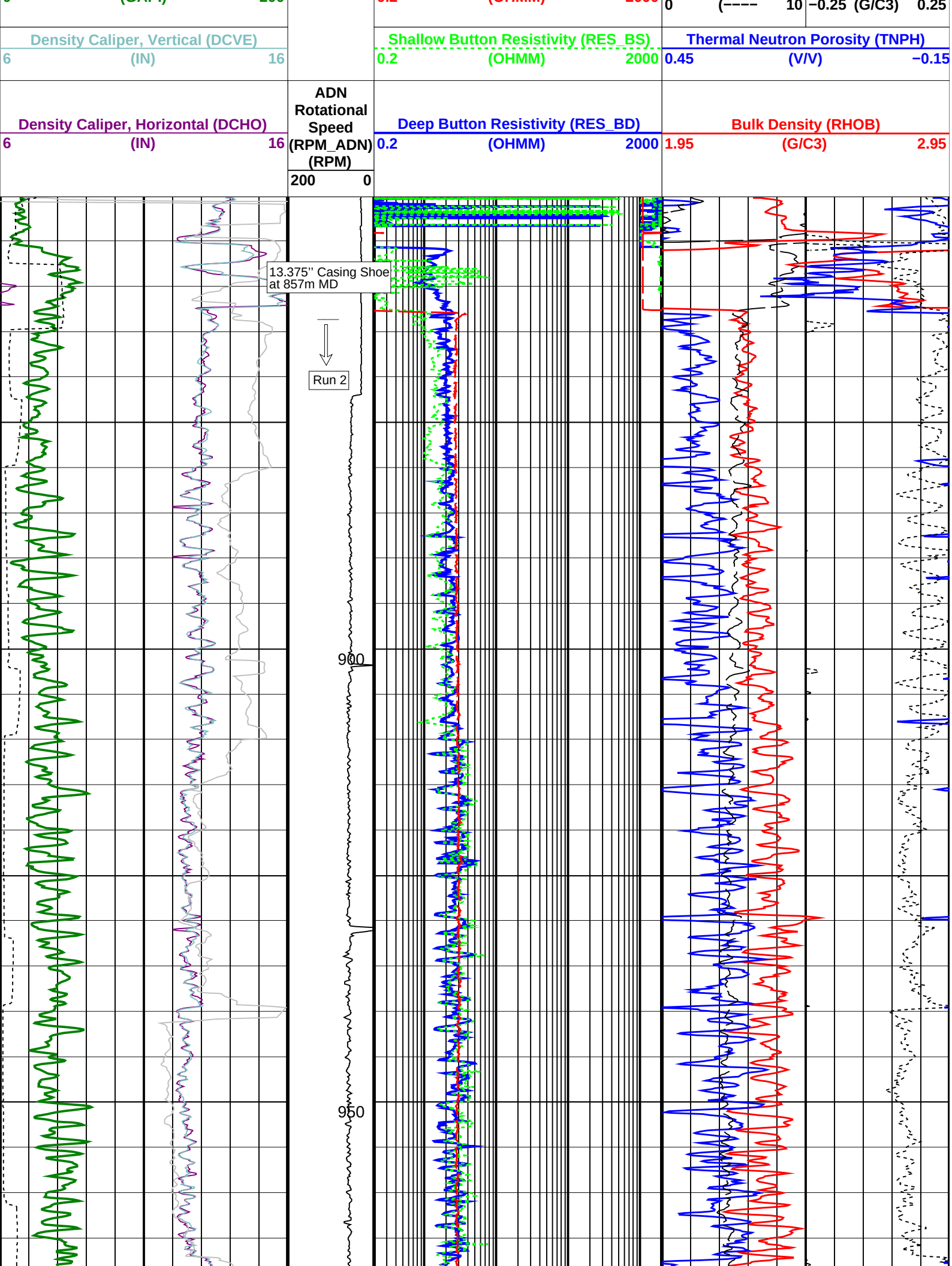
0 **(GAPI)** **200**

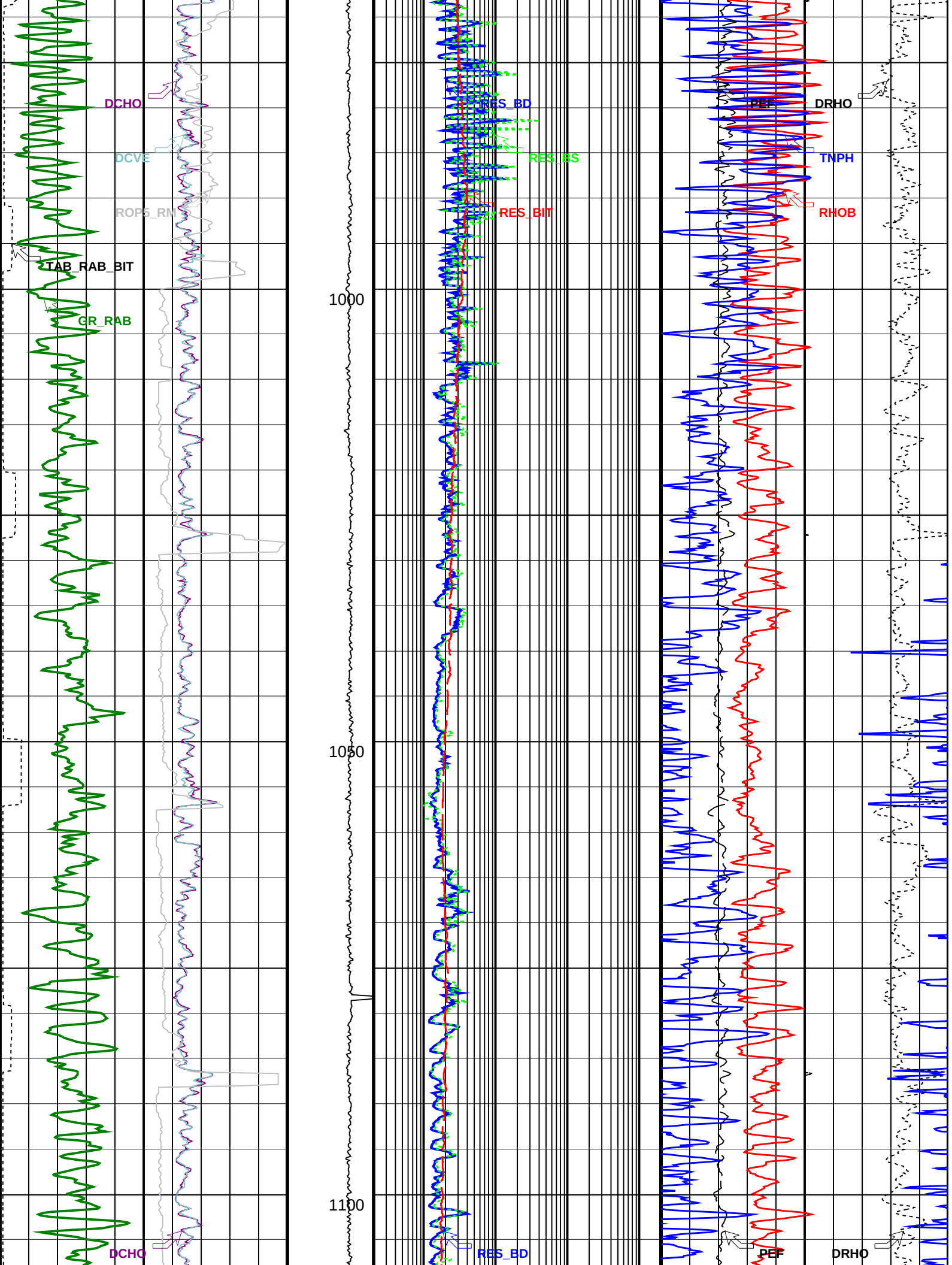
Bit Resistivity (RES_BIT)

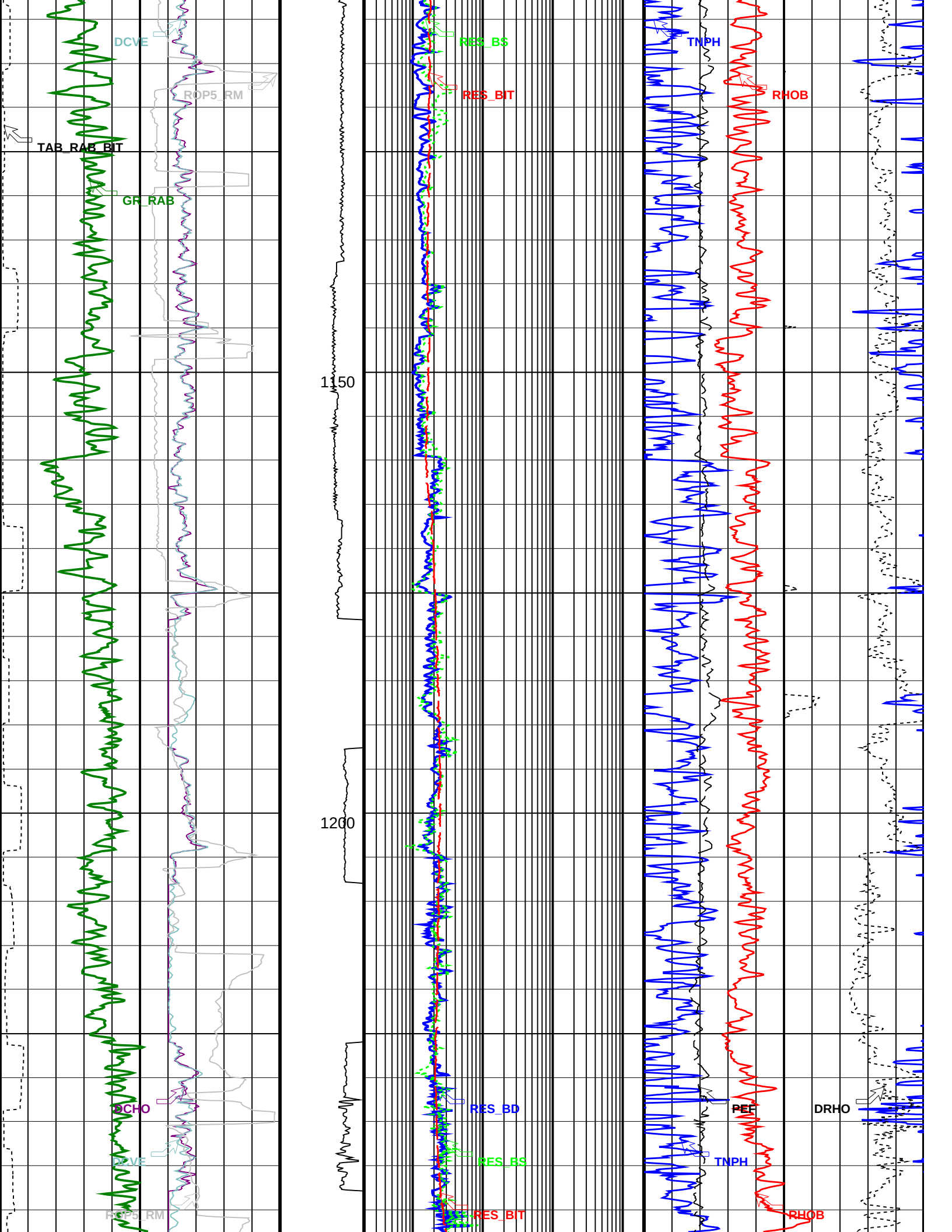
0.2 **(OHMM)** **2000**

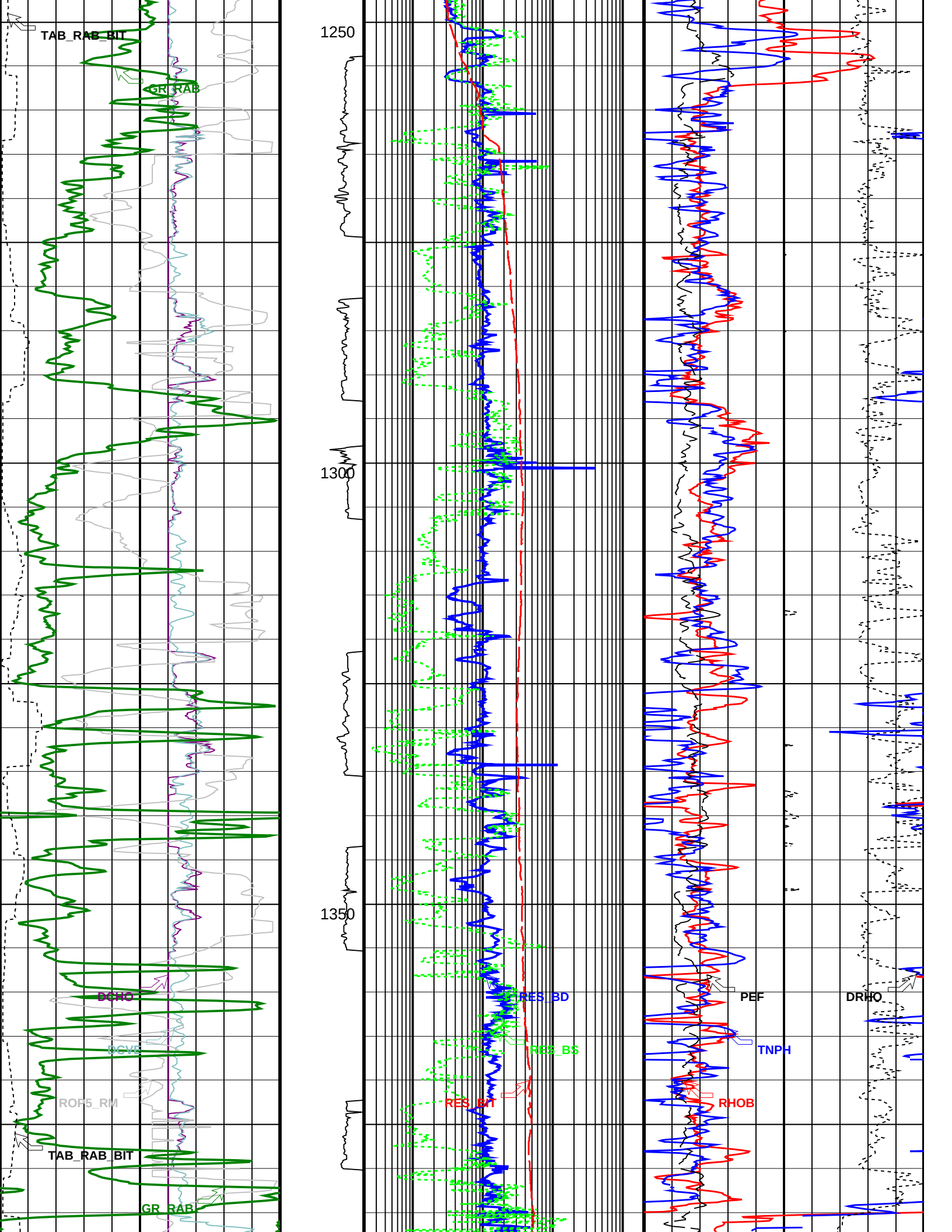
Photoelectric Factor (PEF)

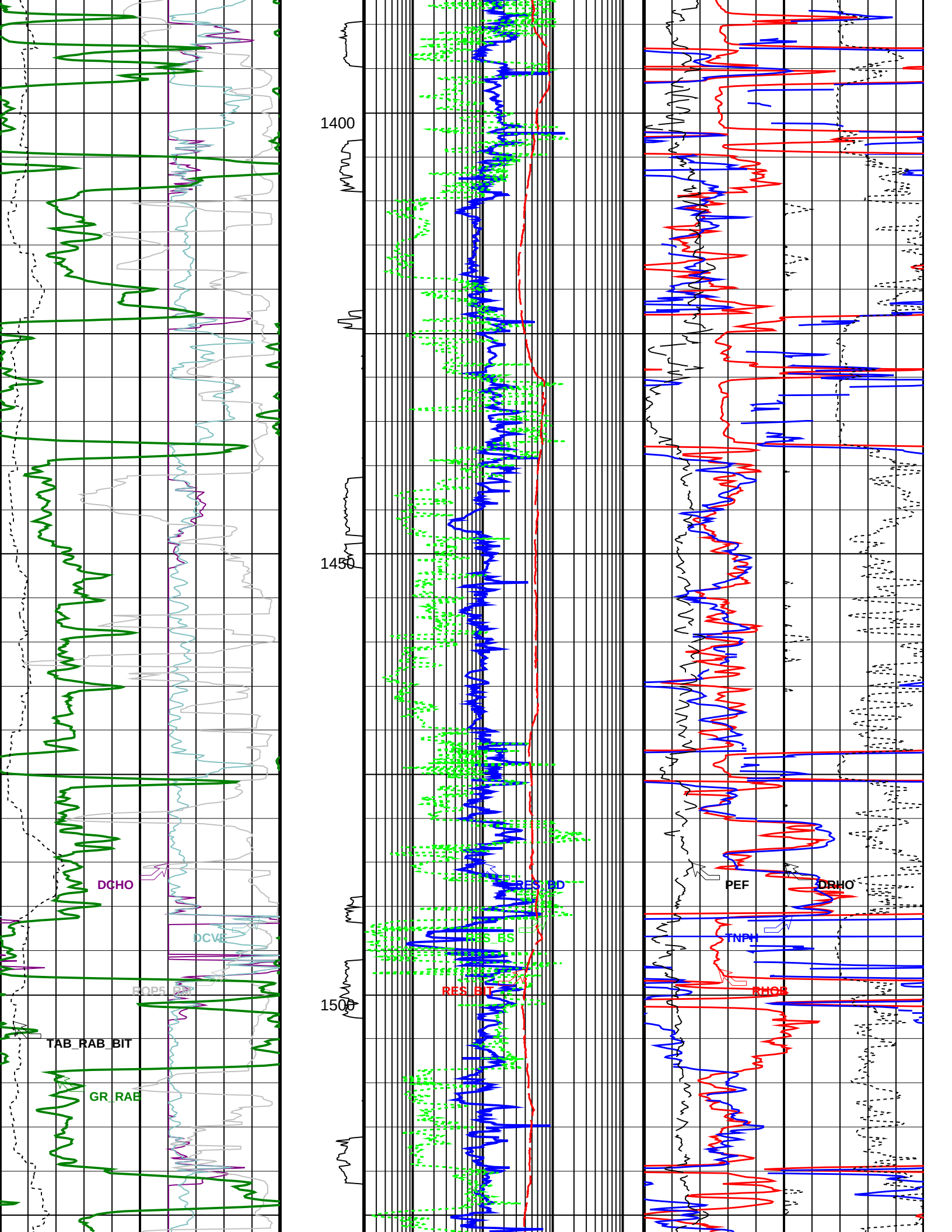
Bulk Density Correction (DRHO)

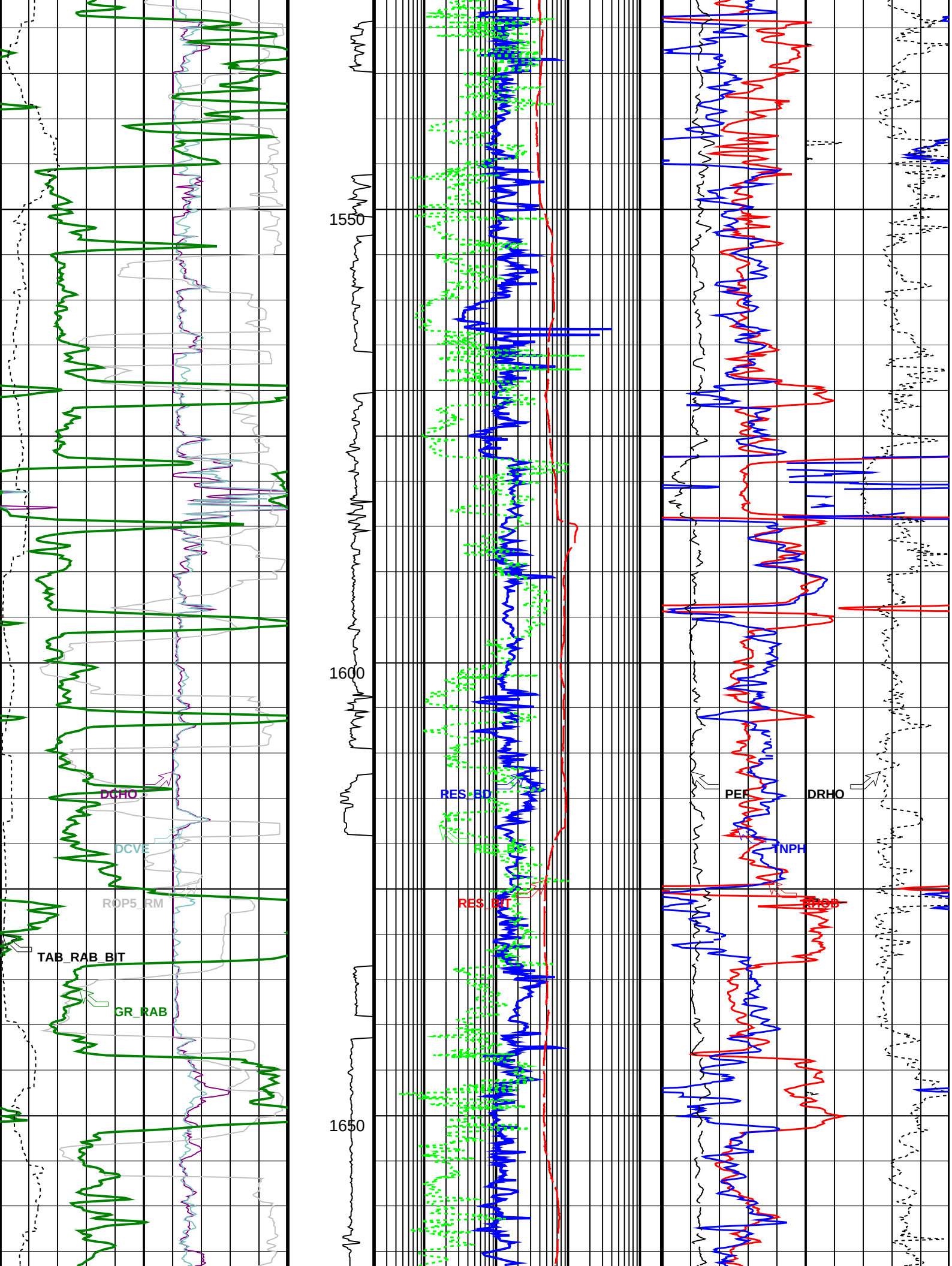

0 (----- 10
−0.25 (G/C3) 0.25
Density Caliper, Vertical (DCVE)
6 (IN) 16
Shallow Button Resistivity (RES_BS)
0.2 (OHMM) 2000
Thermal Neutron Porosity (TNPH)
0.45 (V/V) −0.15
Density Caliper, Horizontal (DCHO)
6 (IN) 16
ADN Rotational Speed (RPM_ADN) (RPM)
200 0
Deep Button Resistivity (RES_BD)
0.2 (OHMM) 2000
Bulk Density (RHOB)
1.95 (G/C3) 2.95
13.375'' Casing Shoe at 857m MD
Run 2
900
950

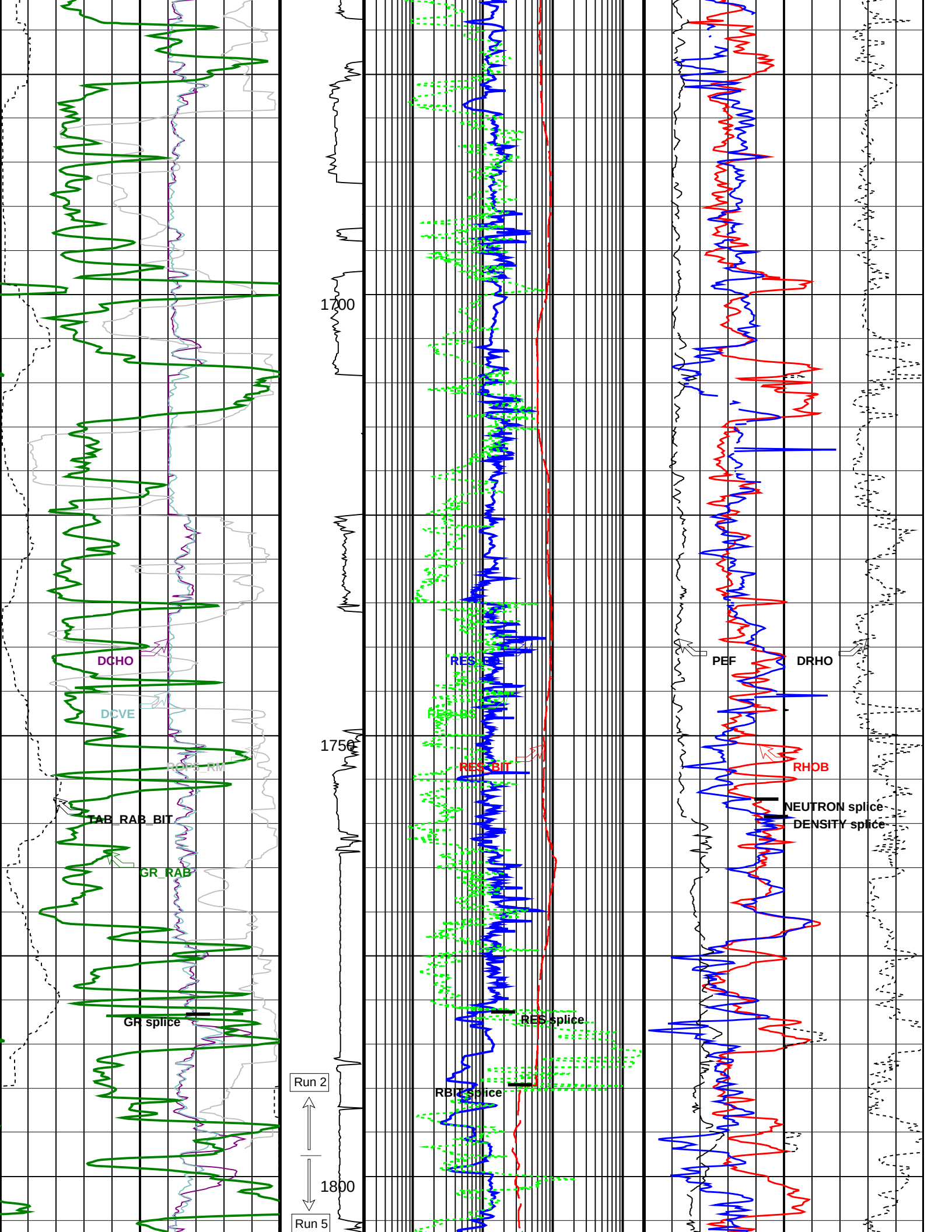

DCHO
DCVE
ROPS_RM
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB
1000
1050
1100
DCHO
RES_BD
PEF
DRHO

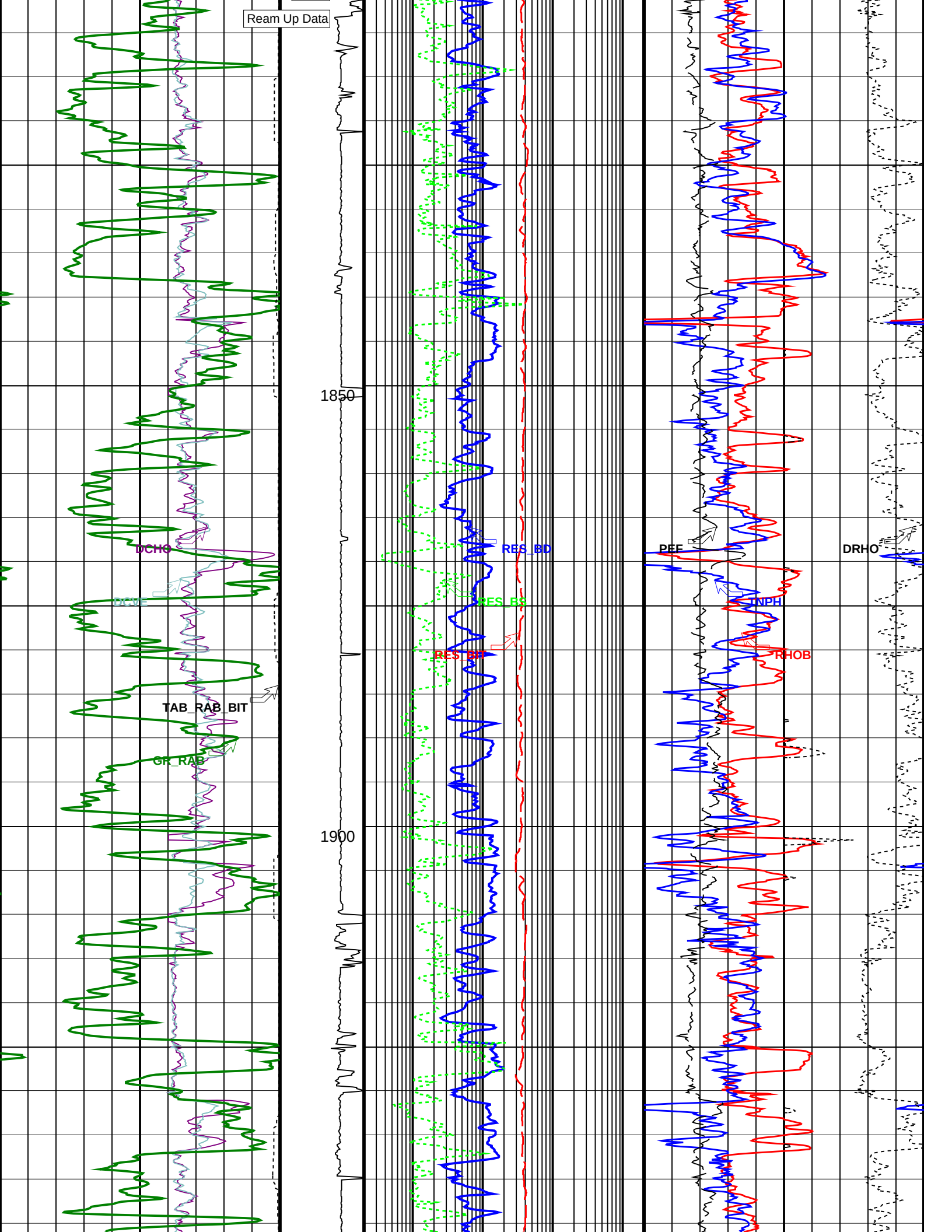

DCVE
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BS
RES_BIT
TNPH
RHOB
1150
1200
DCHO
DCVE
ROP5_RM
RES_BD
RES_BS
RES_BIT
PEF
TNPH
RHOB
DRHO

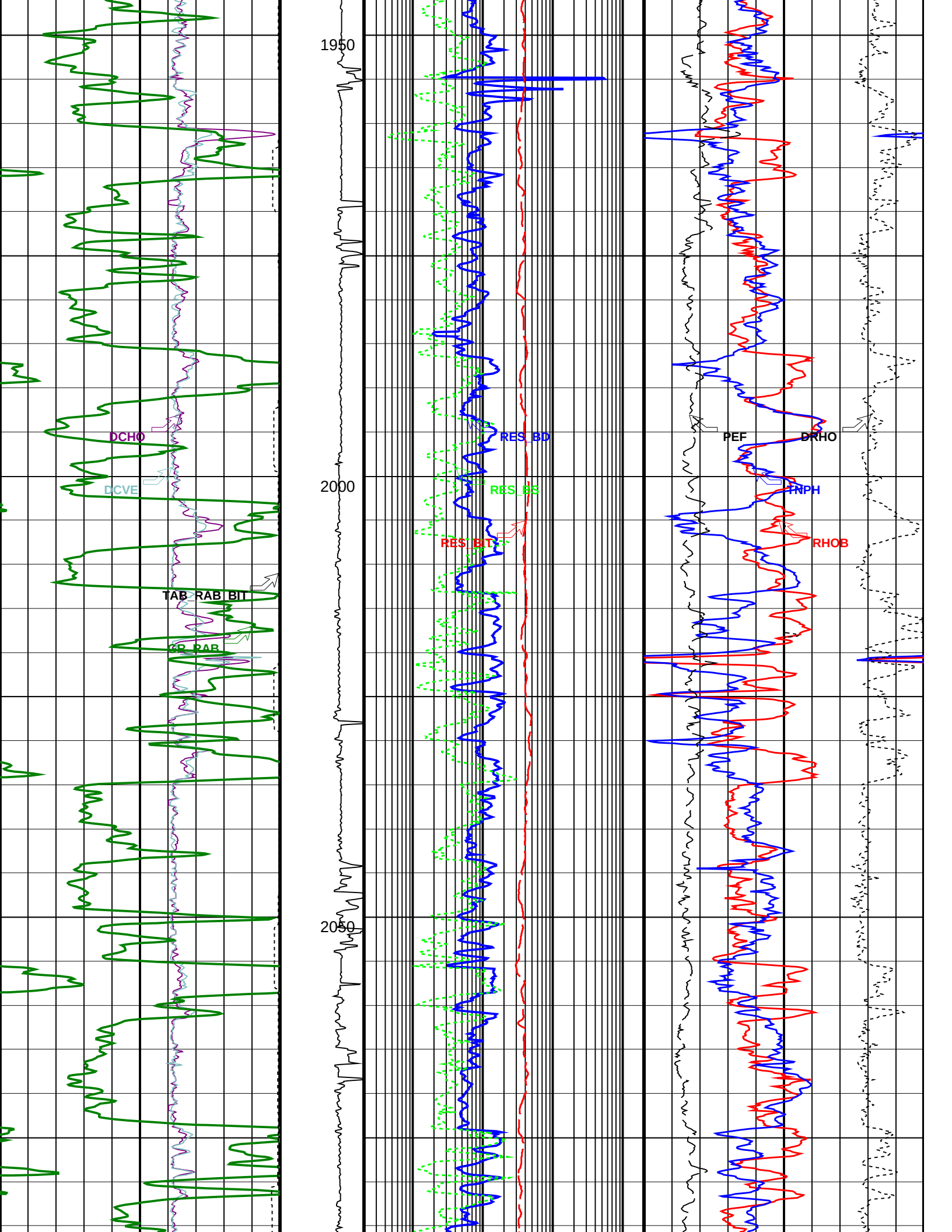

TAB_RAB_BIT
GR_RAB
1250
1300
1350
DCHO
CCVE
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
TNPH
RHOB
DRHO

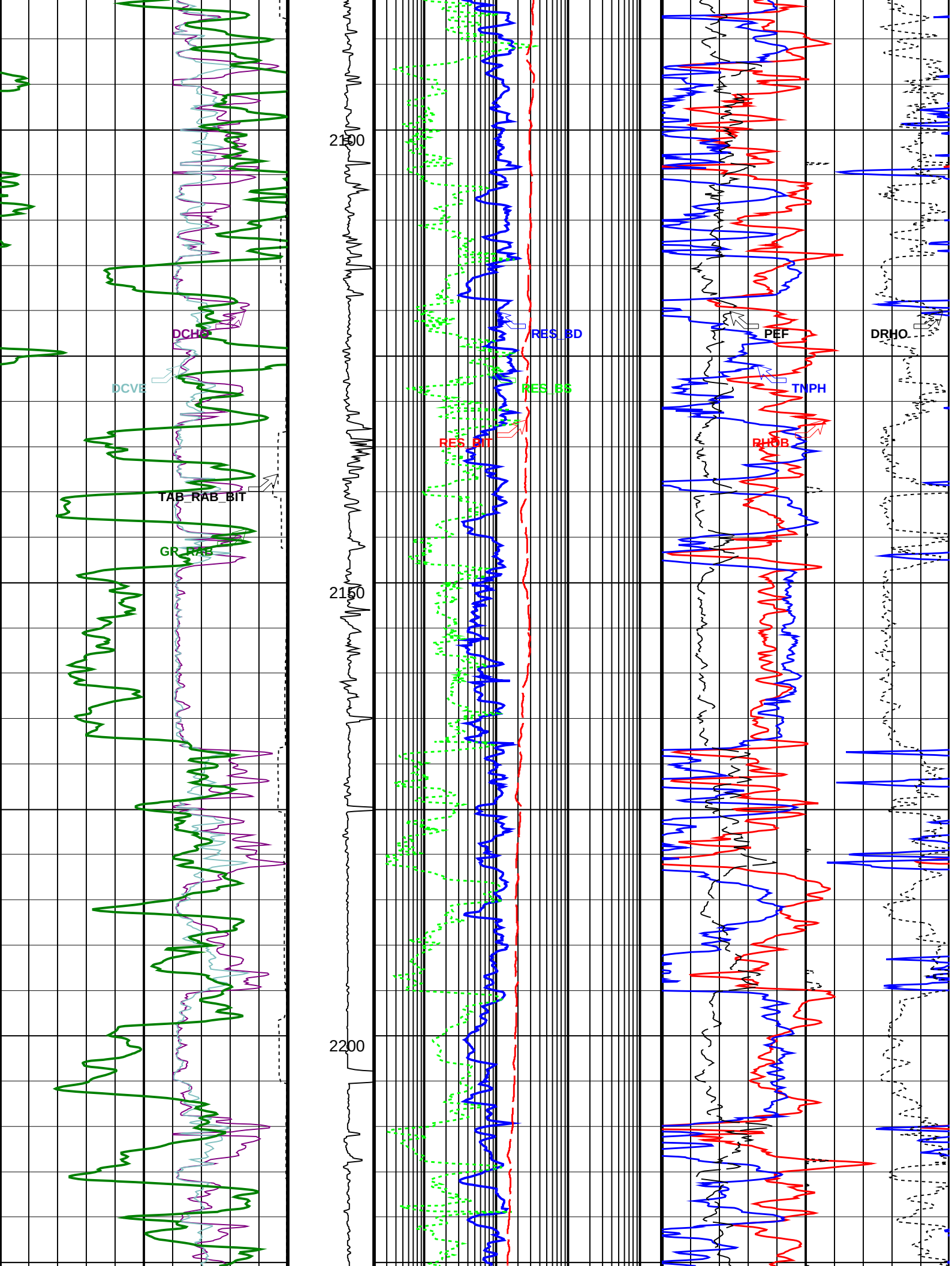

1400
1450
1500
DCHO
DCVE
ROP5_RAB
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB

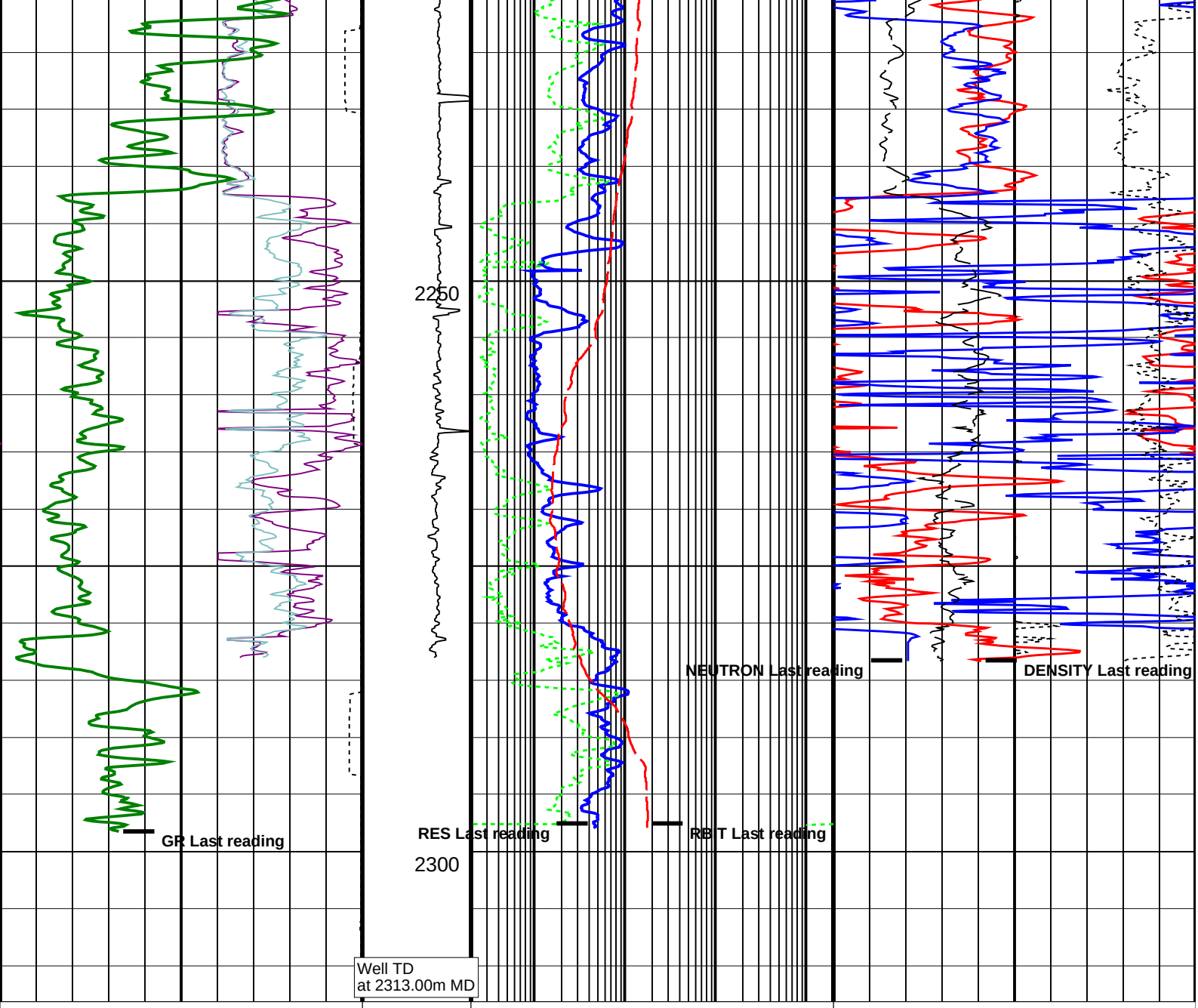

1550
1600
1650
DCHO
DCVE
ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BIT
PEF
DRHO
TNPH


1700
1750
1800
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
GR splice
RES_BIT
RES splice
RBIT splice
PEF
DRHO
RHOB
NEUTRON splice
DENSITY splice
Run 2
Run 5


Ream Up Data
1850
1900
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
TNPH
RHOB
DRHO


1950
2000
2050
DCHO
DCVE
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
DRHO
TNPH
RHOB


2100
2150
2200
DCHO
DCVB
TAB_RAB_BIT
GR_RAB
RES_BD
RES_BS
RES_BIT
PEF
TNPH
RHOB
DRHO



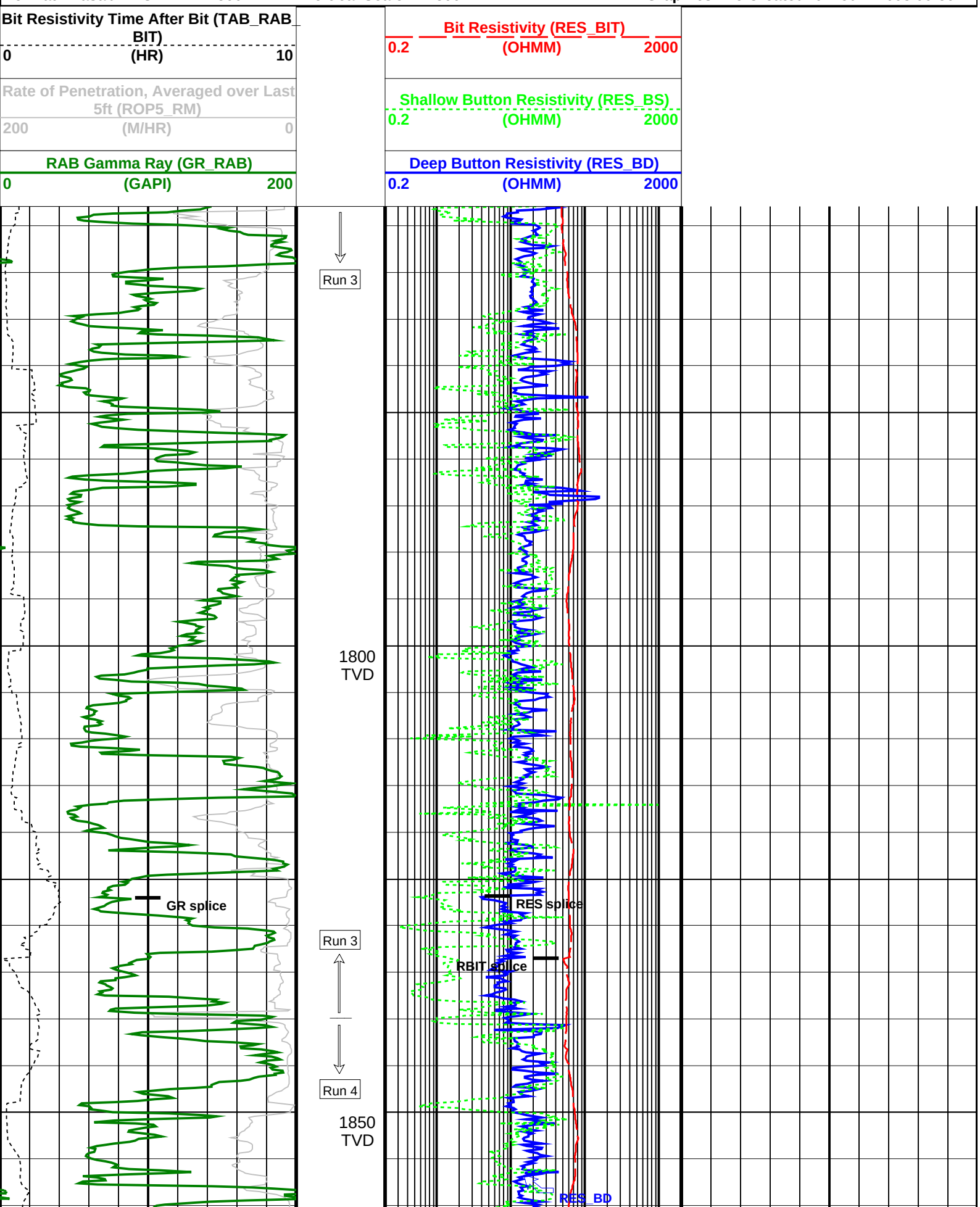
Density Caliper, Horizontal (DCHO)	**ADN Rotational Speed (RPM_ADN) (RPM)**	**Deep Button Resistivity (RES_BD)**	**Bulk Density (RHOB)**
6 (IN) 16	200 0	0.2 (OHMM) 2000	1.95 (G/C3) 2.95
Density Caliper, Vertical (DCVE)		**Shallow Button Resistivity (RES_BS)**	**Thermal Neutron Porosity (TNPH)**
6 (IN) 16		0.2 (OHMM) 2000	0.45 (V/V) −0.15
RAB Gamma Ray (GR_RAB)		**Bit Resistivity (RES_BIT)**	**Photoelectric Factor (PEF)**	**Bulk Density Correction (DRHO)**
0 (GAPI) 200		0.2 (OHMM) 2000	0 (---- 10	−0.25 (G/C3) 0.25
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)			
200 (M/HR) 0			
Bit Resistivity Time After Bit (TAB_RAB_BIT)			
0 (HR) 10			

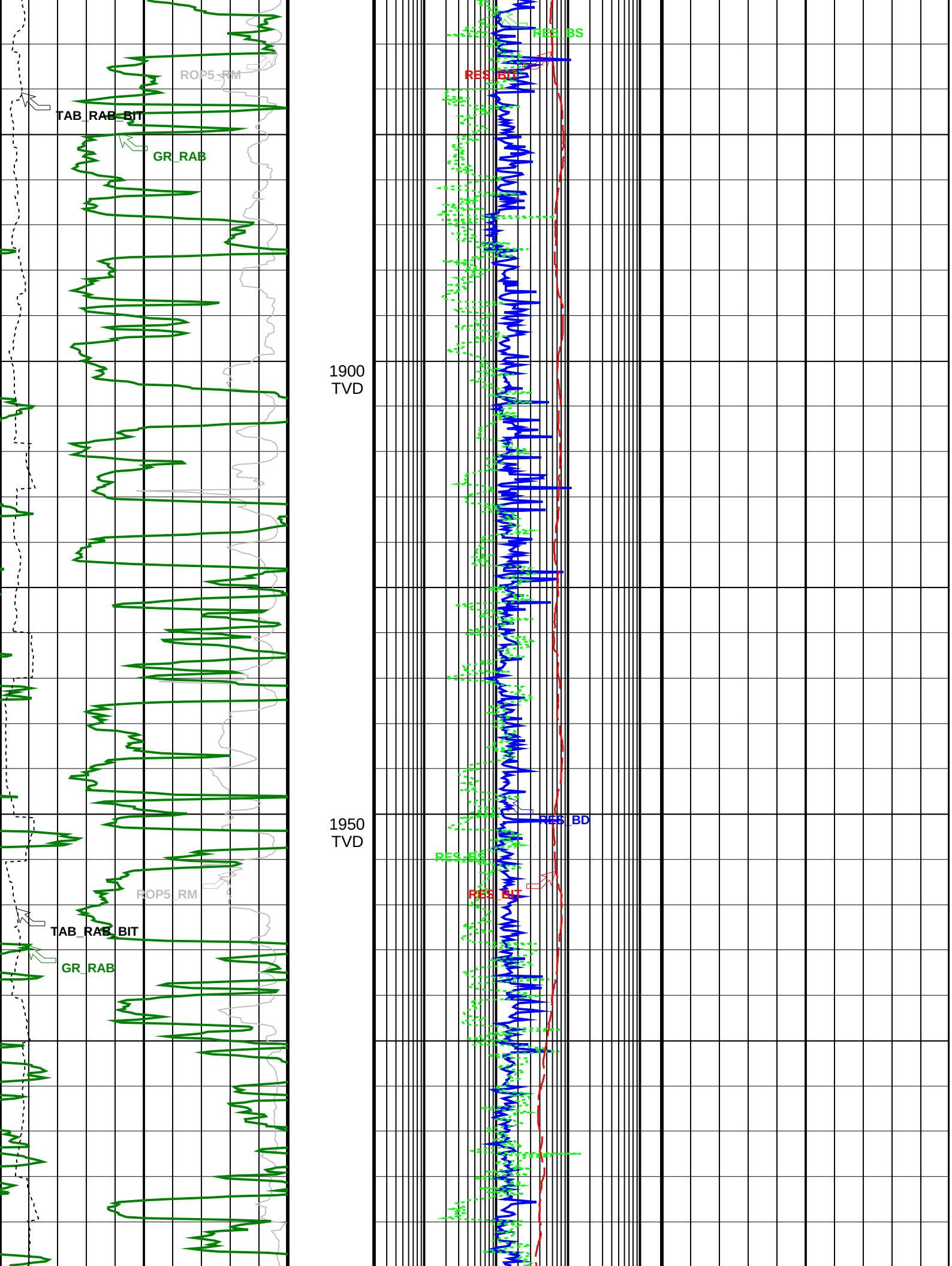
IDEAL Version: ID13_0C_08

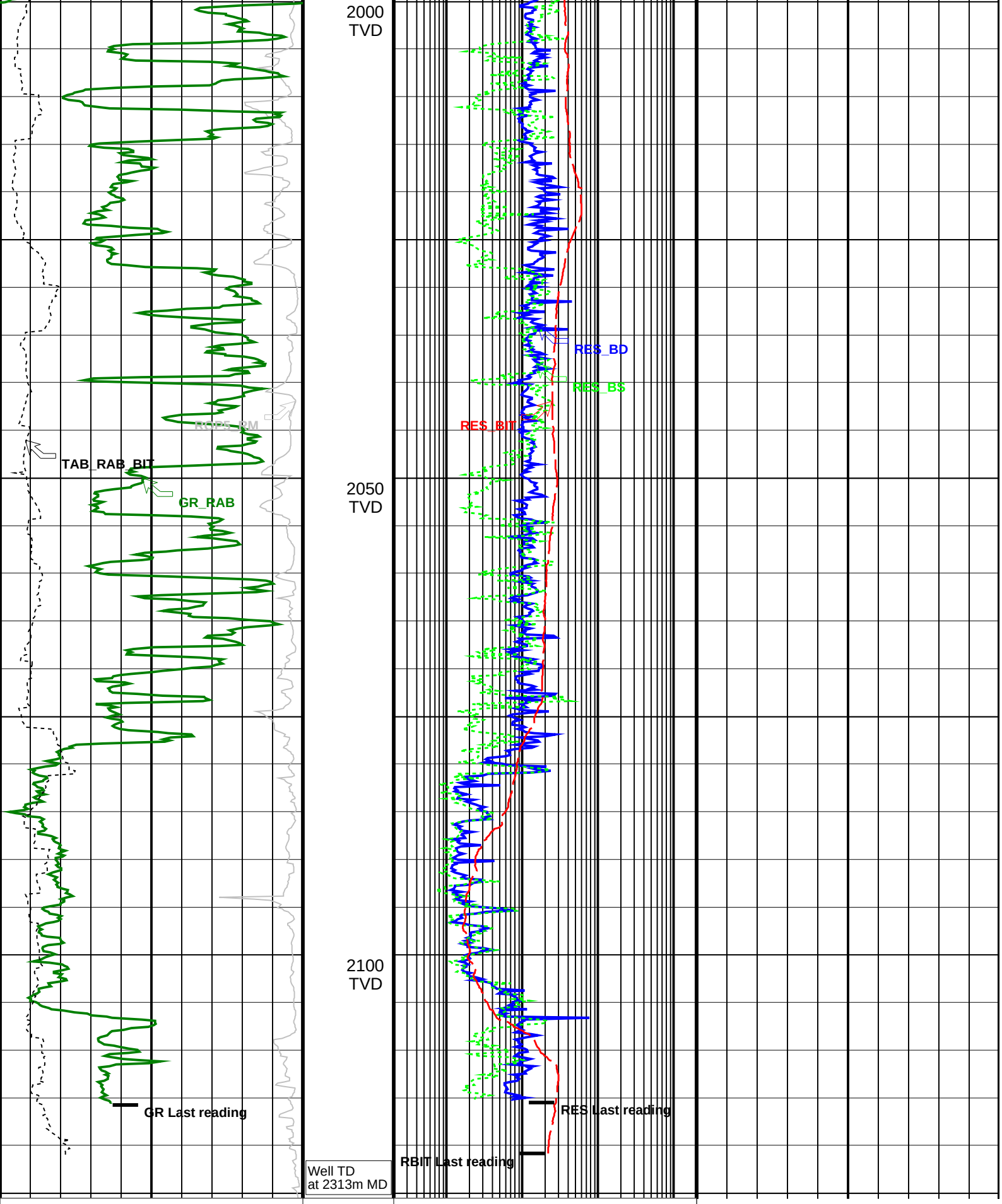
IDF

Wasabi−1 VISION 1:500TVD Repeat Section

Format: Wasabi−1 GVR ADN 500TVD **Vertical Scale: 1:500** **Graphics File Created: 04−Jun−2008 00:50**




ROP5_RM
TAB_RAB_BIT
GR_RAB
RES_BS
RES_BIT
1900
TVD
RES_BD
1950
TVD



RAB Gamma Ray (GR_RAB)

0 (GAPI) 200

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)

200 (M/HR) 0

Deep Button Resistivity (RES_BD)

0.2 (OHMM) 2000

Shallow Button Resistivity (RES_BS)

0.2 (OHMM) 2000

Bit Resistivity Time After Bit (TAB_RAB_BIT)			Bit Resistivity (RES_BIT)		
0	(HR)	10	0.2	(OHMM)	2000

IDEAL Version: ID13_0C_08

IDF

8.25−in. Stabilized Azimuthal Density Neutron / Equipment Identification

Primary Equipment:	
Tool Name and Serial Number	SADN − AA
Collar Type and Serial Number	NDDC − CA
Chassis Type and Serial Number	ADSE − GA
Stabilizer Type and Serial Number	− 1
Neutron Logging Source	NSR − T
Density Logging Source	GSR − Z
Stabilizer Size	12.0 − in.
Calibration Status	AUTO −

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Magnesium Block

Phase	LS window 3 − Mg CPS	Value	Phase	SS window 1 − Mg CPS	Value	Phase	SS window 3 − Mg CPS	Value
Master		931.2	Master		4487	Master		3842
	40.00 (Minimum) 700.0 (Nominal) 1400 (Maximum)			300.0 (Minimum) 3620 (Nominal) 7000 (Maximum)			300.0 (Minimum) 2880 (Nominal) 5000 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Aluminum Block

Phase	LS window 3 − Al CPS	Value	Phase	SS window 1 − Al CPS	Value	Phase	SS window 3 − Al CPS	Value
Master		149.7	Master		2168	Master		2557
	10.00 (Minimum) 110.0 (Nominal) 200.0 (Maximum)			200.0 (Minimum) 1650 (Nominal) 3000 (Maximum)			200.0 (Minimum) 1930 (Nominal) 4000 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Background

Phase	LS window 3 − Background CPS	Value	Phase	SS window 1 − Background CPS	Value	Phase	SS window 3 − Background CPS	Value
Master		67.06	Master		122.6	Master		262.4
	17.00 (Minimum) 90.00 (Nominal) 170.0 (Maximum)			20.00 (Minimum) 120.0 (Nominal) 200.0 (Maximum)			50.00 (Minimum) 260.0 (Nominal) 500.0 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value
Master		1.062	Master		1.399
	1.047 (Minimum) 1.062 (Nominal) 1.077 (Maximum)			1.336 (Minimum) 1.393 (Nominal) 1.450 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Neutron: 3−Point Calibration

Phase	Far Tube 1 Air Point Measure CPS	Value	Phase	Far Tube 1 Rod Point Measure CPS	Value	Phase	Far Tube 1 Water Point Measure CPS	Value
Master		151.2	Master		54.11	Master		19.58
	100.0 (Minimum) 152.1 (Nominal) 190.0 (Maximum)			35.00 (Minimum) 55.33 (Nominal) 69.00 (Maximum)			13.00 (Minimum) 20.14 (Nominal) 25.00 (Maximum)	
Phase	Far Tube 2 Air Point Measure CPS	Value	Phase	Far Tube 2 Rod Point Measure CPS	Value	Phase	Far Tube 2 Water Point Measure CPS	Value
Master		151.9	Master		53.55	Master		20.17
	100.0 (Minimum) 152.1 (Nominal) 190.0 (Maximum)			35.00 (Minimum) 55.33 (Nominal) 69.00 (Maximum)			13.00 (Minimum) 20.14 (Nominal) 25.00 (Maximum)	
Phase	Far Tube 3 Air Point Measure CPS	Value	Phase	Far Tube 3 Rod Point Measure CPS	Value	Phase	Far Tube 3 Water Point Measure CPS	Value
Master		147.7	Master		52.66	Master		19.44
	100.0 (Minimum) 152.1 (Nominal) 190.0 (Maximum)			35.00 (Minimum) 55.33 (Nominal) 69.00 (Maximum)			13.00 (Minimum) 20.14 (Nominal) 25.00 (Maximum)	
Phase	Near Tube 1 Air Point Measure CPS	Value	Phase	Near Tube 1 Rod Point Measure CPS	Value	Phase	Near Tube 1 Water Point Measure CPS	Value

Phase	Near Tube 2 Air Point Measure CPS	Value
Master		1522
	1100 (Minimum) 1462 (Nominal) 2000 (Maximum)	

Phase	Near Tube 2 Rod Point Measure CPS	Value
Master		1572
	1200 (Minimum) 1519 (Nominal) 2000 (Maximum)	

Phase	Near Tube 2 Water Point Measure CPS	Value
Master		825.6
	640.0 (Minimum) 801.5 (Nominal) 1100 (Maximum)	

Phase	Near Tube 2 Air Point Measure CPS	Value
Master		1567
	1100 (Minimum) 1462 (Nominal) 2000 (Maximum)	

Phase	Near Tube 2 Rod Point Measure CPS	Value
Master		1629
	1200 (Minimum) 1519 (Nominal) 2000 (Maximum)	

Phase	Near Tube 2 Water Point Measure CPS	Value
Master		867.6
	640.0 (Minimum) 801.5 (Nominal) 1100 (Maximum)	

Phase	Near Tube 3 Air Point Measure CPS	Value
Master		1489
	1100 (Minimum) 1462 (Nominal) 2000 (Maximum)	

Phase	Near Tube 3 Rod Point Measure CPS	Value
Master		1554
	1200 (Minimum) 1519 (Nominal) 2000 (Maximum)	

Phase	Near Tube 3 Water Point Measure CPS	Value
Master		827.2
	640.0 (Minimum) 801.5 (Nominal) 1100 (Maximum)	

Master: Calibration out of date 24−Nov−2007 10:41

8.25−in. Stabilized Azimuthal Density Neutron Calibration

Neutron: Water Block Check

Phase	Far Neutron water porosity PU	Value
Master		82.38
	60.00 (Minimum) 100.0 (Nominal) 120.0 (Maximum)	

8.25−in. Resistivity At−the−Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number	RAB8 − AA	876
Calibration Status	AUTO −	

Master: 11−Feb−2008 13:23

8.25−in. Resistivity At−the−Bit Calibration

Resistivity: Fixture

Phase	Ring/T1 factor ----	Value
Master		0.01087
	0.009500 (Minimum) 0.01100 (Nominal) 0.01250 (Maximum)	

Phase	Ring/T2 factor ----	Value
Master		0.01084
	0.009500 (Minimum) 0.01100 (Nominal) 0.01250 (Maximum)	

Phase	M0/T1 factor -----	Value
Master		1.051
	0.9000 (Minimum) 1.050 (Nominal) 1.200 (Maximum)	

Phase	M0/T2 factor -----	Value
Master		1.034
	0.9000 (Minimum) 1.050 (Nominal) 1.200 (Maximum)	

Phase	M2/T1 factor -----	Value
Master		0.9812
	0.8500 (Minimum) 1.000 (Nominal) 1.150 (Maximum)	

Phase	M2/T2 factor -----	Value
Master		0.9042
	0.8500 (Minimum) 1.000 (Nominal) 1.150 (Maximum)	

Phase	BTN shallow/T1 factor ----	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN shallow/T2 factor ----	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN medium/T1 factor ----	Value
Master		0.0006630
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN medium/T2 factor ----	Value
Master		0.0006620
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN deep/T1 factor ----	Value
Master		0.0006580
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Phase	BTN deep/T2 factor ----	Value
Master		0.0006550
	0.0005700 (Minimum) 0.0006700 (Nominal) 0.0007700 (Maximum)	

Master: 11−Feb−2008 10:38

8.25−in. Resistivity At−the−Bit Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor ----	Value
Master		8.700
	6.500 (Minimum) 8.000 (Nominal) 9.500 (Maximum)	

Client.....: Apache Energy Ltd.
Field.....: Vic-P58

Well.....: Wasabi-1
API number.....: 07ASQ0028
Engineer.....: A.Kholi, C.Hibberson, D.Perkins

COUNTRY.....: Australia
STATE:.....: Victoria

Spud date.....: 14-Feb-08
Last survey date.....: 01-Mar-08
Total accepted surveys...: 51
MD of first survey.....: 0.00 m
MD of last survey.....: 2313.00 m

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Depth reference -----
Permanent datum.....: AHD
Depth reference.....: RKB
GL above permanent.....: -37.00 m
KB above permanent.....: 38.00 m
DF above permanent.....: 38.00 m

----- Vertical section origin-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

----- Platform reference point-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

Azimuth from Vsect Origin to target: 322.47 degrees

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2007
Magnetic date.....: 15-Feb-2008
Magnetic field strength..: 1202.69 HCNT
Magnetic dec (+E/W-).....: 12.80 degrees
Magnetic dip.....: -69.07 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.05 mGal
Reference H.....: 1202.69 HCNT
Reference Dip.....: -69.07 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 12.80 degrees
Grid convergence (+E/W-).: -0.16 degrees
Total az corr (+E/W-)....: 12.96 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	115.45	0.14	336.08	115.45	115.45	0.14	0.13	-0.06	0.14	336.08	0.01	PUP	None
3	142.86	0.18	296.21	27.41	142.86	0.21	0.18	-0.11	0.21	328.51	0.04	PUP	None
4	170.39	0.09	303.79	27.53	170.39	0.27	0.21	-0.17	0.27	321.61	0.03	PUP	None
5	201.95	0.09	130.71	31.56	201.95	0.27	0.21	-0.17	0.27	320.98	0.06	PUP	None
6	229.75	0.10	88.12	27.80	229.75	0.23	0.19	-0.13	0.23	326.73	0.03	PUP	None
7	494.63	0.28	191.25	264.88	494.63	-0.33	-0.43	-0.02	0.43	182.96	0.01	PUP	None
8	553.43	0.48	178.29	58.80	553.43	-0.62	-0.82	-0.04	0.82	183.01	0.04	PUP	None
9	700.75	0.84	171.77	147.32	700.74	-2.07	-2.51	0.13	2.51	177.03	0.02	PUP	None
10	759.92	0.78	172.15	59.17	759.90	-2.79	-3.33	0.25	3.34	175.76	0.01	PUP	None
11	789.17	0.56	166.34	29.25	789.15	-3.10	-3.67	0.31	3.68	175.20	0.08	PUP	None
12	818.74	0.38	176.04	29.57	818.72	-3.31	-3.91	0.35	3.92	174.90	0.07	PUP	None
13	886.60	0.20	232.91	67.86	886.58	-3.50	-4.20	0.27	4.21	176.33	0.05	PUP	None
14	1034.55	0.55	198.33	147.95	1034.52	-3.90	-5.03	-0.16	5.04	181.81	0.03	PUP	None
15	1180.90	0.38	233.51	146.35	1180.87	-4.28	-5.99	-0.77	6.04	187.33	0.02	PUP	None
16	1239.98	3.38	334.13	59.08	1239.92	-2.57	-4.54	-1.69	4.84	200.40	0.59	PUP	None
17	1270.01	6.32	334.23	30.03	1269.83	-0.09	-2.25	-2.79	3.59	231.11	0.98	PUP	None
18	1298.75	8.02	326.45	28.74	1298.35	3.46	0.84	-4.59	4.67	280.40	0.68	PUP	None
19	1328.72	8.15	333.60	29.97	1328.02	7.63	4.49	-6.69	8.06	303.86	0.34	PUP	None
20	1358.00	9.08	336.28	29.28	1356.97	11.91	8.46	-8.54	12.02	314.73	0.35	PUP	None
21	1388.32	11.22	337.32	30.32	1386.82	17.09	13.37	-10.64	17.09	321.49	0.71	PUP	None
22	1447.39	16.50	340.87	59.07	1444.15	30.61	26.61	-15.61	30.85	329.61	0.90	PUP	None
23	1476.79	18.71	341.36	29.40	1472.17	39.04	35.03	-18.49	39.60	332.18	0.75	PUP	None
24	1506.00	21.47	336.96	29.21	1499.60	48.65	44.39	-22.08	49.57	333.56	1.08	PUP	None
25	1535.79	23.81	336.52	29.79	1527.09	59.76	54.92	-26.61	61.03	334.15	0.79	PUP	None
26	1564.88	26.29	336.35	29.09	1553.44	71.71	66.21	-31.53	73.33	334.53	0.85	PUP	None
27	1594.25	28.63	333.72	29.37	1579.50	84.93	78.48	-37.26	86.87	334.60	0.90	PUP	None
28	1624.03	29.21	334.37	29.78	1605.57	99.04	91.43	-43.56	101.27	334.53	0.22	PUP	None
29	1653.53	29.76	330.72	29.50	1631.25	113.33	104.30	-50.25	115.78	334.28	0.64	PUP	None
30	1683.37	30.78	329.89	29.84	1657.02	128.23	117.37	-57.71	130.79	333.82	0.37	PUP	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
31	1712.48	31.44	331.04	29.11	1681.95	143.12	130.45	-65.12	145.80	333.47	0.31	PUP	None
32	1741.60	32.10	330.46	29.12	1706.70	158.30	143.83	-72.61	161.12	333.21	0.25	PUP	None
33	1770.74	32.52	328.16	29.14	1731.33	173.76	157.22	-80.56	176.66	332.87	0.45	PUP	None
34	1801.91	32.89	325.39	31.17	1757.56	190.55	171.31	-89.79	193.41	332.34	0.49	PUP	None
35	1831.13	34.60	326.01	29.22	1781.86	206.75	184.72	-98.93	209.54	331.83	0.60	PUP	None
36	1860.48	34.24	324.51	29.35	1806.07	223.32	198.35	-108.39	226.03	331.35	0.31	PUP	None
37	1890.59	34.34	324.56	30.11	1830.95	240.28	212.16	-118.23	242.88	330.87	0.03	PUP	None
38	1919.28	39.56	321.67	28.69	1853.87	257.51	225.93	-128.59	259.97	330.35	1.92	PUP	None
39	1948.88	41.97	319.68	29.60	1876.29	276.82	240.88	-140.85	279.03	329.68	0.92	PUP	None
40	1978.21	44.07	317.65	29.33	1897.73	296.79	255.90	-154.07	298.70	328.95	0.86	PUP	None

41	2008.18	45.45	317.25	29.97	1919.01	317.81	271.44	-168.34	319.40	328.19	0.47	PUP	None
42	2037.55	46.14	317.73	29.37	1939.49	338.78	286.96	-182.56	340.11	327.54	0.26	PUP	None
43	2066.69	46.95	318.03	29.14	1959.53	359.87	302.65	-196.75	360.98	326.97	0.29	PUP	None
44	2096.38	47.60	318.28	29.69	1979.67	381.62	318.90	-211.30	382.55	326.47	0.23	PUP	None
45	2125.42	47.49	318.95	29.04	1999.28	402.99	334.97	-225.46	403.79	326.06	0.17	PUP	None
46	2155.49	47.85	318.70	30.07	2019.52	425.18	351.71	-240.10	425.85	325.68	0.13	PUP	None
47	2185.00	47.98	319.61	29.51	2039.30	447.04	368.27	-254.42	447.61	325.36	0.23	PUP	None
48	2214.22	48.00	319.92	29.22	2058.86	468.73	384.85	-268.45	469.23	325.10	0.08	PUP	None
49	2243.21	48.08	320.67	28.99	2078.24	490.27	401.43	-282.22	490.71	324.89	0.19	PUP	None
50	2272.78	47.76	323.36	29.57	2098.06	512.21	418.73	-295.72	512.63	324.77	0.68	PUP	None
51	2313.00	47.76	323.36	40.22	2125.10	541.99	442.62	-313.49	542.39	324.69	0.00	PROJ TO TD	

Company: **Apache Energy Ltd**

Schlumberger

Well: **Wasabi−1**

Field: **Vic−P58**

Rig: **West Triton**

State: **Victoria**

GeoVISION Service
1:200 True Vertical Depth
Recorded Mode Data, Composite Log

HALLIBURTON

Sperry Drilling Services

LWD End of Well Report

For

Apache Energy Ltd

Wasabi-1

Rig:	**West Triton**
Field:	**Exploration**
Job No:	**AU-FE-0005617882**
Country:	**Australia**
Date:	**05-March-2008**

HALLIBURTON

Table of Contents

General Information

Company:	Apache Energy Ltd
Rig:	West Triton
Well:	Wasabi-1
Field:	Exploration
Lease Name:	VIC/P-54
State:	Victoria
County:	
Country:	Australia
API Number:	
Sperry-Sun Job Number:	AU-FE-0005617882
Job start date:	22-Feb-08
Job end date:	02-Mar-08
North reference:	Grid
Declination:	12.803 deg
Dip angle:	-69.072 deg
Total magnetic field:	60136 nT
Date of magnetic data:	16 February, 2008
Wellhead coordinates N:	38 deg. 29 min 18.16 sec South GDA94
Wellhead coordinates E:	147 deg. 15 min 49.15 sec East GDA94
Vertical section direction:	0.00 deg
Unit Number:	BHI Unit
MWD Engineers:	J. Povey
Company Representatives:	B. Openshaw, P.Gallagher, S. Corless
Company Geologist:	H. Little, A. Cruickshank

Operational Overview

311mm Hole Section:

The 311mm hole section was drilled from 862.0 mMDRT to a section TD of 2313.0 mMDRTwith a recorded only LWD suite comprising of a Bimodal Acoustic Tool (BAT) only. This section was drilling in 3 bit runs due to poor directional control. The first was from 862.0 mMDRT to 1797.0 mMDRT, then a BHA assembly was run to assist in dropping angle to 1900.0 mMDRT and then another to final TD of 2313.0 MDRT to help build back up to a revised target. All data was recovered on surface from each bit run.

Summary of MWD runs

Run No.	Bit No.	Hole Size (mm)	MWD Service	Start Depth (m)	End Depth (m)	Drill/Wipe Distance (m)	Run Start Date Time	Run End Date Time	BRT Hrs.	Oper. Hrs.	Circ. Hrs.	Max Temp. (degF)	Serv. Int.	Trip for MWD	Failure Type
100	3	311.00	BAT Rec	862.000	1797.000	935.000	22-Feb-08 06:11	26-Feb-08 06:34	96.38	83.390	57.900	132.80	No	No	
200	4	311.00	BAT Rec	1797.000	1900.000	103.000	26-Feb-08 07:07	27-Feb-08 16:26	33.32	33.310	11.100	136.40	No	No	
300	5	311.00	BAT Rec	1900.000	2313.000	413.000	27-Feb-08 16:50	01-Mar-08 22:00	77.17	77.220	53.200	149.00	No	No	

Bitrun Summary

RUN TIME DATA

MWD Run	: 100	**Run Start**	: 22-Feb-08 06:11	**BRT Hrs**	: 96.38 hr	**Circ. Hrs**	: 57.90 hr
Rig Bit No	: 3	**Run End**	: 26-Feb-08 06:34	**Hole Size**	: 311.00 mm	**Oper. Hrs**	: 83.39 hr

DRILLING DATA

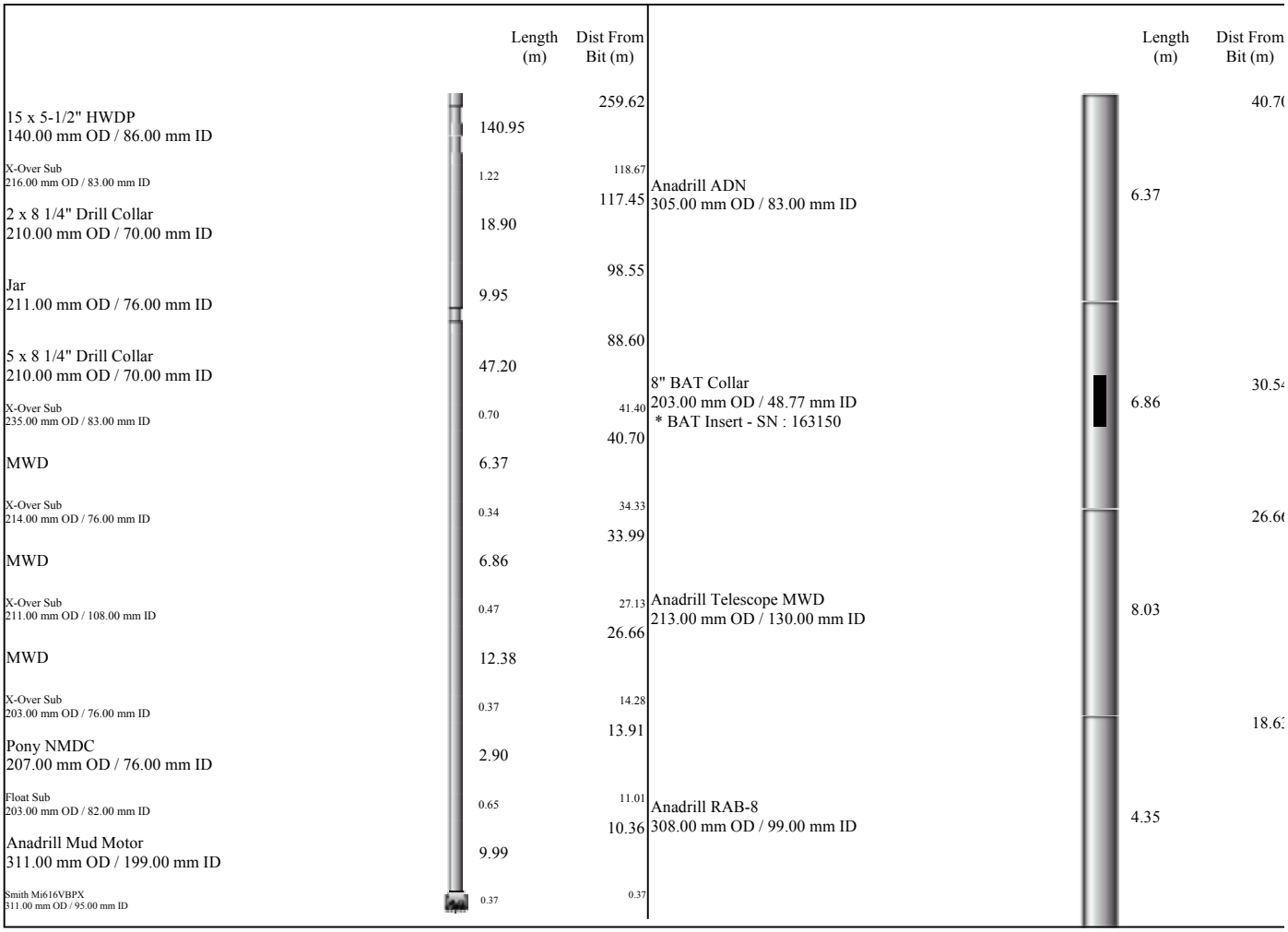
Start Depth	: 862.00 m	**Footage**	: 935.00 m	**Avg RPM**	: 31 rpm	**Avg ROP**	: 62.00 m/hr
End Depth	: 1797.00 m	**Avg Flow Rate**	: 1070 gpm	**Avg WOB**	: 18.0 klb	**Avg SPP**	: 2769 psig

MUD DATA

Mud Type	: KCl Polymer						
Weight	: 1.150 sg	**Viscosity**	: 69.00 spl	**PV**	: 19 cP	**YP**	: 12.45 pa
Chlorides	: 48000 ppm	**Max Temp.**	: 56 degC	**% Solids**	: 4.10 %	**% Sand**	: 1.00 %
pH	: 9.20 pH	**Fluid Loss**	: 4 cptm	**% Oil**	: N/A	**O:W**	: 0:92

MWD PERFORMANCE

Tool OD	: 203.20 mm	**Type**	: BAT Rec	**Min. Inc.**	: 0.20 deg	**Min. Inc. Depth**	: 886.600 m
Final Az.	: 328.16 deg	**Max Op. Press.**	: 3600 psig	**Max Inc.**	: 32.52 deg	**Max Inc. Depth**	: 1770.760 m
	MWD Real-time % : 0 %			**MWD Recorded %**	: 100 %		



COMMENTS

BAT recorded only mode. All data was recovered on surface.

Bitrun Summary

RUN TIME DATA

MWD Run	: 200	**Run Start**	: 26-Feb-08 07:07	**BRT Hrs**	: 33.32 hr	**Circ. Hrs**	: 11.10 hr
Rig Bit No	: 4	**Run End**	: 27-Feb-08 16:26	**Hole Size**	: 311.00 mm	**Oper. Hrs**	: 33.31 hr

DRILLING DATA

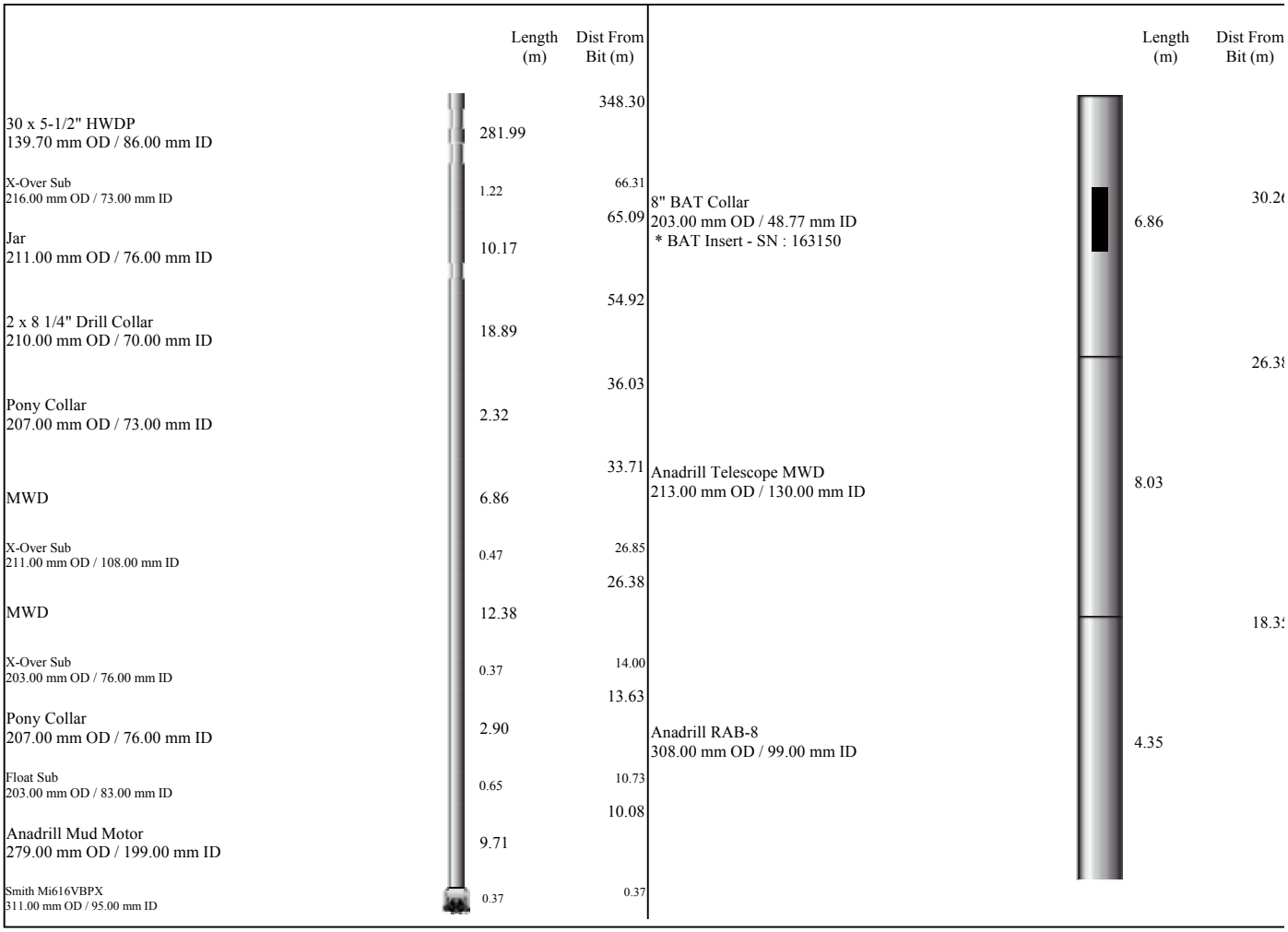
Start Depth	: 1797.00 m	**Footage**	: 103.00 m	**Avg RPM**	: 6 rpm	**Avg ROP**	: 29.00 m/hr
End Depth	: 1900.00 m	**Avg Flow Rate**	: 1103 gpm	**Avg WOB**	: 5.0 klb	**Avg SPP**	: 3320 psig

MUD DATA

Mud Type	: KCl Polymer						
Weight	: 1.150 sg	**Viscosity**	: 64.00 spl	**PV**	: 18 cP	**YP**	: 18.19 pa
Chlorides	: 40000 ppm	**Max Temp.**	: 58 degC	**% Solids**	: 4.80 %	**% Sand**	: 0.80 %
pH	: 8.60 pH	**Fluid Loss**	: 5 cptm	**% Oil**	: N/A	**O:W**	: 0:92

MWD PERFORMANCE

Tool OD	: 203.20 mm	**Type**	: BAT Rec	**Min. Inc.**	: 32.89 deg	**Min. Inc. Depth**	: 1801.910 m
Final Az.	: 323.00 deg	**Max Op. Press.**	: 4100 psig	**Max Inc.**	: 34.60 deg	**Max Inc. Depth**	: 1831.130 m
	MWD Real-time % : 0 %			**MWD Recorded %**	: 100 %		



COMMENTS

Drill ahead to 1900.0 mMDRT then trip for a Bit change. All recorded data was recovered on surface

Bitrun Summary

RUN TIME DATA

MWD Run	: 300	**Run Start**	: 27-Feb-08 16:50	**BRT Hrs**	: 77.17 hr	**Circ. Hrs**	: 53.20 hr
Rig Bit No	: 5	**Run End**	: 01-Mar-08 22:00	**Hole Size**	: 311.00 mm	**Oper. Hrs**	: 77.22 hr

DRILLING DATA

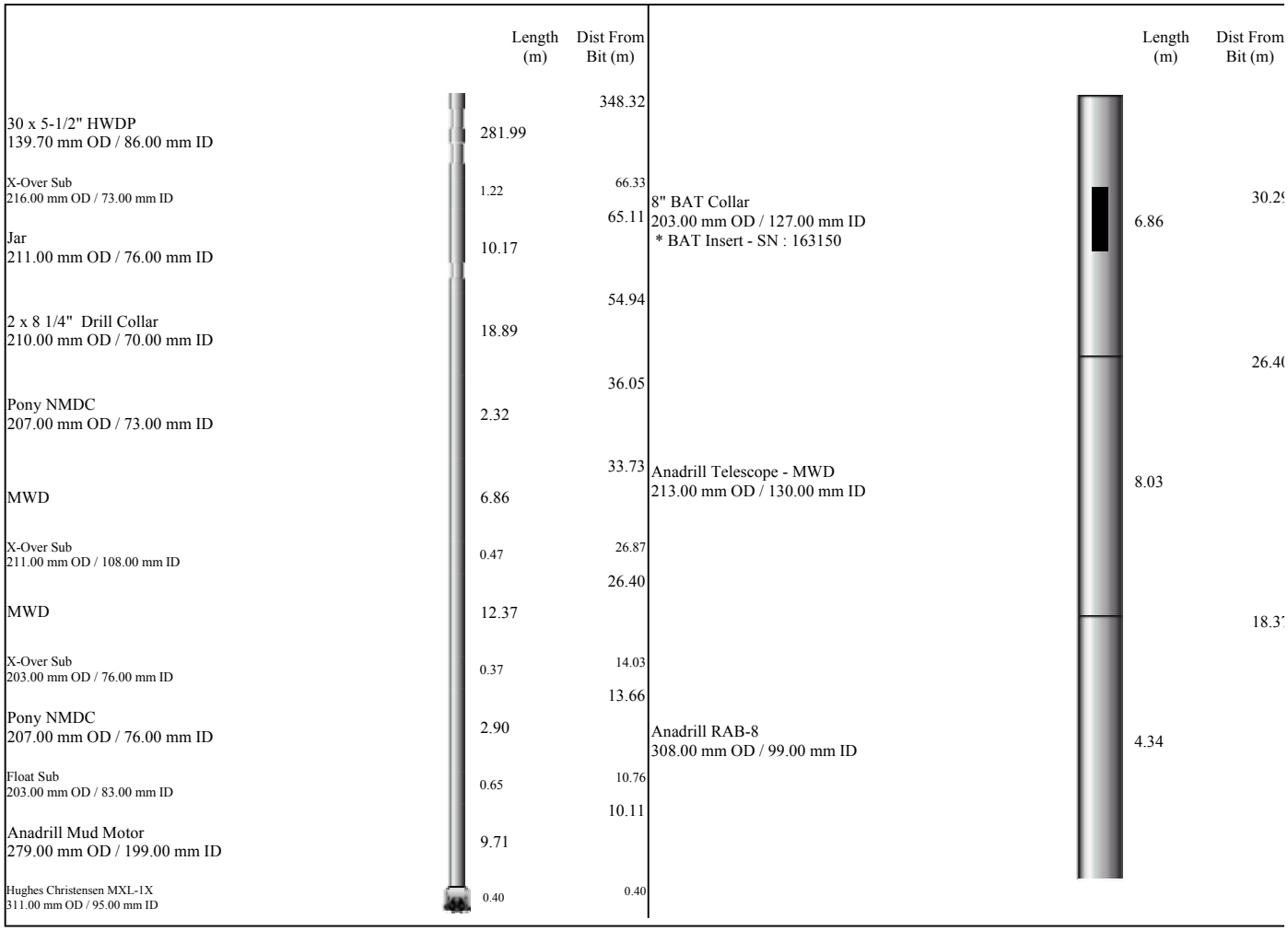
Start Depth	: 1900.00 m	**Footage**	: 413.00 m	**Avg RPM**	: 56 rpm	**Avg ROP**	: 17.70 m/hr
End Depth	: 2313.00 m	**Avg Flow Rate**	: 1079 gpm	**Avg WOB**	: 36.8 klb	**Avg SPP**	: 3326 psig

MUD DATA

Mud Type	: KCL Polymer						
Weight	: 1.180 sg	**Viscosity**	: 50.00 spl	**PV**	: 16 cP	**YP**	: 18.67 pa
Chlorides	: 48000 ppm	**Max Temp.**	: 65 degC	**% Solids**	: 4.10 %	**% Sand**	: 0.75 %
pH	: 9.00 pH	**Fluid Loss**	: 5 cptm	**% Oil**	: N/A	**O:W**	: 0:92

MWD PERFORMANCE

Tool OD	: 203.20 mm	**Type**	: BAT Rec	**Min. Inc.**	: 34.34 deg	**Min. Inc. Depth**	: 1890.590 m
Final Az.	: 323.50 deg	**Max Op. Press.**	: 4150 psig	**Max Inc.**	: 48.08 deg	**Max Inc. Depth**	: 2243.210 m
	MWD Real-time % : 0 %			**MWD Recorded %**	: 100 %		



COMMENTS

RIH and drill to section TD of 2313.0 mMDRT. All recorded data was recovered on surface

HALLIBURTON

BAT Bi-Modal Acoustic

Sperry Drilling Services

Powered by INSITE

1 : 500

Country	: Australia
Field	: Exploration
Location	: Lat: 38° 29' 18.16" South GDA94 Long: 147° 15' 49.15" East GDA94
Well	: Wasabi-1
Company	: Apache Energy Ltd
Rig	: West Triton

Company : **Apache Energy Ltd**
Rig : **West Triton**
Well : **Wasabi-1**
Field : **Exploration**
Country : **Australia**
DOE Number :

LOCATION

Latitude : **Lat: 38° 29' 18.16" South GDA94**
Longitude : **Long: 147° 15' 49.15" East GDA94**
UTM Easting = **522,993.59 m**
UTM Northing = **5,739,963.35 m**

Other Services

Permanent Datum : **Mean Sea Level** Elevation : **0.00 m**
Log Measured From : **Drill Floor** **39.00 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

Elev. KB
DF **39.00 m**
GL
WD **27.00 m**

MD LOG

Depth Logged : **862.00 m** To **2,313.00 m**
Date Logged : **22-Feb-08** To **02-Mar-08**
Total Depth MD : **2,313.00 m** TVD : **2,125.04 m**
Spud Date : **15-Feb-08**

Unit No. : **BHI Unit**
Job No. : **AU-FE-0005617882**
Plot Type : **Final**
Plot Date : **08-Apr-08**

Borehole Record (MD)

Run No.	Size	From	To
100	311.000 mm	862.00 m	1797.00 m
200	311.000 mm	1797.00 m	1900.00 m
300	311.000 mm	1900.00 m	2313.00 m

Borehole Record (MD)

Run No.	Size	From	To

Casing Record (MD)

Size	Weight	From	To
476.000 mm	198.00 kgpm	75.00 m	135.00 m
315.000 mm	101.00 kgpm	75.00 m	857.00 m

WELL INFORMATION

MWD Run Number	100	200	300		
Date run completed	26-Feb-08	27-Feb-08	01-Mar-08		
Rig Bit Number	3	4	5		
Bit Size (mm)	311	311	311		
Tool Nominal OD (mm)	203	203	203		
Log Start Depth (MD, m)	862.00	1,797.00	1,900.00		
Log End Depth (MD, m)	1,797.00	1,900.00	2,313.00		
Drill or Wipe	Drilling	Drilling	Drilling		
Drill/Wipe Start Date and Time	23-Feb-08 00:48	26-Feb-08 22:25	28-Feb-08 03:44		
Drill/Wipe End Date and Time	25-Feb-08 16:06	27-Feb-08 08:47	01-Mar-08 05:30		
Min Inc (deg) @ Depth (MD, m)	0.2 @ 886.60	32.89 @ 1,801.91	34.34 @ 1,890.59		
Max Inc (deg) @ Depth (MD, m)	32.52 @ 1,770.76	34.60 @ 1,831.1	48.08 @ 2,243.21		
Bit TFA(in2) / Bit Type	1.49 / Smith Mi616VBPX	1.35 / Smith Mi616VBPX	1.33 / HTC MXL-1X		
Flow Rate (gpm)	1,070	1,103	1,079.00		
Max AV (mpm) / CV (mpm) @ MWD	138.6 / 115.8	96.0 / 141.6	93.6 / 141.0		
Fluid Type	KCL Polymer	KCl Polymer	KCl Polymer		
Density (sg) / Viscosity (spl)	1.15 / 69.00	1.16 / 64.00	1.2 / 50.00		
Filtrate CL (ppm)	48,000	40,000	48,000		
pH / Fluid Loss (cptm)	9.20 / 4.0	8.60 / 5.0	9.00 / 5.0		
PV (cP) / YP (pa)	19 / 12.45	18 / 18.19	16 / 18.67		
% Solids / % Sand	4.1 / 1	4.8 / 0.8	4.1 / 0.75		
% Oil / Oil:Water Ratio	0 / 0:92	0 / 0:92	0 / 0:92		
Rm @ Measured Temp (degC)	N/A @ N/A	N/A @ N/A	N/A @ N/A		
Rmf @ Measured Temp (degC)	N/A @ N/A	N/A @ N/A	N/A @ N/A		
Rmc @ Measured Temp (degC)	N/A @ N/A	N/A @ N/A	N/A @ N/A		
Max Tool Temp (degC) / Source	56 / BAT	58 / BAT	65 / BAT		
Rm @ Max Tool Temp (degC)	N/A @ 56	N/A @ 58	N/A @ 65		
Lead MWD Engineer	J. Povey	J. Povey	J. Povey		
Customer Representative	B. Openshaw	B. Openshaw	S. Corless		

SENSOR INFORMATION

Sonic Sensor Information

Tool Type	BAT	BAT	BAT		
Distance From Bit (m)	30.54	30.26	30.29		
Recorded Sample Period (sec)	16	16	16		
Sub Serial Number	163150	163150	163150		
Receiver Insert Serial Number	139060	139060	139060		
Transmitter Insert Serial Number	160293	160293	160293		
MIT File	R5Max_Run.mit	R5Max_Run.mit	R5Max_Run.mit		
Config File	R5Max_Run.cfn	R5Max_Run.cfn	R5Max_Run.cfn		
Real-Time Window (uspf)	N/A - N/A	N/A - N/A	N/A - N/A		
Battery Serial Insert Number	157038	157038	157038		
MCM Software Version	4.45	4.45	4.45		
DAQ1/DAQ2 Software Version	/	/	/		
DSM Software Version					

REMARKS

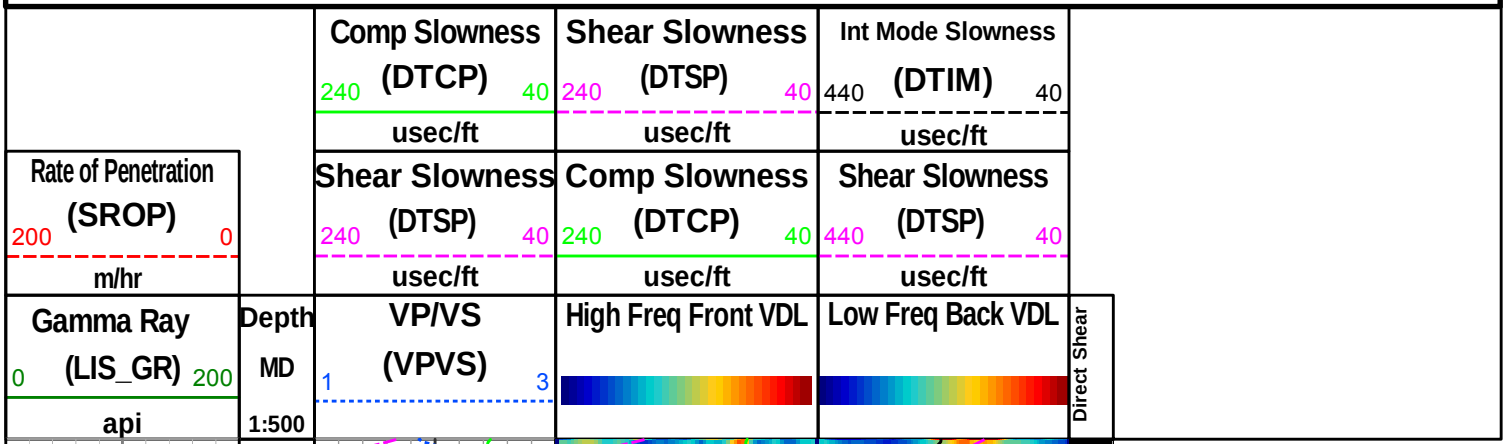
1. All depths are bit depthes and are referenced to the drillers tally unless otherwise noted as aquired from Anadrill.

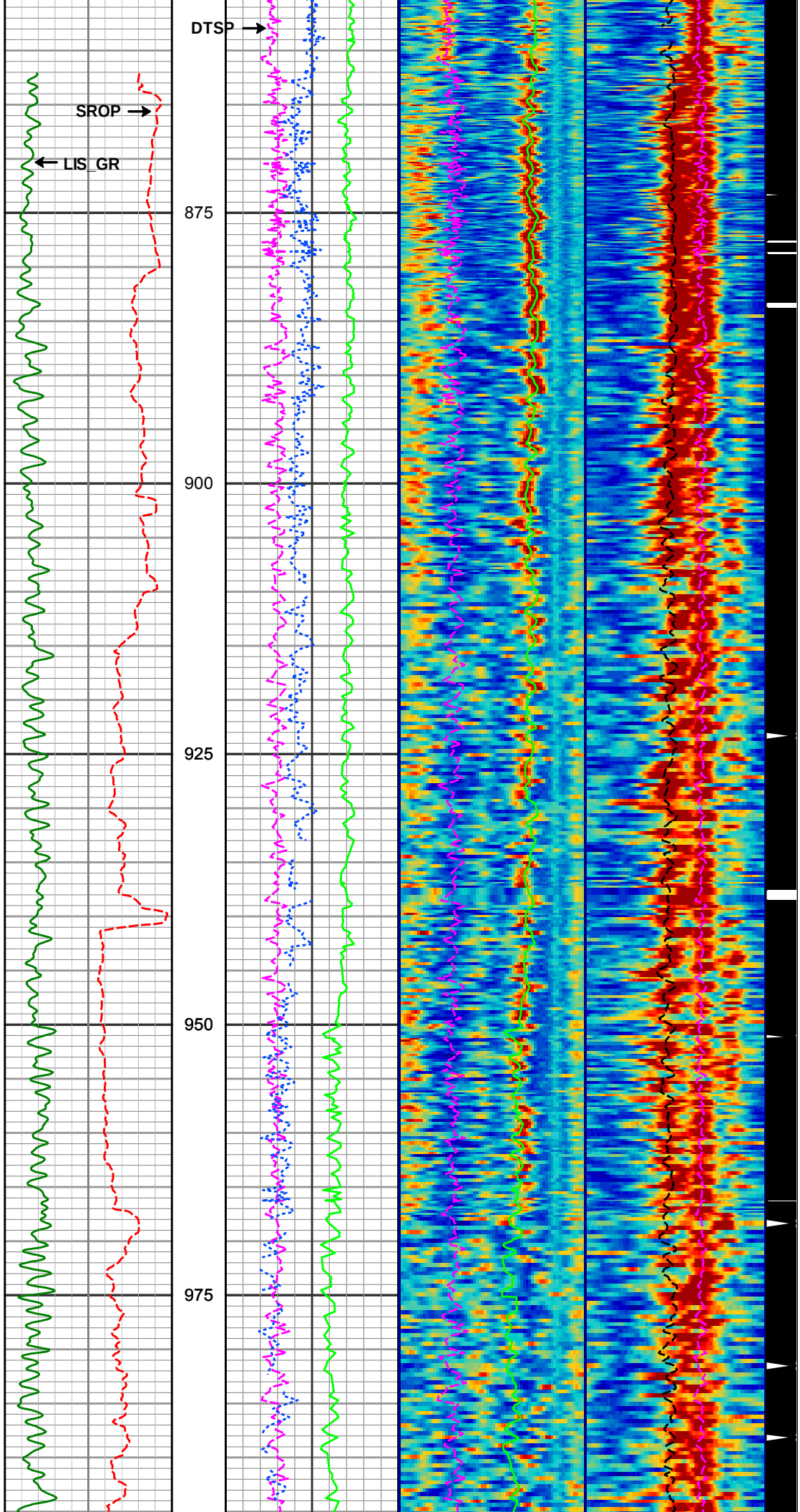
2. AV/CV is calculated at the MWD collar using powers law for water based muds.

3. Curve mnemonics used are:

SROP: Smoothed Rate of Penetration (Anadrill),m/hr
LIS_GR: Smoothed Gamma Ray(Anadrill),api
DTCP: Smoothed BAT Processed Compressional Slowness(Sperry),usec/ft
DTSP: Smoothed BAT Processed Shear Slowness(Sperry),usec/ft
VPVS: Smoothed BAT Compressional velocity to Shear Velocity ratio(Sperry)
DTIM: Smoothed BAT Processed Interface Mode Slowness(Sperry),usec/ft

WARRANTY

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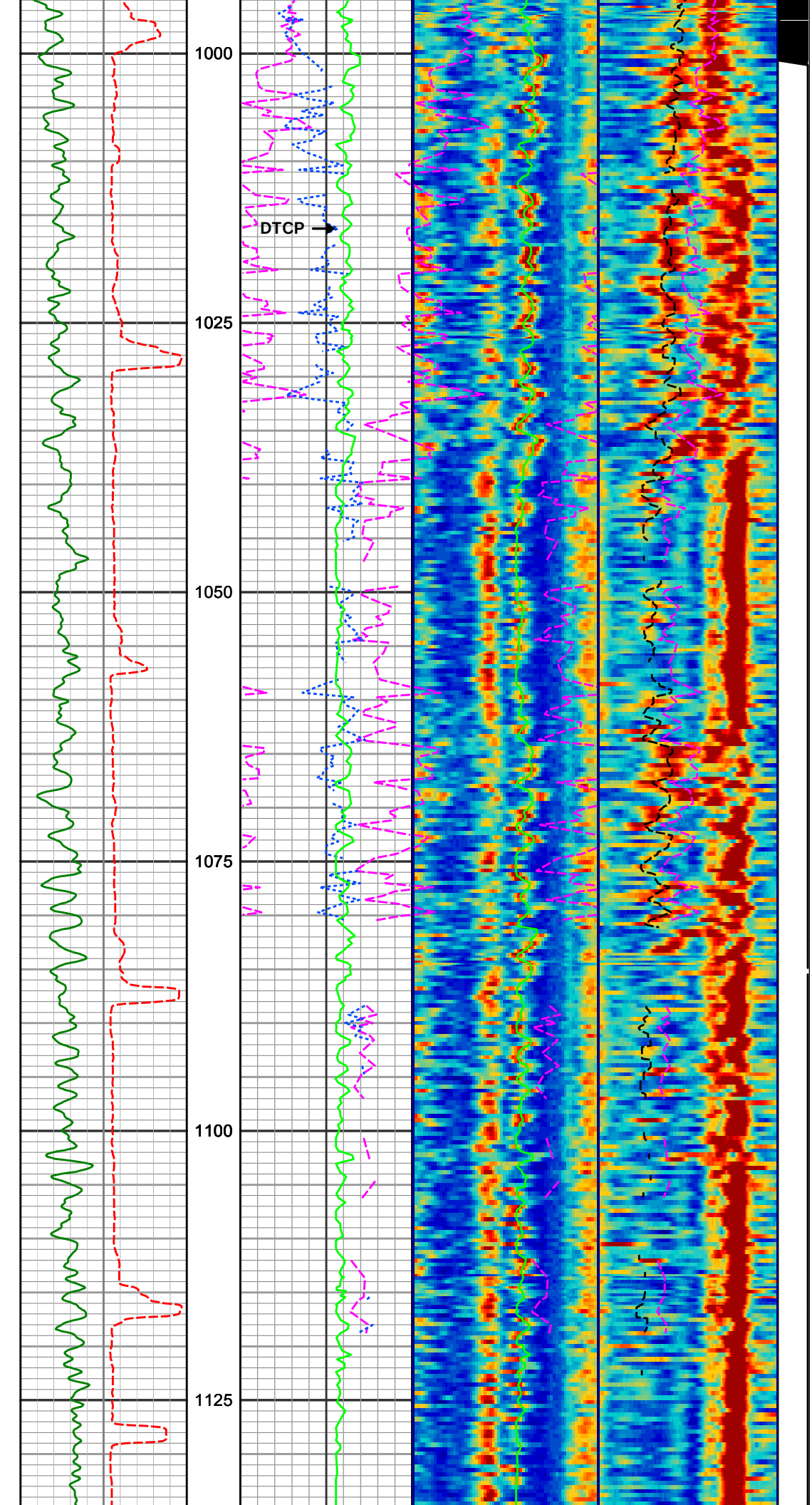
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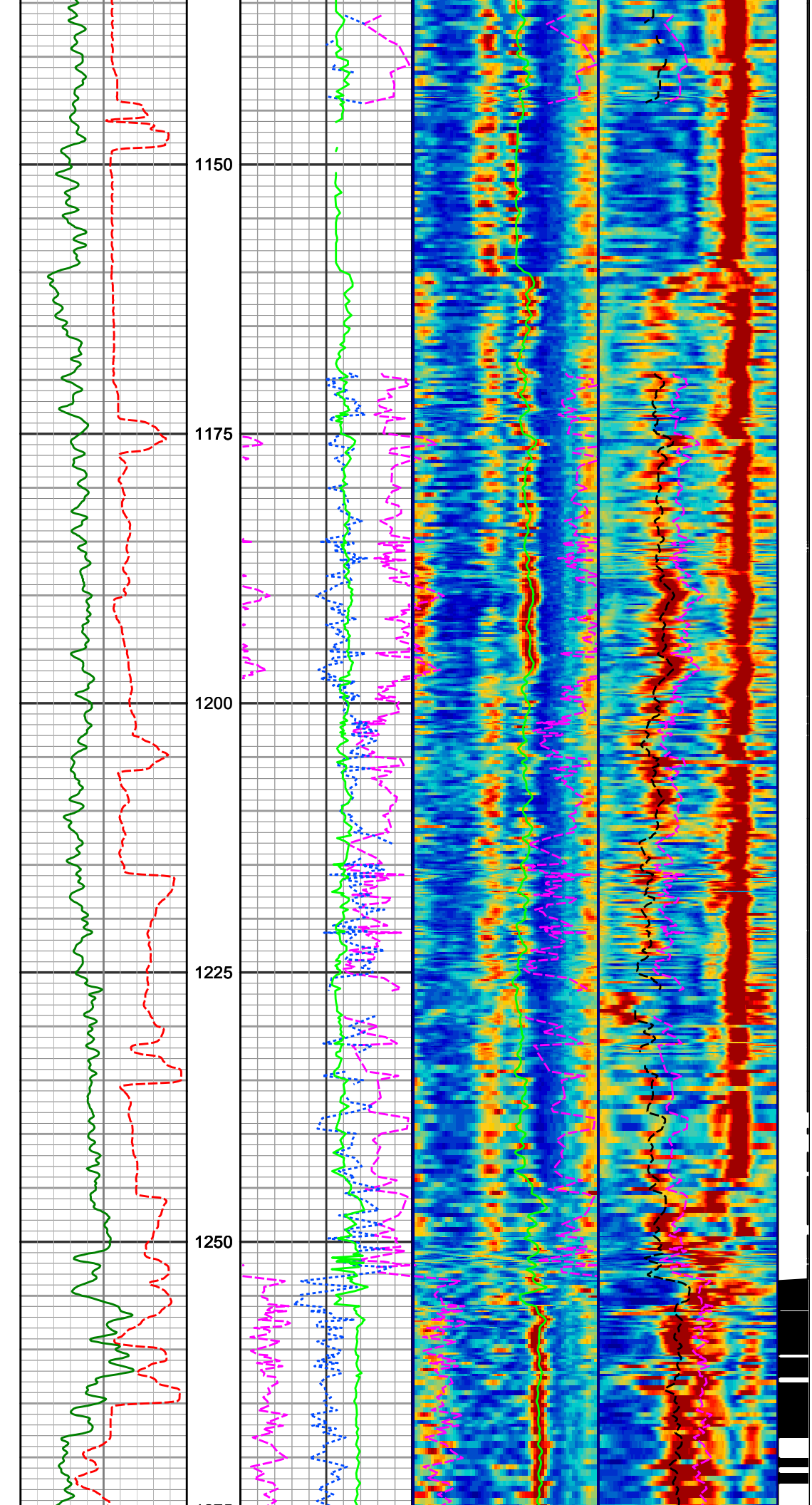
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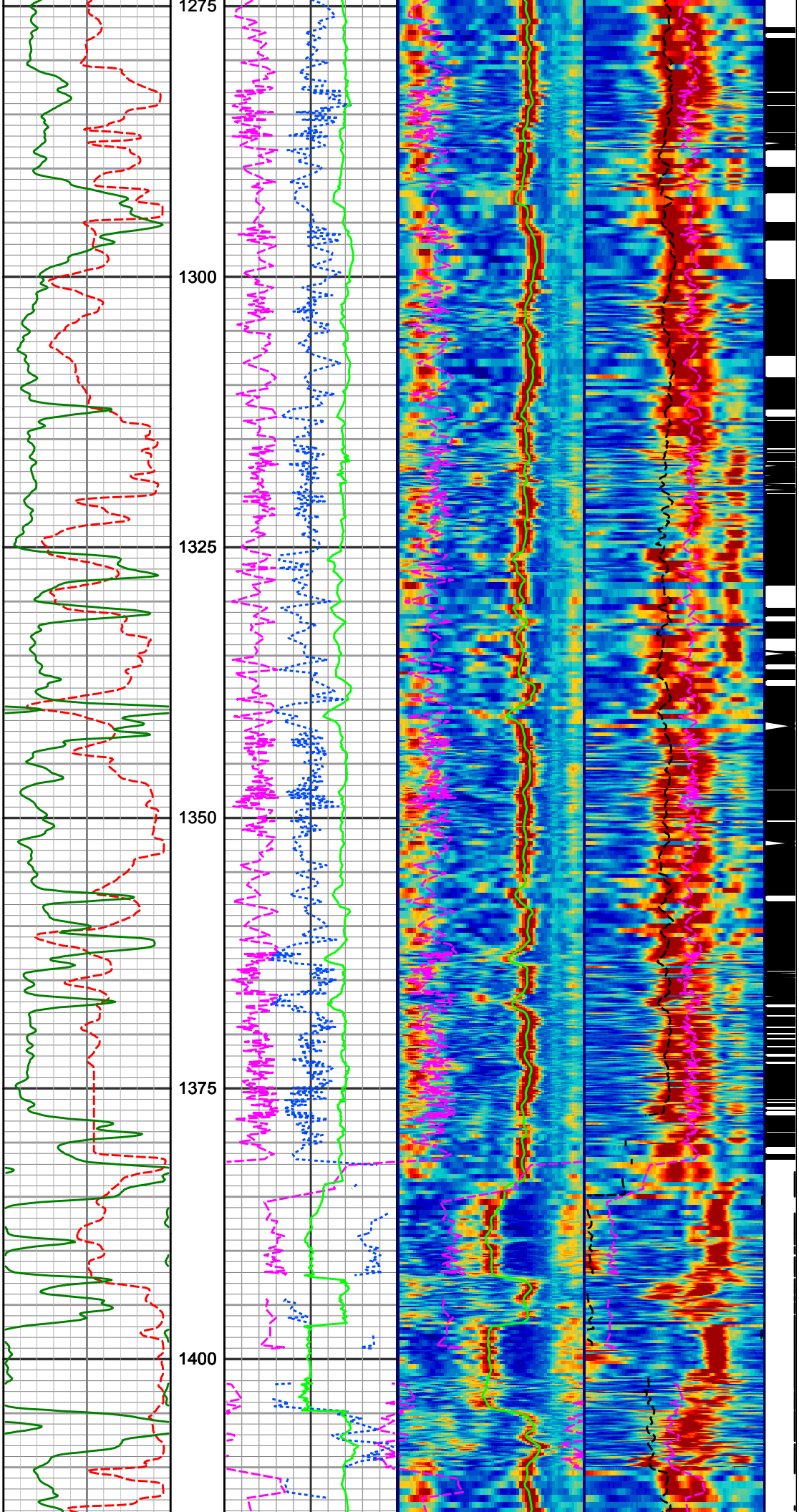
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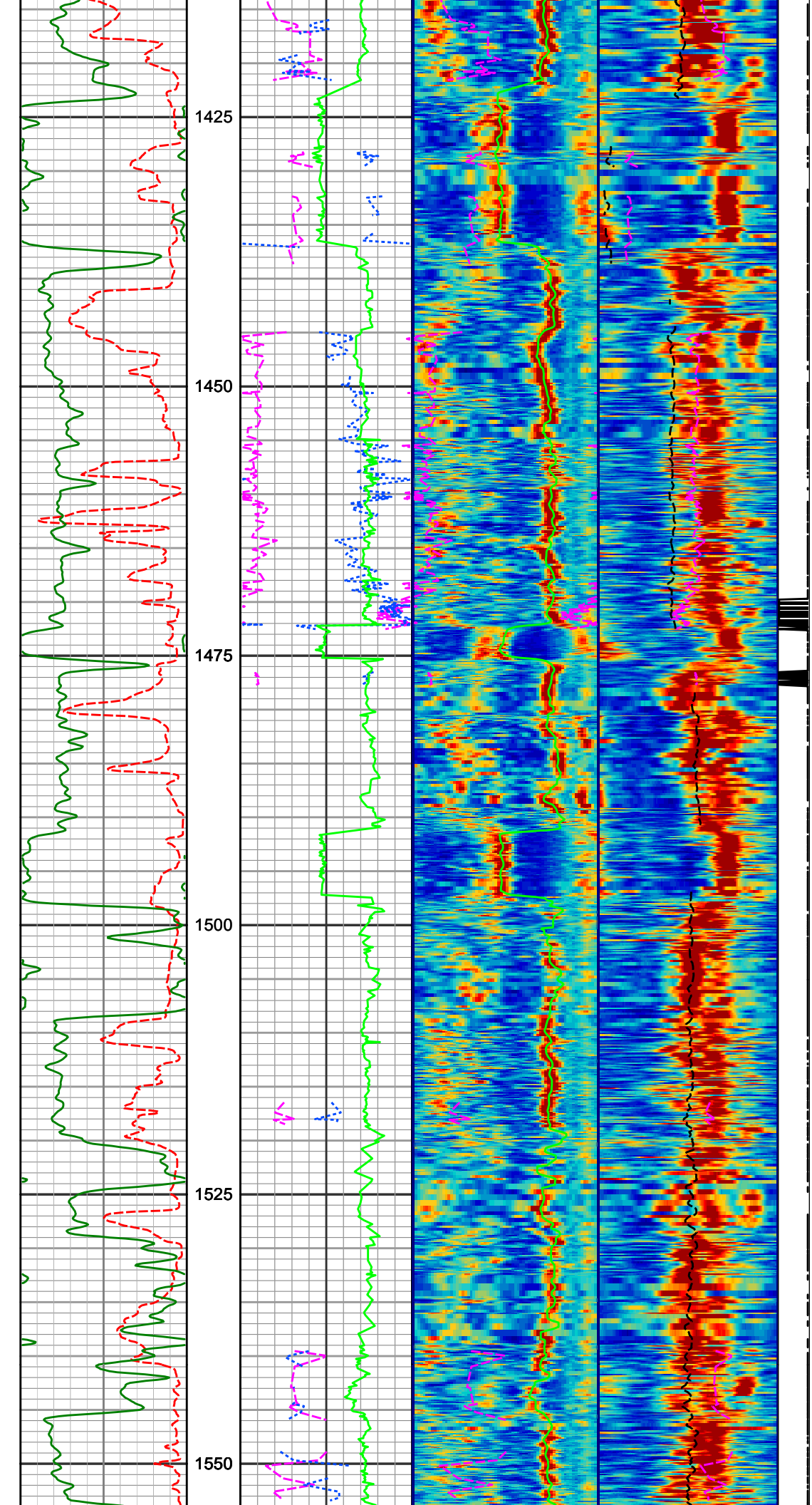
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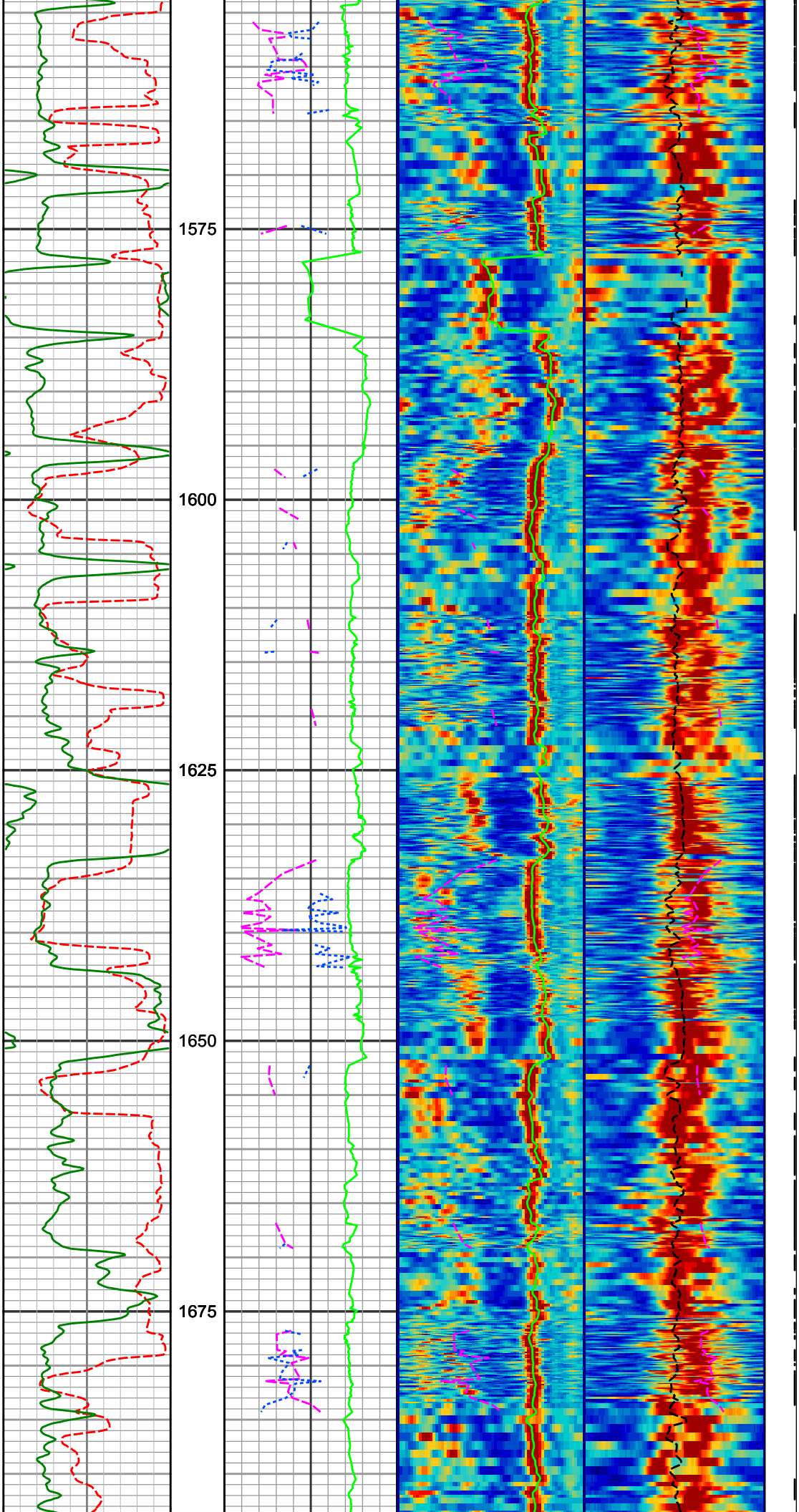
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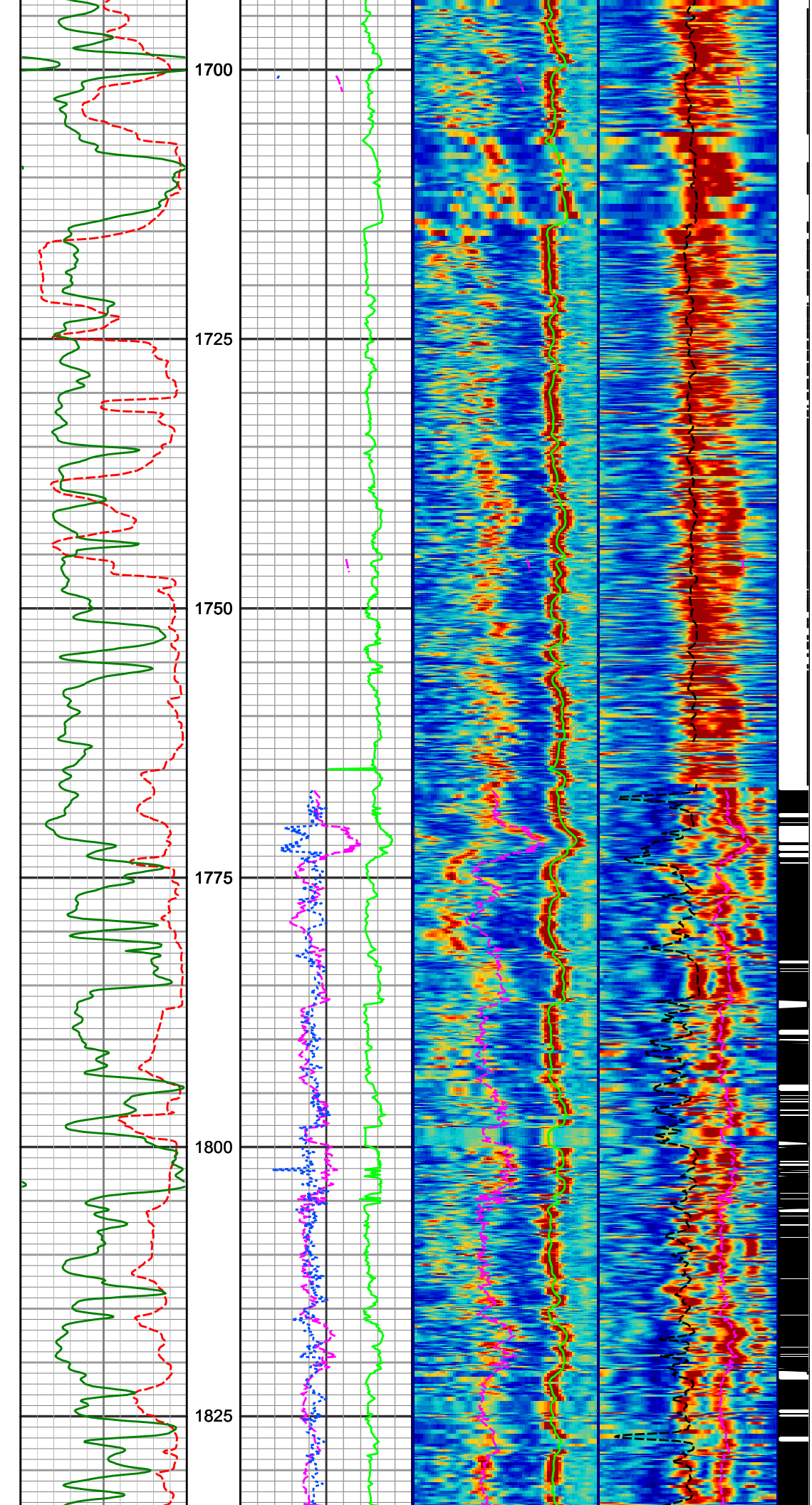
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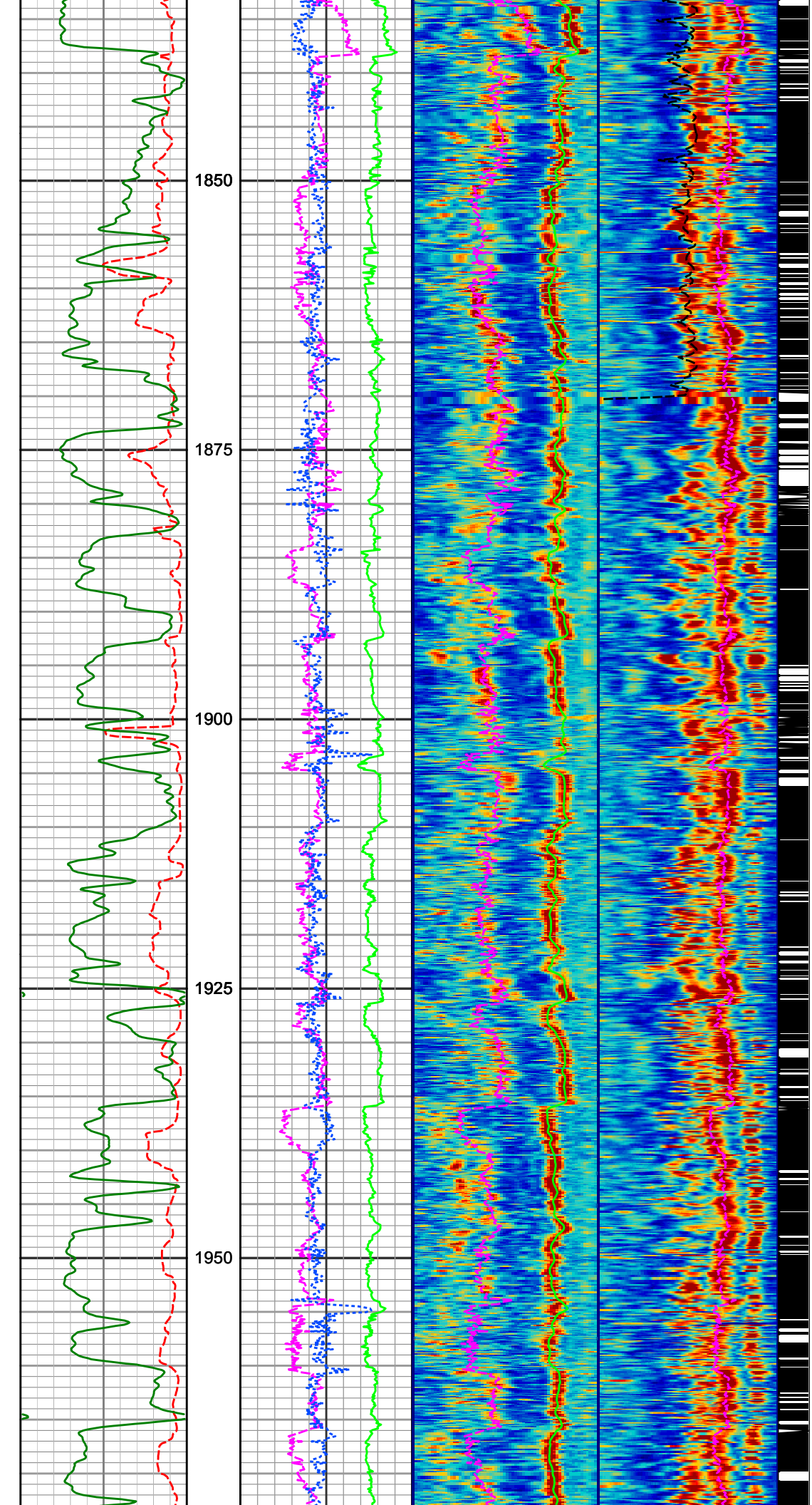
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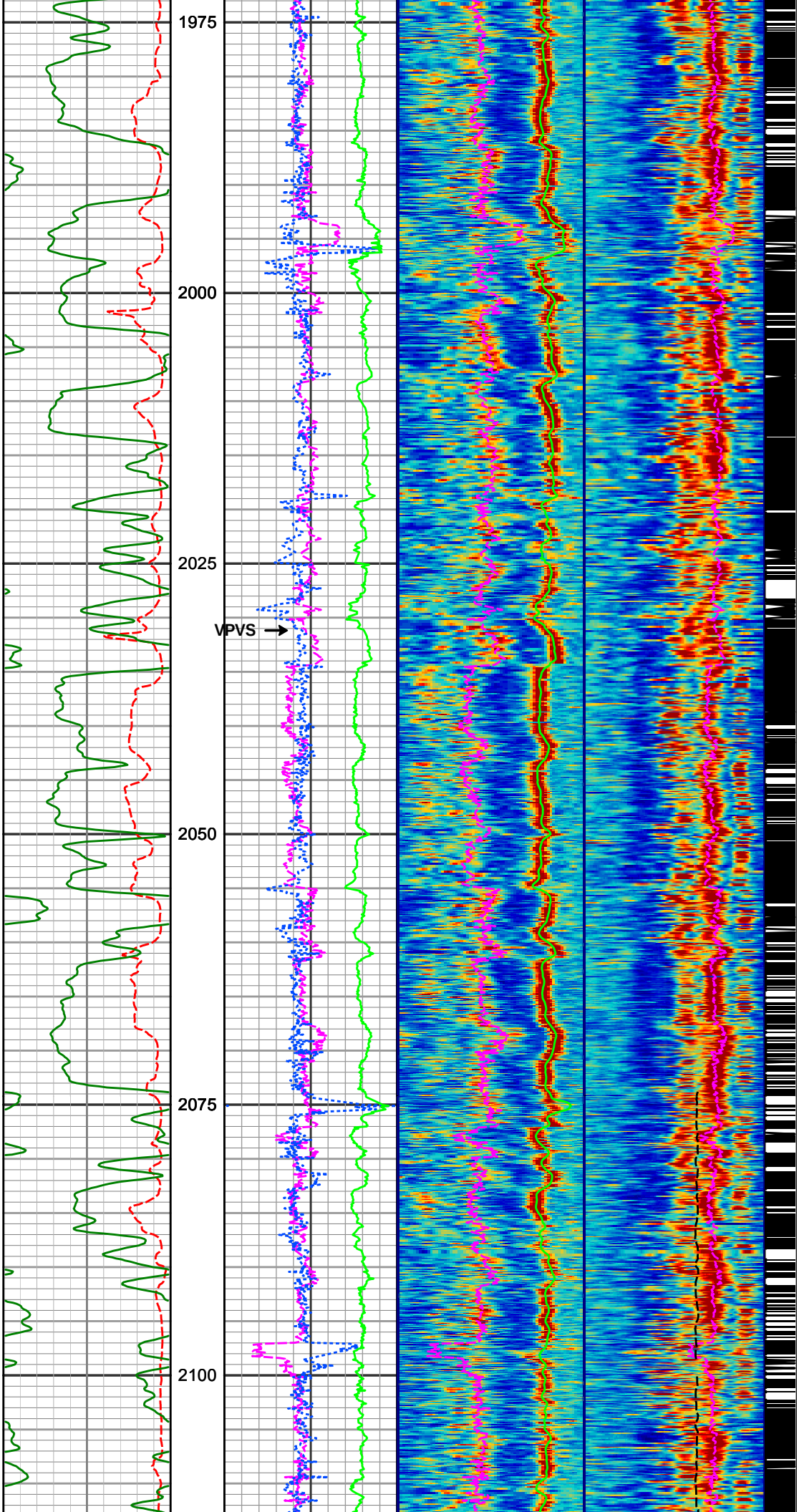
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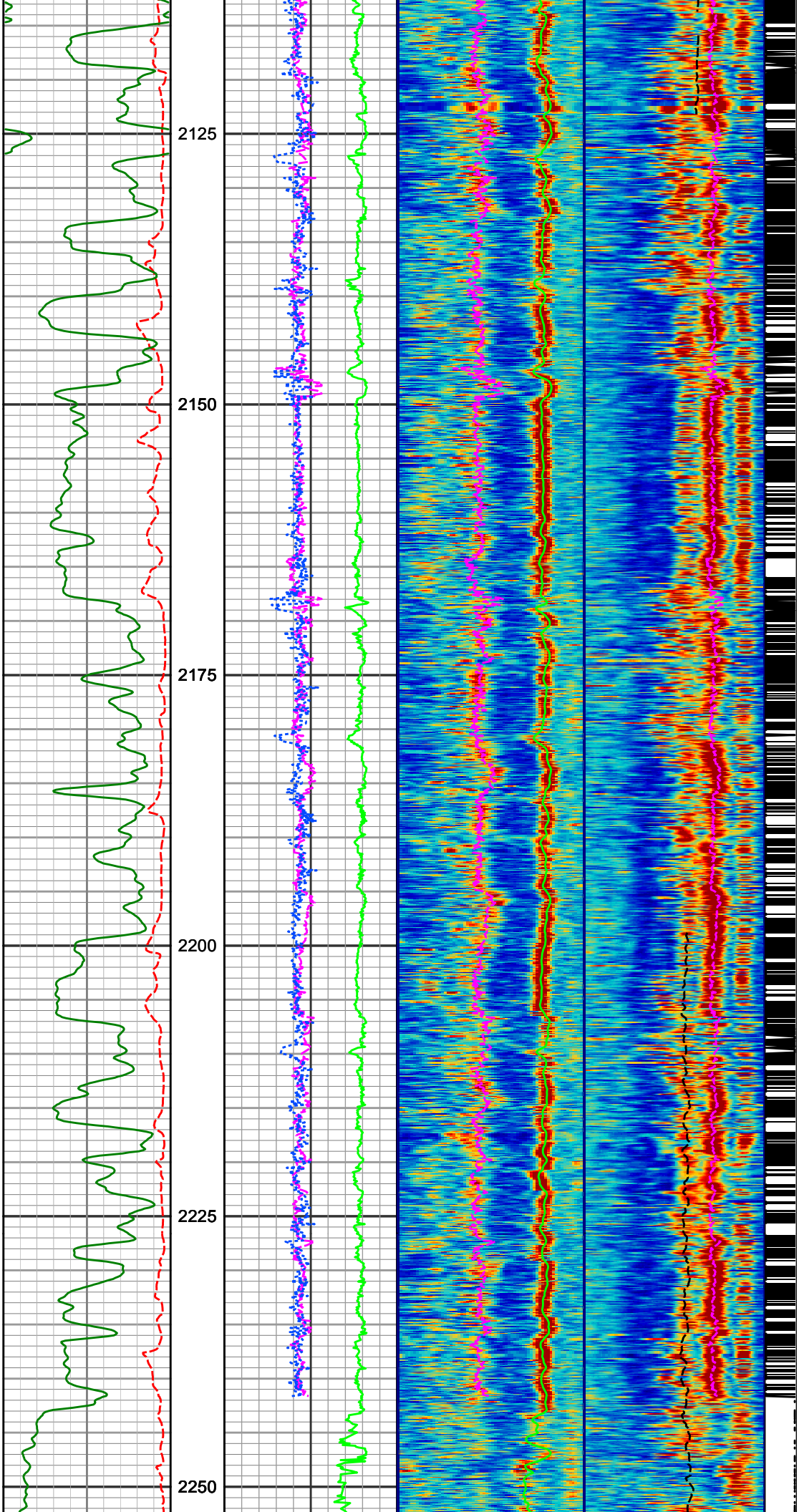
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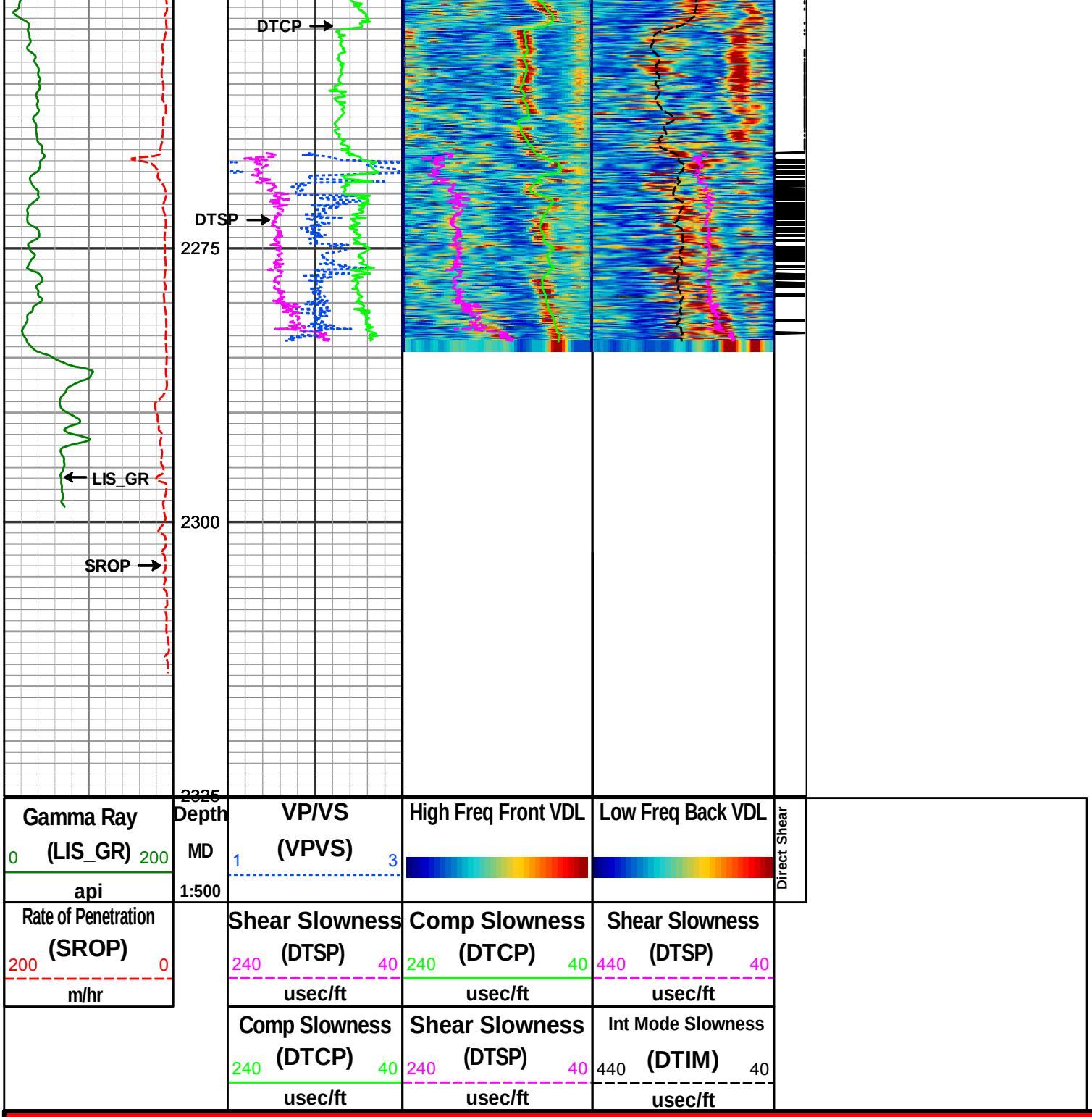


MWD RUN 100 - BHA

	Component Length (m)	Cumulative Length (m)
		259.62
15 x 5-1/2" HWDP	140.950	
		118.67
X-Over Sub	1.220	
		117.45
2 x 8 1/4" Drill Collar	18.900	

MWD RUN 100 - MWD

Sensor Measure Point Distance To Bit (m)

		98.55
Jar	9.950	
		88.60
5 x 8 1/4" Drill Collar	47.200	
X-Over Sub	.700	41.40
		40.70
MWD System	6.370	
X-Over Sub	.340	34.33
		33.99
MWD System	6.860	
X-Over Sub	.470	27.13
		26.66
MWD System	12.38	
X-Over Sub	.370	14.28
		13.91
Pony NMDC	2.900	
Float Sub	.650	11.01
		10.36
Anadrill Mud Motor	9.990	
Smith Mi616VBPX	.370	0.37

MWD - Sonic
BAT Insert

30.540

MWD RUN 200 - BHA

MWD RUN 200 - MWD

	Component Length (m)	Cumulative Length (m)
		348.30
30 x 5-1/2" HWDP	281.990	

Sensor Measure Point Distance To Bit (m)

X-Over Sub	1.220	66.31
Jar	10.170	65.09
2 x 8 1/4" Drill Collar	18.890	54.92
Pony Collar	2.320	36.03
MWD System	6.860	33.71
X-Over Sub	.470	26.85
MWD System	12.38	26.38
X-Over Sub	.370	14.00
Pony Collar	2.900	13.63
Float Sub	.650	10.73
Anadrill Mud Motor	9.710	10.08
Smith Mi616VBPX	.370	0.37

MWD - Sonic BAT Insert	30.260

Apache Northwest Pty Ltd

WIRELINE LOGGING REPORT

GENERAL WELL DATA

Well Name :	Wasabi-1	**Suite :**	1	**Rig :**	West Triton
Permit :	VIC/P-58	**Date 1st Log :**	01-Mar-2008	**GL Elevation :**	
Latitude :	038° 29' 18.157" South	**Date Last Log :**		**Water Depth :**	27.0 (m)
Longitude :	147° 15' 49.147" East	**Depth Ref. :**	Recorded LWD GR	**Witnesses :**	W. Cruickshank, H. Little
Easting (m) :	522,993.588 E	**Depth Ref. Elev. :**	39.0 (m)		
Northing (m) :	5,739,963.350 S	**Service Comp. :**	Schlumberger		
UTM Zone :	55			**Engineers :**	K. Alhadhi, A. Dandi, M. Dawson
Geo. Datum :	NAD83, GDA94				
Ellipsoid :	Geodetic Reference System 1980				

HOLE DATA

Hole Size :	311 (mm)	**Seabed Temp :**	15.0 (°C)	**Max Hole Dev :**	48.0 (°)
Driller's Depth :	2,313.0 (m)	**Surface Temp :**	17.0 (°C)	**Max Dev Depth :**	2,243.0 (m)
Logger's Depth :		**Max BHT :**	59.0 (°C)		
Survey Type :	Static MWD				

Hole Problems : Tight hole experienced from 2194-2166m, 2082-1945m &1847-1837m on MAD run.
Tight hole from 2186.0 - 2115.0 mMDRT
required pump / reaming whilst POOH on trip prior to first run.
Hung up at 1500m on MDT & CST
VSI hung up at 1390.0 mMDRT.

Comments : Rig Heading 119.76° True
340 mm (13 3/8") casing shoe at 857.0 mMDRT

CASING DATA

Casing String	Shoe Depth (mMDRT)	Shoe Depth (mTVDRT)	Casing OD (mm)	Casing ID (mm)	Weight (lbm/ft)	Hole Size (mm)
20" Conductor	101.1	101.1	508	476	129.70	660
13 3/8" Surface Casing	857.0	857.0	340	312	67.90	406

WATER BASE MUD DATA

Date Mud Check	Date Time Circ Stopped	Circ Time (h)	Mud Type	MW (sg)	KCl (%)	Cl (mg/L)	Barite (%)	Rmf (ohm.m)	Rm (ohm.m)	Rmc (ohm.m)
01-Mar-2008	01-Mar-2008 6:4	1.00	KCL Polymer	1.15	10.0	49000.0	4.40	0.070 @ 20.0 °	0.080 @ 20.0 °	0.090 @ 20.0 °
02-Mar-2008	03-Mar-2008 10:2	0.70	KCL / Polymer	1.21	9.0	49000.0	5.00	0.079 @ 22.1 °	0.091 @ 22.2 °	0.109 @ 21.8 °
03-Mar-2008	03-Mar-2008 10:2	0.80	KCL /Polymer	1.24	10.0	51000.0	5.00	0.080 @ 22.1 °	0.091 @ 22.2 °	0.109 @ 21.8 °
04-Mar-2008	05-Mar-2008 13:1	3.50	KCL / Polymer	1.23	10.0	50000.0	5.00	79.000 @ 22.1	0.091 @ 22.2 °	109.000 @ 21

WIRELINE RUN TEMPERATURE DATA

Date of Mud Check: 01-Mar-2008 **Date / Time Circ. Stopped:** 01-Mar-2008 6:45 **Circ. Time :** 1.00 (h)

Run #	Run Date	Tool String	Max BHT (°C)	Max BHT TVD Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
1	01-Mar-2008	VSI	60.0	1326.0	02-Mar-2008 3:34	20.82
2	02-Mar-2008	PEX-SP-MSIP	59.0	1388.5	02-Mar-2008 13:14	30.48

Date of Mud Check: 03-Mar-2008 **Date / Time Circ. Stopped:** 03-Mar-2008 10:20 **Circ. Time :** 0.80 (h)

Run #	Run Date	Tool String	Max BHT (°C)	Max BHT TVD Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
3	04-Mar-2008	MDT	60.0	1437.1	04-Mar-2008 15:19	28.98
4	03-Mar-2008	CST	61.0	1472.5	04-Mar-2008 21:44	35.40

Date of Mud Check: 04-Mar-2008 **Date / Time Circ. Stopped:** 05-Mar-2008 13:10 **Circ. Time :** 3.50 (h)

Run #	Run Date	Tool String	Max BHT (°C)	Max BHT TVD Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
5	05-Mar-2008	VSI through Drill Pipe.			05-Mar-2008 17:00	3.83

WIRELINE RUN SUMMARY DATA

Run #	Tool String	Log From Depth (m)	Log To Depth (m)	Repeat From Depth (m)	Repeat To Depth (m)	Comments
1	VSI	1385.5	70.1	792.0		Plan: VSI 15 m intervals from TD to loss of signal. Tools hung up at 1390.0 mMDRT, log to surface from there. Total of 13 stations with top shuttle at 540.0 mMDRT. Check shot at 792.0 mMDRT
2	PEX-SP-MSIP	1390.0	66.0	1350.0	1250.0	PEX-SP-MSIP - Tool hung up on RIH at 1390.0 mMDRT. Log up as per OOWL. - Sonic from hang point to surface
3	MDT	1440.1	1268.5			Preliminary logging program - 13 pre tests (1440m-1268.5m) 2 sample points - 3 sample chambers used. Last on bottom circulation time 10:20 am 03/03/2008 Last circulation time following ADN logs at 1740.0 mMDRT - 21:30 03/03/2008 MDT 13 pretests completed. 9 Good tests - 3 no seal & 2 flow line blockages. 3 x sample chambers taken at 1328m.
4	CST	1477.2	1250.0			CST: 30 cores, 29 recovered.
5	VSI through Drill Pipe.	2300.0	1265.5			RIH open ended drill pipe and circulated for 3.5 hours. Last circulation 13:10pm 05/03/2008. Move drill pipe every 30mins during logging operations to avoid becoming hydrostatically stuck.

Q-Borehole Survey Report

Schlumberger

Survey type:	Zero Offset VSP survey
Company:	Apache Northwest Pty Ltd
Well:	WASABI-1
Field:	Apache/VIC/P-58/WASABI-1
Location:	Bass Strait
Country:	Australia
Run:	1 & 5
Date:	March 2&5 2008

Recorded by: A. Dandi/M.Dawson/K. AlBarhi
QC & Reported by: S. Nakanishi /A. Dandi

Witnessed by: H.Little / A.Cruickshank

Report Contents

Introduction

A borehole seismic survey was recorded in suite 1 Run1 & 5 in the deviated (max. 48 deg) offshore exploration well Wasabii-1 on 02 & 05 March 2007. This survey included rig source VSP measurements from 2300 m MD to 70 m MD. The data were acquired using 4 shuttles VSIT-G (15.24 m spacing) downhole.

Run1 was unable to pass below 1390 m MD due to the hole condition. VSP survey was made from OH (12 ¼ inch) and through 13 3/8 inch CSG. The survey interval was from 1385 m MD to 70 m MD. Run2 was conducted through Drill-Pipe with Slim-VSI configuration. The survey interval was from 2300 m MD to 1280 m MD). This report combined two runs.

Data Acquisition

A parallel cluster air gun (2 x 150 cu. Inch G-Gun) was deployed at fixed 25 m offset from the well head with an azimuth of 29 deg. The guns were submerged from a buoy to 5.4 meters below water surface. 2 hydrophones were deployed 5 meters below the center of the gun cluster. The detail of the source set-up is explained in the source information page.

The cluster gun was auto tuned using TGS-8 gun controller during the survey.

QC shots were acquired at 1998.7 m MD and 1325.5 m MD while RIH. A minimum good 5 shots were recorded for each VSP level.

GR log was recorded simultaneously during the survey. Depth offset was within 1.0 m comparing with reference log (LWD GeoVision 01 March 2008).

Data Quality

Overall data quality is good. Good data quality of run 1 was obtained till very shallow depth (70 m MD) The data from run 2 (through drill-pipe) has high frequency (120 Hz) harmonic noise in some intervals. Ringing noise is observed dominantly above 1700 m MD, where the drill-pipe has less coupling to the borehole in less deviated section. Transit time discrepancy between two runs was observed within 2 msec.

Transit Time Measurement

The measured transit time corresponds to a difference between the surface reference time and arrivals recorded by the downhole sensors. The surface reference time is the Hydrophone signal deployed with the air gun. First break picking algorithms were applied on the transformed geophone data using an inflection point tangent algorithm.

Transit Time Correction to Datum

The correction of the survey geometry and a static shift were applied to the stack data in order to obtain vertical travel time using simple straight path method. The downhole receiver positions are corrected using well directional survey. A surface velocity of 1524 m/sec was used for static correction. No Tide correction was applied in this report.

Depth correction +0.9 m in Run 1 and -0.4 m in Run5 were made. Additionally correction of receiver spacing (15.12 m to 15.24 m) was applied to each receiver depth in this report as well as the digital data (SEG-Y and LDF).

Quick VSP processing is provided in this report for QC purpose.

Well Information

Company	**Apache Northwest Pty Ltd**
Well	**Wasabi-1**
Field	**Apache/VIC/P-58/Wasabi-1**
Country	Australia
State	Victoria
Logging Date	2-Mar-08
Run Number	1,5
Service Order	AUSL08349210
Well Head (Latitude)	38 29' 18.157" S
Well Head (Longitude)	147 15' 49.147" E
Well Head (X Coordinate)	E 522993.588 m
Well Head (Y Coordinate)	N 5739963.350 m
Total Depth - Driller	2313m
Total Depth - Logger	Not Tagged
Maximum Hole Deviation	48 deg
Azimuth of Maximum Deviation	320.7 deg
Program Version	15C0-309
Bit Size	12.25"
Recorded by	K. Barhi/A. Dandi/M. Dawson
Witnessed by	A. Cruickshank/ H. Little

Elevation Information

Permanent Datum	AHD
Elevation Permanent Datum	0.0 m
Above Permanent Datum	39.0 m
Drilling Measured From	Drill Floor
Derrick Floor	39.0 m
Ground Level	-27.0 m
Kelly Bush	39
Log Measured From	Drill Floor
Elevation Log Zero	39.0 m

Depth Corrected Information

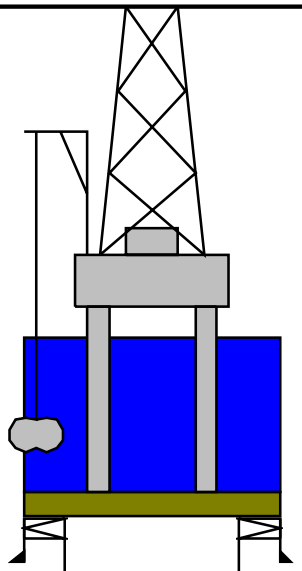
Water Velocity	1524.0 m/s
Seismic Reference Datum	0.0 m

Remarks

Log Correlated to MWD Log Dated 1.Mar.2008, Wasabi.1 GEOVISION Resistivity RM 200.
Maximum Recorded Temperature was 59 degC taken from thermometers in Logging Head.
Tools got hold up @ 1390m MD. Client decided to start the survey from 1390m to surface.
Additional mud properties taken from Mud Report dated 1.Mar.2008:
Chlorides = 49,000 mg/L.
KCL = 10 (% by Wt.), Barite = 4.4 %.

Client: Apache Northwest Pty Ltd
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
State: Victoria
Country: Australia

Rig Name: West Triton
Reference Datum: AHD
Elevation: 39.0 m

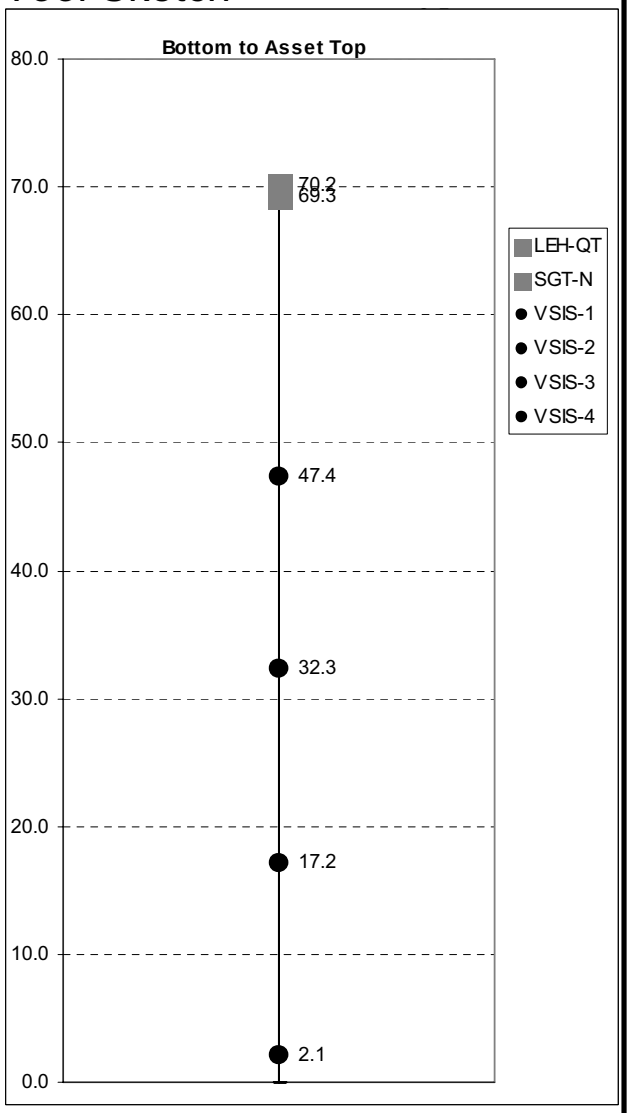
Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
Seismic Gun depth below MSL			5.4					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe
					857.0	13.375		Casing Shoe
					857.0	12.250		Borehole Segment
All depths are driller's depths.					2313.0	12.250		Borehole Segment Bottom

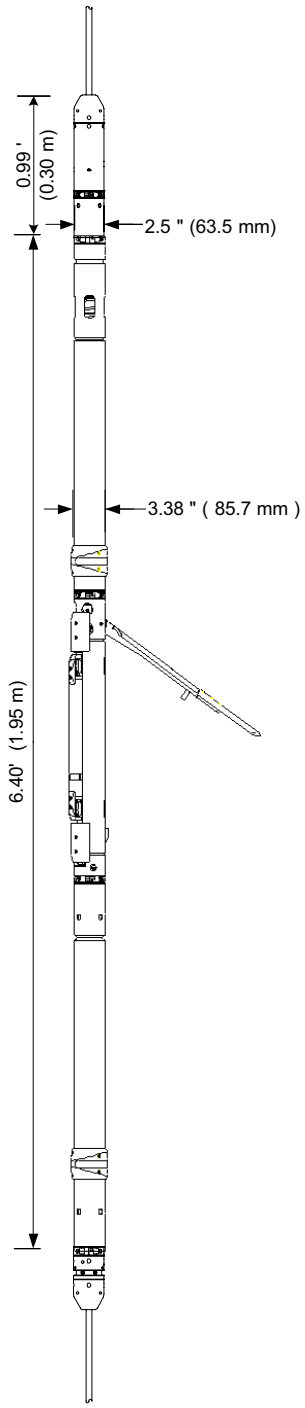
Well Inclinometry List

Measured Depth (m)	Inclination (deg.)	Azimuth (deg.)	True Vertical Depth (m)
0.00	0.00	0.00	0.00
115.45	0.14	336.08	115.45
142.86	0.18	296.21	142.86
170.39	0.09	303.79	170.39
201.95	0.09	130.71	201.95
229.75	0.10	88.12	229.75
494.63	0.28	191.25	494.63
553.43	0.48	178.29	553.43
700.75	0.84	171.77	700.74
759.92	0.78	172.15	759.90
789.17	0.56	166.34	789.15
818.74	0.38	176.04	818.72
886.60	0.20	232.91	886.58
1034.55	0.55	198.33	1034.52
1180.90	0.38	233.51	1180.87
1239.98	3.38	334.13	1239.92
1270.01	6.32	334.23	1269.83
1298.75	8.02	326.45	1298.35
1328.72	8.15	333.60	1328.02
1358.00	9.08	336.28	1356.97
1388.32	11.22	337.32	1386.82
1447.39	16.50	340.87	1444.15
1476.79	18.71	341.36	1472.17
1506.00	21.47	336.96	1499.60
1535.79	23.81	336.52	1527.09
1564.88	26.29	336.35	1553.44
1594.25	28.63	333.72	1579.50
1624.03	29.21	334.37	1605.57
1653.53	29.76	330.72	1631.25
1683.37	30.78	329.89	1657.02
1712.48	31.44	331.04	1681.95
1741.60	32.10	330.46	1706.70
1770.76	32.52	328.16	1731.35
1801.91	32.89	325.39	1757.56
1831.13	34.60	326.01	1781.86
1860.48	34.24	324.51	1806.07
1890.59	34.34	324.56	1830.95
1919.28	39.56	321.67	1853.87
1948.88	41.97	319.68	1876.29
1978.21	44.07	317.65	1897.73
2008.18	45.45	317.25	1919.01
2037.55	46.14	317.73	1939.49
2066.69	46.95	318.03	1959.53
2096.38	47.60	318.28	1979.67
2125.42	47.49	318.95	1999.28
2155.49	47.85	318.70	2019.53
2185.00	47.98	319.61	2039.30
2214.22	48.00	319.92	2058.86
2230.00	48.04	320.29	2069.41
2243.21	48.08	320.67	2078.24
2272.78	47.76	323.36	2098.06
2313.00	48.00	323.50	2125.04

Tool Sketch

	meter
LEH-QT	0.89
EDTC-B	1.98
AH199	0.31
VSPC-BA	3.22
VSCC-BB	3.18
VSII-1	13.17
VSIS-1	1.95
VSII-2	13.17
VSIS-2	1.95
VSII-3	13.17
VSIS-3	1.95
VSII-4	13.17
VSIS-4	1.95
VSIA	0.10
TOTAL	**70.16**





Downhole Equipment Information

Tool Type	VSIT-G
Surface Equipment	WASM-AB 912 , TGS-8
Combined Tool	EDTC-B, EDTH-B 8378
Number of Shuttles	4
Nominal Receiver Spacing	15.24 m
Gimbaled (Y/N)	No
Downhole Geophone Type	GAC-D 3-axis orthogonal
Sensitivity	0.5 V/G 3%
Natural Frequency	20 Hz
Damping Factor	N/A
DC Resistance	1500 Ohms 3% @25 degC
Measurement Specification	
Dynamic range	> 105 dB at 36 dB
Distortion	< -90 dB
Analog Low-Cut filter	0.3 Hz, -6 dB/Oct
Digital Low-Cut filter	None
DC Offset removal	Averaging by surface software
Digital High-Cut filter	Linear phase at down hole
Pass band ripple	+- 0.01 dB
Stop band attenuation	< -130 dB
Bandwidth	80% of Nyquist frequency
Test Signal harmonic distortion	< -110 dB
Tool SN	
VSPC-G	ENP 08
VSCC-G	ENP 08
VSII-G	ENP 100
Receiver #1 (VSIS-G)	ENP 94
VSII-G	ENP 93
Receiver #2 (VSIS-G)	ENP 87
VSII-G	ENP 96
Receiver #3 (VSIS-G)	ENP 96
VSII-G	ENP 98
Receiver #4 (VSIS-G)	ENP 95
VSIA	ENP 19

Operation Time Summary

DATE	Time Start	Time Taken Hr : min	OPERATION
Run 1			**ZVSP in OH**
02-Mar-08	0:10	0:35	JSA and waiting for Rig Floor to be cleared for Rig Up
	0:45	0:40	Rig Up
	1:25	0:03	Surface Check
	1:28	0:47	RIH
	2:15	0:10	QC Shot @ 791.9m
	2:25	0:28	RIH
	2:53	0:22	Tool hold up @ 1393m bottom shuttle depth
	3:15	0:14	Log up for correlation
	3:29	0:09	RIH
	3:38	3:36	Start 1st shot @ 1385.5m
	7:14	0:16	POOH
	7:30	0:17	Finish lay down tool string
	7:47	0:00	Waiting on client decision, preparation for next run
Run 2			**ZVSP Through Drill Pipe**
05-Mar-08	10:45	0:14	JSA
	11:00	2:15	Rig Up Sheave Wheels
	1:15	0:30	Start picking up tools
	1:45	0:42	Pass logging head through ball valve, and move drill pipe
	2:28	0:26	RIH
	2:55	0:03	Moving drill pipe @ 536m
	2:58	0:22	RIH/ Guns deployed in water
	3:21	0:03	Moving drill pipe @ 1043m
	3:25	0:22	RIH
	3:48	0:02	Moving drill pipe @ 1325.5m
	3:50	0:11	Start QC shot @ 1325.5m
	4:01	0:15	RIH
	4:17	0:02	Moving drill pipe @ 1698.5m
	4:20	0:18	RIH
	4:38	0:06	QC Shot @ 1998.7m
	4:45	0:02	Moving drill pipe @ 1998.7m
	4:47	0:14	RIH
	5:02	3:16	Logger @ bottom, Start VSP survey
	8:19	0:56	POOH
	9:15	0:54	Rig Down
	10:10		Rig down completed, well released
		18:50	**HRS –TOTAL OPERATING TIME**

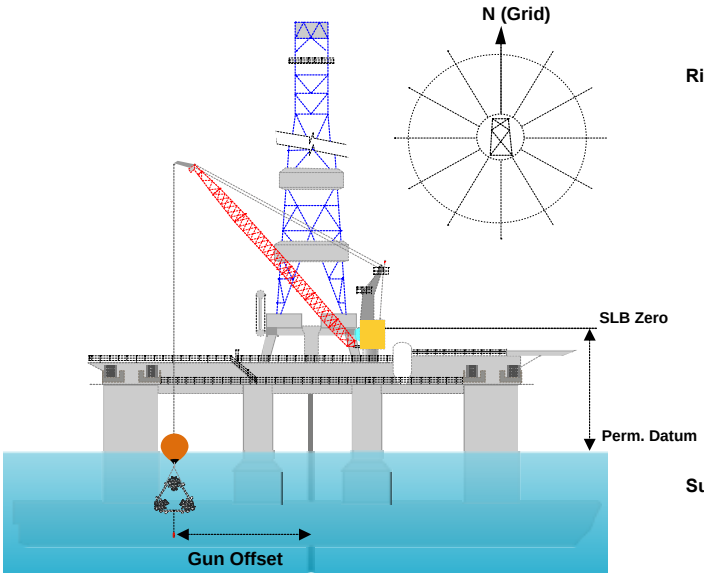
Borehole Seismic Source Information

Engineer: B. Taylor/ K. Barhi/ A. Dandi/ M. Dawson
Well Name: Wasabi-1 **Date:** 02-Mar-2008
Rig: West Triton

<Geometrical Coordinates> **Longitude:** 147 15' 49.146" E **Latitude:** 38 29' 18.157" S
<UTM Coordinates> **Easting:** 522993.588 E **Northing:** 5379963.359 S

Permanent Datum: MSL
Log Measured From: DF **Elev.** 39.0 **Unit :** m

SRD (Seismic Reference Datum): MSL **Elev.** 0.0 **from SLB zero:** 39.0 (SRDS)
Water Depth: 27.0



RIG Heading: 119.8 deg
Rig Crane used: ☑ Port side ☐ Starboard side
Rig Crane azimuth (from Rig Heading): 135.0 deg

Gun Azimuth (Grid North): 29.0 deg (GAZI)

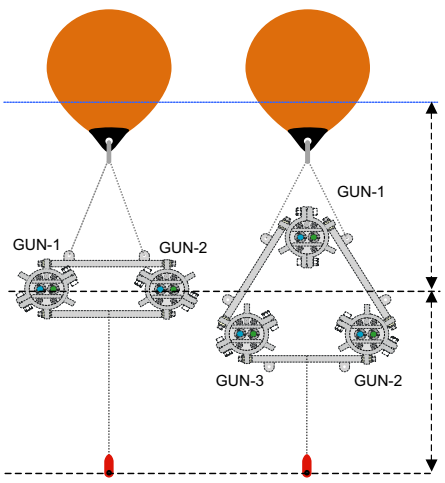
Hy1 Azimuth (Grid North): 29.0 deg
Hy2 Azimuth (Grid North): 29.0 deg
Hy3 Azimuth (Grid North): deg

Gun Offset: 25.0 (GOFF)

Hydrophone-1 Offset: 25.0
Hydrophone-2 Offset: 25.0
Hydrophone-3 Offset:

Surface Velocity: 1524 m/s (SVEL)

Cluster Gun Type:
☑ WSGC-P90 ☐ WSGC-T90



Gun Type:
☑ WSG-G150 (G-Gun 150cu.inch)
☐ WSG-G250 (G-Gun 250cu.inch)

GUN-1 sn: 54537
GUN-2 sn: 54530
GUN-3 sn: 000000

Gun Depth from Local Tide 5.4 **Gun Depth from SLB** 44.4 (GDSZ)

Hydrophone 1 Type: MP-24L3 (10Hz)
Hydrophone 2 Type: MP-24L3 (10Hz)
Hydrophone 3 Type: none

Hy 1 Depth from Gun	Hy 1 Depth from LT	Hy 1 Depth from SLB zero
5.0	10.4	49.4
Hy 2 Depth from Gun	**Hy 2 Depth from LT**	**Hy 2 Depth from SLB zero**
5.0	10.4	49.4
Hy 3 Depth from Gun	**Hy 3 Depth from LT**	**Hy 3 Depth from SLB zero**

Air Gun Firing Pressure: 1800 psi **Accumulator Pressure (Inlet pressure):** 2400 psi
Source of Air supply: Rig Supply
Air Controller (Regulator) Type: WAP-SS01 **sn:** 000000

Sea Condition
Sea Condition: calm (rippled) **Wave Height:** 0.0

Tide Table available: ☑ Yes ☐ No

HSE
Safe Distance: 0.0

Observation of Marine Mammals
Marine Mammals sighted in 30 minutes before the survey ☐ Yes ☑ No
Soft-Start implemented: ☑ Yes ☐ No

Borehole Seismic Gun Tuning Information

Surface Sensor Channels / Gun Controller

WSAM (WSI) sn: WSAM:000000 / WSI:000000

	Gun No	TB	Hy No	SSPS
S1 (WSI-SS2)		☐	1	☑
S2 (WSI-SS3)		☐	2	☐
S3 (WSI-SS4)	1	☑		☐
S4 (WSI-SS5)	2	☑		☐
S5 (WSI-SS6)		☐		☐
S6 (WSI-SS7)		☐		☐

TGS-8 sn: RL:000000 SL:000000

	Gun No	TB	Hy No
Ch1	1	☑	
Ch2	2	☑	
Ch3		☐	
Ch4		☐	
Ch5		☐	
Ch6		☐	
Sig			1
Aux1 Sig			
Aux2 Sig			

P1	☐ Depth S.	☐ Pres. S.
P2	☐ Depth S.	☐ Pres. S.
P3	☐ Depth S.	☐ Pres. S.
P4	☐ Depth S.	☐ Pres. S.

Cluster Gun Tuning / Quality Control

Tuning Sensor used
☑ Time Break Sensor
☐ Hydrophone

WSI	Gun No	Gun Delay(ms)
FS1	1	30.0
FS2	2	30.0
FS3		0.0

TGS-8	Gun No	Gun Delay(ms)	Threshold(v)
Ch1	1	0.0	0.5
Ch2	2	0.0	0.5
Ch3		0.0	0.5
Ch4		0.0	0.0
Ch5		0.0	0.0
Ch6		0.0	0.0

ClusterTuning (Break Time of Tuning Sensors)

	FS1 / Ch	FS2 / Ch	FS3 / Ch
Shot-1	0.0	0.0	0.0
Shot-2	0.0	0.0	0.0
Shot-3	0.0	0.0	0.0
Shot-4	0.0	0.0	0.0
Shot-5	0.0	0.0	0.0
Shot-6	0.0	0.0	0.0
Shot-7	0.0	0.0	0.0
Average	0.0	0.0	0.0

Quality Check Surface Signals / Filling Time (air Regulator)

	S1 Time Break / PP	S2 TT(ms) / PP	S3 TT(ms) / PP	S4 TT(ms) / PP	S5 TT(ms) / PP	S6 TT(ms) / PP	Filling Time (sec)
Shot-1	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0
Shot-2	0.0 / 0	0.0 / 0	1.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0
Shot-3	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0
Shot-4	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0
Shot-5	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0.0 / 0	0

Other Logs Information

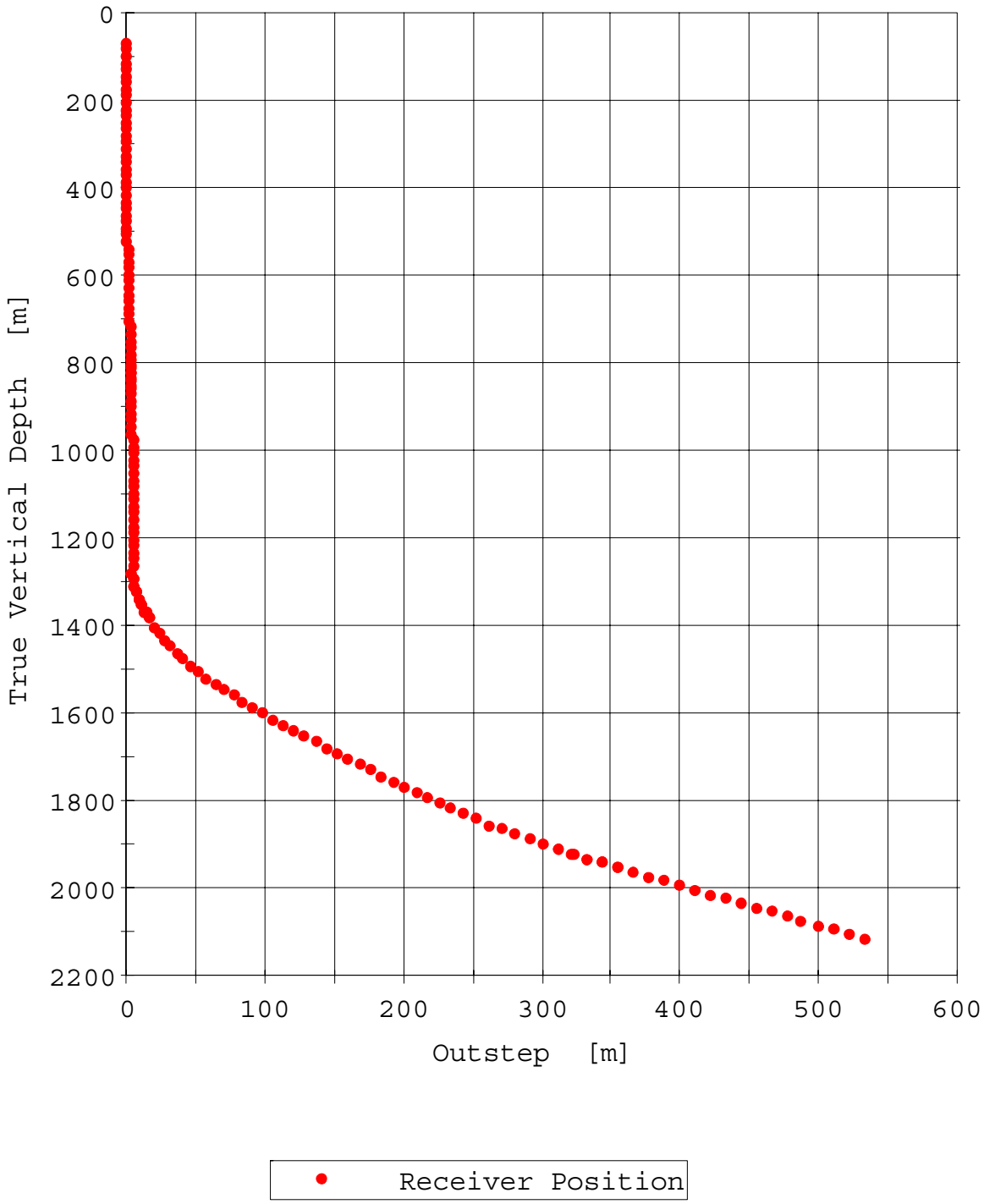
Sonic Log: <service name> **Interval:** **from** 0.0 **to** 0.0 **Date:** dd/mmm/vv
Density Log: <service name> **Interval:** **from** 0.0 **to** 0.0 **Date:** dd/mmm/vv

Remarks

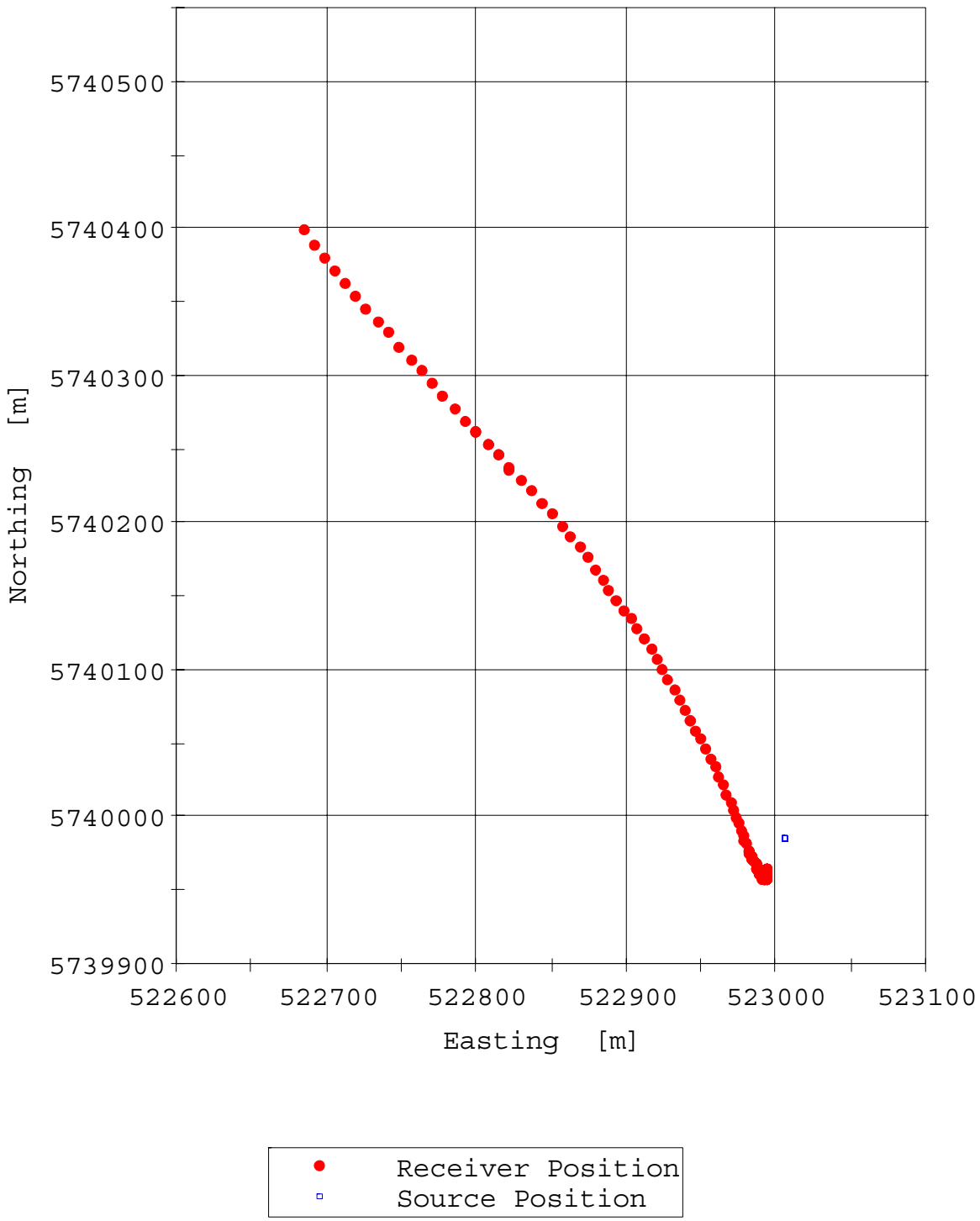
General Information

Survey Type	Zero Offset VSP
Surface Recording Length	1000.0 ms
Suface Sampling Rate	1.00 ms
Downhole Recording Length	5000.0 ms
Downhole Sampling Rate	1.0 ms
Top of Survey	69.8 m
Bottom of Survey	2299.9 m
Number of Shots	230
Number of Downhole Traces	920
Number of Downhole Traces used for Processing	871

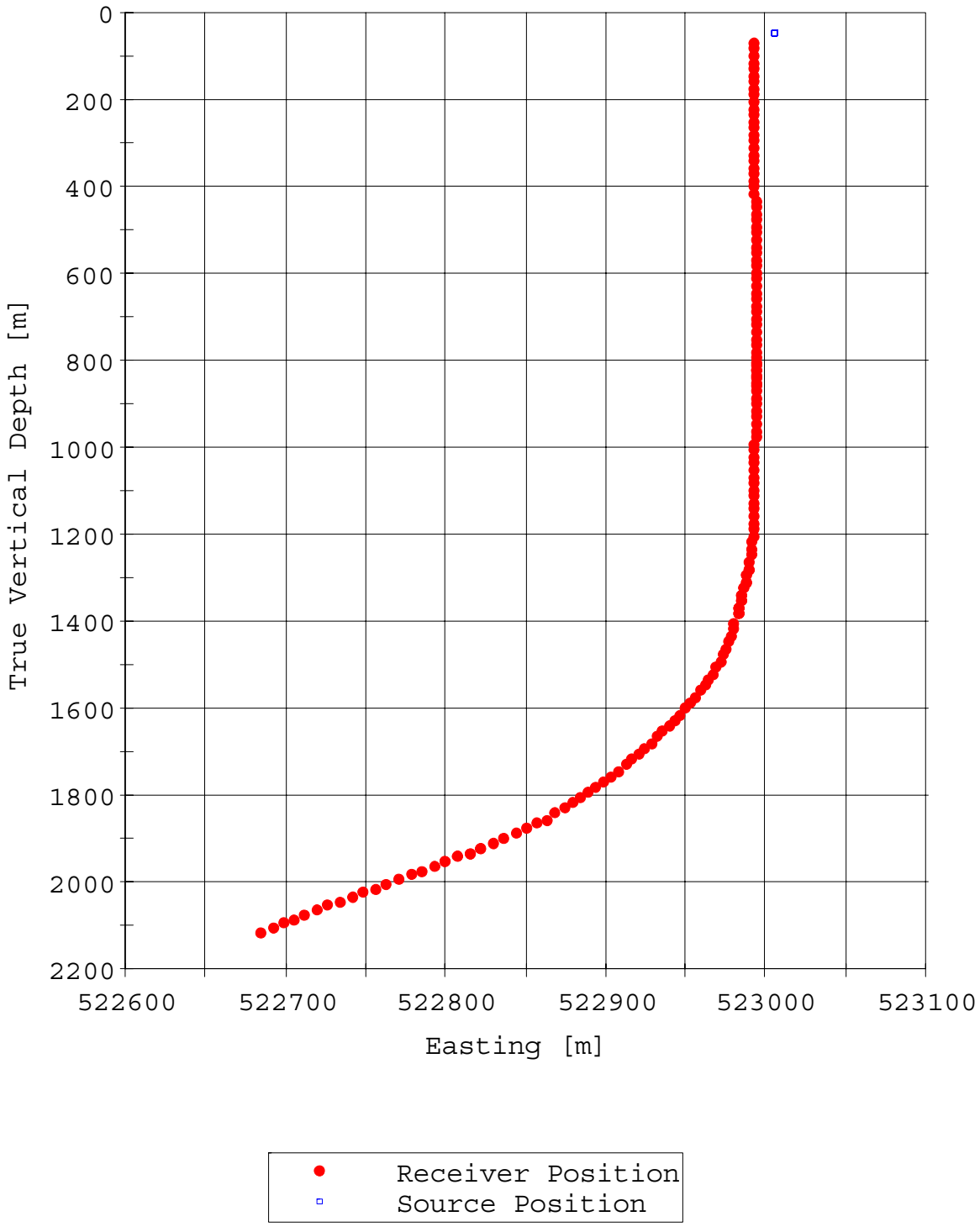
Well Profile



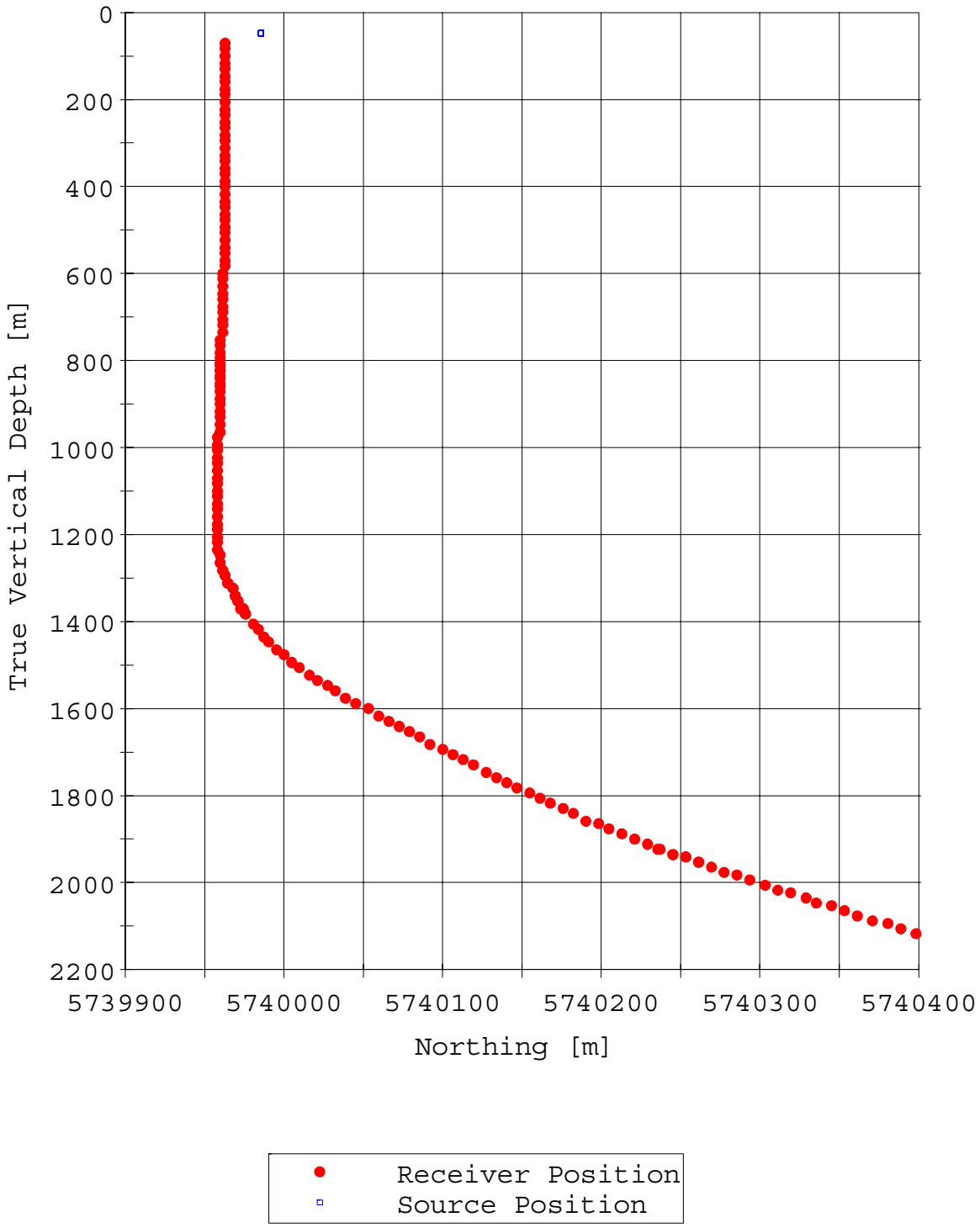
Geometry Infomation (X-Y)



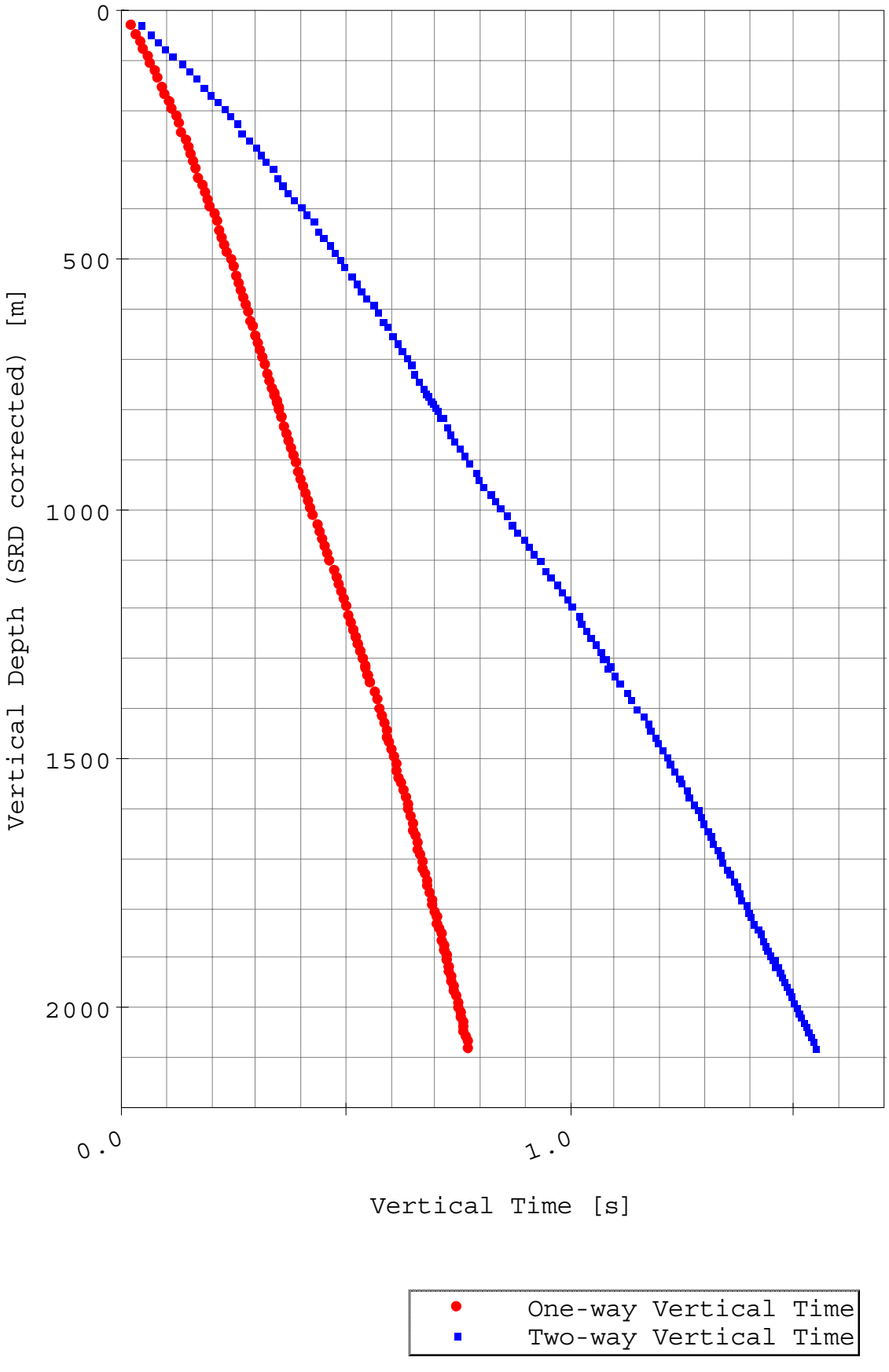
Geometry Infomation (X-Z)



Geometry Infomation (Y-Z)

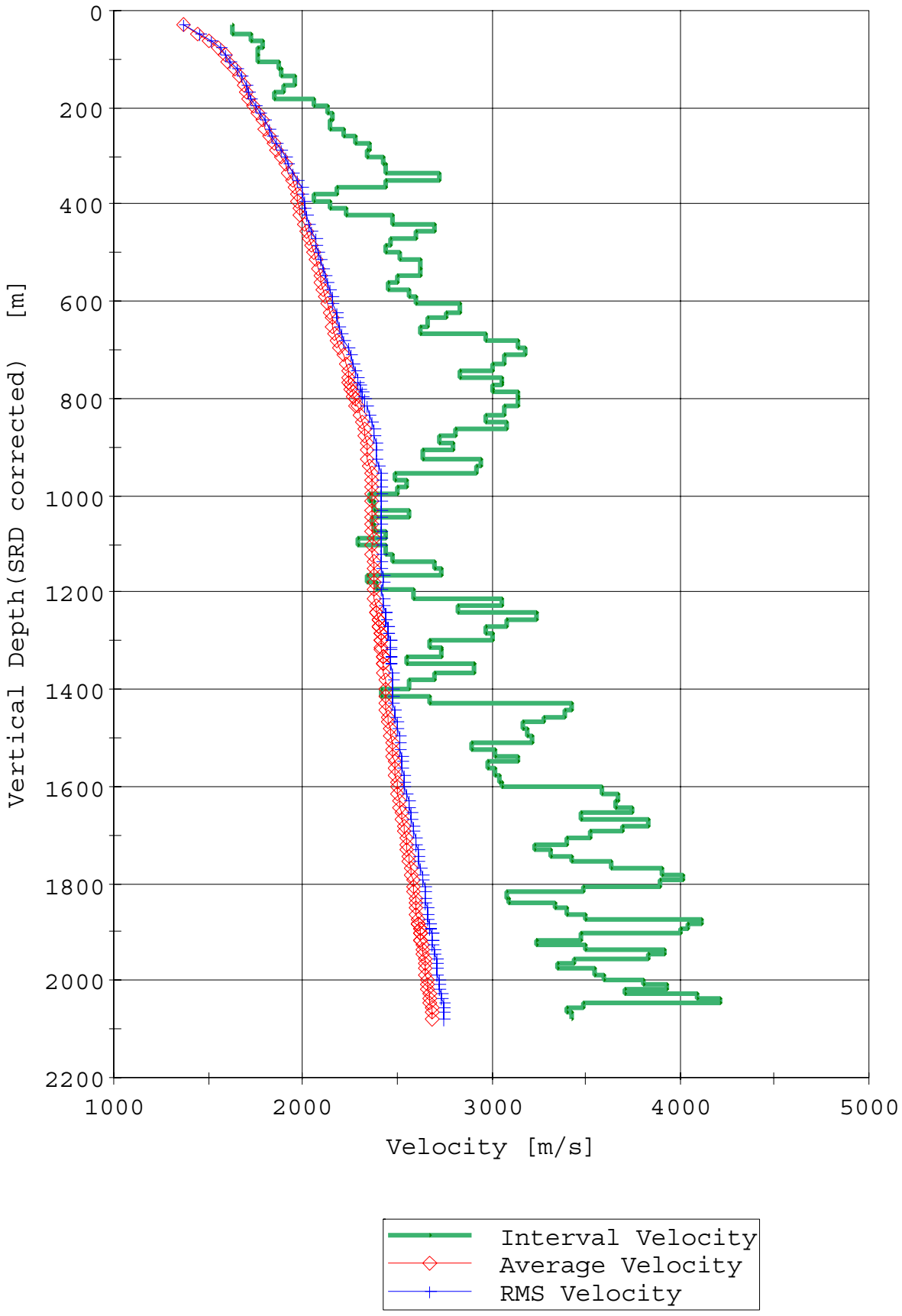


Time Depth Plot



Schlumberger

Velocity Plot Page



Schlumberger

Stack Summary Listing (1/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
	0	0	0	0	0			
						1373.4		
23	69.5	30.5	0.0264	0.0222	0.0445		1373.4	1373.4
						1626.0		
23	84.8	45.8	0.0331	0.0316	0.0632		1448.3	1452.9
						1723.4		
23	100.0	61.0	0.0405	0.0404	0.0809		1508.4	1516.2
						1782.8		
23	115.3	76.3	0.0482	0.0490	0.0980		1556.3	1566.0
						1768.1		
22	129.1	90.1	0.0556	0.0568	0.1136		1585.4	1595.3
						1764.2		
22	144.3	105.3	0.0638	0.0654	0.1309		1609.0	1618.6
						1871.1		
22	159.5	120.5	0.0717	0.0736	0.1472		1638.0	1648.4
						1890.8		
22	174.8	135.8	0.0796	0.0816	0.1633		1663.0	1673.9
						1962.8		
21	190.7	151.7	0.0875	0.0898	0.1795		1690.1	1702.0
						1899.3		
21	205.9	166.9	0.0954	0.0978	0.1956		1707.2	1719.1
						1853.5		
21	221.2	182.2	0.1035	0.1060	0.2120		1718.6	1729.9
						2064.4		
21	236.4	197.4	0.1108	0.1134	0.2268		1741.1	1753.6
						2126.5		
20	251.2	212.2	0.1177	0.1203	0.2407		1763.4	1777.3
						2155.2		
20	266.4	227.4	0.1247	0.1274	0.2548		1785.1	1800.3
						2143.5		
20	281.7	242.7	0.1317	0.1345	0.2690		1804.0	1820.1
						2217.6		
20	296.9	257.9	0.1385	0.1414	0.2828		1824.1	1841.4
						2279.8		
19	311.7	272.7	0.1450	0.1479	0.2958		1844.2	1862.8
						2349.3		
19	327.0	288.0	0.1514	0.1544	0.3087		1865.4	1885.8
						2341.2		
19	342.2	303.2	0.1579	0.1609	0.3218		1884.6	1906.3
						2433.3		
19	357.4	318.4	0.1641	0.1671	0.3343		1905.2	1928.7
						2442.5		
18	372.1	333.1	0.1701	0.1732	0.3463		1923.9	1948.8
						2720.7		
18	387.4	348.4	0.1757	0.1788	0.3575		1948.8	1977.6
						2436.5		
18	402.6	363.6	0.1819	0.1850	0.3700		1965.3	1994.8
						2180.8		
18	417.9	378.9	0.1889	0.1920	0.3840		1973.2	2001.9
						2057.3		
17	432.7	393.7	0.1961	0.1992	0.3984		1976.2	2003.9
						2143.7		
17	447.9	408.9	0.2032	0.2063	0.4126		1982.0	2008.9
						2226.5		
17	463.1	424.1	0.2100	0.2131	0.4263		1989.8	2016.2
						2475.9		
17	478.4	439.4	0.2161	0.2193	0.4386		2003.5	2030.6
						2698.8		
16	493.2	454.2	0.2216	0.2248	0.4496		2020.4	2049.5
						2600.1		
16	508.4	469.4	0.2274	0.2307	0.4613		2035.2	2065.3
						2469.9		
16	523.7	484.7	0.2336	0.2368	0.4736		2046.5	2076.8
						2438.9		

Stack Summary Listing (2/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
16	538.9	499.9	0.2399	0.2431	0.4861		2056.6	2086.9
						2519.3		
15	553.6	514.5	0.2457	0.2489	0.4978		2067.4	2098.0
						2620.0		
15	568.8	529.8	0.2515	0.2547	0.5094		2080.0	2111.4
						2619.4		
15	584.0	545.0	0.2573	0.2605	0.5210		2092.1	2124.1
						2505.8		
15	599.3	560.3	0.2634	0.2666	0.5332		2101.5	2133.5
						2453.0		
14	614.1	575.1	0.2694	0.2726	0.5453		2109.3	2141.1
						2568.4		
14	629.3	590.3	0.2753	0.2786	0.5571		2119.1	2151.1
						2598.3		
14	644.6	605.5	0.2812	0.2844	0.5689		2128.9	2161.3
						2836.9		
14	659.8	620.8	0.2865	0.2898	0.5796		2142.1	2175.7
						2761.3		
13	673.8	634.7	0.2916	0.2949	0.5897		2152.7	2187.1
						2660.2		
13	689.0	650.0	0.2973	0.3006	0.6012		2162.4	2197.0
						2628.0		
13	704.2	665.2	0.3031	0.3064	0.6128		2171.2	2206.0
						2973.6		
13	719.5	680.5	0.3082	0.3115	0.6230		2184.4	2220.7
						3141.0		
12	734.9	695.9	0.3131	0.3164	0.6329		2199.3	2238.0
						3173.8		
12	750.2	711.2	0.3179	0.3212	0.6425		2213.8	2254.8
						3068.2		
12	765.4	726.4	0.3229	0.3262	0.6524		2226.8	2269.4
						3000.4		
12	780.7	741.6	0.3280	0.3313	0.6626		2238.7	2282.4
						2832.4		
11	795.5	756.5	0.3332	0.3365	0.6730		2247.9	2291.9
						3054.1		
1	805.8	766.7	0.3363	0.3396	0.6791		2247.9	2291.9
						3054.1		
11	810.7	771.7	0.3382	0.3415	0.6830		2259.7	2304.9
						3002.0		
1	821.0	782.0	0.3412	0.3445	0.6891		2259.7	2304.9
						3002.0		
11	826.0	786.9	0.3433	0.3466	0.6932		2270.6	2316.6
						3140.1		
1	836.2	797.2	0.3462	0.3495	0.6991		2270.6	2316.6
						3140.1		
11	841.2	802.2	0.3481	0.3514	0.7029		2282.6	2329.9
						3143.1		
1	851.5	812.5	0.3511	0.3545	0.7089		2282.6	2329.9
						3143.1		
10	856.1	817.1	0.3528	0.3562	0.7123		2294.0	2342.6
						3072.9		
10	871.3	832.3	0.3578	0.3611	0.7223		2304.7	2354.2
						2965.5		
10	886.6	847.5	0.3629	0.3663	0.7325		2314.0	2363.8
						3083.4		
10	901.8	862.8	0.3679	0.3712	0.7424		2324.2	2374.9
						2806.0		
9	916.5	877.5	0.3731	0.3764	0.7529		2330.9	2381.4
						2718.0		
9	931.7	892.7	0.3787	0.3821	0.7641		2336.6	2386.7
						2797.6		
9	947.0	907.9	0.3842	0.3875	0.7750		2343.1	2392.9
						2630.9		

Stack Summary Listing (3/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
9	962.2	923.2	0.3900	0.3933	0.7866		2347.3	2396.6
						2943.8		
8	977.0	937.9	0.3950	0.3983	0.7966		2354.8	2404.3
						2920.3		
8	992.2	953.2	0.4002	0.4035	0.8070		2362.1	2411.6
						2483.4		
8	1007.4	968.4	0.4063	0.4097	0.8193		2364.0	2412.7
						2554.1		
8	1022.7	983.7	0.4123	0.4156	0.8312		2366.7	2414.8
						2500.1		
7	1037.5	998.5	0.4182	0.4216	0.8431		2368.6	2416.0
						2356.8		
7	1052.7	1013.7	0.4247	0.4280	0.8560		2368.4	2415.2
						2383.7		
7	1068.0	1028.9	0.4311	0.4344	0.8688		2368.6	2414.7
						2565.3		
7	1083.2	1044.2	0.4370	0.4404	0.8807		2371.3	2416.8
						2370.1		
6	1097.8	1058.8	0.4432	0.4465	0.8930		2371.2	2416.2
						2379.7		
6	1113.1	1074.0	0.4496	0.4529	0.9058		2371.4	2415.6
						2444.3		
6	1128.3	1089.3	0.4558	0.4592	0.9183		2372.4	2416.0
						2289.5		
6	1143.5	1104.5	0.4624	0.4658	0.9316		2371.2	2414.3
						2436.0		
5	1158.2	1119.2	0.4685	0.4718	0.9437		2372.0	2414.6
						2476.7		
5	1173.5	1134.4	0.4746	0.4780	0.9560		2373.4	2415.4
						2696.3		
5	1188.7	1149.7	0.4803	0.4836	0.9673		2377.1	2418.8
						2731.5		
5	1203.9	1164.9	0.4858	0.4892	0.9784		2381.2	2422.6
						2346.9		
4	1218.9	1179.9	0.4922	0.4956	0.9912		2380.7	2421.7
						2396.6		
4	1234.2	1195.1	0.4986	0.5019	1.0039		2380.9	2421.3
						2582.5		
4	1249.4	1210.3	0.5044	0.5078	1.0157		2383.3	2423.3
						3055.1		
4	1264.6	1225.5	0.5094	0.5128	1.0256		2389.8	2430.2
						2826.0		
3	1279.5	1240.3	0.5146	0.5180	1.0361		2394.2	2434.5
						3244.6		
173	1280.7	1241.4	0.5135	0.5169	1.0338		2394.2	2434.5
						3244.6		
3	1294.8	1255.4	0.5193	0.5227	1.0454		2401.8	2442.9
						3078.6		
173	1295.9	1256.5	0.5185	0.5219	1.0438		2401.8	2442.9
						3078.6		
3	1310.0	1270.5	0.5242	0.5276	1.0552		2408.0	2449.6
						2970.0		
173	1311.2	1271.6	0.5233	0.5267	1.0535		2408.0	2449.6
						2970.0		
3	1325.2	1285.6	0.5292	0.5327	1.0654		2413.4	2455.1
						3003.3		
173	1326.4	1286.7	0.5288	0.5322	1.0644		2413.4	2455.1
						3003.3		
2	1339.9	1300.1	0.5341	0.5375	1.0750		2418.7	2460.5
						2676.2		
172	1341.2	1301.3	0.5335	0.5369	1.0738		2418.7	2460.5
						2676.2		
2	1355.1	1315.1	0.5397	0.5431	1.0863		2421.4	2462.9
						2739.4		

Stack Summary Listing (4/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
172	1356.4	1316.4	0.5387	0.5421	1.0843		2421.4	2462.9
						2739.4		
2	1370.4	1330.1	0.5452	0.5486	1.0972		2424.5	2465.8
						2555.1		
172	1371.6	1331.4	0.5448	0.5483	1.0965		2424.5	2465.8
						2555.1		
2	1385.6	1345.1	0.5510	0.5545	1.1090		2425.9	2466.7
						2909.8		
172	1386.9	1346.4	0.5504	0.5538	1.1077		2425.9	2466.7
						2909.8		
171	1408.9	1367.8	0.5588	0.5623	1.1245		2432.6	2473.4
						2693.1		
171	1424.1	1382.6	0.5643	0.5678	1.1355		2435.1	2475.6
						2565.1		
171	1439.4	1397.4	0.5701	0.5735	1.1470		2436.5	2476.6
						2409.8		
171	1454.6	1412.0	0.5762	0.5796	1.1592		2436.2	2475.9
						2678.6		
170	1469.4	1426.1	0.5815	0.5849	1.1698		2438.4	2477.8
						3424.8		
170	1484.7	1440.6	0.5857	0.5891	1.1782		2445.4	2485.8
						3390.6		
170	1499.9	1454.9	0.5900	0.5933	1.1866		2452.1	2493.4
						3282.4		
170	1515.2	1469.0	0.5943	0.5976	1.1952		2458.1	2500.0
						3171.3		
169	1529.9	1482.7	0.5987	0.6019	1.2038		2463.2	2505.4
						3193.9		
169	1545.2	1496.6	0.6031	0.6063	1.2126		2468.5	2511.0
						3209.4		
169	1560.4	1510.4	0.6075	0.6106	1.2212		2473.7	2516.6
						2892.2		
169	1575.6	1524.0	0.6123	0.6153	1.2306		2476.9	2519.7
						3017.3		
168	1590.3	1537.0	0.6168	0.6196	1.2392		2480.7	2523.5
						3146.4		
168	1605.6	1550.4	0.6211	0.6239	1.2477		2485.2	2528.3
						2976.2		
168	1620.8	1563.7	0.6258	0.6283	1.2567		2488.7	2531.8
						3017.0		
168	1636.1	1577.0	0.6303	0.6327	1.2655		2492.4	2535.5
						3040.7		
167	1650.9	1589.9	0.6347	0.6370	1.2740		2496.0	2539.2
						3049.3		
167	1666.1	1603.1	0.6392	0.6413	1.2826		2499.7	2542.9
						3580.1		
167	1681.3	1616.2	0.6431	0.6450	1.2900		2505.9	2550.1
						3665.8		
167	1696.6	1629.3	0.6469	0.6485	1.2971		2512.3	2557.5
						3659.3		
166	1711.4	1642.0	0.6506	0.6520	1.3040		2518.4	2564.6
						3740.5		
166	1726.6	1654.9	0.6543	0.6555	1.3109		2524.8	2572.2
						3474.8		
166	1741.8	1667.9	0.6582	0.6592	1.3184		2530.2	2578.2
						3828.5		
166	1757.1	1680.8	0.6619	0.6626	1.3251		2536.8	2586.1
						3700.2		
165	1771.9	1693.3	0.6655	0.6659	1.3319		2542.7	2593.0
						3527.1		
165	1787.1	1706.1	0.6694	0.6696	1.3391		2548.0	2599.0
						3403.4		
165	1802.4	1718.9	0.6735	0.6733	1.3467		2552.8	2604.1
						3229.0		

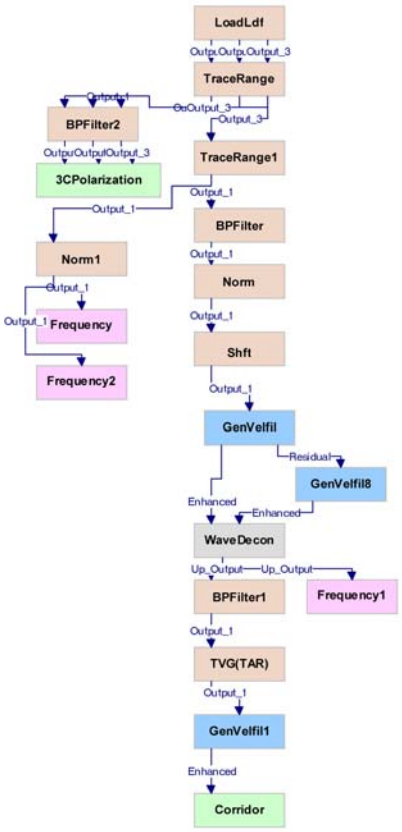
Stack Summary Listing (5/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
165	1817.6	1731.6	0.6777	0.6773	1.3545		2556.7	2608.2
						3310.1		
164	1832.3	1743.8	0.6818	0.6810	1.3619		2560.8	2612.5
						3424.7		
164	1847.6	1756.4	0.6858	0.6846	1.3693		2565.5	2617.5
						3633.5		
164	1862.8	1769.0	0.6896	0.6881	1.3762		2570.8	2623.6
						3909.9		
164	1878.1	1781.6	0.6932	0.6913	1.3826		2577.1	2631.1
						4018.0		
163	1892.8	1793.7	0.6966	0.6943	1.3886		2583.3	2638.7
						3895.6		
163	1908.0	1805.8	0.7001	0.6974	1.3949		2589.2	2645.6
						3489.2		
163	1923.2	1817.9	0.7039	0.7009	1.4018		2593.6	2650.4
						3077.9		
163	1938.5	1829.4	0.7082	0.7046	1.4093		2596.2	2652.9
						3090.3		
162	1953.2	1840.4	0.7122	0.7082	1.4164		2598.7	2655.3
						3340.4		
162	1968.4	1851.6	0.7161	0.7115	1.4231		2602.2	2658.9
						3400.3		
162	1983.7	1862.6	0.7199	0.7148	1.4296		2605.8	2662.7
						3501.1		
162	1998.9	1873.4	0.7236	0.7179	1.4358		2609.6	2666.9
						4116.1		
161	2013.8	1883.9	0.7267	0.7204	1.4409		2615.0	2673.4
						4037.7		
27	2013.9	1883.9	0.7261	0.7198	1.4397		2615.0	2673.4
						4037.7		
161	2029.0	1894.5	0.7299	0.7231	1.4461		2620.2	2679.7
						4001.1		
27	2029.1	1894.6	0.7298	0.7229	1.4459		2620.2	2679.7
						4001.1		
161	2044.3	1905.1	0.7332	0.7257	1.4514		2625.2	2685.6
						3475.4		
27	2044.3	1905.1	0.7343	0.7268	1.4536		2625.2	2685.6
						3475.4		
161	2059.5	1915.6	0.7368	0.7287	1.4574		2628.7	2689.4
						3234.9		
27	2059.6	1915.6	0.7373	0.7292	1.4584		2628.7	2689.4
						3234.9		
160	2074.2	1925.6	0.7406	0.7318	1.4636		2631.3	2691.9
						3492.5		
160	2089.5	1936.0	0.7443	0.7348	1.4696		2634.7	2695.6
						3913.2		
160	2104.7	1946.3	0.7476	0.7374	1.4748		2639.3	2701.0
						3833.6		
160	2119.9	1956.6	0.7510	0.7401	1.4802		2643.6	2705.9
						3435.9		
159	2134.7	1966.5	0.7547	0.7430	1.4860		2646.7	2709.2
						3348.1		
159	2150.0	1976.8	0.7584	0.7461	1.4921		2649.6	2712.1
						3547.7		
159	2165.2	1987.0	0.7621	0.7489	1.4979		2653.1	2715.8
						3596.4		
159	2180.4	1997.2	0.7658	0.7518	1.5036		2656.6	2719.7
						3805.2		
158	2195.1	2007.1	0.7691	0.7544	1.5087		2660.6	2724.1
						3934.7		
158	2210.4	2017.3	0.7725	0.7570	1.5139		2664.9	2729.2
						3712.4		
158	2225.6	2027.4	0.7761	0.7597	1.5194		2668.7	2733.4
						4093.3		

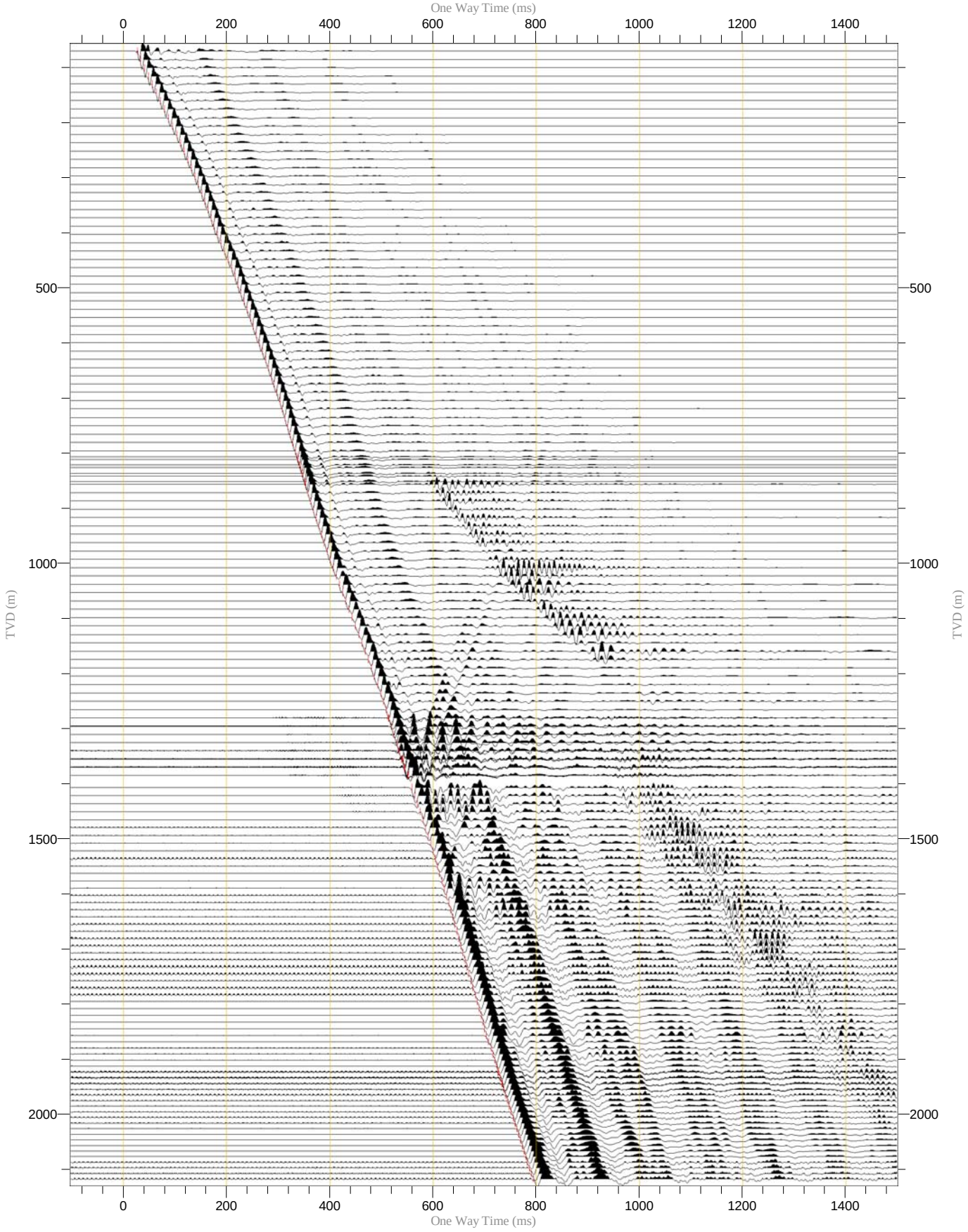
Stack Summary Listing (6/6) from VSI_901_A_geo_wavefield_z.ldf

Stack Number	Measured Depth [m]	True Vertical Depth [m]	Measured Time [s]	One-way Vertical Time [s]	Two-way Vertical Time [s]	Interval Velocity [m/s]	Average Velocity [m/s]	RMS Velocity [m/s]
158	2240.8	2037.6	0.7794	0.7622	1.5244		2673.4	2738.9
						4214.4		
157	2255.6	2047.5	0.7825	0.7645	1.5291		2678.1	2744.6
						3490.7		
157	2270.8	2057.7	0.7863	0.7675	1.5349		2681.2	2747.9
						3394.8		
157	2286.0	2067.9	0.7902	0.7705	1.5409		2684.0	2750.7
						3421.0		
157	2301.3	2078.1	0.7941	0.7735	1.5469		2686.8	2753.6

Field VSP Processing Report

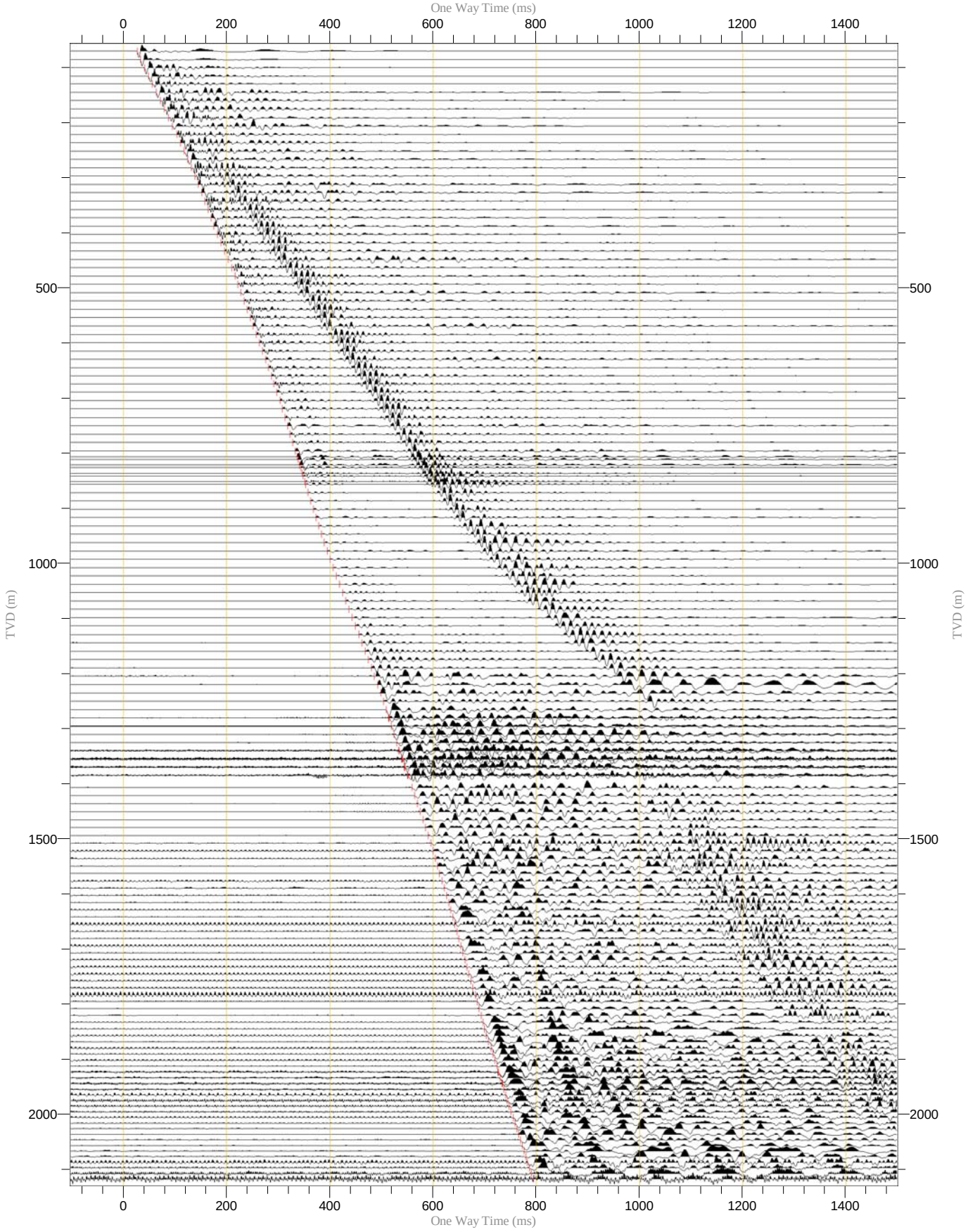
Process Flow	Parameter
	**[LoadLdf]** Input 1: VSI_009_A_geo_wavefield_x.ldf Input 2: VSI_009_A_geo_wavefield_y.ldf Input 3: VSI_009_A_geo_wavefield_z.ldf **[BPFilter2]** Phase: Zero Band Width: 5.0 - 100.0Hz **[Frequency2]** Apply FZ **[BPFilter]** Phase: Zero Band Width: 5.0 - 90.0Hz **[GenVelfil]** 13 Traces **[GenVelfil8]** Median Filter 3 Traces **[WaveDecon]** Waveshape Deconvolution Design Filter trace Input start at TRANSIT_TIME wavelet: 8.0 - 65.0 Hz zero-phase Polarity: Positive **[BPFilter1]** Phase: Zero Band Width: 5.0 - 70.0Hz **[TVG(TAR)]** Travel time exponent = 1.40 **[GenVelfil1]** 7 Traces **[Corridor]** Window Start: TRANSIT_TIME - 0.000 (s) Window End: TRANSIT_TIME - -0.200 (s) (Deepest 5 traces remain) Mean Stack BPF 5.0 - 70.0Hz **[Frequency1]** Apply FK **[Frequency]** Apply FK

Raw Stack (Z)	Normalization Trace by Trace (150%) Polarity Normal One Way Time (ms) Scaling 9.7 cm/sec, 1/9630	



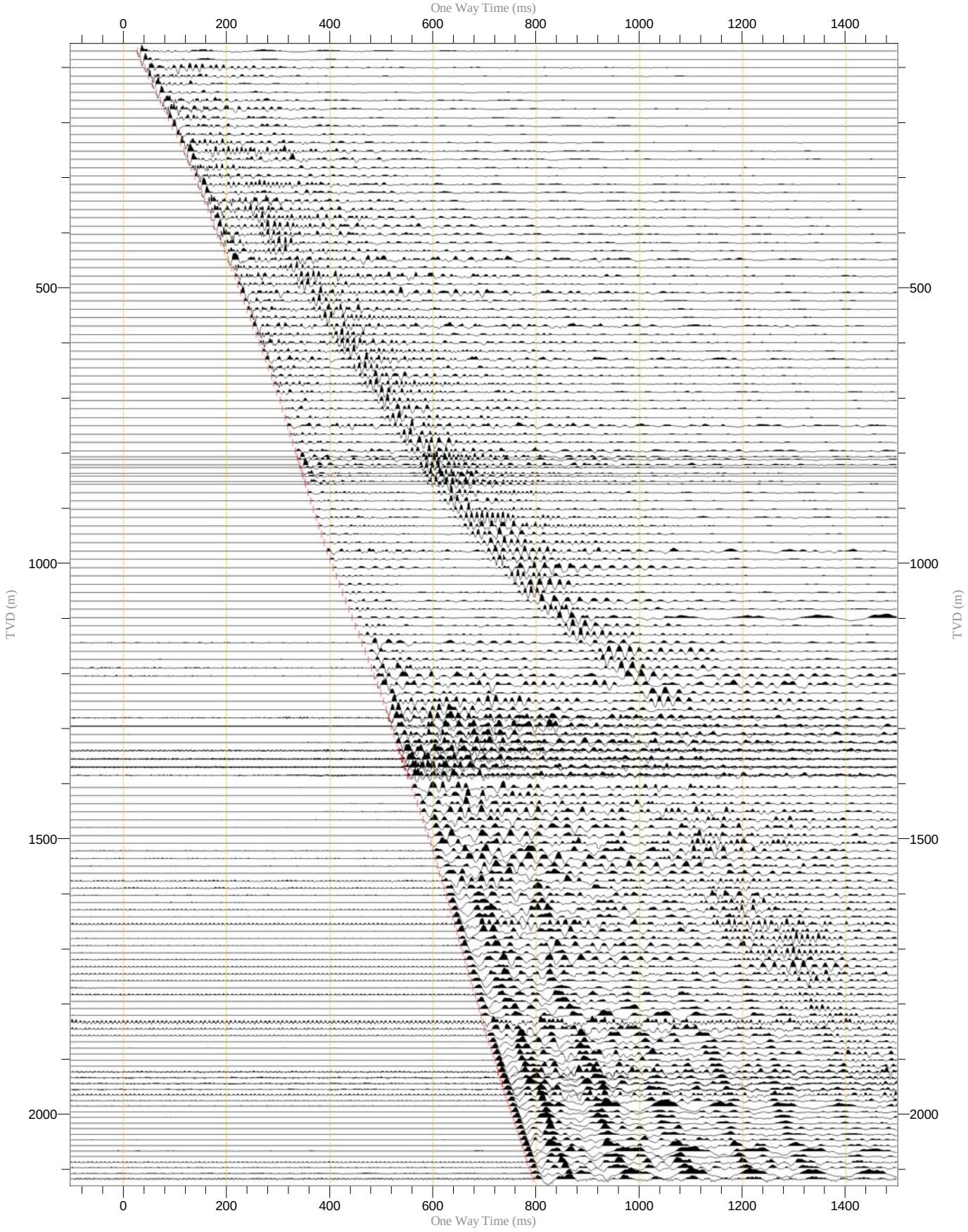
Schlumberger

Raw Stack (X)	Normalization Trace by Trace (100%) Polarity Normal One Way Time (ms) Scaling 9.7 cm/sec, 1/9630	

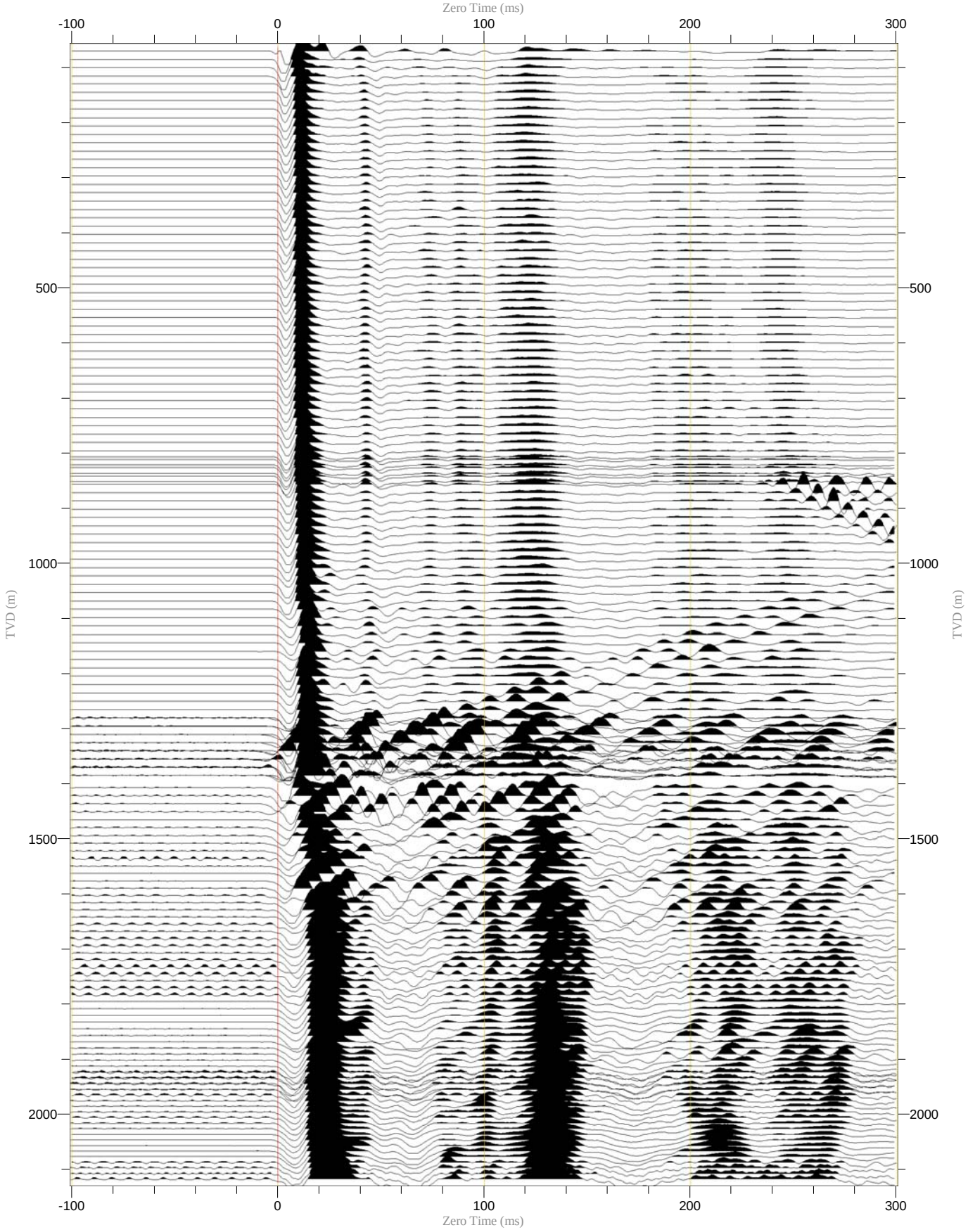


Schlumberger

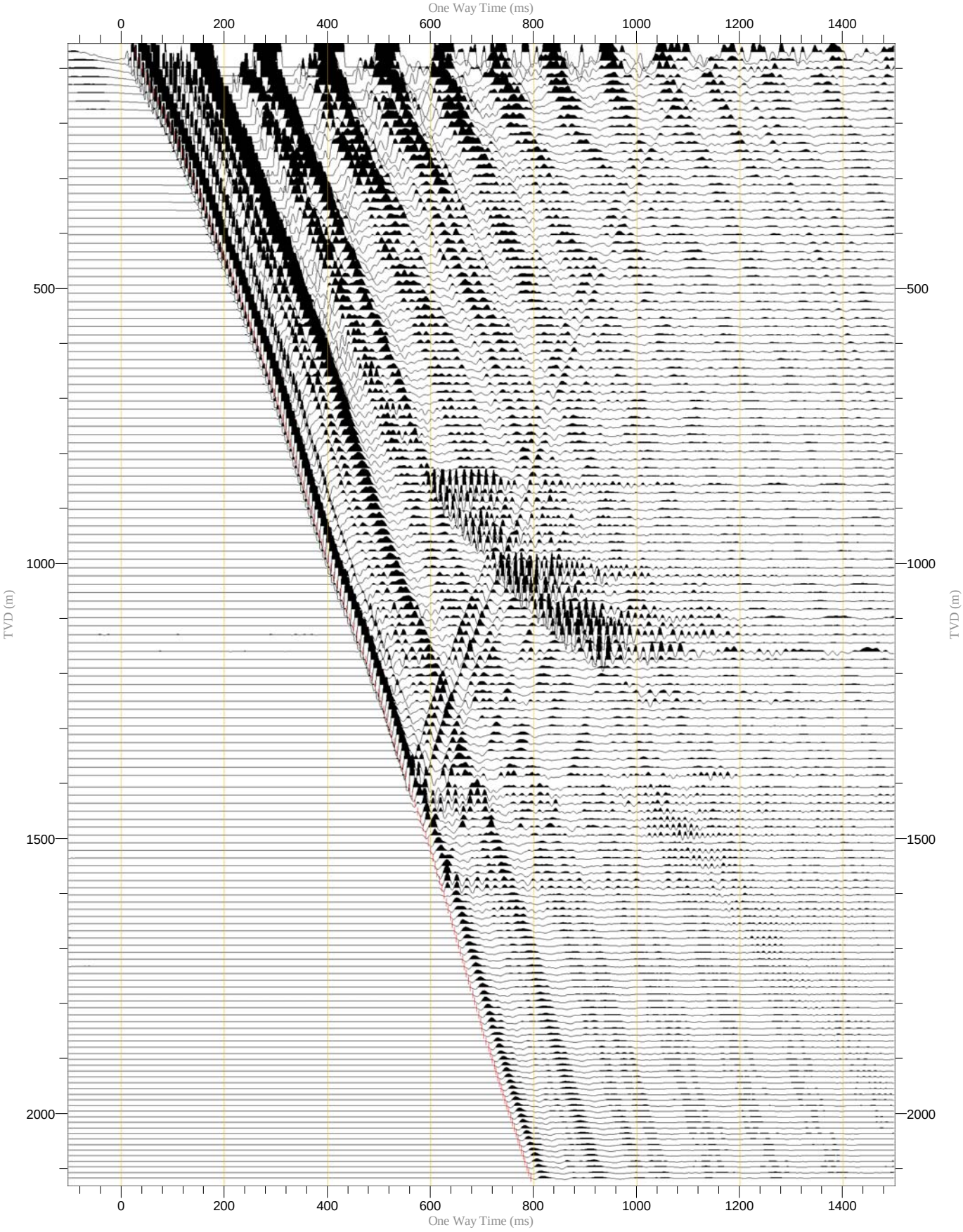
Raw Stack (Y)	Normalization Trace by Trace (100%) Polarity Normal One Way Time (ms) Scaling 9.7 cm/sec, 1/9630	



Raw Stack (Z) (Magnified)	Normalization Trace by Trace (250%) Polarity Normal Zero Time (ms) Scaling 38.8 cm/sec, 1/9630	

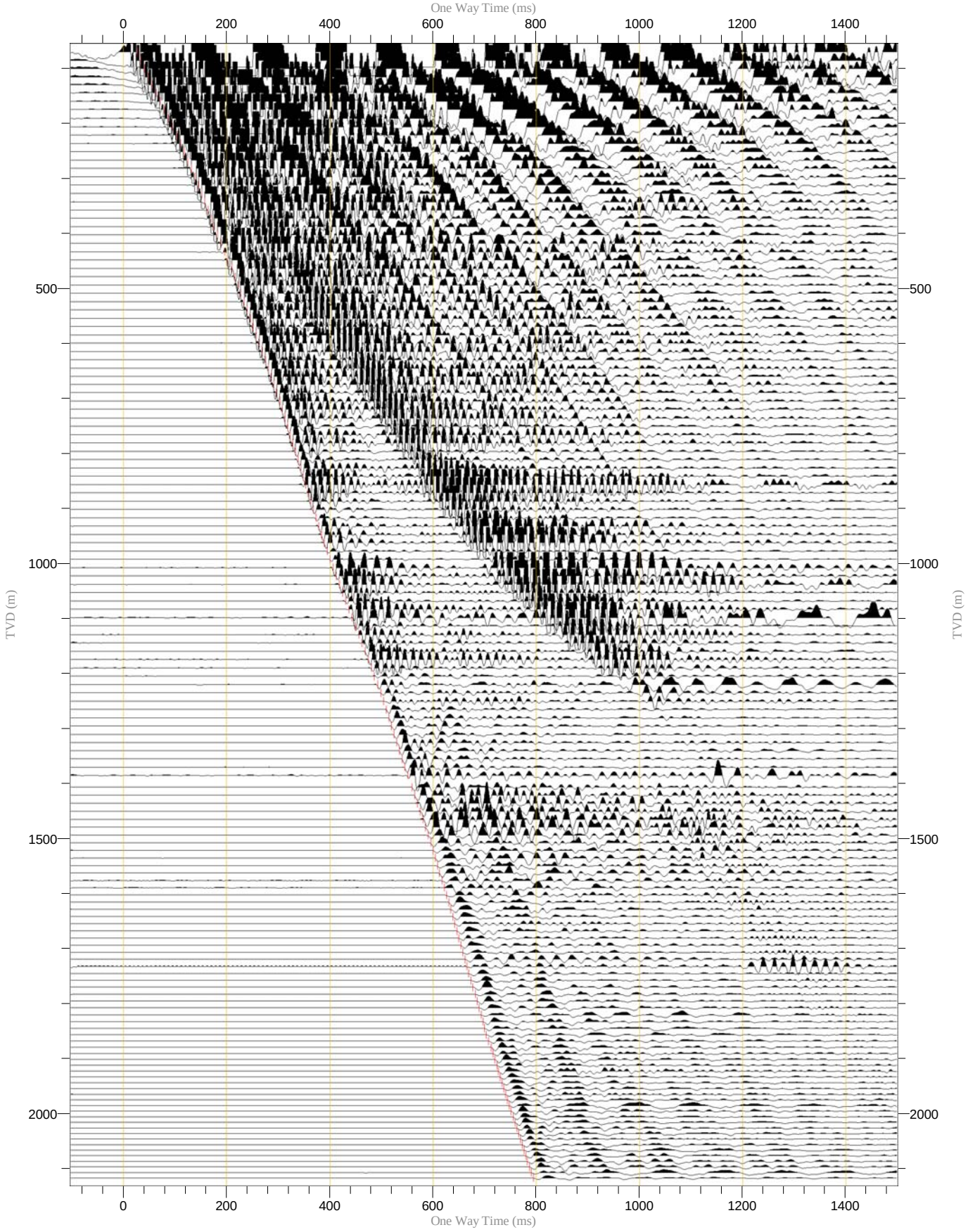


Raw Stack (TRY) BPF 5.0 - 100.0Hz	Normalization Largest Trace in Gather (199x) Polarity Normal One Way Time (ms) Scaling 9.7 cm/sec, 1/9650

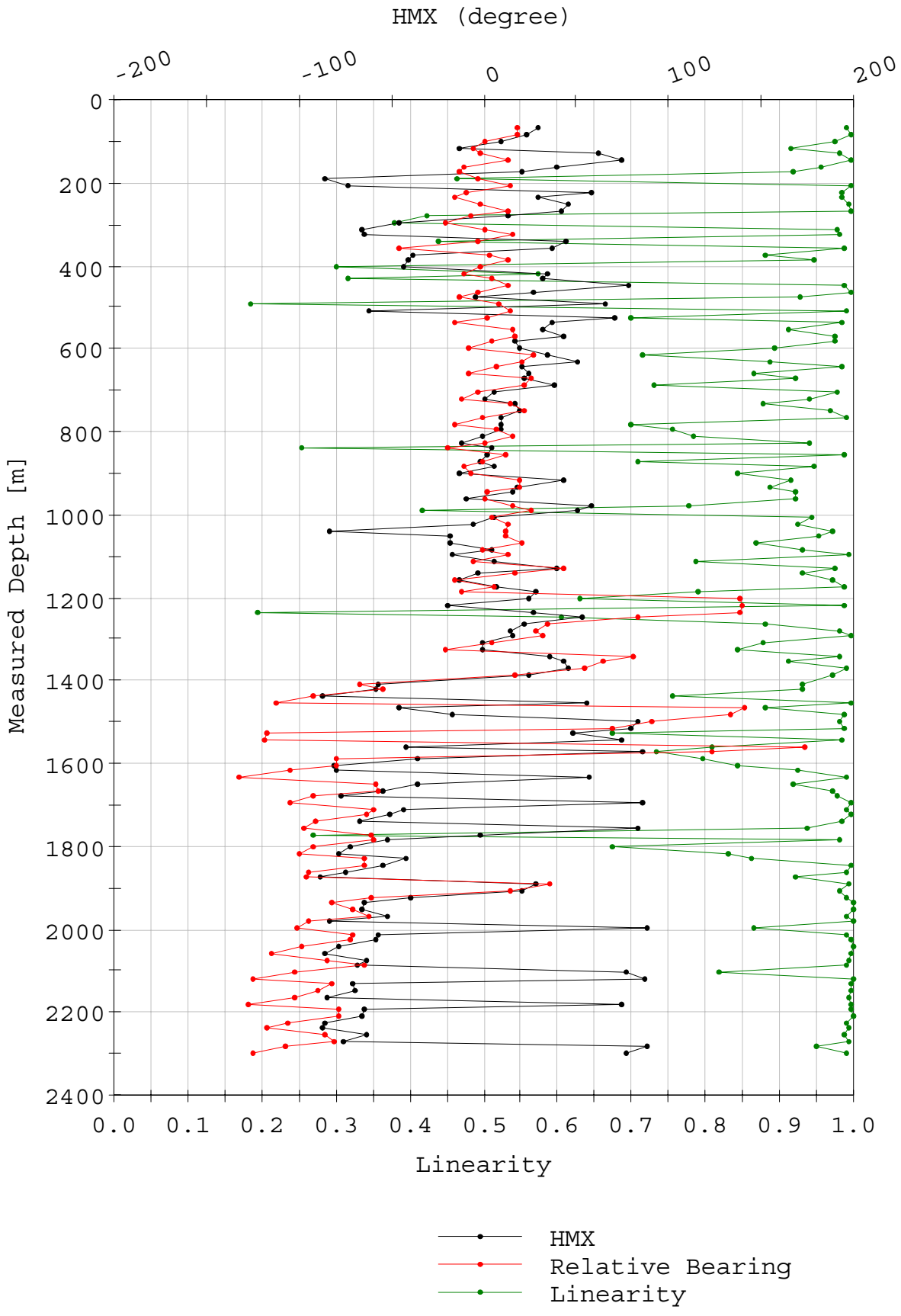


Schlumberger

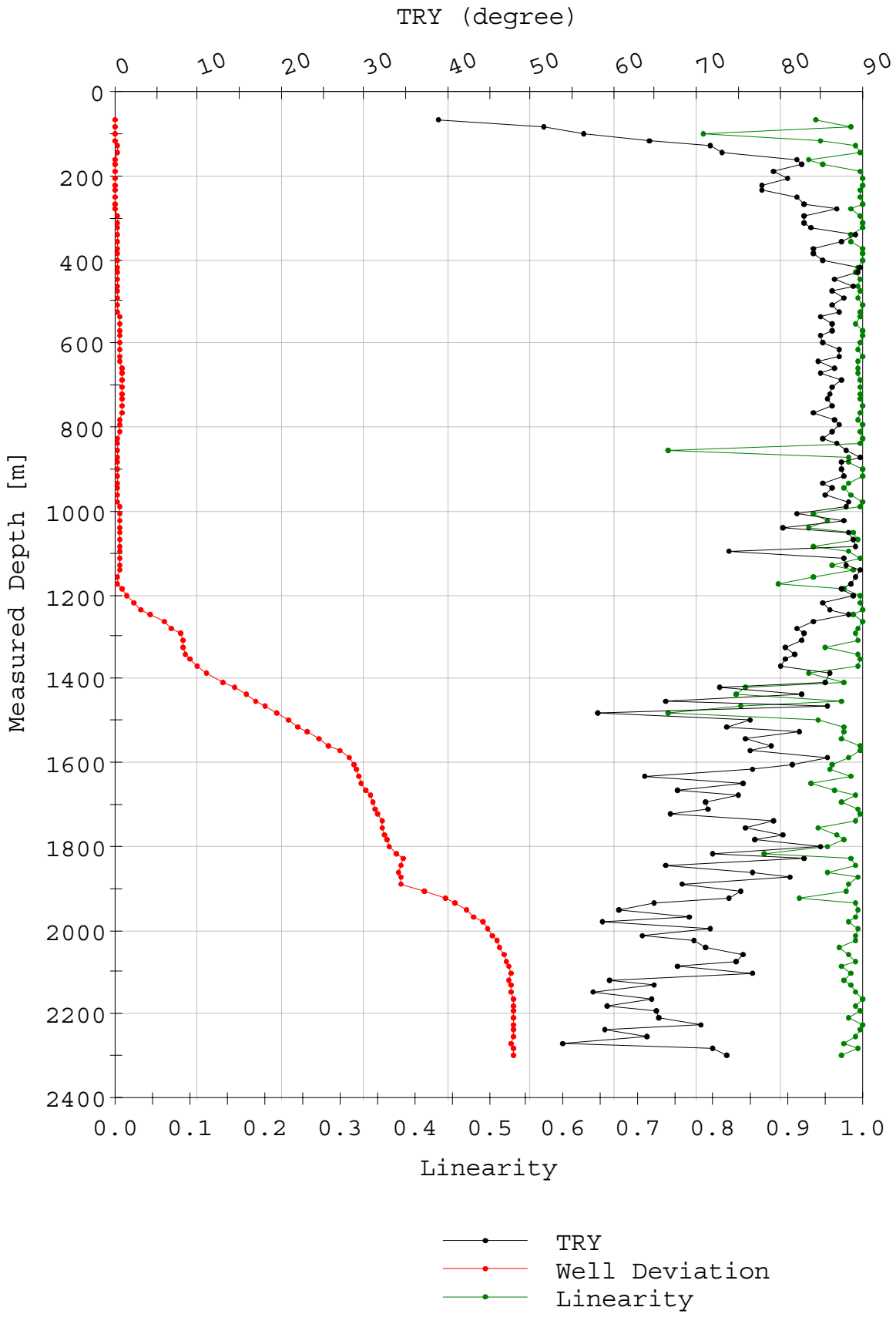
Raw Stack (HMX) BPF 5.0 - 100.0Hz	Normalization Largest Trace in Gather (398x) Polarity Normal One Way Time (ms) Scaling 9.7 cm/sec, 1/9650



HMX Angle

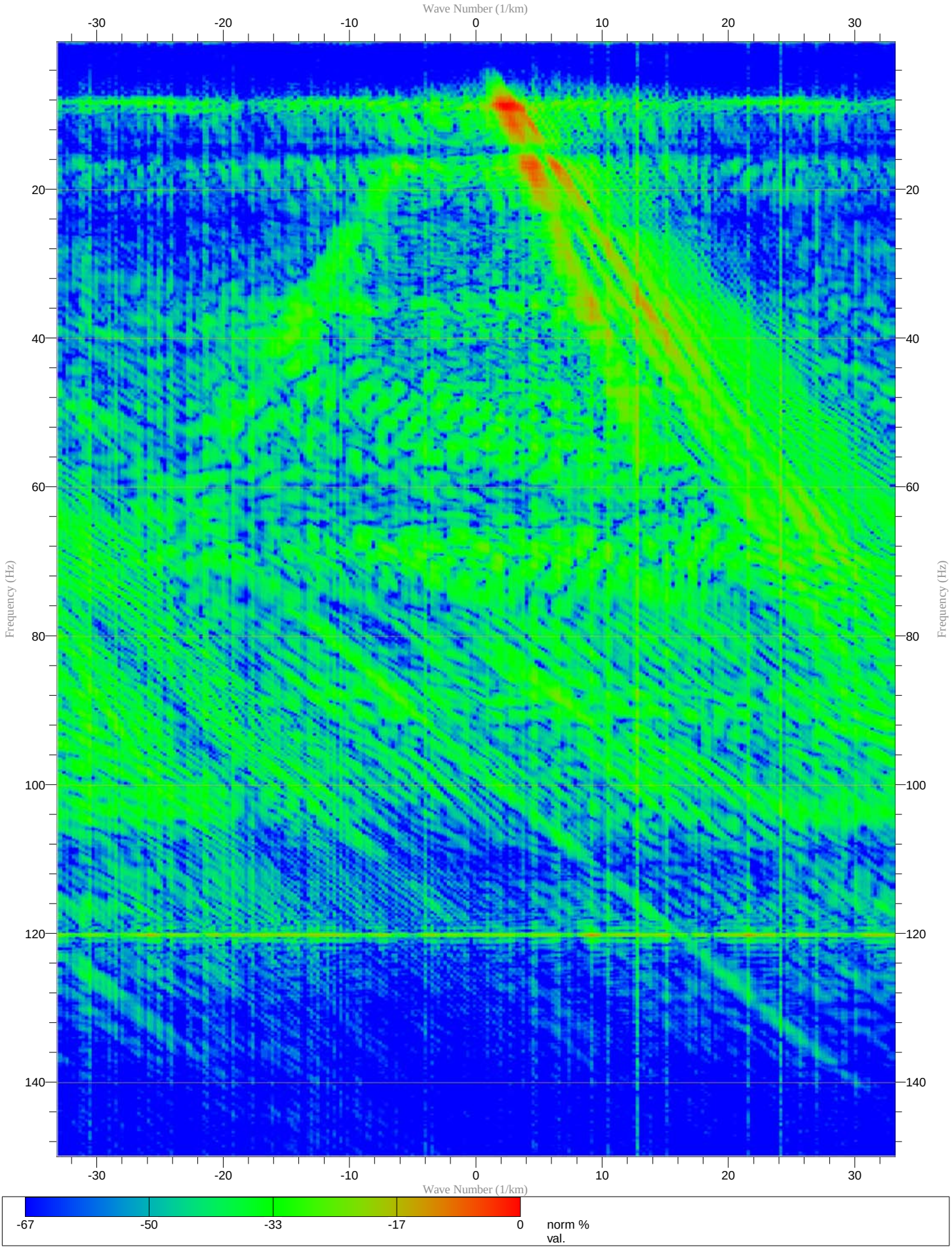

HMX (degree)
-200
-100
0
100
200
Measured Depth [m]
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Linearity
HMX
Relative Bearing
Linearity

TRY Angle



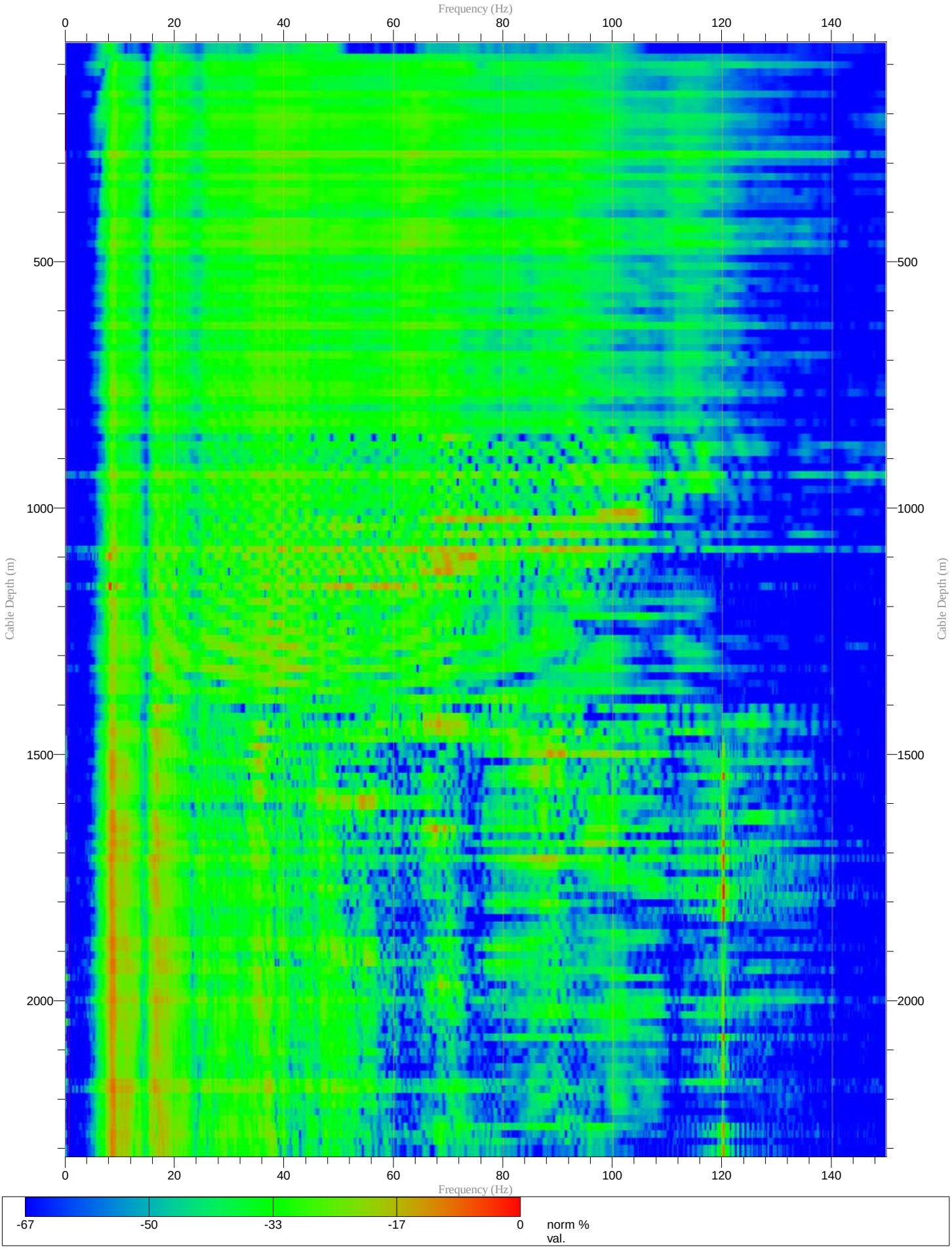
Schlumberger

VSP Raw Stack (Z) FK Apply FK	Normalization Trace by Trace (100%) Polarity Normal Frequency (Hz) Scaling 0.16 cm/Hz, 3.92(1/km)/cm	



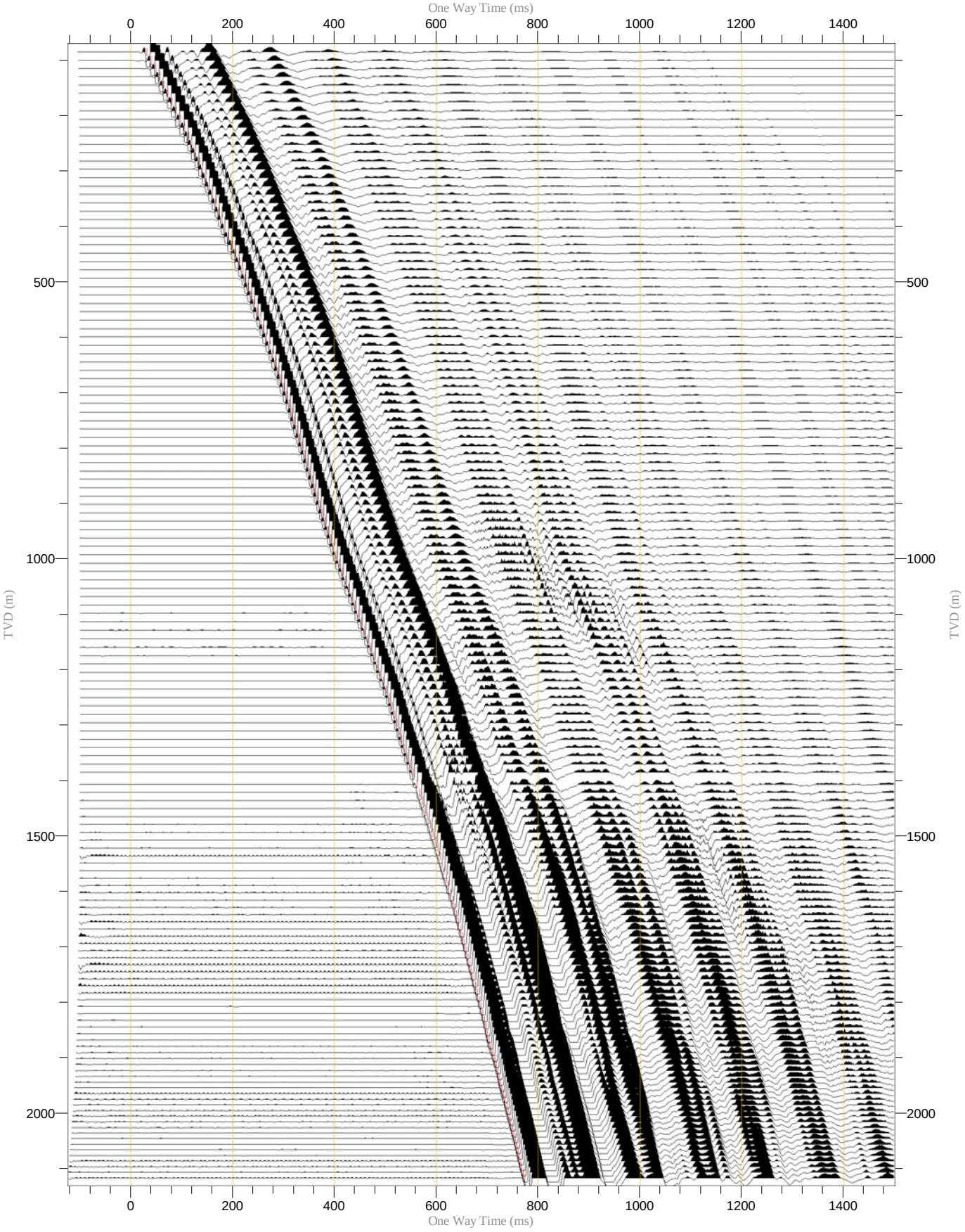
Schlumberger

VSP Raw Stack (Z) FZ Apply FZ	Normalization Trace by Trace (100%) Polarity Normal Frequency (Hz) Scaling 0.1 cm/Hz, 1/9650

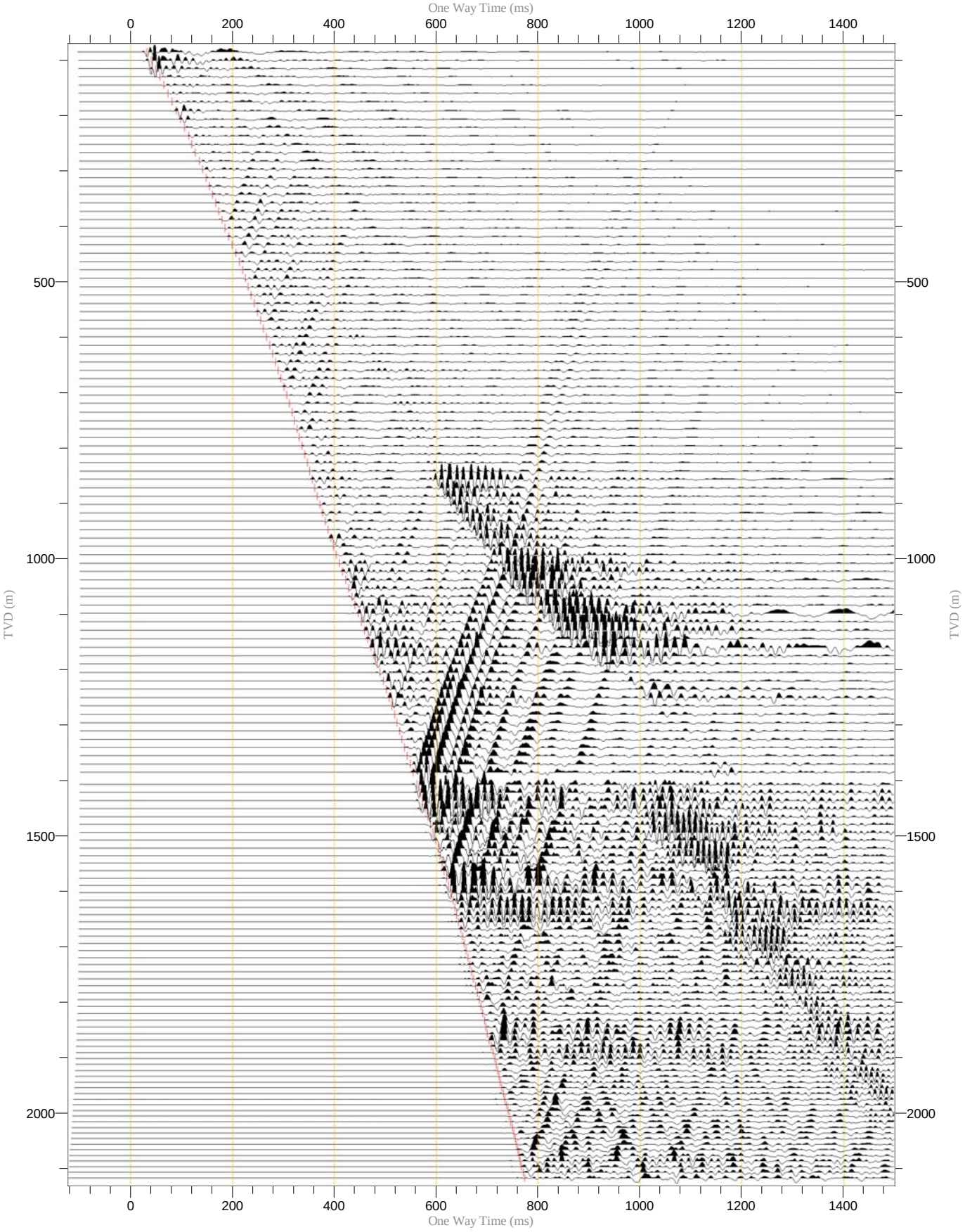


Schlumberger

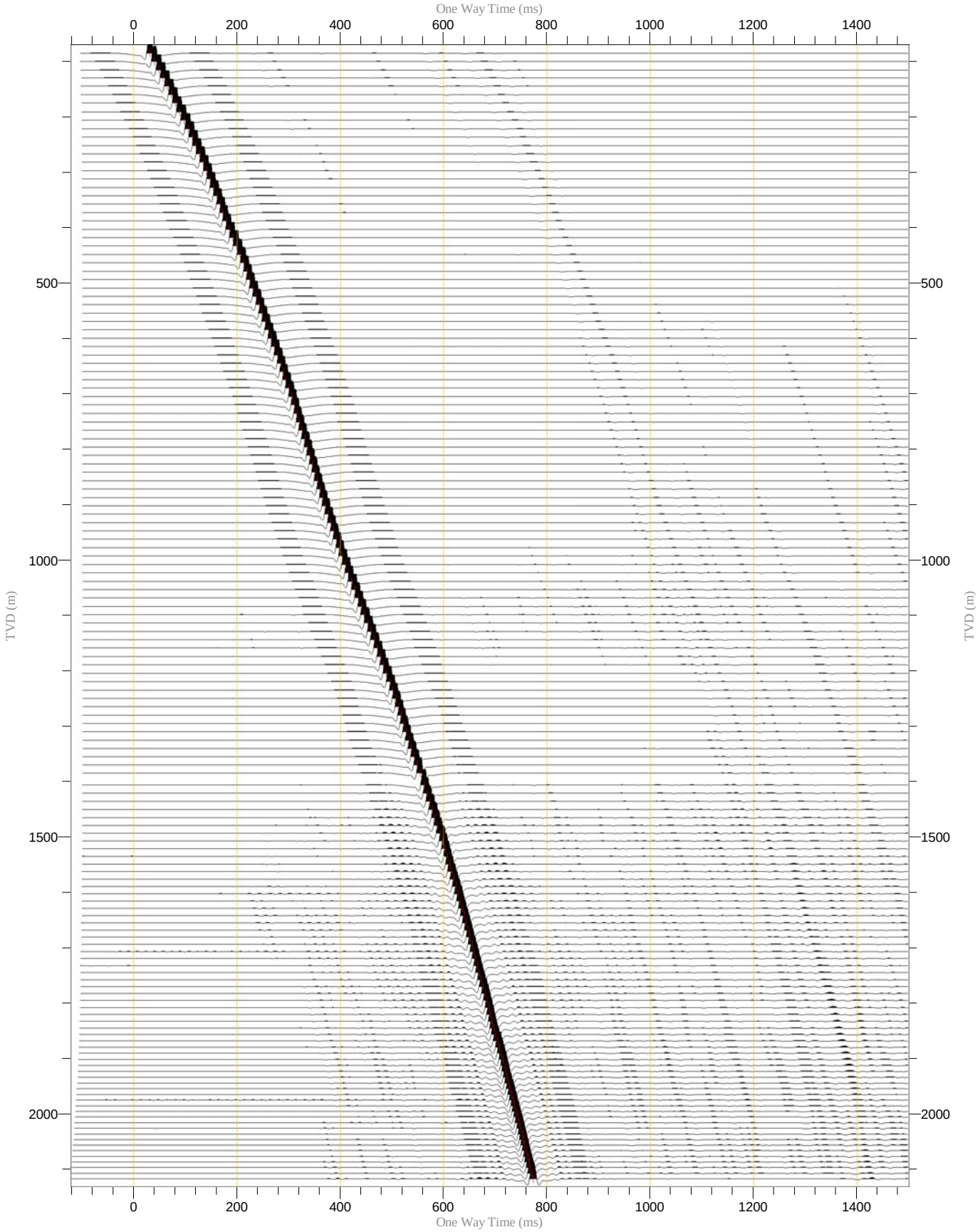
VSP Downgoing BPF 5.0 - 90.0Hz 13 Traces	Normalization Largest Trace in Gather (785%) Polarity Normal One Way Time (ms) Scaling 9.6 cm/sec, 1/9580



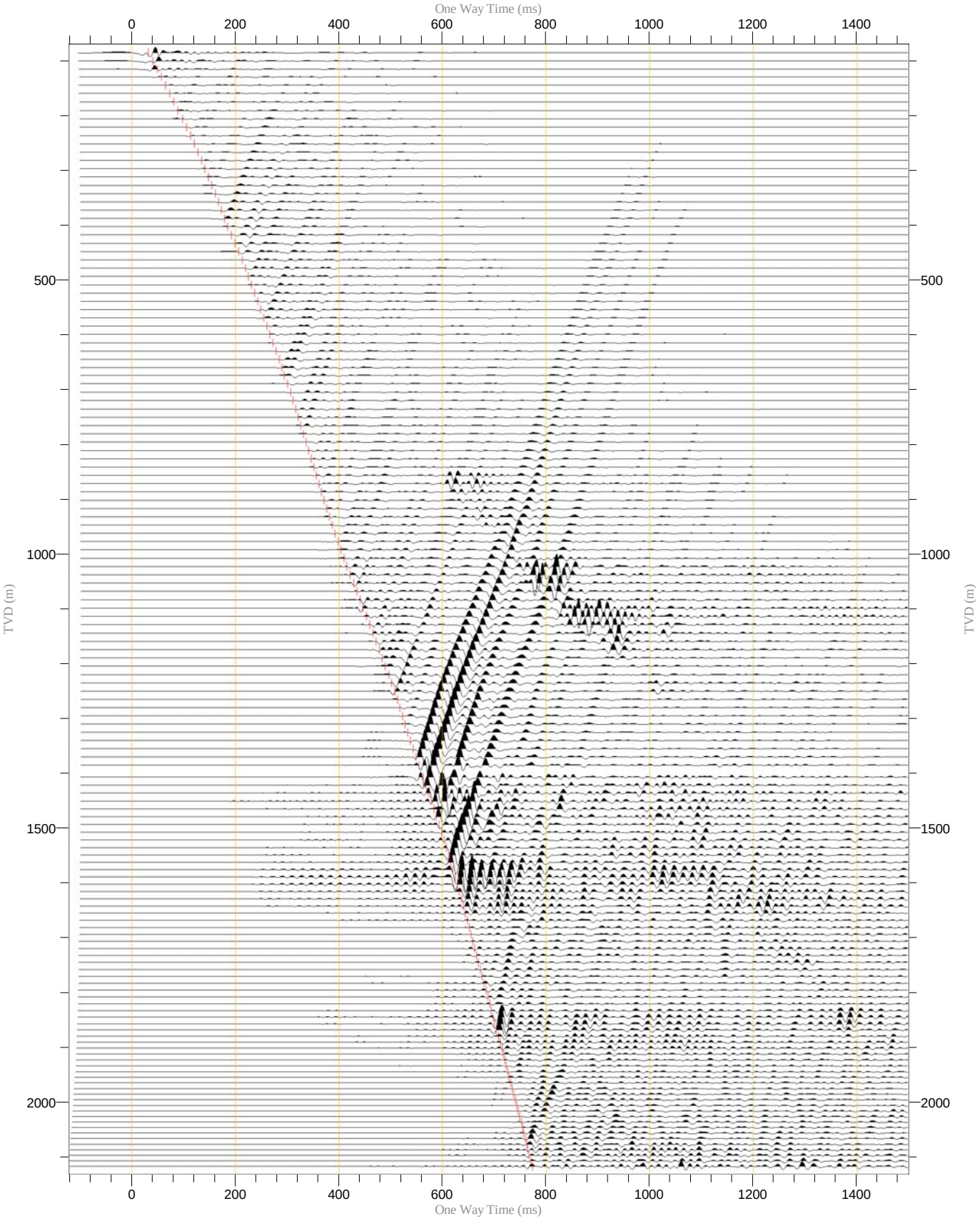
VSP Upgoing BPF 5.0 - 90.0Hz 13 Traces	Normalization Largest Trace in Gather (785%) Polarity Normal One Way Time (ms) Scaling 9.6 cm/sec, 1/9580



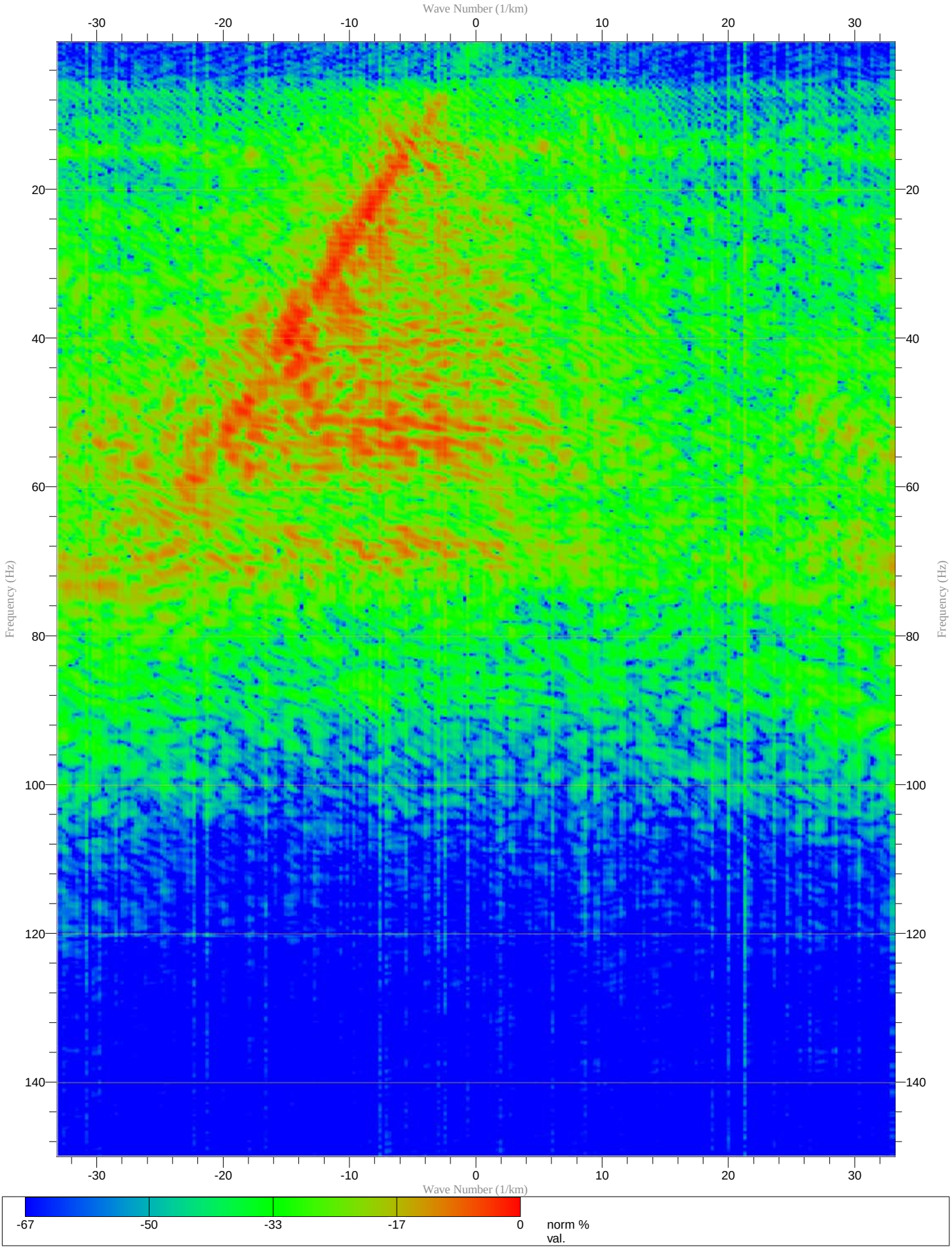
VSP Waveshape decon downgoing BPF 5.0 - 90.0Hz 13 Traces Waveshape Decon.(wavelet: 8.0 - 65.0 Hz zero-phase)	Normalization Largest Trace in Gather (300%) Polarity Normal One Way Time (ms) Scaling 9.6 cm/sec, 1/9700



VSP Waveshape decon upgoing BPF 5.0 - 90.0Hz 13 Traces Median Filter 3 Traces Waveshape Decon.(wavelet: 8.0 - 65.0 Hz zero-phase)	Normalization Largest Trace in Gather (300%) Polarity Normal One Way Time (ms) Scaling 9.6 cm/sec, 1/9830

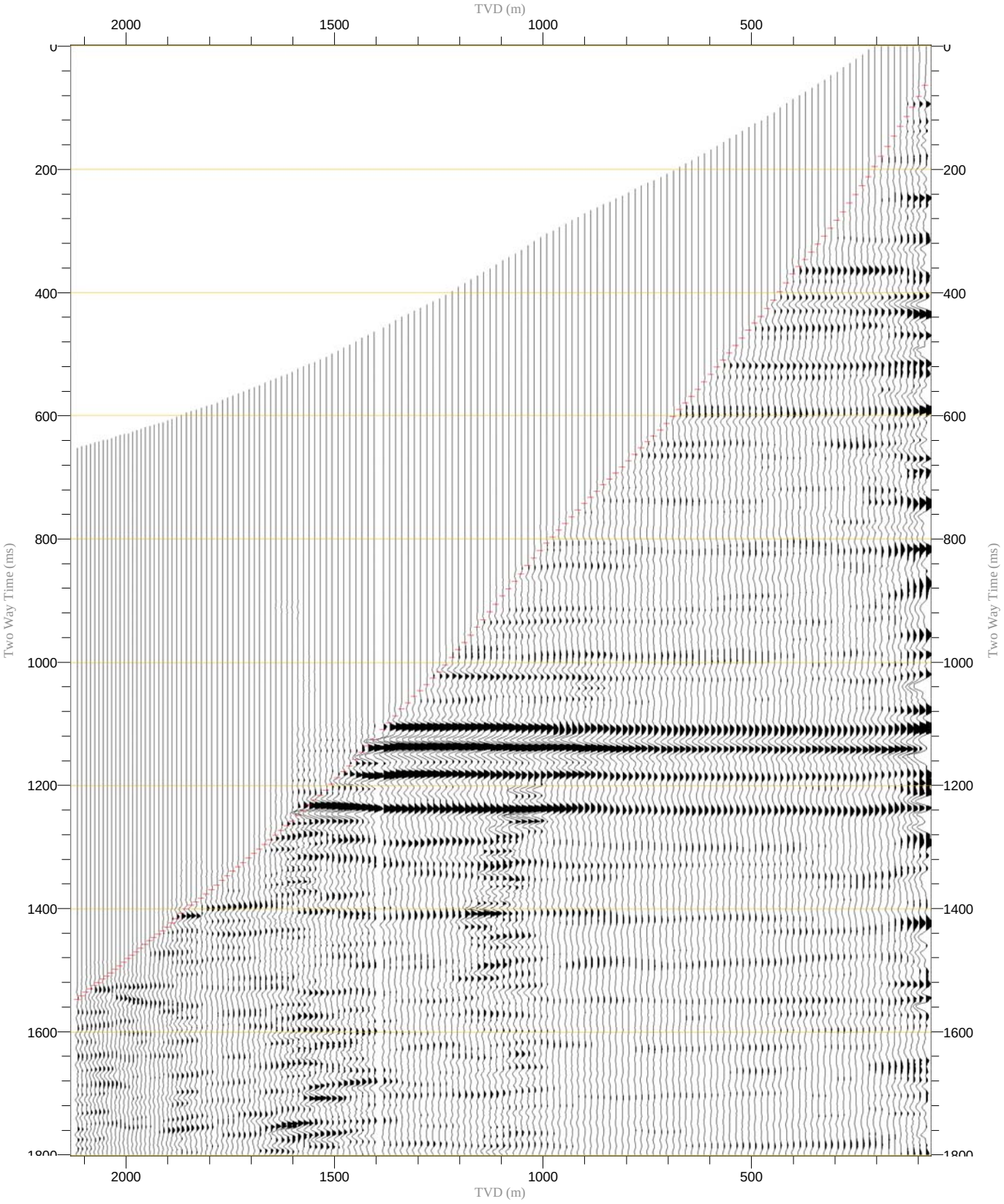


VSP Waveshape decon upgoing FK Apply FK	Normalization Trace by Trace (100%) Polarity Normal Frequency (Hz) Scaling 0.16 cm/Hz, 3.92(1/km)/cm	

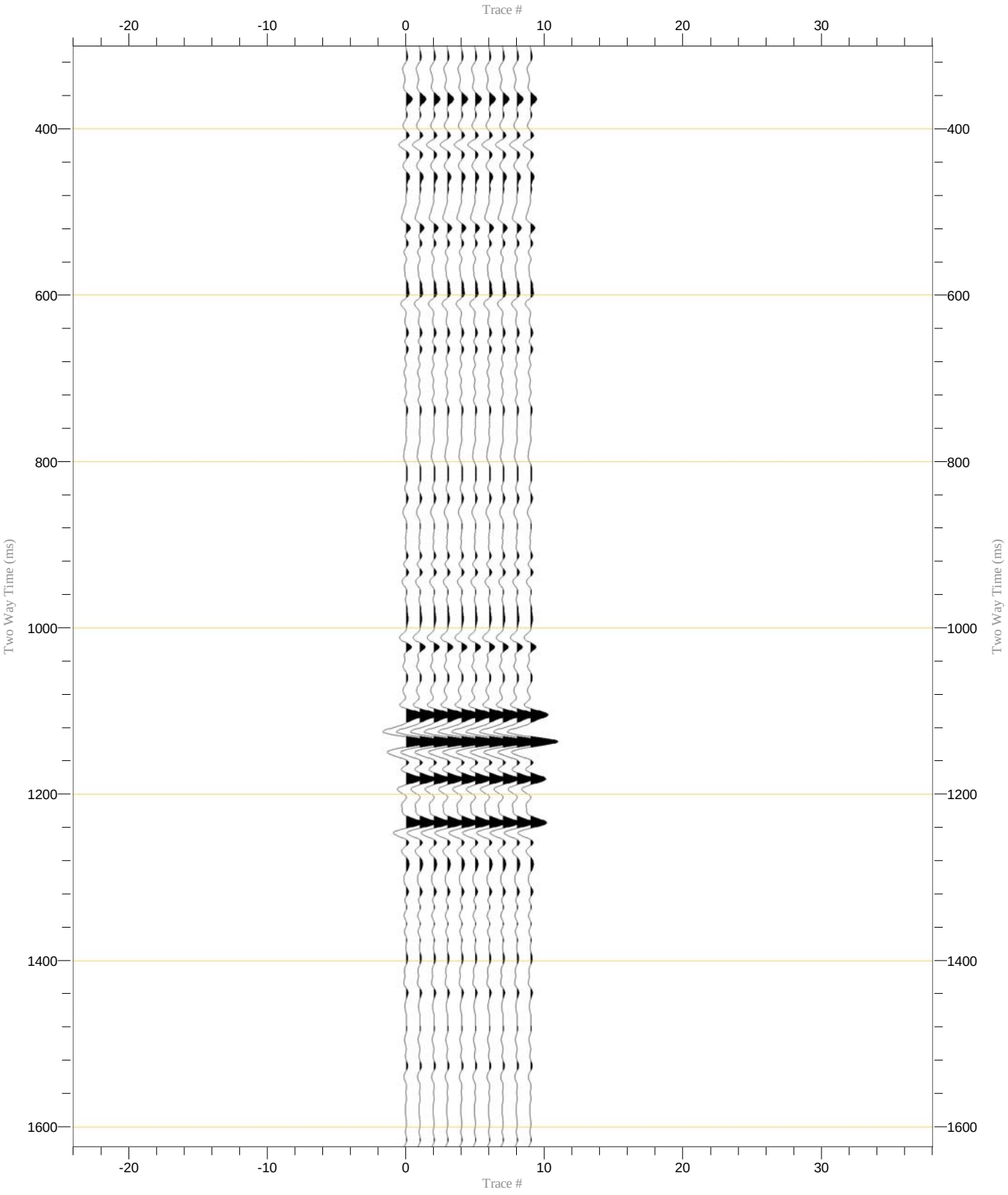


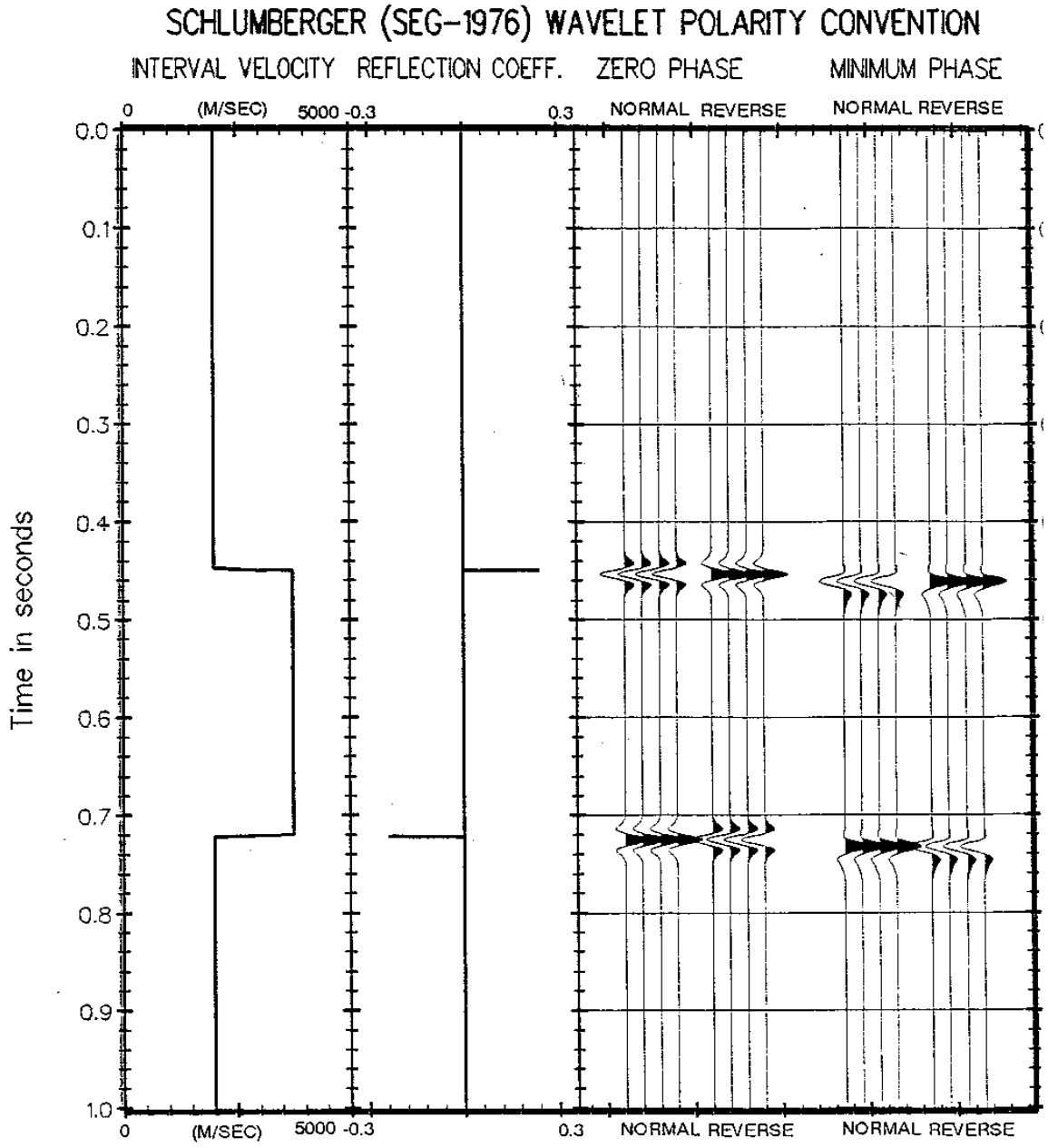
Schlumberger

VSP Corridor Stack (Input) BPF 5.0 - 90.0Hz 13 Traces Median Filter 3 Traces Waveshape Decon.(wavelet: 8.0 - 65.0 Hz zero-phase) BPF 5.0 - 70.0Hz Travel time exponent = 1.40 7 Traces	Normalization Largest Trace in Gather (300%) Polarity Normal Two Way Time (ms) Scaling 11.2 cm/sec, 1/13240	



VSP Corridor Stack (output) BPF 5.0 - 90.0Hz 13 Traces Median Filter 3 Traces Waveshape Decon.(wavelet: 8.0 - 65.0 Hz zero-phase) BPF 5.0 - 70.0Hz Travel time exponent = 1.40 7 Traces Corridor Stack (Mean): BPF 5.0 - 70.0Hz	Normalization Largest Trace in Gather (200%) Polarity Normal Two Way Time (ms) Scaling 15.00 cm/sec, 4.00/cm	

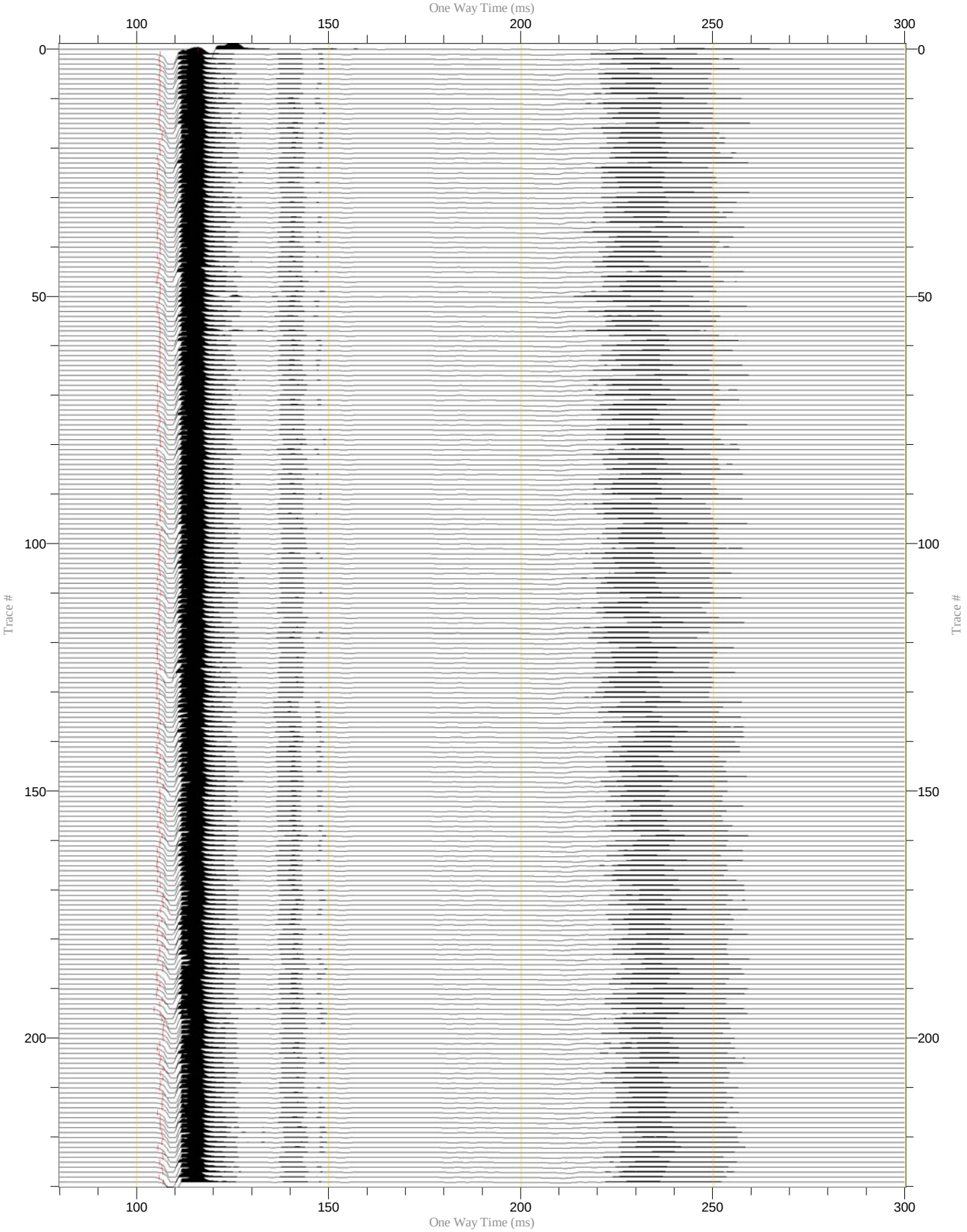




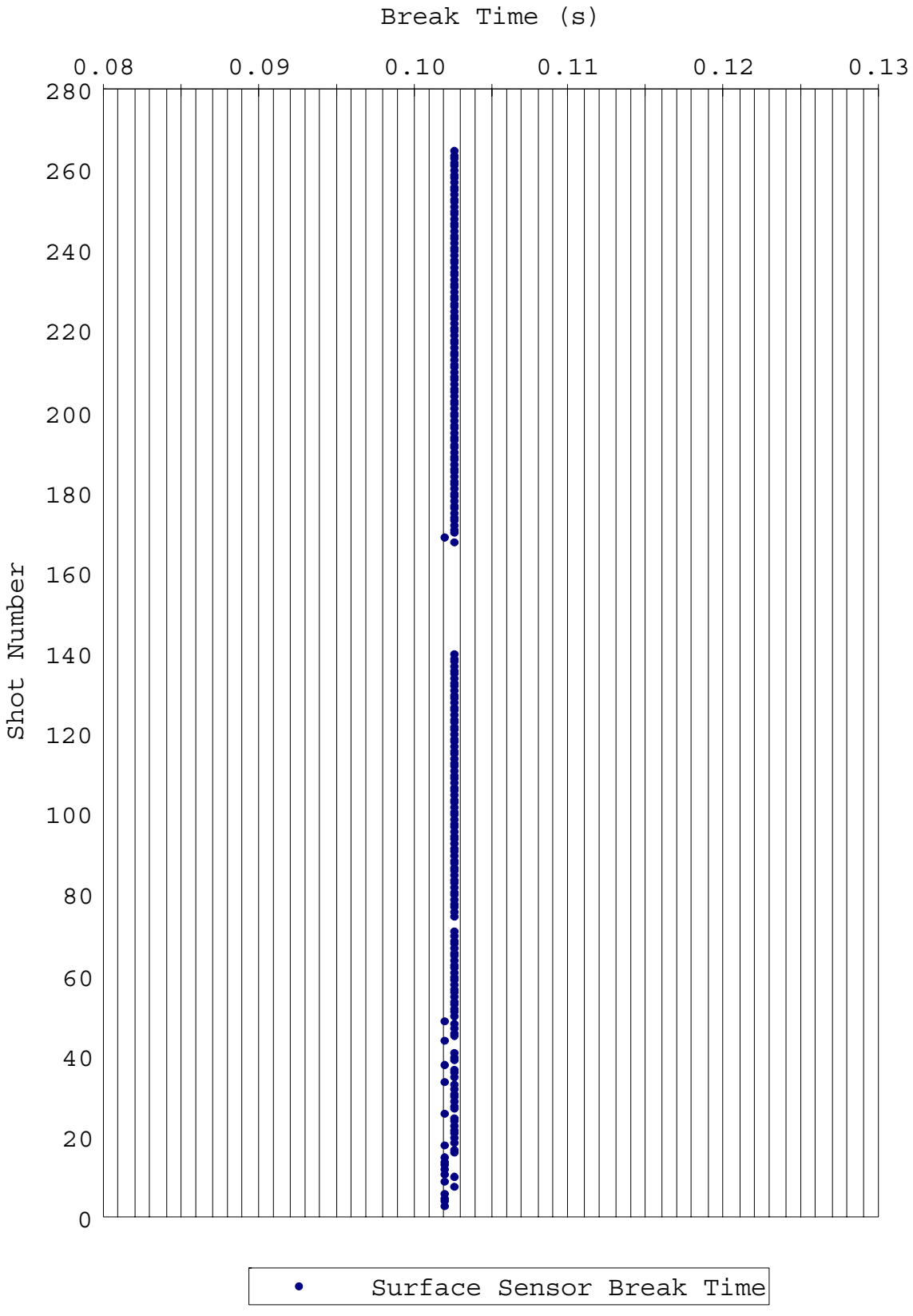
Schlumberger Wavelet Polarity Convention

Source Signature QC Report

Source Sensor Signature	Normalization Trace by Trace (300%) Polarity Normal One Way Time (ms) Scaling 72.24 cm/sec, 10.75/cm	

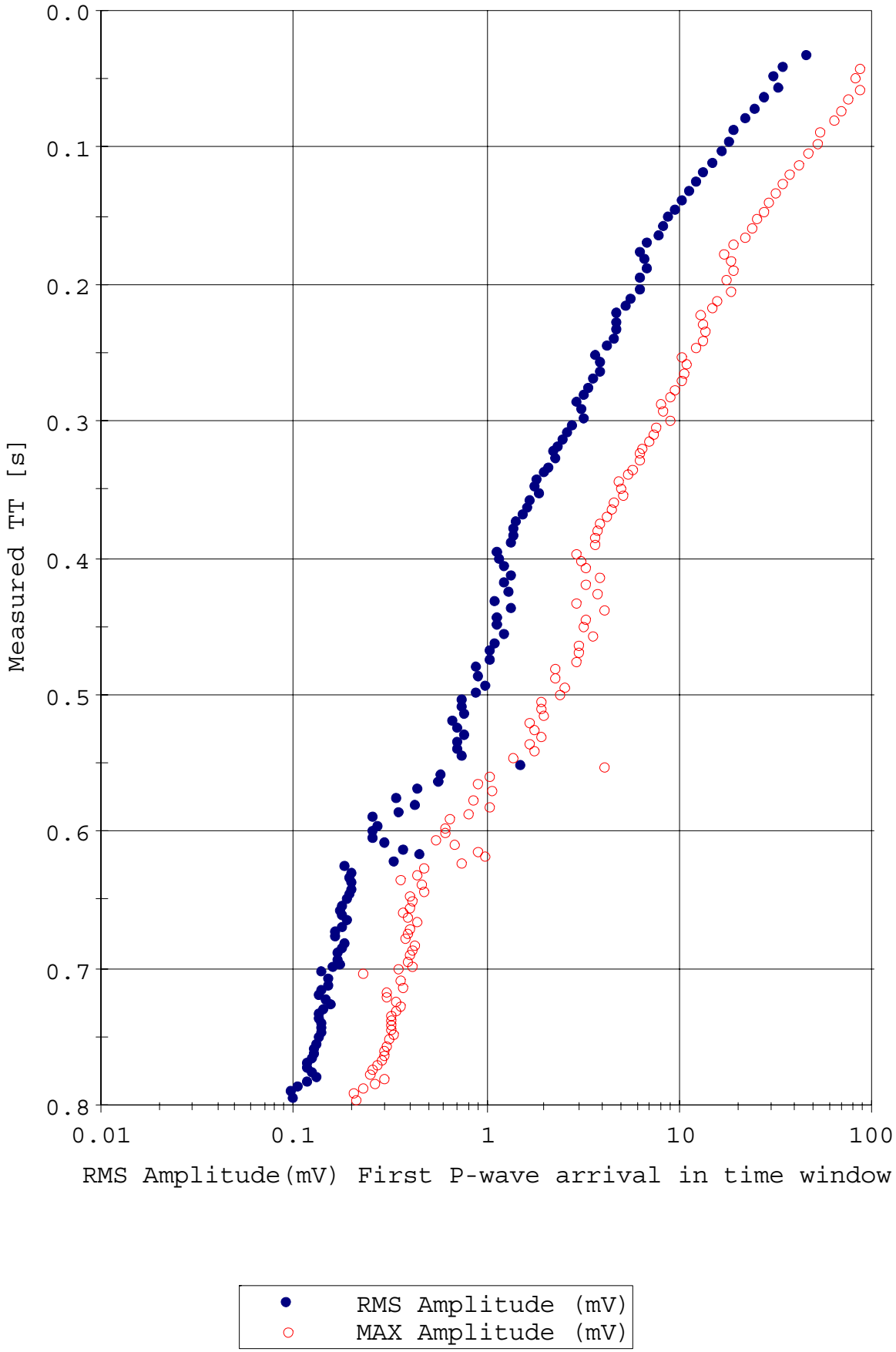


Surface Sensor QC Plot Page



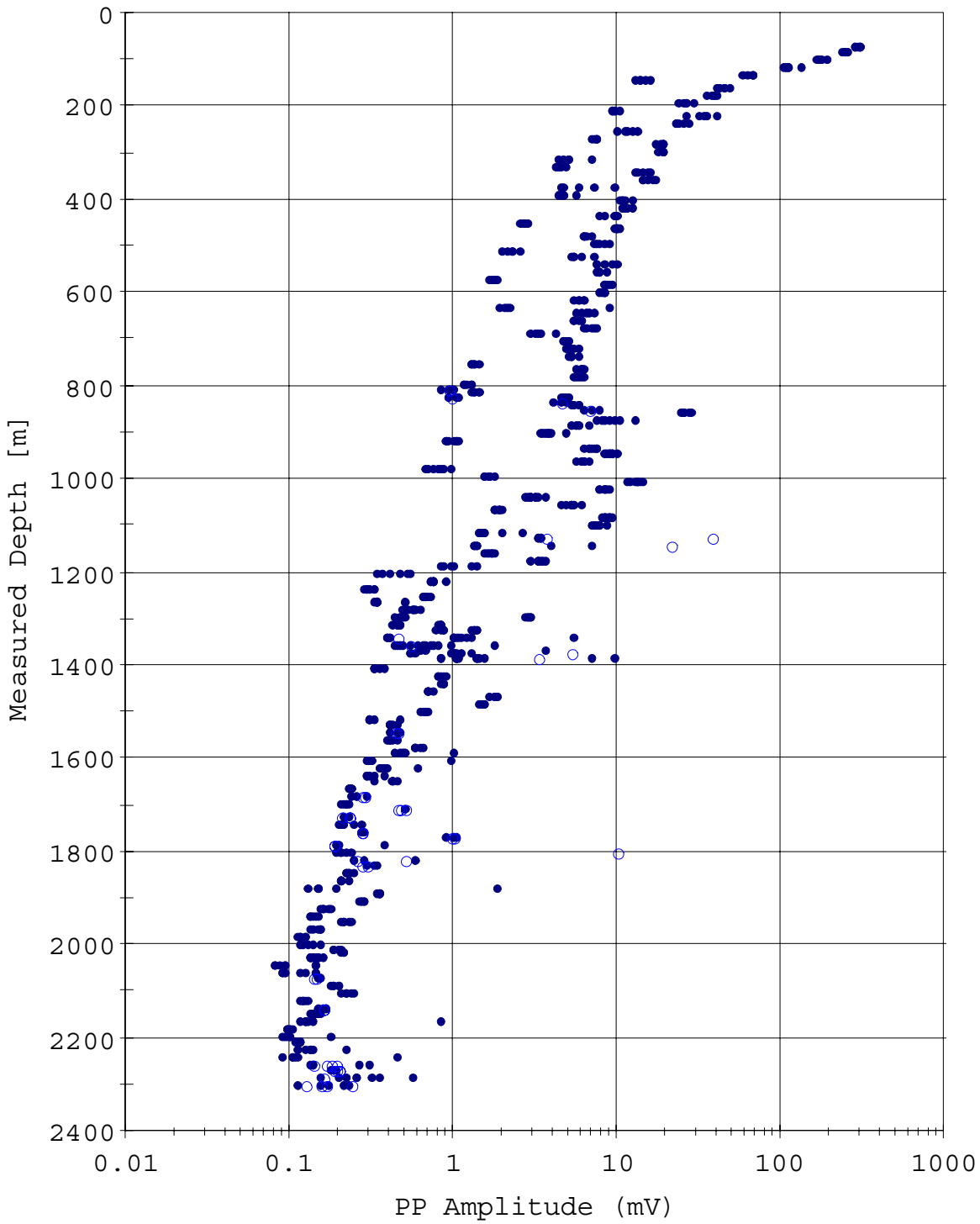
Amplitude QC Report

RMS amplitude Plot



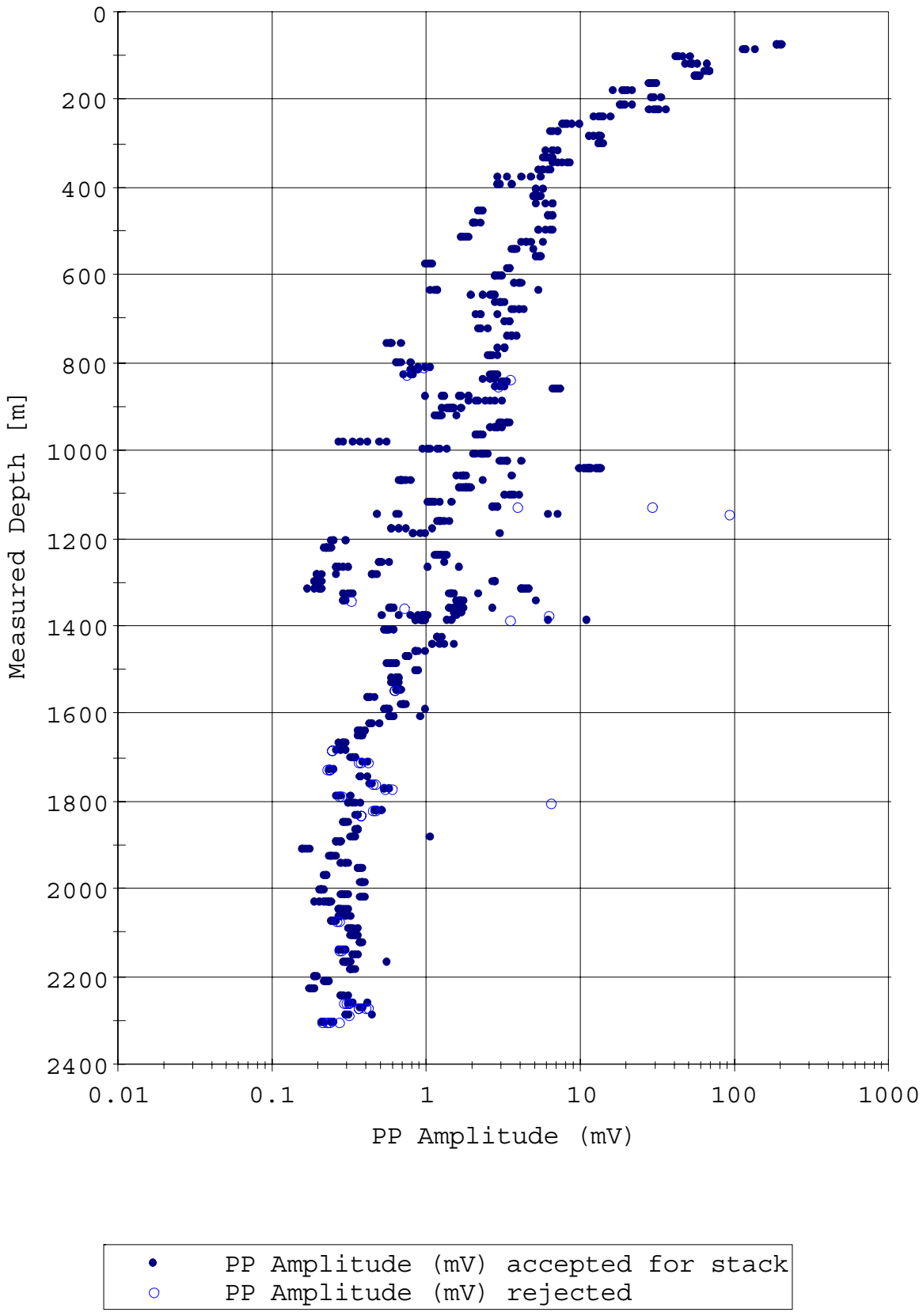
Schlumberger

Peak To Peak Plot (X)



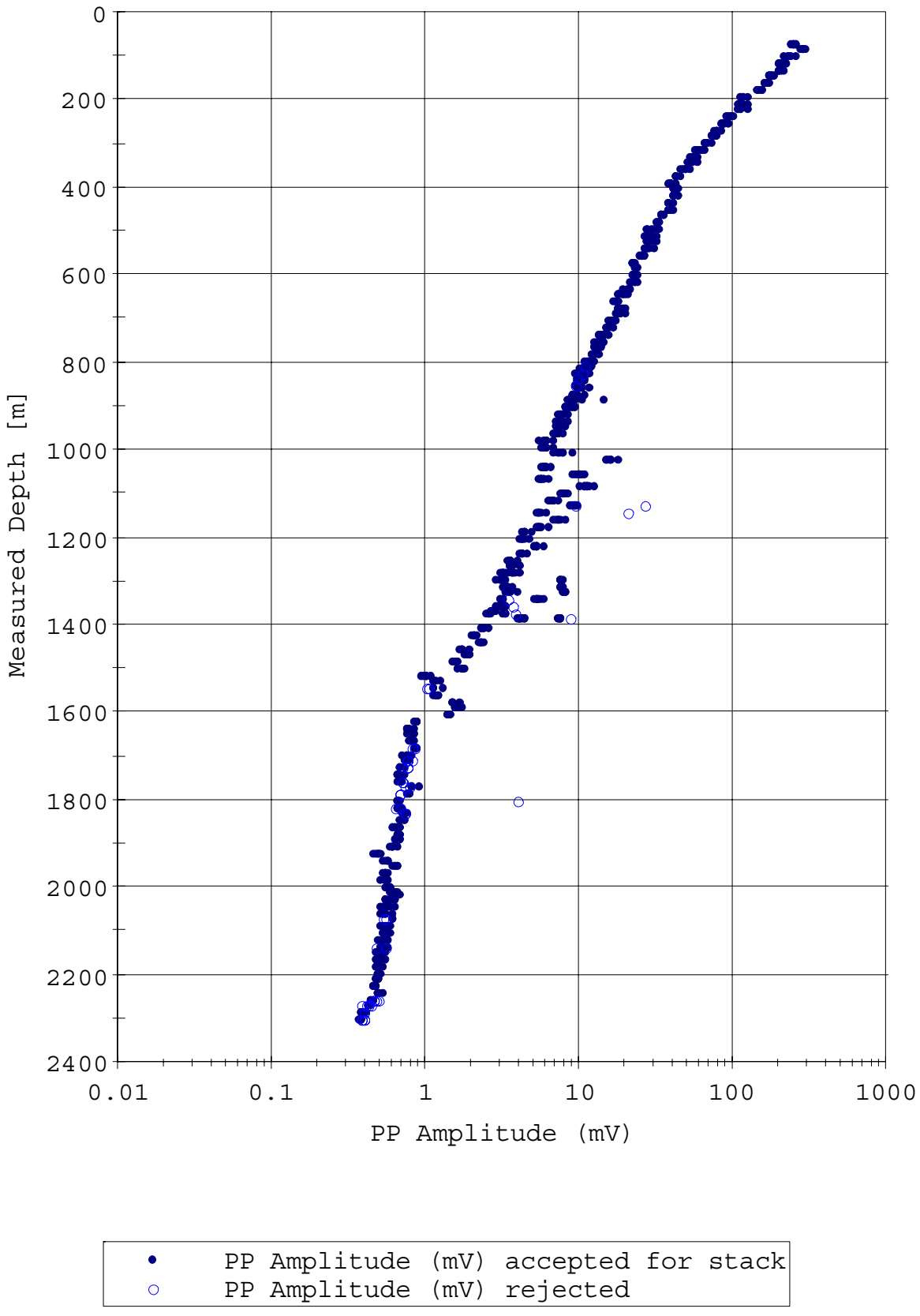
Schlumberger

Peak To Peak Plot (Y)



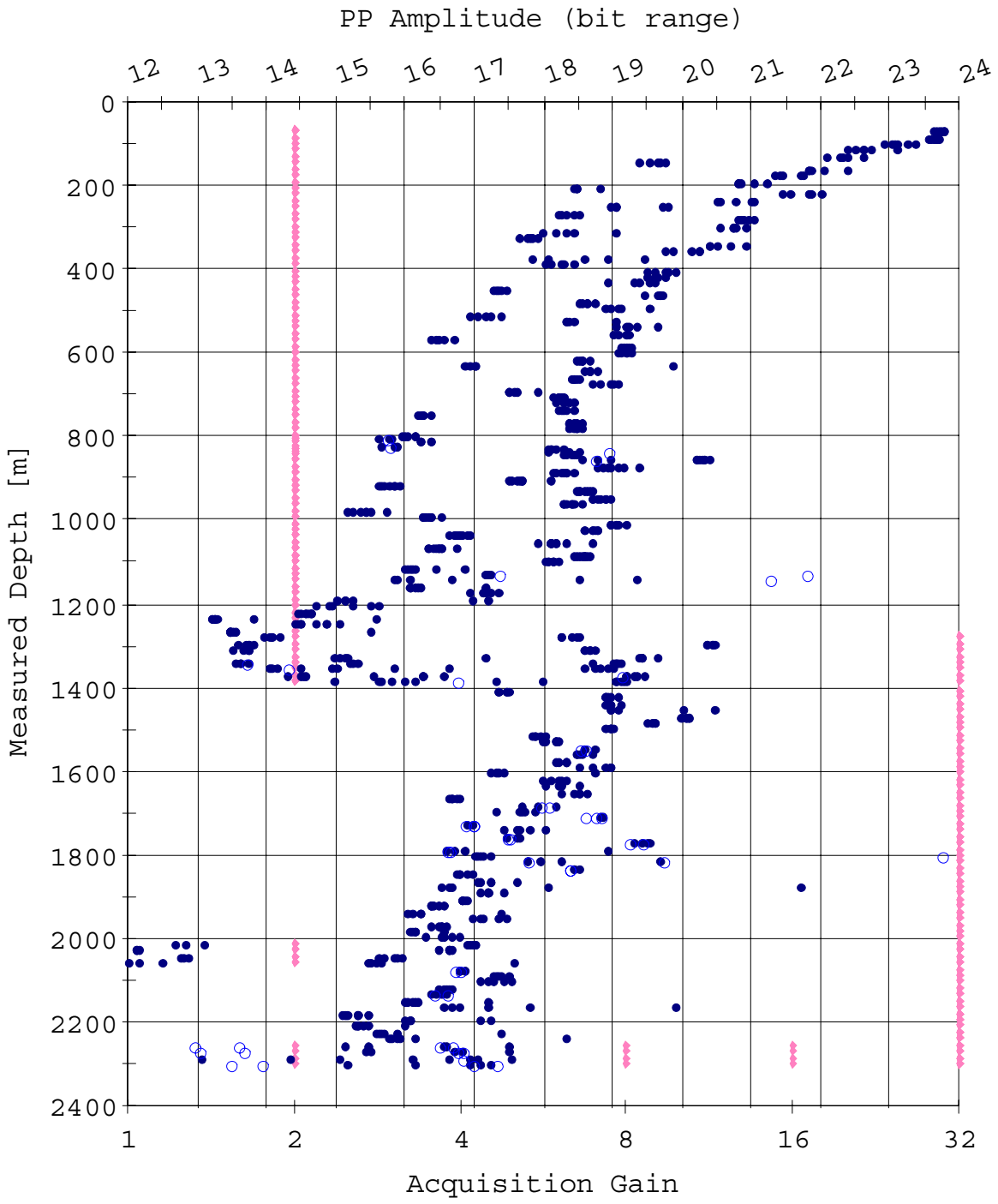
Schlumberger

Peak To Peak Plot (Z)



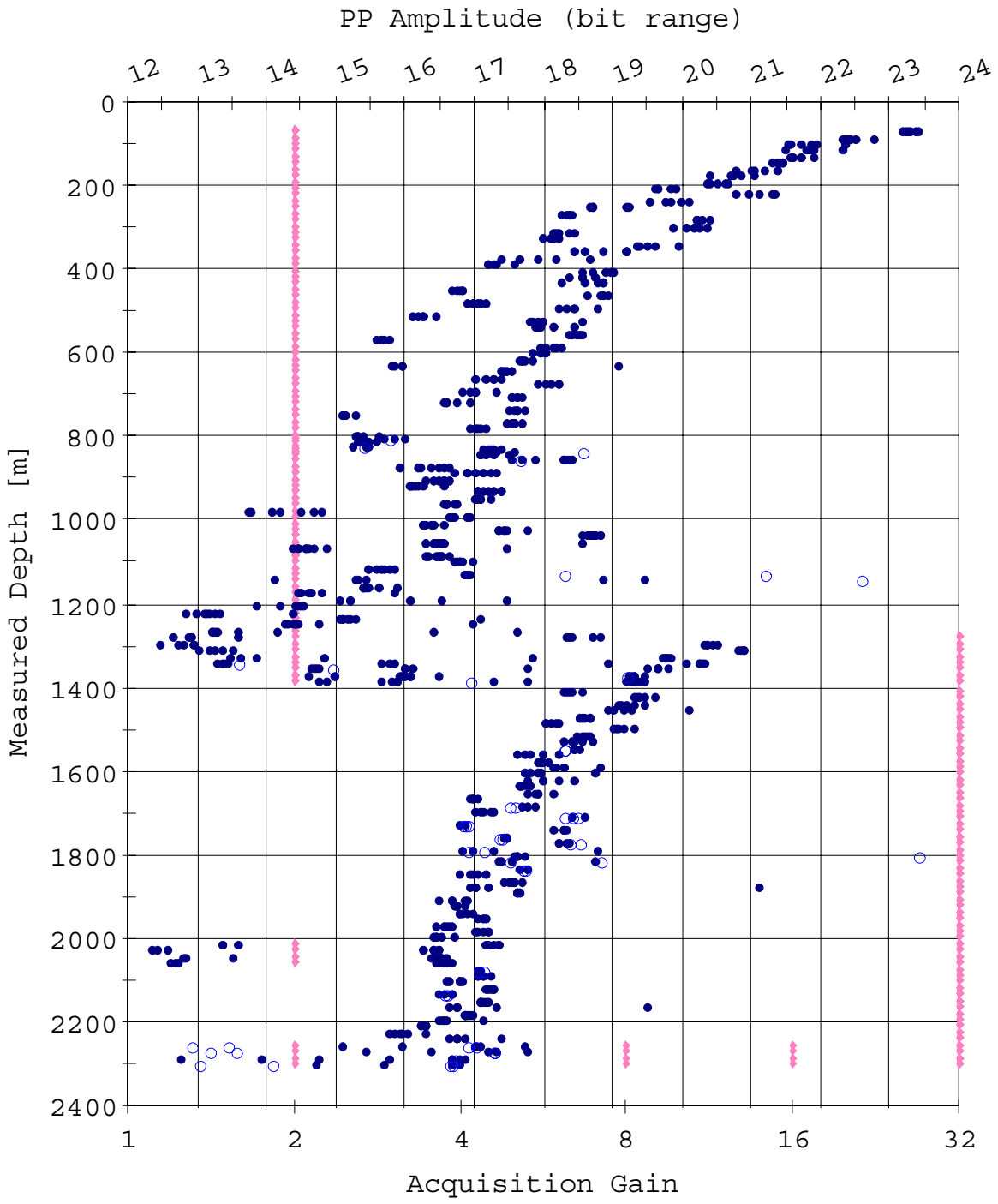
Schlumberger

Amplitude QC Plot (X)



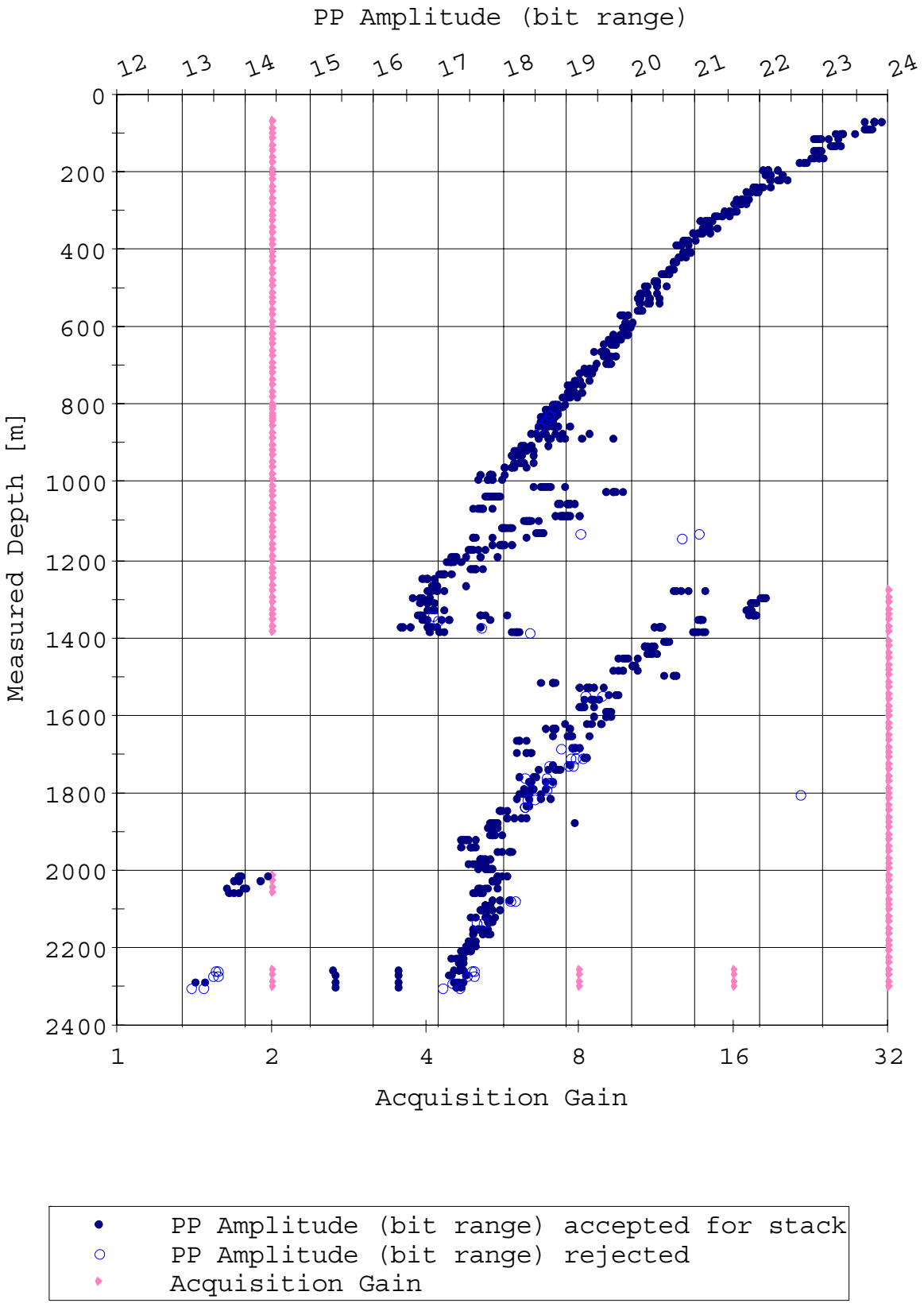
Schlumberger

Amplitude QC Plot (Y)



Schlumberger

Amplitude QC Plot (Z)



Shot and Observer Report

Shot Summary Listing (1/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
806.0	1	1	-7.3	13.6	788.5	3, 5, 6
821.2	2	1	-1.0	13.3	884.9	3, 5, 6
836.3	3	1	-29.6	13.3	800.5	3, 5, 6
851.4	4	1	-42.3	13.3	850.4	3, 5, 6
1340.2	1	2	80.5	12.6	655.0	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1355.3	2	2	64.4	12.2	834.6	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1370.4	3	2	55.1	12.2	647.2	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1385.5	4	2	16.8	22.6	818.4	9, 10, 11, 12, 13
1279.8	1	3	27.7	13.7	742.3	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1294.9	2	3	31.8	13.5	888.9	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1310.0	3	3	3.8	14.1	771.1	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1325.2	4	3	-20.7	13.4	806.7	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1219.2	1	4	140.0	19.8	769.2	19, 20, 21, 22, 23, 24, 25, 26
1234.3	2	4	138.5	15.9	824.3	19, 20, 21, 22, 23, 24, 25, 26
1249.4	3	4	83.5	13.9	766.4	19, 20, 21, 22, 23, 24, 25, 26
1264.6	4	4	34.3	13.5	826.8	19, 20, 21, 22, 23, 24, 25, 26
1158.5	1	5	-16.2	16.4	667.3	27, 28, 29, 30, 31, 32
1173.6	2	5	5.2	18.2	777.3	27, 28, 29, 30, 31, 32
1188.7	3	5	-11.8	14.1	772.9	27, 28, 29, 30, 31, 32
1203.9	4	5	138.9	14.9	818.7	27, 28, 29, 30, 31, 32
1098.1	1	6	12.9	14.8	744.8	33, 34, 35, 36, 37, 38, 39
1113.2	2	6	-5.8	17.8	816.7	33, 34, 35, 36, 37, 38, 39
1128.3	3	6	43.3	17.7	732.9	35, 36, 37, 38, 39
1143.5	4	6	17.5	15.4	796.6	33, 35, 36, 37, 38, 39
1037.8	1	7	12.4	15.7	809.5	40, 41, 44, 45, 46, 47, 48, 49, 50
1052.9	2	7	11.3	14.2	892.3	40, 41, 44, 45, 46, 47, 48, 49, 50
1068.0	3	7	20.2	13.4	763.5	40, 41, 44, 45, 46, 47, 48, 49, 50
1083.1	4	7	-0.2	17.2	780.7	40, 41, 44, 45, 46, 47, 48, 49, 50
977.2	1	8	16.1	13.4	810.8	51, 52, 53, 54, 55, 56, 57
992.4	2	8	25.8	13.5	904.9	51, 52, 53, 54, 55, 56, 57

Shot Summary Listing (2/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
1007.5	3	8	4.6	13.8	812.7	51, 52, 53, 54, 55, 56, 57
1022.6	4	8	12.6	14.9	768.7	51, 52, 53, 54, 55, 56, 57
916.8	1	9	19.0	13.7	740.8	58, 59, 60, 61, 62, 63, 64
931.9	2	9	19.4	13.6	908.2	58, 59, 60, 61, 62, 63, 64
947.0	3	9	2.0	13.8	816.7	58, 59, 60, 61, 62, 63, 64
962.1	4	9	0.8	13.7	887.6	58, 59, 60, 61, 62, 63, 64
856.4	1	10	12.0	17.5	718.4	65, 66, 67, 68, 69, 70, 71
871.5	2	10	-0.2	13.7	903.8	65, 66, 67, 68, 69, 70, 71
886.6	3	10	-10.7	13.5	746.6	65, 66, 67, 68, 69, 70, 71
901.7	4	10	-7.1	14.0	873.5	65, 66, 67, 68, 69, 70, 71
795.8	1	11	6.5	13.5	825.8	75, 76, 77, 78, 79
810.9	2	11	15.9	13.4	907.4	75, 76, 77, 78, 79
826.0	3	11	0.0	13.5	799.5	75, 76, 77, 78, 79
841.1	4	11	-19.4	13.5	890.8	75, 76, 77, 78, 79
735.2	1	12	14.8	13.4	831.8	80, 81, 82, 83, 84
750.3	2	12	21.7	13.3	850.6	80, 81, 82, 83, 84
765.5	3	12	-0.7	13.5	776.3	80, 81, 82, 83, 84
780.6	4	12	-15.8	13.5	839.3	80, 81, 82, 83, 84
674.0	1	13	25.1	13.5	830.5	85, 86, 87, 88, 89
689.2	2	13	21.5	13.4	880.2	85, 86, 87, 88, 89
704.3	3	13	-3.3	13.6	806.5	85, 86, 87, 88, 89
719.4	4	13	-12.0	13.5	878.9	85, 86, 87, 88, 89
614.4	1	14	26.3	13.5	829.4	90, 91, 92, 93, 94
629.5	2	14	20.2	13.4	897.9	90, 91, 92, 93, 94
644.6	3	14	7.5	13.6	801.6	90, 91, 92, 93, 94
659.7	4	14	-8.6	13.5	900.3	90, 91, 92, 93, 94
553.8	1	15	15.1	13.6	822.5	95, 96, 97, 98, 99
569.0	2	15	17.2	13.4	899.7	95, 96, 97, 98, 99
584.1	3	15	4.7	13.6	794.5	95, 96, 97, 98, 99
599.2	4	15	-8.6	13.5	900.5	95, 96, 97, 98, 99

Shot Summary Listing (3/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
493.5	1	16	8.7	13.6	829.3	100, 101, 102, 103, 104
508.6	2	16	14.6	13.4	912.0	100, 101, 102, 103, 104
523.7	3	16	1.8	13.6	799.8	100, 101, 102, 103, 104
538.8	4	16	-15.2	13.5	860.6	100, 101, 102, 103, 104
432.9	1	17	4.8	13.6	820.4	105, 106, 107, 108, 109
448.1	2	17	13.7	13.4	915.3	105, 106, 107, 108, 109
463.2	3	17	-3.6	13.6	811.3	105, 106, 107, 108, 109
478.3	4	17	-13.5	13.5	900.5	105, 106, 107, 108, 109
372.4	1	18	3.1	13.6	821.5	110, 111, 112, 113, 114
387.5	2	18	13.8	13.4	901.7	110, 111, 112, 113, 114
402.7	3	18	-2.0	13.6	811.1	110, 111, 112, 113, 114
417.8	4	18	-11.2	13.5	892.9	110, 111, 112, 113, 114
312.0	1	19	1.1	13.6	820.7	115, 116, 117, 118, 119
327.1	2	19	15.7	13.4	908.8	115, 116, 117, 118, 119
342.2	3	19	-3.6	13.6	778.5	115, 116, 117, 118, 119
357.4	4	19	-45.5	13.5	906.7	115, 116, 117, 118, 119
251.5	1	20	-2.1	13.6	816.0	120, 121, 122, 123, 124
266.6	2	20	13.7	13.4	910.7	120, 121, 122, 123, 124
281.7	3	20	-6.8	13.6	810.8	120, 121, 122, 123, 124
296.8	4	20	-20.7	13.6	902.9	120, 121, 122, 123, 124
191.0	1	21	-3.3	13.6	809.2	125, 126, 127, 128, 129
206.1	2	21	14.7	13.4	901.2	125, 126, 127, 128, 129
221.2	3	21	-9.8	13.6	817.1	125, 126, 127, 128, 129
236.3	4	21	-15.5	13.5	894.0	125, 126, 127, 128, 129
129.3	1	22	-2.3	13.3	853.1	130, 131, 132, 133, 134
144.5	2	22	13.0	13.4	909.9	130, 131, 132, 133, 134
159.6	3	22	-11.3	13.6	824.8	130, 131, 132, 133, 134
174.7	4	22	-13.5	13.6	903.6	130, 131, 132, 133, 134
69.8	1	23	18.7	19.3	785.9	135, 136, 137, 138, 139, 140
84.9	2	23	18.5	19.2	922.9	135, 136, 137, 138, 139, 140

Shot Summary Listing (4/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
100.1	3	23	0.0	19.7	851.6	135, 136, 137, 138, 139, 140
115.2	4	23	-5.5	19.6	878.5	135, 136, 137, 138, 139, 140
1339.6	1	155	-100.6	5.3	815.4	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1354.7	2	155	-72.2	5.7	863.6	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1369.8	3	155	-105.3	5.6	793.7	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1385.0	4	155	-120.1	5.8	789.7	168, 169, 170, 256, 257, 258, 259, 260
2012.8	1	156	-81.4	5.4	733.4	171, 172, 173, 200, 201, 202, 203, 204
2028.0	2	156	-57.3	5.8	827.0	171, 172, 173, 200, 201, 202, 203, 204
2043.1	3	156	-100.3	5.3	791.5	171, 172, 173, 200, 201, 202, 203, 204
2058.2	4	156	-123.9	5.1	812.7	171, 172, 173, 200, 201, 202, 203, 204
2254.5	1	157	-85.6	5.5	753.0	176, 177, 178, 180, 182
2269.7	2	157	-81.0	5.5	854.2	176, 177, 178, 180, 182
2284.8	3	157	-107.3	5.2	798.8	174, 175, 176, 177, 178, 179, 180, 182
2299.9	4	157	-125.0	5.2	823.4	176, 177, 178, 180, 182
2194.1	1	158	-78.4	5.5	734.9	183, 184, 185, 186, 187, 188
2209.2	2	158	-78.3	5.5	845.2	183, 184, 185, 186, 187, 188
2224.3	3	158	-105.8	5.2	787.6	183, 184, 185, 186, 187, 188
2239.5	4	158	-116.9	5.1	850.4	183, 184, 185, 186, 187, 188
2133.7	1	159	-81.9	5.5	754.6	189, 191, 192, 193
2148.8	2	159	-89.8	4.9	850.9	189, 190, 191, 192, 193, 194
2163.9	3	159	-102.0	5.3	706.5	189, 190, 191, 192, 193, 194
2179.1	4	159	-126.7	5.2	768.7	189, 190, 191, 192, 193, 194
2073.2	1	160	-84.0	5.5	741.0	197, 198, 199
2088.3	2	160	-64.5	5.8	844.6	195, 196, 197, 198, 199
2103.4	3	160	-102.0	5.5	769.8	195, 196, 197, 198, 199
2118.6	4	160	-125.3	5.1	831.4	195, 196, 197, 198, 199
2012.8	1	161	-70.8	5.5	721.9	171, 172, 173, 200, 201, 202, 203, 204
2027.9	2	161	-71.8	5.6	831.7	171, 172, 173, 200, 201, 202, 203, 204
2043.0	3	161	-99.0	5.2	791.2	171, 172, 173, 200, 201, 202, 203, 204
2058.1	4	161	-115.3	5.1	838.4	171, 172, 173, 200, 201, 202, 203, 204

Shot Summary Listing (5/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
1952.2	1	162	-70.6	5.2	811.7	205, 206, 207, 208, 209
1967.3	2	162	-62.4	5.7	845.5	205, 206, 207, 208, 209
1982.4	3	162	-95.1	5.3	738.3	205, 206, 207, 208, 209
1997.5	4	162	-100.5	5.7	753.5	205, 206, 207, 208, 209
1891.7	1	163	35.7	5.6	750.1	210, 211, 212, 213, 214
1906.9	2	163	14.1	5.8	817.7	210, 211, 212, 213, 214
1922.0	3	163	-61.4	5.0	771.3	210, 211, 212, 213, 214
1937.1	4	163	-82.7	5.8	777.7	210, 211, 212, 213, 214
1831.3	1	164	-64.8	5.6	705.8	215, 216, 219
1846.4	2	164	-64.5	5.6	862.8	215, 216, 217, 218, 219
1861.6	3	164	-95.2	5.3	772.9	215, 216, 217, 218, 219
1876.7	4	164	-96.2	5.8	799.9	215, 216, 217, 218, 219
1770.9	1	165	-60.8	5.6	700.6	220, 221, 222, 224
1786.0	2	165	-59.8	5.6	854.2	220, 221, 222, 224
1801.1	3	165	-91.5	5.3	770.2	221, 222, 223, 224, 225
1816.2	4	165	-99.4	5.8	753.2	220, 221, 222, 224
1710.3	1	166	-59.4	5.6	704.8	226, 230
1725.5	2	166	-63.0	5.6	857.0	226, 230
1740.6	3	166	-90.7	5.3	794.5	226, 227, 228, 229, 230
1755.7	4	166	-96.9	5.8	761.7	226, 227, 230
1649.8	1	167	-57.7	5.6	761.9	231, 232, 233, 234, 235
1665.0	2	167	-57.6	5.4	860.2	231, 232, 233, 234, 235
1680.1	3	167	-92.0	5.3	786.7	231, 232, 233
1695.2	4	167	-104.5	5.8	788.6	231, 232, 233, 234, 235
1589.3	1	168	-79.4	5.5	761.7	236, 237, 238, 239, 240
1604.4	2	168	-79.4	5.1	868.0	236, 237, 238, 239, 240
1619.6	3	168	-104.6	5.3	788.0	236, 237, 238, 239, 240
1634.7	4	168	-131.9	4.8	792.5	236, 237, 238, 239, 240
1528.9	1	169	-117.1	5.4	795.2	241, 242, 243, 244, 245
1544.0	2	169	-118.8	5.6	875.5	241, 242, 245

Shot Summary Listing (6/6)

Measured Depth [m]	Tool Number	Stack Number	Relative Bearing [deg]	Caliper [in]	Anchoring force [kg]	Shot number
1559.1	3	169	174.0	5.7	724.0	241, 242, 243, 244, 245
1574.3	4	169	123.0	5.3	819.4	241, 242, 243, 244, 245
1468.4	1	170	140.7	5.9	802.0	246, 247, 248, 249, 250
1483.5	2	170	133.2	5.8	867.2	246, 247, 248, 249, 250
1498.7	3	170	90.7	5.8	788.3	246, 247, 248, 249, 250
1513.8	4	170	69.3	5.9	794.4	246, 247, 248, 249, 250
1407.9	1	171	-67.0	5.3	830.4	251, 252, 253, 254, 255
1423.0	2	171	-54.4	5.6	861.2	251, 252, 253, 254, 255
1438.1	3	171	-92.1	5.4	777.1	251, 252, 253, 254, 255
1453.2	4	171	-112.4	5.7	852.0	251, 252, 253, 254, 255
1340.1	1	172	113.5	5.9	803.7	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1355.3	2	172	112.5	5.8	884.9	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1370.4	3	172	71.4	5.9	778.7	9, 10, 11, 12, 13, 168, 169, 170, 256, 257, 258, 259, 260
1385.5	4	172	49.3	5.9	806.0	168, 169, 170, 256, 257, 258, 259, 260
1279.7	1	173	117.5	5.4	837.6	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1294.8	2	173	123.8	5.8	882.4	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1309.9	3	173	81.1	5.7	784.7	14, 15, 16, 17, 18, 261, 262, 263, 264, 265
1325.0	4	173	60.5	5.9	812.9	14, 15, 16, 17, 18, 261, 262, 263, 264, 265

Observer's Note (1/5)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
851.5	01:20:24	SHAK	1			
851.5	01:20:45	BKGD	2			
851.5	01:21:11	SHOT	3	1	A	QC @ 791.9m
851.5	01:21:52	SHOT	4	1	A	QC @ 791.9m
851.5	01:23:06	SHOT	5	1	A	QC @ 791.9m
851.5	01:23:47	SHOT	6	1	A	QC @ 791.9m
1385.6	02:38:09	SHAK	7			
1385.6	02:38:54	SHOT	8	2	A	
1385.6	02:39:36	SHOT	9	2	A	Start Survey Tool hung-up
1385.6	02:40:17	SHOT	10	2	A	
1385.6	02:40:58	SHOT	11	2	A	
1385.6	02:41:39	SHOT	12	2	A	
1385.6	02:42:20	SHOT	13	2	A	
1325.2	02:50:34	SHOT	14	3	A	
1325.2	02:51:15	SHOT	15	3	A	
1325.2	02:51:56	SHOT	16	3	A	
1325.2	02:52:38	SHOT	17	3	A	
1325.2	02:53:19	SHOT	18	3	A	
1264.6	03:01:04	SHOT	19	4	A	
1264.6	03:01:45	SHOT	20	4	A	
1264.6	03:02:26	SHOT	21	4	A	
1264.6	03:03:08	SHOT	22	4	A	
1264.6	03:03:49	SHOT	23	4	A	
1264.6	03:04:30	SHOT	24	4	A	
1264.6	03:05:11	SHOT	25	4	A	
1264.6	03:05:52	SHOT	26	4	A	
1203.9	03:13:30	SHOT	27	5	A	
1203.9	03:14:25	SHOT	28	5	A	
1203.9	03:15:06	SHOT	29	5	A	
1203.9	03:15:48	SHOT	30	5	A	
1203.9	03:16:29	SHOT	31	5	A	
1203.9	03:17:10	SHOT	32	5	A	
1143.5	03:24:41	SHOT	33	6	A	
1143.5	03:25:22	SHOT	34	6	A	
1143.5	03:27:14	SHOT	35	6	A	
1143.5	03:27:55	SHOT	36	6	A	
1143.5	03:28:46	SHOT	37	6	A	
1143.5	03:29:27	SHOT	38	6	A	
1143.5	03:30:08	SHOT	39	6	A	
1083.2	03:38:01	SHOT	40	7	A	
1083.2	03:38:42	SHOT	41	7	A	
1083.2	03:38:57	BKGD	42			
1083.2	03:39:13	BKGD	43			
1083.2	03:39:38	SHOT	44	7	A	
1083.2	03:40:19	SHOT	45	7	A	
1083.2	03:41:00	SHOT	46	7	A	
1083.2	03:41:41	SHOT	47	7	A	
1083.2	03:42:22	SHOT	48	7	A	
1083.2	03:42:50	SHOT	49	7	A	
1083.2	03:43:31	SHOT	50	7	A	
1022.7	03:50:19	SHOT	51	8	A	
1022.7	03:51:00	SHOT	52	8	A	
1022.7	03:51:41	SHOT	53	8	A	
1022.7	03:52:22	SHOT	54	8	A	
1022.7	03:53:03	SHOT	55	8	A	
1022.7	03:53:17	SHOT	56	8	A	
1022.7	03:53:58	SHOT	57	8	A	
962.2	04:00:47	SHOT	58	9	A	
962.2	04:01:28	SHOT	59	9	A	
962.2	04:02:09	SHOT	60	9	A	
962.2	04:02:50	SHOT	61	9	A	
962.2	04:03:31	SHOT	62	9	A	
962.2	04:03:51	SHOT	63	9	A	
962.2	04:04:32	SHOT	64	9	A	
901.8	04:12:38	SHOT	65	10	A	

Observer's Note (2/5)

Well depth[m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
901.8	04:13:19	SHOT	66	10	A	
901.8	04:14:32	SHOT	67	10	A	
901.8	04:15:13	SHOT	68	10	A	
901.8	04:15:54	SHOT	69	10	A	
901.8	04:17:31	SHOT	70	10	A	
901.8	04:18:12	SHOT	71	10	A	
901.8	04:18:44	ENLO	72			
901.8	04:19:13	ENHI	73			
901.8	04:20:00	SHAK	74			
841.2	04:27:00	SHOT	75	11	A	
841.2	04:27:41	SHOT	76	11	A	
841.2	04:28:22	SHOT	77	11	A	
841.2	04:29:04	SHOT	78	11	A	
841.2	04:29:45	SHOT	79	11	A	
780.7	04:35:49	SHOT	80	12	A	
780.7	04:36:31	SHOT	81	12	A	
780.7	04:37:12	SHOT	82	12	A	
780.7	04:37:53	SHOT	83	12	A	
780.7	04:38:34	SHOT	84	12	A	
719.5	04:43:49	SHOT	85	13	A	
719.5	04:44:31	SHOT	86	13	A	
719.5	04:45:12	SHOT	87	13	A	
719.5	04:45:53	SHOT	88	13	A	
719.5	04:46:34	SHOT	89	13	A	
659.8	04:52:24	SHOT	90	14	A	
659.8	04:53:05	SHOT	91	14	A	
659.8	04:53:46	SHOT	92	14	A	
659.8	04:54:27	SHOT	93	14	A	
659.8	04:55:08	SHOT	94	14	A	
599.3	05:00:06	SHOT	95	15	A	
599.3	05:00:47	SHOT	96	15	A	
599.3	05:01:28	SHOT	97	15	A	
599.3	05:02:09	SHOT	98	15	A	
599.3	05:02:50	SHOT	99	15	A	
538.9	05:09:03	SHOT	100	16	A	
538.9	05:09:44	SHOT	101	16	A	
538.9	05:10:25	SHOT	102	16	A	
538.9	05:11:06	SHOT	103	16	A	
538.9	05:11:47	SHOT	104	16	A	
478.4	05:17:05	SHOT	105	17	A	
478.4	05:17:46	SHOT	106	17	A	
478.4	05:18:27	SHOT	107	17	A	
478.4	05:19:08	SHOT	108	17	A	
478.4	05:19:49	SHOT	109	17	A	
417.9	05:25:18	SHOT	110	18	A	
417.9	05:25:59	SHOT	111	18	A	
417.9	05:26:40	SHOT	112	18	A	
417.9	05:27:21	SHOT	113	18	A	
417.9	05:28:02	SHOT	114	18	A	
357.4	05:33:31	SHOT	115	19	A	
357.4	05:34:13	SHOT	116	19	A	
357.4	05:34:54	SHOT	117	19	A	
357.4	05:35:35	SHOT	118	19	A	
357.4	05:36:16	SHOT	119	19	A	
296.9	05:40:27	SHOT	120	20	A	
296.9	05:41:08	SHOT	121	20	A	
296.9	05:41:49	SHOT	122	20	A	
296.9	05:42:31	SHOT	123	20	A	
296.9	05:43:12	SHOT	124	20	A	
236.4	05:47:53	SHOT	125	21	A	
236.4	05:48:35	SHOT	126	21	A	
236.4	05:49:16	SHOT	127	21	A	
236.4	05:49:57	SHOT	128	21	A	
236.4	05:51:17	SHOT	129	21	A	
174.8	05:58:05	SHOT	130	22	A	

Observer's Note (3/5)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
174.8	05:58:46	SHOT	131	22	A	
174.8	05:59:27	SHOT	132	22	A	
174.8	06:00:08	SHOT	133	22	A	
174.8	06:00:49	SHOT	134	22	A	
115.3	06:09:27	SHOT	135	23	A	
115.3	06:10:08	SHOT	136	23	A	
115.3	06:10:49	SHOT	137	23	A	
115.3	06:11:30	SHOT	138	23	A	
115.3	06:12:11	SHOT	139	23	A	
115.3	06:12:52	SHOT	140	23	A	
115.3	06:16:56	ENLO	141			
115.3	06:17:20	ENHI	142			
115.3	06:17:29	ETHD	143			
115.3	06:17:43	DRNG	144			
115.3	06:17:58	GA02	145			
115.3	06:18:08	GA04	146			
115.3	06:18:17	GA08	147			
115.3	06:18:27	GA16	148			
115.3	06:18:37	GA32	149			
115.3	06:18:53	XTLK	150			
115.3	06:19:11	XTLK	151			
115.3	06:19:30	XTLK	152			
115.3	06:19:48	EIMP	153			
1079.7	14:15:53	ENLO	154			
1079.7	14:16:19	ENHI	155			
1079.7	14:16:29	ETHD	156			
1079.7	14:16:45	DRNG	157			
1079.7	14:17:01	GA02	158			
1079.7	14:17:13	GA04	159			
1079.7	14:17:24	GA08	160			
1079.7	14:17:36	GA16	161			
1079.7	14:17:48	GA32	162			
1079.7	14:18:05	XTLK	163			
1079.7	14:18:25	XTLK	164			
1079.7	14:18:46	XTLK	165			
1079.7	14:19:05	EIMP	166			
1386.3	14:57:43	SHOT	168	26	A	QC @ 1385m -- this is TDS survey
1386.3	14:58:45	SHOT	169	26	A	QC @ 1385m
1386.3	14:59:26	SHOT	170	26	A	QC @ 1385m
2059.6	15:40:37	SHOT	171	27	A	QC @ 2085.2m
2059.6	15:41:18	SHOT	172	27	A	QC @ 2085.2m
2059.6	15:41:59	SHOT	173	27	A	QC @ 2085.2m
2301.3	16:07:15	SHOT	174	28	A	
2301.3	16:07:56	SHOT	175	28	A	
2301.3	16:08:56	SHOT	176	28	A	
2301.3	16:09:37	SHOT	177	28	A	
2301.3	16:10:24	SHOT	178	28	A	
2301.3	16:11:05	SHOT	179	28	A	
2301.3	16:11:46	SHOT	180	28	A	
2301.3	16:12:27	SHOT	181	28	A	
2301.3	16:13:08	SHOT	182	28	A	
2240.8	16:26:59	SHOT	183	29	A	
2240.8	16:27:40	SHOT	184	29	A	
2240.8	16:28:21	SHOT	185	29	A	
2240.8	16:29:12	SHOT	186	29	A	
2240.8	16:29:53	SHOT	187	29	A	
2240.8	16:30:34	SHOT	188	29	A	
2180.4	16:36:16	SHOT	189	30	A	
2180.4	16:36:57	SHOT	190	30	A	
2180.4	16:37:38	SHOT	191	30	A	
2180.4	16:38:19	SHOT	192	30	A	
2180.4	16:39:00	SHOT	193	30	A	
2180.4	16:39:42	SHOT	194	30	A	
2119.9	16:50:21	SHOT	195	31	A	
2119.9	16:51:02	SHOT	196	31	A	

Observer's Note (4/5)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
2119.9	16:52:00	SHOT	197	31	A	
2119.9	16:52:41	SHOT	198	31	A	
2119.9	16:53:22	SHOT	199	31	A	
2059.5	16:58:16	SHOT	200	32	A	
2059.5	16:58:57	SHOT	201	32	A	
2059.5	16:59:38	SHOT	202	32	A	
2059.5	17:00:19	SHOT	203	32	A	
2059.5	17:01:00	SHOT	204	32	A	
1998.9	17:06:00	SHOT	205	33	A	
1998.9	17:06:41	SHOT	206	33	A	
1998.9	17:07:22	SHOT	207	33	A	
1998.9	17:08:04	SHOT	208	33	A	
1998.9	17:08:45	SHOT	209	33	A	
1938.5	17:20:13	SHOT	210	34	A	
1938.5	17:20:54	SHOT	211	34	A	
1938.5	17:21:35	SHOT	212	34	A	
1938.5	17:22:16	SHOT	213	34	A	
1938.5	17:22:57	SHOT	214	34	A	
1878.1	17:29:33	SHOT	215	35	A	
1878.1	17:30:14	SHOT	216	35	A	
1878.1	17:31:12	SHOT	217	35	A	
1878.1	17:31:53	SHOT	218	35	A	
1878.1	17:32:34	SHOT	219	35	A	
1817.6	17:37:47	SHOT	220	36	A	
1817.6	17:38:39	SHOT	221	36	A	
1817.6	17:41:12	SHOT	222	36	A	
1817.6	17:41:53	SHOT	223	36	A	
1817.6	17:42:34	SHOT	224	36	A	
1817.6	17:43:23	SHOT	225	36	A	
1757.1	17:58:19	SHOT	226	37	A	
1757.1	17:59:00	SHOT	227	37	A	
1757.1	17:59:41	SHOT	228	37	A	
1757.1	18:00:22	SHOT	229	37	A	
1757.1	18:01:13	SHOT	230	37	A	
1696.6	18:08:49	SHOT	231	38	A	
1696.6	18:09:30	SHOT	232	38	A	
1696.6	18:10:11	SHOT	233	38	A	
1696.6	18:10:52	SHOT	234	38	A	
1696.6	18:11:34	SHOT	235	38	A	
1636.1	18:24:52	SHOT	236	39	A	
1636.1	18:25:33	SHOT	237	39	A	
1636.1	18:26:14	SHOT	238	39	A	
1636.1	18:26:55	SHOT	239	39	A	
1636.1	18:27:36	SHOT	240	39	A	
1575.6	18:32:41	SHOT	241	40	A	
1575.6	18:33:22	SHOT	242	40	A	
1575.6	18:34:03	SHOT	243	40	A	
1575.6	18:34:44	SHOT	244	40	A	
1575.6	18:35:25	SHOT	245	40	A	
1515.2	18:40:03	SHOT	246	41	A	
1515.2	18:40:44	SHOT	247	41	A	
1515.2	18:41:26	SHOT	248	41	A	
1515.2	18:42:07	SHOT	249	41	A	
1515.2	18:42:48	SHOT	250	41	A	
1454.6	18:53:17	SHOT	251	42	A	
1454.6	18:53:58	SHOT	252	42	A	
1454.6	18:54:39	SHOT	253	42	A	
1454.6	18:55:20	SHOT	254	42	A	
1454.6	18:56:01	SHOT	255	42	A	
1386.9	19:02:29	SHOT	256	43	A	
1386.9	19:03:10	SHOT	257	43	A	
1386.9	19:03:51	SHOT	258	43	A	
1386.9	19:04:32	SHOT	259	43	A	
1386.9	19:05:14	SHOT	260	43	A	
1326.4	19:10:17	SHOT	261	44	A	

Observer's Note (5/5)

Well depth [m]	Time	Shot Type	Shot#	Stack#	Source	Remarks
1326.4	19:10:58	SHOT	262	44	A	
1326.4	19:11:39	SHOT	263	44	A	
1326.4	19:12:20	SHOT	264	44	A	
1326.4	19:13:01	SHOT	265	44	A	

GR Correlation Report

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT VSIT_098LUP FN:156 PRODUCER 05−Mar−2008 19:02 1696.1 M 244.8 M

OP System Version: 15C0−309

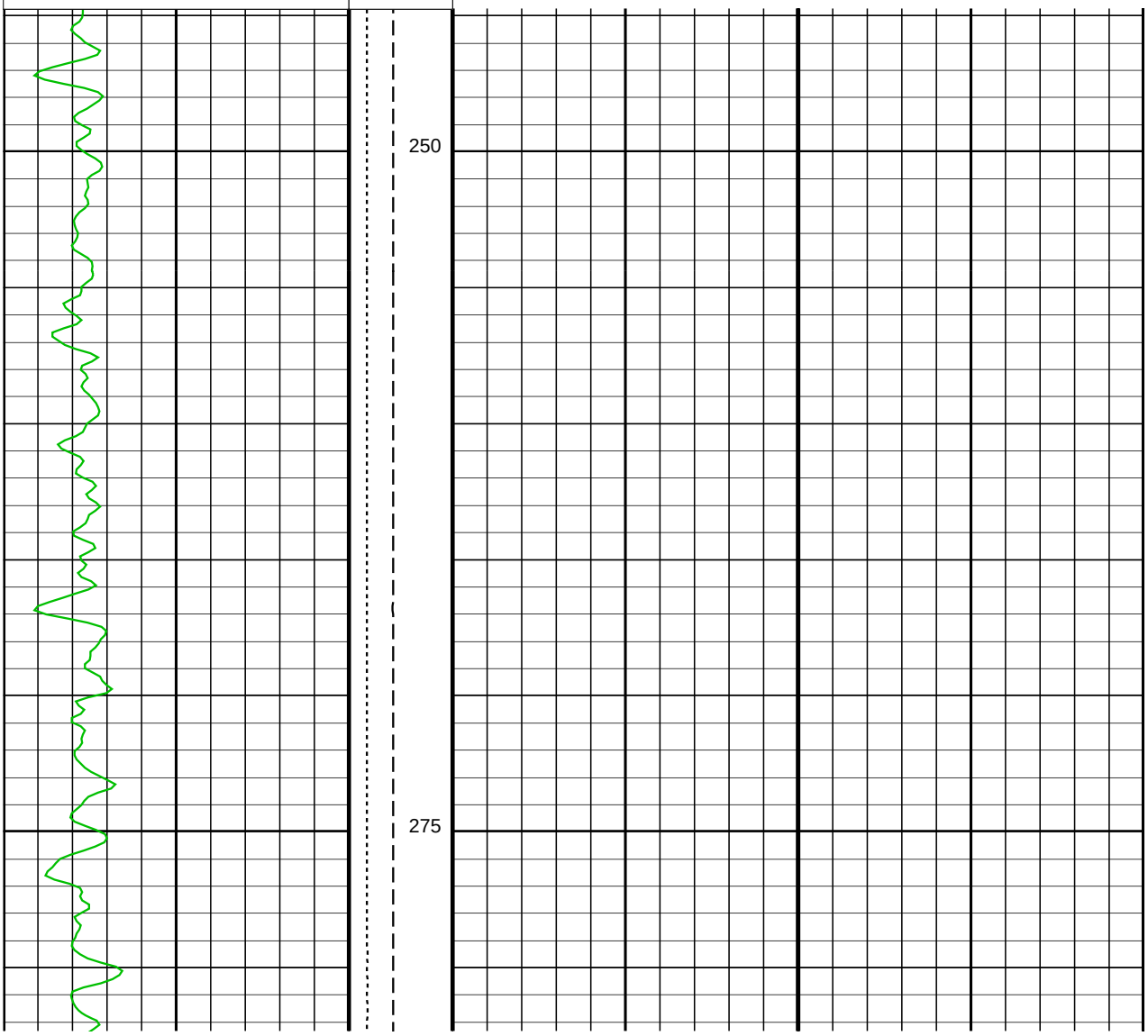
MCM

VSIT−G SKK−3368−VSI−WB2_9_17_I STGC−B 15C0−309

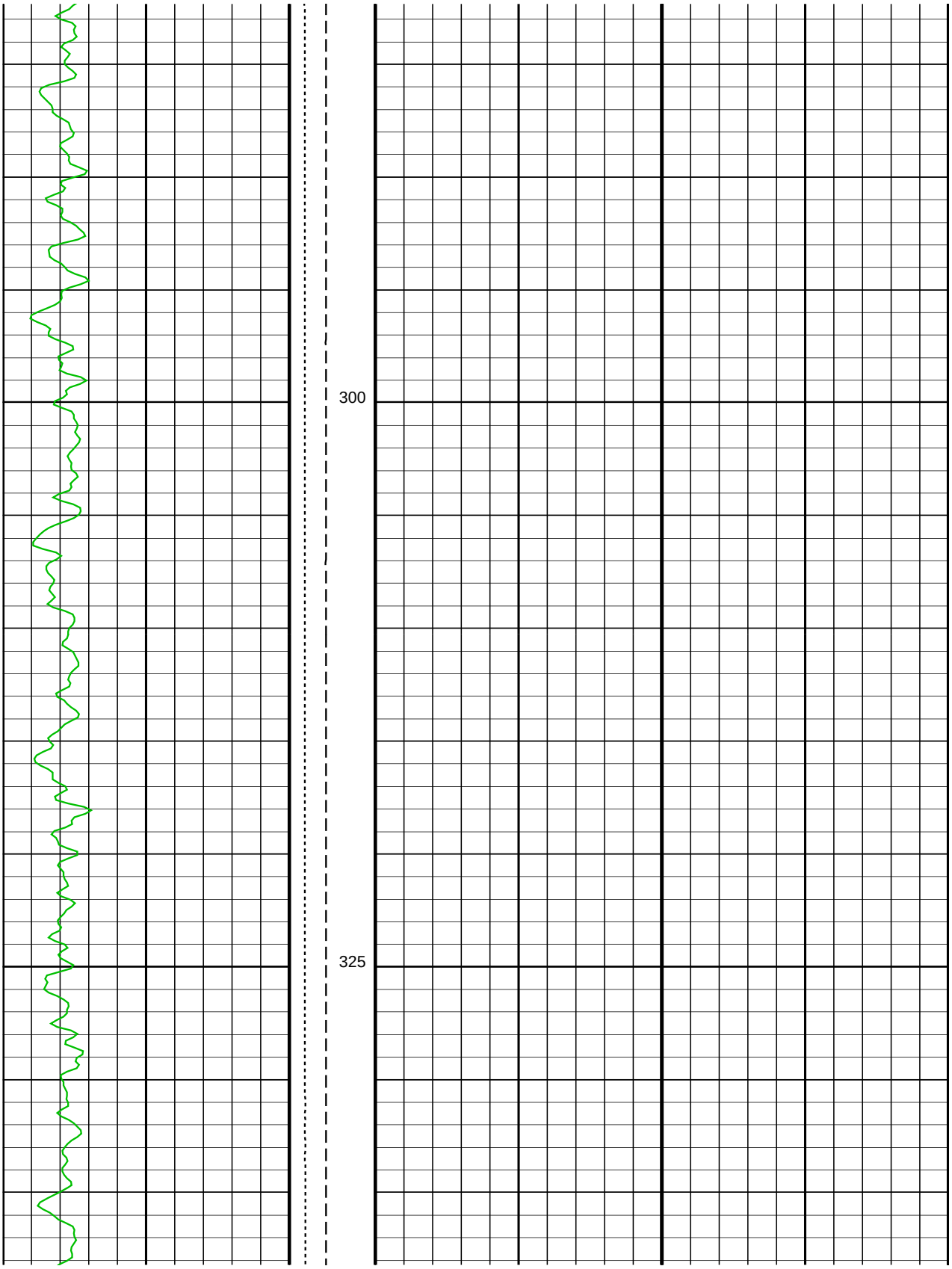
Calibrated Downhole Force (CDF) (LBF)
−200 1800

Gamma Ray (GR_STGC)
0 (GAPI) 150

Tension (TENS) (LBF)
0 6000



Schlumberger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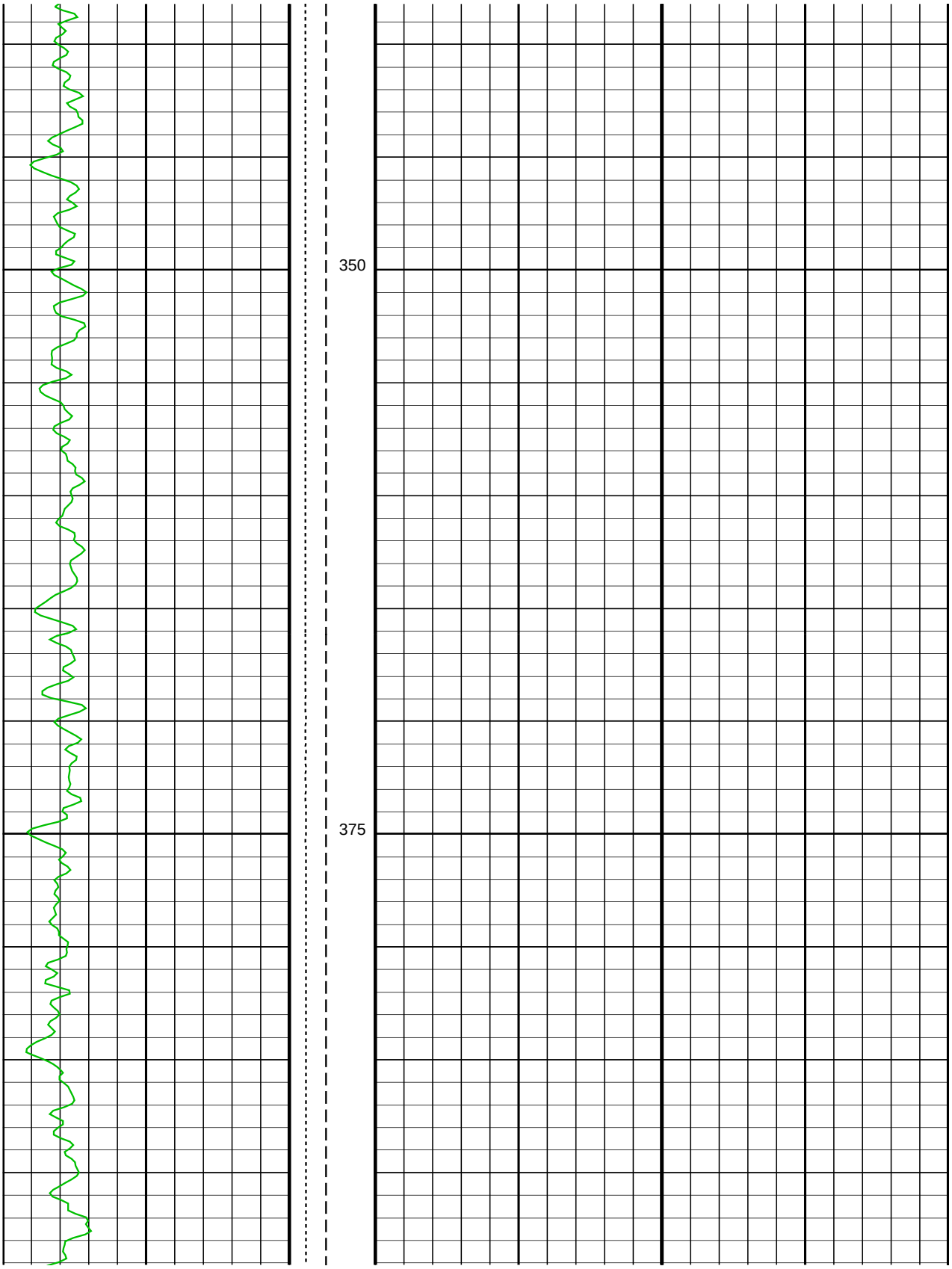
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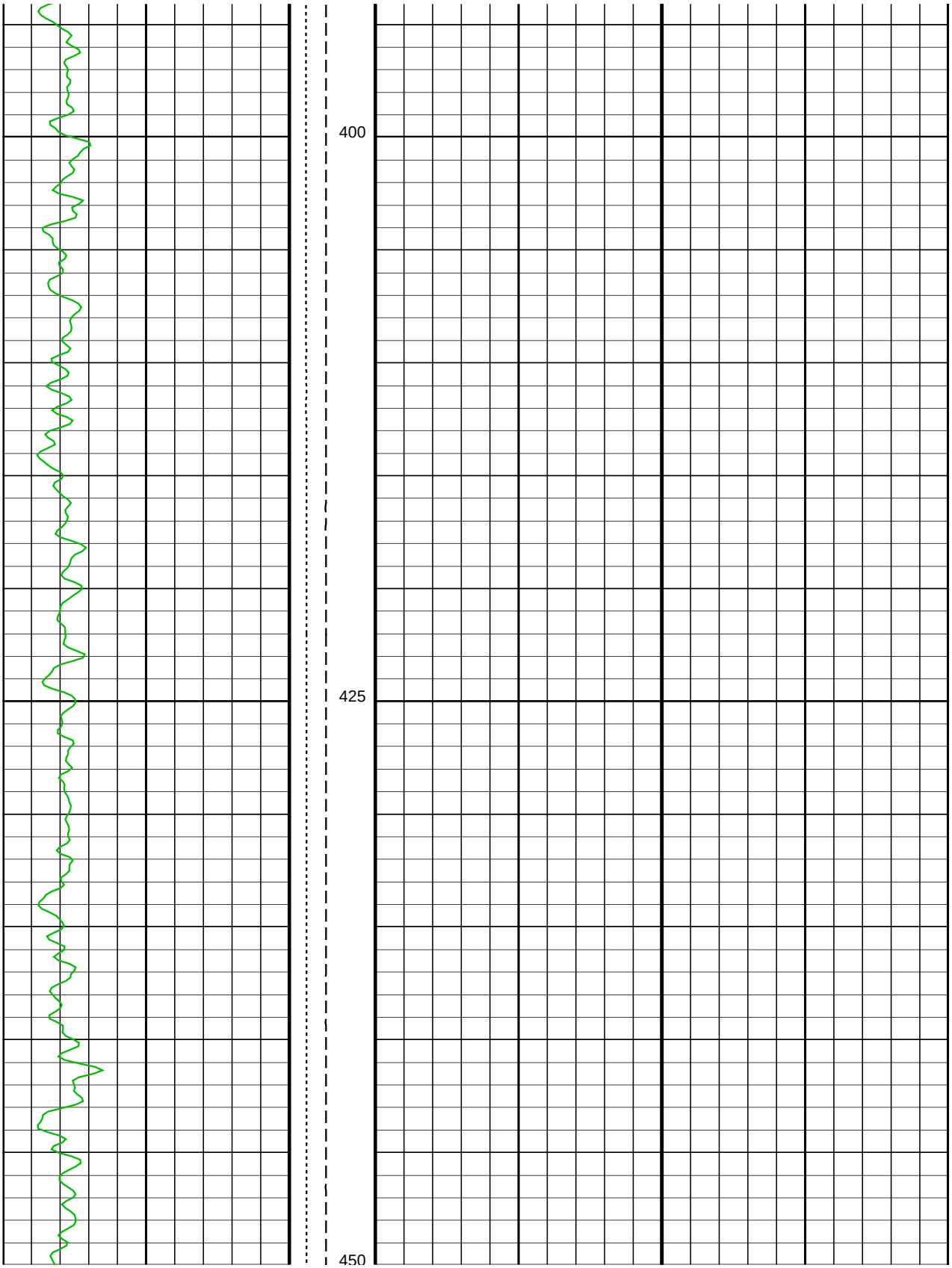
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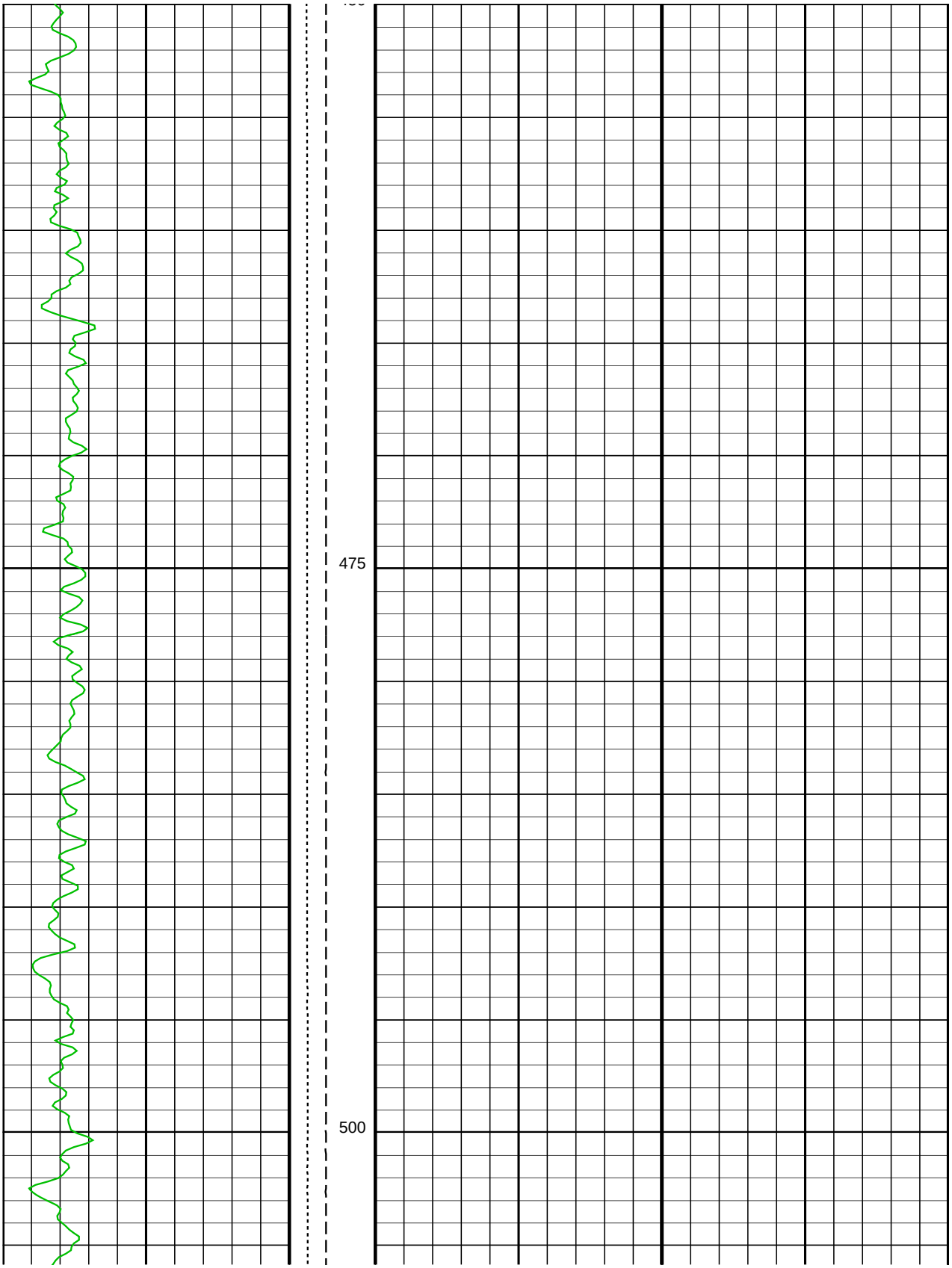
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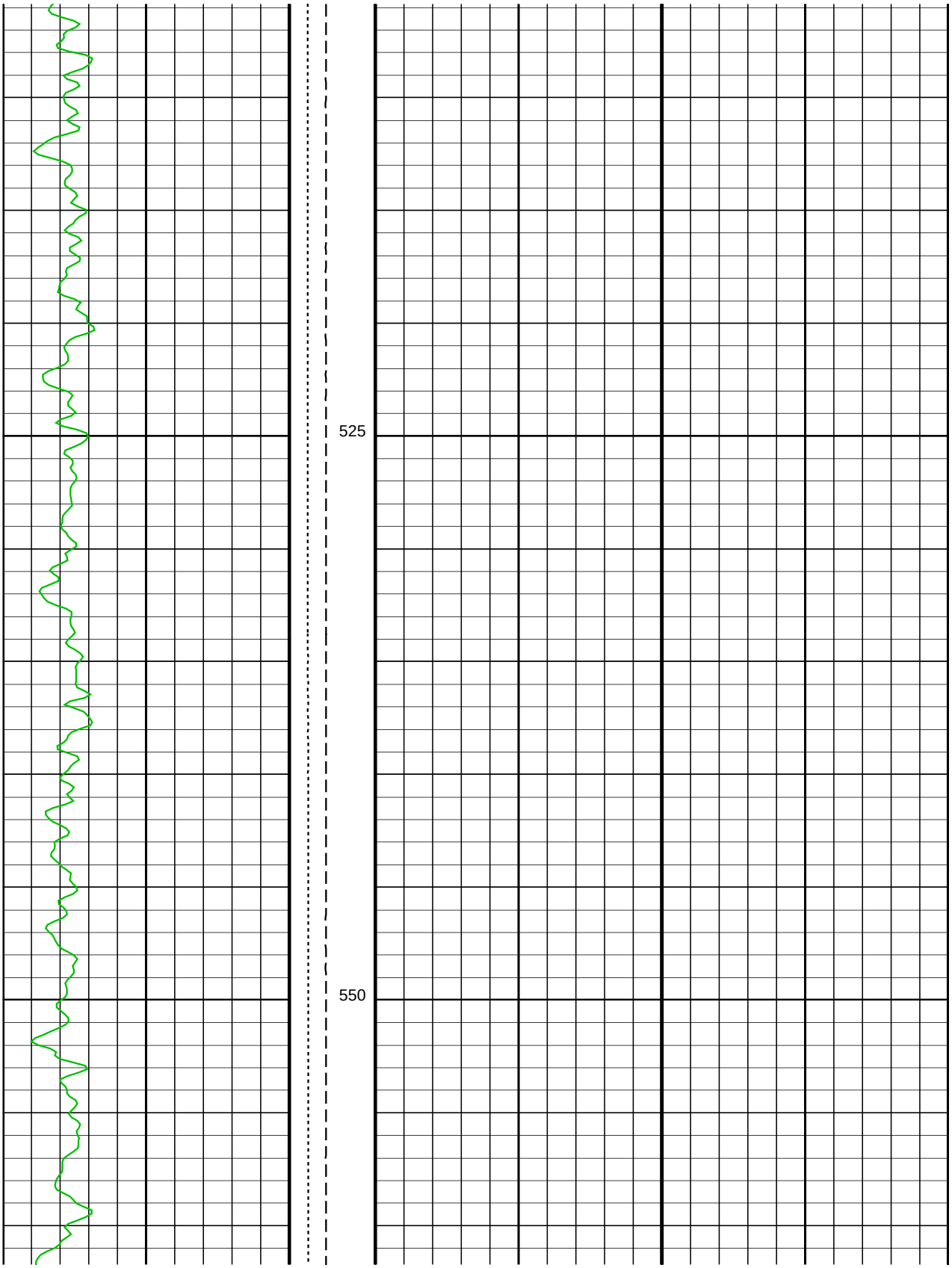
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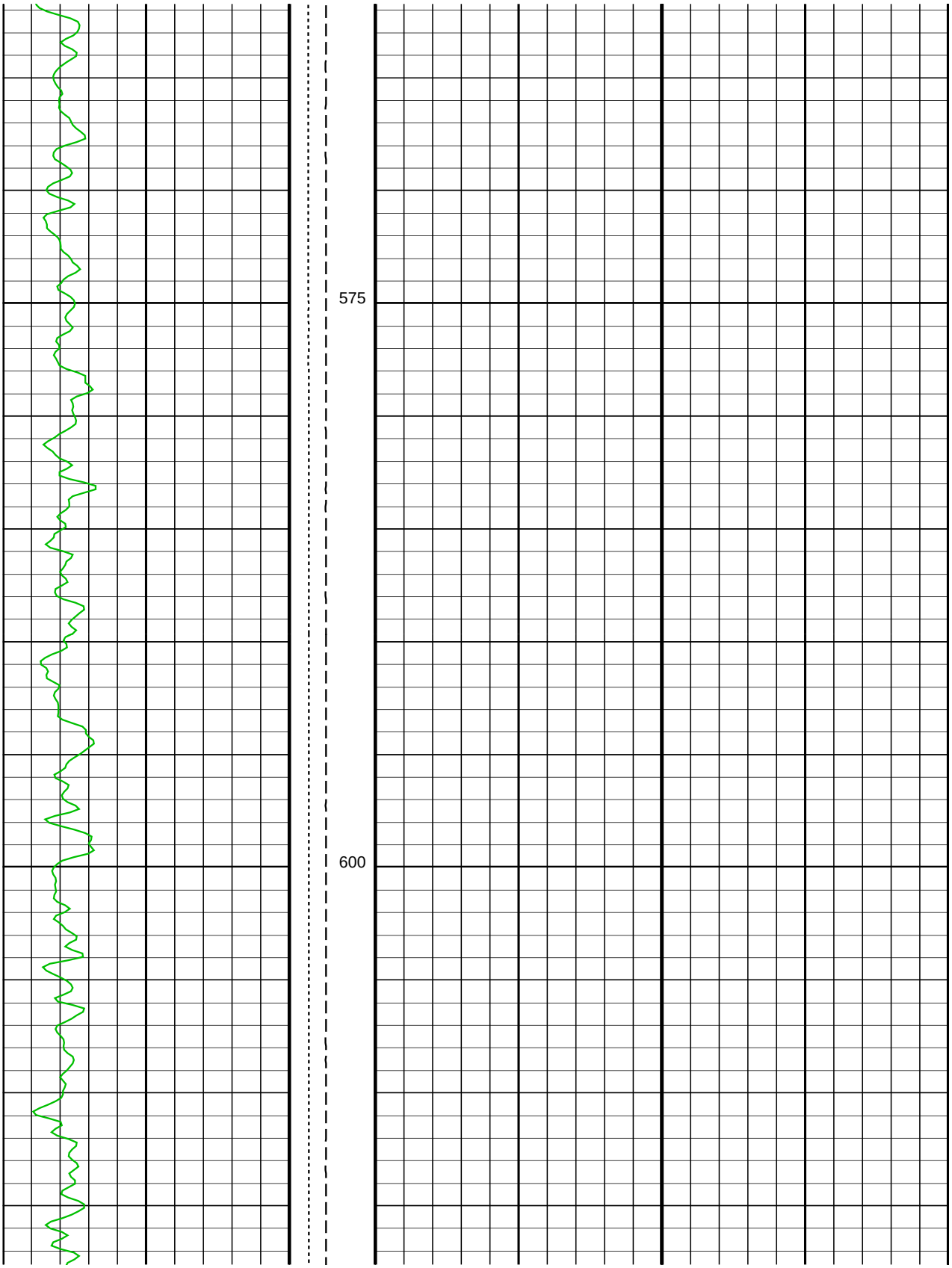
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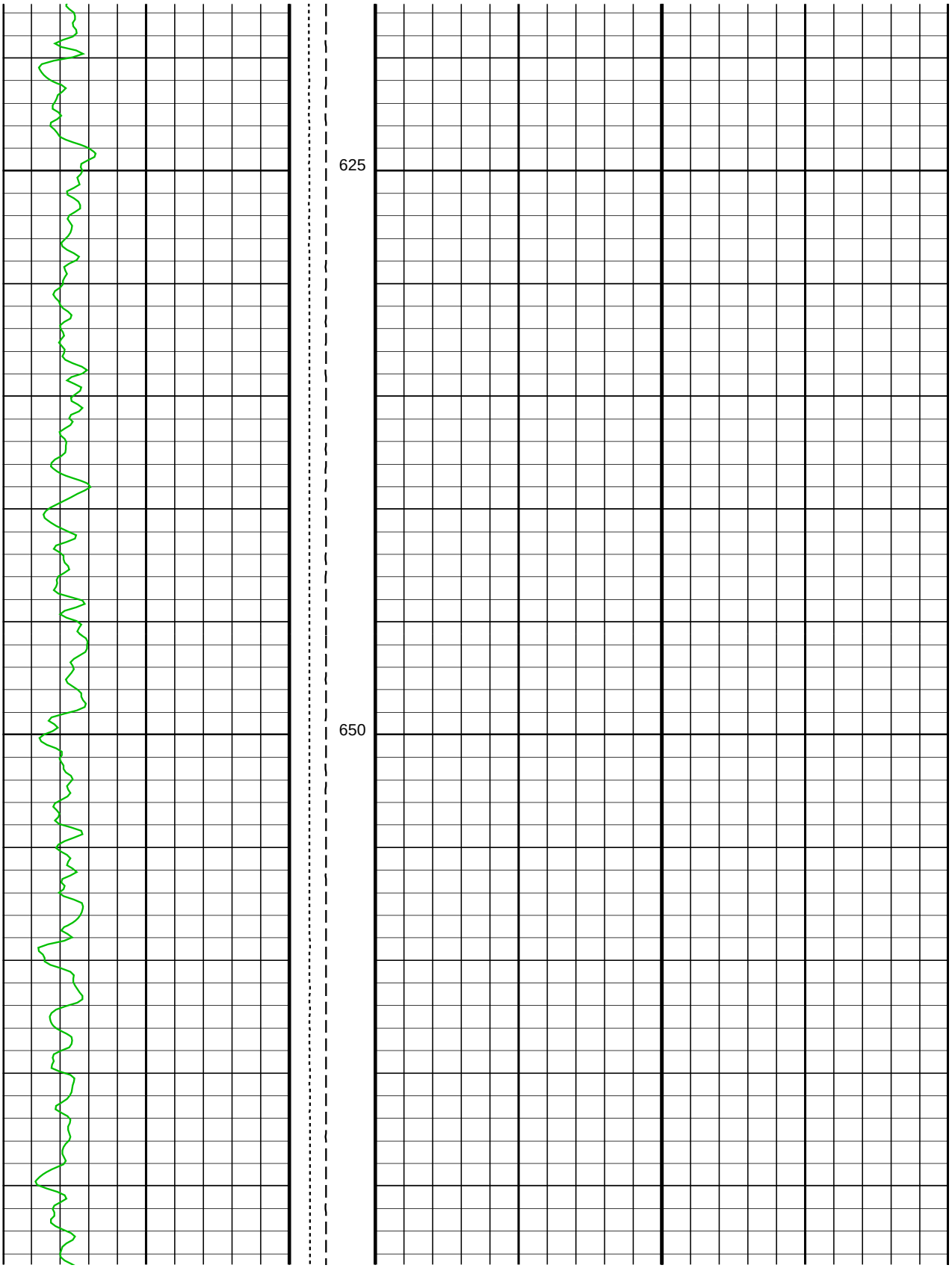
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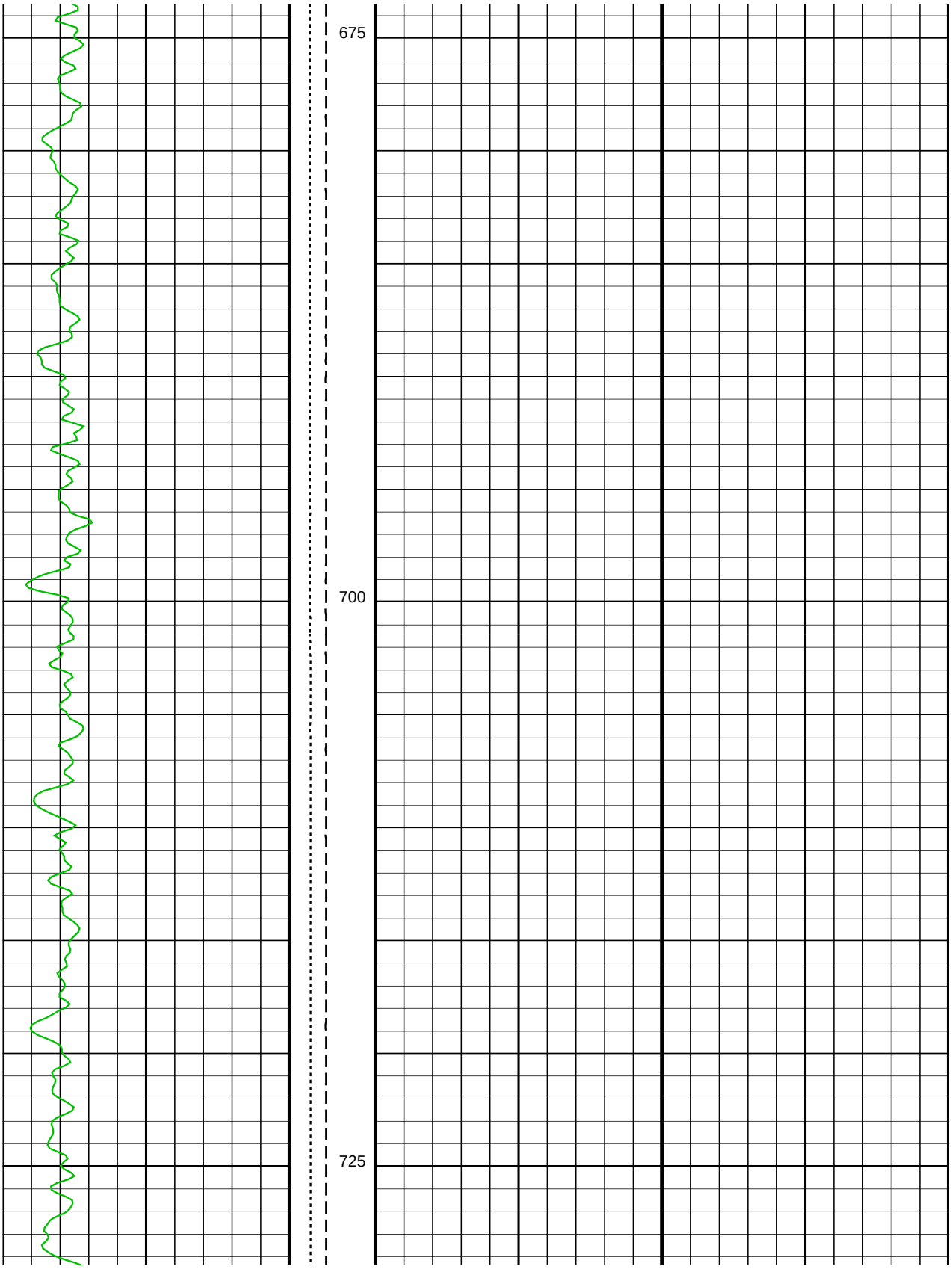
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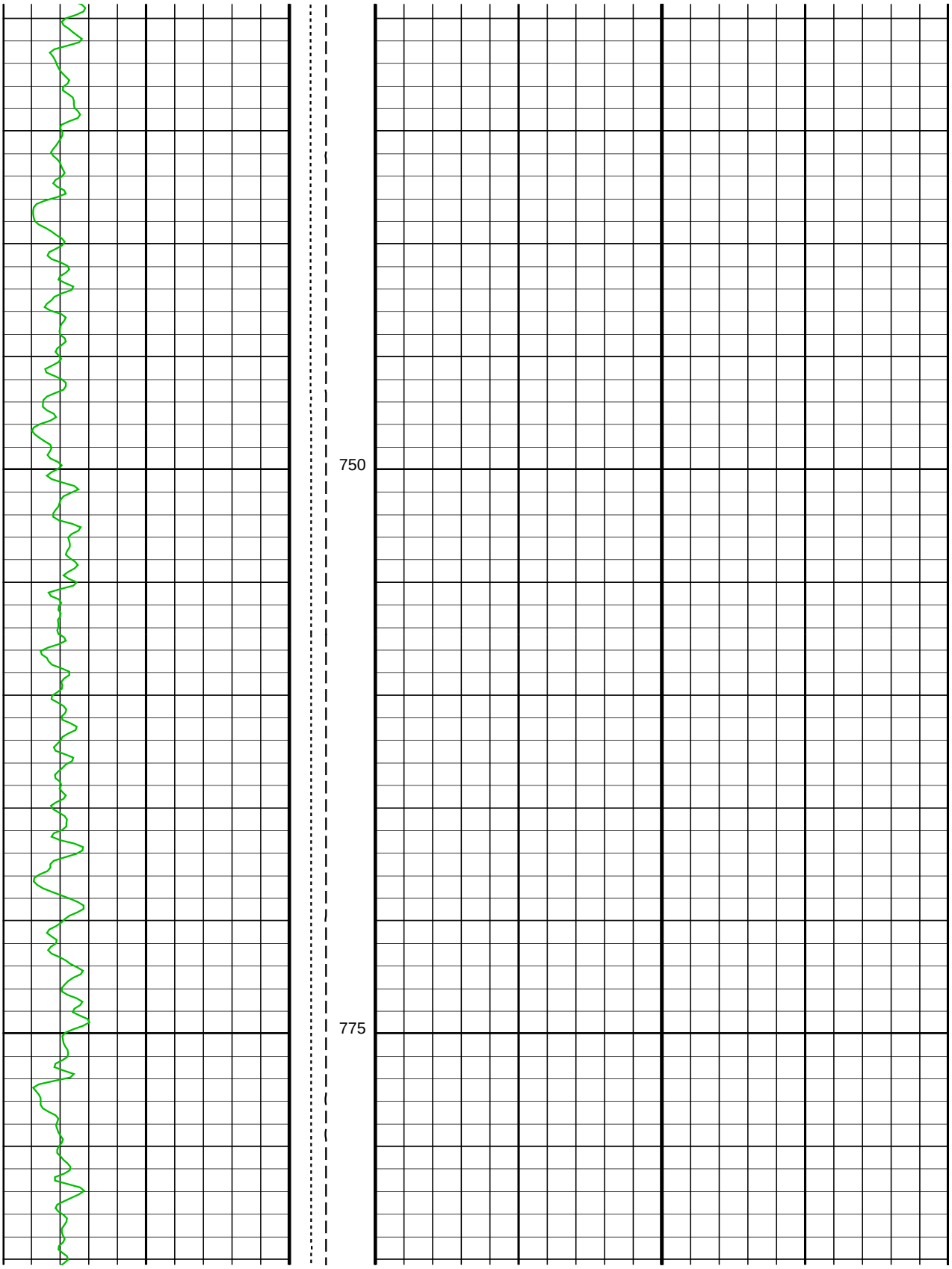
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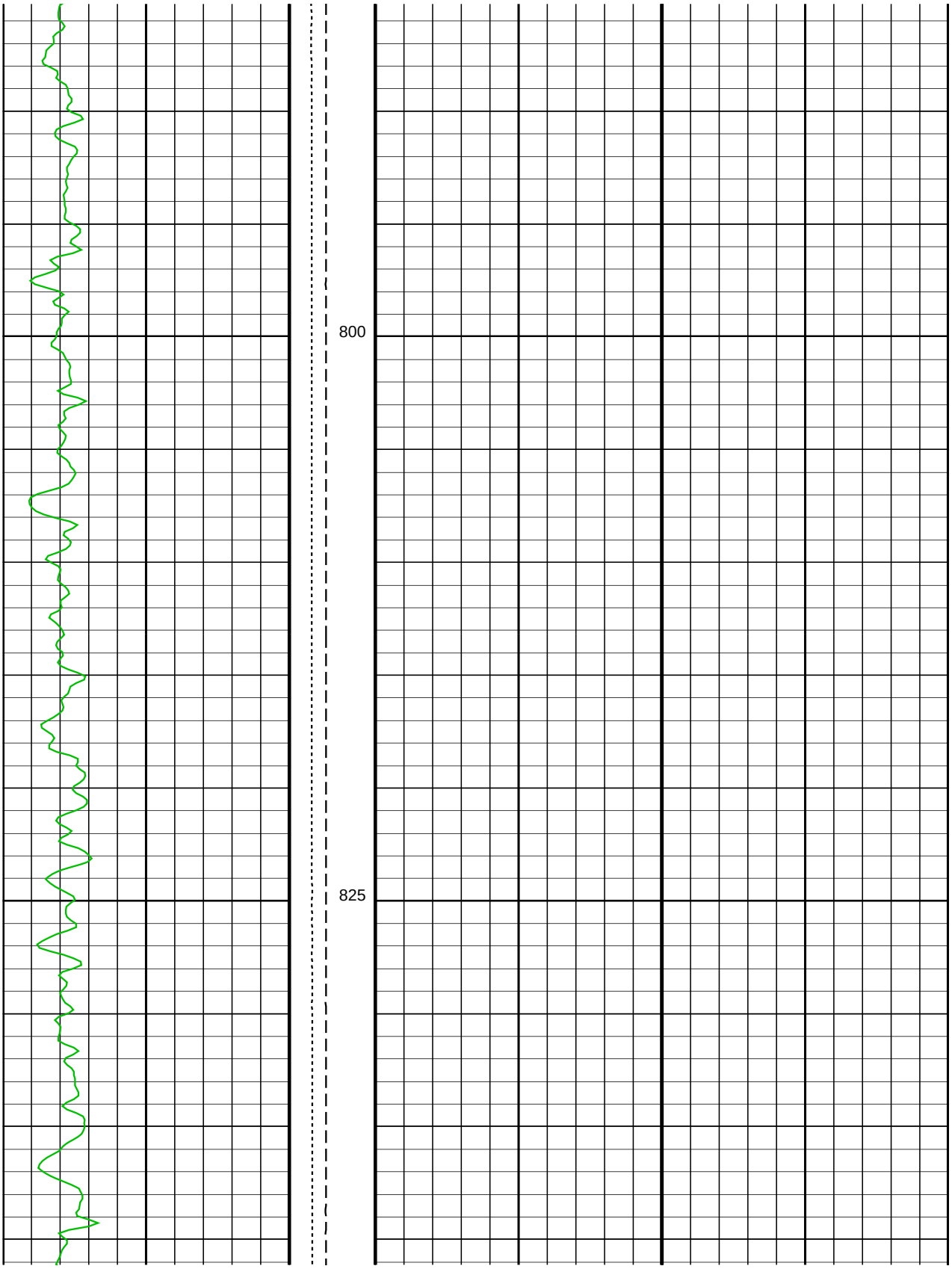
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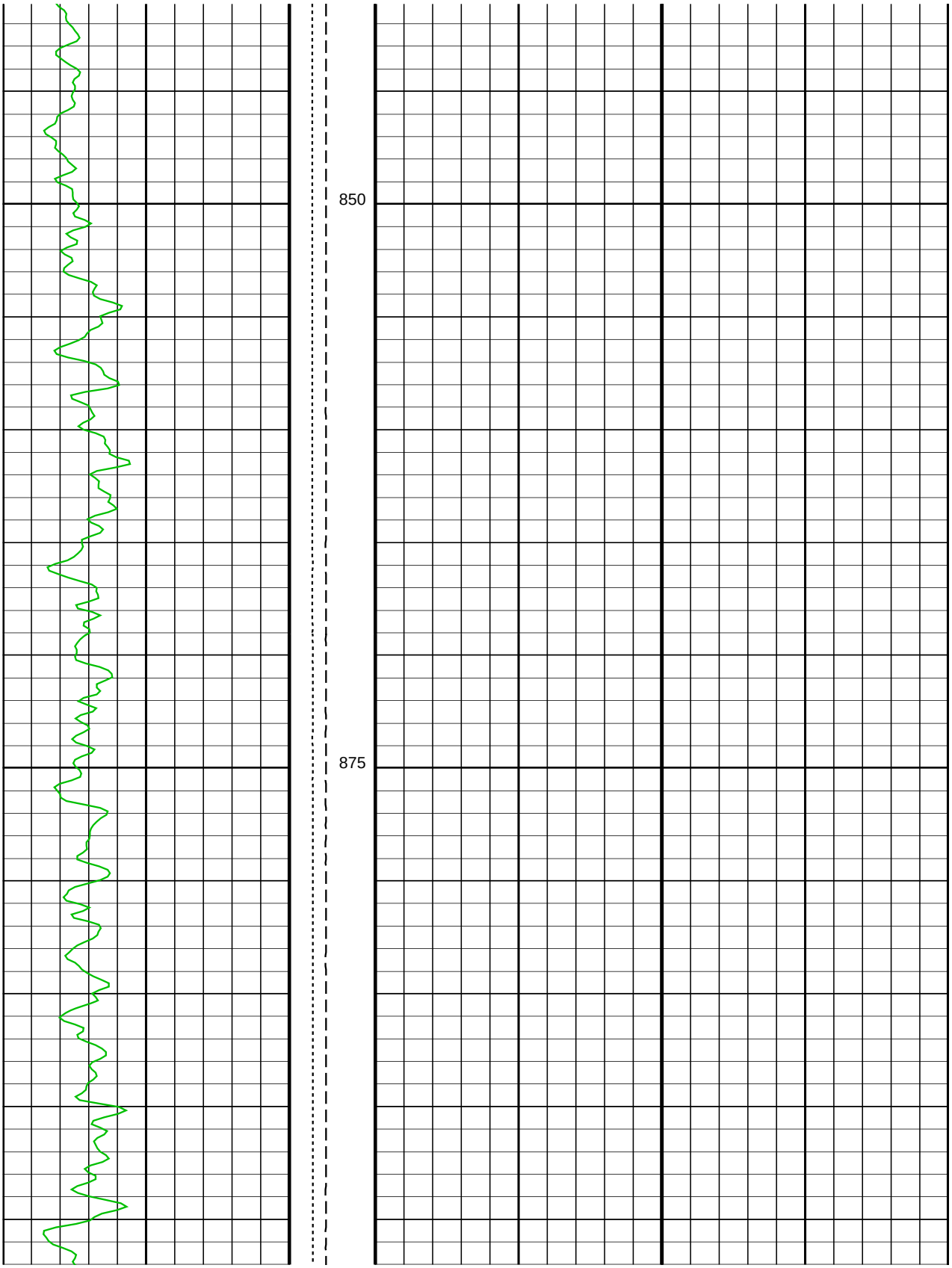
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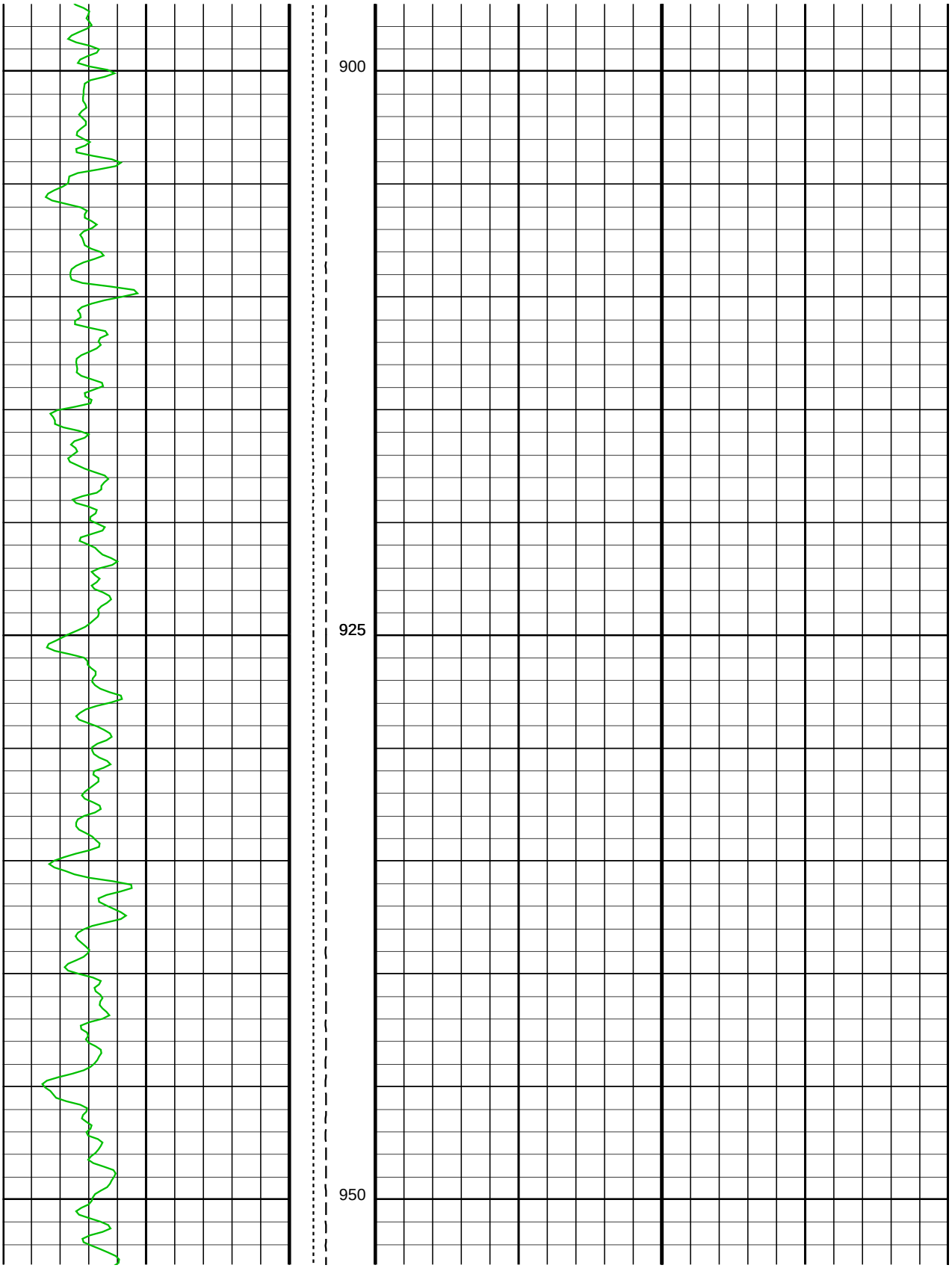
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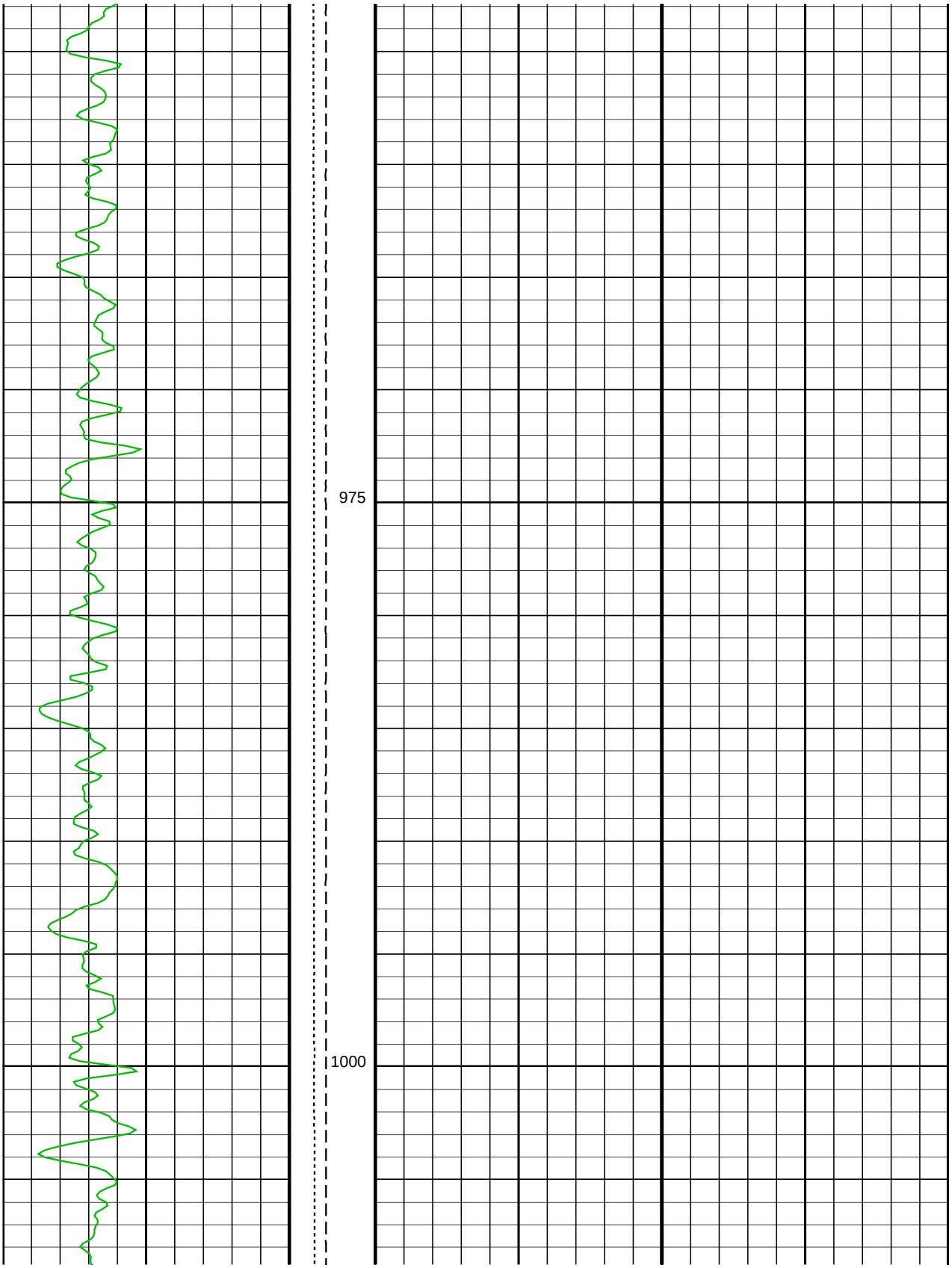
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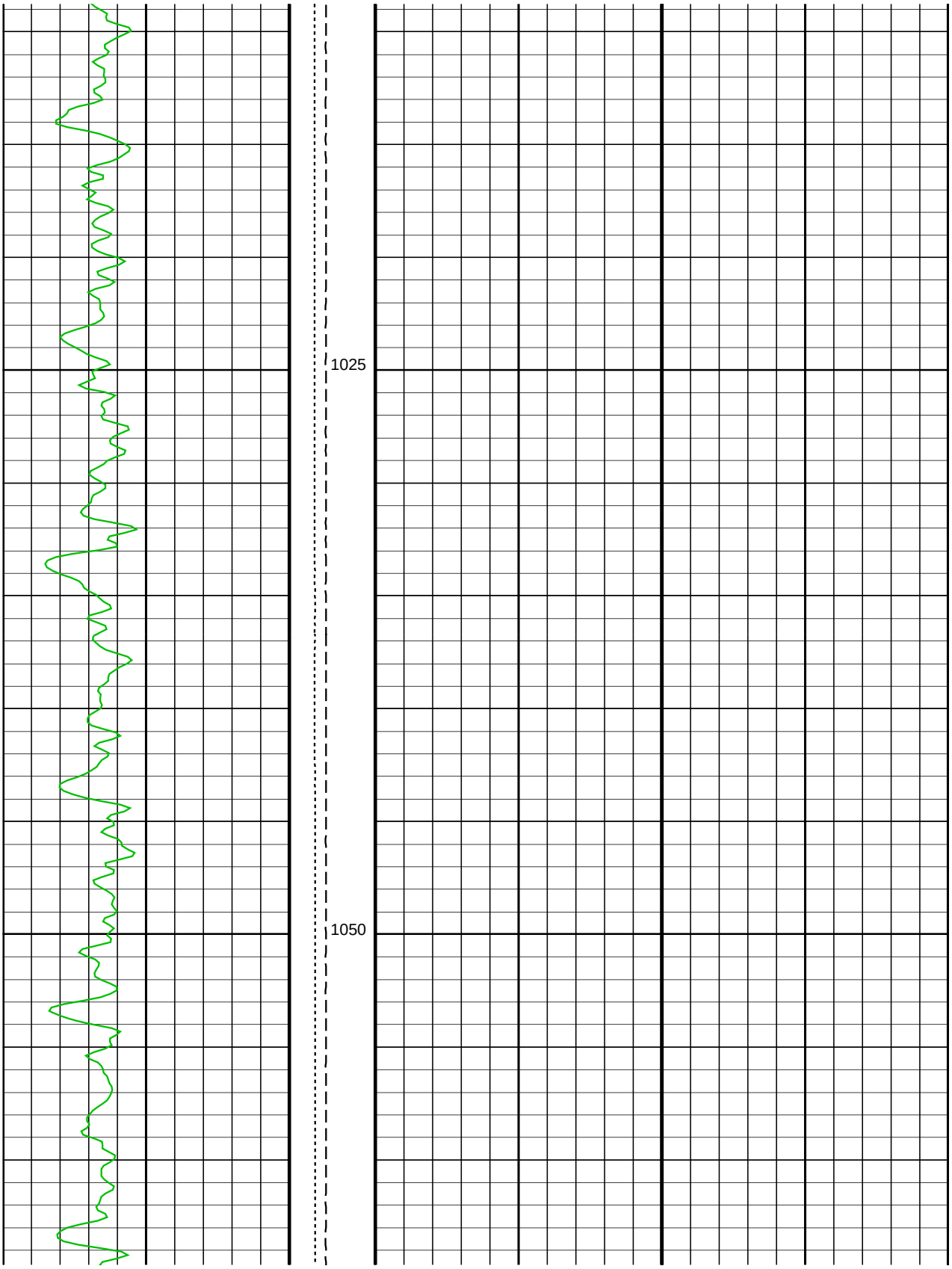
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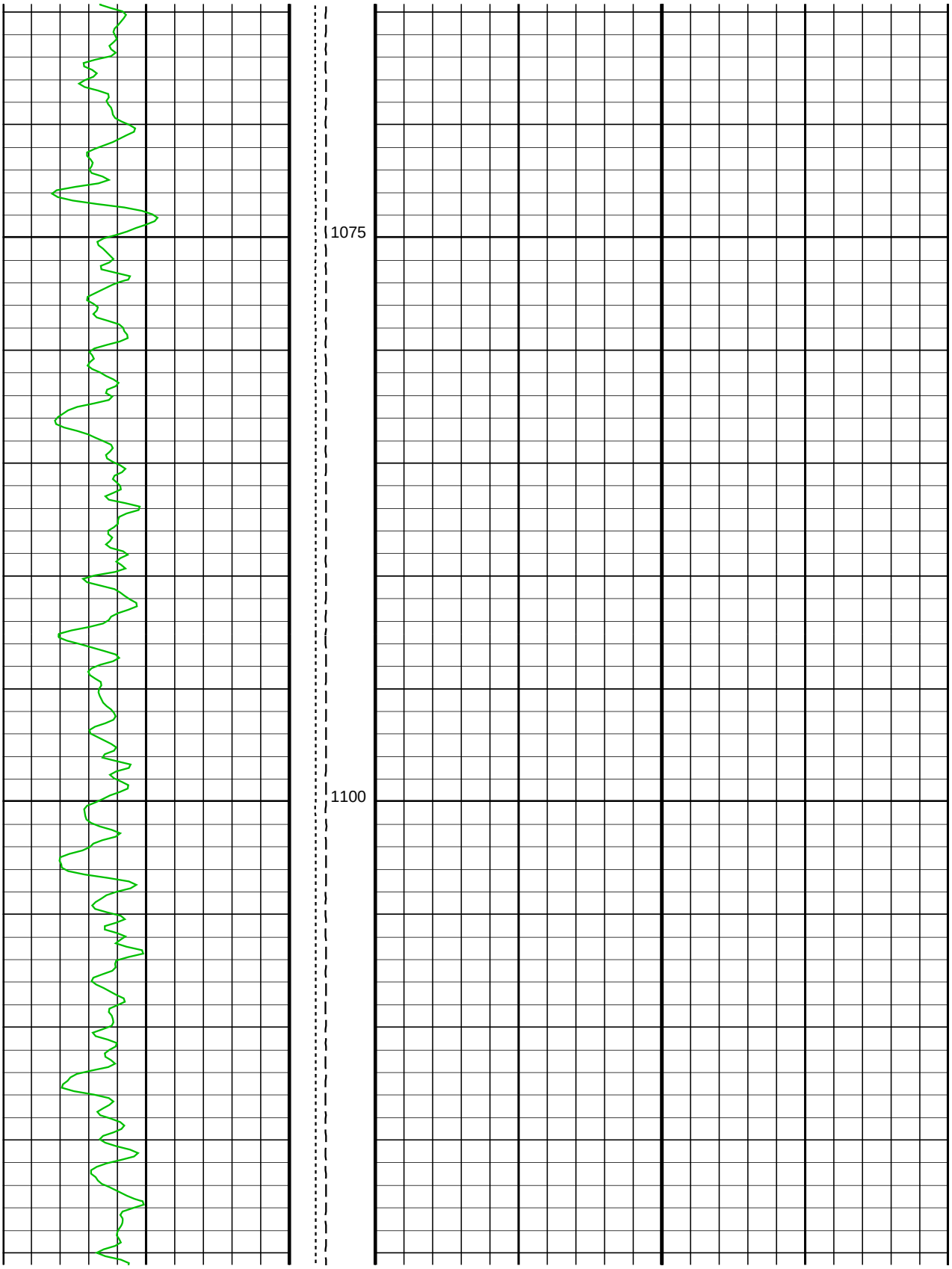
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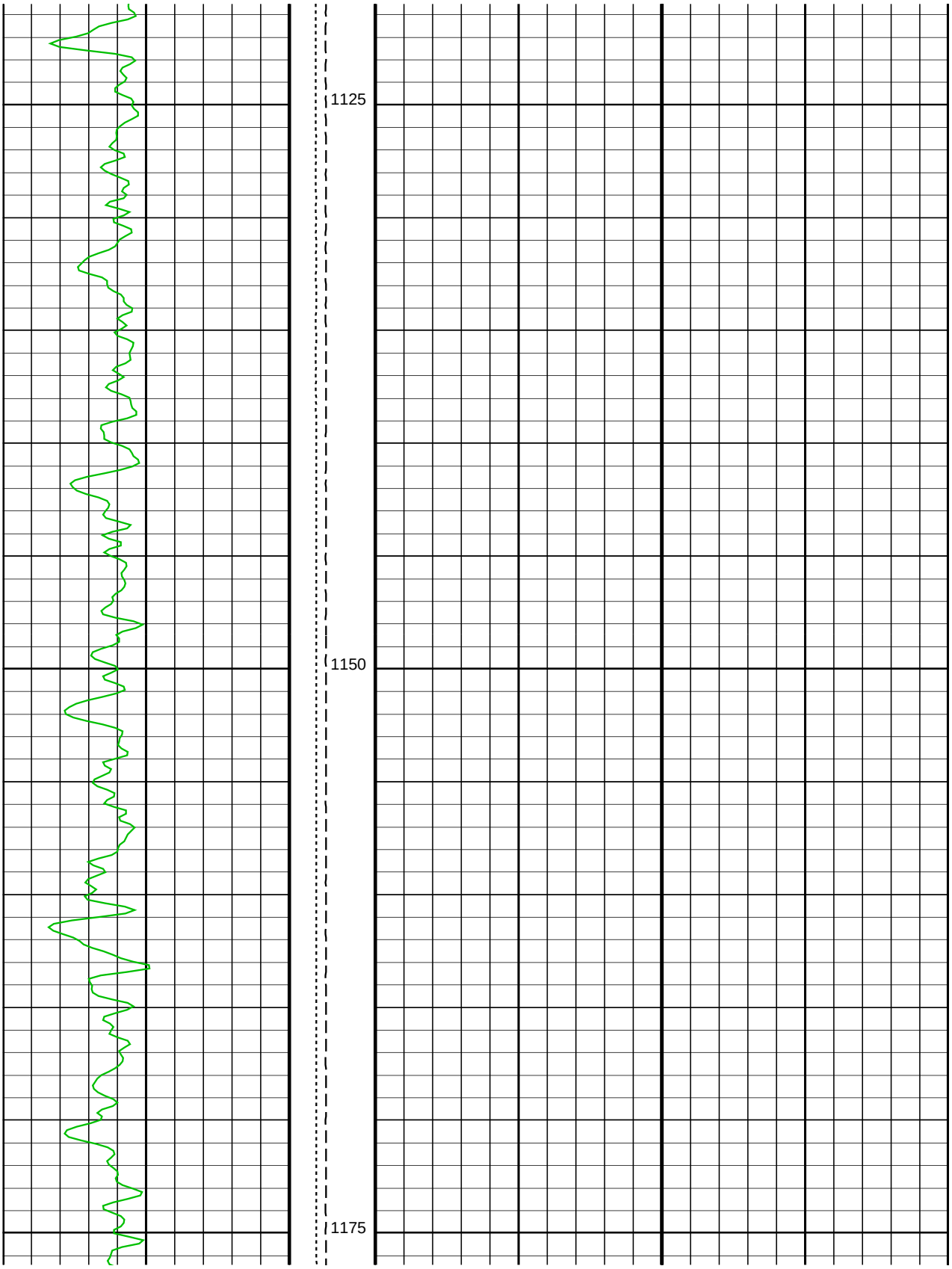
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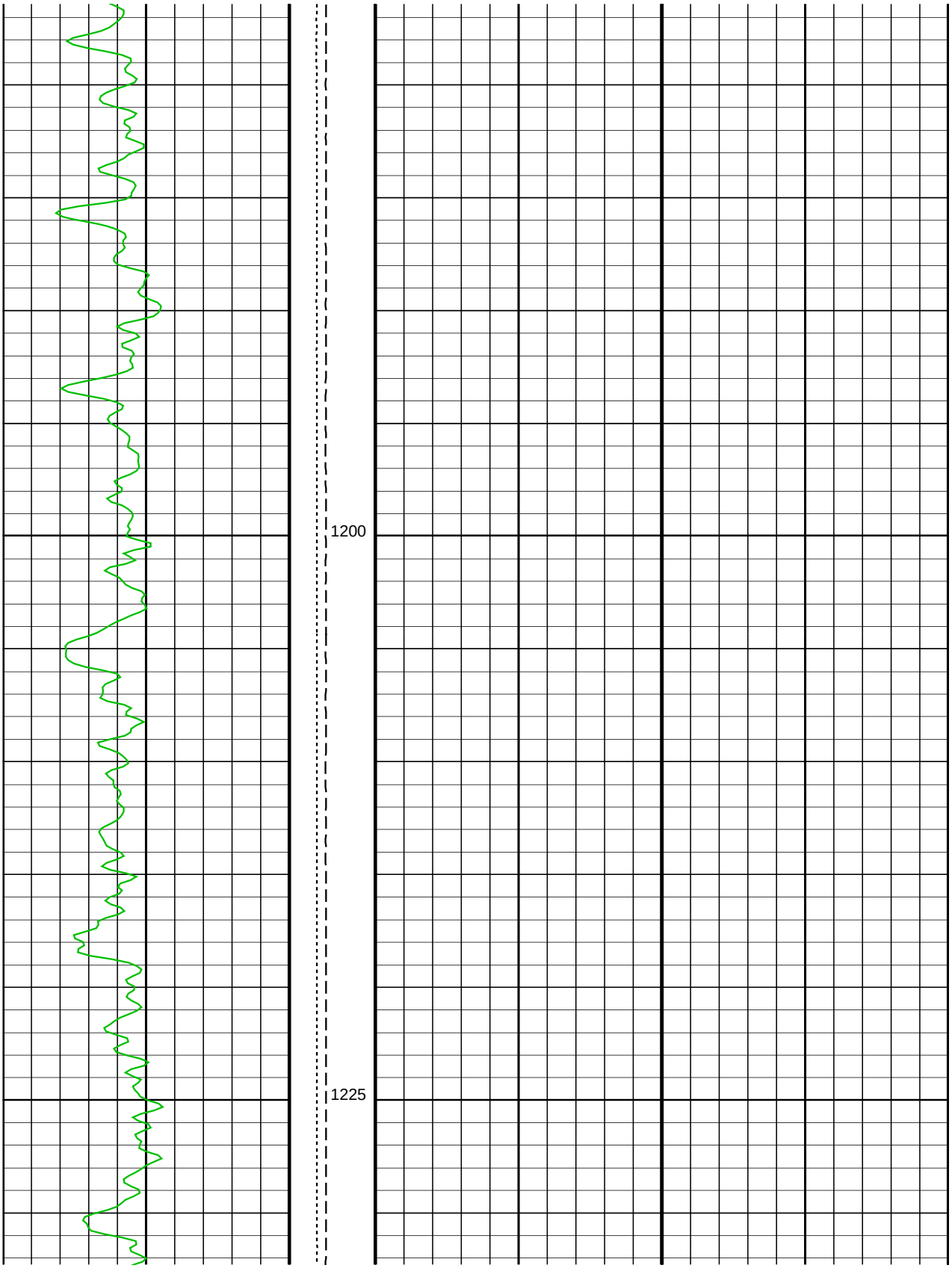
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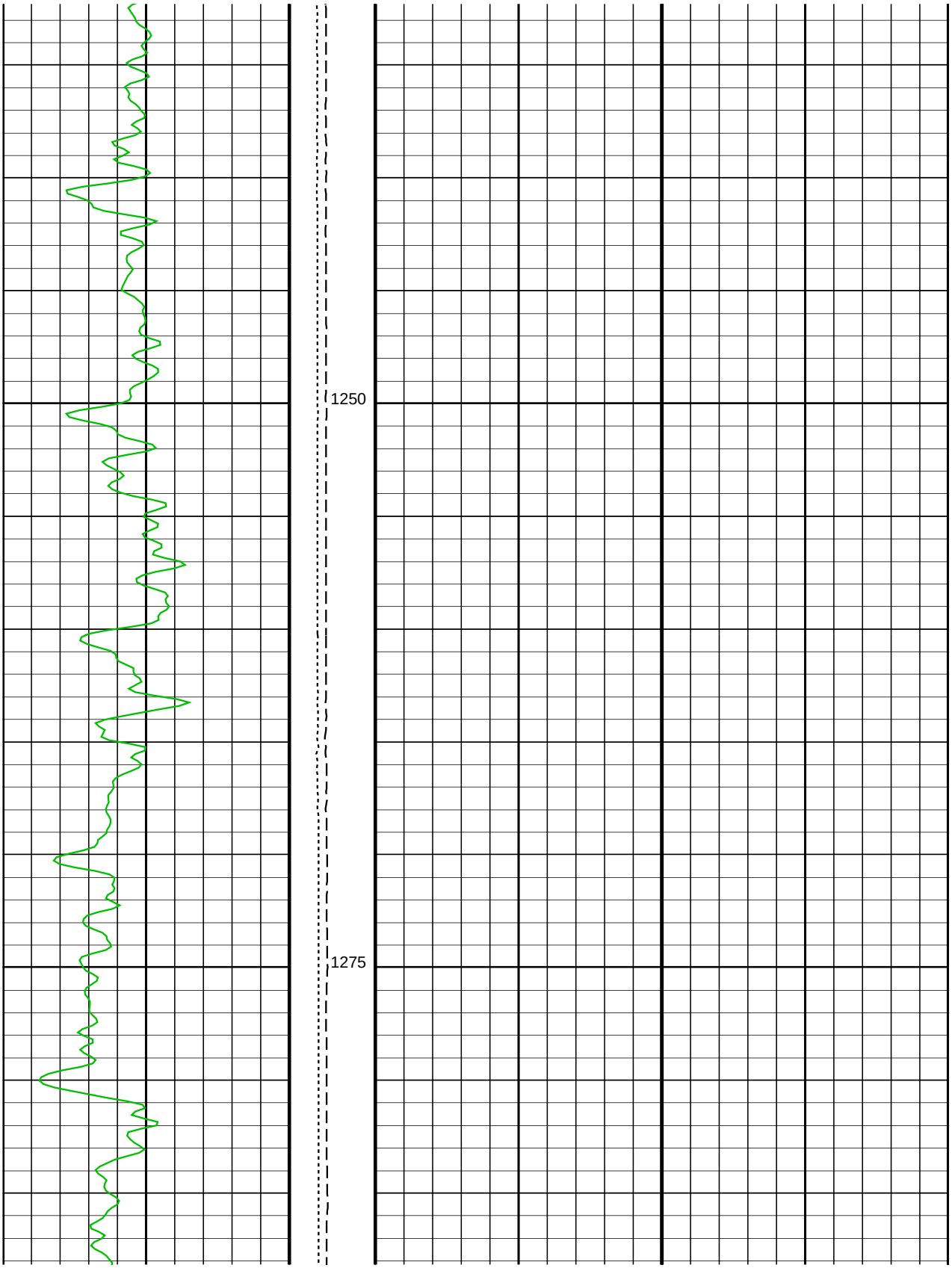
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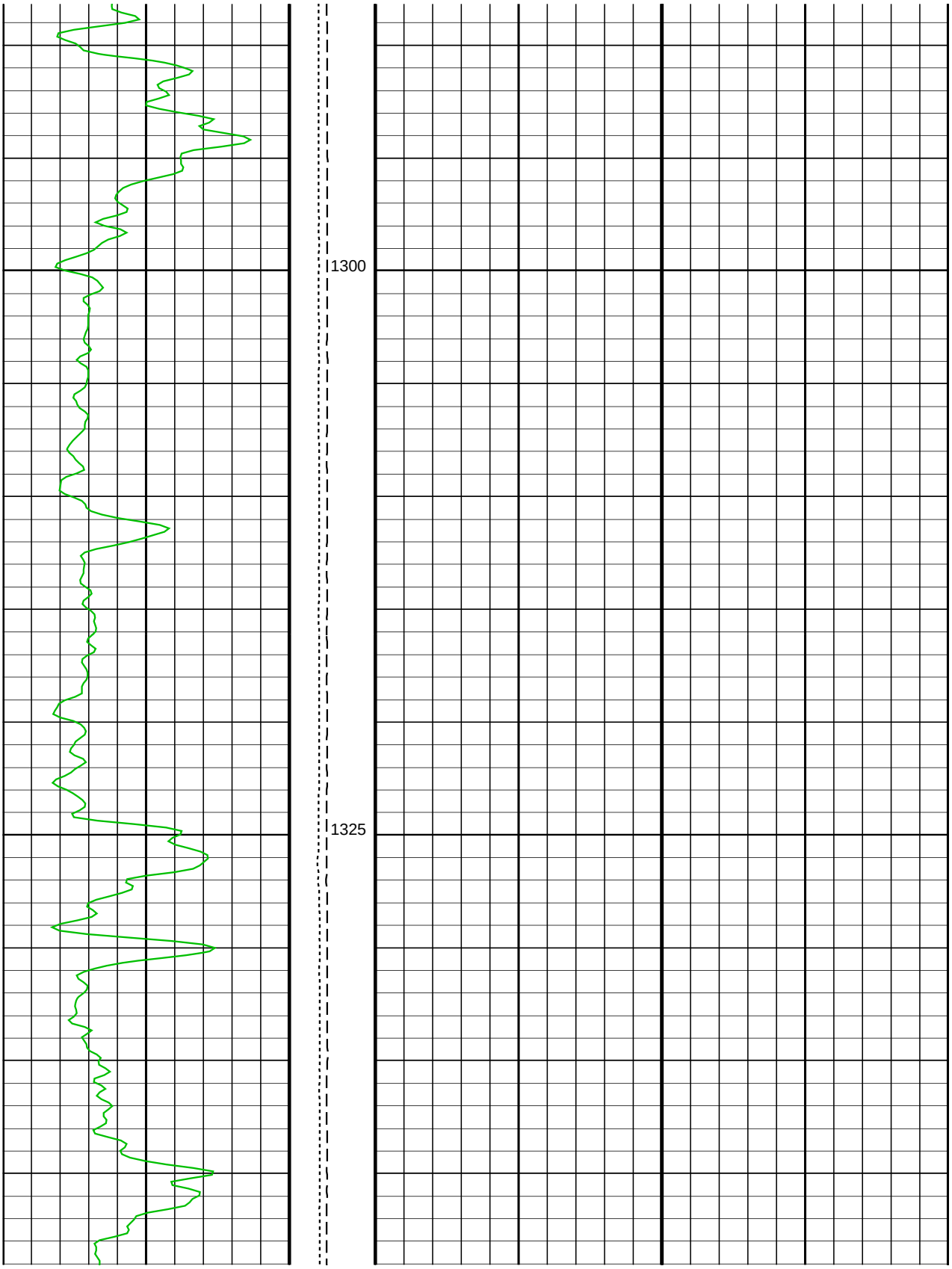
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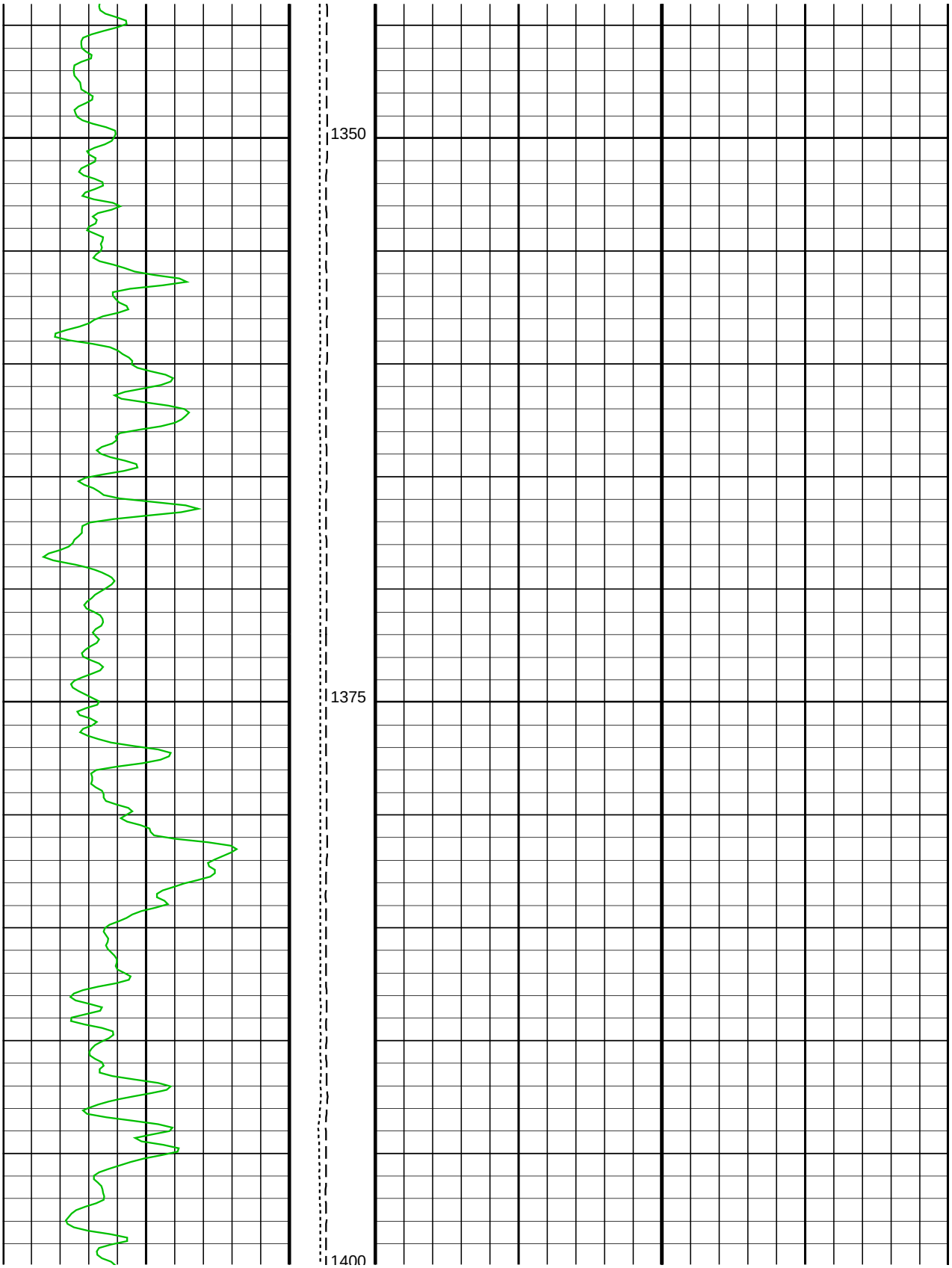
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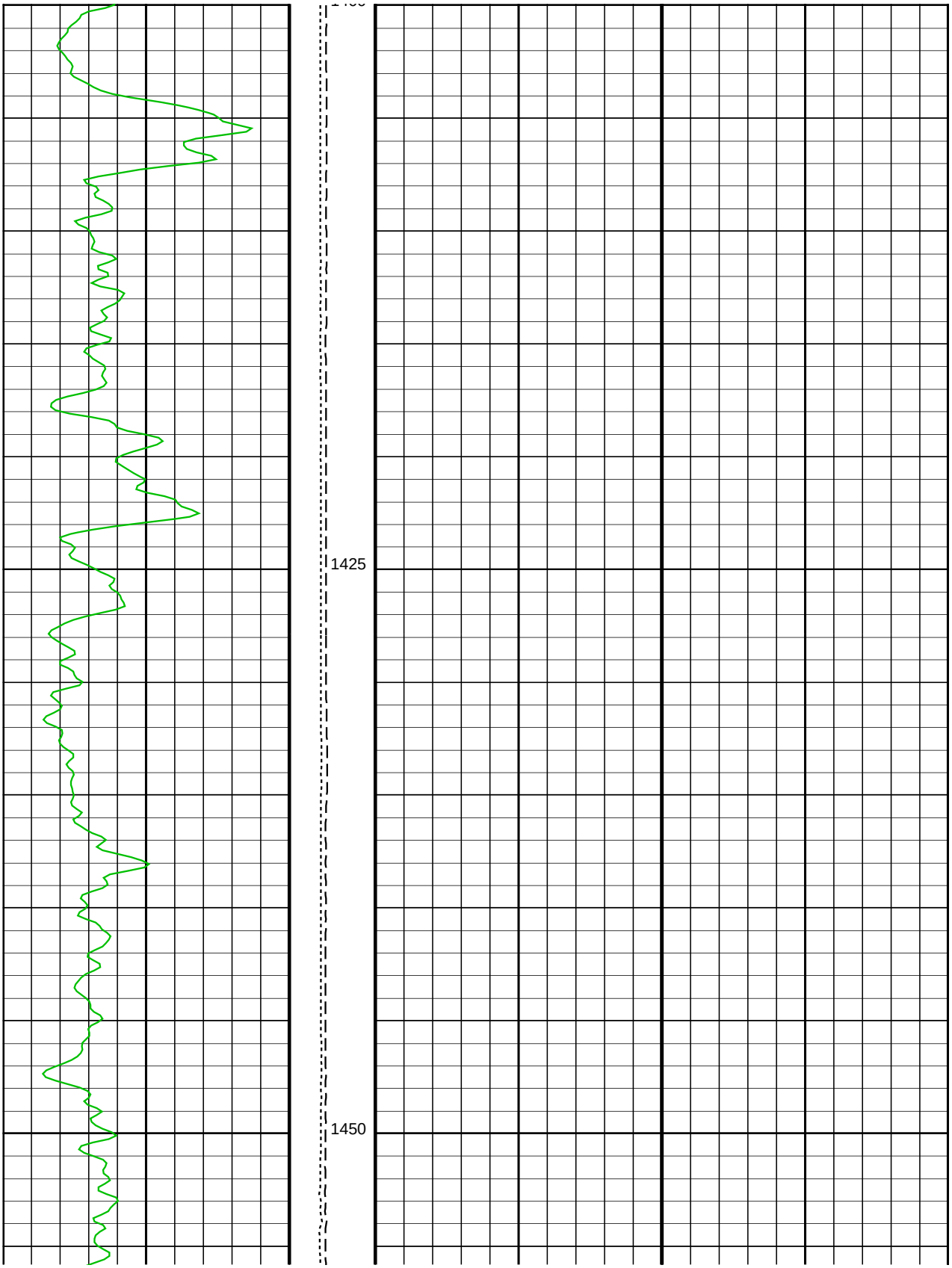
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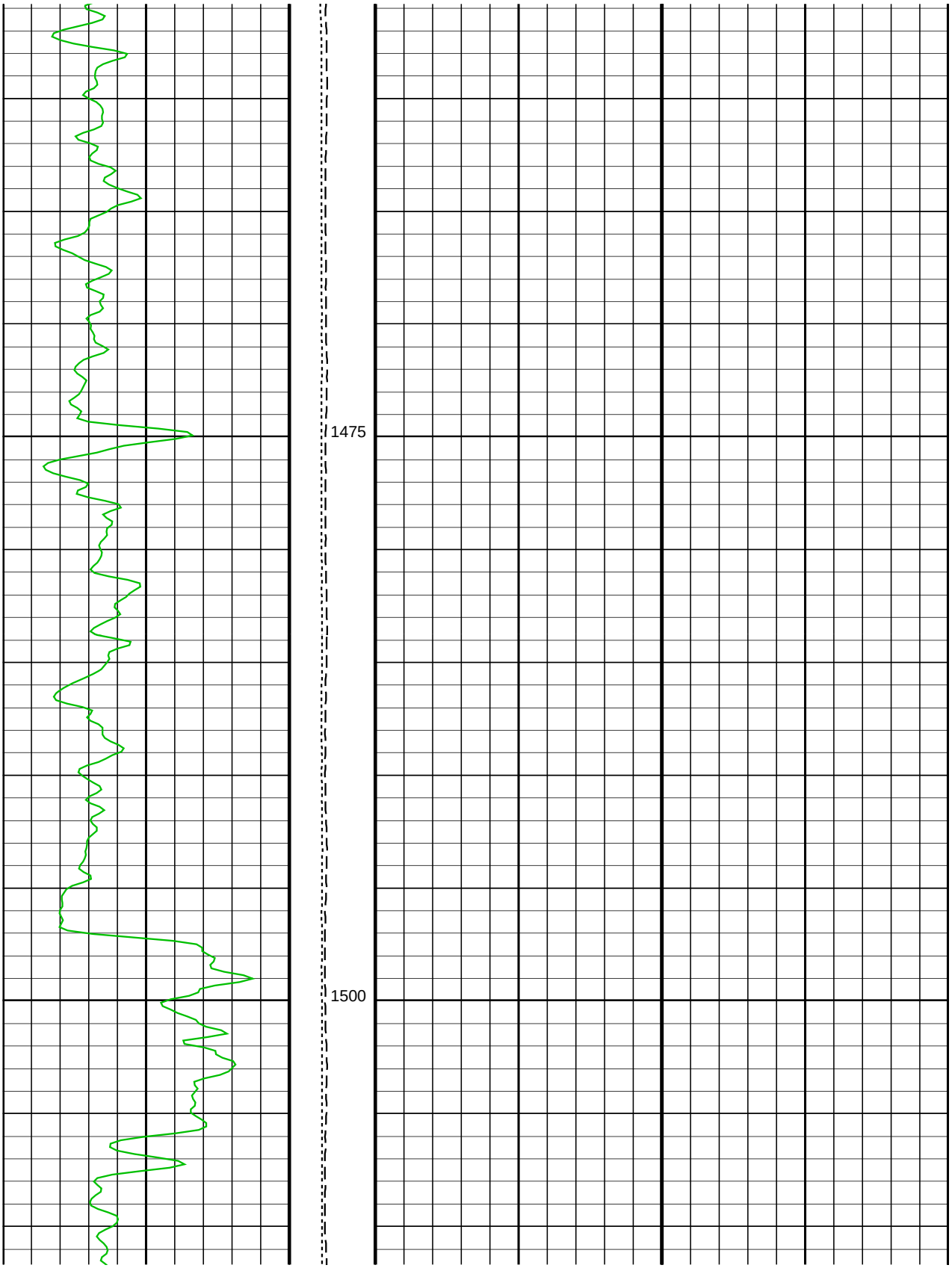
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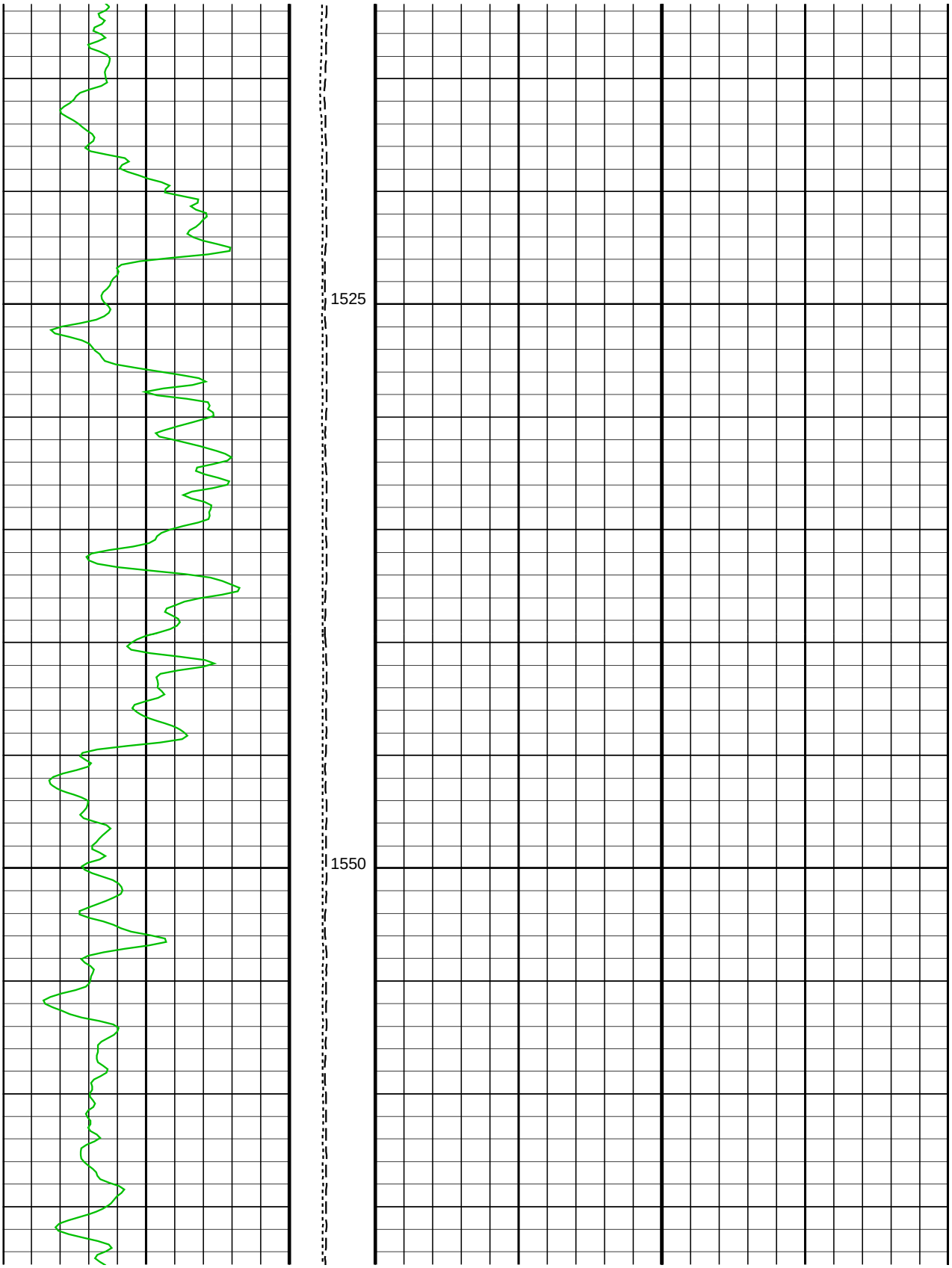
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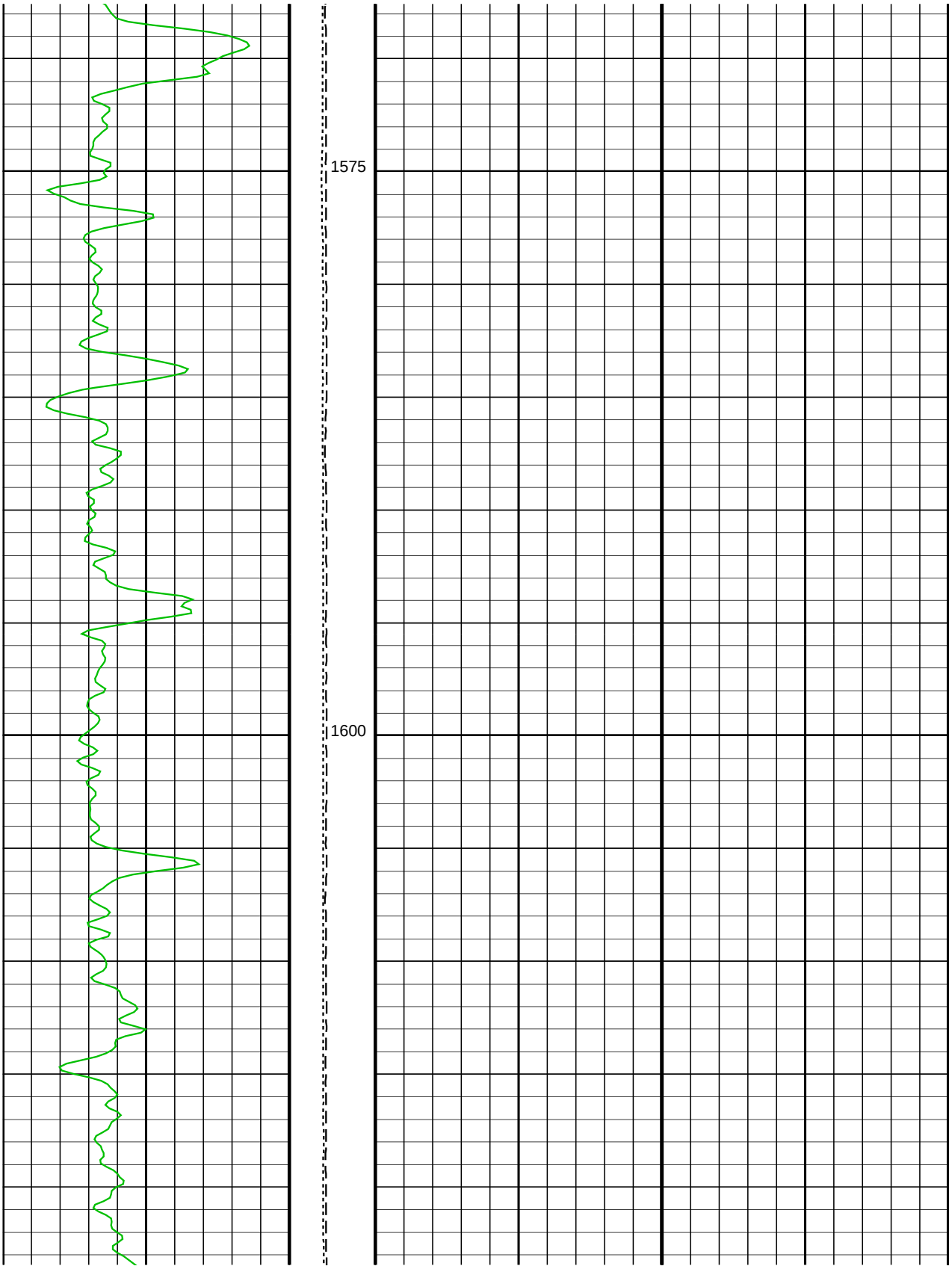
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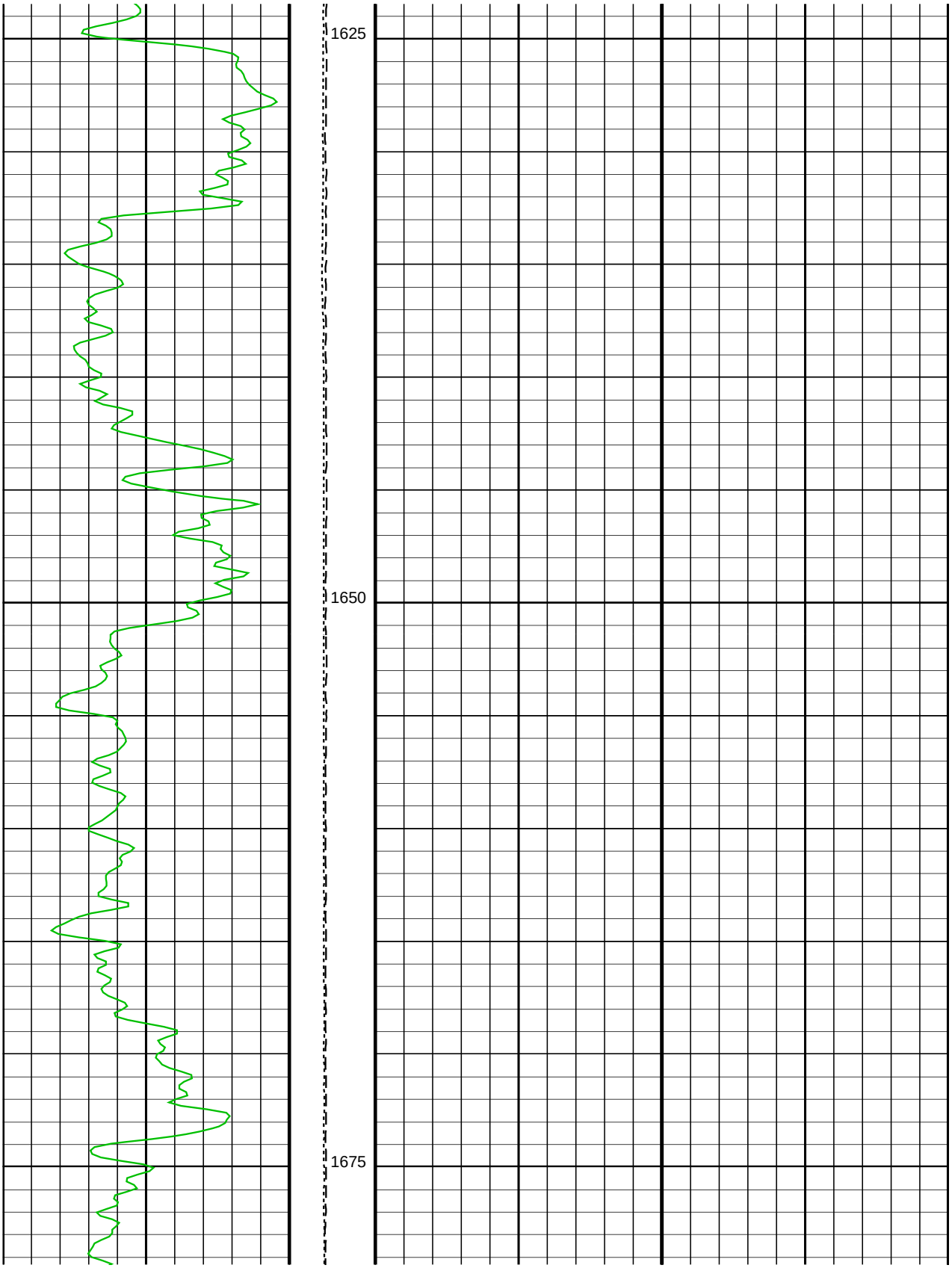
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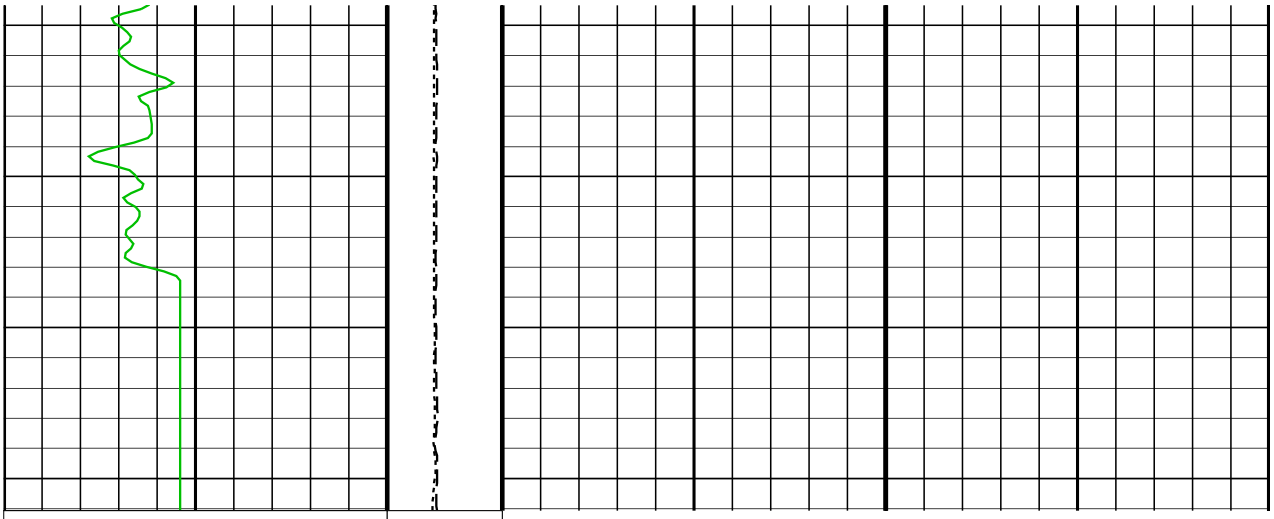

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Format: CORRELATION_STGC Vertical Scale: 1:200 Graphics File Created: 05−Mar−2008 19:02

OP System Version: 15C0−309

MCM

VSIT−G	SKK−3368−VSI−WB2_9_17_I	STGC−B	15C0−309

Output DLIS Files

DEFAULT	VSIT_098LUP	FN:156	PRODUCER	05−Mar−2008 19:02	

Company: Apache Energy Pty Ltd Well: Wasabi−1

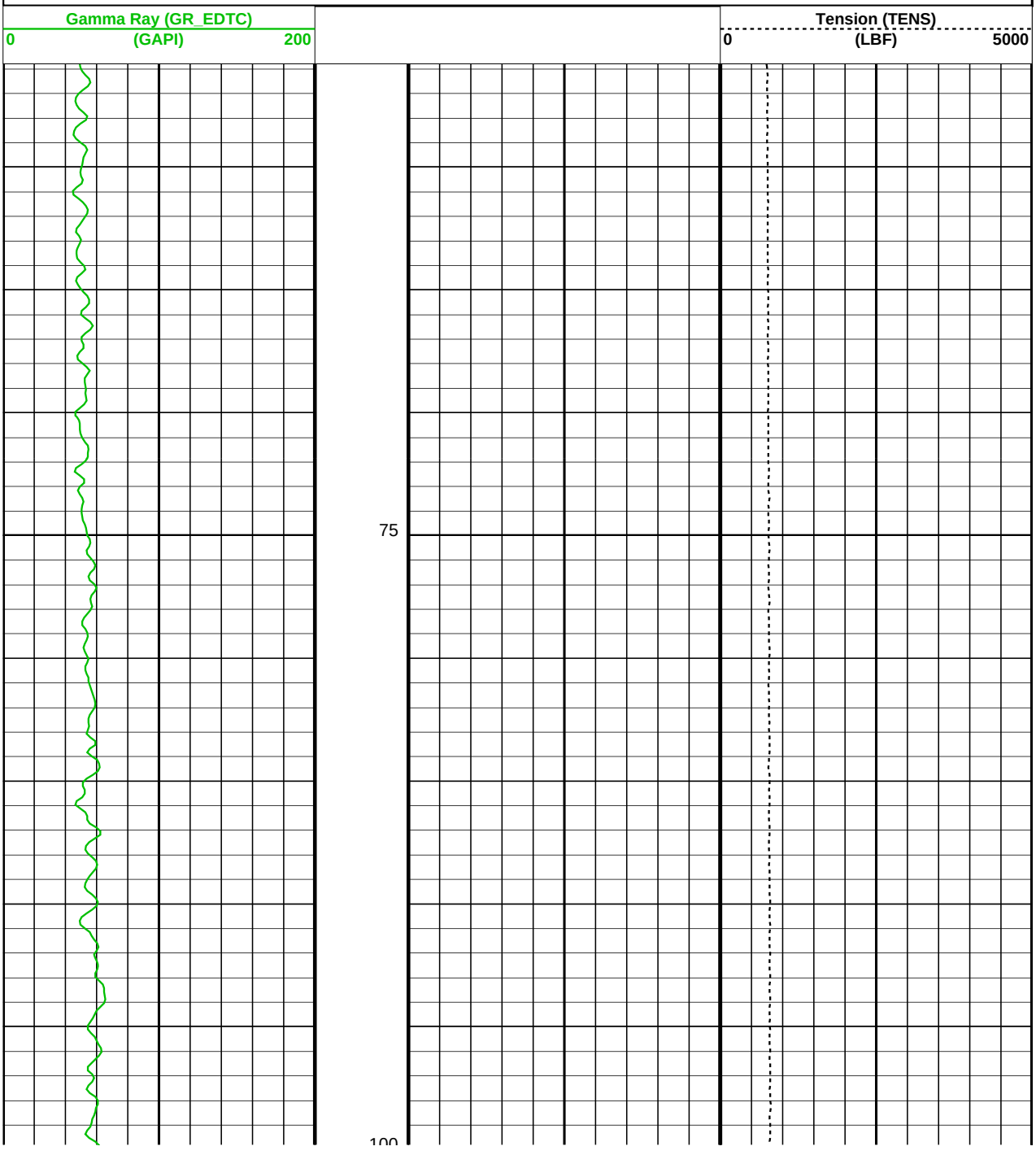
Output DLIS Files

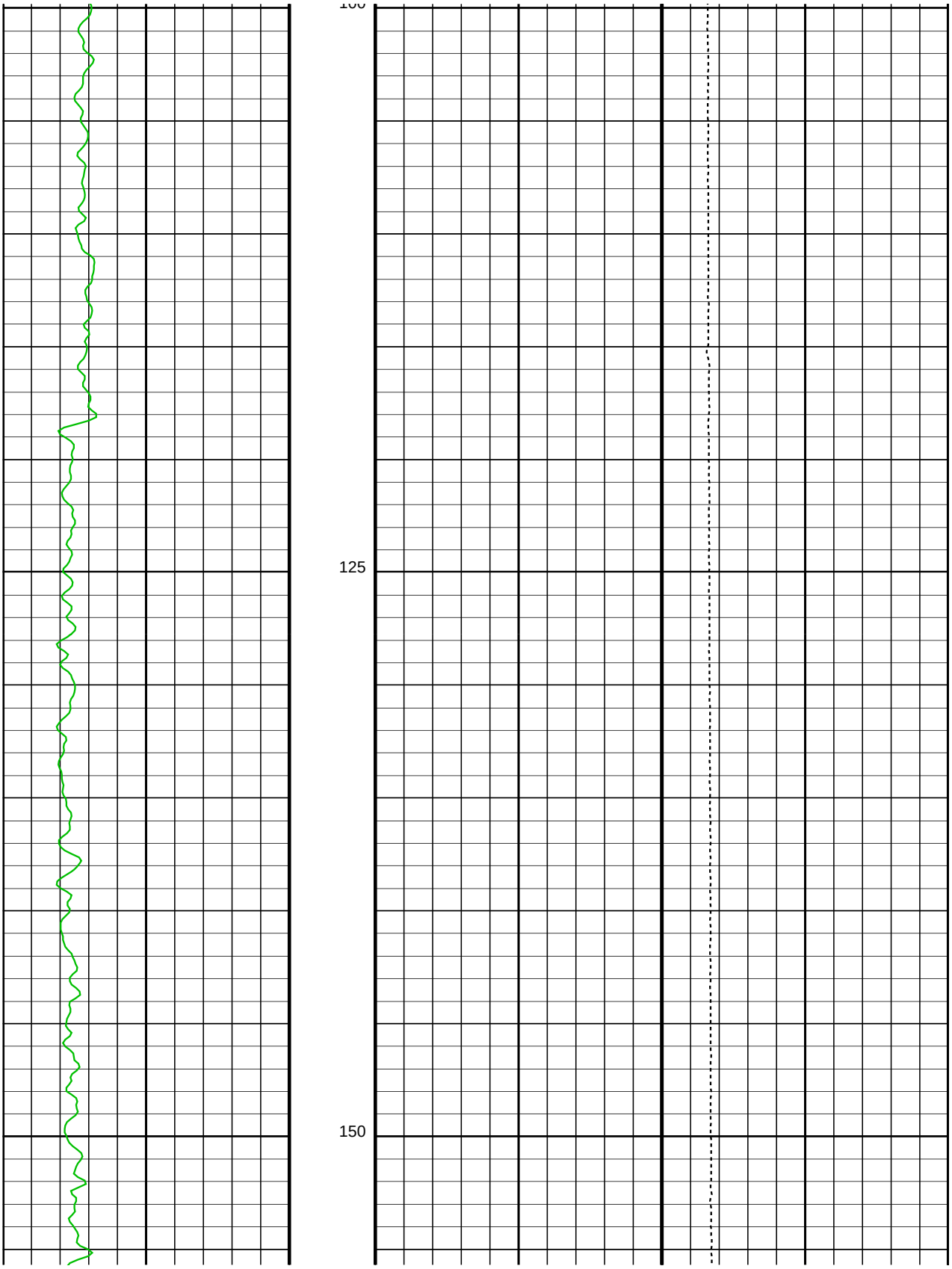
DEFAULT VSIT_013LUP FN:12 PRODUCER 02−Mar−2008 03:58 1212.0 M 55.8 M

OP System Version: 15C0−309

MCM

VSIT−G SKK−3368−VSI−WB2_9_17_I EDTC−B SKK−3493−EDTCB_b

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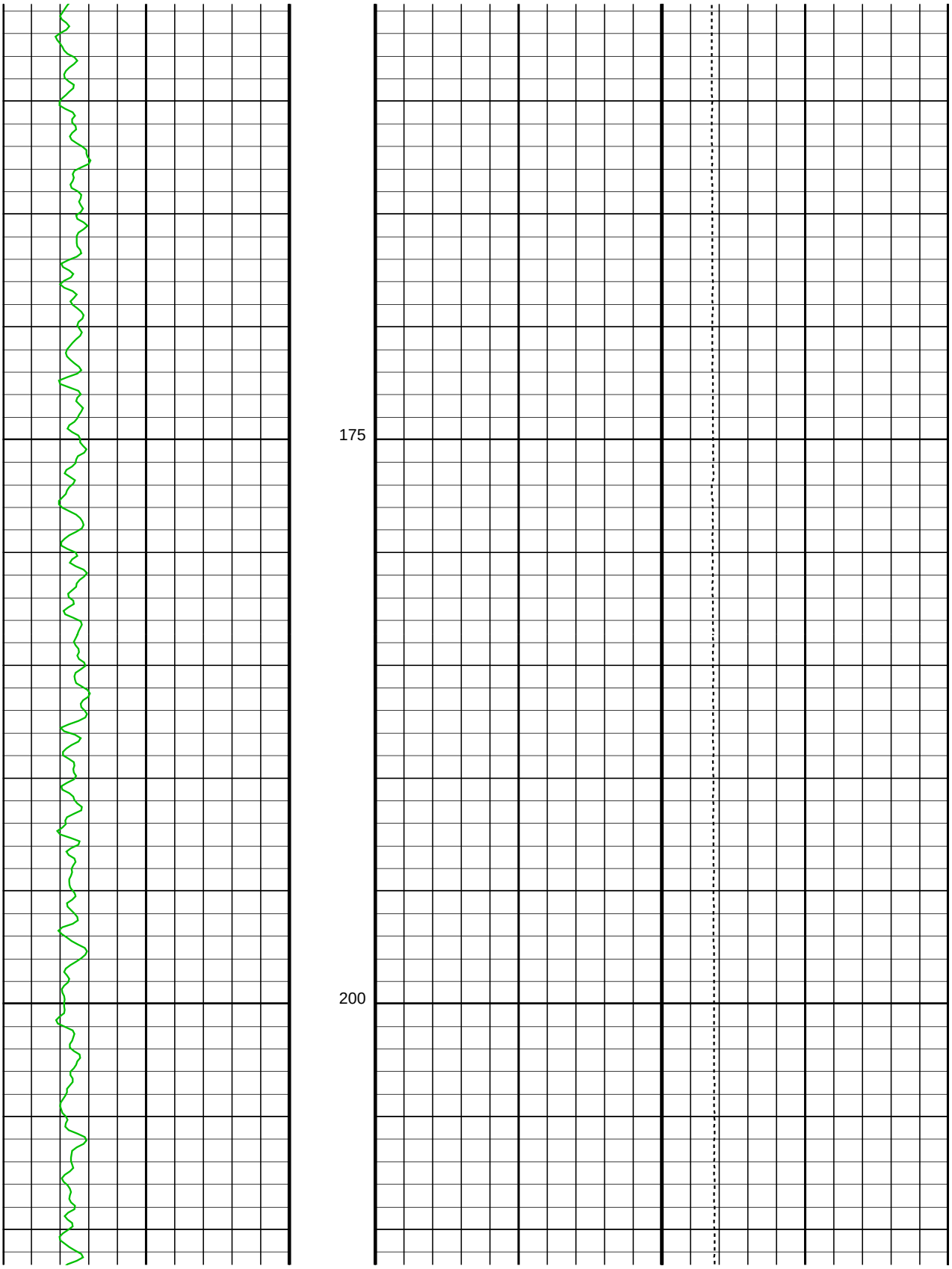
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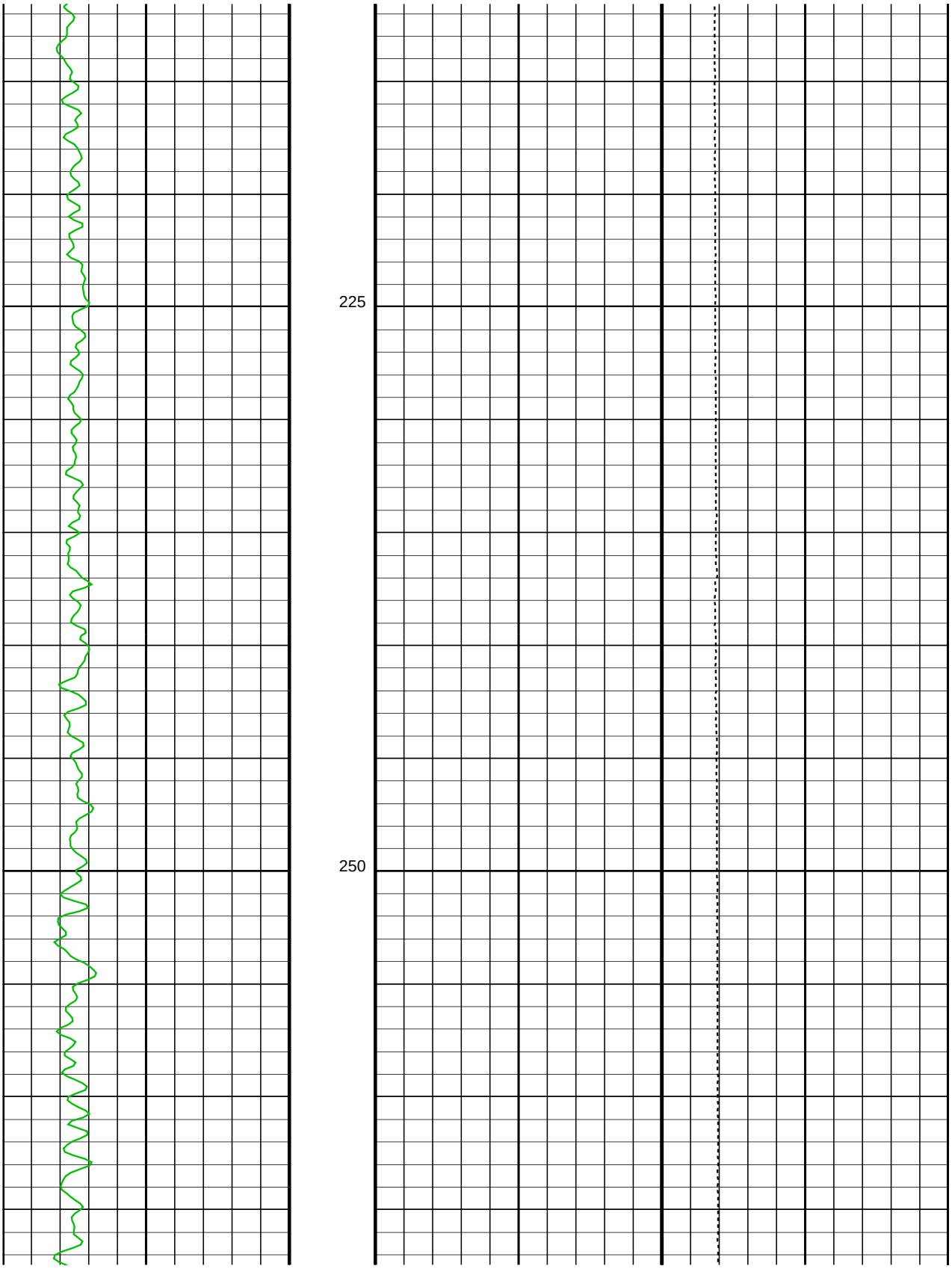
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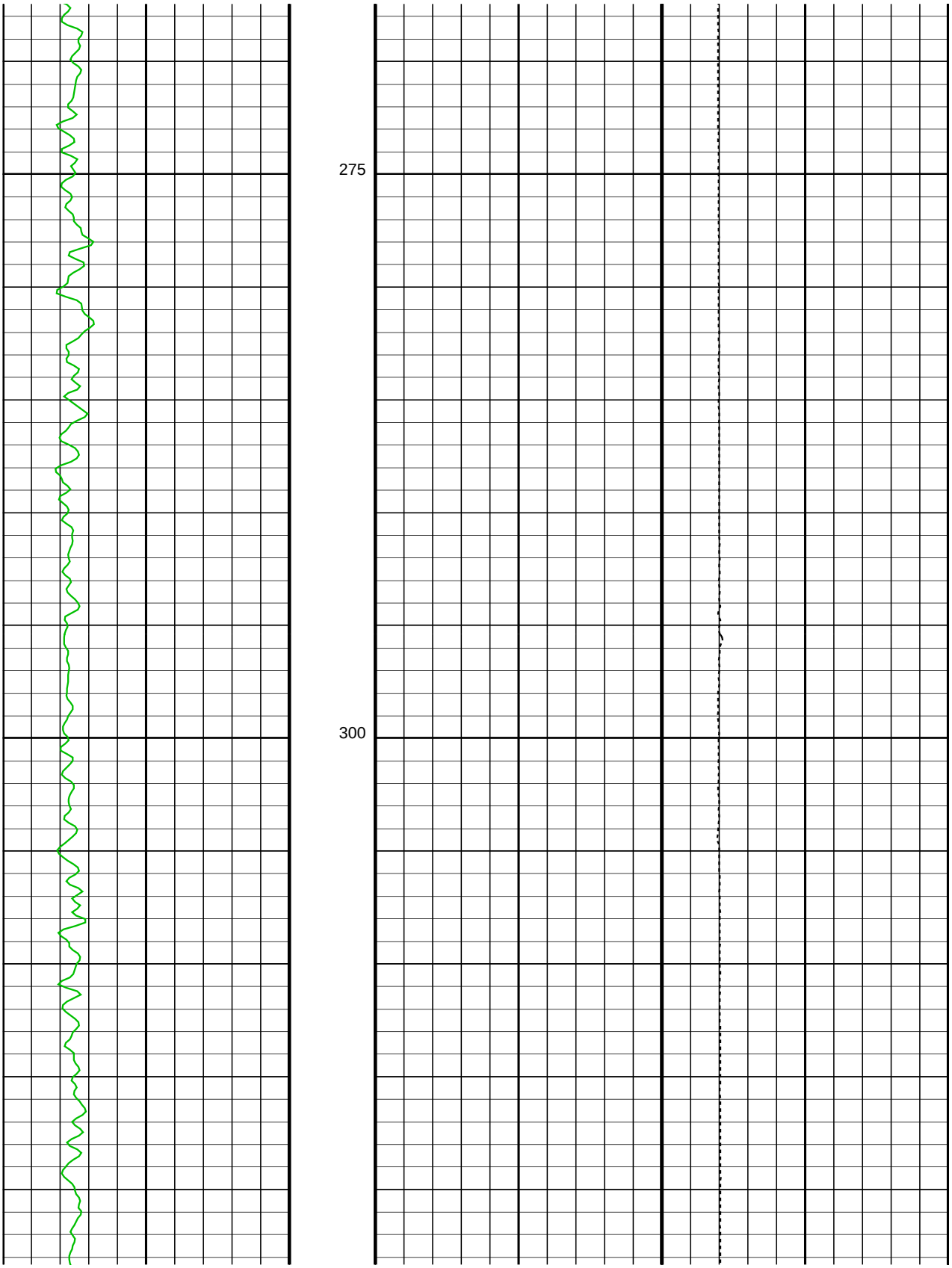
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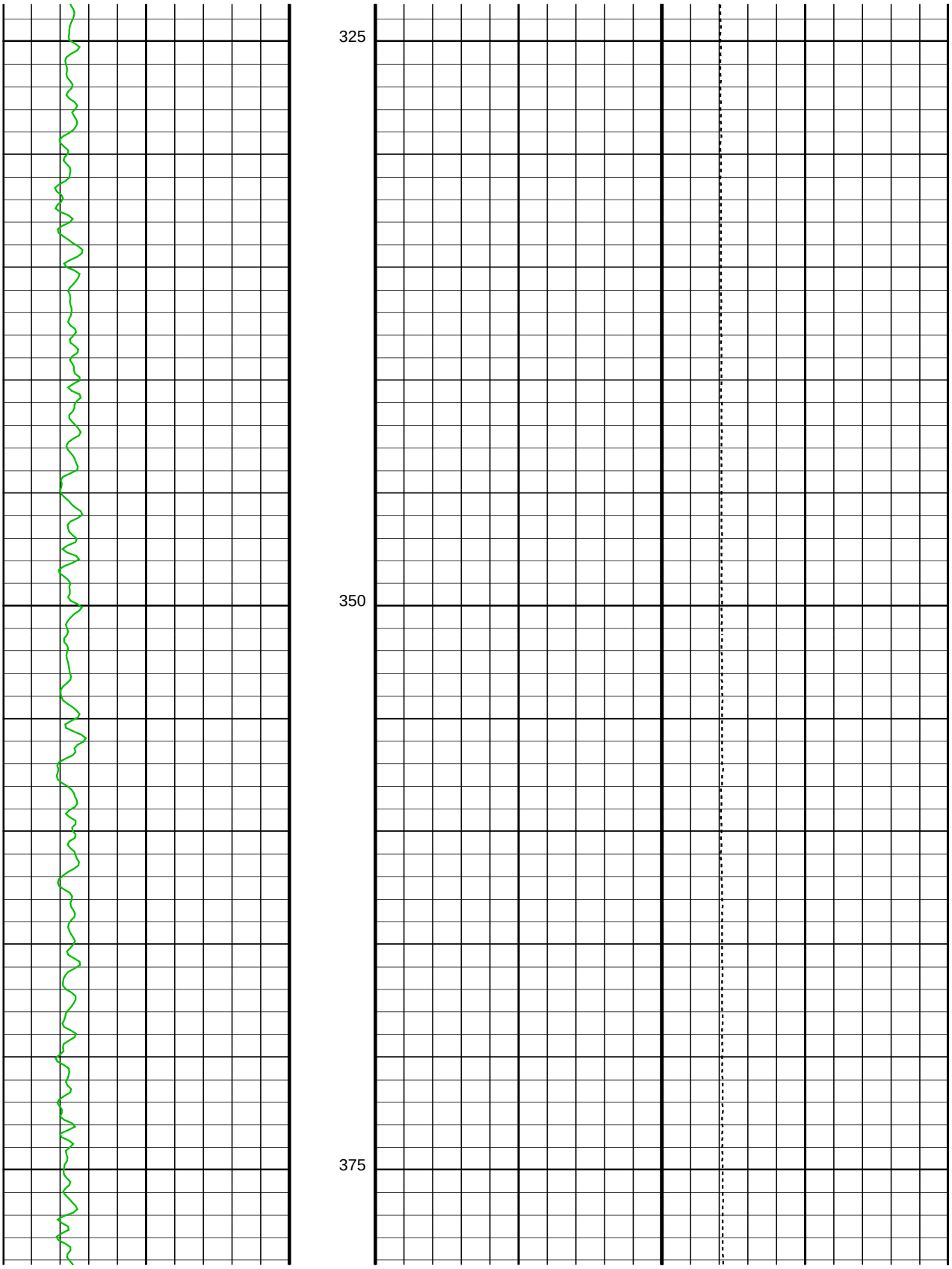
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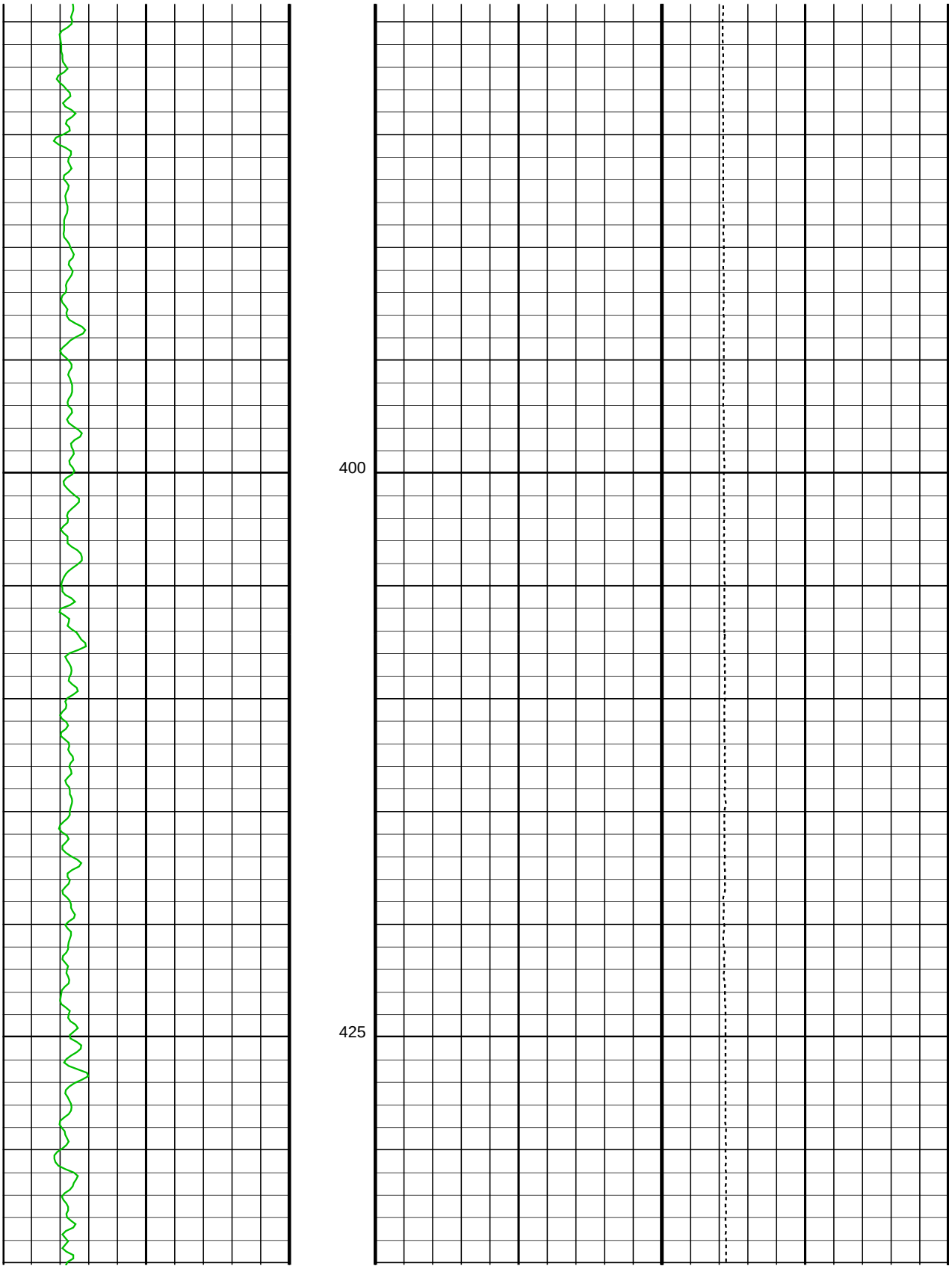
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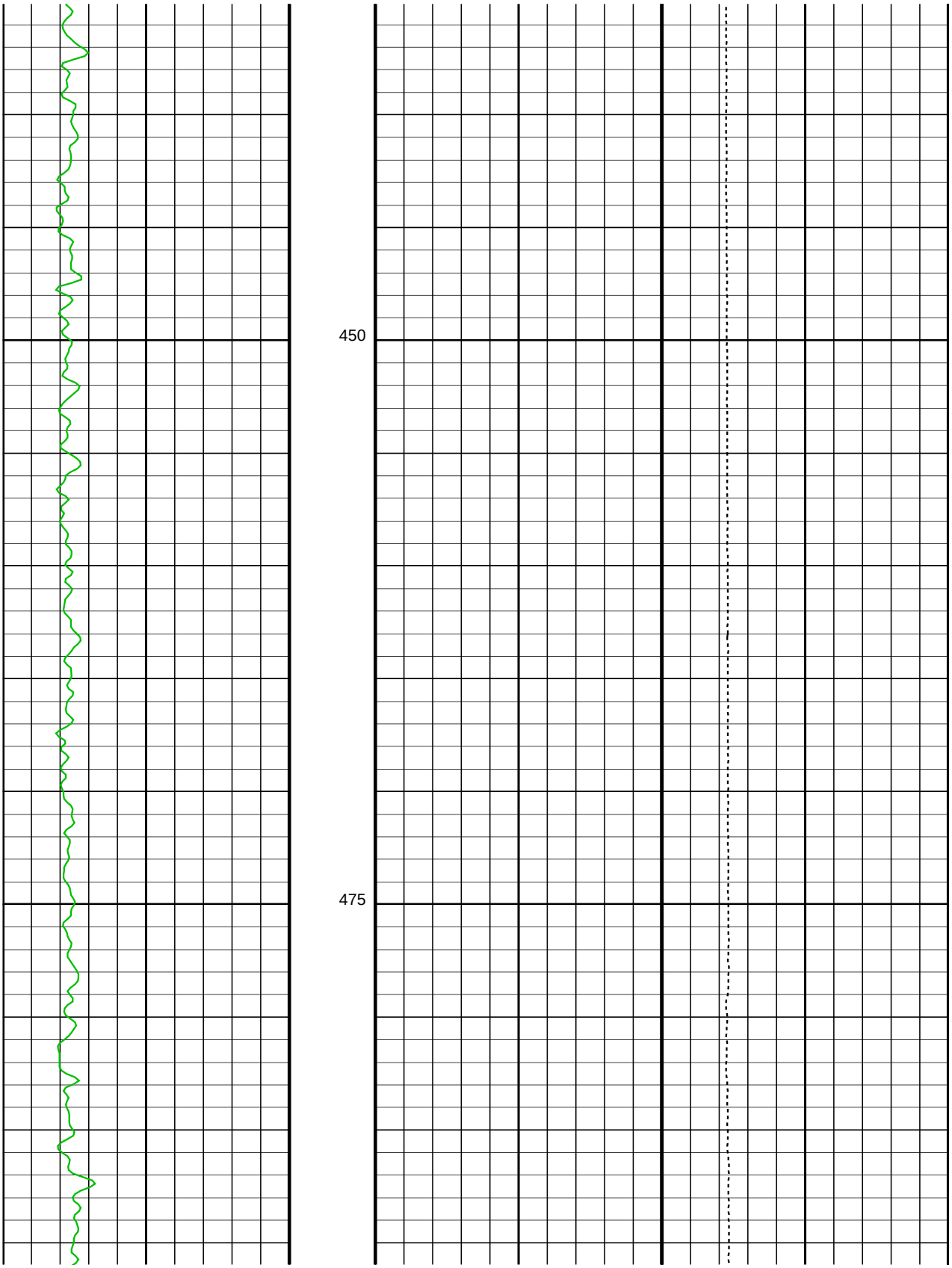
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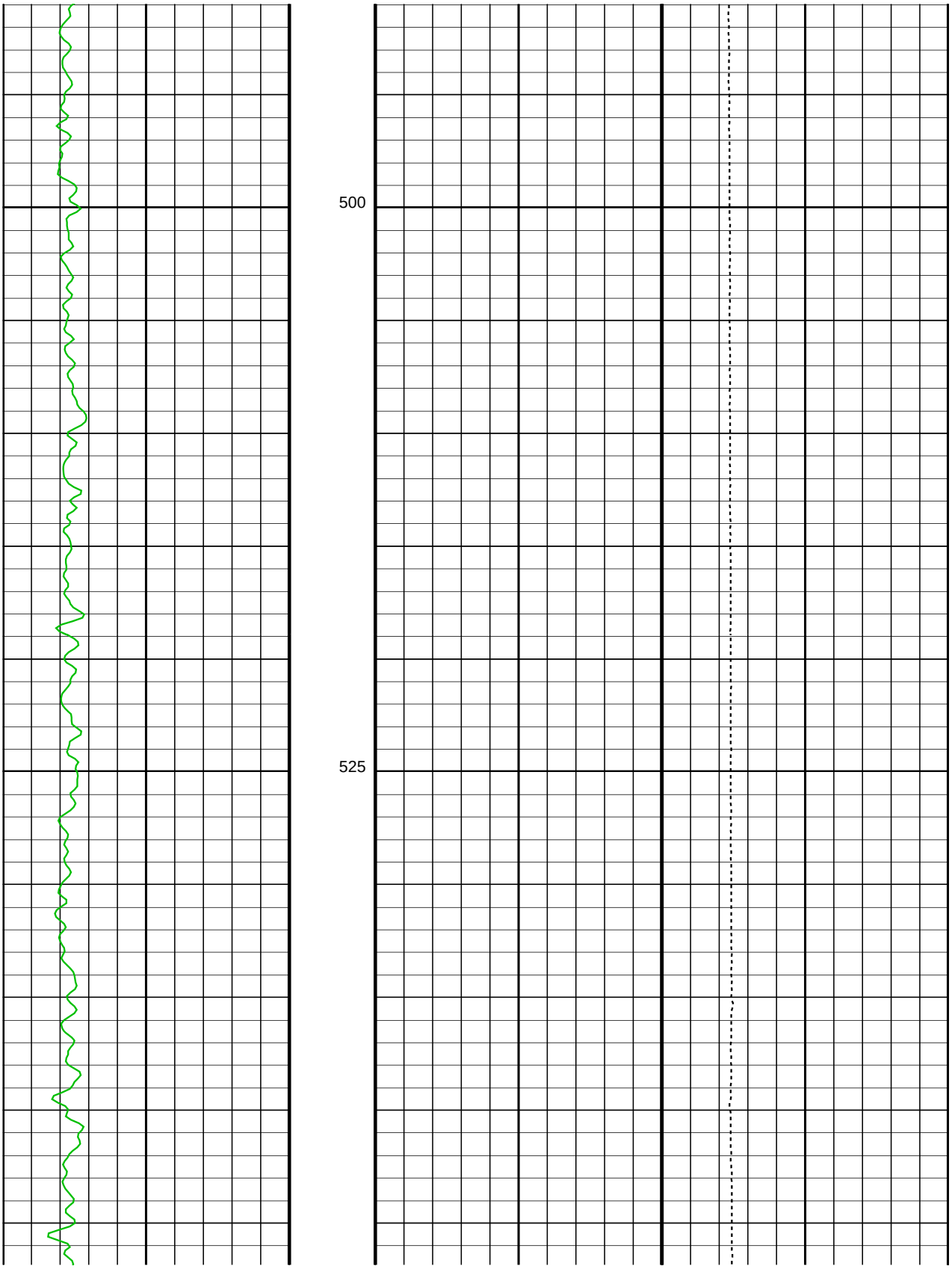
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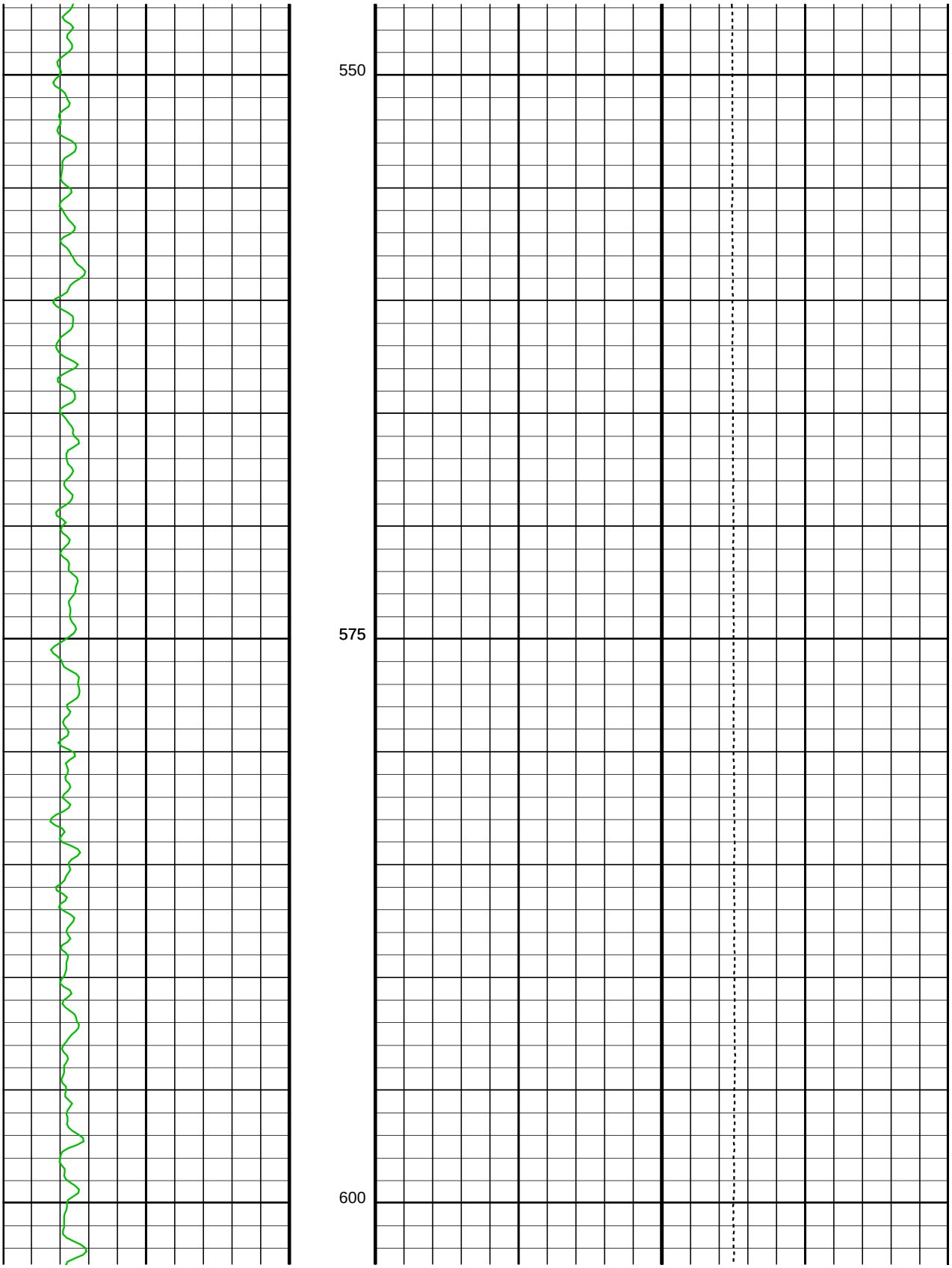
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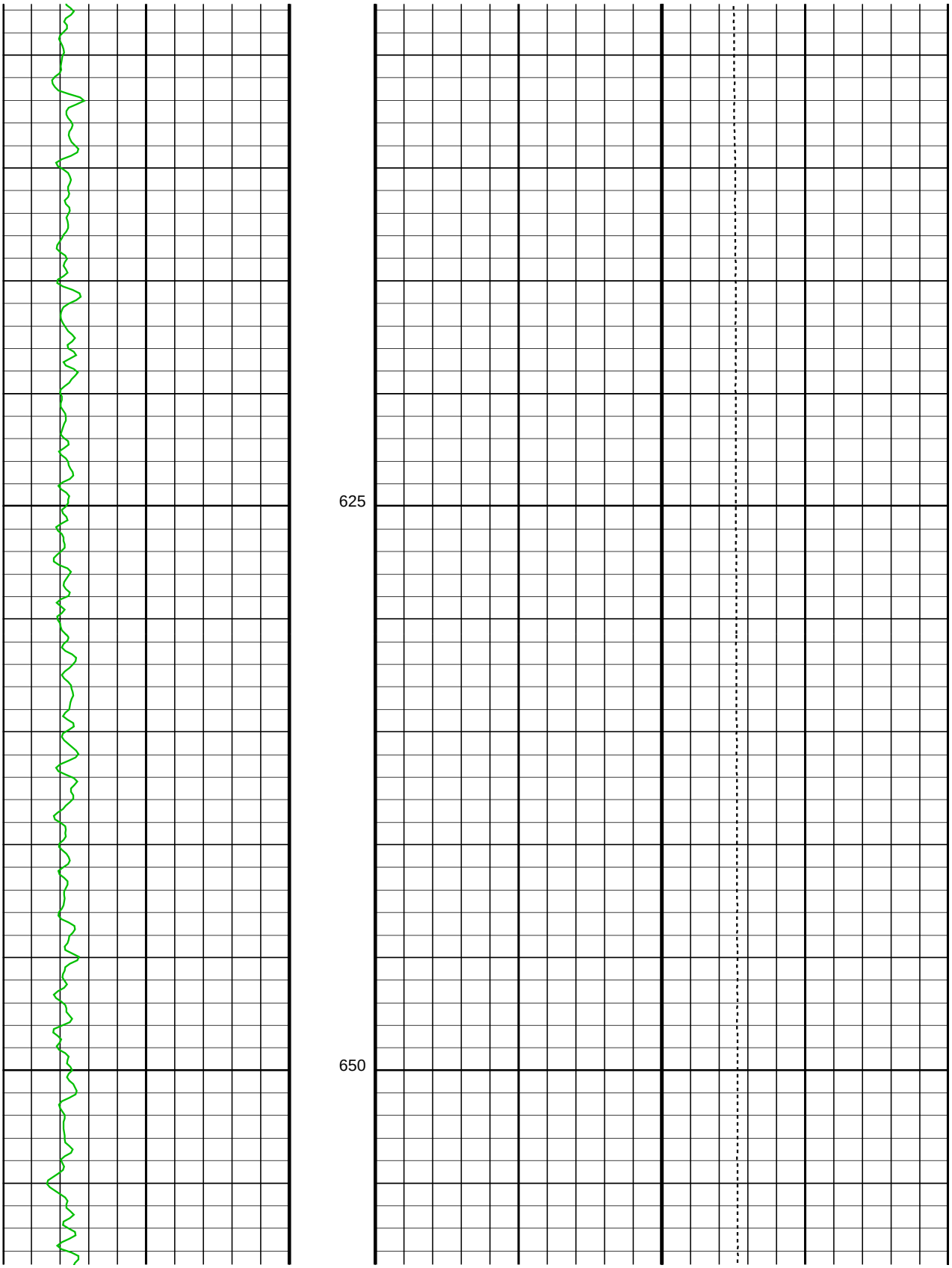
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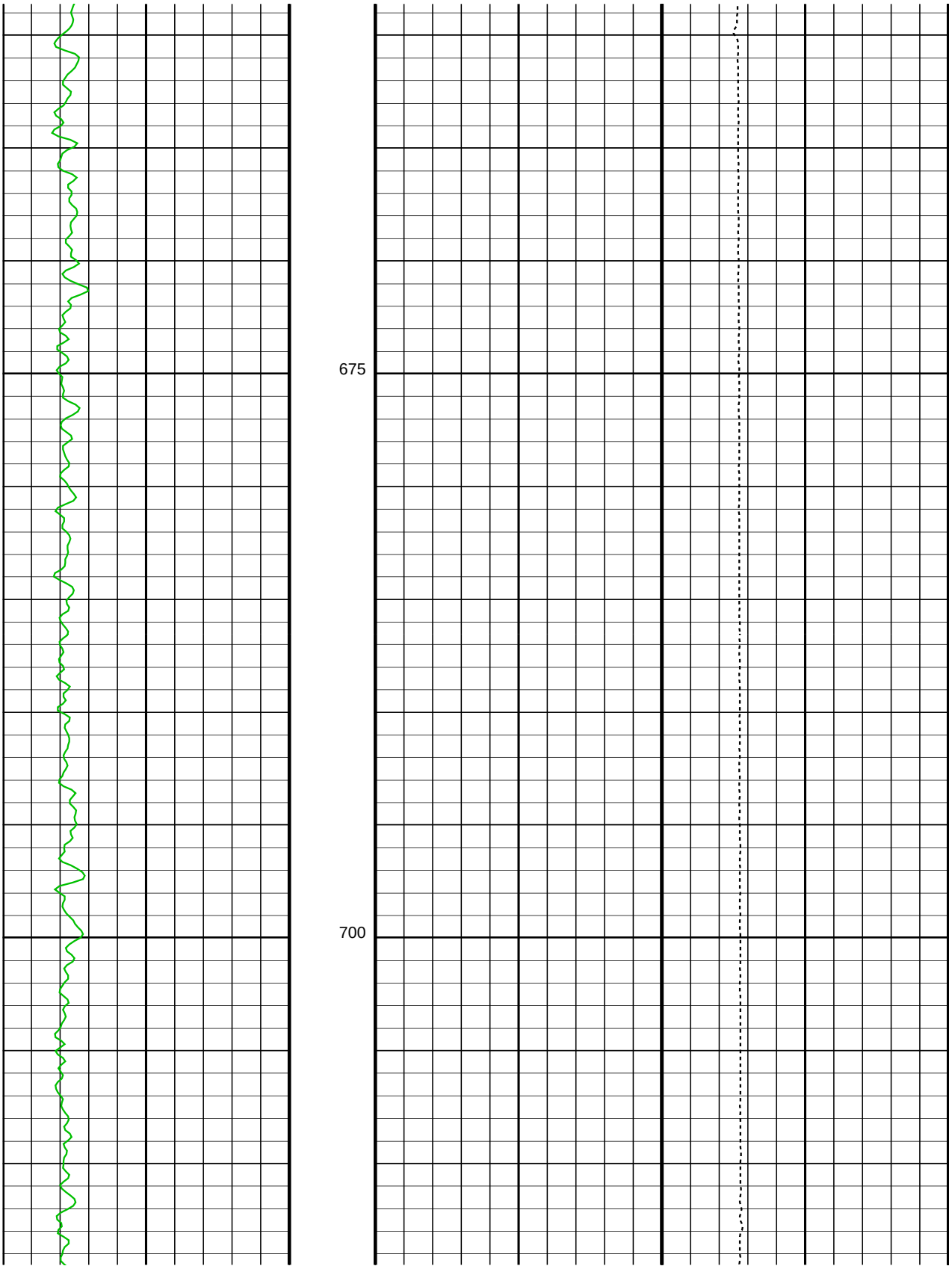
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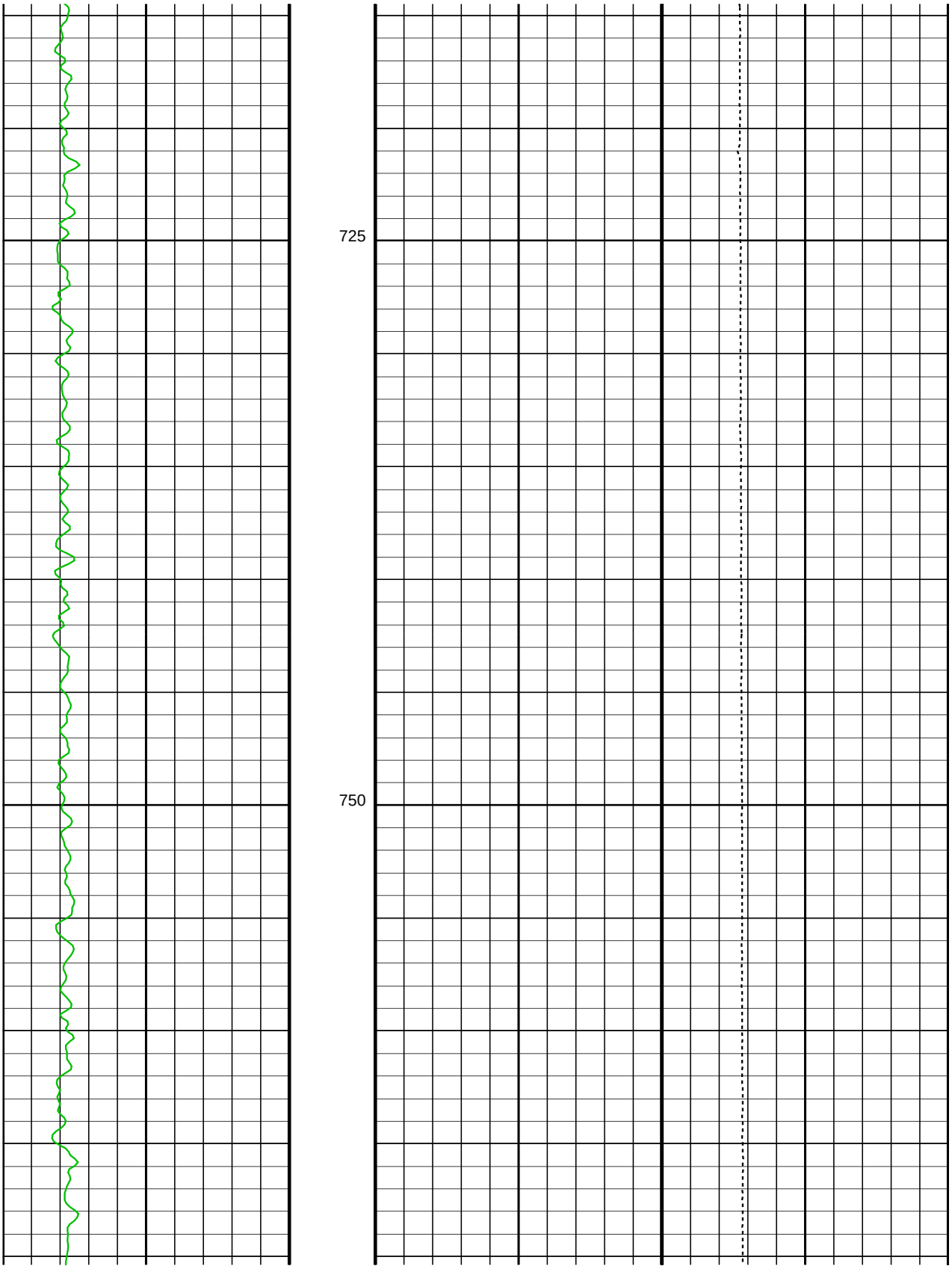
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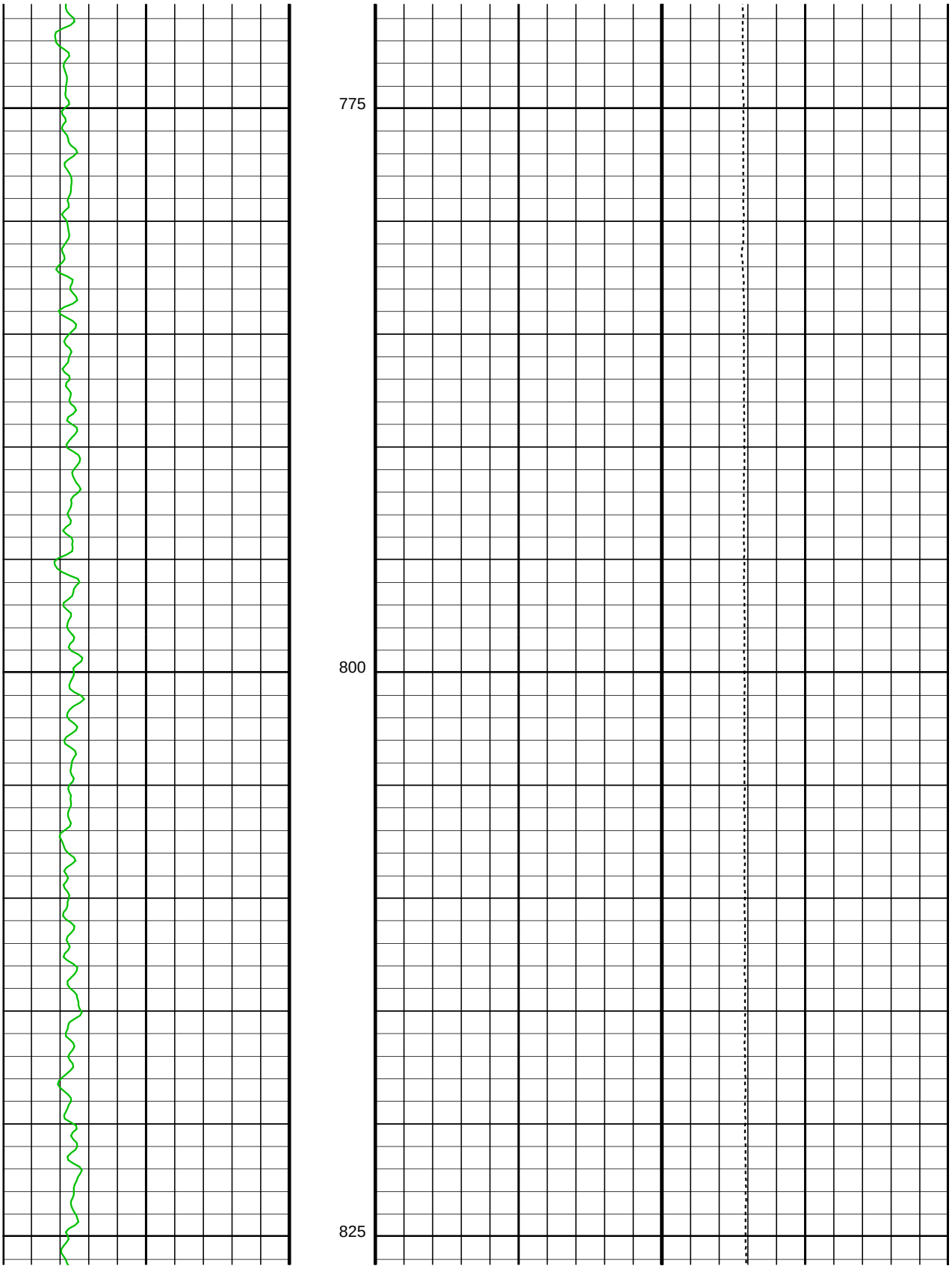
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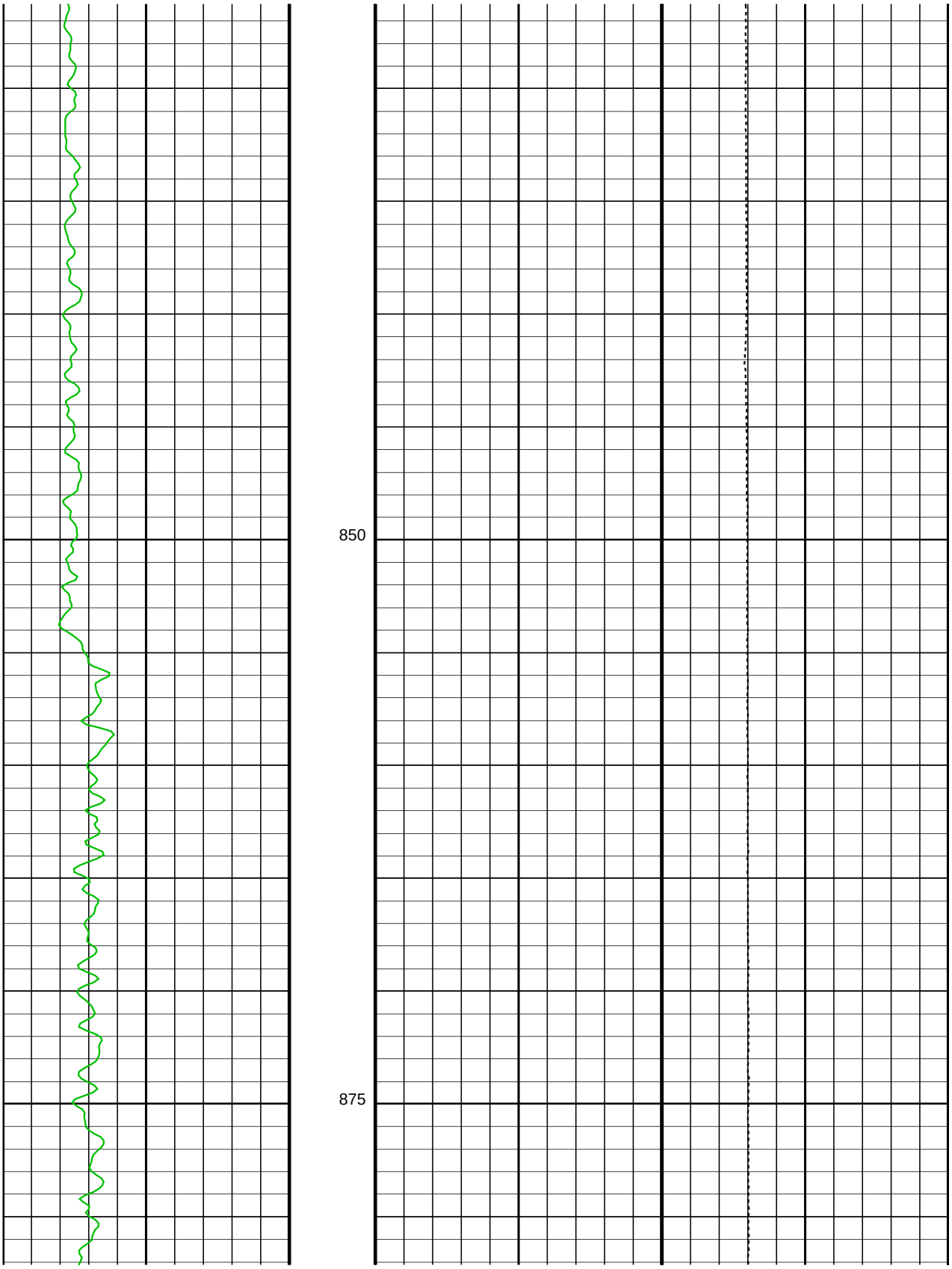
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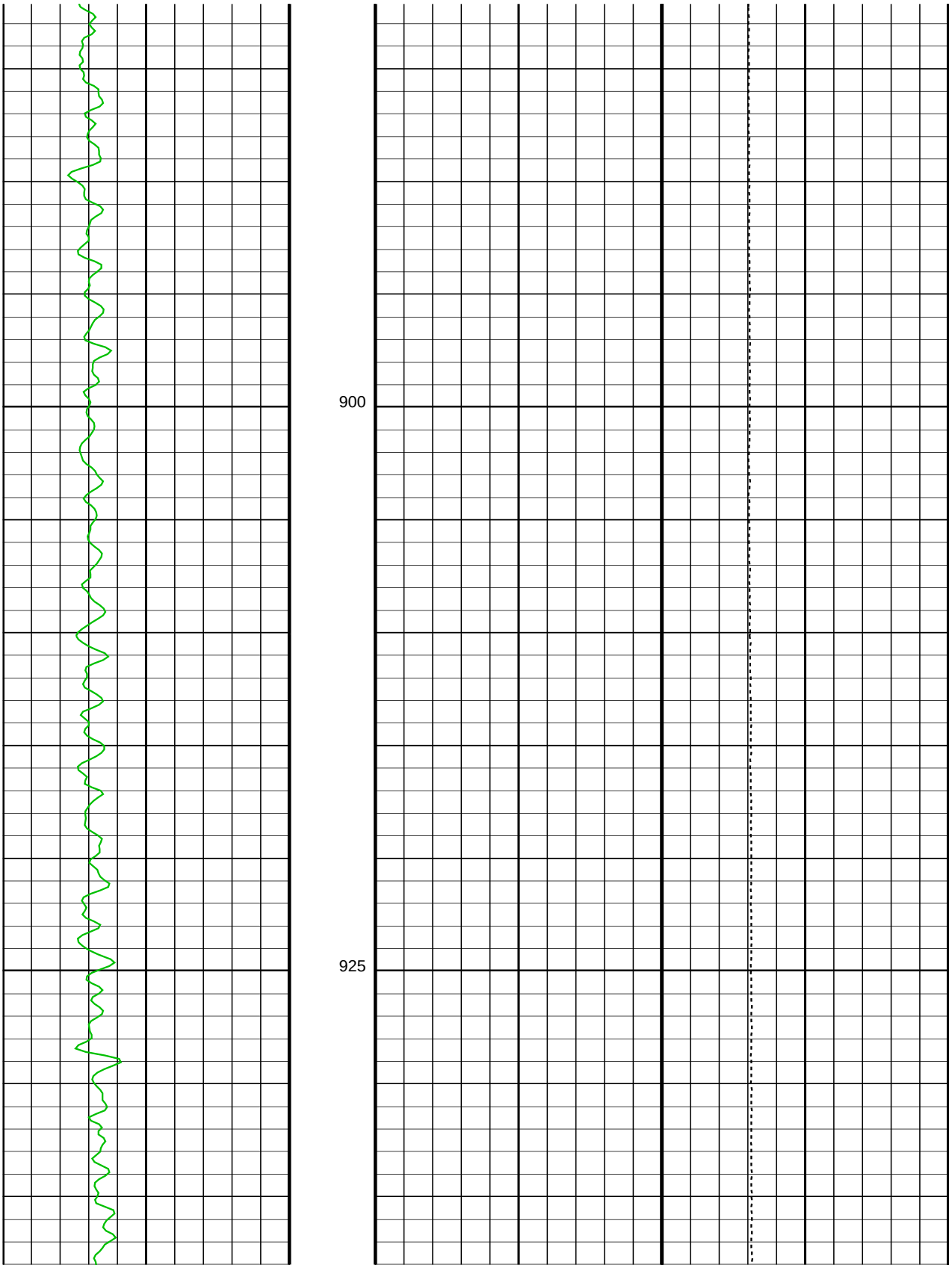
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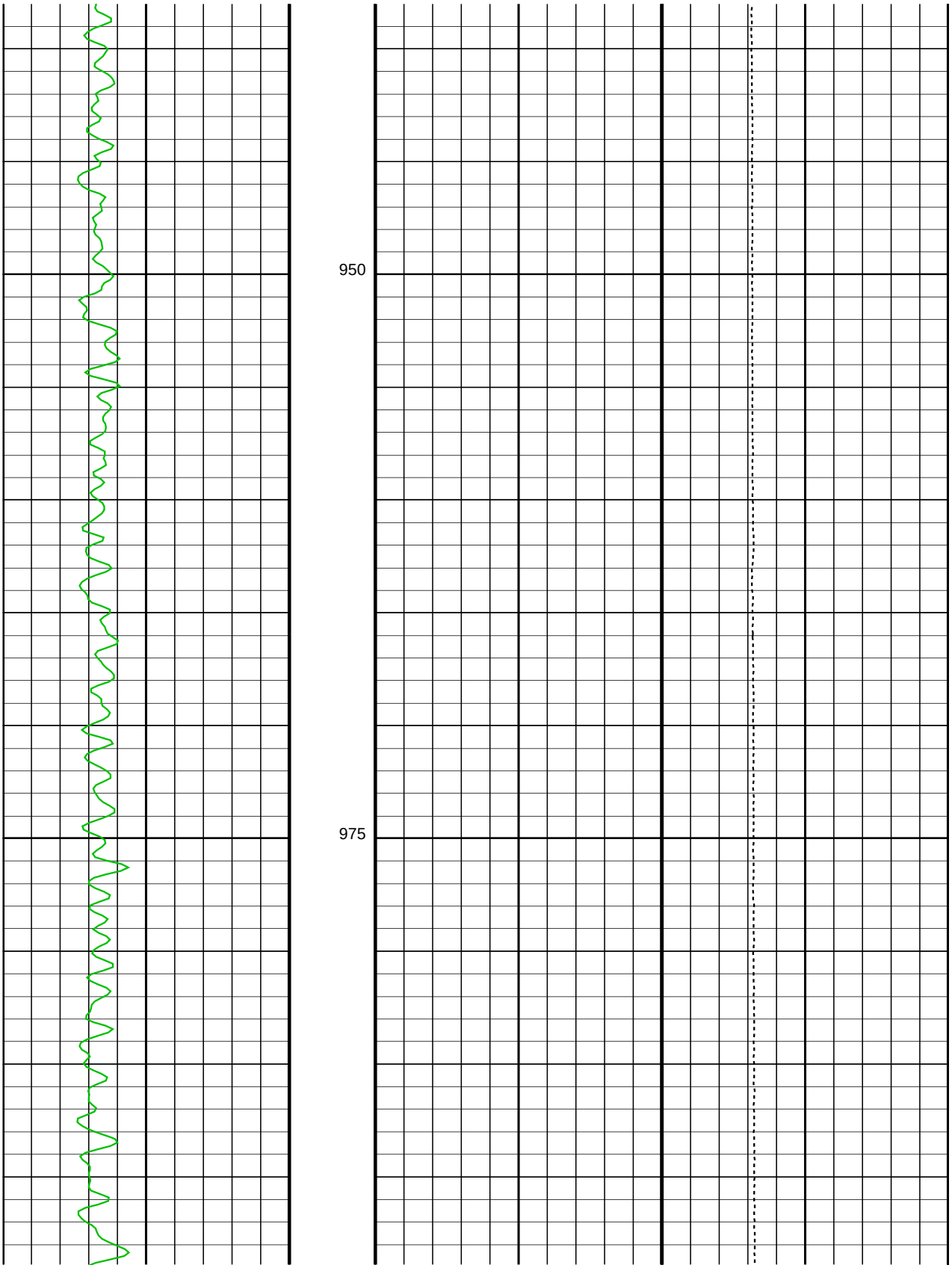
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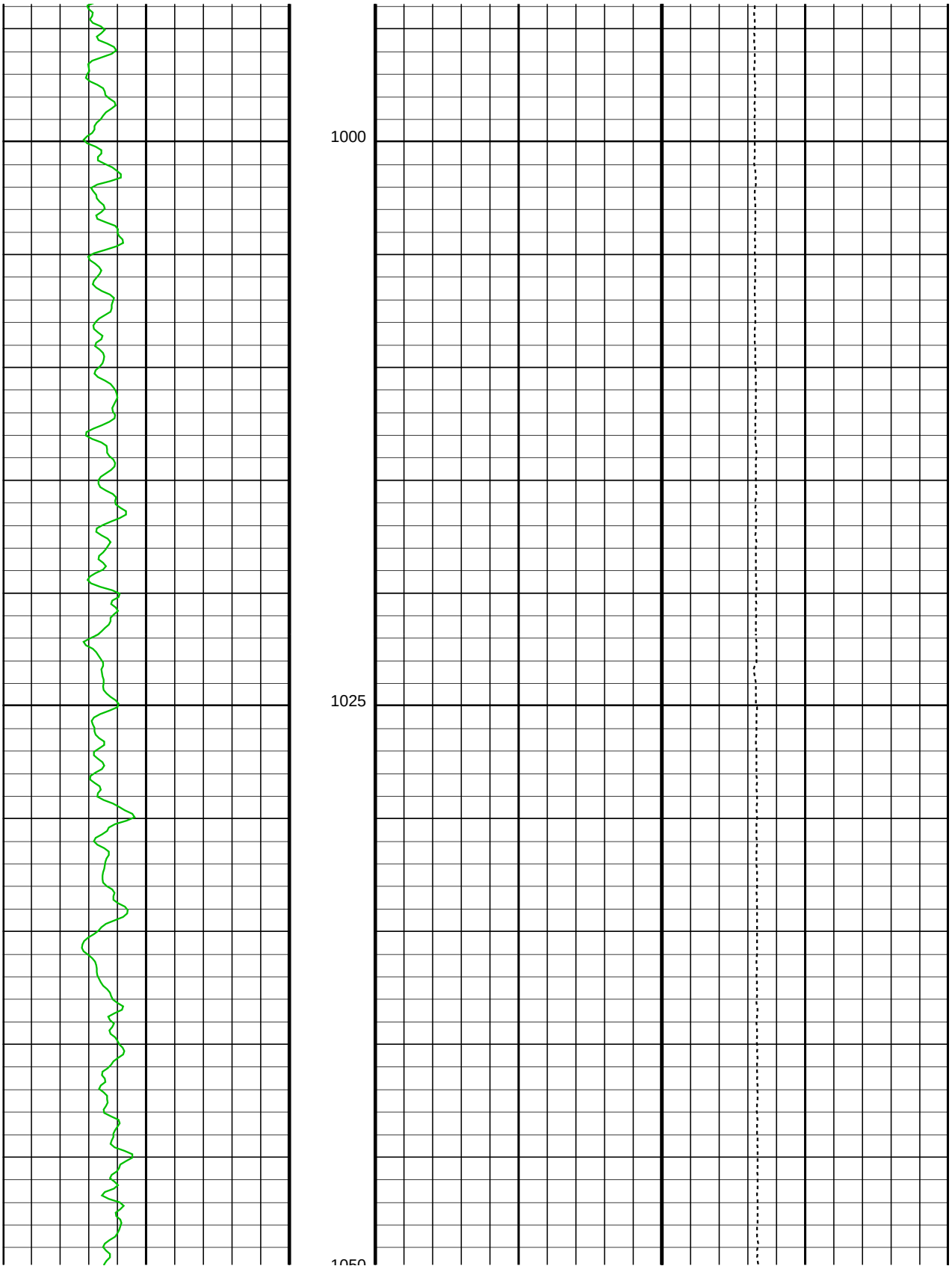
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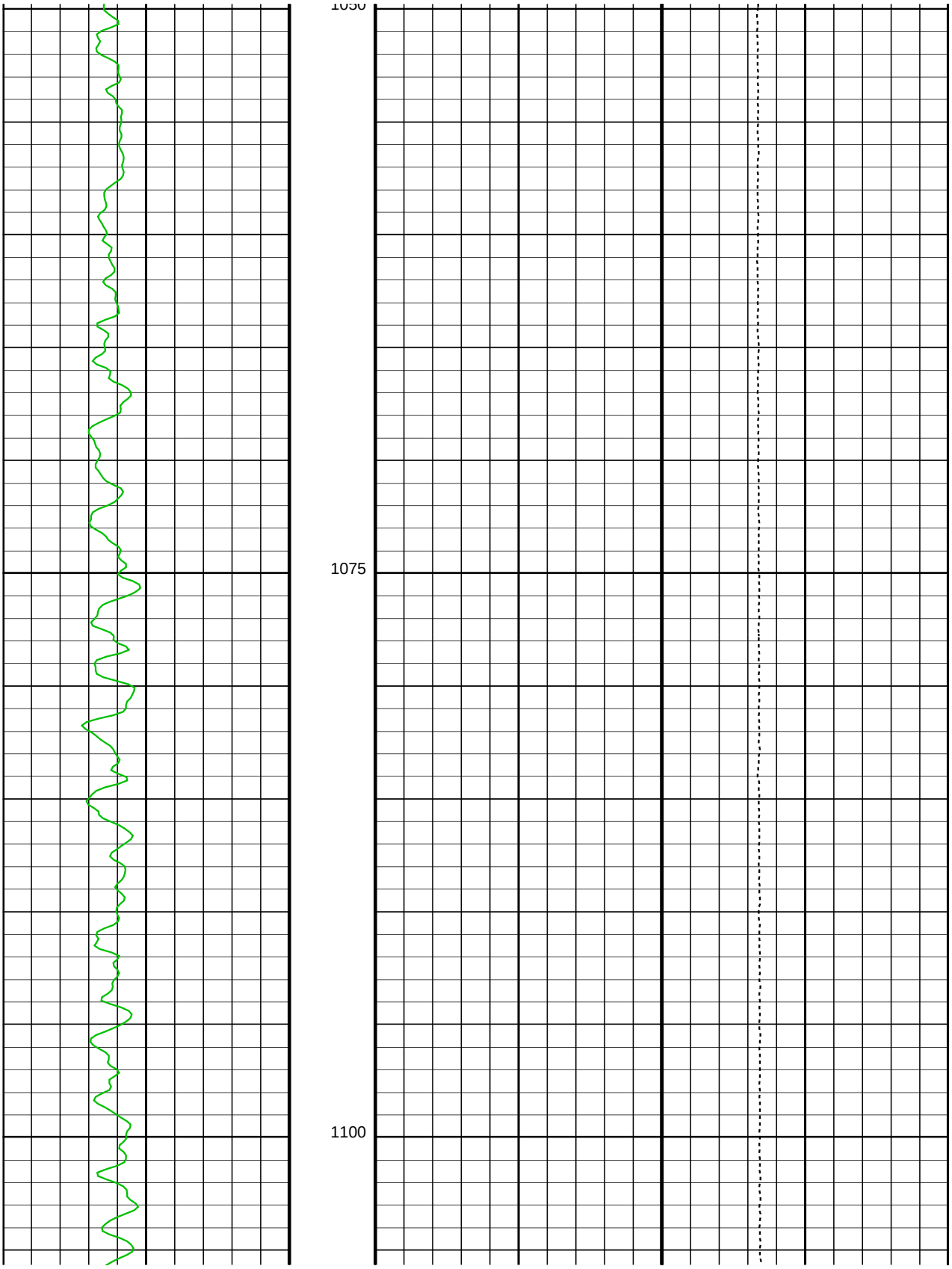
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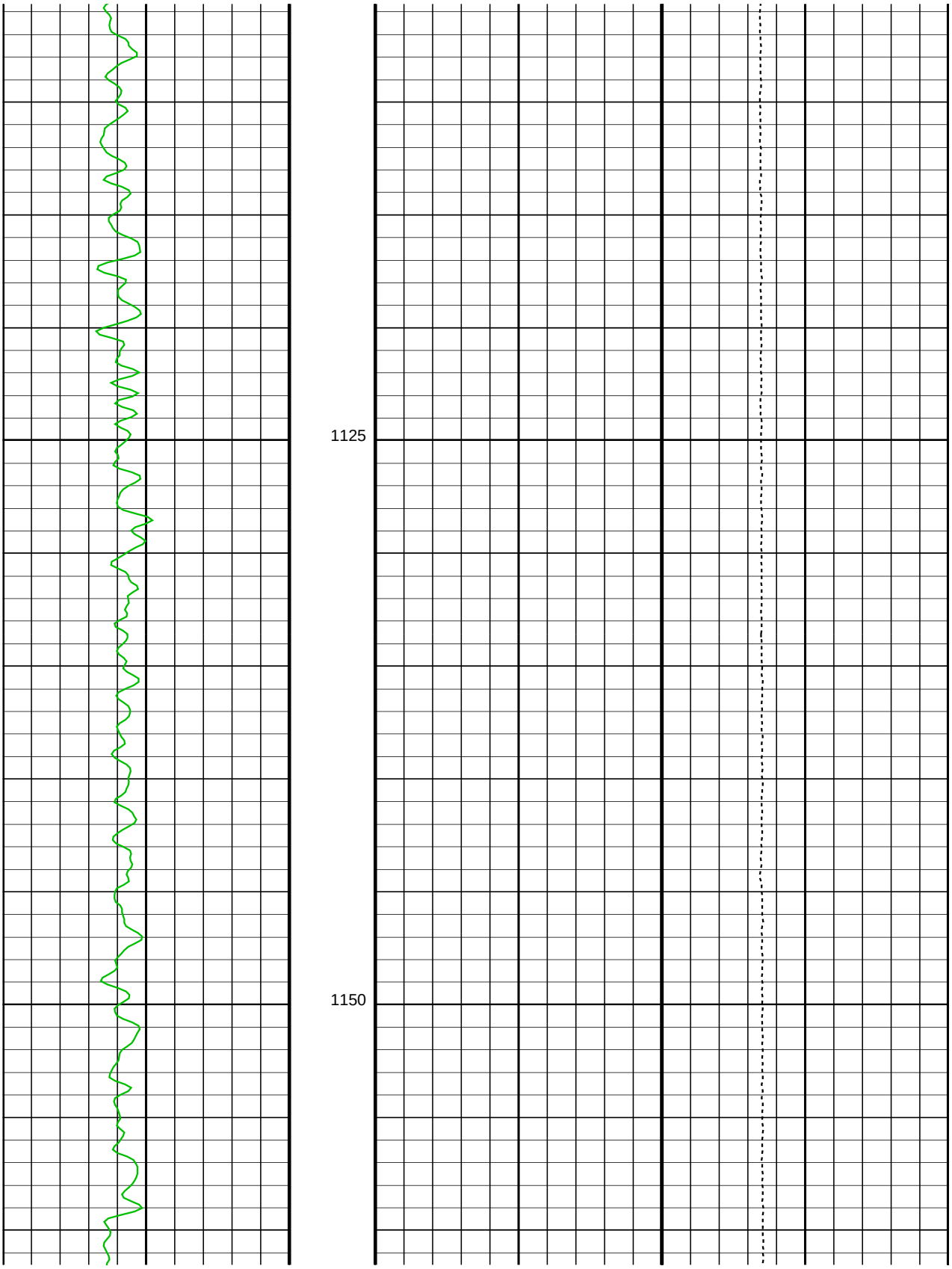
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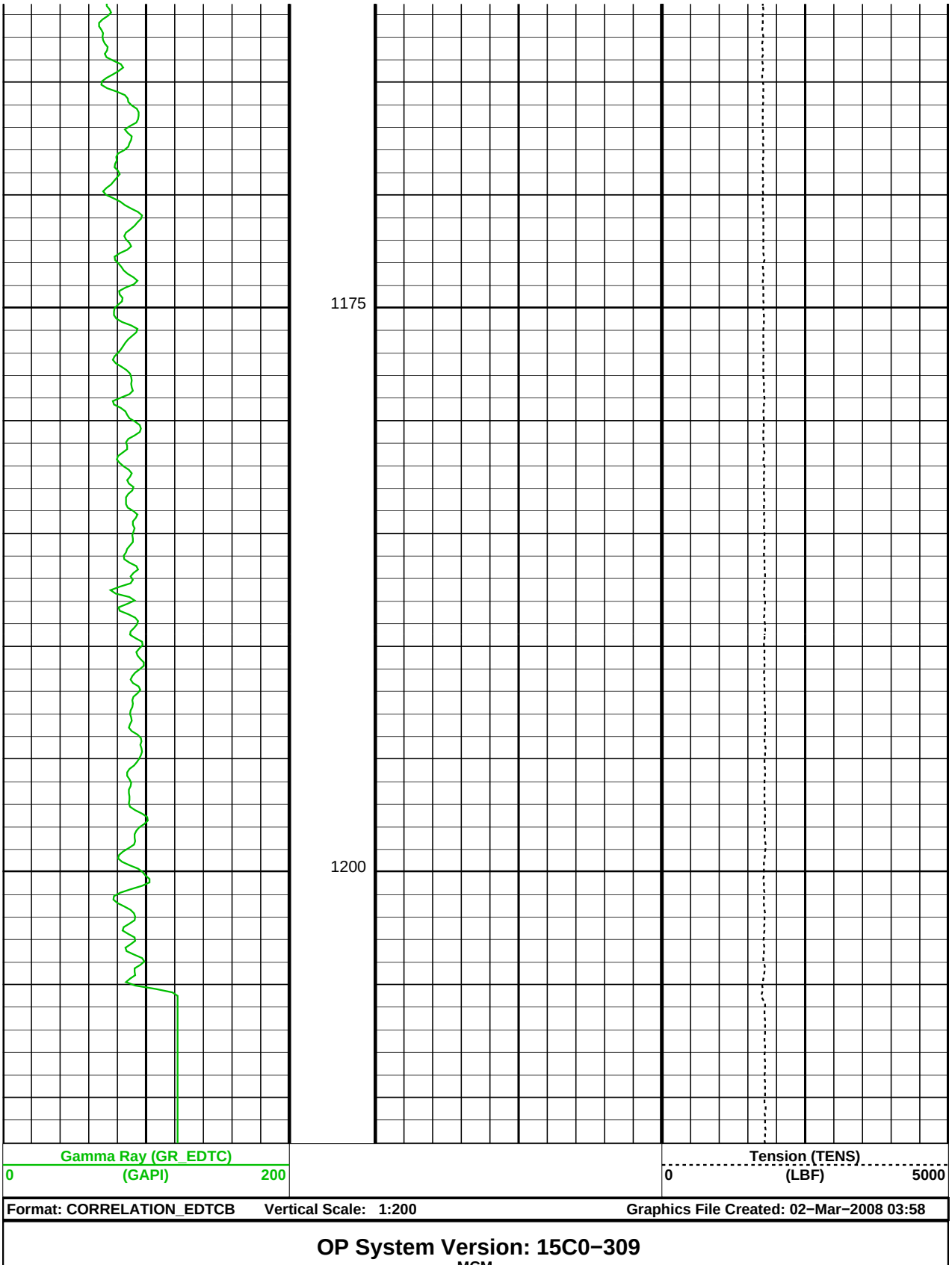
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0 (GAPI) 200
Tension (TENS)
0 (LBF) 5000
Format: CORRELATION_EDTCB Vertical Scale: 1:200 Graphics File Created: 02−Mar−2008 03:58
OP System Version: 15C0−309

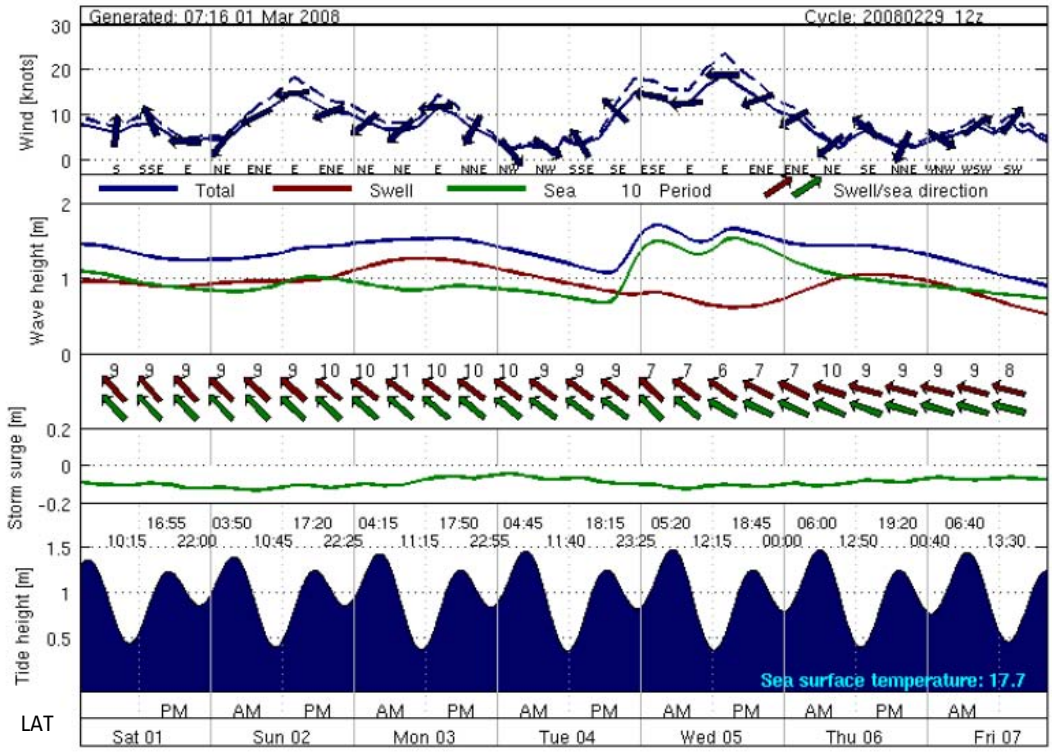
		MCM	
VSIT−G	SKK−3368−VSI−WB2_9_17_I	EDTC−B	SKK−3493−EDTCB_b

Output DLIS Files

DEFAULT	VSIT_013LUP	FN:12	PRODUCER	02−Mar−2008 03:58

Tidal Water Level Report

MetOcean Forecast Report for **Wasabi 1** [38.4883S 147.264E]
Issued at 2008-02-29 18:43 UTC



	Total					Swell		Sea		Wind		
Time	Hs	Hx	Tp	Dp	Dpm	Hs	Dpm	Hs	Dpm	Wsp	Gst	Wd
UTC+8	m	m	s	deg	deg	m	deg	m	deg	kts	kts	deg
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2008-03-01 04:00:00	1.4	2.6	8.9	139	139	0.9	139	1.0	138	5	6	216
2008-03-01 07:00:00	1.4	2.5	8.9	139	139	0.9	139	1.0	138	5	6	226
2008-03-01 10:00:00	1.3	2.4	8.8	139	138	0.9	138	0.9	138	7	8	196
2008-03-01 13:00:00	1.2	2.3	8.8	138	138	0.9	138	0.9	137	8	10	168
2008-03-01 16:00:00	1.2	2.3	8.7	138	138	0.8	138	0.9	137	6	8	145
2008-03-01 19:00:00	1.2	2.2	8.7	137	137	0.8	137	0.9	136	5	5	119
2008-03-01 22:00:00	1.2	2.2	8.7	136	136	0.8	136	0.9	136	4	5	85
2008-03-02 01:00:00	1.2	2.3	8.8	135	135	0.9	135	0.9	135	4	5	61
2008-03-02 04:00:00	1.3	2.3	8.9	134	134	0.9	134	0.9	135	4	5	53
2008-03-02 07:00:00	1.3	2.4	9.0	133	133	0.9	133	0.9	134	6	7	62
2008-03-02 10:00:00	1.3	2.4	9.0	133	132	0.9	132	0.9	133	10	12	83
2008-03-02 13:00:00	1.4	2.5	9.1	132	132	1.0	132	0.9	133	13	16	89
2008-03-02 16:00:00	1.4	2.7	9.1	131	131	1.0	131	1.0	132	14	17	83

	Total					Swell		Sea		Wind		
2008-03-02 19:00:00	1.5	2.8	9.4	131	131	1.0	131	1.1	132	12	15	71
2008-03-02 22:00:00	1.5	2.9	9.9	127	127	1.1	127	1.1	131	11	13	59
2008-03-03 01:00:00	1.6	2.9	10.3	127	127	1.2	127	1.0	131	10	12	47
2008-03-03 04:00:00	1.6	3.0	10.6	126	126	1.2	126	1.0	130	8	10	35
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2008-03-03 10:00:00	1.6	3.0	10.7	126	126	1.3	126	0.9	130	6	8	62
2008-03-03 13:00:00	1.6	2.9	10.6	126	126	1.3	126	0.9	130	10	12	80
2008-03-03 16:00:00	1.6	2.9	10.5	126	126	1.3	126	0.9	129	11	13	71
2008-03-03 19:00:00	1.5	2.9	10.3	126	126	1.2	126	0.9	129	10	12	44
2008-03-03 22:00:00	1.5	2.8	10.2	126	126	1.2	126	0.9	128	8	10	18
2008-03-04 01:00:00	1.4	2.7	10.1	126	126	1.1	126	0.9	128	6	7	11
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2008-03-04 19:00:00	1.9	3.5	7.6	133	133	1.0	133	1.6	133	17	21	125
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2008-03-05 10:00:00	1.8	3.3	6.9	125	126	0.7	127	1.6	126	16	20	94
2008-03-05 13:00:00	1.6	3.1	6.8	124	124	0.6	125	1.5	124	16	20	90
2008-03-05 16:00:00	1.6	3.0	6.7	123	121	0.6	124	1.5	121	16	19	82
2008-03-05 19:00:00	1.5	2.8	6.5	121	119	0.6	123	1.4	119	15	18	75
2008-03-05 22:00:00	1.5	2.8	6.6	120	118	0.7	120	1.3	118	14	17	73
2008-03-06 01:00:00	1.5	2.7	6.9	119	119	0.8	116	1.2	119	13	16	68
2008-03-06 04:00:00	1.5	2.7	9.9	107	107	0.9	107	1.2	116	11	13	60
2008-03-06 07:00:00	1.4	2.7	9.8	106	106	0.9	106	1.1	113	8	9	58
2008-03-06 10:00:00	1.4	2.6	9.7	106	106	1.0	106	1.0	111	6	7	92
2008-03-06 13:00:00	1.4	2.6	9.5	104	104	1.0	104	1.0	109	7	9	107
2008-03-06 16:00:00	1.4	2.5	9.2	103	104	1.0	104	0.9	107	5	6	104
2008-03-06 19:00:00	1.3	2.5	9.0	103	104	1.0	104	0.9	106		1	90
2008-03-06 22:00:00	1.3	2.4	8.9	103	104	0.9	104	0.9	106	6	7	250
2008-03-07 01:00:00	1.3	2.3	8.8	104	104	0.9	104	0.9	105	10	11	246
2008-03-07 04:00:00	1.2	2.3	8.6	104	104	0.8	104	0.9	105	9	11	252
2008-03-07 07:00:00	1.2	2.2	8.5	104	105	0.8	105	0.9	105	8	10	240

Hs: Total significant wave height **Hx:** Spectral estimate of maximum wave **Tp:** Peak Period

Dp: Peak direction **Dpm:** Mean direction at peak frequency **Wsp:** Mean wind speed

Gst: Typical gust speed **Wd:** Wind direction

VSI Tool Evaluation Test Report

VSI Seismic Evaluation Report

ELECTRICAL NOISE LOW TEST

2008/03/05 15:15:53

Shot No: 1 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
DC Offset	1	X	-25.1572	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	X	0.1481	micro V	-	0.5000	PASS
Noise Peak	1	X	0.5902	micro V	-	2.0000	PASS
DC Offset	1	Y	-25.2649	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Y	0.1344	micro V	-	0.5000	PASS
Noise Peak	1	Y	0.4893	micro V	-	2.0000	PASS
DC Offset	1	Z	-25.1555	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Z	0.1285	micro V	-	0.5000	PASS
Noise Peak	1	Z	0.5479	micro V	-	2.0000	PASS
DC Offset	2	X	-25.2719	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	X	0.1289	micro V	-	0.5000	PASS
Noise Peak	2	X	0.5234	micro V	-	2.0000	PASS
DC Offset	2	Y	-25.2503	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Y	0.1294	micro V	-	0.5000	PASS
Noise Peak	2	Y	0.4645	micro V	-	2.0000	PASS
DC Offset	2	Z	-25.2660	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Z	0.1284	micro V	-	0.5000	PASS
Noise Peak	2	Z	0.4437	micro V	-	2.0000	PASS
DC Offset	3	X	-25.2366	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	X	0.1327	micro V	-	0.5000	PASS
Noise Peak	3	X	0.4503	micro V	-	2.0000	PASS
DC Offset	3	Y	-25.4020	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Y	0.1364	micro V	-	0.5000	PASS
Noise Peak	3	Y	0.4919	micro V	-	2.0000	PASS
DC Offset	3	Z	-25.2583	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Z	0.1265	micro V	-	0.5000	PASS
Noise Peak	3	Z	0.4647	micro V	-	2.0000	PASS
DC Offset	4	X	-25.1746	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	X	0.1277	micro V	-	0.5000	PASS
Noise Peak	4	X	0.5231	micro V	-	2.0000	PASS
DC Offset	4	Y	-25.4283	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Y	0.1448	micro V	-	0.5000	PASS
Noise Peak	4	Y	0.4648	micro V	-	2.0000	PASS
DC Offset	4	Z	-25.2405	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Z	0.1249	micro V	-	0.5000	PASS
Noise Peak	4	Z	0.4569	micro V	-	2.0000	PASS

ELECTRICAL NOISE HIGH TEST

2008/03/05 15:16:19

Shot No: 2 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
DC Offset	1	X	-23.9378	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	X	0.1300	micro V	-	0.5000	PASS
Noise Peak	1	X	0.4837	micro V	-	2.0000	PASS
DC Offset	1	Y	-25.9460	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Y	0.1291	micro V	-	0.5000	PASS
Noise Peak	1	Y	0.4292	micro V	-	2.0000	PASS
DC Offset	1	Z	-24.8840	milli V	-100.0000	100.0000	PASS
RMS Noise Level	1	Z	0.1254	micro V	-	0.5000	PASS
Noise Peak	1	Z	0.4698	micro V	-	2.0000	PASS
DC Offset	2	X	-24.3633	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	X	0.1220	micro V	-	0.5000	PASS
Noise Peak	2	X	0.4048	micro V	-	2.0000	PASS
DC Offset	2	Y	-25.2371	milli V	-100.0000	100.0000	PASS
RMS Noise Level	2	Y	0.1317	micro V	-	0.5000	PASS
Noise Peak	2	Y	0.4521	micro V	-	2.0000	PASS
DC Offset	2	Z	-25.0111	milli V	-100.0000	100.0000	PASS

RMS Noise Level	2	Z	0.1266	micro V	-	0.5000	PASS
Noise Peak	2	Z	0.5274	micro V	-	2.0000	PASS
DC Offset	3	X	-24.6450	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	X	0.1305	micro V	-	0.5000	PASS
Noise Peak	3	X	0.4830	micro V	-	2.0000	PASS
DC Offset	3	Y	-25.8079	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Y	0.1302	micro V	-	0.5000	PASS
Noise Peak	3	Y	0.4743	micro V	-	2.0000	PASS
DC Offset	3	Z	-24.8328	milli V	-100.0000	100.0000	PASS
RMS Noise Level	3	Z	0.1293	micro V	-	0.5000	PASS
Noise Peak	3	Z	0.4591	micro V	-	2.0000	PASS
DC Offset	4	X	-24.5309	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	X	0.1249	micro V	-	0.5000	PASS
Noise Peak	4	X	0.4569	micro V	-	2.0000	PASS
DC Offset	4	Y	-26.5537	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Y	0.1267	micro V	-	0.5000	PASS
Noise Peak	4	Y	0.4554	micro V	-	2.0000	PASS
DC Offset	4	Z	-24.3538	milli V	-100.0000	100.0000	PASS
RMS Noise Level	4	Z	0.1268	micro V	-	0.5000	PASS
Noise Peak	4	Z	0.5074	micro V	-	2.0000	PASS

ELECTRICAL DISTORTION TEST

2008/03/05 15:16:29

Shot No: 3 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Total Harmonic Distortion	1	X	-101.3496	dB	-	-90.0000	PASS
Total Harmonic Distortion	1	Y	-101.6085	dB	-	-90.0000	PASS
Total Harmonic Distortion	1	Z	-99.1830	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	X	-99.0730	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	Y	-97.5717	dB	-	-90.0000	PASS
Total Harmonic Distortion	2	Z	-98.7248	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	X	-102.0585	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	Y	-101.5743	dB	-	-90.0000	PASS
Total Harmonic Distortion	3	Z	-100.5992	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	X	-100.3988	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	Y	-99.5966	dB	-	-90.0000	PASS
Total Harmonic Distortion	4	Z	-103.4201	dB	-	-90.0000	PASS

SYSTEM DYNAMIC RANGE TEST

2008/03/05 15:16:45

Shot No: 4 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
System Dynamic Range	1	X	108.0226	dB	103.0000	-	PASS
System Dynamic Range	1	Y	107.9481	dB	103.0000	-	PASS
System Dynamic Range	1	Z	107.9384	dB	103.0000	-	PASS
System Dynamic Range	2	X	107.6075	dB	103.0000	-	PASS
System Dynamic Range	2	Y	107.7226	dB	103.0000	-	PASS
System Dynamic Range	2	Z	107.3482	dB	103.0000	-	PASS
System Dynamic Range	3	X	107.0977	dB	103.0000	-	PASS
System Dynamic Range	3	Y	107.3249	dB	103.0000	-	PASS
System Dynamic Range	3	Z	107.1382	dB	103.0000	-	PASS
System Dynamic Range	4	X	107.8019	dB	103.0000	-	PASS
System Dynamic Range	4	Y	107.3409	dB	103.0000	-	PASS
System Dynamic Range	4	Z	106.8546	dB	103.0000	-	PASS

AMPLIFIER GAIN 2 TEST

2008/03/05 15:17:01

Shot No: 5 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1287	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1209	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	0.0000	dB	-0.5000	0.5000	PASS

Gain Accuracy	1	Z	0.1253	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.1147	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1242	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1281	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1227	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1221	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1211	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1358	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1336	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0000	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1370	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0000	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 4 TEST

2008/03/05 15:17:13

Shot No: 6 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1270	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0017	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1221	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	-0.0013	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1225	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0028	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.0972	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0175	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1228	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0014	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1264	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0016	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1197	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1184	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0037	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1182	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0028	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1328	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1300	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0035	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1363	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0007	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 8 TEST

2008/03/05 15:17:24

Shot No: 7 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1253	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0034	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1243	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	-0.0034	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1224	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0029	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.0915	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0233	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1233	dB	-0.5000	0.5000	PASS

Gain Step Accuracy	2	Y	0.0009	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1269	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0011	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1185	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0041	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1173	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0047	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1181	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1318	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0040	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1286	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0050	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1370	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0000	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 16 TEST

2008/03/05 15:17:36

Shot No: 8 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1230	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0057	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1203	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	0.0006	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1201	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0052	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.0883	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0264	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1212	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	0.0030	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1206	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0075	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1133	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0094	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Y	0.1135	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0086	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1159	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0051	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1257	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0101	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1273	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0063	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1318	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	0.0051	dB	-0.5000	0.5000	PASS

AMPLIFIER GAIN 32 TEST

2008/03/05 15:17:48

Shot No: 9 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Gain Accuracy	1	X	0.1251	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	X	0.0036	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Y	0.1201	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Y	0.0007	dB	-0.5000	0.5000	PASS
Gain Accuracy	1	Z	0.1248	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	1	Z	0.0004	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	X	0.0894	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	X	0.0253	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Y	0.1258	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Y	-0.0016	dB	-0.5000	0.5000	PASS
Gain Accuracy	2	Z	0.1246	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	2	Z	0.0035	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	X	0.1197	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	X	0.0030	dB	-0.5000	0.5000	PASS

Gain Accuracy	3	Y	0.1161	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Y	0.0060	dB	-0.5000	0.5000	PASS
Gain Accuracy	3	Z	0.1190	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	3	Z	0.0021	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	X	0.1255	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	X	0.0104	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Y	0.1277	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Y	0.0059	dB	-0.5000	0.5000	PASS
Gain Accuracy	4	Z	0.1382	dB	-0.5000	0.5000	PASS
Gain Step Accuracy	4	Z	-0.0012	dB	-0.5000	0.5000	PASS

CROSS TALK X TEST

2008/03/05 15:18:05

Shot No: 10 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk X-Y	1	-	-99.4508	dB	-	-90.0000	PASS
Cross Talk X-Z	1	-	-99.9949	dB	-	-90.0000	PASS
Cross Talk X-Y	2	-	-99.6220	dB	-	-90.0000	PASS
Cross Talk X-Z	2	-	-99.7794	dB	-	-90.0000	PASS
Cross Talk X-Y	3	-	-99.7799	dB	-	-90.0000	PASS
Cross Talk X-Z	3	-	-100.0375	dB	-	-90.0000	PASS
Cross Talk X-Y	4	-	-100.0864	dB	-	-90.0000	PASS
Cross Talk X-Z	4	-	-99.6811	dB	-	-90.0000	PASS

CROSS TALK Y TEST

2008/03/05 15:18:25

Shot No: 11 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk Y-Z	1	-	-99.7419	dB	-	-90.0000	PASS
Cross Talk Y-X	1	-	-99.4512	dB	-	-90.0000	PASS
Cross Talk Y-Z	2	-	-99.7991	dB	-	-90.0000	PASS
Cross Talk Y-X	2	-	-99.5626	dB	-	-90.0000	PASS
Cross Talk Y-Z	3	-	-99.8088	dB	-	-90.0000	PASS
Cross Talk Y-X	3	-	-99.5592	dB	-	-90.0000	PASS
Cross Talk Y-Z	4	-	-99.9557	dB	-	-90.0000	PASS
Cross Talk Y-X	4	-	-99.6567	dB	-	-90.0000	PASS

CROSS TALK Z TEST

2008/03/05 15:18:46

Shot No: 12 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Cross Talk Z-X	1	-	-98.8214	dB	-	-90.0000	PASS
Cross Talk Z-Y	1	-	-99.7788	dB	-	-90.0000	PASS
Cross Talk Z-X	2	-	-99.0421	dB	-	-90.0000	PASS
Cross Talk Z-Y	2	-	-98.4888	dB	-	-90.0000	PASS
Cross Talk Z-X	3	-	-98.7811	dB	-	-90.0000	PASS
Cross Talk Z-Y	3	-	-99.3707	dB	-	-90.0000	PASS
Cross Talk Z-X	4	-	-99.0389	dB	-	-90.0000	PASS
Cross Talk Z-Y	4	-	-99.6681	dB	-	-90.0000	PASS

IMPULSE RESPONSE TEST

2008/03/05 15:19:05

Shot No: 13 **Station Depth: 1078.31 m**

Evaluation Item	Shuttle	Channel	Value	Unit	Lower Limit	Upper Limit	Result
Amplitude (0.3Hz)	1	X	-1.4994	dB	-5.0000	-	PASS
Amplitude (400Hz)	1	X	-3.5761	dB	-5.0000	-	PASS
Impulse Amplitude	1	X	572.7488	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	X	0.0000	degree	-	-	-
Amplitude (0.3Hz)	1	Y	-1.4989	dB	-5.0000	-	PASS
Amplitude (400Hz)	1	Y	-3.5766	dB	-5.0000	-	PASS
Impulse Amplitude	1	Y	572.5405	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	Y	-0.1641	degree	-	-	-
Amplitude (0.3Hz)	1	Z	-1.5121	dB	-5.0000	-	PASS

Amplitude (400Hz)	1	Z	-3.5768	dB	-5.0000	-	PASS
Impulse Amplitude	1	Z	572.7220	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	1	Z	0.0145	degree	-	-	-
Amplitude (0.3Hz)	2	X	-1.6141	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	X	-3.5756	dB	-5.0000	-	PASS
Impulse Amplitude	2	X	571.3664	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	X	0.9346	degree	-	-	-
Amplitude (0.3Hz)	2	Y	-1.5926	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	Y	-3.5775	dB	-5.0000	-	PASS
Impulse Amplitude	2	Y	572.2194	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	Y	0.7340	degree	-	-	-
Amplitude (0.3Hz)	2	Z	-1.5345	dB	-5.0000	-	PASS
Amplitude (400Hz)	2	Z	-3.5773	dB	-5.0000	-	PASS
Impulse Amplitude	2	Z	572.4417	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	2	Z	0.2699	degree	-	-	-
Amplitude (0.3Hz)	3	X	-1.5067	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	X	-3.5780	dB	-5.0000	-	PASS
Impulse Amplitude	3	X	571.7280	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	X	-0.2759	degree	-	-	-
Amplitude (0.3Hz)	3	Y	-1.6145	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	Y	-3.5767	dB	-5.0000	-	PASS
Impulse Amplitude	3	Y	571.7051	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	Y	0.8946	degree	-	-	-
Amplitude (0.3Hz)	3	Z	-1.5530	dB	-5.0000	-	PASS
Amplitude (400Hz)	3	Z	-3.5767	dB	-5.0000	-	PASS
Impulse Amplitude	3	Z	571.6976	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	3	Z	0.1111	degree	-	-	-
Amplitude (0.3Hz)	4	X	-1.4945	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	X	-3.5774	dB	-5.0000	-	PASS
Impulse Amplitude	4	X	572.9066	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	X	-0.4238	degree	-	-	-
Amplitude (0.3Hz)	4	Y	-1.5014	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	Y	-3.5788	dB	-5.0000	-	PASS
Impulse Amplitude	4	Y	572.4818	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	Y	0.2423	degree	-	-	-
Amplitude (0.3Hz)	4	Z	-1.6175	dB	-5.0000	-	PASS
Amplitude (400Hz)	4	Z	-3.5777	dB	-5.0000	-	PASS
Impulse Amplitude	4	Z	572.9537	milli V	-	-	-
Phase Diff. at 0.3Hz from X1	4	Z	1.3322	degree	-	-	-

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig: West Triton
Field: Apache/VIC/P−58/WASABI−1
Location: Bass Strait
Well: WASABI−1
Company: Apache Northwest Pty Ltd

PEX−GR−HRLA−MSIP−S
Caliper Log
Scale 1:500

LOCATION

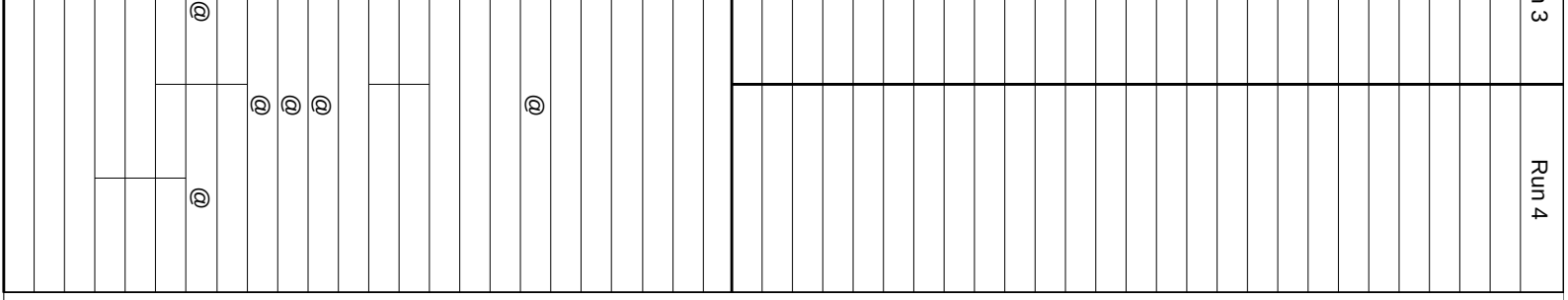
Bass Strait
Northing : 5739963.350 m
Easting : 522993.588 m

Elev.:
G.L. −27 m
D.F. 39 m

Permanent Datum: AHD — Elev.: 0 m
Log Measured From: DRILL FLOOR (RT) — 39.0 m above Perm. Datum
Drilling Measured From: DRILL FLOOR (RT)

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48.1 deg	147 15' 49.147" E	38 29' 18.157" S

	Run 1	Run 2	Run 3
Logging Date	1−Mar−2008		
Run Number	2		
Depth Driller	2313 m		
Schlumberger Depth	Not Tagged		
Bottom Log Interval	1387 m		
Top Log Interval	854 m		
Casing Driller Size @ Depth	13.375 in @ 857 m	@	@
Casing Schlumberger	854 m		
Bit Size	12.250 in		
Type Fluid In Hole	KCl/Polymer		
MUD Density / Viscosity	1.15 g/cm3 / 50 s		
MUD Fluid Loss / PH	5 cm3 / 8.7		
MUD Source Of Sample	Flowline		
RM @ Measured Temperature	0.082 ohm.m @ 20 degC	@	@
RMF @ Measured Temperature	0.071 ohm.m @ 21 degC	@	@
RMC @ Measured Temperature	0.099 ohm.m @ 20 degC	@	@
Source RMF / RMC	Press / Press		
RM @ MRT / RMF @ MRT	0.042 @ 59 / 0.037 @ 59	@ / @	@ / @
Maximum Recorded Temperatures	59 degC / 59		
Circulation Stopped / Time	1−Mar−2008 / 18:45		
Logger On Bottom / Time	3−Mar−2008 / 11:28		
Unit Number / Location	41 / AUSL		
Recorded By	A. Dandi/M.Dawson/K. AlBarhi		
Witnessed By	H.Little / A.Cruickshank		



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051		
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Conveyance Method:	Wireline
Wheel Correction 1:	−5	Calibration Offset:	−610.00	Rig Type:	Offshore_Fixed
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: VSI	OS1:
OS2: MDT−GR	OS2:
OS3: CST−GR	OS3:
OS4: VSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1

Tools run as per tool sketch, using 5x standoffs, 3x LCMEs and a bow spring.

Maximum Recorded Temperature was 59 degC taken from thermometers in Logging Head.

Neutron Enviroment Corrections : Hole Size, Borehole and formation Salinity, Mud Weight, Mud Cake, Standoff and Press./ Temp.

Density Environment Corrections : Hole Size, using BS, and Mud Weight.

Pex run in standard resolution as per client request.

REMARKS: RUN NUMBER 2

Barite correction applied to log.

Log Correlated to MWD Log Dated 1−Mar−2008, Wasabi−1 GEOVISION Resistivity RM 200.

Tools got hold up @ 1390m MD. Client decided to Log up from 1390m to surface.

Additional mud properties taken from Mud Report dated 1−Mar−2008:

Chlorides = 49,000 mg/L.

KCL = 10 (% by Wt.), Barite = 4.4 %.

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL08349210		SERVICE ORDER #:		
PROGRAM VERSION:	15C0−309		PROGRAM VERSION:		
FLUID LEVEL:	0 m		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

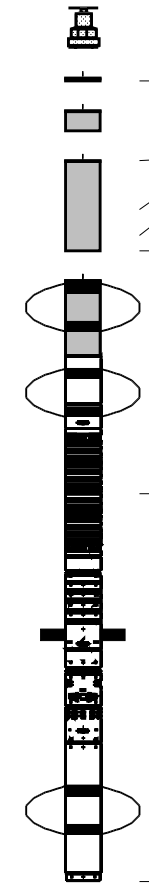
RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−Y
NCT−B
CNB−AB
NCS−YC 5375

WITM (EDTS)−A 969

DOWNHOLE EQUIPMENT



LEH−QT
LEH−QT 2800
33.61

BSP AH−169
32.73

AH−369
32.32

EDTC−B
EDTH−B 8378
EDTC−B 8379
EDTG−B 77305
31.88

MAPC−B
MAPC−BA 8198
ECH−SD 8198
MAMS−BA 8201
29.90

MAXS−B
MASS−BA 8157
MAXS−BA 8157
23.49
2.5 IN Standoff

PPC1−B
PPC1−B
PPC_CAL_STD
17.32

HRLT−B
HRUH−B 1741
HRUC−B 1730
15.33
2.5 IN Standoff

HRLS−B 1745
HRLH−B 1745
HRLC−B 1745
AH−270 1792

High Res. — 11.75

2.5 IN Standoff

HILTB−FTB
AH−107 2910
AH−107
HGNSD−B 856
HMCA
HGNH 3915
NLS−KL
NSR−F 5224
HACCZ 379
HCNT
HGR
HRCC−B 868
HRMS−B 788
HRGD−B 1806
GLS−J 5334

HGNS HTEM — 7.96
HMCA — 6.74
HGNS Gamm — 6.51
HGNS Neut — 4.73
HGNS Neut — 4.58
HGNS sens — 3.87
HRCC cart — 2.65
MCFL — 1.00
HILT cali — 0.85
HRDD−LS
HRDD−SS
HRDD−BS — 0.73
DF ACCZ
HTEN HMAS HV
Accelerom
Tension — 0.00

BNS−CCS — 0.14

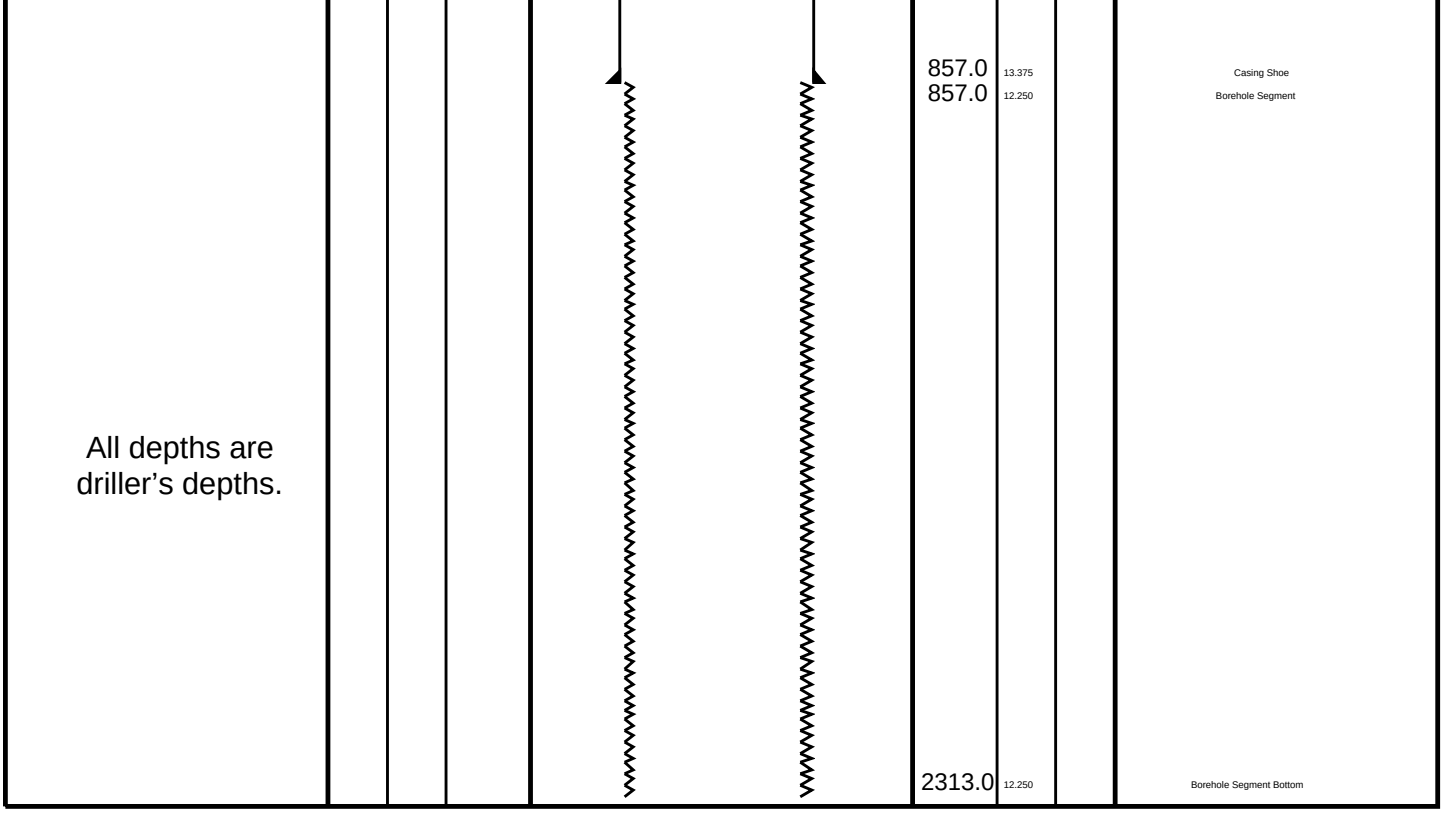
TOOL ZERO

MAXIMUM STRING DIAMETER 8.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
State: Victoria
Country: Australia

Drawing Date: 7−Mar−2008
Rig Name: West Triton
Reference Datum: AHD
Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe



All depths are driller's depths.

Schlumberger

Main Pass
1391 m − 840 m

MAXIS Field Log

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

Input DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_038PUP	FN:51	PRODUCER	12−Mar−2008 01:24	1391.0 M	840.5 M

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_035PUP	FN:36	PRODUCER	12−Mar−2008 01:47	1391.0 M	841.4 M
CUSTOMER	TLD_MCFL_CNL_HRLA_035PUC	FN:37	CUSTOMER	12−Mar−2008 01:47	1391.0 M	841.4 M

Integrated Hole/Cement Volume Summary

Hole Volume = 49.69 M3

Cement Volume = 24.62 M3 (assuming 9.63 IN casing O.D.)

Computed from 1391.0 M to 857.1 M using data channel(s) HCAL

OP System Version: 15C0−309

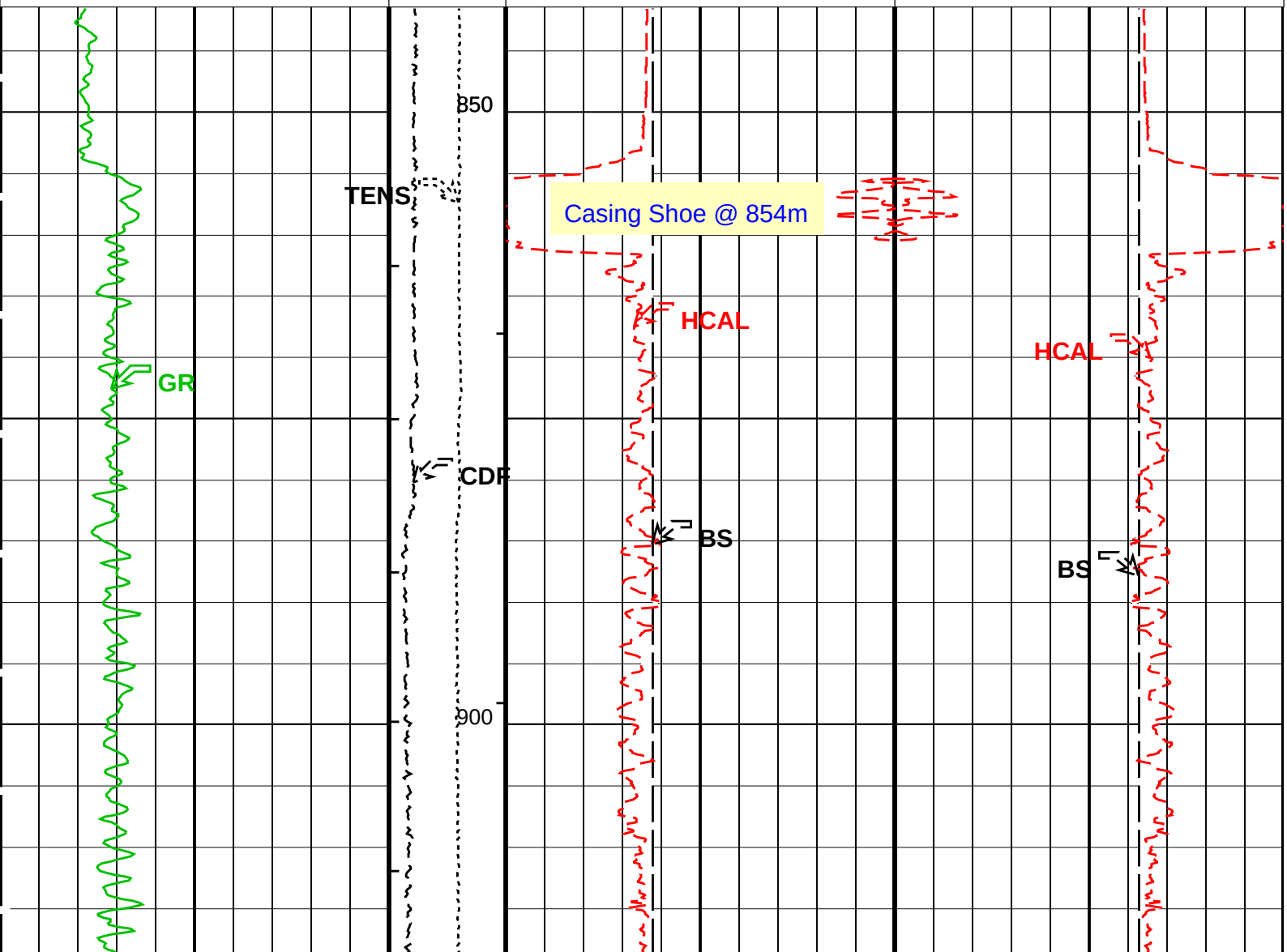
MCM

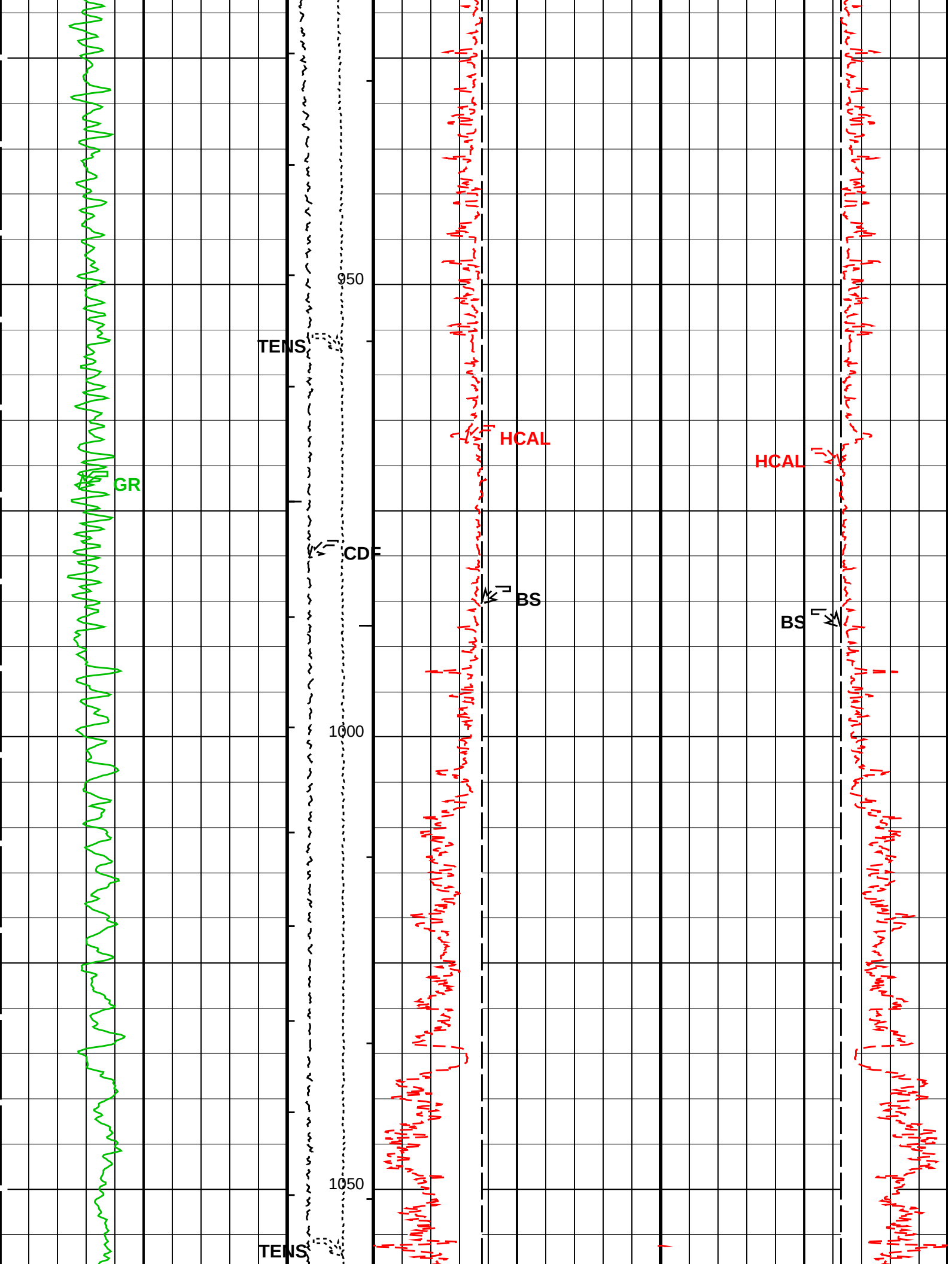
HILTB−FTB	SRPC−3546−Q1_2008_OP15_b	HRLT−B	SRPC−3546−Q1_2008_OP15_b
PPC1−B	SRPC−3546−Q1_2008_OP15_b	MAXS−B	SKK−3442−MAST_b
MAPC−B	SKK−3442−MAST_b	EDTC−B	SKK−3493−EDTCB_b
BSP	SRPC−3546−Q1_2008_OP15_b		

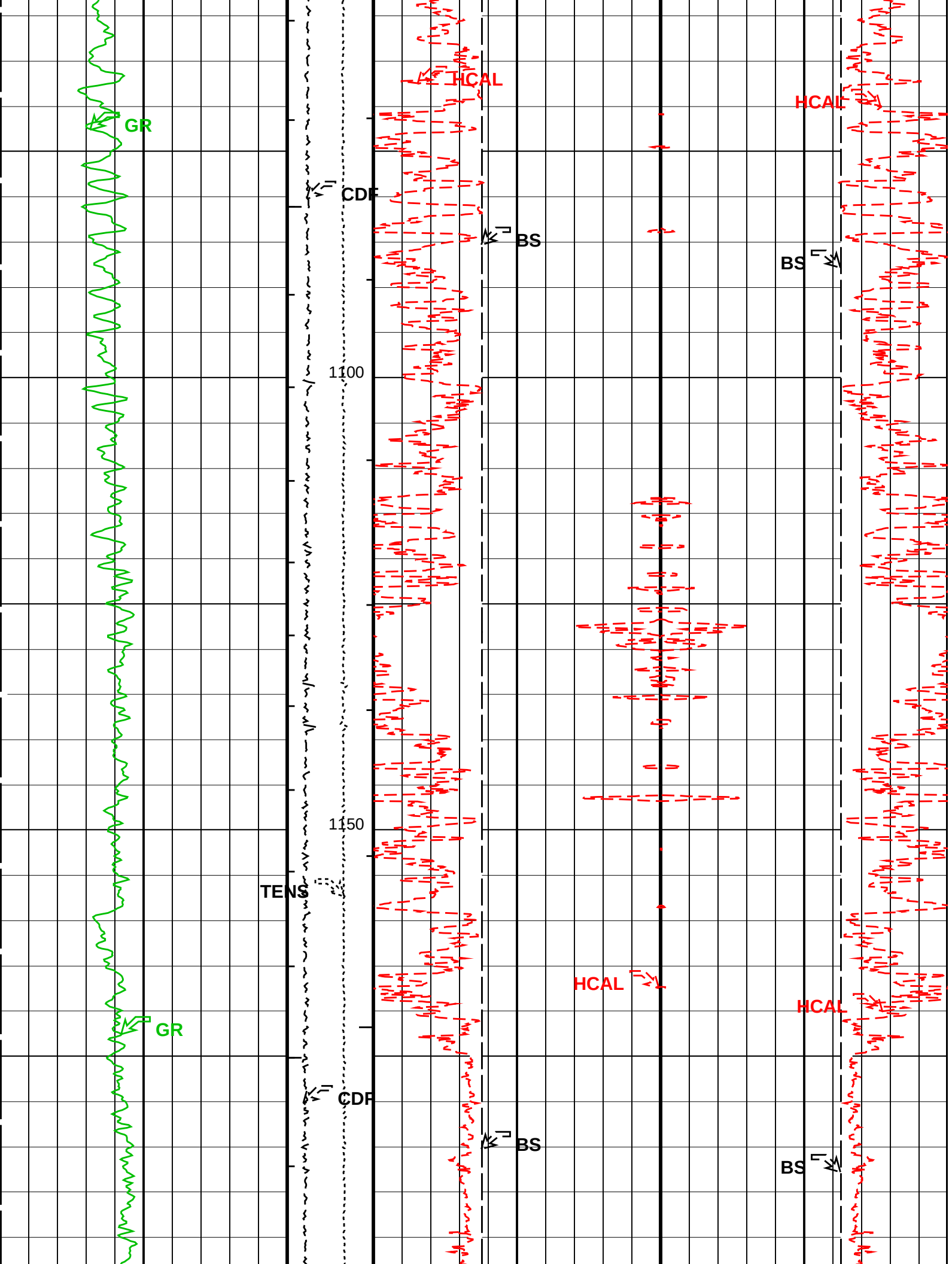
PIP SUMMARY

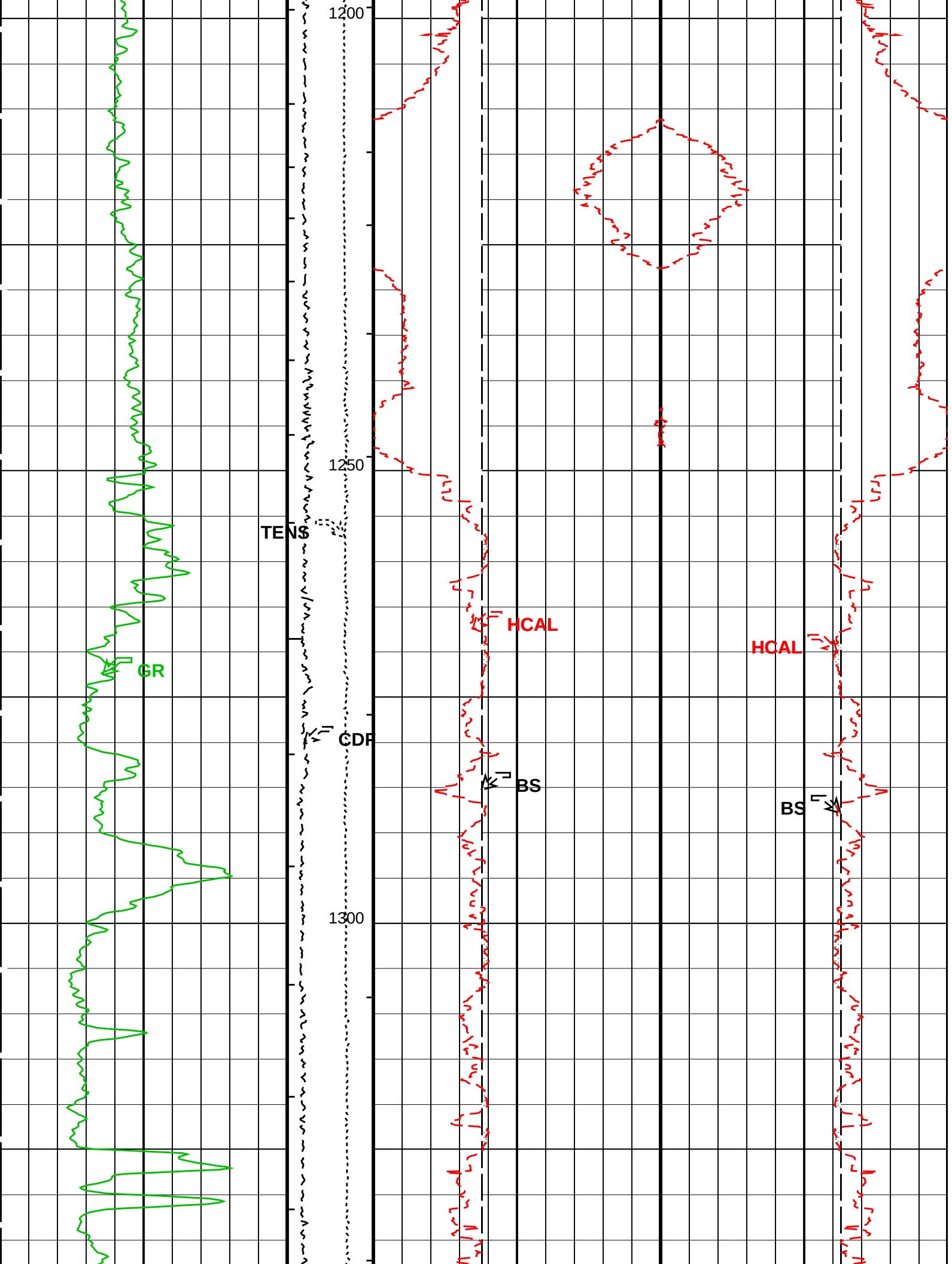
Integrated Hole Volume Minor Pip Every 1 M3
Integrated Hole Volume Major Pip Every 10 M3
Integrated Cement Volume Minor Pip Every 1 M3
Integrated Cement Volume Major Pip Every 10 M3
Time Mark Every 60 S

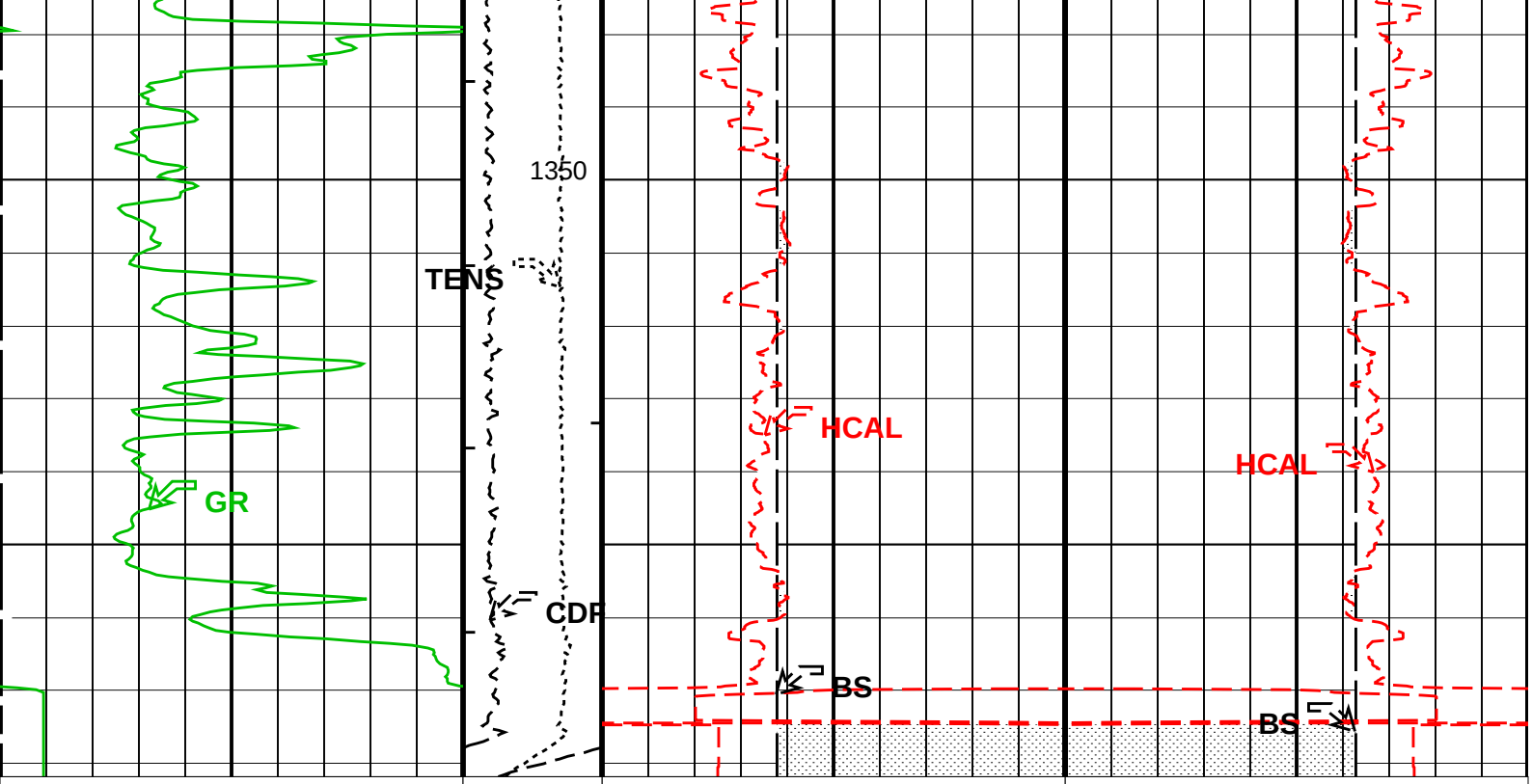
Gamma Ray (GR)	Tension (TENS)	Calibrated Downhole Force (CDF)	Washout From HCAL_1 to BS_1	Washout From BS to HCAL
			Mudcake From BS_1 to HCAL_1	Mudcake From HCAL to BS
			HILT Caliper (HCAL)	HILT Caliper (HCAL)
0 (GAPI) 200	0 5000	−200 1800	16 (IN) 6	6 (IN) 16
			Bit Size (BS)	Bit Size (BS)
			16 (IN) 6	6 (IN) 16




950
TENS
HCAL
HCAL
GR
CDF
BS
BS
1000
1050
TENS


GR
HCAL
CDF
BS
HCAL
BS
1100
1150
TENS
HCAL
HCAL
GR
CDF
BS
BS


1200
1250
1300
TENS
GR
CDP
HCAL
BS
HCAL
BS



Gamma Ray (GR) 0 (GAPI) 200	Tension (TENS) (LBF) 0 5000	Bit Size (BS) 16 (IN) 6	Bit Size (BS) 6 (IN) 16
	Calibrated Downhole Force (CDF) (LBF) −200 1800	HILT Caliper (HCAL) 16 (IN) 6	HILT Caliper (HCAL) 6 (IN) 16
		Mudcake From BS_1 to HCAL_1	Mudcake From HCAL to BS
		Washout From HCAL_1 to BS_1	Washout From BS to HCAL

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 1 M3
- Integrated Hole Volume Major Pip Every 10 M3
- Integrated Cement Volume Minor Pip Every 1 M3
- Integrated Cement Volume Major Pip Every 10 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MAPC−B: Multimode Array Sonic Power Cartridge		
BS	Bit Size	12.250	IN
	HOLEV: Integrated Hole/Cement Volume		
FCD	Future Casing (Outer) Diameter	9.625	IN
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
	System and Miscellaneous		
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	2313	M

Format: CaliperLog Vertical Scale: 1:500 Graphics File Created: 12−Mar−2008 01:47

OP System Version: 15C0−309

MCM

HILTB−FTB	SRPC−3546−Q1_2008_OP15_b	HRLT−B	SRPC−3546−Q1_2008_OP15_b
PPC1−B	SRPC−3546−Q1_2008_OP15_b	MAXS−B	SKK−3442−MAST_b
MAPC−B	SKK−3442−MAST_b	EDTC−B	SKK−3493−EDTCB_b

MAPC−B	**SKK−3442−MAST_b**	**EDTC−B**	**SKK−3493−EDTCB_b**
BSP	**SRPC−3546−Q1_2008_OP15_b**		

Input DLIS Files

DEFAULT	**TLD_MCFL_CNL_HRLA_038PUP**	**FN:51**	**PRODUCER**	**12−Mar−2008 01:24**	**1391.0 M**	**840.5 M**

Output DLIS Files

DEFAULT	**TLD_MCFL_CNL_HRLA_035PUP**	**FN:36**	**PRODUCER**	**12−Mar−2008 01:47**
CUSTOMER	**TLD_MCFL_CNL_HRLA_035PUC**	**FN:37**	**CUSTOMER**	**12−Mar−2008 01:47**

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Stab Measurement Summary							
Before: 26−Feb−2008 11:17							
BS Window Ratio	0.7624	N/A	0.7602	N/A	N/A	N/A	
BS Window Sum	10750	N/A	10980	N/A	N/A	N/A	CPS
SS Window Ratio	0.4883	N/A	0.4862	N/A	N/A	N/A	
SS Window Sum	10370	N/A	10360	N/A	N/A	N/A	CPS
LS Window Ratio	0.2968	N/A	0.2999	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1179	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Photo−multiplier High Voltages Calibrations							
Before: 26−Feb−2008 11:17							
BS PM High Voltage (Command)	1227	N/A	1249	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1921	N/A	1901	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1407	N/A	1418	N/A	N/A	N/A	V
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Crystal Quality Resolutions Calibration							
Before: 26−Feb−2008 11:17							
BS Crystal Resolution	9.875	N/A	9.867	N/A	N/A	N/A	%
SS Crystal Resolution	10.56	N/A	10.33	N/A	N/A	N/A	%
LS Crystal Resolution	9.503	N/A	9.278	N/A	N/A	N/A	%
High resolution Integrated Logging Tool−DTS Wellsite Calibration − MCFL Calibration							
Before: 26−Feb−2008 13:17							
Raw B0 Resistivity	3875	N/A	3878	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3831	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3834	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool−DTS Wellsite Calibration − HILT Caliper Calibration							
Before: 26−Feb−2008 11:25							
HILT Caliper Zero Measurement	8.000	N/A	8.163	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.39	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Detector Calibration							
Before: 29−Feb−2008 20:22							
Gamma Ray Background	30.00	N/A	9.320	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	184.0	N/A	184.0	N/A	N/A	16.73	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Zero Measurement							
Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15							
CNTC Background	29.71	29.71	28.10	N/A	N/A	4.457	CPS
CFTC Background	33.75	33.75	30.26	N/A	N/A	5.063	CPS
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Ratio Measurement							

Master: 20−Feb−2008 19:21

Thermal Near Corr. (Tank)	5800	5605	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2340	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.395	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Accelerometer Calibration
Before: Calibration not done

Z−Axis Acceleration	9.810	N/A	9.810	N/A	N/A	N/A	M/S2

High resolution Integrated Logging Tool−DTS Master Calibration − Inversion results
Master: 20−Feb−2008 21:02

Rho Aluminum	2.596	2.602	−−	−−	−−	−−	G/C3
Rho Magnesium	1.686	1.685	−−	−−	−−	−−	G/C3
Pe Aluminum	2.570	2.571	−−	−−	−−	−−	
Pe Magnesium	2.650	2.634	−−	−−	−−	−−	

High resolution Integrated Logging Tool−DTS Master Calibration − Deviation Summary
Master: 20−Feb−2008 21:02

BS Average Deviation	0	0.5701	−−	−−	−−	−−	%
BS Max Deviation	0	1.350	−−	−−	−−	−−	%
SS Average Deviation	0	0.3068	−−	−−	−−	−−	%
SS Max Deviation	0	0.7734	−−	−−	−−	−−	%
LS Average Deviation	0	0.6760	−−	−−	−−	−−	%
LS Max Deviation	0	1.772	−−	−−	−−	−−	%

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01
Before: 29−Feb−2008 19:20

HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.2	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−355.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−358.0	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−342.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−325.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−329.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	315.1	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12
Before: 29−Feb−2008 19:20

HRLT M1−M2 Voltage Plus − 0	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1957	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1963	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1876	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1783	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1810	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1741	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23
Before: 29−Feb−2008 19:20

HRLT M2−M3 Voltage Plus − 0	0	N/A	1736	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1947	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1956	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1875	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1778	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1806	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1721	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34
Before: 29−Feb−2008 19:20

HRLT A3−A4 Voltage Plus − 0	0	N/A	68550	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	77150	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	77730	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	74680	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	70640	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	71700	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−67220	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 29−Feb−2008 19:20

HRLT A4−A5 Voltage Plus − 0	0	N/A	68390	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	77030	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	77590	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	74510	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	70470	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	71520	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−67110	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56

Before: 29−Feb−2008 19:20

HRLT A5−A6 Voltage Plus − 0	0	N/A	68510	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	77320	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	77840	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	74720	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	70600	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	71640	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−67390	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 29−Feb−2008 19:20

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68130	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−77110	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−77730	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−74700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−70660	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−71700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67120	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 29−Feb−2008 19:20

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68070	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−76870	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−77500	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−74520	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−70540	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−71630	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	66910	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 29−Feb−2008 19:20

HRLT Source Current Plus − 0	0	N/A	283.9	N/A	N/A	8.520	UA
HRLT Source Current Plus − 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 29−Feb−2008 19:20

HRLT Vertical Voltage Pl − 0	0	N/A	−320.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−351.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−351.9	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−334.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−314.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−334.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	324.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

Powered Positioning Deveice/Caliper 1 Wellsite Calibration − PPC1 Caliper Calibration
Before: Calibration out of date 19−Jun−2007 15:30

PPC1 Radius 1 Raw Small Radius	3.500	N/A	3.996	N/A	N/A	0.5000	IN
PPC1 Radius 1 Raw Large Radius	8.000	N/A	8.071	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Small Radius	3.500	N/A	3.288	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Large Radius	8.000	N/A	7.596	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Small Radius	3.500	N/A	3.747	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Large Radius	8.000	N/A	8.101	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Small Radius	3.500	N/A	3.359	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Large Radius	8.000	N/A	7.738	N/A	N/A	0.5000	IN

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration
Before: Calibration not done

EDTC Z−Axis Acceleration	9.810	N/A	9.807	N/A	N/A	N/A	M/S2

Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration
Before: 29−Feb−2008 19:22

Gamma Ray (Jig − Bkg)	166.4	N/A	166.4	N/A	N/A	15.12	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

The GLS−VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT−B Water Temperature	20.0	DEGC.
Thermal Housing Size	3.376	IN.
NSR−F serial number	5224	

High resolution Integrated Logging Tool−DTS / Equipment Identification

Primary Equipment:		
HILT high−Resolution Mechanical Sonde	HRMS − B	
HILT Rxo Gamma−ray Device	HRGD − B	
HILT Micro Cylindrically Focused Log Dev	MCFL −	
GR Logging Source	GLS − VJ	5334
HILT High Res. Control Cartridge	HRCC − B	
HILT Gamma−Ray Neutron Sonde−DTS	HGNS − B	
HGNS Gamma−Ray Device	HGR −	
HGNS Neutron Detector with Alpha Source	HCNT −	
Auxiliary Equipment:		
Neutron Calibration Tank	NCT − B	
Gamma Source Radioactive	GSR − U/Y	
HGNS Housing	HGNH −	

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value
Before		0.7602	Before		0.4862	Before		0.2999
0.7243 (Minimum)	0.7624 (Nominal)	0.8005 (Maximum)	0.4639 (Minimum)	0.4883 (Nominal)	0.5127 (Maximum)	0.2820 (Minimum)	0.2968 (Nominal)	0.3117 (Maximum)
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value
Before		10980	Before		10360	Before		1179
10210 (Minimum)	10750 (Nominal)	11290 (Maximum)	9854 (Minimum)	10370 (Nominal)	10890 (Maximum)	1102 (Minimum)	1160 (Nominal)	1218 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Photo−multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V	Value	Phase	SS PM High Voltage (Command) V	Value	Phase	LS PM High Voltage (Command) V	Value
Before		1249	Before		1901	Before		1418
1127 (Minimum)	1227 (Nominal)	1327 (Maximum)	1821 (Minimum)	1921 (Nominal)	2021 (Maximum)	1307 (Minimum)	1407 (Nominal)	1507 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %	Value	Phase	SS Crystal Resolution %	Value	Phase	LS Crystal Resolution %	Value
Before		9.867	Before		10.33	Before		9.278
8.875 (Minimum)	9.875 (Nominal)	10.87 (Maximum)	9.556 (Minimum)	10.56 (Nominal)	11.56 (Maximum)	8.503 (Minimum)	9.503 (Nominal)	10.50 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

MCFL Calibration

Phase	Raw B0 Resistivity OHMM	Value	Phase	Raw B1 Resistivity OHMM	Value	Phase	Raw B2 Resistivity OHMM	Value
Before		3878	Before		3831	Before		3834
3565 (Minimum)	3875 (Nominal)	4185 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)

Before: 26−Feb−2008 13:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN	Value	Phase	HILT Caliper Plus Measurement IN	Value
Before		8.163	Before		12.39
6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)	9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)

Before: 26−Feb−2008 11:25

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		9.320	Before		184.0	Before		165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			167.3 (Minimum) 184.0 (Nominal) 200.7 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 29−Feb−2008 20:22

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.71	Master		33.75
Before		28.10	Before		30.26
	5.000 (Minimum) 29.71 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 33.75 (Nominal) 40.00 (Maximum)	

Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5605	Master		2340	Master		2.395
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Accelerometer Calibration

Phase	Z−Axis Acceleration M/S2	Value
Before		9.810
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: Calibration not done

High resolution Integrated Logging Tool−DTS Master Calibration

Inversion results

Phase	Rho Aluminum G/C3	Value	Phase	Rho Magnesium G/C3	Value
Master		2.602	Master		1.685
	2.586 (Minimum) 2.596 (Nominal) 2.606 (Maximum)			1.676 (Minimum) 1.686 (Nominal) 1.696 (Maximum)	

Phase	Pe Aluminum	Value	Phase	Pe Magnesium	Value
Master		2.571	Master		2.634
	2.470 (Minimum) 2.570 (Nominal) 2.670 (Maximum)			2.550 (Minimum) 2.650 (Nominal) 2.750 (Maximum)	

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Deviation Summary

Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value
Master		0.5701	Master		0.3068	Master		0.6760
	−0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)			−1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)			−1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)	

Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value
Master		1.350	Master		0.7734	Master		1.772
	−1.600 (Minimum) 0 (Nominal) 1.600 (Maximum)			−2.500 (Minimum) 0 (Nominal) 2.500 (Maximum)			−3.500 (Minimum) 0 (Nominal) 3.500 (Maximum)	

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.71	Master		33.75
	5.000 (Minimum) 29.71 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 33.75 (Nominal) 40.00 (Maximum)	

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS Master Calibration

Tank Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5605	Master		2340	Master		2.395
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 20−Feb−2008 19:21

High Resolution Laterolog Array − B / Equipment Identification

Primary Equipment:	
HRLT Sonde	HRLS − B
Auxiliary Equipment:	
HRLT lower Housing	HRLH − B
HRLT Lower Cartridge	HRLC − B
HRLT upper Housing	HRUH − B
HRLT Upper Cartridge	HRUC − B

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M01

Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−318.2	−322.7	−280.7	−379.7
1	Before		−355.9	−322.7	−280.7	−379.7
2	Before		−358.0	−322.7	−280.7	−379.7
3	Before		−342.3	−322.7	−280.7	−379.7
4	Before		−325.3	−322.7	−280.7	−379.7
5	Before		−329.9	−322.7	−280.7	−379.7
6	Before		315.1	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1749	1781	2095	1549
1	Before		1957	1781	2095	1549
2	Before		1963	1781	2095	1549
3	Before		1876	1781	2095	1549
4	Before		1783	1781	2095	1549
5	Before		1810	1781	2095	1549
6	Before		−1741	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1736	1781	2095	1549
1	Before		1947	1781	2095	1549
2	Before		1956	1781	2095	1549
3	Before		1875	1781	2095	1549

3	Before		1875	1781	2095	1549
4	Before		1778	1781	2095	1549
5	Before		1806	1781	2095	1549
6	Before		−1721	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
1	Before		77150	70000	82360	60900
2	Before		77730	70000	82360	60900
3	Before		74680	70000	82360	60900
4	Before		70640	70000	82360	60900
5	Before		71700	70000	82360	60900
6	Before		−67220	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68390	70000	82360	60900
1	Before		77030	70000	82360	60900
2	Before		77590	70000	82360	60900
3	Before		74510	70000	82360	60900
4	Before		70470	70000	82360	60900
5	Before		71520	70000	82360	60900
6	Before		−67110	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68510	70000	82360	60900
1	Before		77320	70000	82360	60900
2	Before		77840	70000	82360	60900
3	Before		74720	70000	82360	60900
4	Before		70600	70000	82360	60900
5	Before		71640	70000	82360	60900
6	Before		−67390	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68130	−70000	−60900	−82360
1	Before		−77110	−70000	−60900	−82360
2	Before		−77730	−70000	−60900	−82360
3	Before		−74700	−70000	−60900	−82360
4	Before		−70660	−70000	−60900	−82360
5	Before		−71700	−70000	−60900	−82360
6	Before		67120	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68070	−70000	−60900	−82360
1	Before		−76870	−70000	−60900	−82360
2	Before		−77500	−70000	−60900	−82360
3	Before		−74520	−70000	−60900	−82360
4	Before		−70540	−70000	−60900	−82360
5	Before		−71630	−70000	−60900	−82360
6	Before		66910	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.9	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.5	−322.7	−280.7	−379.7
1	Before		−351.4	−322.7	−280.7	−379.7
2	Before		−351.9	−322.7	−280.7	−379.7
3	Before		−334.5	−322.7	−280.7	−379.7
4	Before		−314.4	−322.7	−280.7	−379.7

5	Before		−334.3	−322.7	−280.7	−379.7
6	Before		324.3	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

Powered Positioning Deveice/Caliper 1 / Equipment Identification

Primary Equipment:

PPC Powered Positioning Device/Caliper	PPC1 − B
PPC1 Caliper Standard	PPC_ −

Auxiliary Equipment:

Powered Positioning Deveice/Caliper 1 Wellsite Calibration

PPC1 Caliper Calibration

Phase	PPC1 Radius 1 Raw Small Radius IN	Value	Phase	PPC1 Radius 1 Raw Large Radius IN	Value
Before		3.996	Before		8.071
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 2 Raw Small Radius IN	Value	Phase	PPC1 Radius 2 Raw Large Radius IN	Value
Before		3.288	Before		7.596
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 3 Raw Small Radius IN	Value	Phase	PPC1 Radius 3 Raw Large Radius IN	Value
Before		3.747	Before		8.101
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 4 Raw Small Radius IN	Value	Phase	PPC1 Radius 4 Raw Large Radius IN	Value
Before		**3.359**	**Before**		**7.738**
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Before: Calibration out of date 19−Jun−2007 15:30

Multimode Array Sonic Power Cartridge / Equipment Identification

Primary Equipment:

Multimode Array Sonic Minimum Service So	MAMS − BA	8201
Multimode Array Sonic Control Cartridge	MAPC − BA	8198

Auxiliary Equipment:

Electronics Cartridge Housing	ECH − SD	8198

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

EDTC Gamma Ray Detector	EDTG − A/B
Enhanced DTS Cartridge	EDTC − B

Auxiliary Equipment:

EDTC Housing	EDTH − B

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.807
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: Calibration not done

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI			Value
Before				7.742
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	

Phase	Gamma Ray (Jig − Bkg) GAPI			Value
Before				166.4
	151.2 (Minimum)	166.4 (Nominal)	181.5 (Maximum)	

Phase	Gamma Ray (Calibrated) GAPI			Value
Before				165.0
	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	

Before: 29−Feb−2008 19:22

Company: **Apache Northwest Pty Ltd**

Schlumberger

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton**
Country: **Australia**

PEX−GR−HRLA−MSIP−S
Caliper Log
Scale 1:500

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig: West Triton
Field: Apache/VIC/P−58/WASABI−1
Location: Bass Strait
Well: WASABI−1
Company: Apache Northwest Pty Ltd

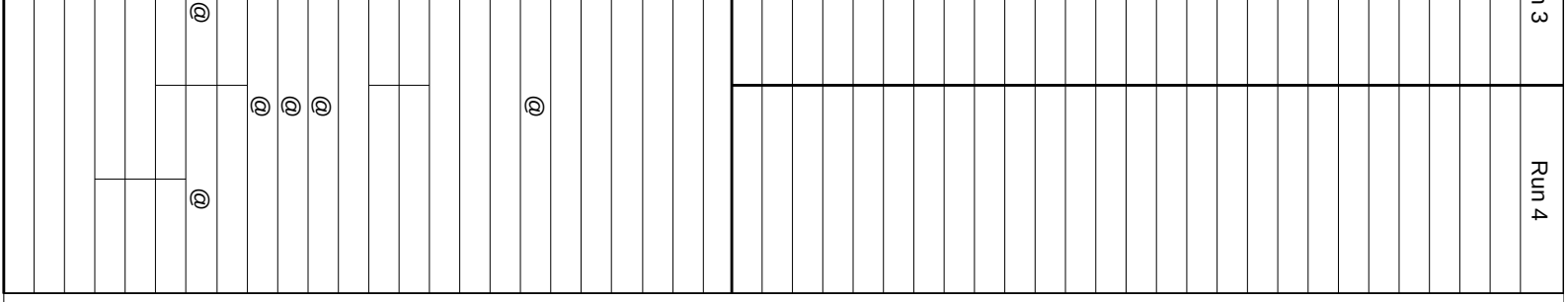
PEX−GR−HRLA−MSIP−S
Compressional and Shear Slowness
Scale 1:200

LOCATION

Bass Strait		Elev.:	
Northing : 5739963.350 m		G.L.	−27 m
Easting : 522993.588 m		D.F.	39 m
Permanent Datum:	AHD	Elev.:	0 m
Log Measured From:	DRILL FLOOR (RT)	39.0 m	above Perm. Datum
Drilling Measured From:	DRILL FLOOR (RT)		

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48.1 deg	147 15' 49.147" E	38 29' 18.157" S

	Run 1	Run 2	Run 3
Logging Date	1−Mar−2008		
Run Number	2		
Depth Driller	2313 m		
Schlumberger Depth	Not Tagged		
Bottom Log Interval	1387 m		
Top Log Interval	854 m		
Casing Driller Size @ Depth	13.375 in @ 857 m	@	@
Casing Schlumberger	854 m		
Bit Size	12.250 in		
Type Fluid In Hole	KCl/Polymer		
MUD Density / Viscosity	1.15 g/cm3 / 50 s		
MUD Fluid Loss / PH	5 cm3 / 8.7		
MUD Source Of Sample	Flowline		
RM @ Measured Temperature	0.082 ohm.m @ 20 degC	@	@
RMF @ Measured Temperature	0.071 ohm.m @ 21 degC	@	@
RMC @ Measured Temperature	0.099 ohm.m @ 20 degC	@	@
Source RMF / RMC	Press / Press		
RM @ MRT / RMF @ MRT	0.042 @ 59 / 0.037 @ 59	@ / @	@ / @
Maximum Recorded Temperatures	59 degC / 59		
Circulation Stopped / Time	1−Mar−2008 / 18:45		
Logger On Bottom / Time	3−Mar−2008 / 11:28		
Unit Number / Location	41 / AUSL		
Recorded By	A. Dandi/M.Dawson/K. AlBarhi		
Witnessed By	H.Little / A.Cruickshank		



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051		
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Conveyance Method:	Wireline
Wheel Correction 1:	−5	Calibration Offset:	−610.00	Rig Type:	Offshore_Fixed
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: VSI	OS1:
OS2: MDT−GR	OS2:
OS3: CST−GR	OS3:
OS4: VSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tools run as per tool sketch, using 5x standoffs, 3x LCMEs and a bow spring.	
Maximum Recorded Temperature was 59 degC taken from thermometers in Logging Head.	
Neutron Enviroment Corrections : Hole Size, Borehole and formation Salinity, Mud Weight, Mud Cake, Standoff and Press./ Temp.	
Density Environment Corrections : Hole Size, using BS, and Mud Weight.	
Pex run in standard resolution as per client request.	

Pex run in standard resolution as per client request.

Barite correction applied to log.

Log Correlated to MWD Log Dated 1−Mar−2008, Wasabi−1 GEOVISION Resistivity RM 200.

Tools got hold up @ 1390m MD. Client decided to Log up from 1390m to surface.

Additional mud properties taken from Mud Report dated 1−Mar−2008:

Chlorides = 49,000 mg/L.

KCL = 10 (% by Wt.), Barite = 4.4 %.

RUN 1		
SERVICE ORDER #:	AUSL08349210	
PROGRAM VERSION:	15C0−309	
FLUID LEVEL:	0 m	
LOGGED INTERVAL	START	STOP

RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

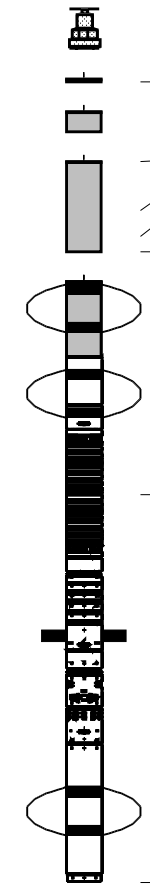
RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−Y
NCT−B
CNB−AB
NCS−YC 5375

WITM (EDTS)−A 969

DOWNHOLE EQUIPMENT



LEH−QT
LEH−QT 2800
33.61

BSP AH−169
32.73

AH−369
32.32

EDTC−B
EDTH−B 8378
EDTC−B 8379
EDTG−B 77305
31.88

MAPC−B
MAPC−BA 8198
ECH−SD 8198
MAMS−BA 8201
29.90

MAXS−B
MASS−BA 8157
MAXS−BA 8157
23.49
2.5 IN Standoff

PPC1−B
PPC1−B
PPC_CAL_STD
17.32

HRLT−B
HRUH−B 1741
HRUC−B 1730
15.33
2.5 IN Standoff

HRLS−B 1745
HRLH−B 1745
HRLC−B 1745
AH−270 1792

High Res. — 11.75

2.5 IN Standoff

HILTB−FTB
AH−107 2910
AH−107
HGNSD−B 856
HMCA
HGNH 3915
NLS−KL
NSR−F 5224
HACCZ 379
HCNT
HGR
HRCC−B 868
HRMS−B 788
HRGD−B 1806
GLS−J 5334

HGNS HTEM — 7.96
HMCA — 6.74
HGNS Gamm — 6.51
HGNS Neut — 4.73
HGNS Neut — 4.58
HGNS sens — 3.87
HRCC cart — 2.65
MCFL — 1.00
HILT cali — 0.85
HRDD−LS
HRDD−SS
HRDD−BS — 0.73
DF ACCZ
HTEN HMAS HV
Accelerom
Tension — 0.00

BNS−CCS — 0.14

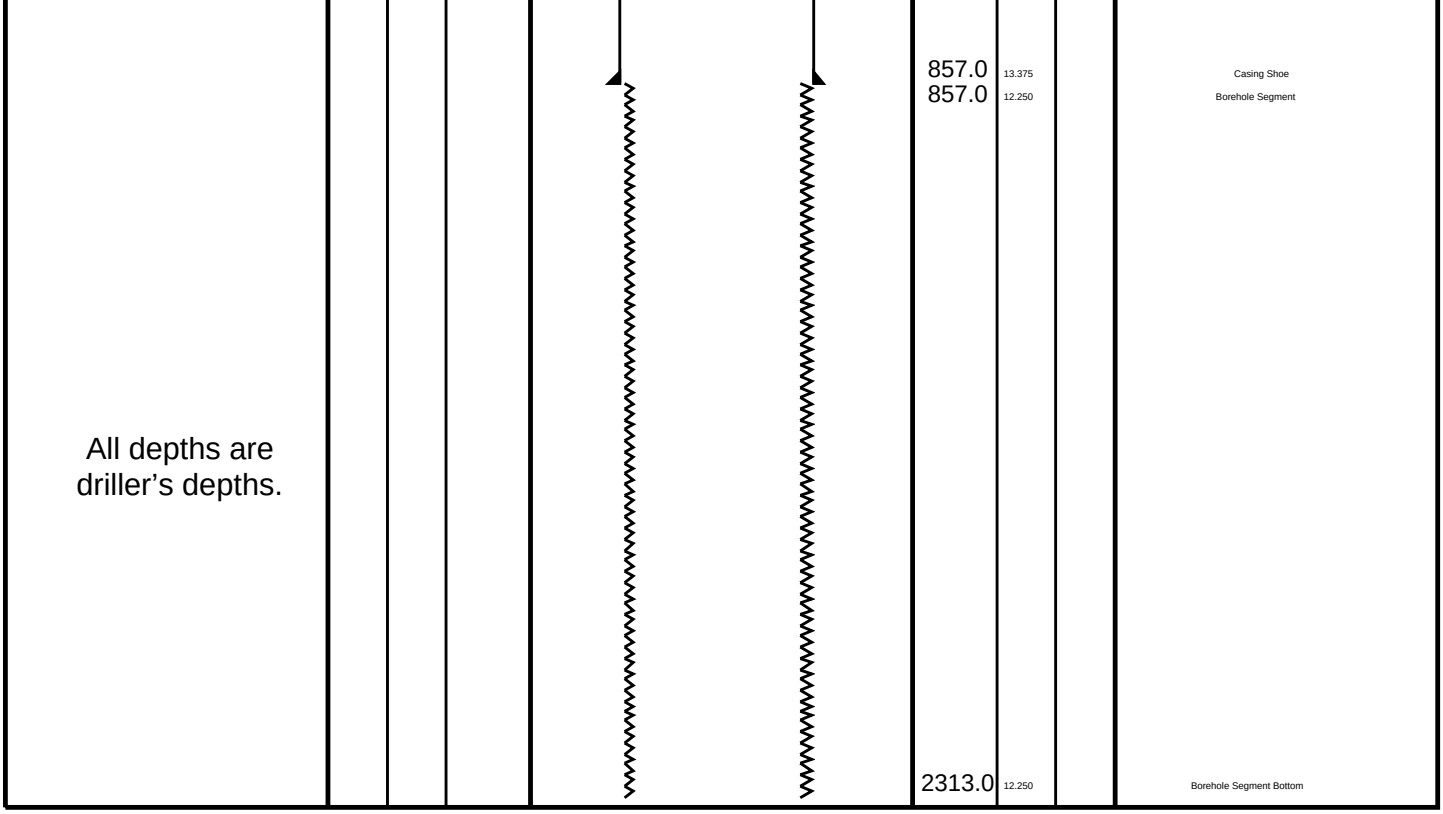
TOOL ZERO

MAXIMUM STRING DIAMETER 8.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
State: Victoria
Country: Australia

Rig Name: West Triton
Reference Datum: AHD
Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe



All depths are driller's depths.

Schlumberger

Monopole Compressional Slowness 1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

Input DLIS Files

20−Mar−2008 08:35

Output DLIS Files

DEFAULT	**TLD_MCFL_CNL_HRLA_101PUP**	**FN:6**	**PRODUCER**	**20−Mar−2008 11:10**	**1391.0 M**	**842.3 M**

OP System Version: 15C0−309

MCM

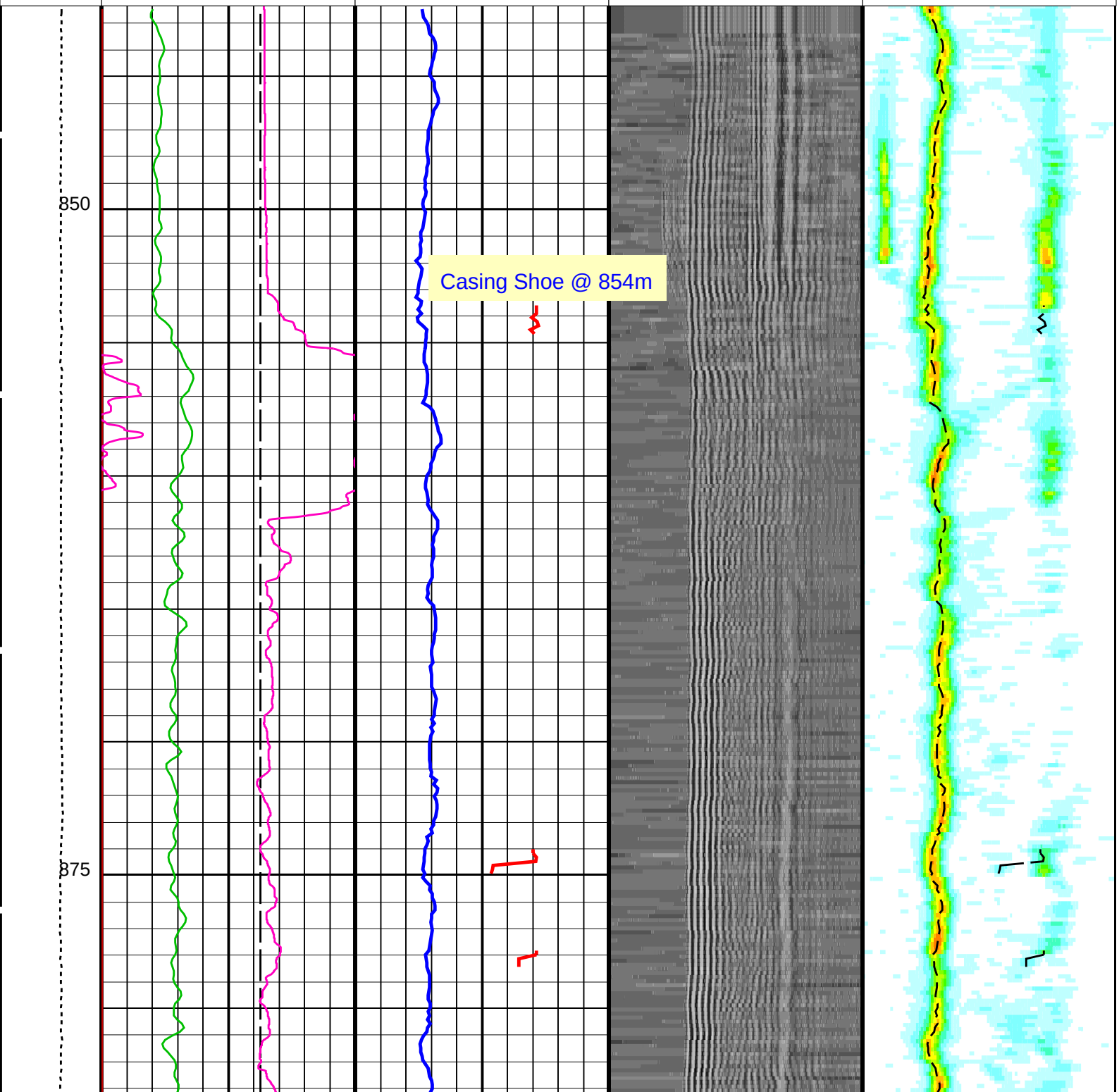
HILTB−FTB	**SRPC−3546−Q1_2008_OP15**	**HRLT−B**	**SRPC−3546−Q1_2008_OP15**
PPC1−B	**SRPC−3546−Q1_2008_OP15**	**MAXS−B**	**SKK−3442−MAST**
MAPC−B	**SKK−3442−MAST**	**EDTC−B**	**SKK−3493−EDTCB**
BSP	**SRPC−3546−Q1_2008_OP15**		

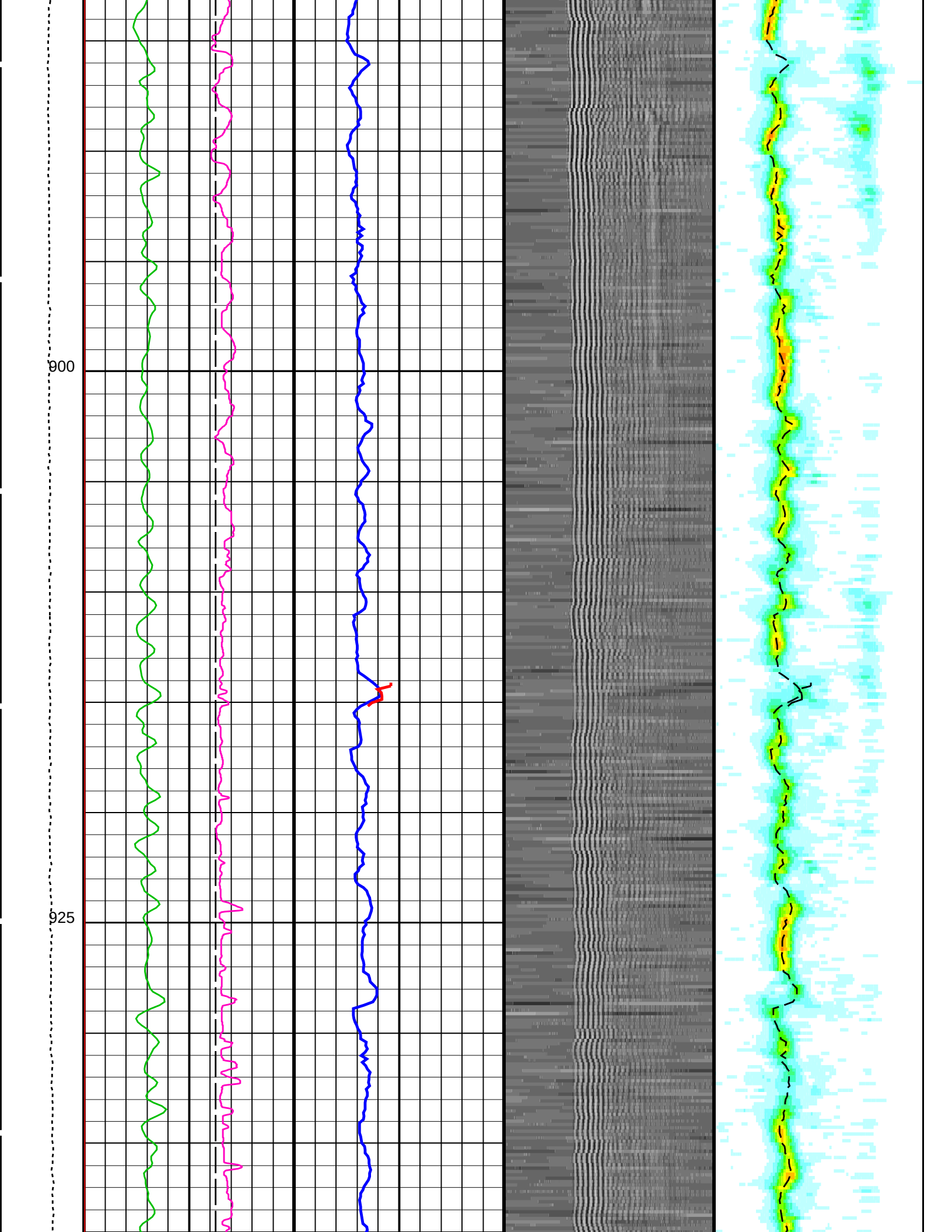
PIP SUMMARY

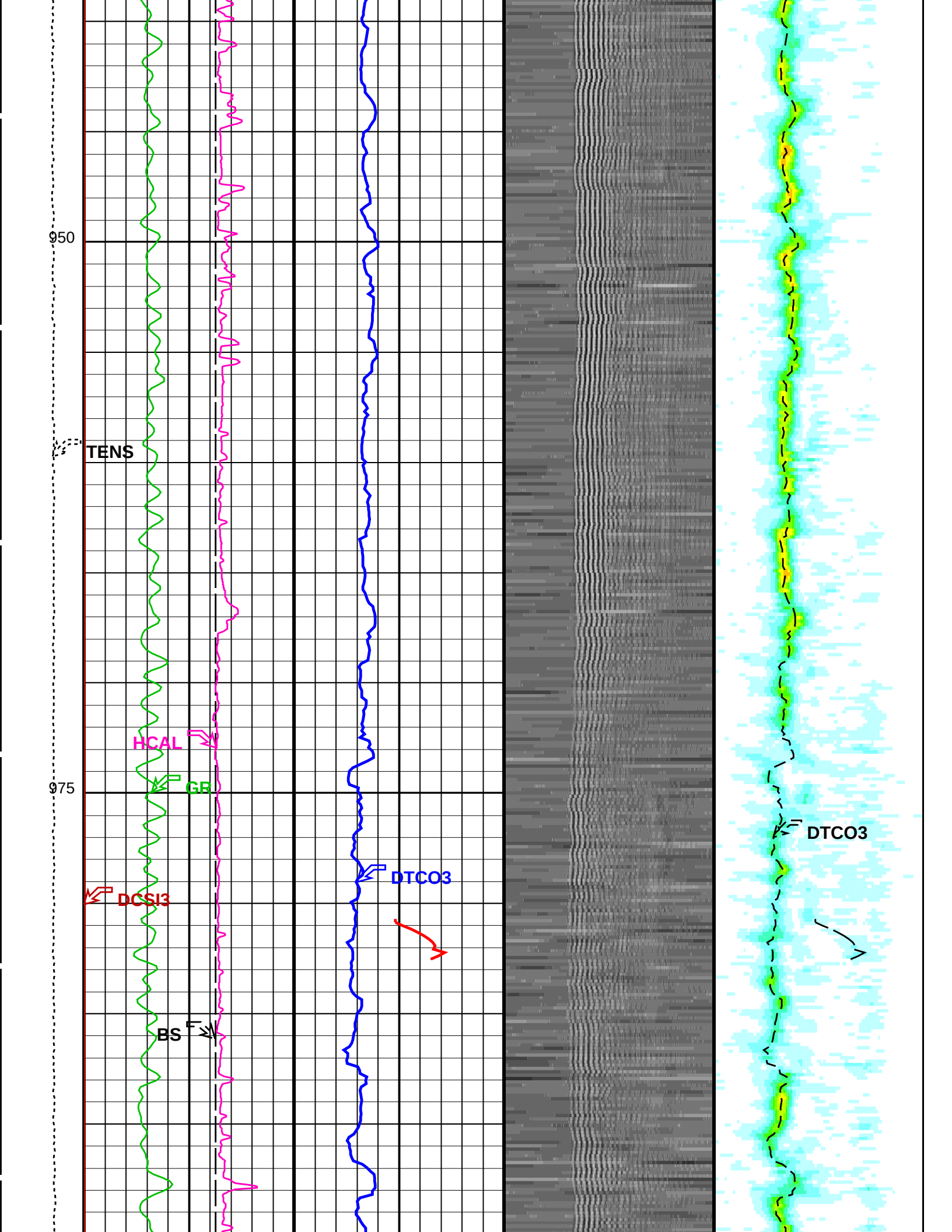
PIP SUMMARY

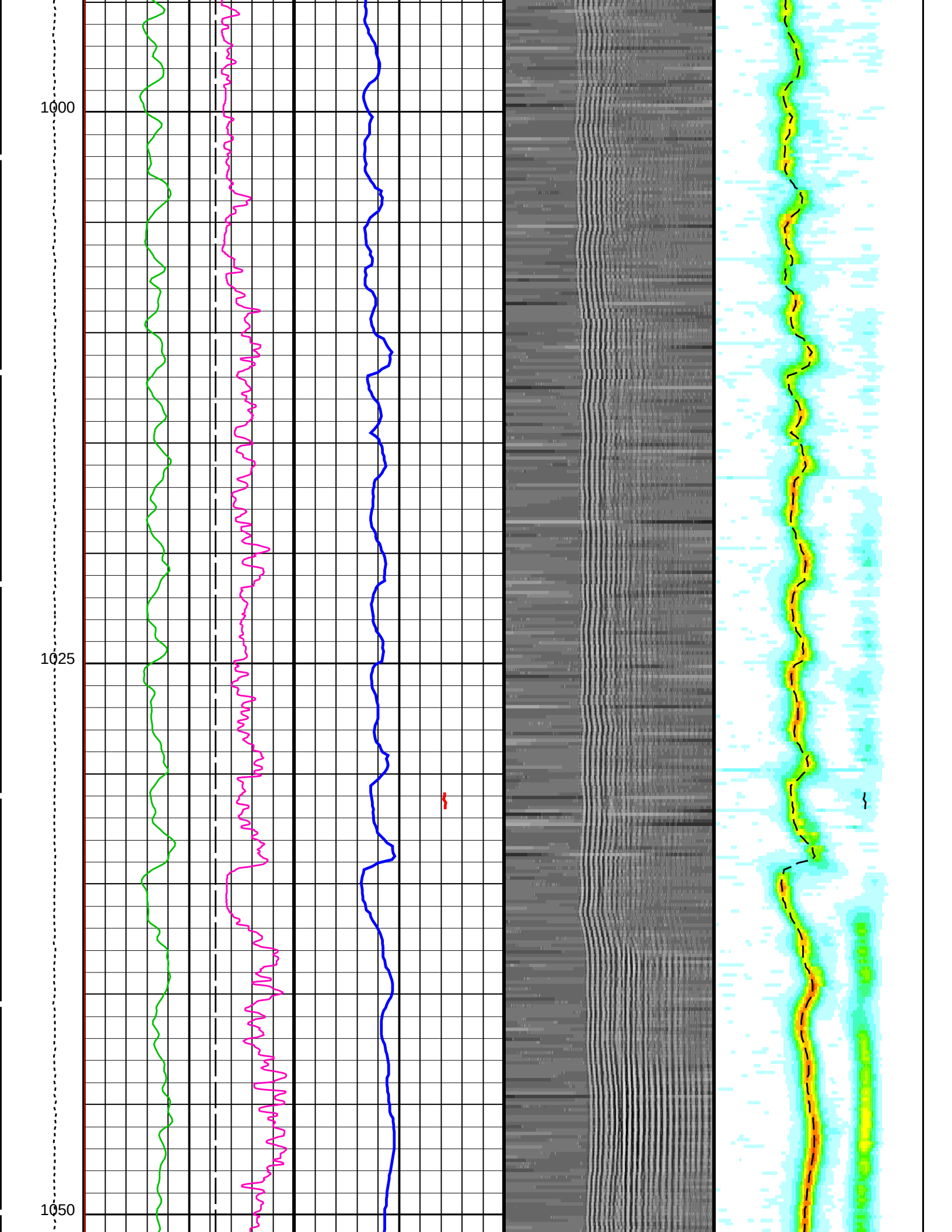
Time Mark Every 60 S

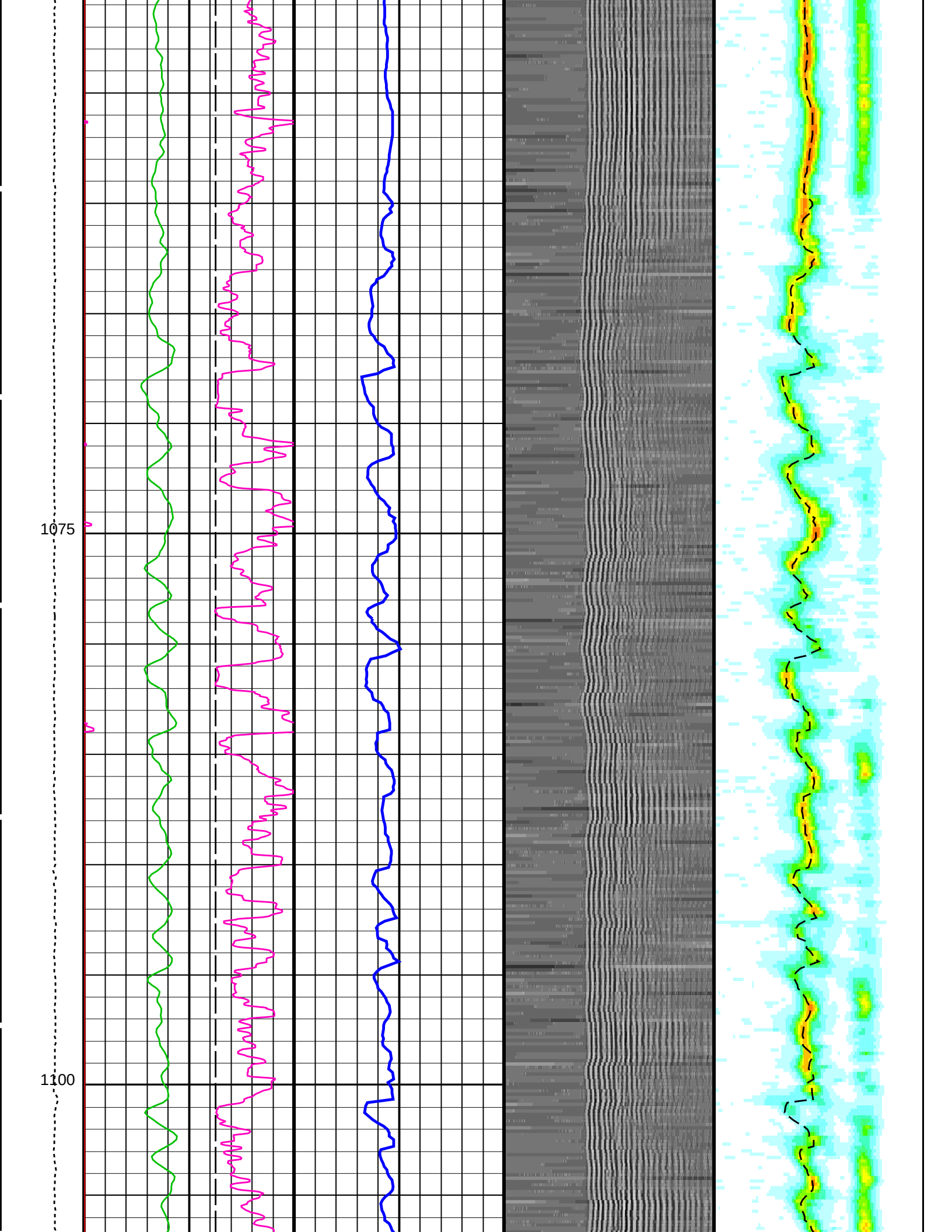
	Data Copy Status Indicator 3 (DCSI3) 0 (----- 10			
	HILT Caliper (HCAL) 6 (IN) 16			Min Amplitude Max Slowness Projection 3 (SPJ3) 40 (US/F) 240
	Gamma Ray (GR) 0 (GAPI) 200	Shear Slowness 3 (DTSH3) 40 (US/F) 240		Shear Slowness 3 (DTSH3) 40 (US/F) 240
Tension (TENS) (LBF) 0 5000	Bit Size (BS) 6 (IN) 16	Compressional Slowness 3 (DTCO3) 40 (US/F) 240	Min Amplitude Max MAST MF VDL WF (DWF3_MONO) 0 (US) 5000	Compressional Slowness 3 (DTCO3) 40 (US/F) 240




900
925


950
TENS
HCAL
GR
975
DTCO3
DCSI3
BS
DTCO3


1000
1025
1050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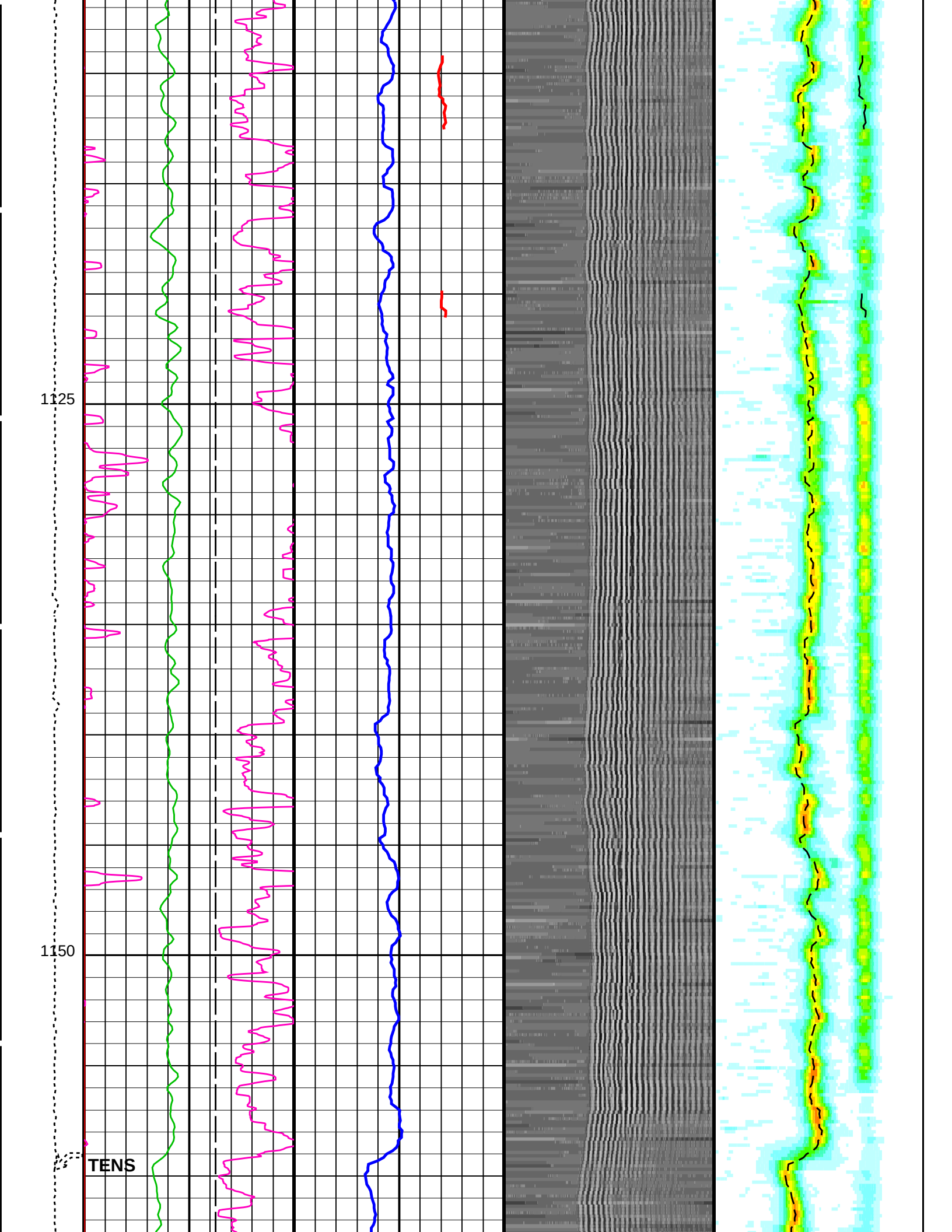
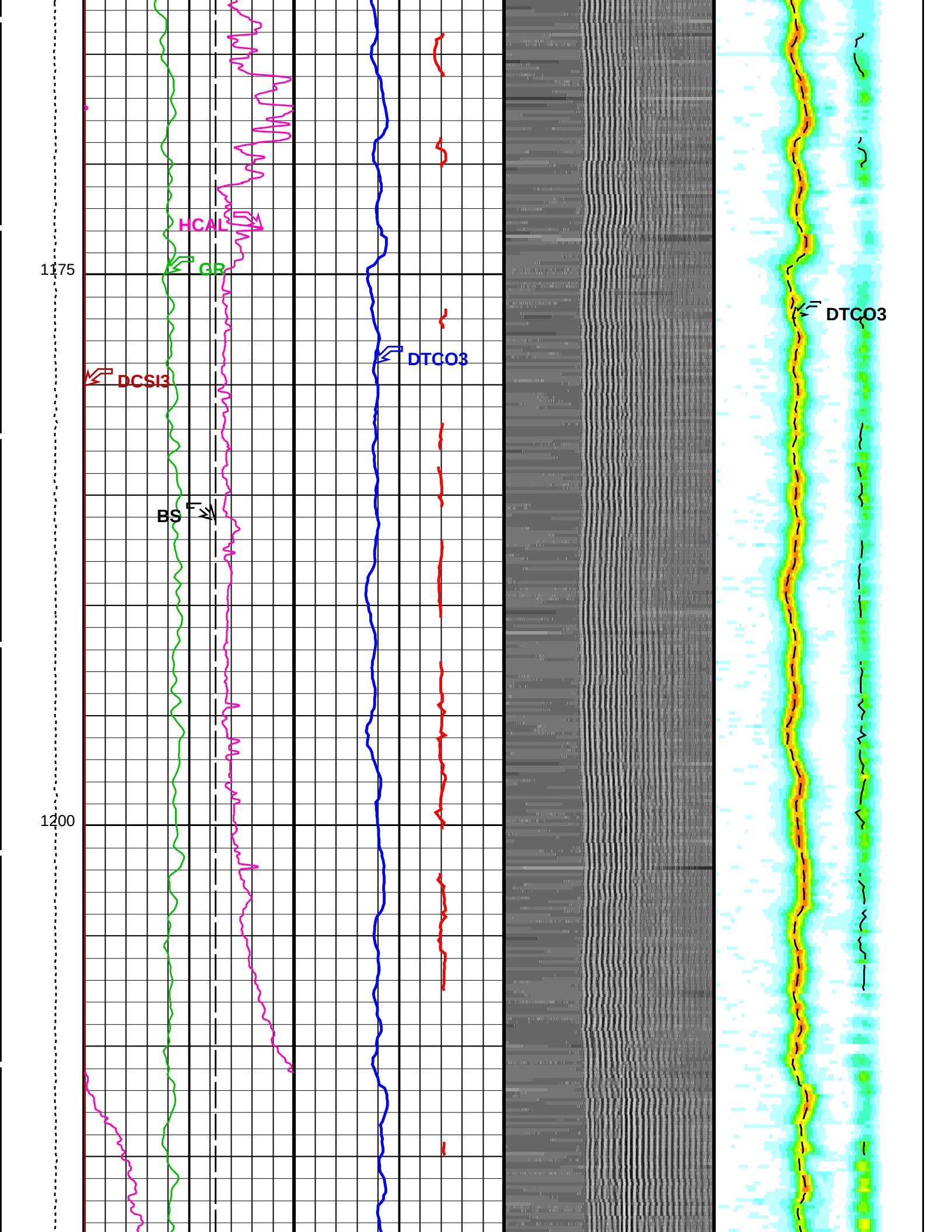
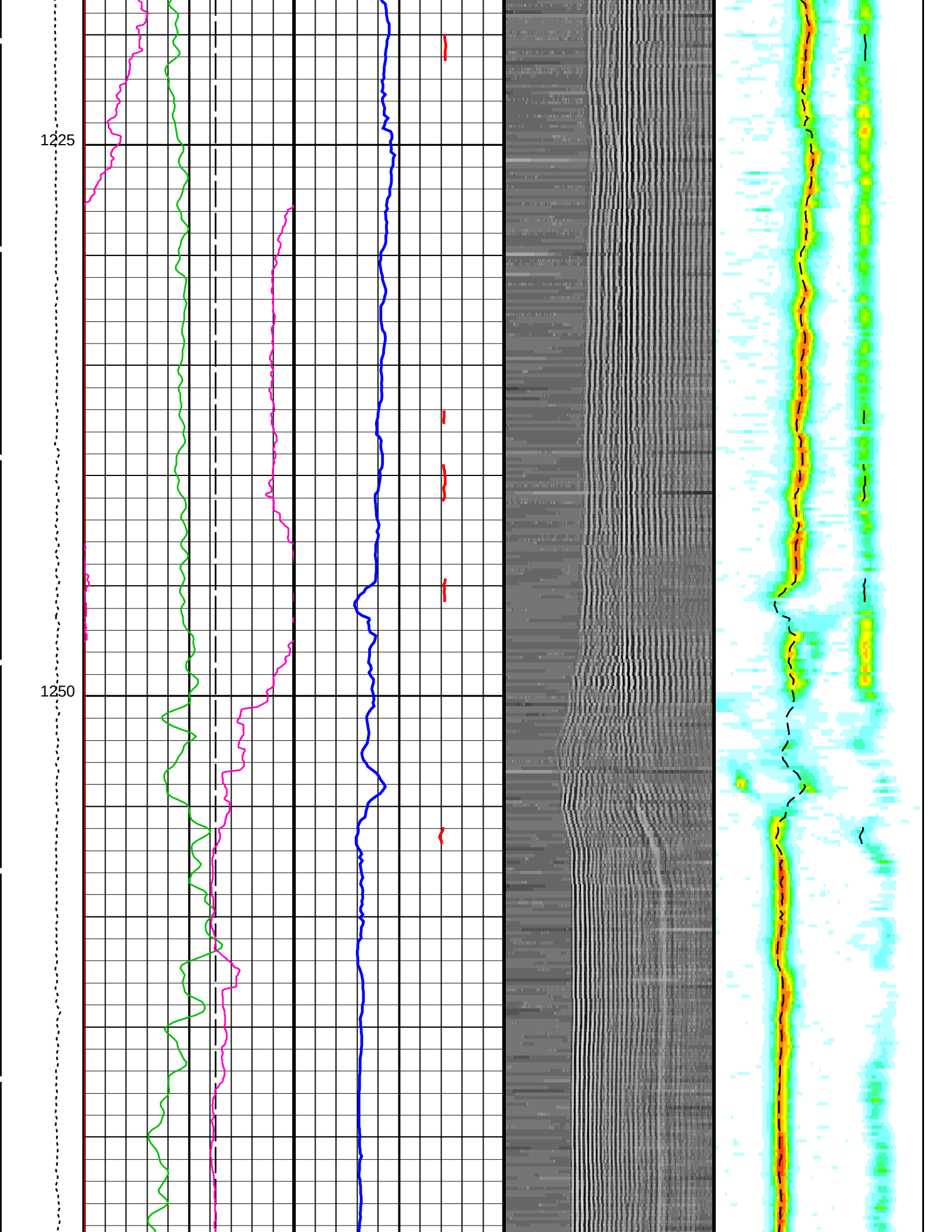

1125
1150
TENS


HCAL
GR
DCSI3
DTCO3
BS
DTCO3
1175
1200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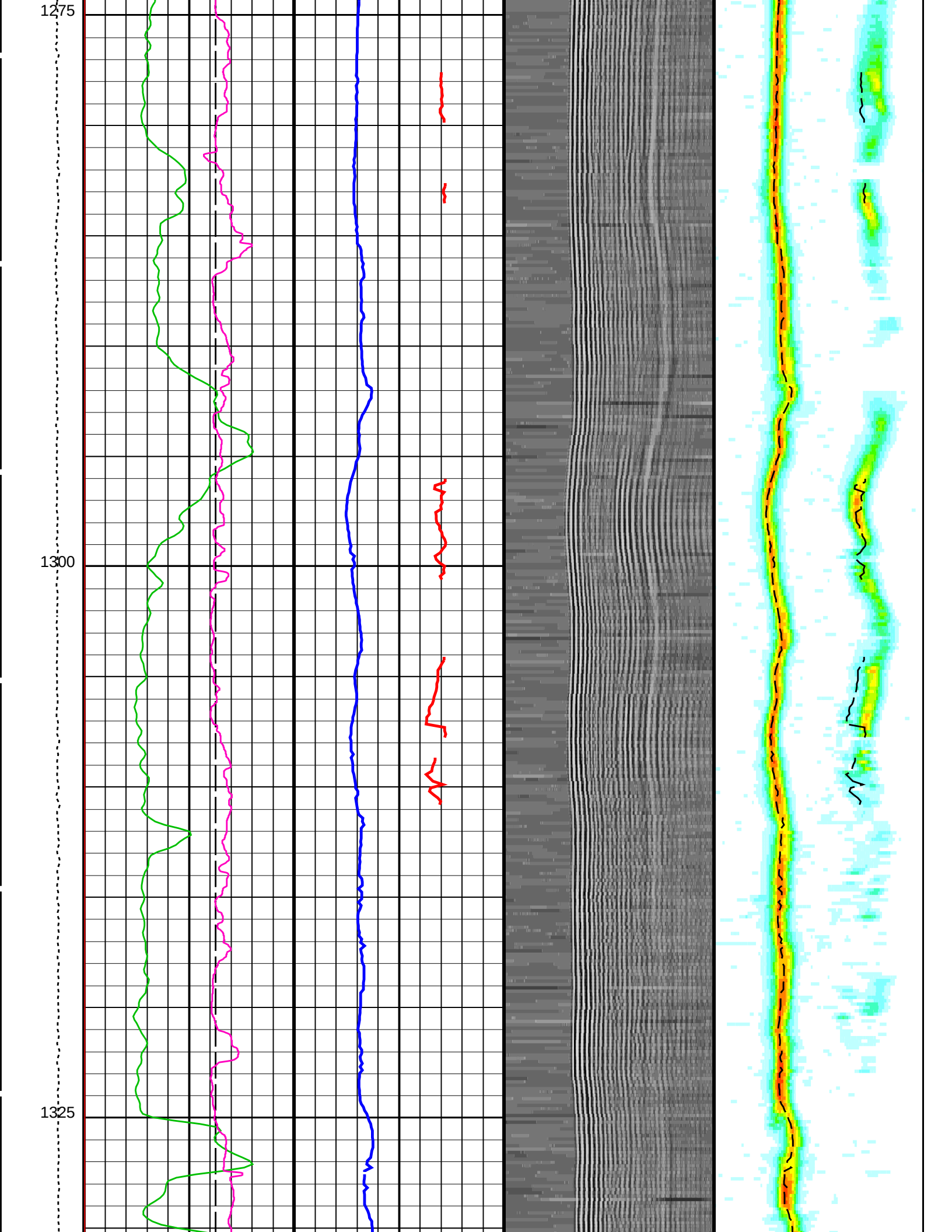
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1300
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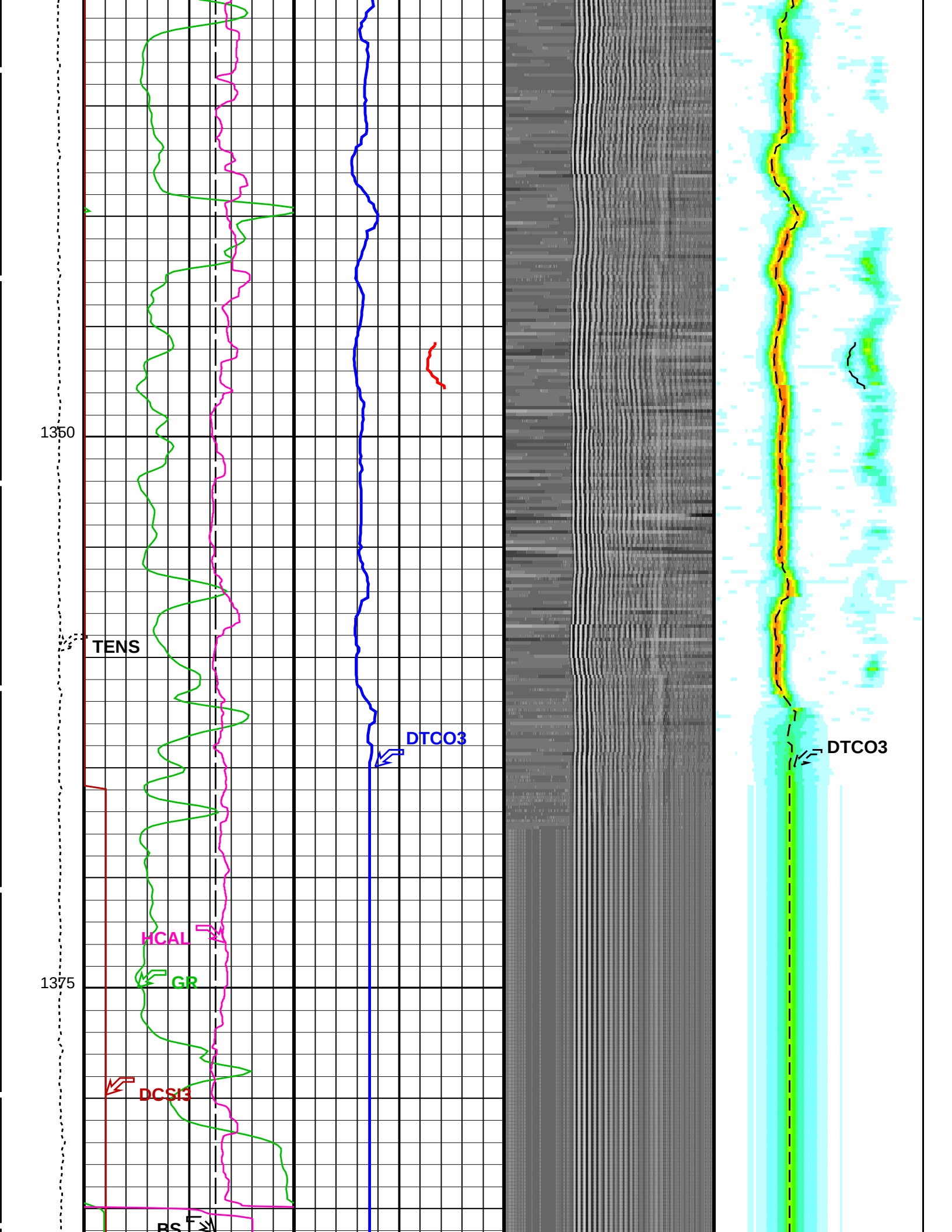
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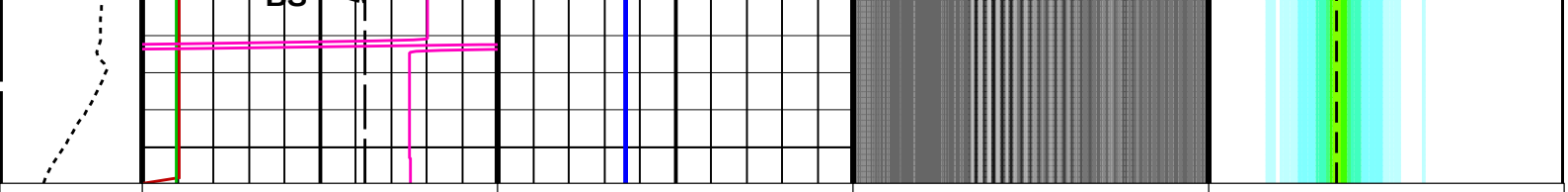
1375
TENS
DTCO3
HCAL
GR
DCSI3
RS
DTCO3



Tension (TENS) (LBF)	Bit Size (BS) (IN)	Compressional Slowness 3 (DTCO3) (US/F)	MAST MF VDL WF (DWF3_MONO) Amplitude (US)	Compressional Slowness 3 (DTCO3) (US/F)
0 5000	6 16	40 240	Min Max 0 5000	40 240

Gamma Ray (GR) (GAPI)	Shear Slowness 3 (DTSH3) (US/F)	Shear Slowness 3 (DTSH3) (US/F)
0 200	40 240	40 240

HILT Caliper (HCAL) (IN)	Slowness Projection 3 (SPJ3) Amplitude (US/F)
6 16	Min Max 40 240

Data Copy Status Indicator 3 (DCSI3)
0 (---- 10

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HILTB-FTB: High resolution Integrated Logging Tool-DTS		
BHS	Borehole Status	CASED	
	HRLT-B: High Resolution Laterolog Array - E		
BHS	Borehole Status	CASED	
	MAPC-B: Multimode Array Sonic Power Cartridge		
BHS	Borehole Status	CASED	
BS	Bit Size	12.250	IN
DLHS	Hole Diameter Source for SOBS Channel	AUTO	
DTF	Delta-T Fluid	204.5	US/F
	EDTC-B: Enhanced DTS Cartridge		
BHS	Borehole Status	CASED	
	HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	CASED	
	System and Miscellaneous		
CSIZ	Current Casing Size	13.375	IN
CWEI	Casing Weight	67.90	LB/F
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	OFF	

Format: MAST_STC_MF Vertical Scale: 1:200 Graphics File Created: 20-Mar-2008 11:10

OP System Version: 15C0-309

MCM

HILTB-FTB	SRPC-3546-Q1_2008_OP15	HRLT-B	SRPC-3546-Q1_2008_OP15
PPC1-B	SRPC-3546-Q1_2008_OP15	MAXS-B	SKK-3442-MAST
MAPC-B	SKK-3442-MAST	EDTC-B	SKK-3493-EDTCB
BSP	SRPC-3546-Q1_2008_OP15		

Input DLIS Files

20-Mar-2008 08:35

Output DLIS Files

DEFAULT TLD_MCFL_CNL_HRLA_101PUP FN:6 PRODUCER 20-Mar-2008 11:10

Schlumberger

Dipole Shear Slowness
1:200

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

Input DLIS Files

DEFAULT	MERGE_084	FN:1	PRODUCER	20−Mar−2008 08:35	1391.0 M	841.2 M

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_087PUP	FN:4	PRODUCER	20−Mar−2008 08:59	1391.0 M	842.3 M

OP System Version: 15C0−309

MCM

HILTB−FTB	SRPC−3546−Q1_2008_OP15	HRLT−B	SRPC−3546−Q1_2008_OP15
PPC1−B	SRPC−3546−Q1_2008_OP15	MAXS−B	SKK−3442−MAST
MAPC−B	SKK−3442−MAST	EDTC−B	SKK−3493−EDTCB
BSP	SRPC−3546−Q1_2008_OP15		

PIP SUMMARY

Time Mark Every 60 S

Data Copy Status Indicator 5 (DCSI5)
0 (−−−− 10

Sonic Porosity (SPHI)
0.45 (V/V) −0.15

HILT Caliper (HCAL)
6 (IN) 16

Gamma Ray (GR)
0 (GAPI) 200

Min Amplitude Max
Slowness Projection 5 (SPJ5)
80 (US/F) 540

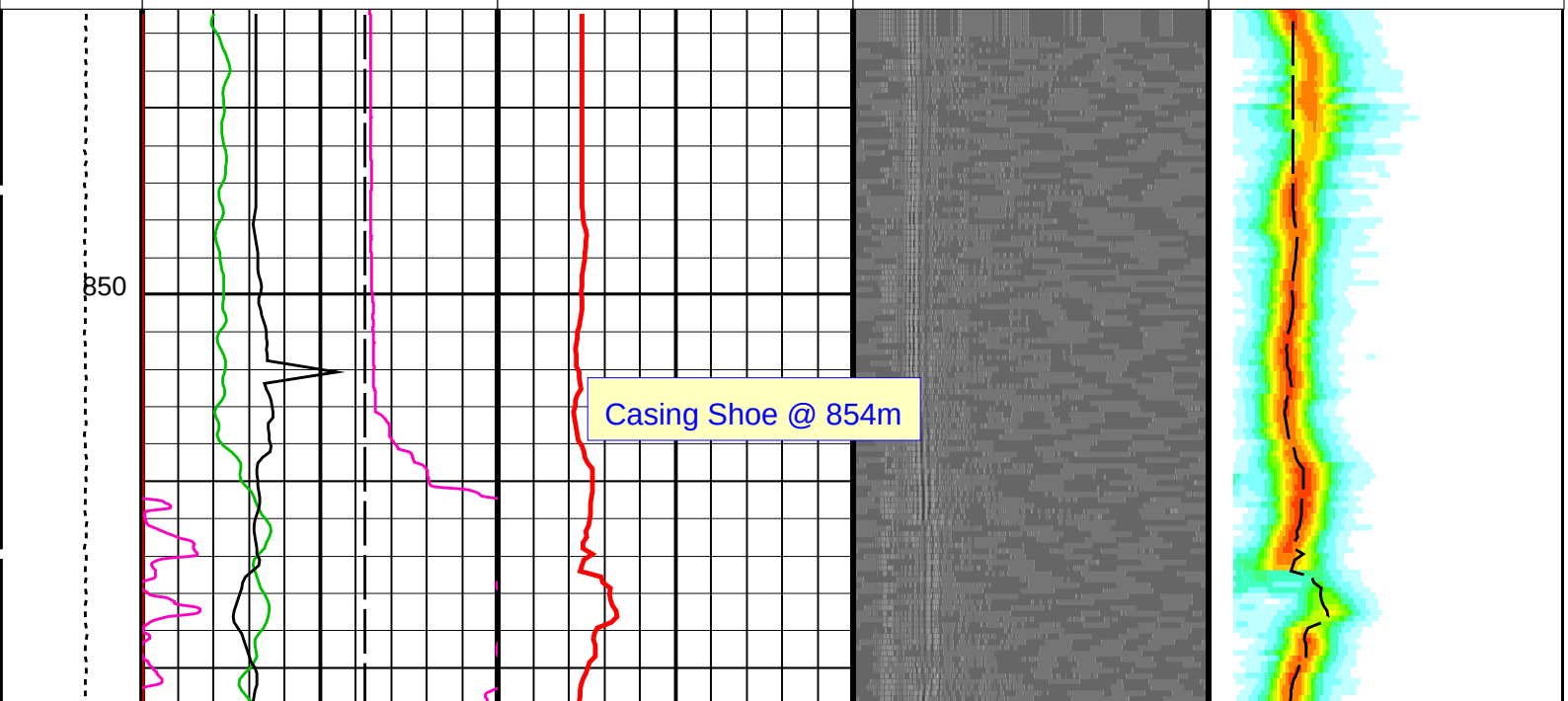
Tension (TENS) (LBF)
0 5000

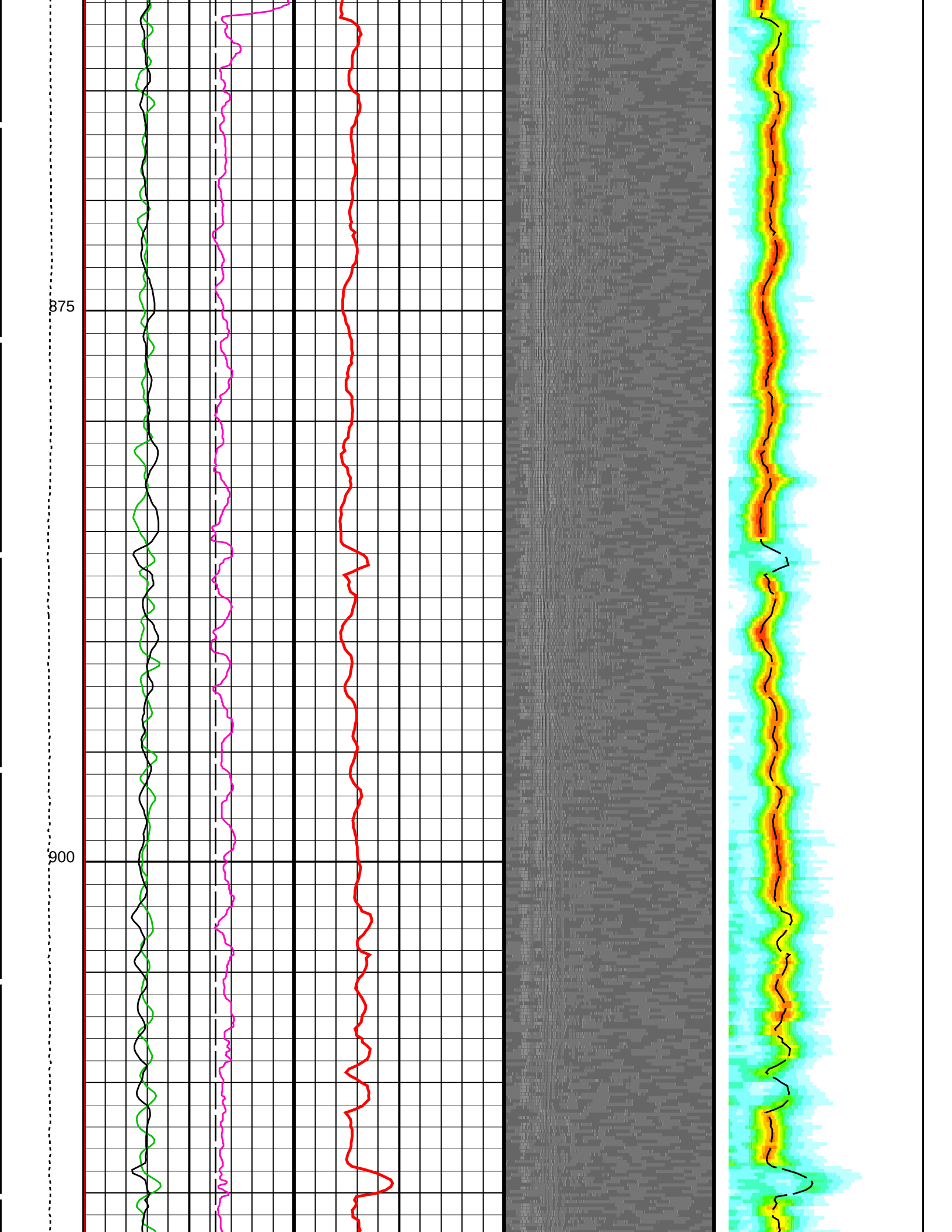
Bit Size (BS)
6 (IN) 16

Shear Slowness 5 (DTSH5)
80 (US/F) 540

Min Amplitude Max
MAST XDIPOLE VDL WF (DWF5_DIIN)
0 (US) 30000

Shear Slowness 5 (DTSH5)
80 (US/F) 540

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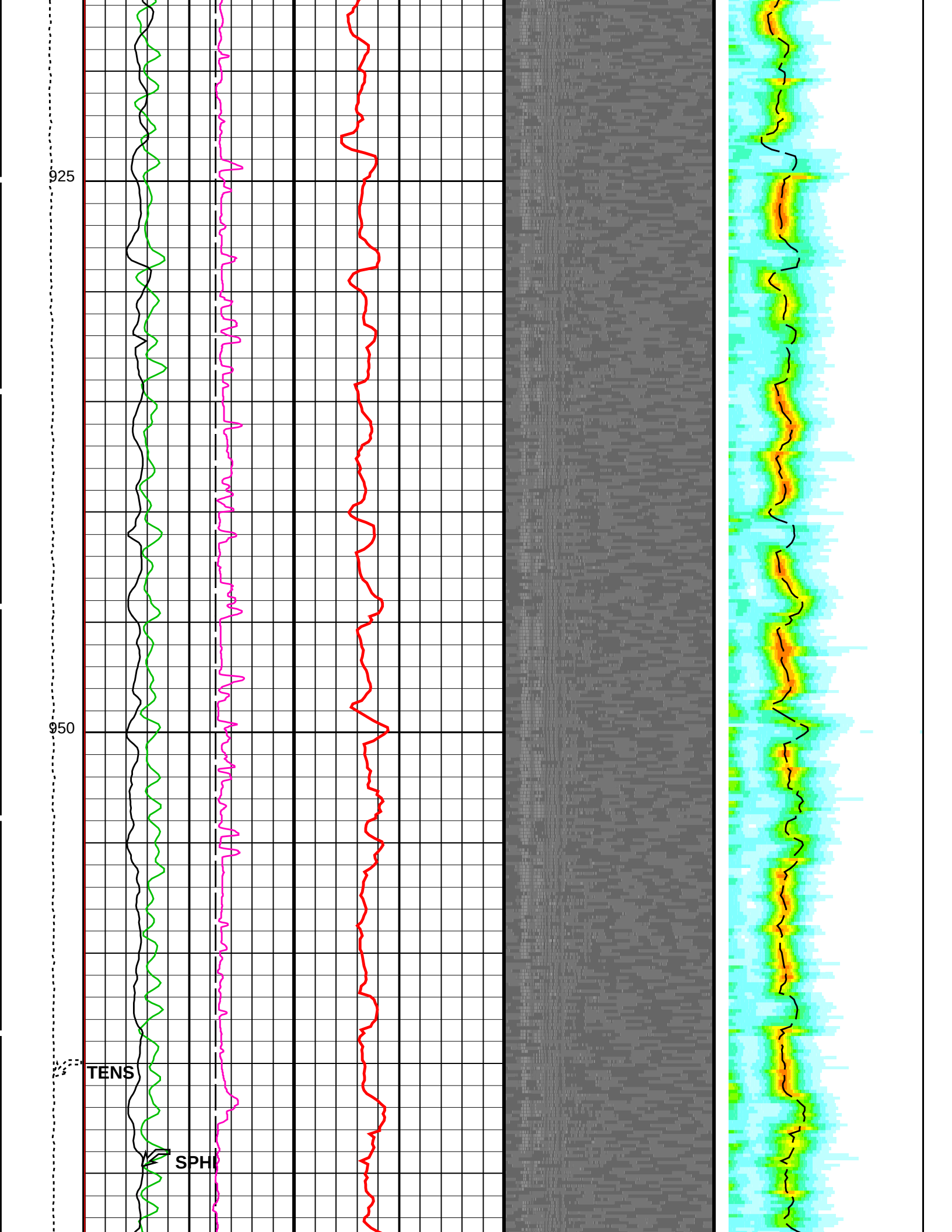
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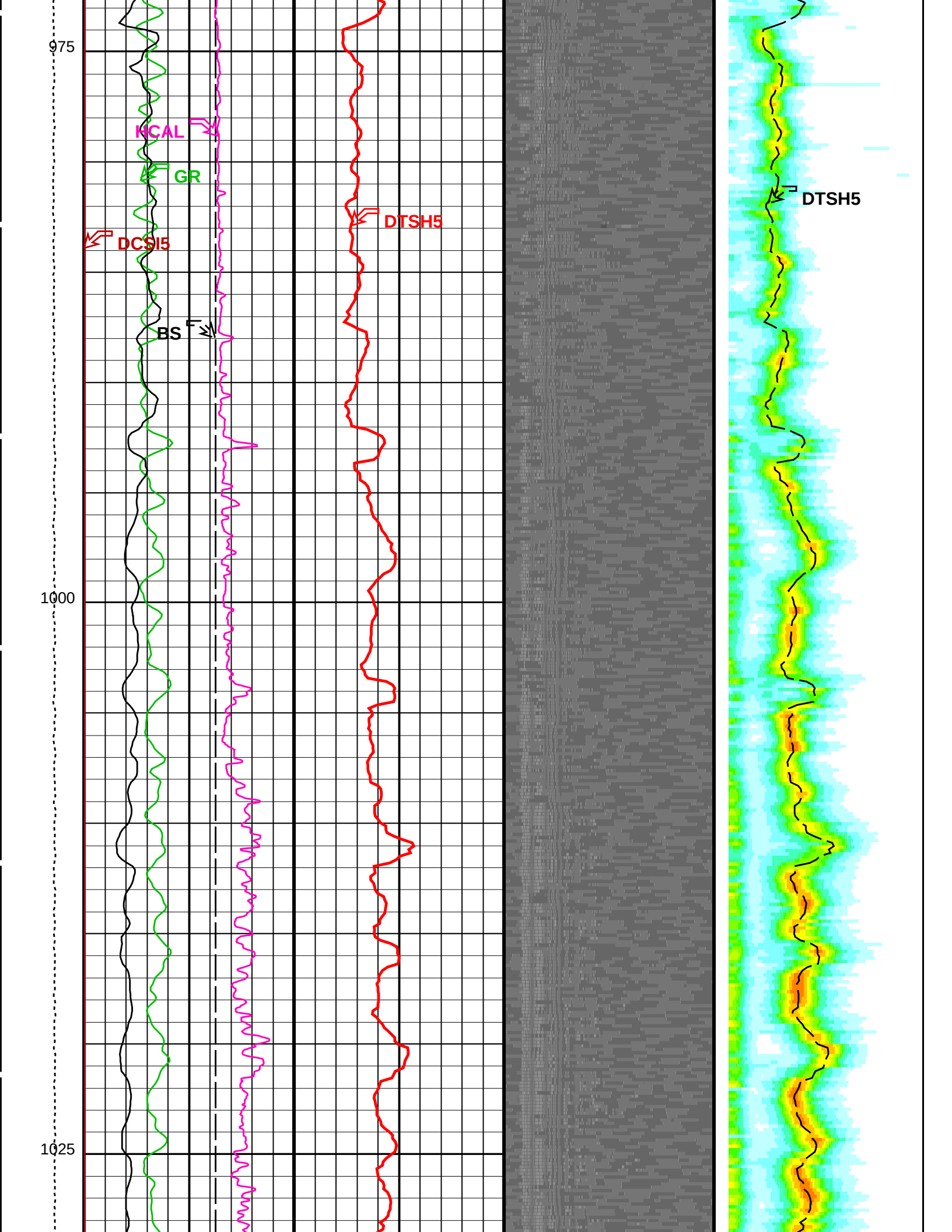
950
TENS
SPHI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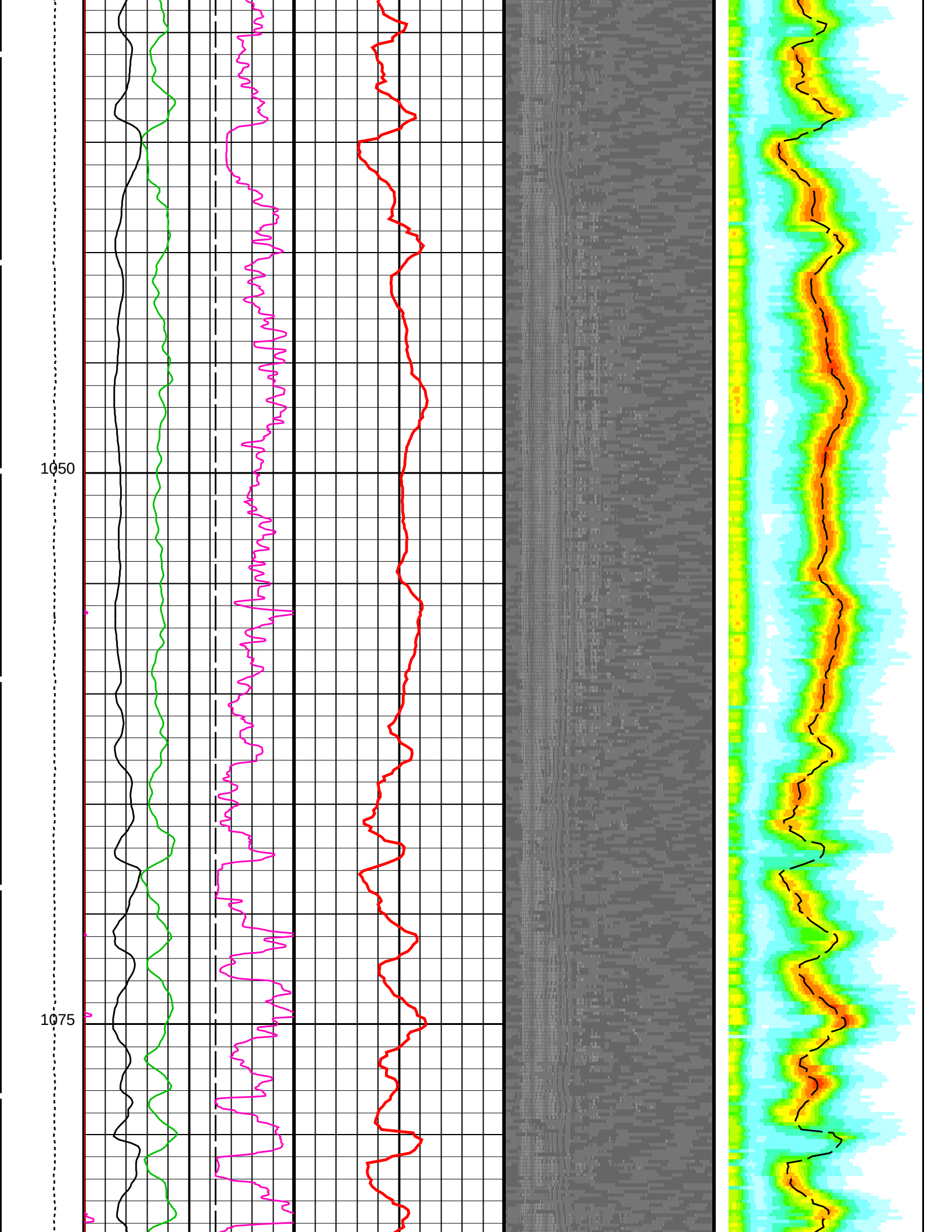
HCAL
GR
DCSI5
BS
DTSH5
DTSH5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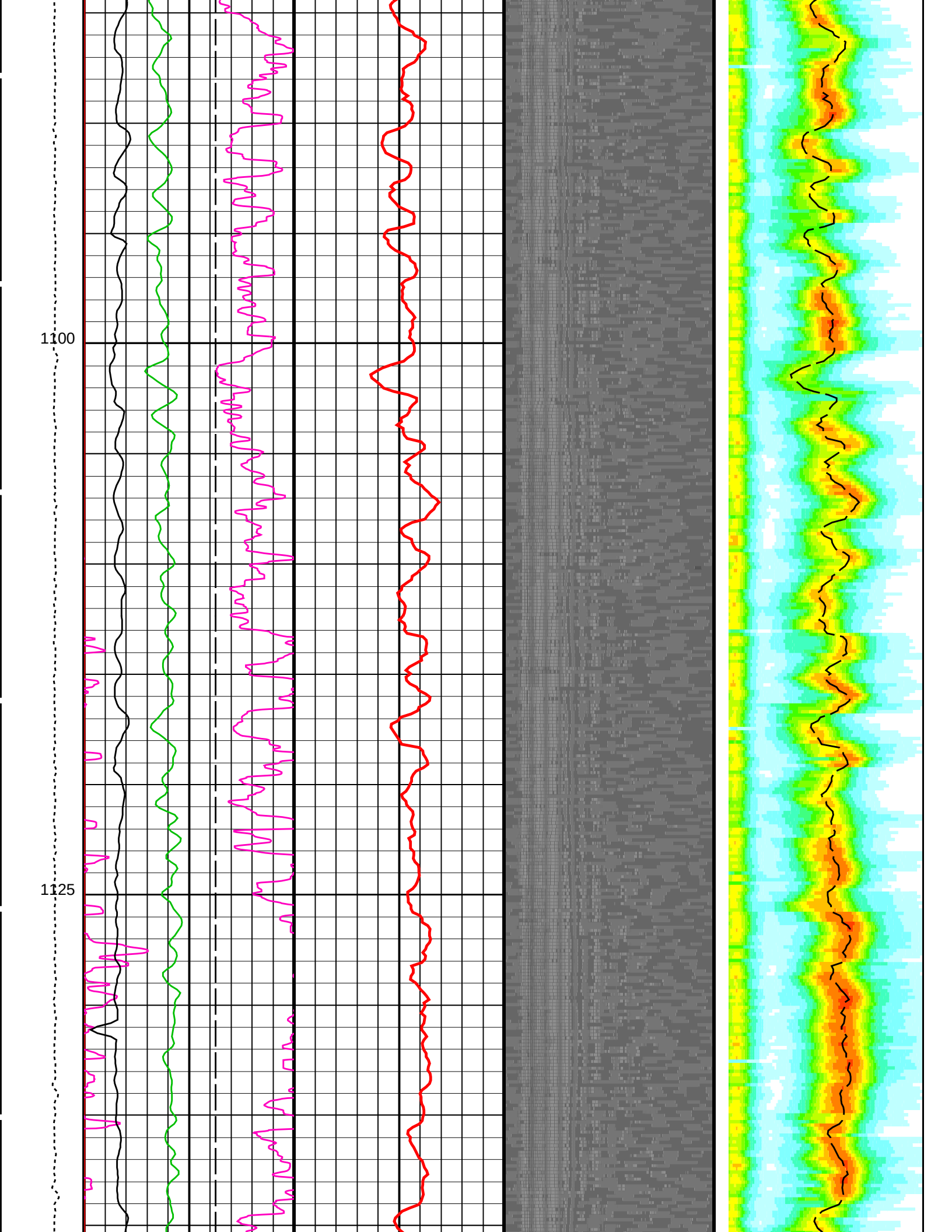
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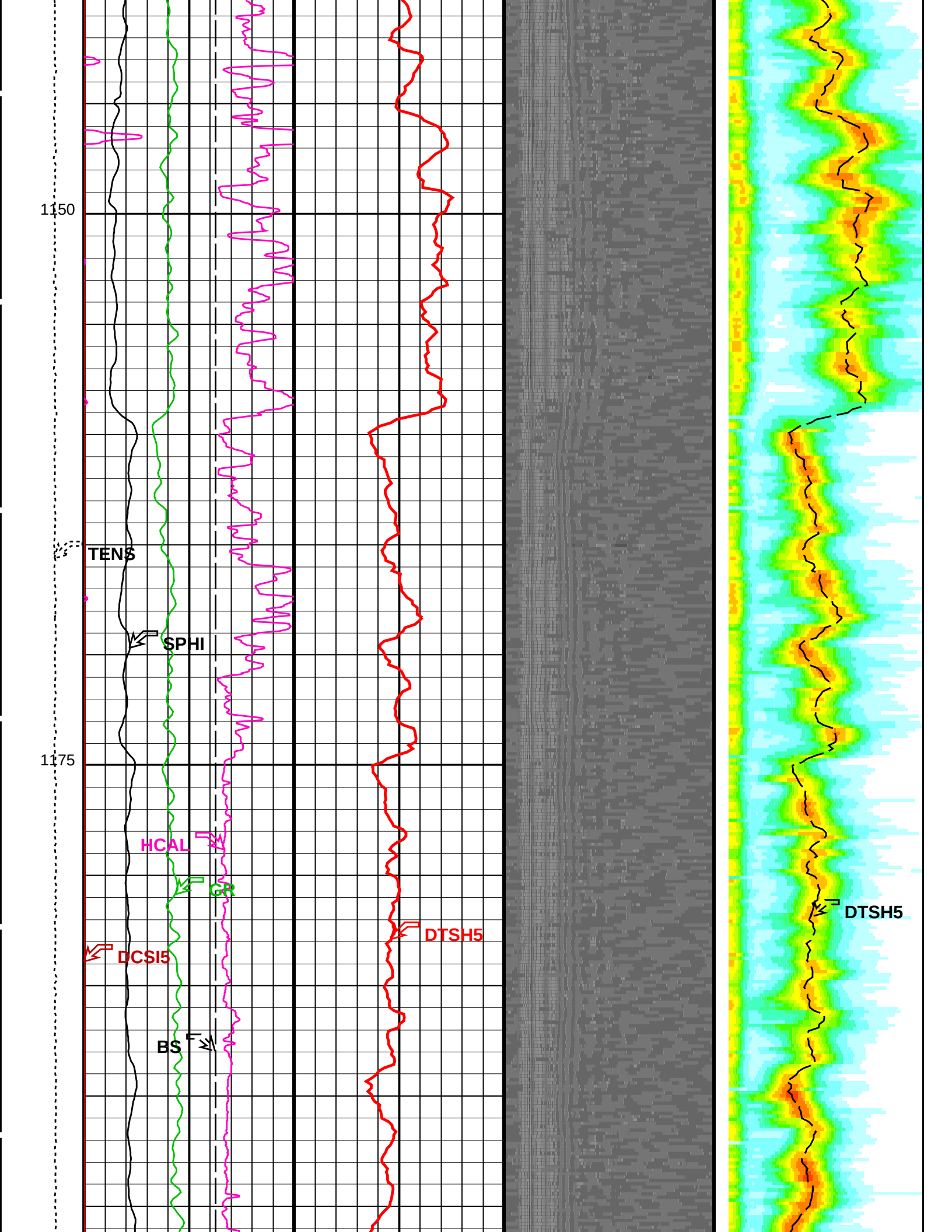
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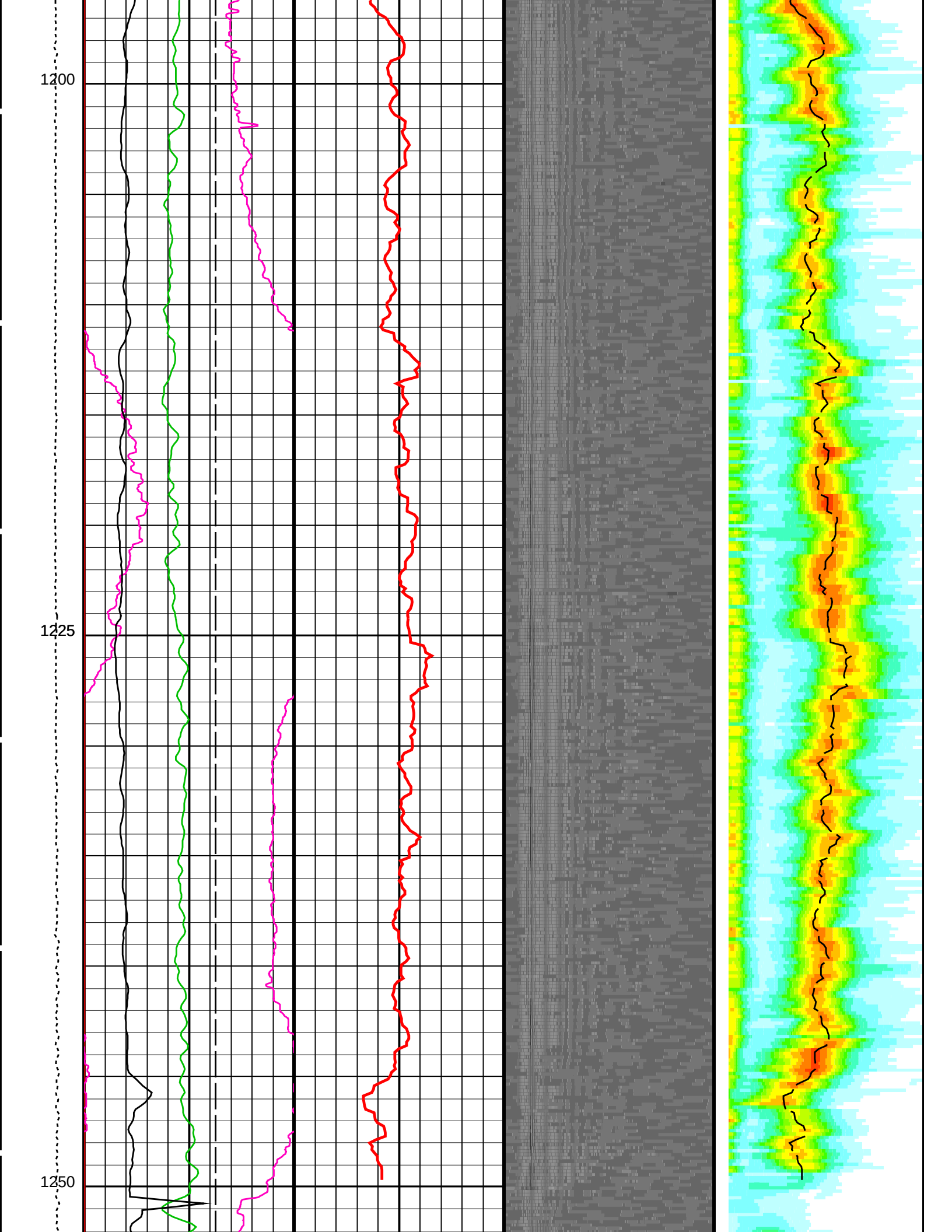
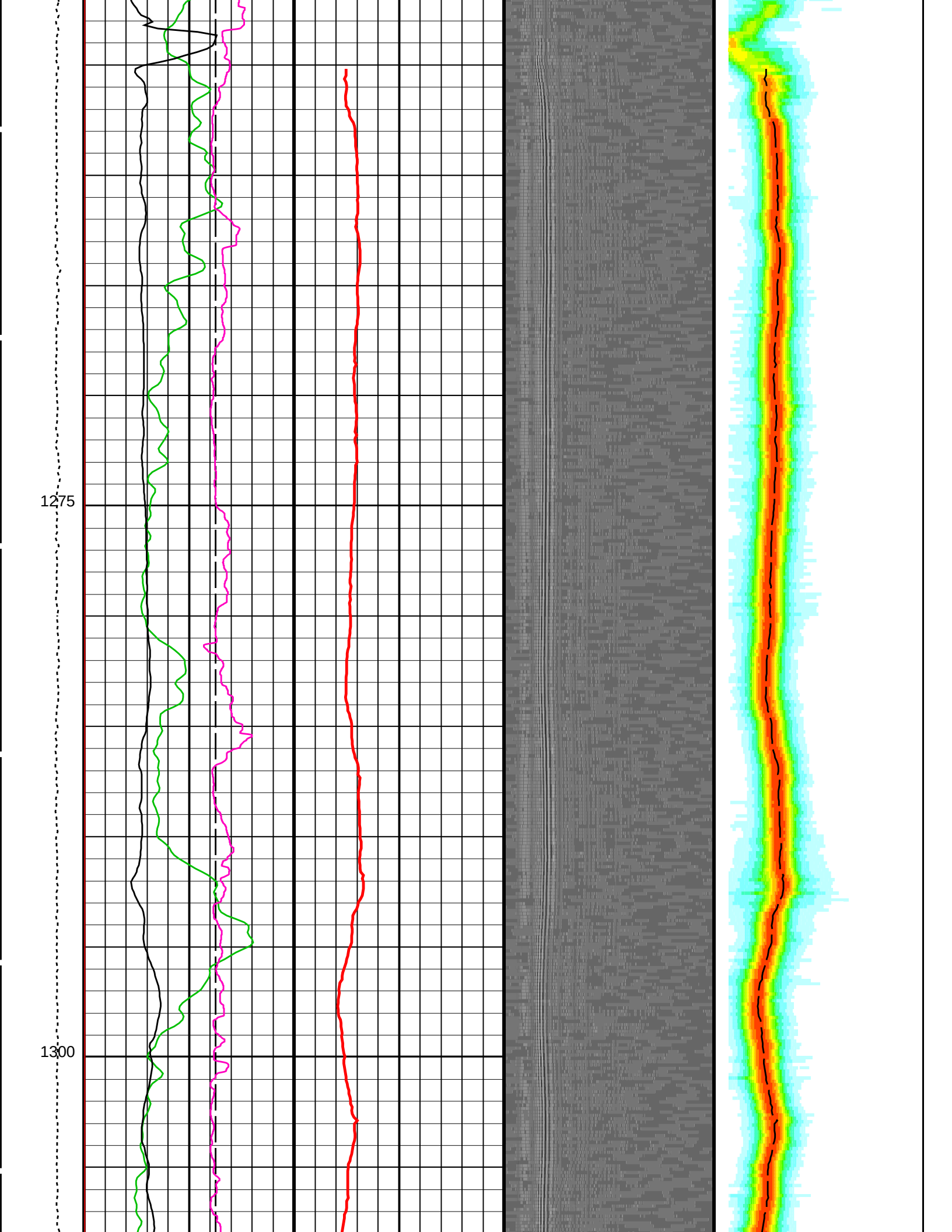
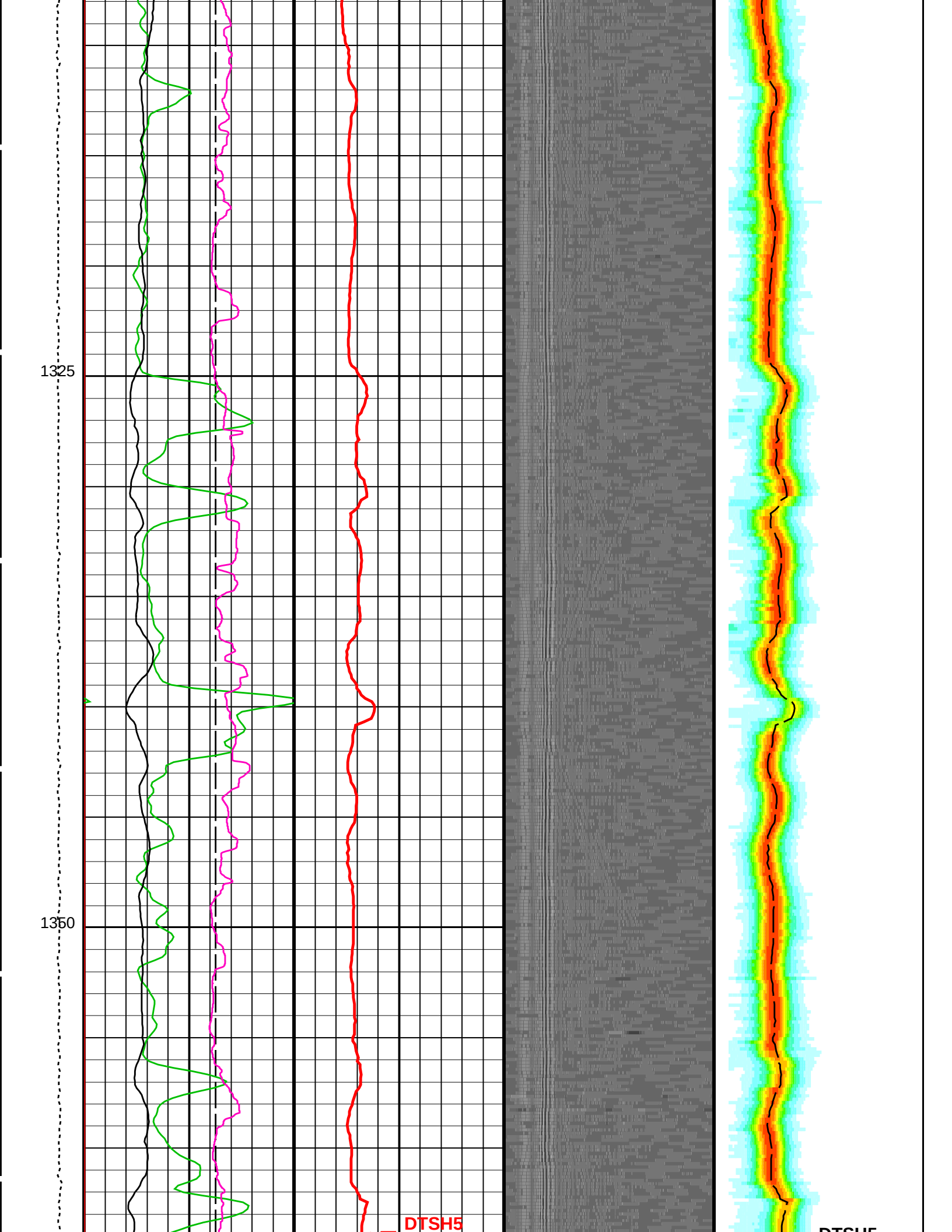
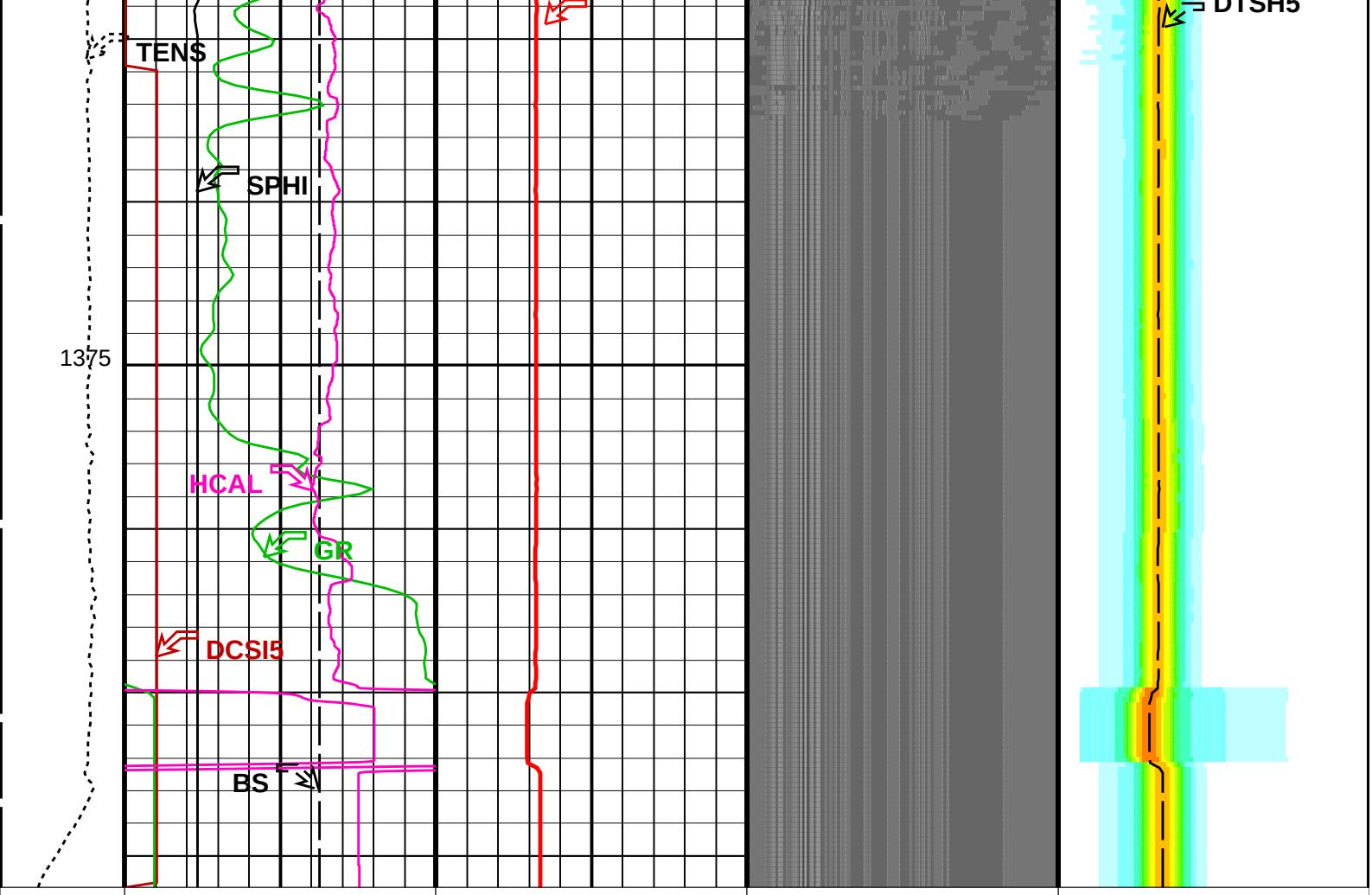
1175
TENS
SPHI
HCAL
GR
DCSI5
BS
DTSH5
DTSH5


1200
1225
1250


1275
1300


1325
1350
DTSH5
DTSH5



Tension (TENS) (LBF)	Bit Size (BS) (IN)	Shear Slowness 5 (DTSH5) (US/F)	MAST XDIPOLE VDL WF (DWF5_DIIN) Amplitude (US)	Shear Slowness 5 (DTSH5) (US/F)
0 5000	6 16	80 540	Min Max 0 30000	80 540

Gamma Ray (GR) (GAPI)	HILT Caliper (HCAL) (IN)	Sonic Porosity (SPHI) (V/V)	Data Copy Status Indicator 5 (DCSI5)	Slowness Projection 5 (SPJ5) Amplitude (US/F)
0 200	6 16	0.45 −0.15	0 (---- 10	Min Max 80 540

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HILTB−FTB: High resolution Integrated Logging Tool−DTS		
BHS	Borehole Status	OPEN	
	HRLT−B: High Resolution Laterolog Array − E		
BHS	Borehole Status	OPEN	
	MAPC−B: Multimode Array Sonic Power Cartridge		
BHS	Borehole Status	OPEN	
BS	Bit Size	12.250	IN
CDTS	C−Delta−T Shale	100	US/F
DLHS	Hole Diameter Source for SOBS Channel	AUTO	
DTF	Delta−T Fluid	204.5	US/F
DTM	Delta−T Matrix	56	US/F

DTM	Delta-T Matrix	60	US/F
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DTCO	
EDTC-B: Enhanced DTS Cartridge			
BHS	Borehole Status	OPEN	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
System and Miscellaneous			
CSIZ	Current Casing Size	13.375	IN
CWEI	Casing Weight	67.90	LB/F
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	OFF	

Format: MAST_DSTC_XD **Vertical Scale: 1:200** **Graphics File Created: 20-Mar-2008 08:59**

OP System Version: 15C0-309

MCM

HILTB-FTB	SRPC-3546-Q1_2008_OP15	HRLT-B	SRPC-3546-Q1_2008_OP15
PPC1-B	SRPC-3546-Q1_2008_OP15	MAXS-B	SKK-3442-MAST
MAPC-B	SKK-3442-MAST	EDTC-B	SKK-3493-EDTCB
BSP	SRPC-3546-Q1_2008_OP15		

Input DLIS Files

DEFAULT	MERGE_084	FN:1	PRODUCER	20-Mar-2008 08:35	1391.0 M	841.2 M

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_087PUP	FN:4	PRODUCER	20-Mar-2008 08:59

Schlumberger

Calibrations
1:200

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Stab Measurement Summary							
Before: 26-Feb-2008 11:17							
BS Window Ratio	0.7624	N/A	0.7602	N/A	N/A	N/A	
BS Window Sum	10750	N/A	10980	N/A	N/A	N/A	CPS
SS Window Ratio	0.4883	N/A	0.4862	N/A	N/A	N/A	
SS Window Sum	10370	N/A	10360	N/A	N/A	N/A	CPS
LS Window Ratio	0.2968	N/A	0.2999	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1179	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations							
Before: 26-Feb-2008 11:17							
BS PM High Voltage (Command)	1227	N/A	1249	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1921	N/A	1901	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1407	N/A	1418	N/A	N/A	N/A	V
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Crystal Quality Resolutions Calibration							
Before: 26-Feb-2008 11:17							
BS Crystal Resolution	9.875	N/A	9.867	N/A	N/A	N/A	%
SS Crystal Resolution	10.56	N/A	10.33	N/A	N/A	N/A	%
LS Crystal Resolution	9.503	N/A	9.278	N/A	N/A	N/A	%
High resolution Integrated Logging Tool-DTS Wellsite Calibration - MCFL Calibration							
Before: 26-Feb-2008 13:17							
Raw B0 Resistivity	3875	N/A	3878	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3831	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3834	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool−DTS Wellsite Calibration − HILT Caliper Calibration
Before: 26−Feb−2008 11:25

HILT Caliper Zero Measurement	8.000	N/A	8.163	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.39	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Detector Calibration
Before: 29−Feb−2008 20:22

Gamma Ray Background	30.00	N/A	9.320	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	184.0	N/A	184.0	N/A	N/A	16.73	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Zero Measurement
Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15

CNTC Background	29.71	29.71	28.10	N/A	N/A	4.457	CPS
CFTC Background	33.75	33.75	30.26	N/A	N/A	5.063	CPS

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Ratio Measurement
Master: 20−Feb−2008 19:21

Thermal Near Corr. (Tank)	5800	5605	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2340	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.395	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Accelerometer Calibration
Before: Calibration not done

Z−Axis Acceleration	9.810	N/A	9.810	N/A	N/A	N/A	M/S2

High resolution Integrated Logging Tool−DTS Master Calibration − Inversion results
Master: 20−Feb−2008 21:02

Rho Aluminum	2.596	2.602	−−	−−	−−	−−	G/C3
Rho Magnesium	1.686	1.685	−−	−−	−−	−−	G/C3
Pe Aluminum	2.570	2.571	−−	−−	−−	−−	
Pe Magnesium	2.650	2.634	−−	−−	−−	−−	

High resolution Integrated Logging Tool−DTS Master Calibration − Deviation Summary
Master: 20−Feb−2008 21:02

BS Average Deviation	0	0.5701	−−	−−	−−	−−	%
BS Max Deviation	0	1.350	−−	−−	−−	−−	%
SS Average Deviation	0	0.3068	−−	−−	−−	−−	%
SS Max Deviation	0	0.7734	−−	−−	−−	−−	%
LS Average Deviation	0	0.6760	−−	−−	−−	−−	%
LS Max Deviation	0	1.772	−−	−−	−−	−−	%

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01
Before: 29−Feb−2008 19:20

HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.2	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−355.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−358.0	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−342.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−325.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−329.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	315.1	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12
Before: 29−Feb−2008 19:20

HRLT M1−M2 Voltage Plus − 0	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1957	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1963	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1876	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1783	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1810	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1741	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23
Before: 29−Feb−2008 19:20

HRLT M2−M3 Voltage Plus − 0	0	N/A	1736	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1947	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1956	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1875	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1778	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1806	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 6	0	N/A	−1721	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34
Before: 29−Feb−2008 19:20

HRLT A3−A4 Voltage Plus − 0	0	N/A	68550	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	77150	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	77730	N/A	N/A	2100	UV

HRLT A3−A4 Voltage Plus − 3	0	N/A	74680	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	70640	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	71700	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−67220	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 29−Feb−2008 19:20

HRLT A4−A5 Voltage Plus − 0	0	N/A	68390	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	77030	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	77590	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	74510	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	70470	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	71520	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−67110	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56
Before: 29−Feb−2008 19:20

HRLT A5−A6 Voltage Plus − 0	0	N/A	68510	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	77320	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	77840	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	74720	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	70600	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	71640	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−67390	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 29−Feb−2008 19:20

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68130	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−77110	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−77730	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−74700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−70660	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−71700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67120	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 29−Feb−2008 19:20

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68070	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−76870	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−77500	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−74520	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−70540	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−71630	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	66910	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 29−Feb−2008 19:20

HRLT Source Current Plus − 0	0	N/A	283.9	N/A	N/A	8.520	UA
HRLT Source Current Plus − 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 29−Feb−2008 19:20

HRLT Vertical Voltage Pl − 0	0	N/A	−320.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−351.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−351.9	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−334.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−314.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−334.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	324.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

Powered Positioning Deveice/Caliper 1 Wellsite Calibration − PPC1 Caliper Calibration
Before: Calibration out of date 19−Jun−2007 15:30

PPC1 Radius 1 Raw Small Radius	3.500	N/A	3.996	N/A	N/A	0.5000	IN
PPC1 Radius 1 Raw Large Radius	8.000	N/A	8.071	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Small Radius	3.500	N/A	3.288	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Large Radius	8.000	N/A	7.596	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Small Radius	3.500	N/A	3.747	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Large Radius	8.000	N/A	8.101	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Small Radius	3.500	N/A	3.359	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Large Radius	8.000	N/A	7.738	N/A	N/A	0.5000	IN

Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration							
Before: Calibration not done							
EDTC Z−Axis Acceleration	9.810	N/A	9.807	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration							
Before: 29−Feb−2008 19:22							
Gamma Ray (Jig − Bkg)	166.4	N/A	166.4	N/A	N/A	15.12	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

The GLS−VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT−B Water Temperature 20.0 DEGC.
Thermal Housing Size 3.376 IN.
NSR−F serial number 5224

High resolution Integrated Logging Tool−DTS / Equipment Identification

Primary Equipment:		
HILT high−Resolution Mechanical Sonde	HRMS − B	
HILT Rxo Gamma−ray Device	HRGD − B	
HILT Micro Cylindrically Focused Log Dev	MCFL −	
GR Logging Source	GLS − VJ	5334
HILT High Res. Control Cartridge	HRCC − B	
HILT Gamma−Ray Neutron Sonde−DTS	HGNS − B	
HGNS Gamma−Ray Device	HGR −	
HGNS Neutron Detector with Alpha Source	HCNT −	
Auxiliary Equipment:		
Neutron Calibration Tank	NCT − B	
Gamma Source Radioactive	GSR − U/Y	
HGNS Housing	HGNH −	

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value
Before		0.7602	Before		0.4862	Before		0.2999
0.7243 (Minimum)	0.7624 (Nominal)	0.8005 (Maximum)	0.4639 (Minimum)	0.4883 (Nominal)	0.5127 (Maximum)	0.2820 (Minimum)	0.2968 (Nominal)	0.3117 (Maximum)
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value
Before		10980	Before		10360	Before		1179
10210 (Minimum)	10750 (Nominal)	11290 (Maximum)	9854 (Minimum)	10370 (Nominal)	10890 (Maximum)	1102 (Minimum)	1160 (Nominal)	1218 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Photo−multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V	Value	Phase	SS PM High Voltage (Command) V	Value	Phase	LS PM High Voltage (Command) V	Value
Before		1249	Before		1901	Before		1418
1127 (Minimum)	1227 (Nominal)	1327 (Maximum)	1821 (Minimum)	1921 (Nominal)	2021 (Maximum)	1307 (Minimum)	1407 (Nominal)	1507 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %	Value	Phase	SS Crystal Resolution %	Value	Phase	LS Crystal Resolution %	Value
Before		9.867	Before		10.33	Before		9.278
8.875 (Minimum)	9.875 (Nominal)	10.87 (Maximum)	9.556 (Minimum)	10.56 (Nominal)	11.56 (Maximum)	8.503 (Minimum)	9.503 (Nominal)	10.50 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

MCFL Calibration

Phase	Raw B0 Resistivity OHMM			Value
Before				3878
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)	

Phase	Raw B1 Resistivity OHMM			Value
Before				3831
	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	

Phase	Raw B2 Resistivity OHMM			Value
Before				3834
	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	

Before: 26−Feb−2008 13:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN			Value
Before				8.163
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)	

Phase	HILT Caliper Plus Measurement IN			Value
Before				12.39
	9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)	

Before: 26−Feb−2008 11:25

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI			Value
Before				9.320
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	

Phase	Gamma Ray (Jig − Bkg) GAPI			Value
Before				184.0
	167.3 (Minimum)	184.0 (Nominal)	200.7 (Maximum)	

Phase	Gamma Ray (Calibrated) GAPI			Value
Before				165.0
	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	

Before: 29−Feb−2008 20:22

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Zero Measurement

Phase	CNTC Background CPS			Value
Master				29.71
Before				28.10
	5.000 (Minimum)	29.71 (Nominal)	40.00 (Maximum)	

Phase	CFTC Background CPS			Value
Master				33.75
Before				30.26
	5.000 (Minimum)	33.75 (Nominal)	40.00 (Maximum)	

Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS			Value
Master				5605
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	

Phase	Thermal Far Corr. (Tank) CPS			Value
Master				2340
	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	

Phase	CNTC/CFTC (Tank)			Value
Master				2.395
	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS
Wellsite Calibration

Accelerometer Calibration

Phase	Z−Axis Acceleration M/S2			Value
Before				9.810
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)	

Before: Calibration not done

High resolution Integrated Logging Tool−DTS Master Calibration

Inversion results

Phase	Rho Aluminum G/C3			Value
Master				2.602
	2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)	

Phase	Rho Magnesium G/C3			Value
Master				1.685
	1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)	

Phase	Pe Aluminum			Value
Master				2.571
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	

Phase	Pe Magnesium			Value
Master				2.634
	2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)	

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Deviation Summary

Phase	BS Average Deviation %	Value
Master		0.5701

Phase	SS Average Deviation %	Value
Master		0.3068

Phase	LS Average Deviation %	Value
Master		0.6760

−0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)	−1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	−1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)

Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value
Master		1.350	Master		0.7734	Master		1.772

−1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)	−2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)	−3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.71	Master		33.75

5.000 (Minimum)	29.71 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	33.75 (Nominal)	40.00 (Maximum)

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS Master Calibration

Tank Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5605	Master		2340	Master		2.395

4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)

Master: 20−Feb−2008 19:21

High Resolution Laterolog Array − B / Equipment Identification

Primary Equipment:	
HRLT Sonde	HRLS − B
Auxiliary Equipment:	
HRLT lower Housing	HRLH − B
HRLT Lower Cartridge	HRLC − B
HRLT upper Housing	HRUH − B
HRLT Upper Cartridge	HRUC − B

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M01

Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−318.2	−322.7	−280.7	−379.7
1	Before		−355.9	−322.7	−280.7	−379.7
2	Before		−358.0	−322.7	−280.7	−379.7
3	Before		−342.3	−322.7	−280.7	−379.7
4	Before		−325.3	−322.7	−280.7	−379.7
5	Before		−329.9	−322.7	−280.7	−379.7
6	Before		315.1	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1749	1781	2095	1549
1	Before		1957	1781	2095	1549
2	Before		1963	1781	2095	1549
3	Before		1876	1781	2095	1549
4	Before		1783	1781	2095	1549
5	Before		1810	1781	2095	1549

6	Before		−1741	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1736	1781	2095	1549
1	Before		1947	1781	2095	1549
2	Before		1956	1781	2095	1549
3	Before		1875	1781	2095	1549
4	Before		1778	1781	2095	1549
5	Before		1806	1781	2095	1549
6	Before		−1721	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
1	Before		77150	70000	82360	60900
2	Before		77730	70000	82360	60900
3	Before		74680	70000	82360	60900
4	Before		70640	70000	82360	60900
5	Before		71700	70000	82360	60900
6	Before		−67220	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68390	70000	82360	60900
1	Before		77030	70000	82360	60900
2	Before		77590	70000	82360	60900
3	Before		74510	70000	82360	60900
4	Before		70470	70000	82360	60900
5	Before		71520	70000	82360	60900
6	Before		−67110	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68510	70000	82360	60900

0	Before		68510	70000	82360	60900
1	Before		77320	70000	82360	60900
2	Before		77840	70000	82360	60900
3	Before		74720	70000	82360	60900
4	Before		70600	70000	82360	60900
5	Before		71640	70000	82360	60900
6	Before		−67390	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68130	−70000	−60900	−82360
1	Before		−77110	−70000	−60900	−82360
2	Before		−77730	−70000	−60900	−82360
3	Before		−74700	−70000	−60900	−82360
4	Before		−70660	−70000	−60900	−82360
5	Before		−71700	−70000	−60900	−82360
6	Before		67120	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68070	−70000	−60900	−82360
1	Before		−76870	−70000	−60900	−82360
2	Before		−77500	−70000	−60900	−82360
3	Before		−74520	−70000	−60900	−82360
4	Before		−70540	−70000	−60900	−82360
5	Before		−71630	−70000	−60900	−82360
6	Before		66910	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.9	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4

Idx	Phase		Value	Nominal	Maximum	Minimum
7	Before		281.1	281.1	330.7	244.4
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.5	−322.7	−280.7	−379.7
1	Before		−351.4	−322.7	−280.7	−379.7
2	Before		−351.9	−322.7	−280.7	−379.7
3	Before		−334.5	−322.7	−280.7	−379.7
4	Before		−314.4	−322.7	−280.7	−379.7
5	Before		−334.3	−322.7	−280.7	−379.7
6	Before		324.3	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

Powered Positioning Deveice/Caliper 1 / Equipment Identification

Primary Equipment:

PPC Powered Positioning Device/Caliper	PPC1 − B
PPC1 Caliper Standard	PPC_ −

Auxiliary Equipment:

Powered Positioning Deveice/Caliper 1 Wellsite Calibration

PPC1 Caliper Calibration

Phase	PPC1 Radius 1 Raw Small Radius IN	Value	Phase	PPC1 Radius 1 Raw Large Radius IN	Value
Before		3.996	Before		8.071
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 2 Raw Small Radius IN	Value	Phase	PPC1 Radius 2 Raw Large Radius IN	Value
Before		3.288	Before		7.596
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 3 Raw Small Radius IN	Value	Phase	PPC1 Radius 3 Raw Large Radius IN	Value
Before		3.747	Before		8.101
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 4 Raw Small Radius IN	Value	Phase	PPC1 Radius 4 Raw Large Radius IN	Value
Before		3.359	Before		7.738
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Before: Calibration out of date 19−Jun−2007 15:30

Multimode Array Sonic Power Cartridge / Equipment Identification

Primary Equipment:

Multimode Array Sonic Minimum Service So	MAMS − BA	8201
Multimode Array Sonic Control Cartridge	MAPC − BA	8198

Auxiliary Equipment:

Electronics Cartridge Housing	ECH − SD	8198

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

Primary Equipment:	
EDTC Gamma Ray Detector	EDTG − A/B
Enhanced DTS Cartridge	EDTC − B
Auxiliary Equipment:	
EDTC Housing	EDTH − B

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.807

9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)

Before: Calibration not done

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value
Before		7.742

0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)

Phase	Gamma Ray (Jig − Bkg) GAPI	Value
Before		166.4

151.2 (Minimum)	166.4 (Nominal)	181.5 (Maximum)

Phase	Gamma Ray (Calibrated) GAPI	Value
Before		165.0

150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)

Before: 29−Feb−2008 19:22

Company: **Apache Northwest Pty Ltd**

Schlumberger

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton**
Country: **Australia**

PEX−GR−HRLA−MSIP−S
Compressional and Shear Slowness
Scale 1:200

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig: West Triton
Field: Apache/VIC/P−58/WASABI−1
Location: Bass Strait
Well: WASABI−1
Company: Apache Northwest Pty Ltd

PEX−GR−HRLA−MSIP−S
Density−Neutron−GR−Resistivity−S
Scale 1:500

LOCATION

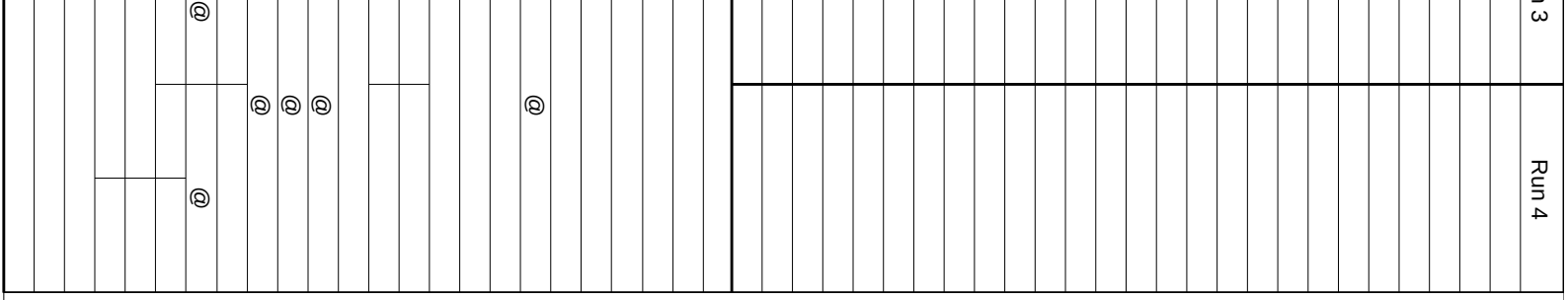
Bass Strait
Northing : 5739963.350 m
Easting : 522993.588 m

Elev.:
G.L. −27 m
D.F. 39 m

Permanent Datum: AHD — Elev.: 0 m
Log Measured From: DRILL FLOOR (RT) — 39.0 m above Perm. Datum
Drilling Measured From: DRILL FLOOR (RT)

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48.1 deg	147 15' 49.147" E	38 29' 18.157" S

	Run 1	Run 2	Run 3
Logging Date	1−Mar−2008		
Run Number	2		
Depth Driller	2313 m		
Schlumberger Depth	Not Tagged		
Bottom Log Interval	1387 m		
Top Log Interval	854 m		
Casing Driller Size @ Depth	13.375 in @ 857 m	@	@
Casing Schlumberger	854 m		
Bit Size	12.250 in		
Type Fluid In Hole	KCl/Polymer		
MUD Density / Viscosity	1.15 g/cm3 / 50 s		
MUD Fluid Loss / PH	5 cm3 / 8.7		
MUD Source Of Sample	Flowline		
RM @ Measured Temperature	0.082 ohm.m @ 20 degC	@	@
RMF @ Measured Temperature	0.071 ohm.m @ 21 degC	@	@
RMC @ Measured Temperature	0.099 ohm.m @ 20 degC	@	@
Source RMF / RMC	Press / Press		
RM @ MRT / RMF @ MRT	0.042 @ 59 / 0.037 @ 59	@ / @	@ / @
Maximum Recorded Temperatures	59 degC / 59		
Circulation Stopped / Time	1−Mar−2008 / 18:45		
Logger On Bottom / Time	3−Mar−2008 / 11:28		
Unit Number / Location	41 / AUSL		
Recorded By	A. Dandi/M.Dawson/K. AlBarhi		
Witnessed By	H.Little / A.Cruickshank		



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051		
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Conveyance Method:	Wireline
Wheel Correction 1:	−5	Calibration Offset:	−610.00	Rig Type:	Offshore_Fixed
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: VSI	OS1:
OS2: MDT−GR	OS2:
OS3: CST−GR	OS3:
OS4: VSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1

Tools run as per tool sketch, using 5x standoffs, 3x LCMEs and a bow spring.

Maximum Recorded Temperature was 59 degC taken from thermometers in Logging Head.

Neutron Enviroment Corrections : Hole Size, Borehole and formation Salinity, Mud Weight, Mud Cake, Standoff and Press./ Temp.

Density Environment Corrections : Hole Size, using BS, and Mud Weight.

Pex run in standard resolution as per client request.

REMARKS: RUN NUMBER 2

Barite correction applied to log.

Log Correlated to MWD Log Dated 1−Mar−2008, Wasabi−1 GEOVISION Resistivity RM 200.

Tools got hold up @ 1390m MD. Client decided to Log up from 1390m to surface.

Additional mud properties taken from Mud Report dated 1−Mar−2008:

Chlorides = 49,000 mg/L.

KCL = 10 (% by Wt.), Barite = 4.4 %.

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL08349210		SERVICE ORDER #:		
PROGRAM VERSION:	15C0−309		PROGRAM VERSION:		
FLUID LEVEL:	0 m		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

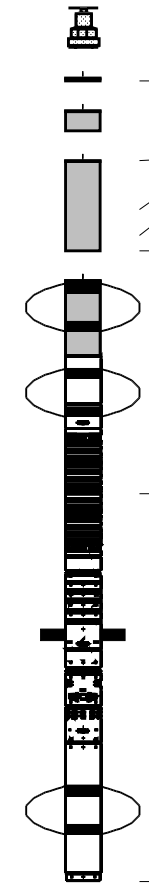
RUN 1 RUN 2

SURFACE EQUIPMENT

GSR−Y
NCT−B
CNB−AB
NCS−YC 5375

WITM (EDTS)−A 969

DOWNHOLE EQUIPMENT



LEH−QT
LEH−QT 2800
33.61

BSP AH−169
32.73

AH−369
32.32

EDTC−B
EDTH−B 8378
EDTC−B 8379
EDTG−B 77305
31.88

MAPC−B
MAPC−BA 8198
ECH−SD 8198
MAMS−BA 8201
29.90

MAXS−B
MASS−BA 8157
MAXS−BA 8157
23.49
2.5 IN Standoff

PPC1−B
PPC1−B
PPC_CAL_STD
17.32

HRLT−B
HRUH−B 1741
HRUC−B 1730
15.33
2.5 IN Standoff

HRLS−B 1745
HRLH−B 1745
HRLC−B 1745
AH−270 1792

High Res. — 11.75

2.5 IN Standoff

HILTB−FTB
AH−107 2910
AH−107
HGNSD−B 856
HMCA
HGNH 3915
NLS−KL
NSR−F 5224
HACCZ 379
HCNT
HGR
HRCC−B 868
HRMS−B 788
HRGD−B 1806
GLS−J 5334

HGNS HTEM — 7.96
HMCA — 6.74
HGNS Gamm — 6.51
HGNS Neut — 4.73
HGNS Neut — 4.58
HGNS sens — 3.87
HRCC cart — 2.65
MCFL — 1.00
HILT cali — 0.85
HRDD−LS
HRDD−SS
HRDD−BS — 0.73
DF ACCZ
HTEN HMAS HV
Accelerom
Tension — 0.00

BNS−CCS — 0.14

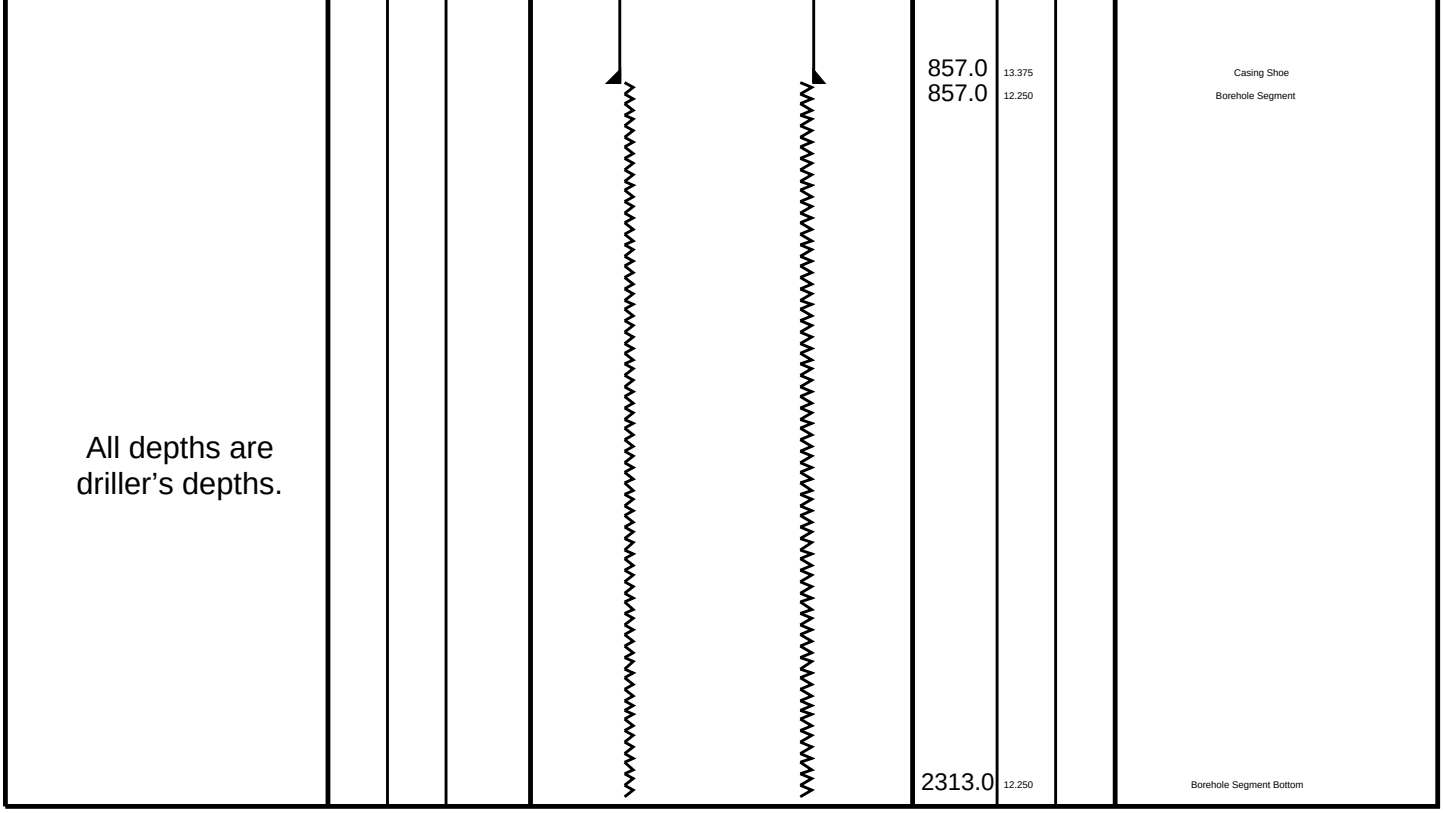
TOOL ZERO

MAXIMUM STRING DIAMETER 8.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
State: Victoria
Country: Australia

Drawing Date: 7−Mar−2008
Rig Name: West Triton
Reference Datum: AHD
Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe



All depths are driller's depths.

Schlumberger

Main Pass
1391 m − 840 m

MAXIS Field Log

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

Input DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_038PUP	FN:51	PRODUCER	12−Mar−2008 01:24	1391.0 M	840.5 M

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_035PUP	FN:36	PRODUCER	12−Mar−2008 01:47	1391.0 M	841.4 M
CUSTOMER	TLD_MCFL_CNL_HRLA_035PUC	FN:37	CUSTOMER	12−Mar−2008 01:47	1391.0 M	841.4 M

Integrated Hole/Cement Volume Summary

Hole Volume = 49.69 M3

Cement Volume = 24.62 M3 (assuming 9.63 IN casing O.D.)

Computed from 1391.0 M to 857.1 M using data channel(s) HCAL

OP System Version: 15C0−309

MCM

HILTB−FTB	SRPC−3546−Q1_2008_OP15_b	HRLT−B	SRPC−3546−Q1_2008_OP15_b
PPC1−B	SRPC−3546−Q1_2008_OP15_b	MAXS−B	SKK−3442−MAST_b
MAPC−B	SKK−3442−MAST_b	EDTC−B	SKK−3493−EDTCB_b
BSP	SRPC−3546−Q1_2008_OP15_b		

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 1 M3
- Integrated Hole Volume Major Pip Every 10 M3
- Integrated Cement Volume Minor Pip Every 1 M3
- Integrated Cement Volume Major Pip Every 10 M3
- Time Mark Every 60 S

HRLT True Resistivity (RT_HRLT) 0.2 (OHMM) 2000

Std. Res. Invaded Zone Resistivity (RXOZ) 0.2 (OHMM) 2000

Stuck Tool Indicator, Adjusted (STIA) 0 (M) 20

Area From HCAL to BS

HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 2000

Tool/Tot. Drag From D4T to STIA

SP (SP) −80 (MV) 20

HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 2000

Sand From RHOZ to TNPH

Cable Drag From D4T to STIT

Gamma Ray (ECGR) 0 (GAPI) 200

HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 2000

Env.Corr.Thermal Neutron Porosity (TNPH) 0.45 (V/V) −0.15

Stuck Stretch (STIT) 0 (M) 20

HILT Caliper (HCAL) 6 (IN) 16

HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 2000

Std. Res. Formation Density (RHOZ) 1.95 (G/C3) 2.95

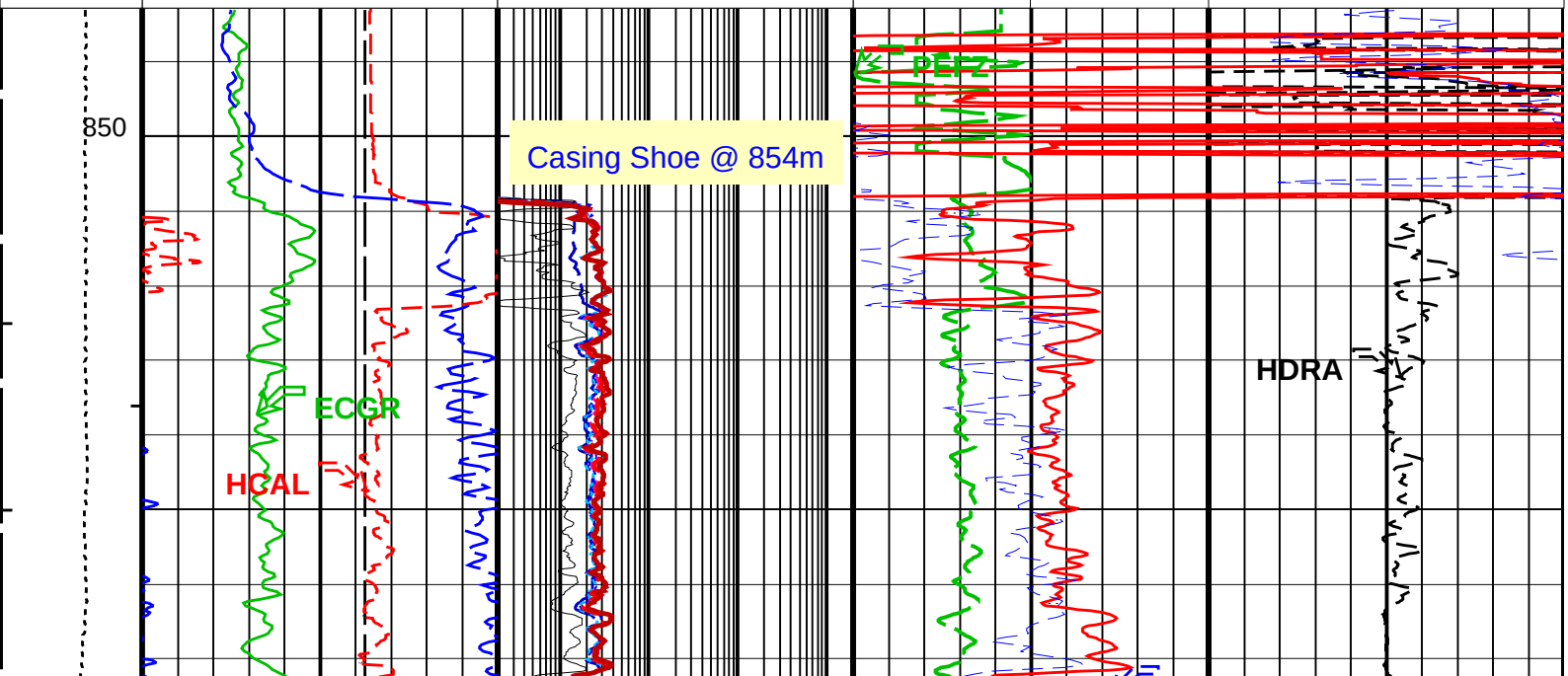
Tension (TENS) (LBF) 0 5000

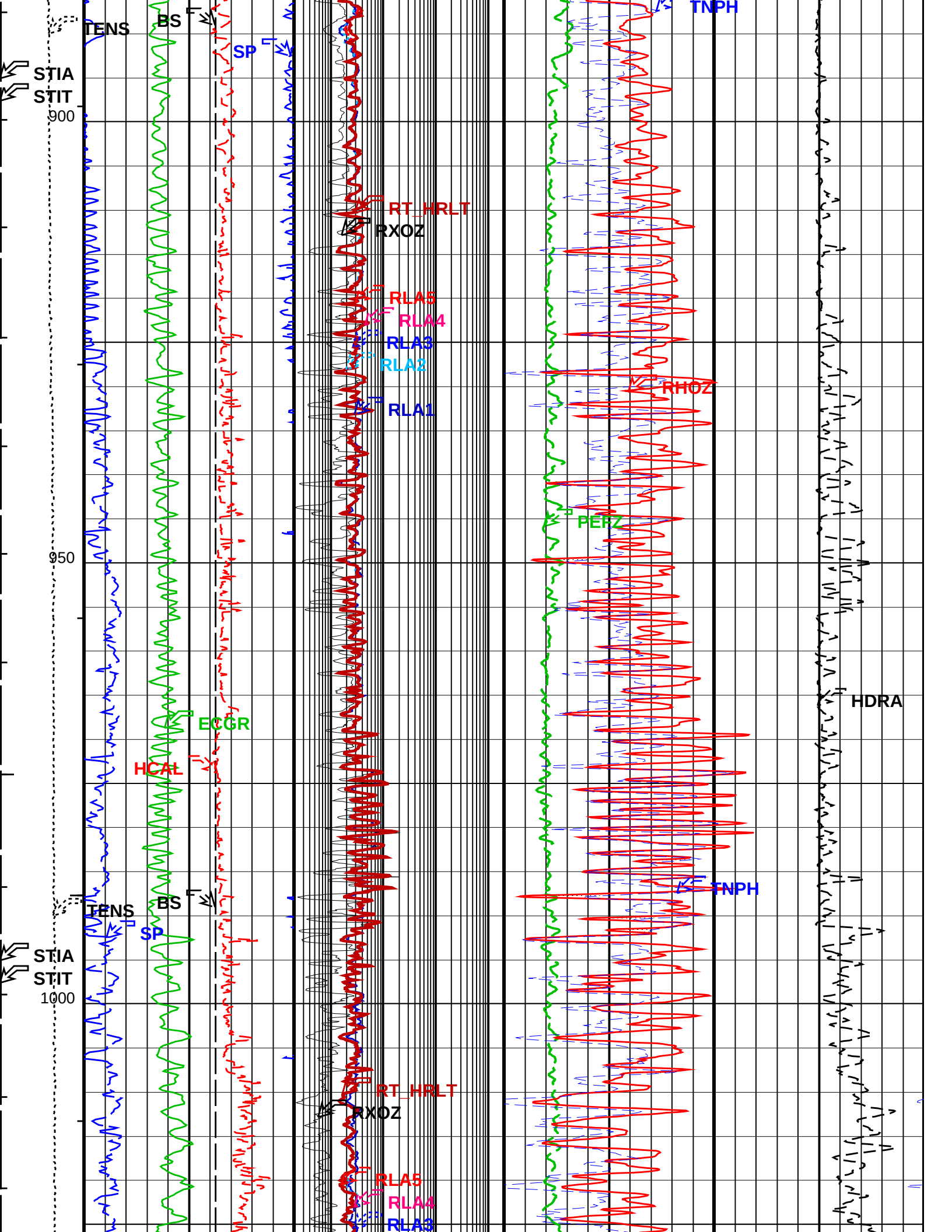
Bit Size (BS) 6 (IN) 16

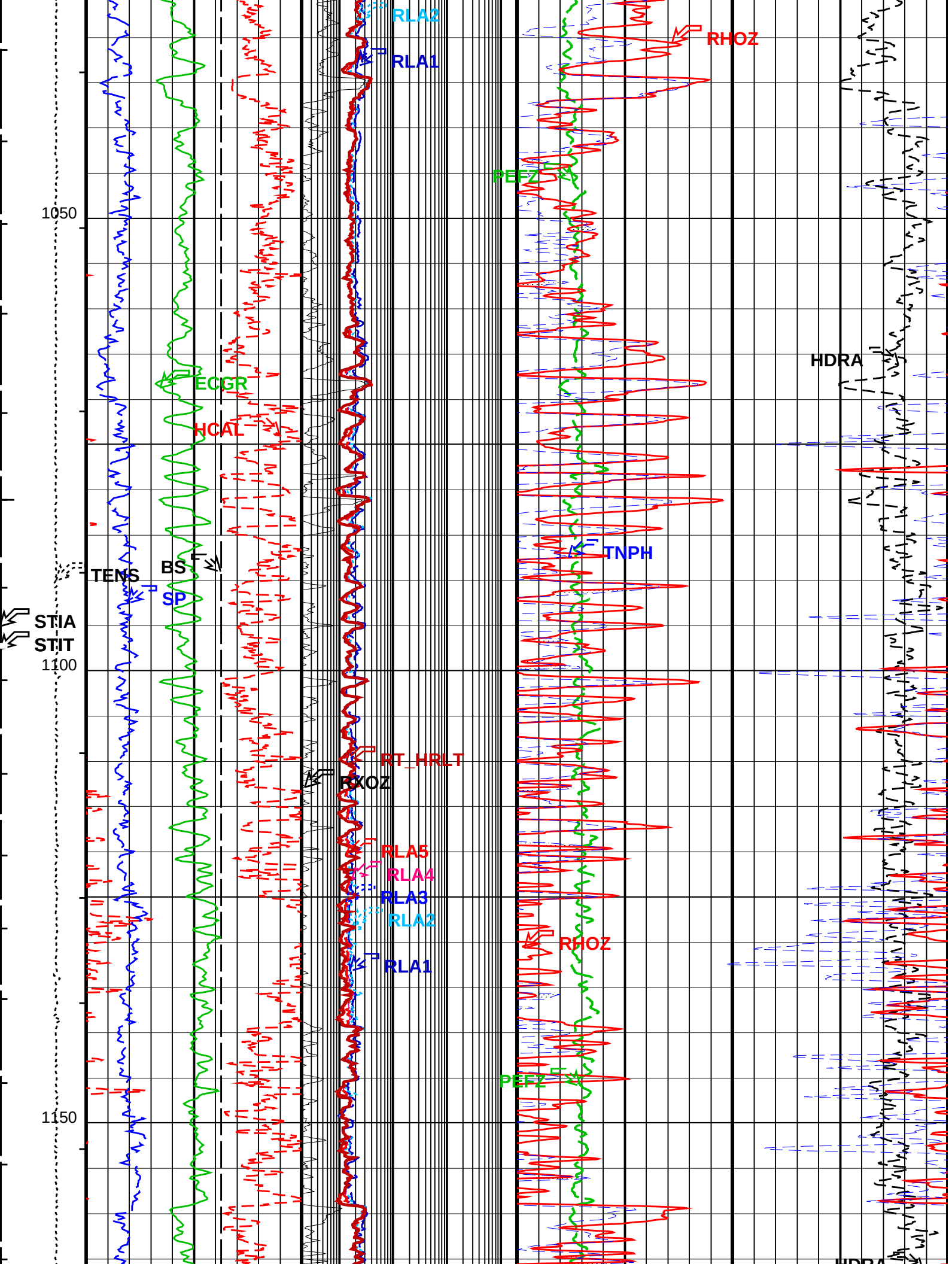
HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 2000

Std. Res. Formation Pe (PEFZ) 0 (---- 10

Density Correction (HDRA) −0.25 (G/C3) 0.25




TENS
BS
SP
STIA
STIT
900
RT_HRLT
RXOZ
RLA5
RLA4
RLA3
RLA2
RLA1
TNPH
RHOZ
PEFZ
950
HDRA
ECGR
HCAL
TENS
BS
SP
STIA
STIT
1000
RT_HRLT
RXOZ
RLA5
RLA4
RLA3
TNPH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RLA1
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PEFZ
1050
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HDRA
TENS
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SP
TNPH
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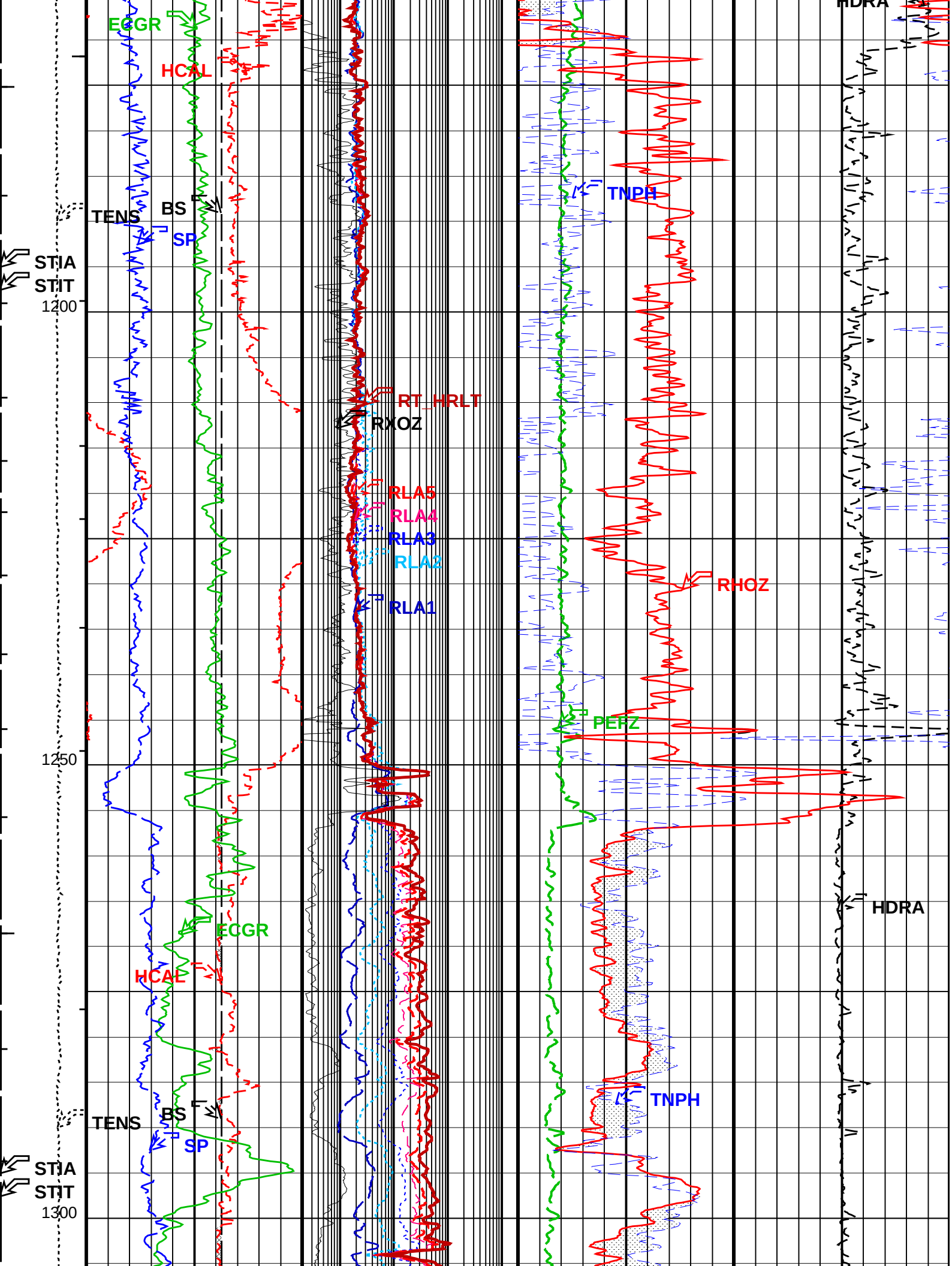
RXOZ
RLA5
RLA4
RLA3
RLA2
RHOZ
RLA1
PEFZ
1150


ECGR
HCAL
TENS
BS
SP
STIA
STIT
1200
RT_HRLT
RXOZ
RLA5
RLA4
RLA3
RLA2
RLA1
TNPH
RHOZ
PEFZ
HDRA
1250
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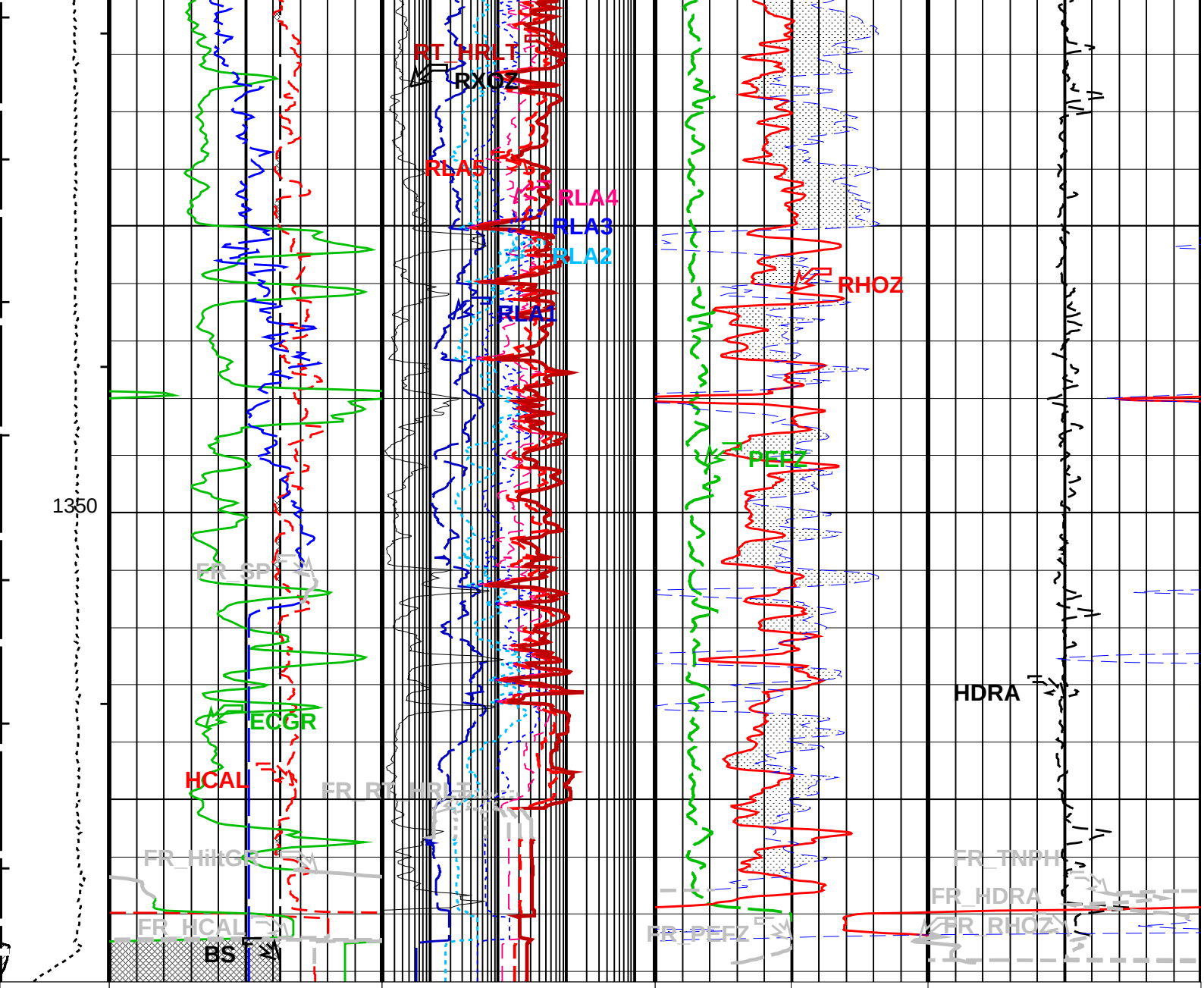
HCAL
TENS
BS
SP
STIA
STIT
1300
TNPH
HDRA



Tension (TENS) (LBF) 0 5000	Bit Size (BS) 6 (IN) 16	HRLT Resistivity 1 (RLA1) 0.2 (OHMM) 2000	Std. Res. Formation Pe (PEFZ) 0 (---- 10	Density Correction (HDRA) −0.25 (G/C3) 0.25
Stuck Stretch (STIT) 0 (M) 20	HILT Caliper (HCAL) 6 (IN) 16	HRLT Resistivity 2 (RLA2) 0.2 (OHMM) 2000	Std. Res. Formation Density (RHOZ) 1.95 (G/C3) 2.95	
Cable Drag From D4T to STIT	Gamma Ray (ECGR) 0 (GAPI) 200	HRLT Resistivity 3 (RLA3) 0.2 (OHMM) 2000	Env.Corr.Thermal Neutron Porosity (TNPH) 0.45 (V/V) −0.15	
Tool/Tot. Drag From D4T to STIA	SP (SP) −80 (MV) 20	HRLT Resistivity 4 (RLA4) 0.2 (OHMM) 2000	Sand From RHOZ to TNPH	
Stuck Tool Indicator, Adjusted (STIA) 0 (M) 20	Area From HCAL to BS	HRLT Resistivity 5 (RLA5) 0.2 (OHMM) 2000		
		Std. Res. Invaded Zone		

Resistivity (RXOZ)		
0.2	(OHMM)	2000

HRLT True Resistivity (RT_HRLT)		
0.2	(OHMM)	2000

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 1 M3
- Integrated Hole Volume Major Pip Every 10 M3
- Integrated Cement Volume Minor Pip Every 1 M3
- Integrated Cement Volume Major Pip Every 10 M3
- Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	HILTB−FTB: High resolution Integrated Logging Tool−DTS		
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	59	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	−50000	PPM
FSCO	Formation Salinity Correction Option	YES	
GCLF	Germany Coal−like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.71	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e−005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e−005	OHMS
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	StdRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	YES	
	HRLT−B: High Resolution Laterolog Array − E		
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	59	DEGC
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE	

CALTEMP	HRLTB Calibration Temperature	63.426	DEGC
FREQ0	HRLT Frequency Index for Mode 0	32	
FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPMOD0	HRLT Mode 0 Loop Mode	OFF	
LOOPMOD1	HRLT Mode 1 Loop Mode	OFF	
LOOPMOD2	HRLT Mode 2 Loop Mode	OFF	
LOOPMOD3	HRLT Mode 3 Loop Mode	OFF	
LOOPMOD4	HRLT Mode 4 Loop Mode	OFF	
LOOPMOD5	HRLT Mode 5 Loop Mode	OFF	
LOOPMOD6	HRLT Mode 6 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro−Resistivity Selection	NO_EXTERNAL_RXO	
PROCMSO	Mechanical Standoff Fin Size	2.5	IN
PROCRM	Processing Mud Resistivity Select	HRLT_Compute	
PROCSPO	Sonde Position	Eccentered	
SHT	Surface Hole Temperature	20	DEGC
PPC1−B: Powered Positioning Deveice/Caliper 1			
	PPC1 Caliper Type	CAL_STD	
CLBD_PPC	PPC Calibration data selection	ROM	
PWEL_PPC	PPC Primary Tool for WellCAD	NONE	
SWEL_PPC	PPC Secondary Tool for WellCAD (45 Degrees Rotation PPC Tool)	NONE	
WRDR_PPC	PPC Rotation Direction for Secondary Tool	NONE	
MAXS−B: Multimode Array Sonic Xmitter Sonde			
FIRING_TABLE	MAST Firing Table	** V **	
TX_AMP	Transmitter Amplitude Factor	** V **	
U_CE_CBLG7	CBL Gate Width 7 for Cement Evaluation	80	US
U_CE_CBLG8	CBL Gate Width 8 for Cement Evaluation	80	US
U_CE_NMSG7	Near Minimum Sliding Gate 7 for Cement Evaluation	220	US
U_CE_NMSG8	Near Minimum Sliding Gate 8 for Cement Evaluation	220	US
U_CE_SGDT7	Sliding Gate Delta−T 7 for Cement Evaluation	57	US/F
U_CE_SGDT8	Sliding Gate Delta−T 8 for Cement Evaluation	57	US/F
MAPC−B: Multimode Array Sonic Power Cartridge			
AZIM_SELECT	Azimuth Selection	P1AZ	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	59	DEGC
BS	Bit Size	12.250	IN
CDTS	C−Delta−T Shale	100	US/F
CE_DCBLSEL	DCBL Selection for Cement Evaluation	3_5FT	
CE_VDLGRA	VDL Manual Gain Rate Array for Cement Evaluation	** V **	
CE_VDLSEL	VDL Selection for Cement Evaluation	MU_5FT	
CE_VDL_MODE	DCBL/VDL Mode for Cement Evaluation	STANDARD	
CE_VFILSWA	VDL Filter Switch Array for Cement Evaluation	** V **	
CRVIN_MF	Alteration Detection Input Number for Monopole Far	DISALLOW	
CRVIN_ML	Alteration Detection Input Number for Monopole Lower	DISALLOW	
CRVIN_MU	Alteration Detection Input Number for Monopole Upper	DISALLOW	
DCRMVL	DC Offset Removal Option	DC_MULTIPLE	
DLHS	Hole Diameter Source for SOBS Channel	AUTO	
DTCO_SELECT	Delta−T Compressional Selection for DSTC	MF	
DTF	Delta−T Fluid	204.5	US/F
DTM	Delta−T Matrix	56	US/F
DTSH_SELECT	Delta−T Shear Selection for DSTC	XD	
DWF7_SPEC	Channel/Station/Azimuth for VDL (DWF7) of Measurement 7	WFA7/9/1	
DWF8_SPEC	Channel/Station/Azimuth for VDL (DWF8) of Measurement 8	WFA8/5/1	
FIRING_TABLE	MAST Firing Table	** V **	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
IMG_DTCO_SEL_MAST	Imaging Input DT Compressional Selection	CONSTANT_DTCO	
IMG_EST_DTCO_MAST	Imaging Estimated DT Compressional	120	US/F
IMG_RBS	Imaging Relative Bearing Selection	RB1	
ISSBAR	Barite Mud Switch	BARITE	
ITTS	Integrated Transit Time Source	DTCO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NRSA	Number of Receivers in Sub−Array	** V **	
RBC	Relative Bearing Correction Allow/Disallow	DISALLOW	
ROTIN_XD	Alford Rotation X Dipole Measurement Number	DISALLOW	
ROTIN_YD	Alford Rotation Y Dipole Measurement Number	DISALLOW	
ROTWINDOW_CTRL	Alford Rotation Window Control	ON	
ROT_AI	Dipole Waveform Rotation Averaging Depth Interval	0	M

ROT_FIL_LENG	Alford Rotation Filter Length	0	
ROT_TWD	Alford Rotation Window Time Width	0	US
ROT_TWO	Alford Rotation Window Time Offset	0	US
ROT_XFH	Alford Rotation Filter High Cutoff	0	HZ
ROT_XFL	Alford Rotation Filter Low Cutoff	0	HZ
SHT	Surface Hole Temperature	20	DEGC
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DTCO	
STCAL	STC Algorithm	** V **	
STCSEL1	Station Selection for STC for Measurement 1	** V **	
STCSEL2	Station Selection for STC for Measurement 2	** V **	
STCSEL3	Station Selection for STC for Measurement 3	** V **	
STCSEL4	Station Selection for STC for Measurement 4	** V **	
STCSEL5	Station Selection for STC for Measurement 5	** V **	
STCSEL6	Station Selection for STC for Measurement 6	** V **	
STCSEL_FAST	Station Selection for STC for DT_FAST	** V **	
STCSEL_SLOW	Station Selection for STC for DT_SLOW	** V **	
TRMIN	Alteration Detection Minimum Transmitter Receiver Spacing for Processing	3.0	FT
TX_AMP	Transmitter Amplitude Factor	** V **	
U_CE_CBLG7	CBL Gate Width 7 for Cement Evaluation	80	US
U_CE_CBLG8	CBL Gate Width 8 for Cement Evaluation	80	US
U_CE_NMSG7	Near Minimum Sliding Gate 7 for Cement Evaluation	220	US
U_CE_NMSG8	Near Minimum Sliding Gate 8 for Cement Evaluation	220	US
U_CE_SGDT7	Sliding Gate Delta−T 7 for Cement Evaluation	57	US/F
U_CE_SGDT8	Sliding Gate Delta−T 8 for Cement Evaluation	57	US/F
U_SLL1_MAST	MAST DSTC Slowness Lower Limit 1	40	US/F
U_SLL2_MAST	MAST DSTC Slowness Lower Limit 2	40	US/F
U_SLL3_MAST	MAST DSTC Slowness Lower Limit 3	40	US/F
U_SLL4_MAST	MAST DSTC Slowness Lower Limit 4	0	US/F
U_SLL5_MAST	MAST DSTC Slowness Lower Limit 5	112	US/F
U_SLL6_MAST	MAST DSTC Slowness Lower Limit 6	112	US/F
U_SLL_FAST_MAST	MAST DSTC Slowness Lower Limit Fast	0	US/F
U_SLL_SLOW_MAST	MAST DSTC Slowness Lower Limit Slow	0	US/F
U_SUL1_MAST	MAST DSTC Slowness Upper Limit 1	240	US/F
U_SUL2_MAST	MAST DSTC Slowness Upper Limit 2	240	US/F
U_SUL3_MAST	MAST DSTC Slowness Upper Limit 3	240	US/F
U_SUL4_MAST	MAST DSTC Slowness Upper Limit 4	0	US/F
U_SUL5_MAST	MAST DSTC Slowness Upper Limit 5	772	US/F
U_SUL6_MAST	MAST DSTC Slowness Upper Limit 6	772	US/F
U_SUL_FAST_MAST	MAST DSTC Slowness Upper Limit Fast	0	US/F
U_SUL_SLOW_MAST	MAST DSTC Slowness Upper Limit Slow	0	US/F
EDTC−B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	59	DEGC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
FSCO	Formation Salinity Correction Option	YES	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	YES	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Eccentered	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	59	DEGC
FCD	Future Casing (Outer) Diameter	9.625	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBEP	Trigger for MAXIS First Reading Label	TDI	

LBPR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth − Driller	2313.00	M
TDL	Total Depth − Logger	1388.00	M
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	MeasuredDepth	
BSAL	Borehole Salinity	80850.00	PPM
CSIZ	Current Casing Size	13.375	IN
CWEI	Casing Weight	67.90	LB/F
DFD	Drilling Fluid Density	1.15	G/C3
DO	Depth Offset for Playback	0.0	M
FLEV	Fluid Level	0.00	M
MST	Mud Sample Temperature	20.20	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.0710	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	2313	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: APACHE_D500 **Vertical Scale: 1:500** **Graphics File Created: 12−Mar−2008 01:47**

OP System Version: 15C0−309

MCM

HILTB−FTB	SRPC−3546−Q1_2008_OP15_b	HRLT−B	SRPC−3546−Q1_2008_OP15_b
PPC1−B	SRPC−3546−Q1_2008_OP15_b	MAXS−B	SKK−3442−MAST_b
MAPC−B	SKK−3442−MAST_b	EDTC−B	SKK−3493−EDTCB_b
BSP	SRPC−3546−Q1_2008_OP15_b		

Input DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_038PUP	FN:51	PRODUCER	12−Mar−2008 01:24	1391.0 M	840.5 M

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_HRLA_035PUP	FN:36	PRODUCER	12−Mar−2008 01:47
CUSTOMER	TLD_MCFL_CNL_HRLA_035PUC	FN:37	CUSTOMER	12−Mar−2008 01:47

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Stab Measurement Summary							
Before: 26−Feb−2008 11:17							
BS Window Ratio	0.7624	N/A	0.7602	N/A	N/A	N/A	
BS Window Sum	10750	N/A	10980	N/A	N/A	N/A	CPS
SS Window Ratio	0.4883	N/A	0.4862	N/A	N/A	N/A	
SS Window Sum	10370	N/A	10360	N/A	N/A	N/A	CPS
LS Window Ratio	0.2968	N/A	0.2999	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1179	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Photo−multiplier High Voltages Calibrations							
Before: 26−Feb−2008 11:17							
BS PM High Voltage (Command)	1227	N/A	1249	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1921	N/A	1901	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1407	N/A	1418	N/A	N/A	N/A	V
High resolution Integrated Logging Tool−DTS Wellsite Calibration − Crystal Quality Resolutions Calibration							
Before: 26−Feb−2008 11:17							
BS Crystal Resolution	0.875	N/A	0.867	N/A	N/A	N/A	%

BS Crystal Resolution	9.875	N/A	9.867	N/A	N/A	N/A	%
SS Crystal Resolution	10.56	N/A	10.33	N/A	N/A	N/A	%
LS Crystal Resolution	9.503	N/A	9.278	N/A	N/A	N/A	%

High resolution Integrated Logging Tool−DTS Wellsite Calibration − MCFL Calibration
Before: 26−Feb−2008 13:17

Raw B0 Resistivity	3875	N/A	3878	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3831	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3834	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool−DTS Wellsite Calibration − HILT Caliper Calibration
Before: 26−Feb−2008 11:25

HILT Caliper Zero Measurement	8.000	N/A	8.163	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.39	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Detector Calibration
Before: 29−Feb−2008 20:22

Gamma Ray Background	30.00	N/A	9.320	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	184.0	N/A	184.0	N/A	N/A	16.73	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Zero Measurement
Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15

CNTC Background	29.71	29.71	28.10	N/A	N/A	4.457	CPS
CFTC Background	33.75	33.75	30.26	N/A	N/A	5.063	CPS

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Ratio Measurement
Master: 20−Feb−2008 19:21

Thermal Near Corr. (Tank)	5800	5605	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2340	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.395	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool−DTS Wellsite Calibration − Accelerometer Calibration
Before: Calibration not done

Z−Axis Acceleration	9.810	N/A	9.810	N/A	N/A	N/A	M/S2

High resolution Integrated Logging Tool−DTS Master Calibration − Inversion results
Master: 20−Feb−2008 21:02

Rho Aluminum	2.596	2.602	−−	−−	−−	−−	G/C3
Rho Magnesium	1.686	1.685	−−	−−	−−	−−	G/C3
Pe Aluminum	2.570	2.571	−−	−−	−−	−−	
Pe Magnesium	2.650	2.634	−−	−−	−−	−−	

High resolution Integrated Logging Tool−DTS Master Calibration − Deviation Summary
Master: 20−Feb−2008 21:02

BS Average Deviation	0	0.5701	−−	−−	−−	−−	%
BS Max Deviation	0	1.350	−−	−−	−−	−−	%
SS Average Deviation	0	0.3068	−−	−−	−−	−−	%
SS Max Deviation	0	0.7734	−−	−−	−−	−−	%
LS Average Deviation	0	0.6760	−−	−−	−−	−−	%
LS Max Deviation	0	1.772	−−	−−	−−	−−	%

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M01
Before: 29−Feb−2008 19:20

HRLT M0−M1 Voltage Plus − 0	0	N/A	−318.2	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 1	0	N/A	−355.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 2	0	N/A	−358.0	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 3	0	N/A	−342.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 4	0	N/A	−325.3	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 5	0	N/A	−329.9	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 6	0	N/A	315.1	N/A	N/A	9.681	UV
HRLT M0−M1 Voltage Plus − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M12
Before: 29−Feb−2008 19:20

HRLT M1−M2 Voltage Plus − 0	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 1	0	N/A	1957	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 2	0	N/A	1963	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 3	0	N/A	1876	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 4	0	N/A	1783	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 5	0	N/A	1810	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 6	0	N/A	−1741	N/A	N/A	53.42	UV
HRLT M1−M2 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT M23
Before: 29−Feb−2008 19:20

HRLT M2−M3 Voltage Plus − 0	0	N/A	1736	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 1	0	N/A	1947	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 2	0	N/A	1956	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 3	0	N/A	1875	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 4	0	N/A	1778	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 5	0	N/A	1806	N/A	N/A	53.42	UV

HRLT M2−M3 Voltage Plus − 6	0	N/A	−1721	N/A	N/A	53.42	UV
HRLT M2−M3 Voltage Plus − 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V34
Before: 29−Feb−2008 19:20

HRLT A3−A4 Voltage Plus − 0	0	N/A	68550	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 1	0	N/A	77150	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 2	0	N/A	77730	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 3	0	N/A	74680	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 4	0	N/A	70640	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 5	0	N/A	71700	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 6	0	N/A	−67220	N/A	N/A	2100	UV
HRLT A3−A4 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V45
Before: 29−Feb−2008 19:20

HRLT A4−A5 Voltage Plus − 0	0	N/A	68390	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 1	0	N/A	77030	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 2	0	N/A	77590	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 3	0	N/A	74510	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 4	0	N/A	70470	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 5	0	N/A	71520	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 6	0	N/A	−67110	N/A	N/A	2100	UV
HRLT A4−A5 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT V56
Before: 29−Feb−2008 19:20

HRLT A5−A6 Voltage Plus − 0	0	N/A	68510	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 1	0	N/A	77320	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 2	0	N/A	77840	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 3	0	N/A	74720	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 4	0	N/A	70600	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 5	0	N/A	71640	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 6	0	N/A	−67390	N/A	N/A	2100	UV
HRLT A5−A6 Voltage Plus − 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VTP
Before: 29−Feb−2008 19:20

HRLT Torpedo−M0 Voltage − 0	0	N/A	−68130	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 1	0	N/A	−77110	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 2	0	N/A	−77730	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 3	0	N/A	−74700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 4	0	N/A	−70660	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 5	0	N/A	−71700	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 6	0	N/A	67120	N/A	N/A	2100	UV
HRLT Torpedo−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT VBD
Before: 29−Feb−2008 19:20

HRLT Bridle#9−M0 Voltage − 0	0	N/A	−68070	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 1	0	N/A	−76870	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 2	0	N/A	−77500	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 3	0	N/A	−74520	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 4	0	N/A	−70540	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 5	0	N/A	−71630	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 6	0	N/A	66910	N/A	N/A	2100	UV
HRLT Bridle#9−M0 Voltage − 7	0	N/A	−70000	N/A	N/A	2100	UV

High Resolution Laterolog Array − B Wellsite Calibration − HRLT ISO
Before: 29−Feb−2008 19:20

HRLT Source Current Plus − 0	0	N/A	283.9	N/A	N/A	8.520	UA
HRLT Source Current Plus − 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus − 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array − B Wellsite Calibration − HRLT MV
Before: 29−Feb−2008 19:20

HRLT Vertical Voltage Pl − 0	0	N/A	−320.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 1	0	N/A	−351.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 2	0	N/A	−351.9	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 3	0	N/A	−334.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 4	0	N/A	−314.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 5	0	N/A	−334.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 6	0	N/A	324.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage Pl − 7	0	N/A	−322.7	N/A	N/A	9.681	UV

Powered Positioning Deveice/Caliper 1 Wellsite Calibration − PPC1 Caliper Calibration
Before: Calibration out of date − 19−Jun−2007 15:20

Before: Calibration out of date 19−Jun−2007 15:30							
PPC1 Radius 1 Raw Small Radius	3.500	N/A	3.996	N/A	N/A	0.5000	IN
PPC1 Radius 1 Raw Large Radius	8.000	N/A	8.071	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Small Radius	3.500	N/A	3.288	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Large Radius	8.000	N/A	7.596	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Small Radius	3.500	N/A	3.747	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Large Radius	8.000	N/A	8.101	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Small Radius	3.500	N/A	3.359	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Large Radius	8.000	N/A	7.738	N/A	N/A	0.5000	IN
Enhanced DTS Cartridge Wellsite Calibration − EDTC Accelerometer Calibration							
Before: Calibration not done							
EDTC Z−Axis Acceleration	9.810	N/A	9.807	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration − Detector Calibration							
Before: 29−Feb−2008 19:22							
Gamma Ray (Jig − Bkg)	166.4	N/A	166.4	N/A	N/A	15.12	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

The GLS−VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT−B Water Temperature 20.0 DEGC.
Thermal Housing Size 3.376 IN.
NSR−F serial number 5224

High resolution Integrated Logging Tool−DTS / Equipment Identification

Primary Equipment:		
HILT high−Resolution Mechanical Sonde	HRMS − B	
HILT Rxo Gamma−ray Device	HRGD − B	
HILT Micro Cylindrically Focused Log Dev	MCFL −	
GR Logging Source	GLS − VJ	5334
HILT High Res. Control Cartridge	HRCC − B	
HILT Gamma−Ray Neutron Sonde−DTS	HGNS − B	
HGNS Gamma−Ray Device	HGR −	
HGNS Neutron Detector with Alpha Source	HCNT −	
Auxiliary Equipment:		
Neutron Calibration Tank	NCT − B	
Gamma Source Radioactive	GSR − U/Y	
HGNS Housing	HGNH −	

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value	Phase	LS Window Ratio			Value
Before				0.7602	Before				0.4862	Before				0.2999
	0.7243 (Minimum)	0.7624 (Nominal)	0.8005 (Maximum)			0.4639 (Minimum)	0.4883 (Nominal)	0.5127 (Maximum)			0.2820 (Minimum)	0.2968 (Nominal)	0.3117 (Maximum)	
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
Before				10980	Before				10360	Before				1179
	10210 (Minimum)	10750 (Nominal)	11290 (Maximum)			9854 (Minimum)	10370 (Nominal)	10890 (Maximum)			1102 (Minimum)	1160 (Nominal)	1218 (Maximum)	

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Photo−multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1249	Before				1901	Before				1418
	1127 (Minimum)	1227 (Nominal)	1327 (Maximum)			1821 (Minimum)	1921 (Nominal)	2021 (Maximum)			1307 (Minimum)	1407 (Nominal)	1507 (Maximum)	

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value	Phase	LS Crystal Resolution %			Value

Before		9.867	Before		10.33	Before		9.278
8.875 (Minimum)	9.875 (Nominal)	10.87 (Maximum)	9.556 (Minimum)	10.56 (Nominal)	11.56 (Maximum)	8.503 (Minimum)	9.503 (Nominal)	10.50 (Maximum)

Before: 26−Feb−2008 11:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

MCFL Calibration

Phase	Raw B0 Resistivity OHMM	Value	Phase	Raw B1 Resistivity OHMM	Value	Phase	Raw B2 Resistivity OHMM	Value
Before		3878	Before		3831	Before		3834
3565 (Minimum)	3875 (Nominal)	4185 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)

Before: 26−Feb−2008 13:17

High resolution Integrated Logging Tool−DTS Wellsite Calibration

HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN	Value	Phase	HILT Caliper Plus Measurement IN	Value
Before		8.163	Before		12.39
6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)	9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)

Before: 26−Feb−2008 11:25

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		9.320	Before		184.0	Before		165.0
0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	167.3 (Minimum)	184.0 (Nominal)	200.7 (Maximum)	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)

Before: 29−Feb−2008 20:22

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.71	Master		33.75
Before		28.10	Before		30.26
5.000 (Minimum)	29.71 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	33.75 (Nominal)	40.00 (Maximum)

Master: 20−Feb−2008 19:21 Before: 26−Feb−2008 11:15

High resolution Integrated Logging Tool−DTS Wellsite Calibration

Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5605	Master		2340	Master		2.395
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS
Wellsite Calibration

Accelerometer Calibration

Phase	Z−Axis Acceleration M/S2	Value
Before		9.810
9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)

Before: Calibration not done

High resolution Integrated Logging Tool−DTS Master Calibration

Inversion results

Phase	Rho Aluminum G/C3	Value	Phase	Rho Magnesium G/C3	Value
Master		2.602	Master		1.685
2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)	1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)
Phase	Pe Aluminum	Value	Phase	Pe Magnesium	Value
Master		2.571	Master		2.634
2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Deviation Summary

Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value
Master		0.5701	Master		0.3068	Master		0.6760
	−0.6000 (Minimum) 0 (Nominal) 0.6000 (Maximum)			−1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)			−1.500 (Minimum) 0 (Nominal) 1.500 (Maximum)	
Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value
Master		1.350	Master		0.7734	Master		1.772
	−1.600 (Minimum) 0 (Nominal) 1.600 (Maximum)			−2.500 (Minimum) 0 (Nominal) 2.500 (Maximum)			−3.500 (Minimum) 0 (Nominal) 3.500 (Maximum)	

Master: 20−Feb−2008 21:02

High resolution Integrated Logging Tool−DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.71	Master		33.75
	5.000 (Minimum) 29.71 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 33.75 (Nominal) 40.00 (Maximum)	

Master: 20−Feb−2008 19:21

High resolution Integrated Logging Tool−DTS Master Calibration

Tank Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5605	Master		2340	Master		2.395
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 20−Feb−2008 19:21

High Resolution Laterolog Array − B / Equipment Identification

Primary Equipment:	
HRLT Sonde	HRLS − B
Auxiliary Equipment:	
HRLT lower Housing	HRLH − B
HRLT Lower Cartridge	HRLC − B
HRLT upper Housing	HRUH − B
HRLT Upper Cartridge	HRUC − B

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M01

Idx	Phase	HRLT M0−M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−318.2	−322.7	−280.7	−379.7
1	Before		−355.9	−322.7	−280.7	−379.7
2	Before		−358.0	−322.7	−280.7	−379.7
3	Before		−342.3	−322.7	−280.7	−379.7
4	Before		−325.3	−322.7	−280.7	−379.7
5	Before		−329.9	−322.7	−280.7	−379.7
6	Before		315.1	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1−M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1749	1781	2095	1549
1	Before		1957	1781	2095	1549

2	Before		1963	1781	2095	1549
3	Before		1876	1781	2095	1549
4	Before		1783	1781	2095	1549
5	Before		1810	1781	2095	1549
6	Before		−1741	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2−M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1736	1781	2095	1549
1	Before		1947	1781	2095	1549
2	Before		1956	1781	2095	1549
3	Before		1875	1781	2095	1549
4	Before		1778	1781	2095	1549
5	Before		1806	1781	2095	1549
6	Before		−1721	−1781	−1549	−2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V34

Idx	Phase	HRLT A3−A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
1	Before		77150	70000	82360	60900
2	Before		77730	70000	82360	60900
3	Before		74680	70000	82360	60900
4	Before		70640	70000	82360	60900
5	Before		71700	70000	82360	60900
6	Before		−67220	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V45

Idx	Phase	HRLT A4−A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68390	70000	82360	60900
1	Before		77030	70000	82360	60900
2	Before		77590	70000	82360	60900
3	Before		74510	70000	82360	60900
4	Before		70470	70000	82360	60900
5	Before		71520	70000	82360	60900
6	Before		−67110	−70000	−60900	−82360
7	Before		70000	70000	82360	60900

		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT V56

Idx	Phase	HRLT A5−A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68510	70000	82360	60900
1	Before		77320	70000	82360	60900
2	Before		77840	70000	82360	60900
3	Before		74720	70000	82360	60900
4	Before		70600	70000	82360	60900
5	Before		71640	70000	82360	60900
6	Before		−67390	−70000	−60900	−82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68130	−70000	−60900	−82360
1	Before		−77110	−70000	−60900	−82360
2	Before		−77730	−70000	−60900	−82360
3	Before		−74700	−70000	−60900	−82360
4	Before		−70660	−70000	−60900	−82360
5	Before		−71700	−70000	−60900	−82360
6	Before		67120	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9−M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−68070	−70000	−60900	−82360
1	Before		−76870	−70000	−60900	−82360
2	Before		−77500	−70000	−60900	−82360
3	Before		−74520	−70000	−60900	−82360
4	Before		−70540	−70000	−60900	−82360
5	Before		−71630	−70000	−60900	−82360
6	Before		66910	70000	82360	60900
7	Before		−70000	−70000	−60900	−82360
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.9	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4

3	Before	281.1	281.1	330.7	244.4
4	Before	281.1	281.1	330.7	244.4
5	Before	281.1	281.1	330.7	244.4
6	Before	281.1	281.1	330.7	244.4
7	Before	281.1	281.1	330.7	244.4
	(Minimum)	(Nominal)	(Maximum)			

Before: 29−Feb−2008 19:20

High Resolution Laterolog Array − B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		−320.5	−322.7	−280.7	−379.7
1	Before		−351.4	−322.7	−280.7	−379.7
2	Before		−351.9	−322.7	−280.7	−379.7
3	Before		−334.5	−322.7	−280.7	−379.7
4	Before		−314.4	−322.7	−280.7	−379.7
5	Before		−334.3	−322.7	−280.7	−379.7
6	Before		324.3	322.7	379.7	280.7
7	Before		−322.7	−322.7	−280.7	−379.7
		(Minimum) (Nominal) (Maximum)				

Before: 29−Feb−2008 19:20

Powered Positioning Deveice/Caliper 1 / Equipment Identification

Primary Equipment:

PPC Powered Positioning Device/Caliper	PPC1 − B
PPC1 Caliper Standard	PPC_ −

Auxiliary Equipment:

Powered Positioning Deveice/Caliper 1 Wellsite Calibration

PPC1 Caliper Calibration

Phase	PPC1 Radius 1 Raw Small Radius IN	Value	Phase	PPC1 Radius 1 Raw Large Radius IN	Value
Before		3.996	Before		8.071
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 2 Raw Small Radius IN	Value	Phase	PPC1 Radius 2 Raw Large Radius IN	Value
Before		3.288	Before		7.596
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 3 Raw Small Radius IN	Value	Phase	PPC1 Radius 3 Raw Large Radius IN	Value
Before		3.747	Before		8.101
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Phase	PPC1 Radius 4 Raw Small Radius IN	Value	Phase	PPC1 Radius 4 Raw Large Radius IN	Value
Before		3.359	Before		7.738
	1.200 (Minimum) 3.500 (Nominal) 5.600 (Maximum)			6.100 (Minimum) 8.000 (Nominal) 9.700 (Maximum)	

Before: Calibration out of date 19−Jun−2007 15:30

Multimode Array Sonic Power Cartridge / Equipment Identification

Primary Equipment:

Multimode Array Sonic Minimum Service So	MAMS − BA	8201
Multimode Array Sonic Control Cartridge	MAPC − BA	8198

Auxiliary Equipment:

Electronics Cartridge Housing	ECH − SD	8198

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

EDTC Gamma Ray Detector	EDTG − A/B
Enhanced DTS Cartridge	EDTC − B

Auxiliary Equipment:

EDTC Housing	EDTH − B

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z−Axis Acceleration M/S2	Value
Before		9.807
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	

Before: Calibration not done

Enhanced DTS Cartridge Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		7.742	Before		166.4	Before		165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			151.2 (Minimum) 166.4 (Nominal) 181.5 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 29−Feb−2008 19:22

Company: **Apache Northwest Pty Ltd**

Schlumberger

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton**
Country: **Australia**

PEX−GR−HRLA−MSIP−S
Density−Neutron−GR−Resistivity−S
Scale 1:500

Wasabi -1

WASABI-1 SUITE-1 RUN-3, HLS RDT

PRESSURE POINT & SAMPLING PROGRAMME

3/04/2008

RT-AHD = 39.02

Pressure Point #	Actual Depth mMDRT	Actual Depth mTVDRT	Actual Depth mTVDAHD	Mobility md/cp	Time Pad Set	Initial Hydrostatic Pressure psia	Final Hydrostatic Pressure psia	Drawdown Volume cc	Initial Drawdown Pressure psia	Final Buildup Pressure psia	Buildup Time mins	Time Pad Retracted	Temp. deg C	Remarks
Suite 1 Run 3, Unable to RIH past 1500m due to poor hole conditions														
Wasabi-1														
Suite 1 Run 3														
04/03/08														
Correlated against Suite 1 - Run 2 Pex - Sonic. File #48 1500 - 1265m.														
1	**1268.5**	1268.3	1229.3	1353.1	10:32	2295.39	2295.56	20		1761.04	-	10:37	56.80	20 cc draw down - insant build up. File 50
2	**1274.5**	1274.2	1235.2	1274.8	10:44	2306.45	2306.40	20		1769.79	-	10:48	56.50	20 cc draw down - instant build up. File 51
3	**1278**	1277.7	1238.7	1161.7	10:53	2312.88	2312.83	20		1774.77		10:59	56.20	20 cc draw down - instant build up. File 52
4	**1288**	1287.6	1248.6	709.5	11:04	2330.42	2330.41			1788.56		11:09	56.30	20 cc draw down - instant build up. File 53
														Correlated against Suite 1 - Run 2 Pex - Sonic. File #54 1360m - 1315m.
5	**1328**	1327.2	1288.2	2060.3	11:24	2401.34	2401.43	40		1841.5		11:33	56.6	Partial lost seal - recycle DD (40cc) as did not draw below formation pressure. File #55
6	**1329**	1328.2	1289.2		11:40	2403.29	2403.34	20				11:44	56.7	20 cc draw down - No seal. File #56
6a	**1329.5**	1328.7	1289.7		11:52	2404.16	2404.11	20				11:58	56.7	20 cc draw down - No seal. File #57
6b	**1328.8**	1328.0	1289.0	1623.1	12:04	2402.88	2402.61	20		1842.49		12:07	56.6	20 cc draw down - Instant build up. File #58
Correlated against LWD final data. File #59														
7	**1440**	1437.0	1398.0	3032.0	12:28	2598.70	2598.64	20		1985.9		12:33	57.8	20 cc draw down - Instant build up. File #60

Pressure Point #	Actual Depth mMDRT	Actual Depth mTVDRT	Actual Depth mTVDAHD	Mobility md/cp	Time Pad Set	Initial Hydrostatic Pressure psia	Final Hydrostatic Pressure psia	Drawdown Volume cc	Initial Drawdown Pressure psia	Final Buildup Pressure psia	Buildup Time mins	Time Pad Retracted	Temp. deg C	Remarks
1	**1328**	1327.2	1288.2	11270.8	13:02	2401.80	2401.82			1841.42		14:30	56.4	2 attempts due to plugging
														file #59-67
					13:26		Commence pump out at 4 cc/sec, 1839.5psi - res 0.051 ohm							
					13:30		Increase to 6.6 cc/sec, 1839.5 psi flowing, res 0.087ohm							
					13:34		Increase to 9.4 cc/sec, pumped through 5.5Ltr							
					13:42		Incrcease to 16 cc/sec, 1841 psi, res 0.331ohm							
					13:51		10 litres pumped through, 20.5 cc/sec, res 0.4 ohm							
					14:01		Res increase to 023 cc/min, Res 0.51 ohm							
					14:20		Fill chamber 1, 2, 3 SN 3300, SN 3347 & SN 3351 @ 23 cc/sec, res 0.63 ohm							
					14:27		Chambers filled to 3800 psi over hydrostatic, 1841psi, 0.63 ohm.							
					14:30		Off point							
2	**1440.0**	1437.0	1398.0	3032.0	15:21	2599.63	2599.60			1986.24			59.6	First attempt - partial blockage of flowline - pick up
														Second attempt lost seal - pick up & move 0.1m
					15:24		Commence pump through, 4.5cc/sec, 1986 psi flowing pressure, res 0.087 ohr							file #70-72
					15:27		5cc/min, 1884psi and dropping. 0.07ohm. Flow line blocking.							
					15:35		Pressure fluctuating - sanding up. Pump at 6cc/sec							
					15:37		Lost / blocked flow line - abort sample. 3.4L pumped. 0.07ohm..							

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig:	West Triton
Field:	Apache/VIC/P−58/WASABI−1
Location:	Bass Strait
Well:	WASABI−1
Company:	Apache Northwest Pty Ltd

MDT−GR
Suite−1 Run−3
MDT Pretest

LOCATION

Bass Strait
Northing : 5,739,963.350 m
Easting : 522,993.588 m

Elev.: G.L. −27 m; D.F. 39 m

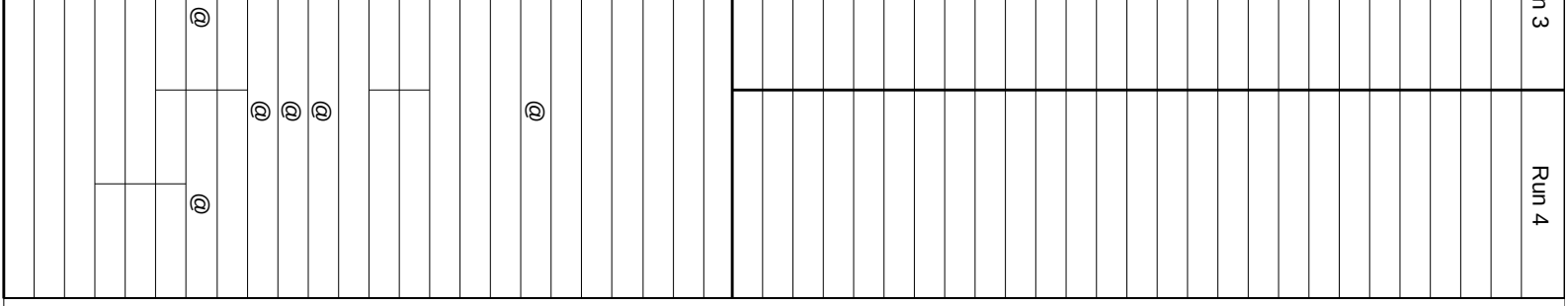
Permanent Datum:	AHD	Elev.:	0 m
Log Measured From:	Drill Floor (RT)	39.0 m	above Perm. Datum
Drilling Measured From:	Drill Floor (RT)		

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48 deg	147 15’ 49.147" E	38 29’ 18.157" S

Logging Date		4−Mar−2008				
Run Number		3				
Depth Driller		2313 m				
Schlumberger Depth		Not Tagged				
Bottom Log Interval		1440 m				
Top Log Interval		1268.5 m				
Casing Driller Size @ Depth		13.375 in @ 2313 m		@		
Casing Schlumberger		854 m				
Bit Size		12.250 in				
Type Fluid In Hole		KCl/Polymer				
MUD Density	Viscosity	1.21 g/cm3	50 s			
MUD Fluid Loss	PH	5 cm3	8.7			
MUD Source Of Sample		Flowline				
RM @ Measured Temperature		0.091 ohm.m @ 22 degC		@		
RMF @ Measured Temperature		0.079 ohm.m @ 22 degC		@		
RMC @ Measured Temperature		0.109 ohm.m @ 22 degC		@		
Source RMF	RMC	Press	Press			
RM @ MRT	RMF @ MRT	0.049 @ 59	0.043 @ 59	@	@	
Maximum Recorded Temperatures		59 degC	59			
Circulation Stopped	Time	3−Mar−2008	10:25			
Logger On Bottom	Time	4−Mar−2008	12:27			
Unit Number	Location	41	AUSL			
Recorded By		A. Dandi/M.Dawson/K. AlBarhi				
Witnessed By		H.Little / A.Cruickshank				

	Run 1	Run 2	Run

Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth		@		
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
MUD Density	Viscosity			
MUD Fluid Loss	PH			
MUD Source Of Sample				
RM @ Measured Temperature		@		
RMF @ Measured Temperature		@		
RMC @ Measured Temperature		@		
Source RMF	RMC			
RM @ MRT	RMF @ MRT	@	@	
Maximum Recorded Temperatures				
Circulation Stopped	Time			
Logger On Bottom	Time			
Unit Number	Location			
Recorded By				
Witnessed By				



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051	Conveyance Method:	Wireline
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Rig Type:	Offshore_Fixed
Wheel Correction 1:	−5	Calibration Offset:	−610.00		
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: VSI	OS1:
OS2: PEX−HRLA−MSIP−GR−S	OS2:
OS3: CST−GR	OS3:
OS4: VSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tool string run as per tool sketch.	
Log correlated to Schlumberger GeoVISION Resistivity Log dated 1−Mar−2008.	
Large Hole Kit and Large−Diameter probe used.	
9 pretest pressures attempted as per client request:	
− 7 Normal Tests.	
− 2 Lost Seals.	
Pressures attempted from Top to Bottom as per client request.	

Pressures attempted from Top to Bottom as per client request.

Quartz gauge corrections applied: QGCA (Both), QGFD (1 g/cc), QGDA (As per deviation survey).

Max. recorded temperature was 59 degC sourced from LEH−QT thermometers.

Tool got hold up @ 1500m MD, client decided to abort lower points and POOH.

Additional mud properties taken from Mud Report dated 2−Mar−2008:

Chlorides = 49,000 mg/L, Barite = 5.00 %.

KCL = 9 (% by Wt.)

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL08349210		SERVICE ORDER #:		
PROGRAM VERSION:	15C0−309		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

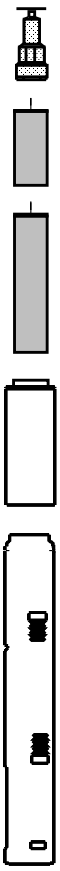
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

MRPP−AA
GSR−U/Y
WITM (CTS)−A

DOWNHOLE EQUIPMENT



LEH−QT 18.82
LEH−QT 2800

TCC−BF 17.93
ECH−KC 2653
TCC−BF 653

TelStatus ___ 16.58

SGT−L 17.01
SGH−K 403
SGC−SA 735
SGD−TAB 3465

Gamma Ray ___ 16.30

MRPC 15.34
MRPC−BB

PC ___ 13.39

MRMS_1 13.82
BOTT_6−AA 3358
BOTT_5−AA 3354
BOTT_4−AA 3353
BOTT_3−AA 3351
BOTT_2−AA 3347
BOTT_1−AA 3300
MRMS_1−CA 324

MS1 ___ 9.37

LFA 9.80
MRFA−EA 8011

FA−BA ___ 7.82

MRPO_UD 8.25
MRPOUD−DU−AA

MRPOUD−CA 494

POUD ___ 4.58

MRHY_1 5.01
MRHY_1−AB 112

HY1 ___ 2.01

MRPS_1 2.44
MRPS_1−DBZ 171

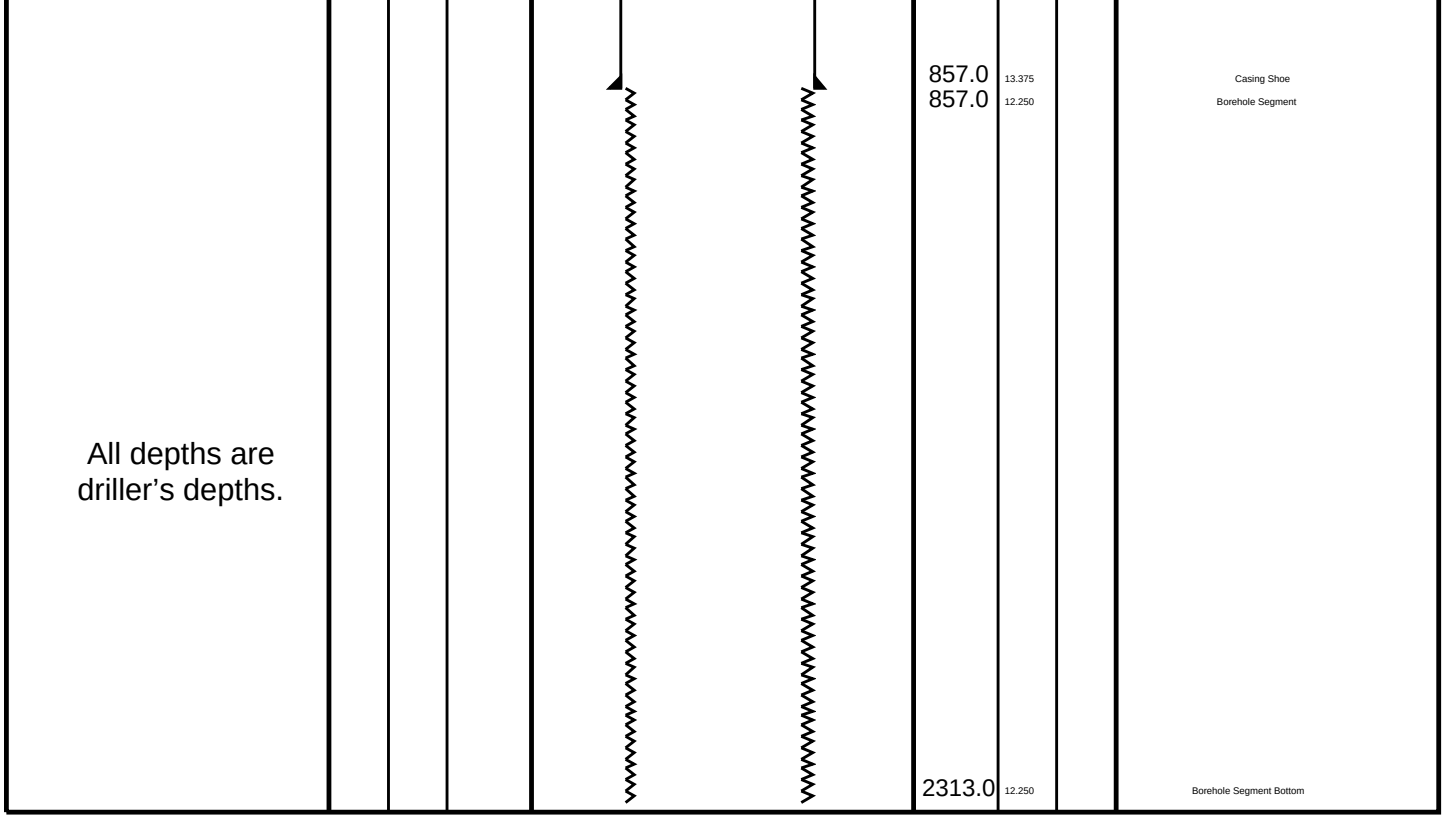
DF
PS1−CQG−G HV
PS1−RES
Tension PS1 ___ TOOL ZERO

TOOL BOTTOM

MAXIMUM STRING DIAMETER 4.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd
Drawing Date: 7−Mar−2008
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
Rig Name: West Triton
State: Victoria
Reference Datum: AHD
Country: Australia
Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe



Schlumberger

General Pretest Summary

MAXIS Field Log

Client: Apache Northwest Pty Ltd
Field: Apache/VIC/P−58/WASABI−1
Well: WASABI−1
Run date: 4−Mar−2008

Tool: MRPS_1−
Probe Type: Large Diameter Probe
Gauge: BQP1
Gauge Resolution: 0.010 psi

Test	File	Depth M	TVD M	Drawdown Mobility MD/CP	Mud Pressure Before PSIA	Mud Pressure After PSIA	Last read build−up Pres PSIA	Formation Pressure PSIA	Test Type
4	50	1268.46	1268.29	1353.13	2293.87	2294.03	1759.52	1759.52	Volumetric Limited draw−down
6	51	1274.54	1274.33	1274.84	2304.93	2304.87	1768.27	1768.27	Volumetric Limited draw−down
8	52	1278.05	1277.81	1161.72	2311.36	2311.30	1773.24	1773.24	Volumetric Limited draw−down
10	53	1287.97	1287.66	709.47	2328.90	2328.90	1787.04	1787.04	Volumetric Limited draw−down
14	55	1327.99	1327.30	2060.26	2399.83	2399.91	1839.98	1839.98	Volumetric Limited draw−down
16	56	1328.95	1328.24		2401.77	2401.77			Lost Seal

16	56	1328.95	1328.24		2401.77	2401.77			Lost Seal
18	57	1329.48	1328.77		2402.65	2402.59			Lost Seal
20	58	1328.76	1328.06	1623.11	2401.37	2401.09	1840.97	1840.97	Volumetric Limited draw-down
22	60	1439.99	1437.03	3032.33	2597.25	2597.20	1984.45	1984.45	Volumetric Limited draw-down

Schlumberger

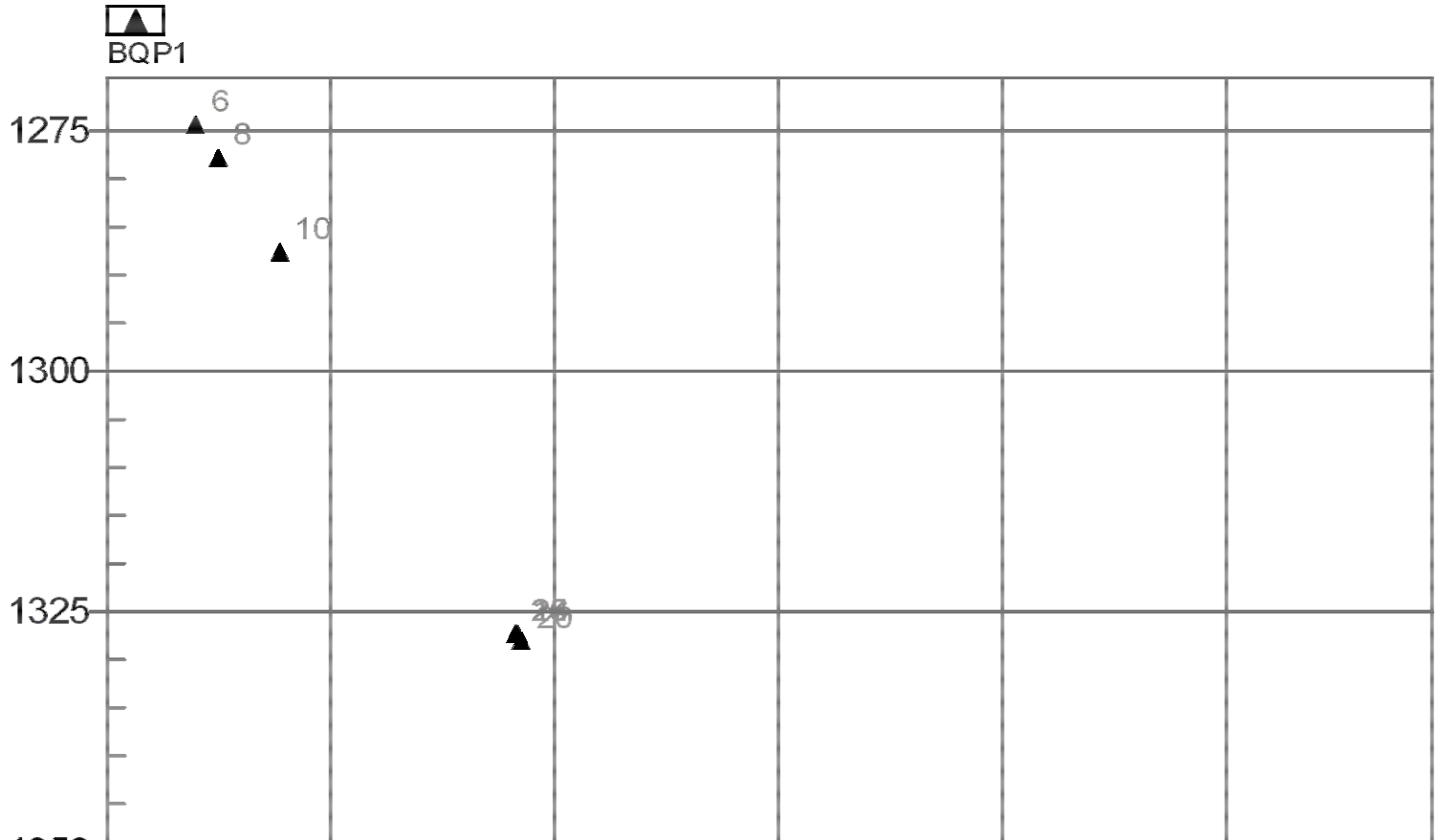
Formation Pressure

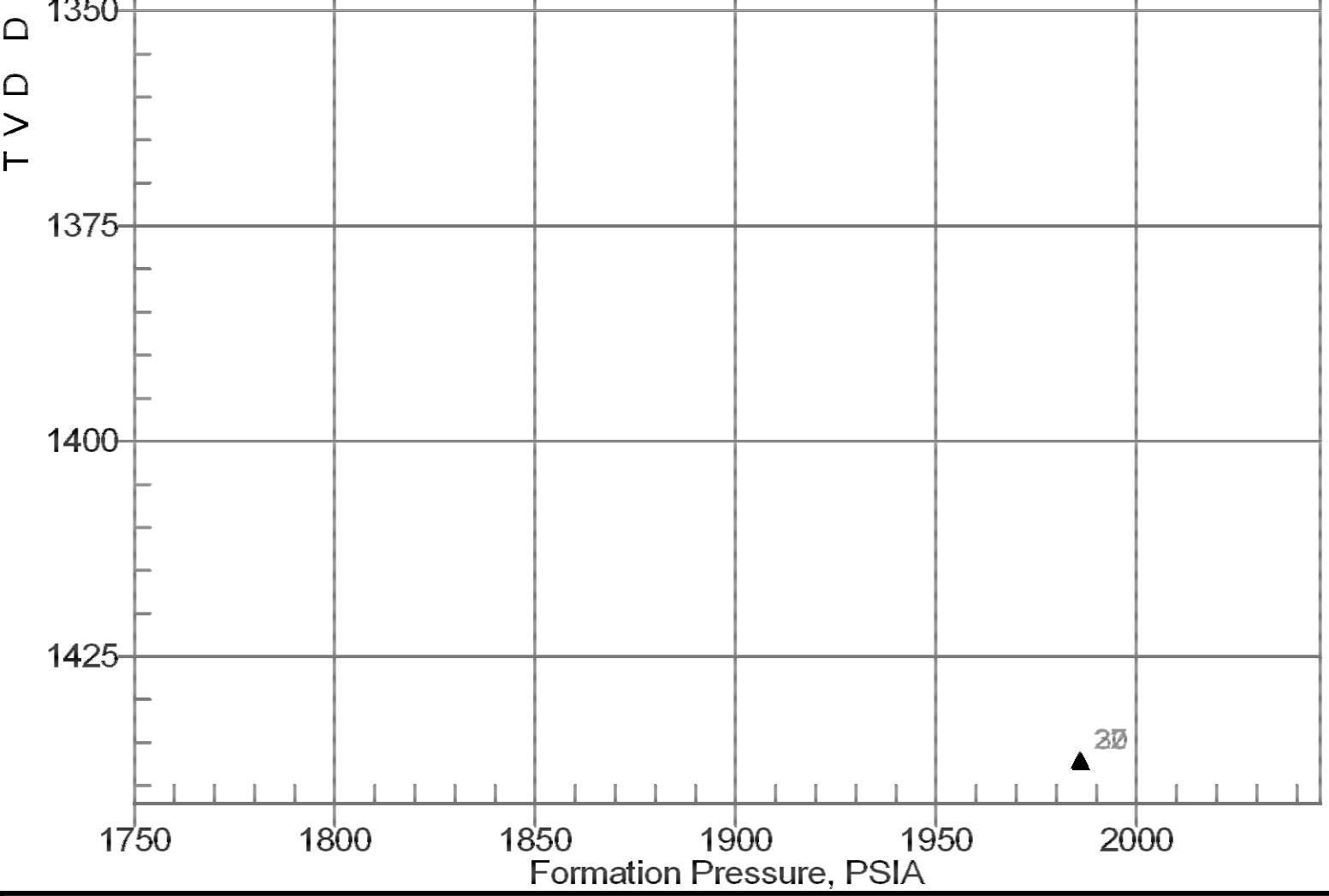
MAXIS Field Log

Depth vs. Formation Pressure

4-Mar-2008

Apache Northwest Pty Ltd
Apache/VIC/P-58/WASABI-1
WASABI-1





Schlumberger

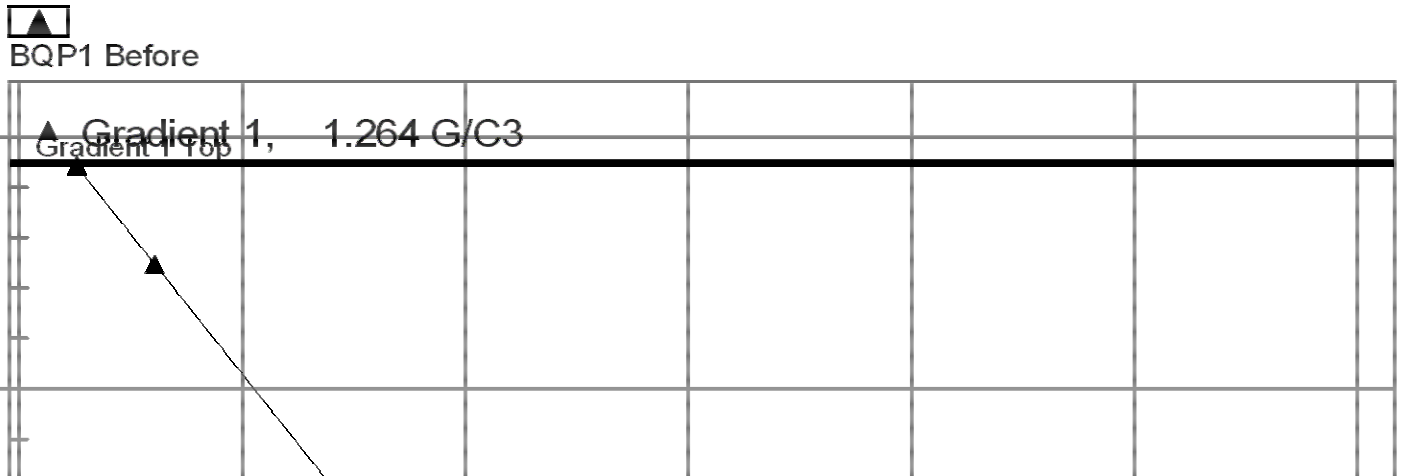
Mud Pressure

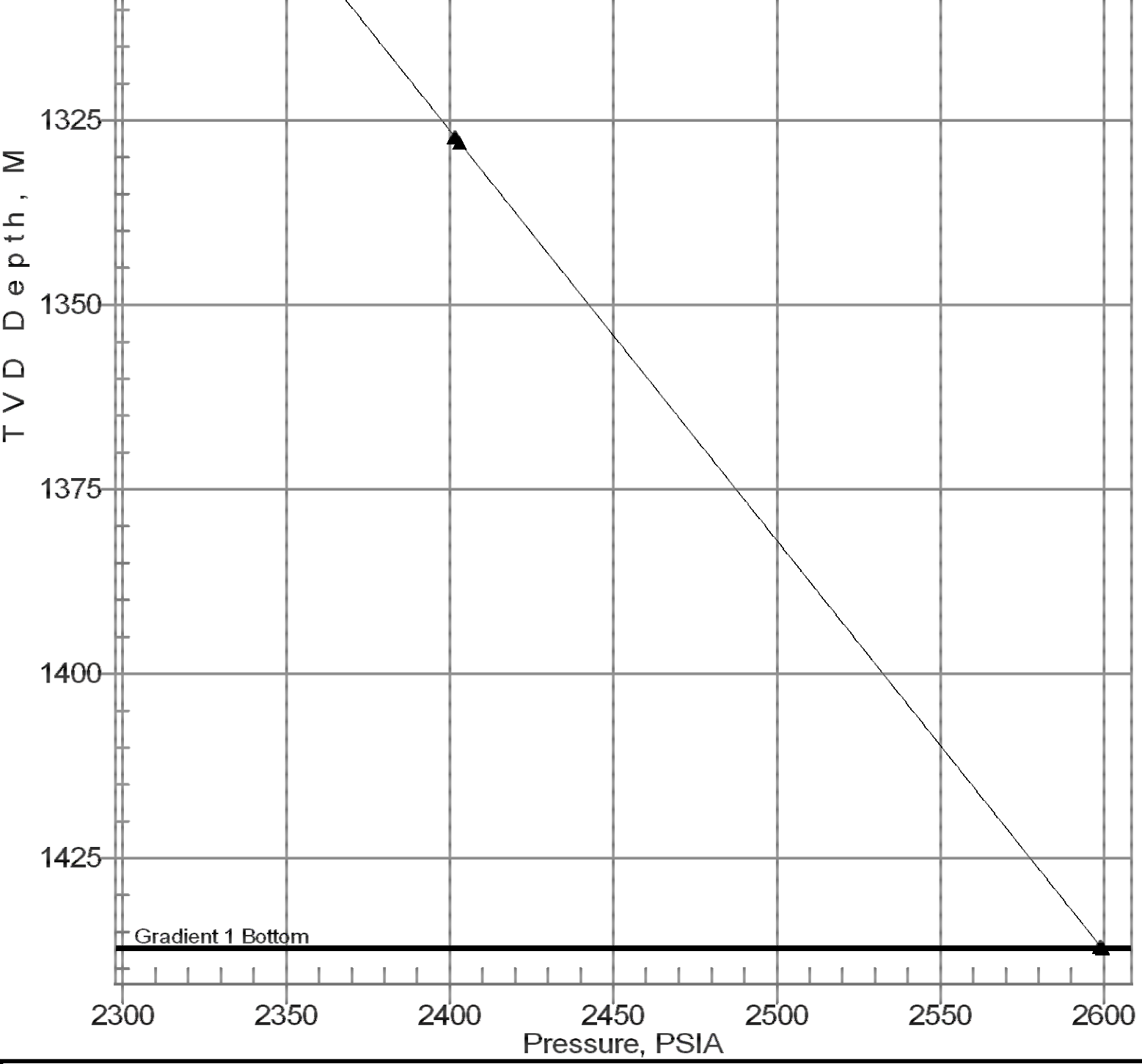
MAXIS Field Log

Depth vs. Mud Pressure

4-Mar-2008

Apache Northwest Pty Ltd
Apache/VIC/P-58/WASABI-1
WASABI-1





Schlumberger

Formation Mobility

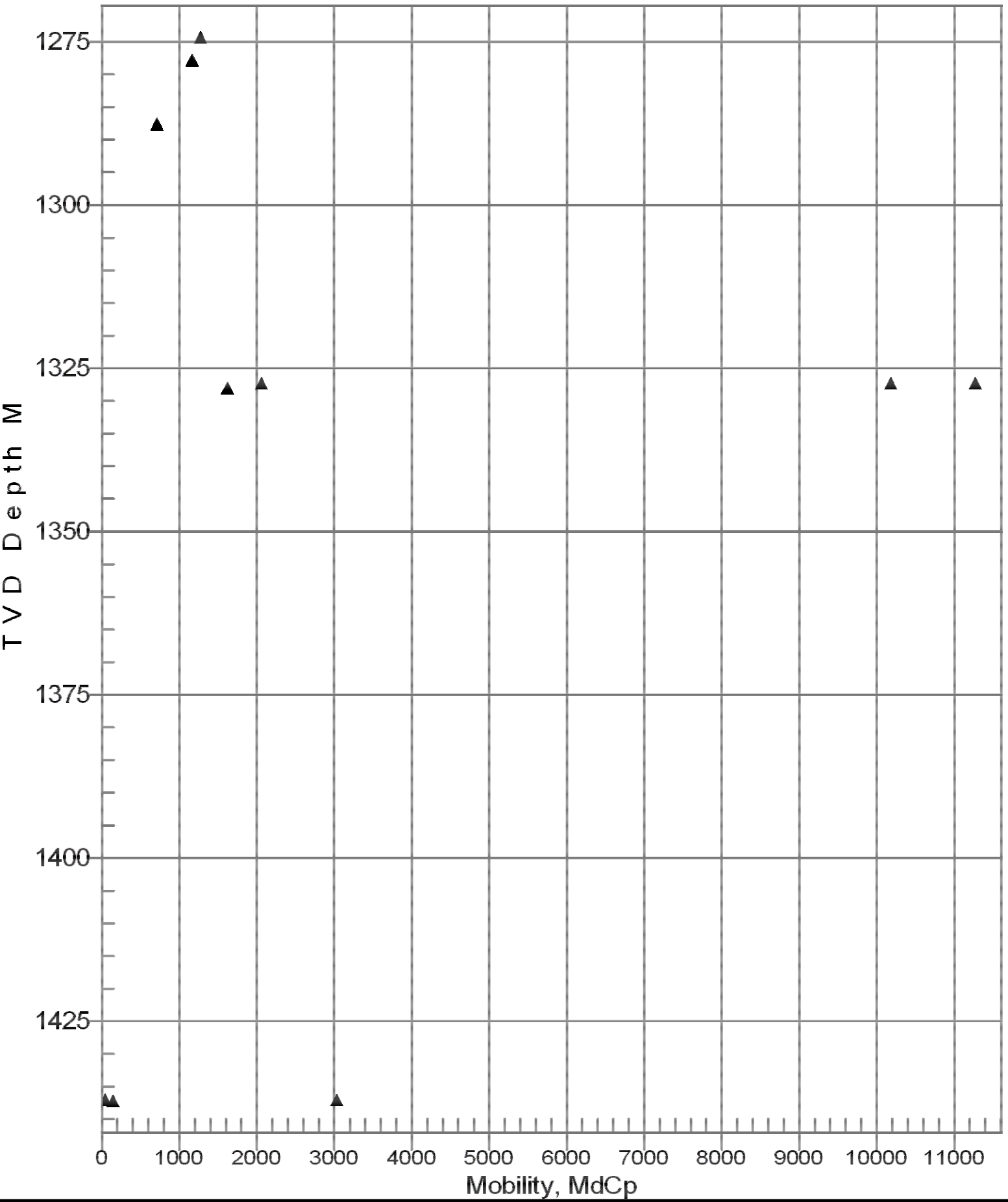
MAXIS Field Log

Depth vs. Mobility

4-Mar-2008

Apache Northwest Pty Ltd
Apache/VIC/P-58/WASABI-1
WASABI-1

BQP1



Schlumberger

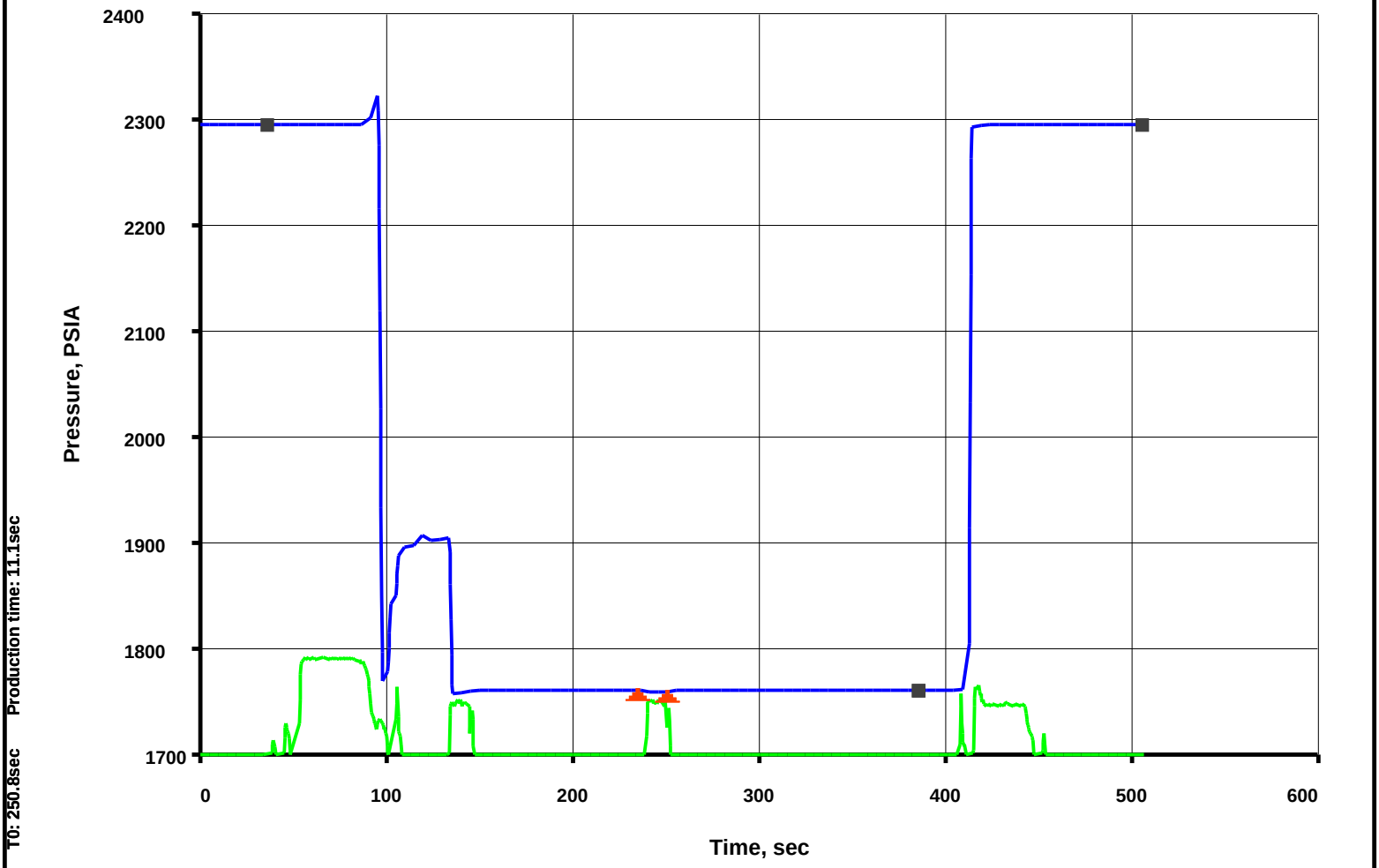
Pretest @ 1268.5m

File 50
4−Mar−2008

Depth, M: 1268.46
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2295.39
Mud Pressure after test, PSIA:	2295.56
Last build−up pressure, PSIA:	1761.04
Draw−down mobility, md/cp:	1353.1



Pretest Volume: 9.8 cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_050LTP	FN:75	PRODUCER	04−Mar−2008 10:30	1268.5 M	1.3 M

Output DLIS Files

DEFAULT	MDT_OFA_073PTP	FN:121	PRODUCER	04−Mar−2008 16:06	1268.5 M	1.3 M
RTB	MDT_OFA_073PTP	FN:122	PRODUCER	04−Mar−2008 16:06	1268.5 M	1.3 M

Elapsed Time (s)	Event Summary
411.0	Retract Single Probe Module (MRPS) 1
234.9	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
129.0	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
49.2	Probe Set @ 1268.5 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1) (----
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

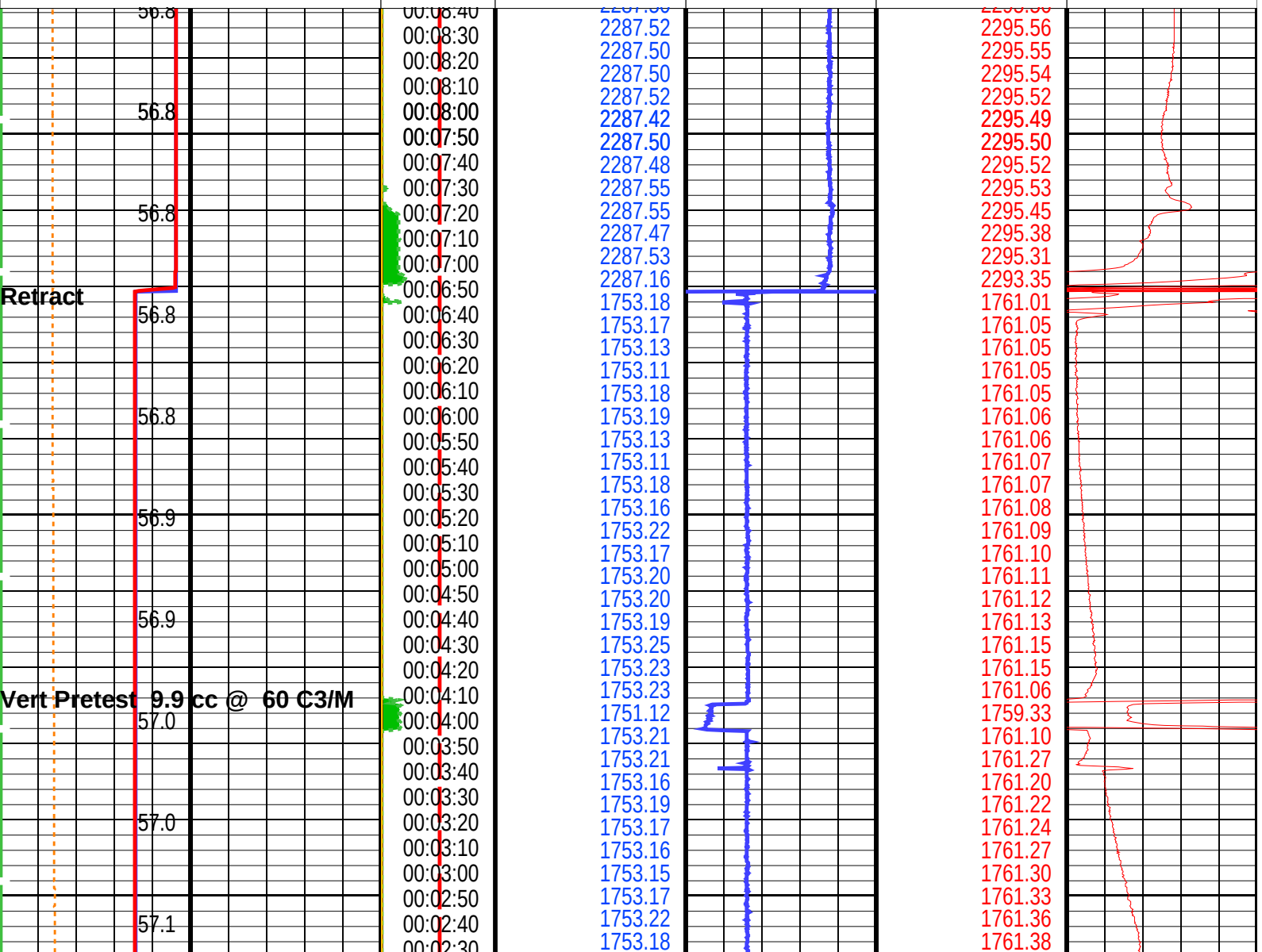
Elapsed Time (ETIM) (S)

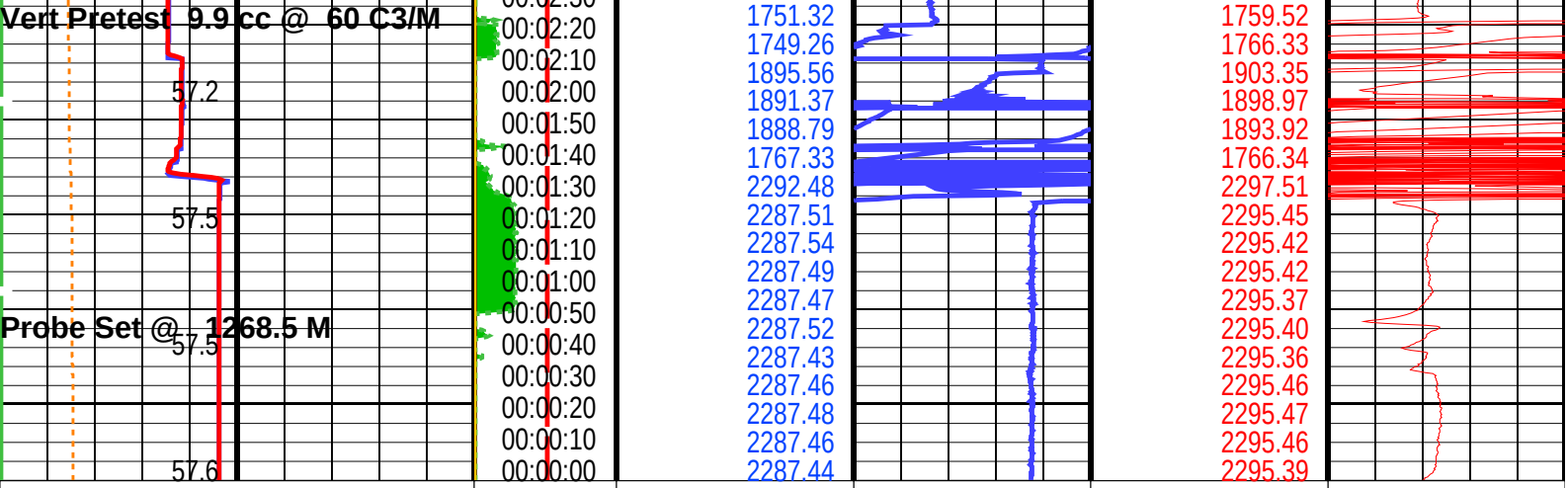
MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIG) 10

MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 1





MRPS 1 Strain Gauge Pressure (BSG1)	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1)	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000			0 (PSIG) 10		0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1)	MRPOUD Solenoid 3 Status (POUDS3)				
0 (PSIA) 5000	5 (---- 0				
MRPOUD Motor Speed (POUDMS)	MRHY 1 Motor Speed (HMS1) (RPM)				
0 (RPM) 5000	0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (----				
	5 260				
MRPS 1 Resistivity Cell Temperature (B1TR)					
100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	6.3	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04-Mar-2008 16:06

OP System Version: 15C0-309

MCM

MRPS_1	SPC-3397-MDT	MRHY_1	SPC-3397-MDT
MRPO_UD	SPC-3397-MDT	LFA	SPC-3397-MDT
MRMS_1	SPC-3397-MDT	MRPC	SPC-3397-MDT
SGT-L	SRPC-3546-Q1_2008_OP15	TCC-BF	SRPC-3546-Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_050LTP	FN:75	PRODUCER	04−Mar−2008 10:30	1268.5 M	1.3 M

Output DLIS Files

DEFAULT	MDT_OFA_073PTP	FN:121	PRODUCER	04−Mar−2008 16:06
RTB	MDT_OFA_073PTP	FN:122	PRODUCER	04−Mar−2008 16:06

Schlumberger

Pretest @ 1274.5m

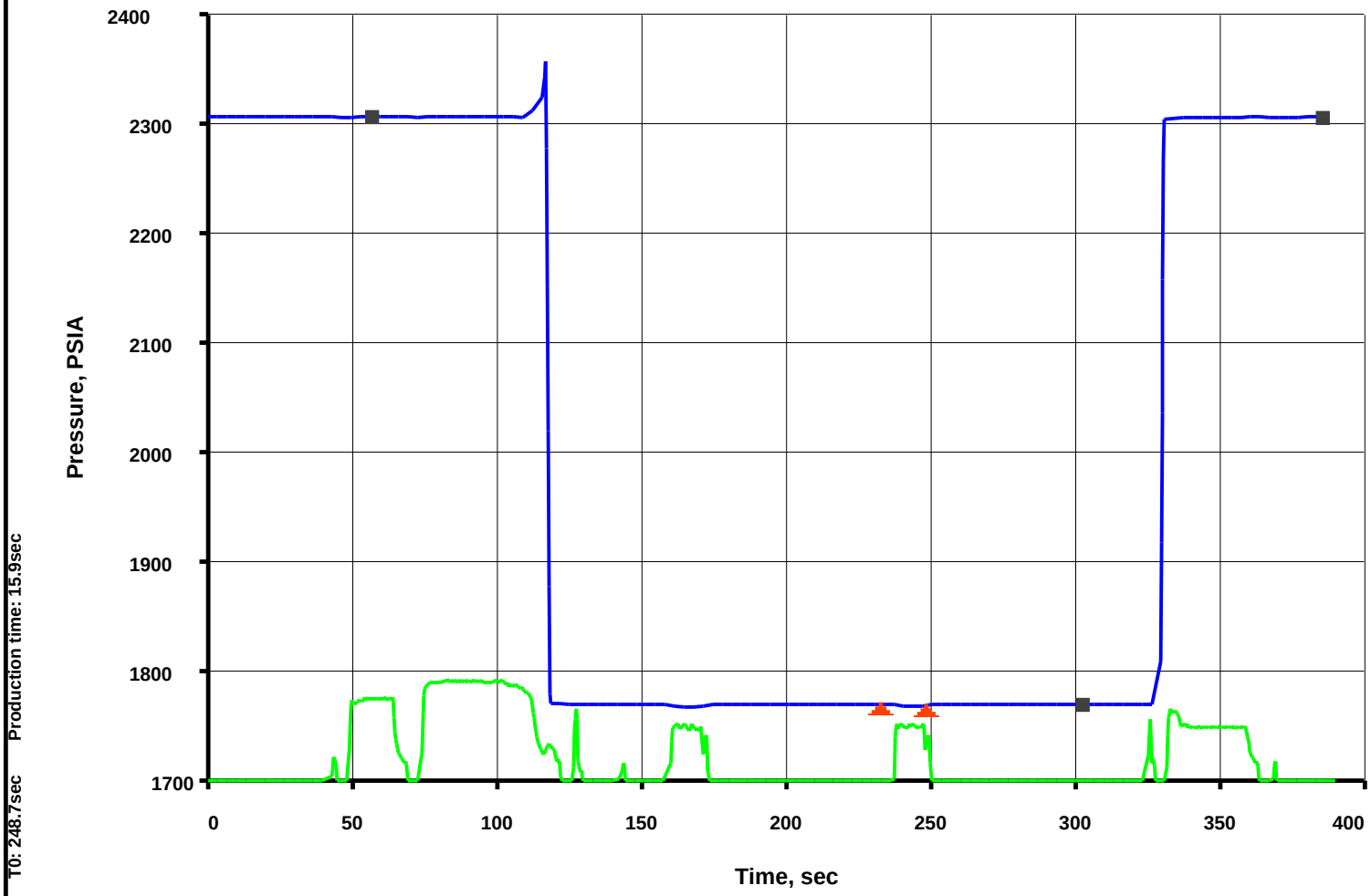
MAXIS Field Log

File 51
4−Mar−2008

Depth, M: 1274.54
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2306.45
Mud Pressure after test, PSIA:	2306.4
Last build−up pressure, PSIA:	1769.79
Draw−down mobility, md/cp:	1274.8



Pretest Volume: 9.9 cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_051LTP	FN:77	PRODUCER	04−Mar−2008 10:42	1274.5 M	1.0 M

Output DLIS Files

DEFAULT	MDT_OFA_074PTP	FN:123	PRODUCER	04−Mar−2008 16:08	1274.5 M	1.0 M
RTB	MDT_OFA_074PTP	FN:124	PRODUCER	04−Mar−2008 16:09	1274.5 M	1.0 M

Elapsed Time (s)	Event Summary
327.6	Retract Single Probe Module (MRPS) 1
232.8	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
155.4	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
69.9	Probe Set @ 1274.5 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1) (----
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

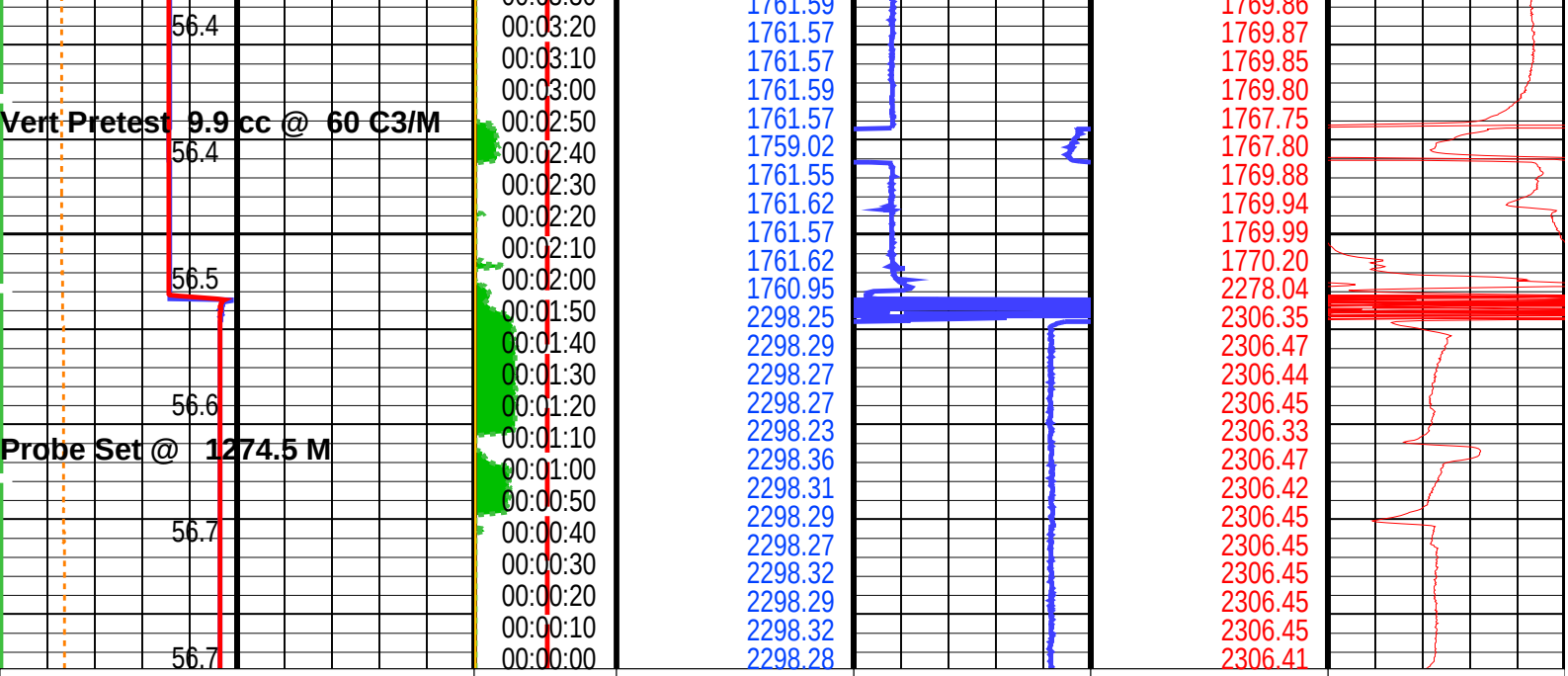
MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
00:06:40	2298.17		2306.40	
00:06:30	2298.28		2306.40	
00:06:20	2298.24		2306.40	
00:06:10	2298.30		2306.37	
00:06:00	2298.34		2306.37	
00:05:50	2298.26		2306.26	
00:05:40	2298.21		2306.16	
00:05:30	2297.97		2305.36	
00:05:20	1761.57		1770.20	
00:05:10	1761.59		1769.79	
00:05:00	1761.59		1769.79	
00:04:50	1761.62		1769.80	
00:04:40	1761.59		1769.80	
00:04:30	1761.59		1769.81	
00:04:20	1761.62		1769.80	
00:04:10	1761.57		1769.77	
00:04:00	1761.59		1769.68	
00:03:50	1759.72		1768.03	
00:03:40	1761.64		1769.77	
00:03:30	1761.54		1769.64	
	1761.62		1769.84	

56.4
Retract
56.3
56.3
Vert Pretest 9.9 cc @ 60 C3/M
56.4



MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	6.3	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04-Mar-2008 16:09

OP System Version: 15C0-309

		MCM	
MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_051LTP	FN:77	PRODUCER	04−Mar−2008 10:42	1274.5 M	1.0 M

Output DLIS Files

DEFAULT	MDT_OFA_074PTP	FN:123	PRODUCER	04−Mar−2008 16:08
RTB	MDT_OFA_074PTP	FN:124	PRODUCER	04−Mar−2008 16:09

Schlumberger

Pretest @ 1278m

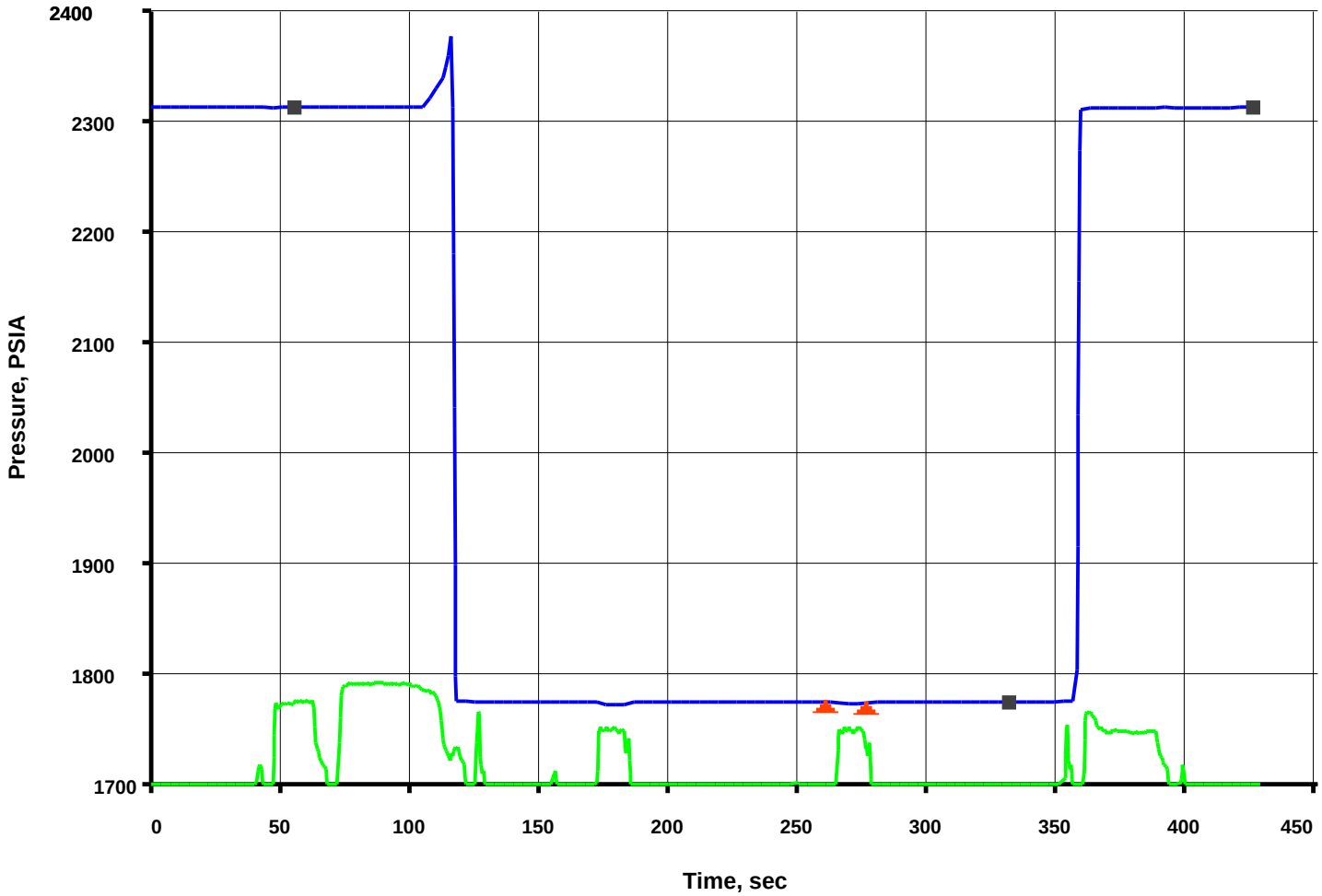
MAXIS Field Log

File 52
4−Mar−2008

Depth, M: 1278.05
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2312.88
Mud Pressure after test, PSIA:	2312.83
Last build−up pressure, PSIA:	1774.77
Draw−down mobility, md/cp:	1161.7



Pretest Volume: 9.9 cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_052LTP	FN:79	PRODUCER	04−Mar−2008 10:51	1278.0 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_075PTP	FN:125	PRODUCER	04−Mar−2008 16:12	1278.0 M	1.1 M
RTB	MDT_OFA_075PTP	FN:126	PRODUCER	04−Mar−2008 16:12	1278.0 M	1.1 M

Elapsed Time (s)	Event Summary
355.5	Retract Single Probe Module (MRPS) 1
260.1	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
167.7	Vert Pretest 10.0 cc @ 60 C3/M Single Probe Module (MRPS) 1
68.7	Probe Set @ 1278.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1) (----
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

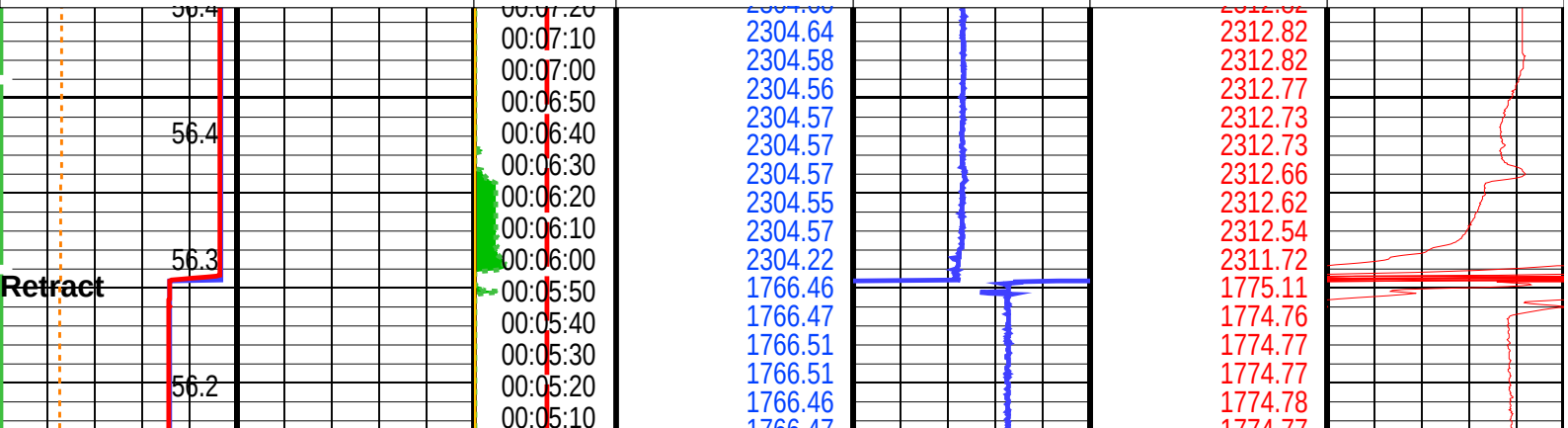
Elapsed Time (ETIM) (S)

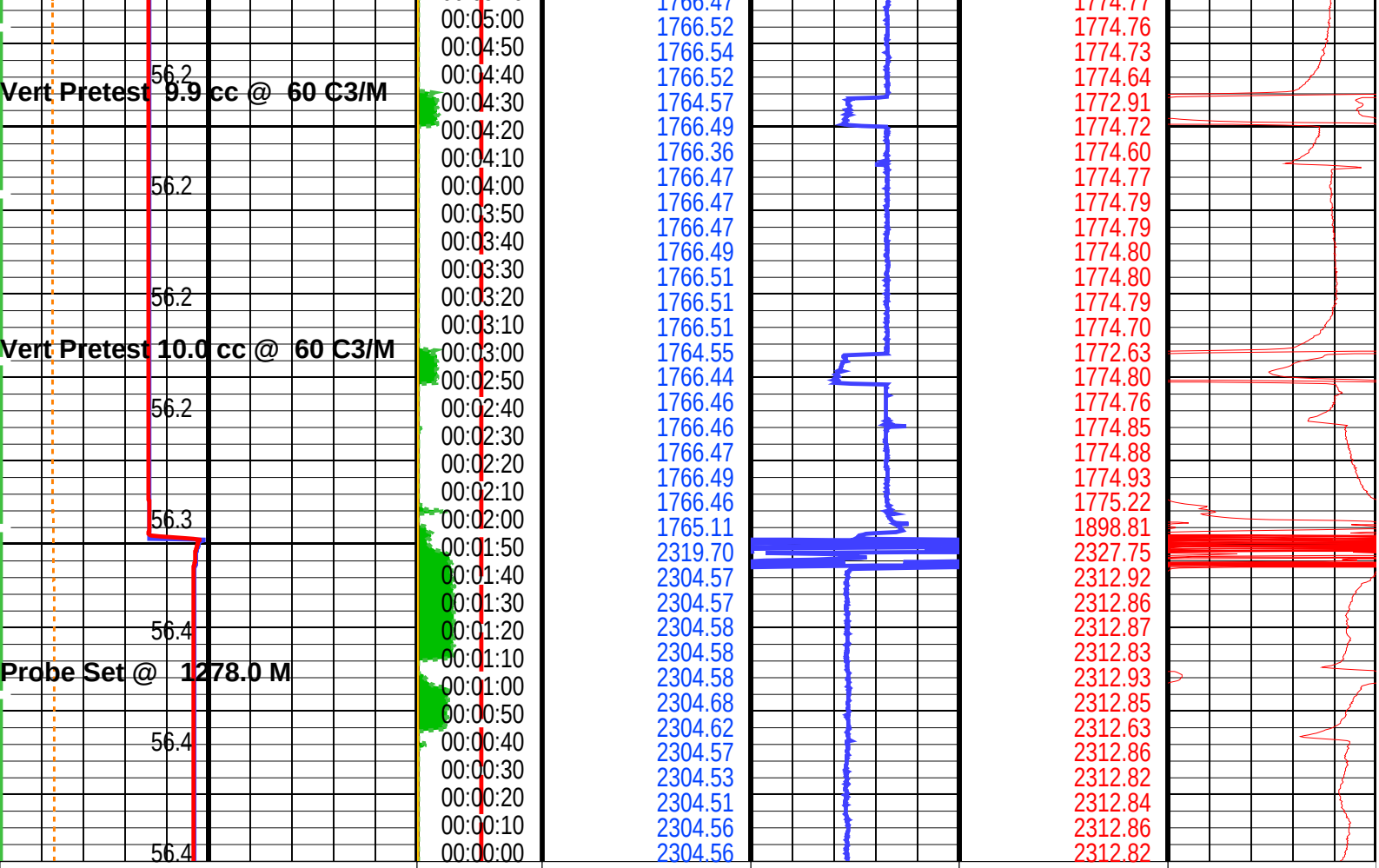
MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIG) 10

MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 1





MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	MRPS_1: Single Probe Module (MRPS) 1	
QCCA	Quartz Gauge Pressure Correction Applied	BOTH

QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	6.3	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests **Vertical Scale: 1" per 60S** **Graphics File Created: 04−Mar−2008 16:12**

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_052LTP	FN:79	PRODUCER	04−Mar−2008 10:51	1278.0 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_075PTP	FN:125	PRODUCER	04−Mar−2008 16:12
RTB	MDT_OFA_075PTP	FN:126	PRODUCER	04−Mar−2008 16:12

Schlumberger

Pretest @ 1288m

MAXIS Field Log

File 53

4−Mar−2008

Depth, M: 1287.97

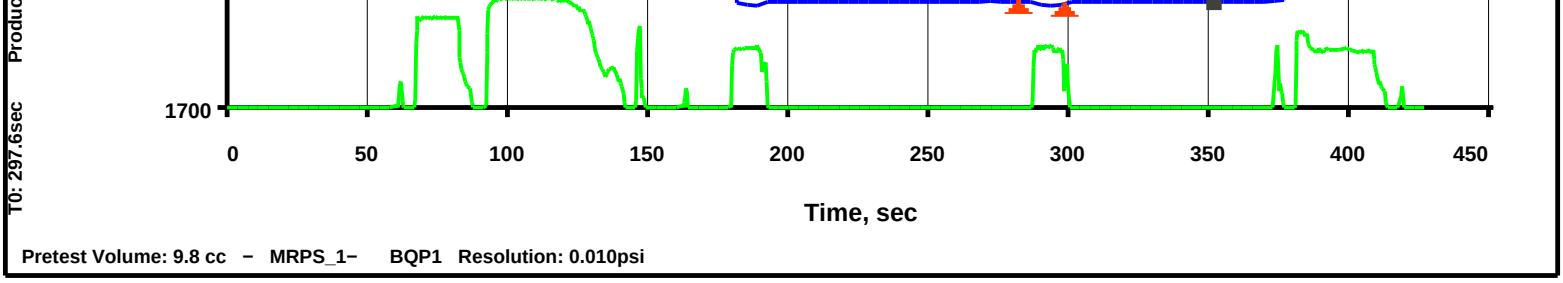
Apache Northwest Pty Ltd

Apache/VIC/P−58/WASABI−1

WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2330.42
Mud Pressure after test, PSIA:	2330.41
Last build−up pressure, PSIA:	1788.56
Draw−down mobility, md/cp:	709.5



Input DLIS Files

DEFAULT	MDT_OFA_053LTP	FN:81	PRODUCER	04–Mar–2008 11:02	1288.0 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_076PTP	FN:127	PRODUCER	04–Mar–2008 16:16	1288.0 M	1.1 M
RTB	MDT_OFA_076PTP	FN:128	PRODUCER	04–Mar–2008 16:16	1288.0 M	1.1 M

Elapsed Time (s)	Event Summary
375.3	Retract Single Probe Module (MRPS) 1
281.4	Vert Pretest 9.8 cc @ 60 C3/M Single Probe Module (MRPS) 1
174.6	Vert Pretest 9.8 cc @ 60 C3/M Single Probe Module (MRPS) 1
87.9	Probe Set @ 1288.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1)
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

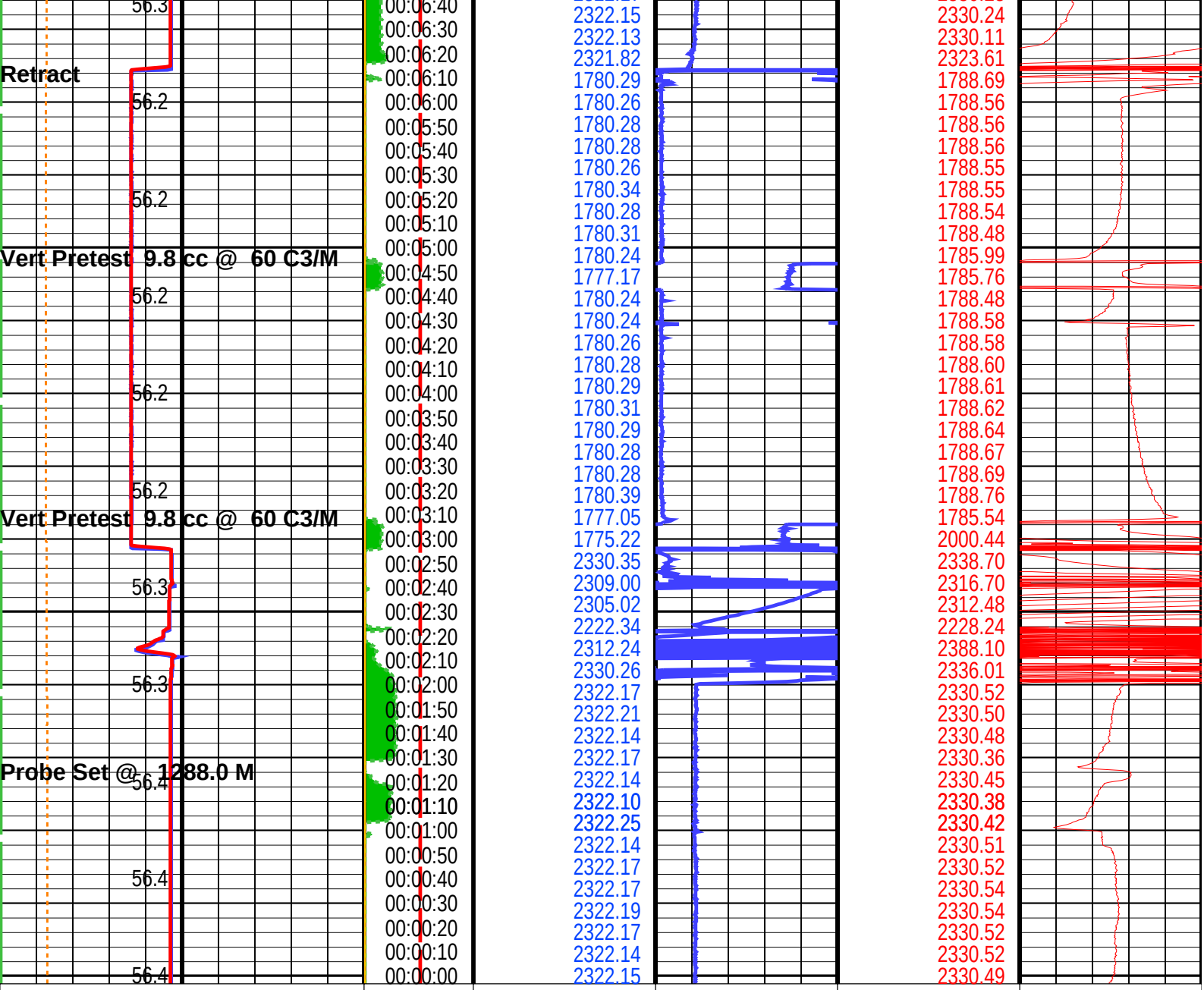
MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
00:07:10	2322.21		2330.42	
00:07:00	2322.25		2330.40	
00:06:50	2322.19		2330.39	
	2322.17		2330.28	



MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR)					

100 (DEGC) 150

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.02	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 16:16

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_053LTP	FN:81	PRODUCER	04−Mar−2008 11:02	1288.0 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_076PTP	FN:127	PRODUCER	04−Mar−2008 16:16
RTB	MDT_OFA_076PTP	FN:128	PRODUCER	04−Mar−2008 16:16

Schlumberger

Pretest @ 1328m

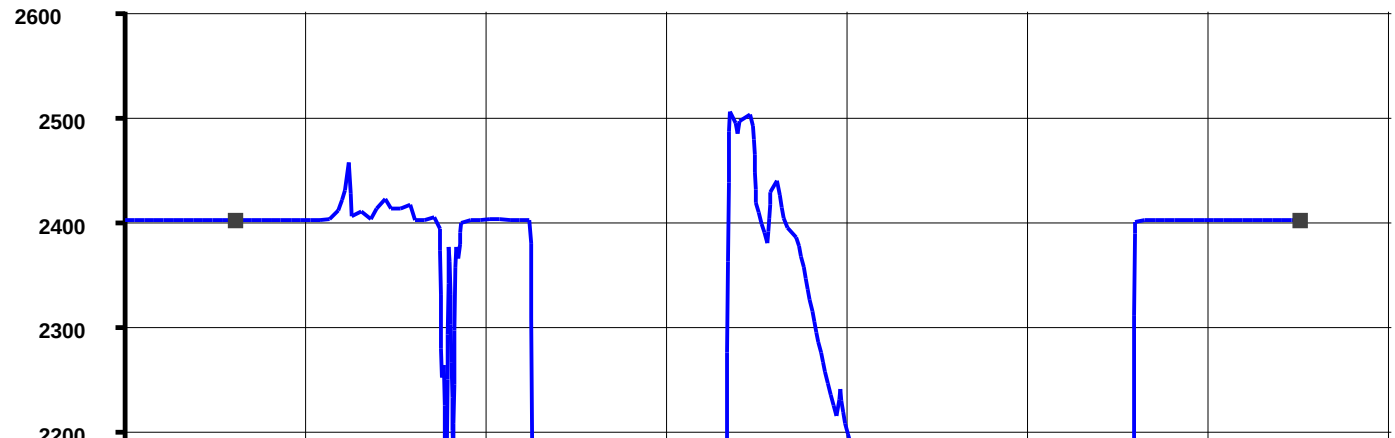
MAXIS Field Log

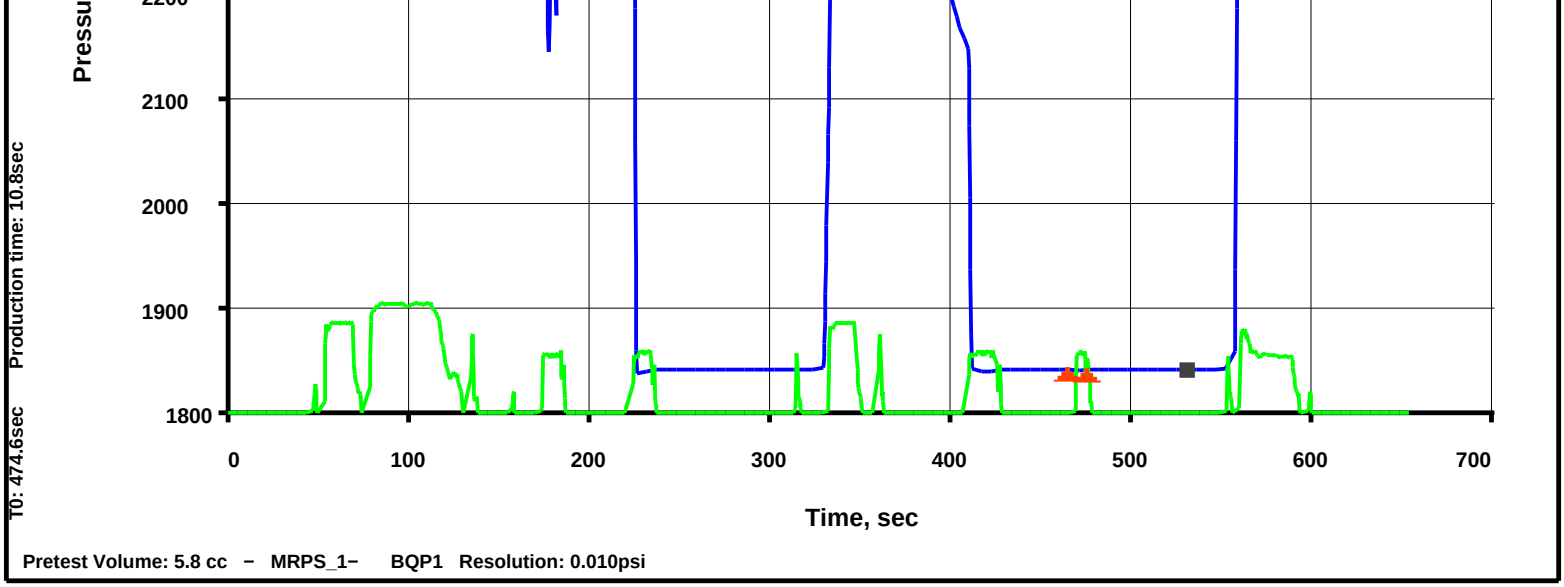
File 55
4−Mar−2008

Depth, M: 1327.99
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2401.34
Mud Pressure after test, PSIA:	2401.43
Last build−up pressure, PSIA:	1841.49
Draw−down mobility, md/cp:	2060.3





Input DLIS Files

DEFAULT	MDT_OFA_055LTP	FN:85	PRODUCER	04–Mar–2008 11:23	1328.0 M	1.7 M

Output DLIS Files

DEFAULT	MDT_OFA_077PTP	FN:129	PRODUCER	04–Mar–2008 16:18	1328.0 M	1.7 M
RTB	MDT_OFA_077PTP	FN:130	PRODUCER	04–Mar–2008 16:18	1328.0 M	1.7 M

Elapsed Time (s)	Event Summary
555.0	Retract Single Probe Module (MRPS) 1
463.8	Vert Pretest 5.8 cc @ 60 C3/M Single Probe Module (MRPS) 1
404.7	Vert Pretest 14.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
219.6	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
169.2	Vert Pretest 9.8 cc @ 60 C3/M Single Probe Module (MRPS) 1
74.4	Probe Set @ 1328.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

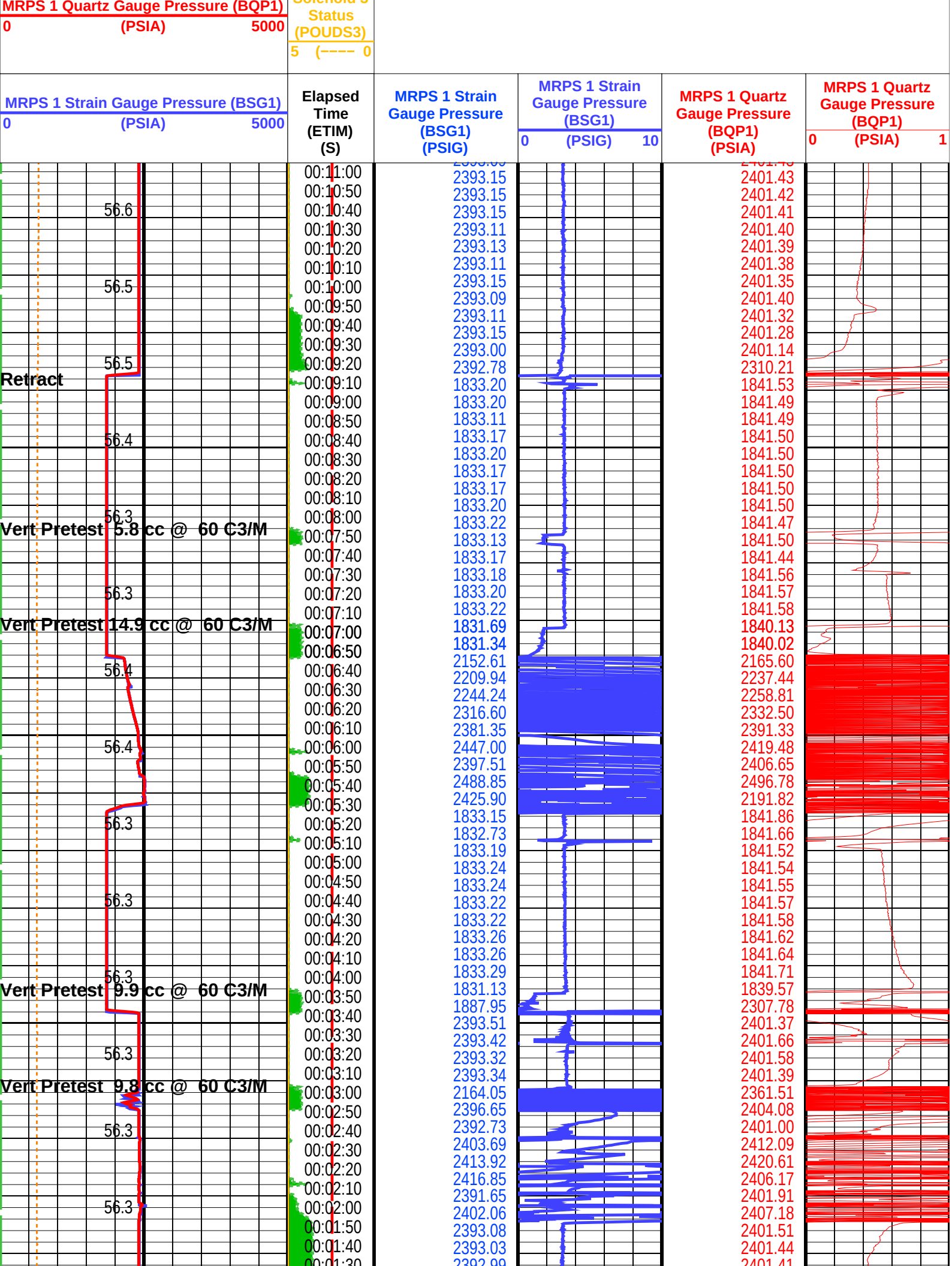
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

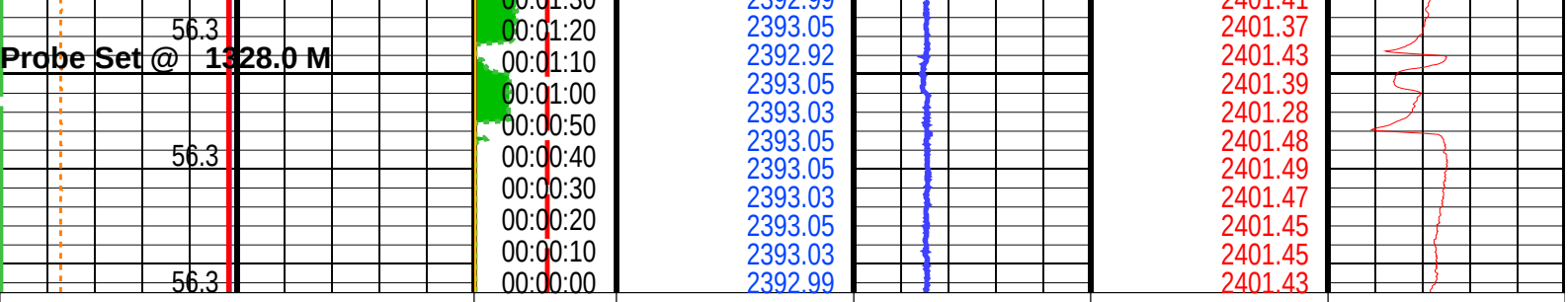
MRMS 1 Upper Valve Position (MUP1)
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPOUD Solenoid 3


MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000
Solenoid 3 Status (POUDS3)
5 (---- 0
MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000
Elapsed Time (ETIM) (S)
MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)
MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIG) 10
MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)
MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 1
Retract
Vert Pretest 5.8 cc @ 60 C3/M
Vert Pretest 14.9 cc @ 60 C3/M
Vert Pretest 9.9 cc @ 60 C3/M
Vert Pretest 9.8 cc @ 60 C3/M



MRPS 1 Strain Gauge Pressure (BSG1)	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1)	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000			0 (PSIG) 10		0 (PSIA) 1

MRPS 1 Quartz Gauge Pressure (BQP1)	MRPOUD Solenoid 3 Status (POUDS3)
0 (PSIA) 5000	5 (---- 0

MRPOUD Motor Speed (POUDMS)	MRHY 1 Motor Speed (HMS1) (RPM)
0 (RPM) 5000	0 8000

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)		MRMS 1 Upper Valve Position (MUP1) (----
		5 260

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.15	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04-Mar-2008 16:18

OP System Version: 15C0-309

MCM

MRPS_1	SPC-3397-MDT	MRHY_1	SPC-3397-MDT
MRPO_UD	SPC-3397-MDT	LFA	SPC-3397-MDT
MRMS_1	SPC-3397-MDT	MRPC	SPC-3397-MDT
SGT-L	SRPC-3546-Q1_2008_OP15	TCC-BF	SRPC-3546-Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_055LTP	FN:85	PRODUCER	04-Mar-2008 11:23	1328.0 M	1.7 M

Output DLIS Files

DEFAULT	MDT_OFA_077PTP	FN:129	PRODUCER	04−Mar−2008 16:18		
RTB	MDT_OFA_077PTP	FN:130	PRODUCER	04−Mar−2008 16:18		

Schlumberger

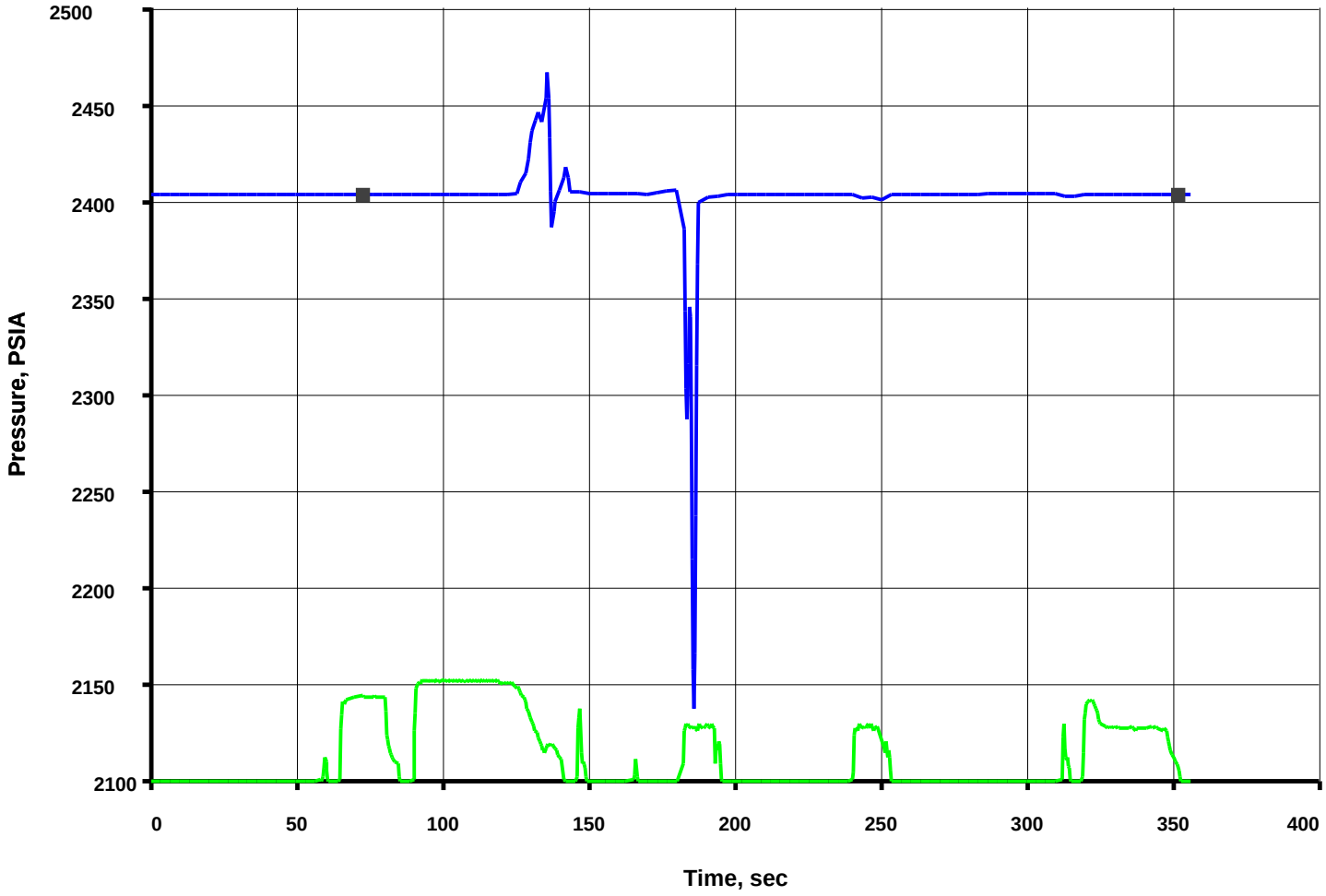
Pretest @ 1329m

MAXIS Field Log

File 56
4−Mar−2008

Depth, M: 1328.95
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Lost Seal − Large−Diameter probe
Mud Pressure before test, PSIA: 2403.29
Mud Pressure after test, PSIA: 2403.34



Pretest Volume: 9.9 cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_056LTP	FN:87	PRODUCER	04−Mar−2008 11:39	1328.9 M	0.9 M

Output DLIS Files

DEFAULT	MDT_OFA_078PTP	FN:131	PRODUCER	04−Mar−2008 16:20	1328.9 M	0.9 M
RTB	MDT_OFA_078PTP	FN:132	PRODUCER	04−Mar−2008 16:20	1328.9 M	0.9 M

Elapsed Time (s)	Event Summary
315.0	Retract Single Probe Module (MRPS) 1
236.4	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
177.9	Vert Pretest 10.0 cc @ 60 C3/M Single Probe Module (MRPS) 1
85.8	Probe Set @ 1328.9 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

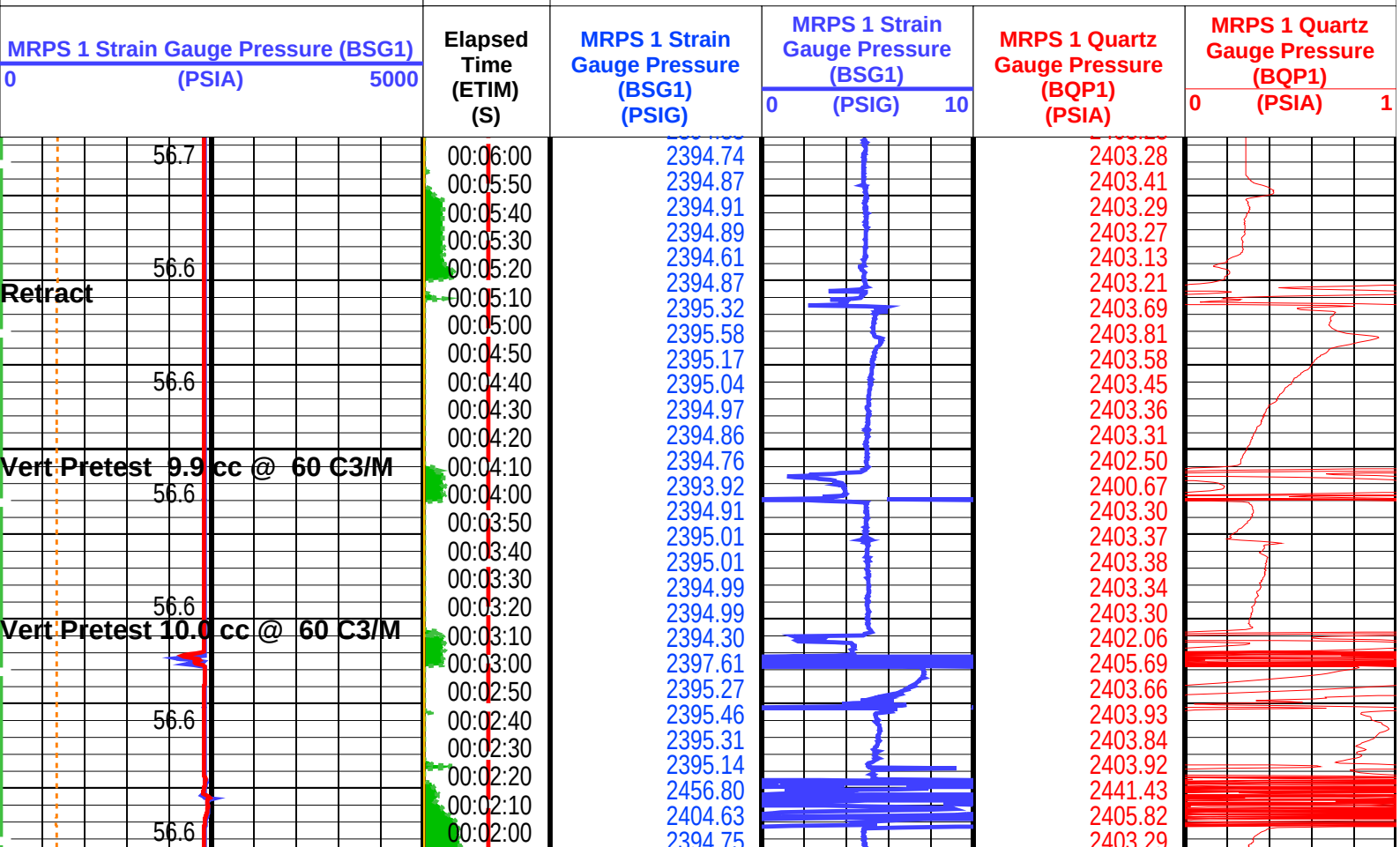
MRMS 1 Upper Valve Position (MUP1) (----
5 260

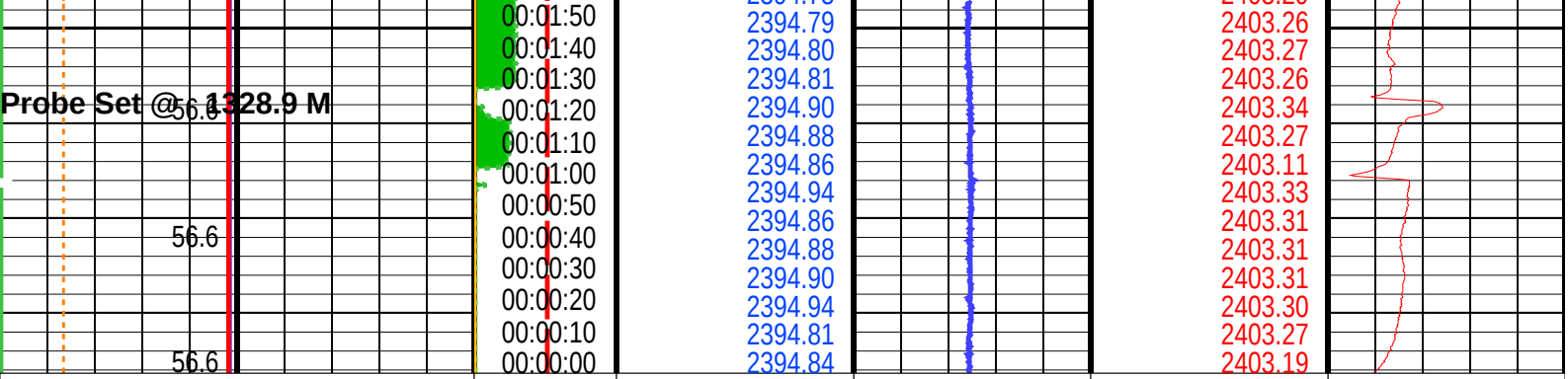
MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0





MRPS 1 Strain Gauge Pressure (BSG1)	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1)	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000			0 (PSIG) 10		0 (PSIA) 1

MRPS 1 Quartz Gauge Pressure (BQP1)	MRPOUD Solenoid 3 Status (POUDS3)
0 (PSIA) 5000	5 (---- 0

MRPOUD Motor Speed (POUDMS)	MRHY 1 Motor Speed (HMS1) (RPM)
0 (RPM) 5000	0 8000

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1)
	(---- 5 260

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.15	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04-Mar-2008 16:20

OP System Version: 15C0-309

MCM

MRPS_1	SPC-3397-MDT	MRHY_1	SPC-3397-MDT
MRPO_UD	SPC-3397-MDT	LFA	SPC-3397-MDT
MRMS_1	SPC-3397-MDT	MRPC	SPC-3397-MDT
SGT-L	SRPC-3546-Q1_2008_OP15	TCC-BF	SRPC-3546-Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_056LTP	FN:87	PRODUCER	04-Mar-2008 11:39	1328.9 M	0.9 M

Output DLIS Files

DEFAULT	MDT_OFA_078PTP	FN:131	PRODUCER	04−Mar−2008 16:20
RTB	MDT_OFA_078PTP	FN:132	PRODUCER	04−Mar−2008 16:20

Schlumberger

Pretest @ 1329.5m

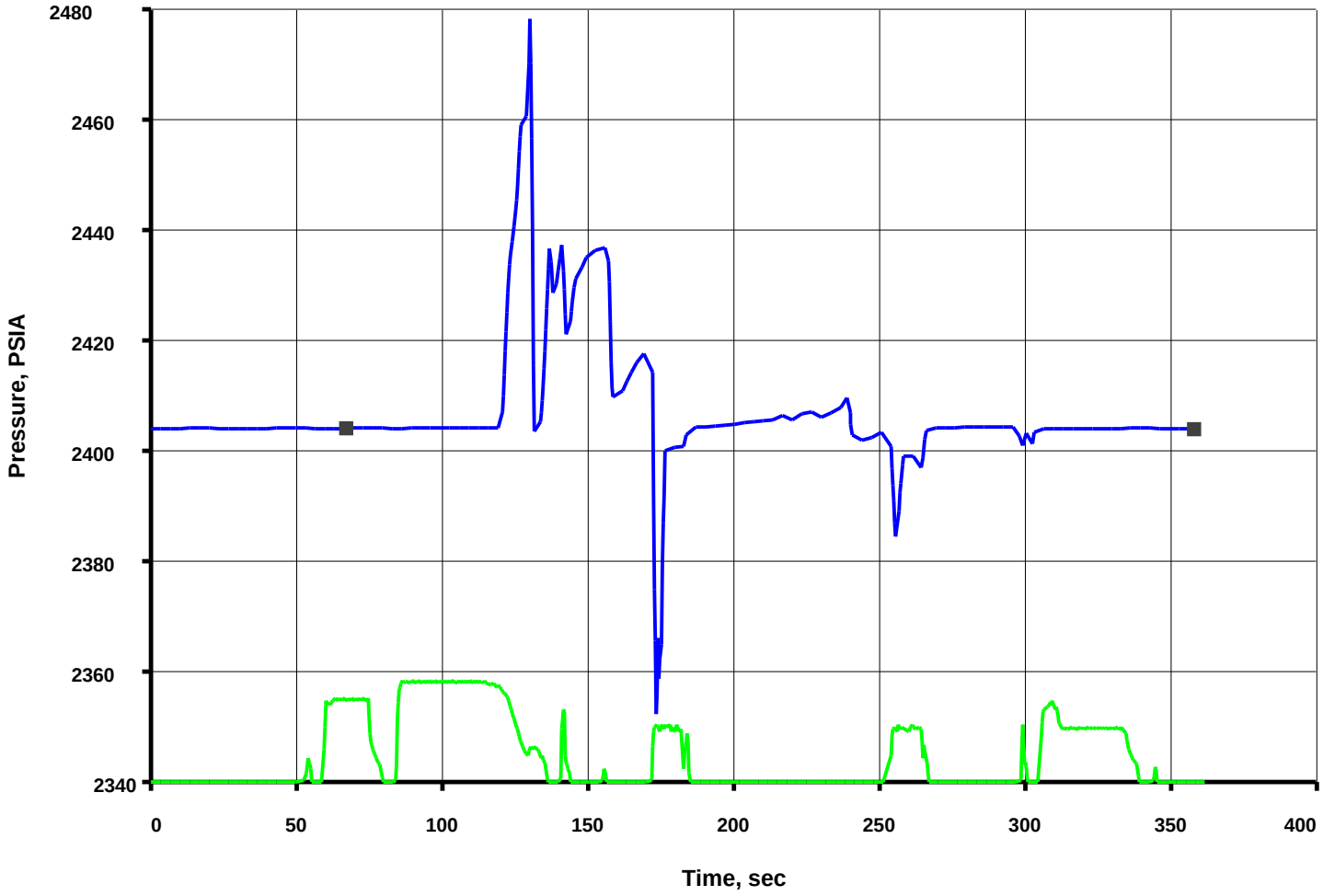
MAXIS Field Log

File 57
4−Mar−2008

Depth, M: 1329.48
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Lost Seal − Large−Diameter probe

Mud Pressure before test, PSIA: 2404.16
Mud Pressure after test, PSIA: 2404.11



Pretest Volume: 9.9 cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_057LTP	FN:89	PRODUCER	04−Mar−2008 11:51	1329.5 M	1.0 M

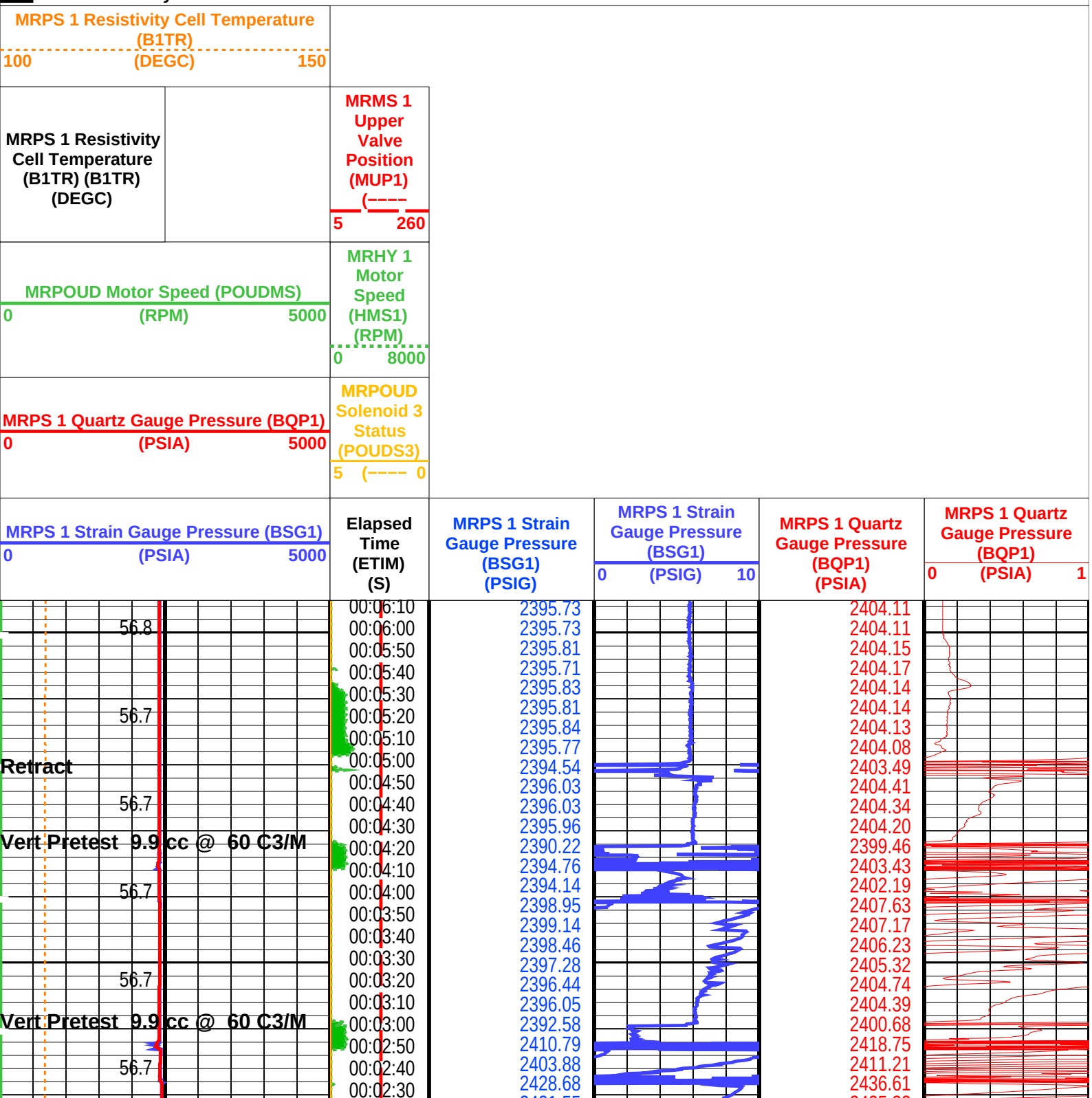
Output DLIS Files

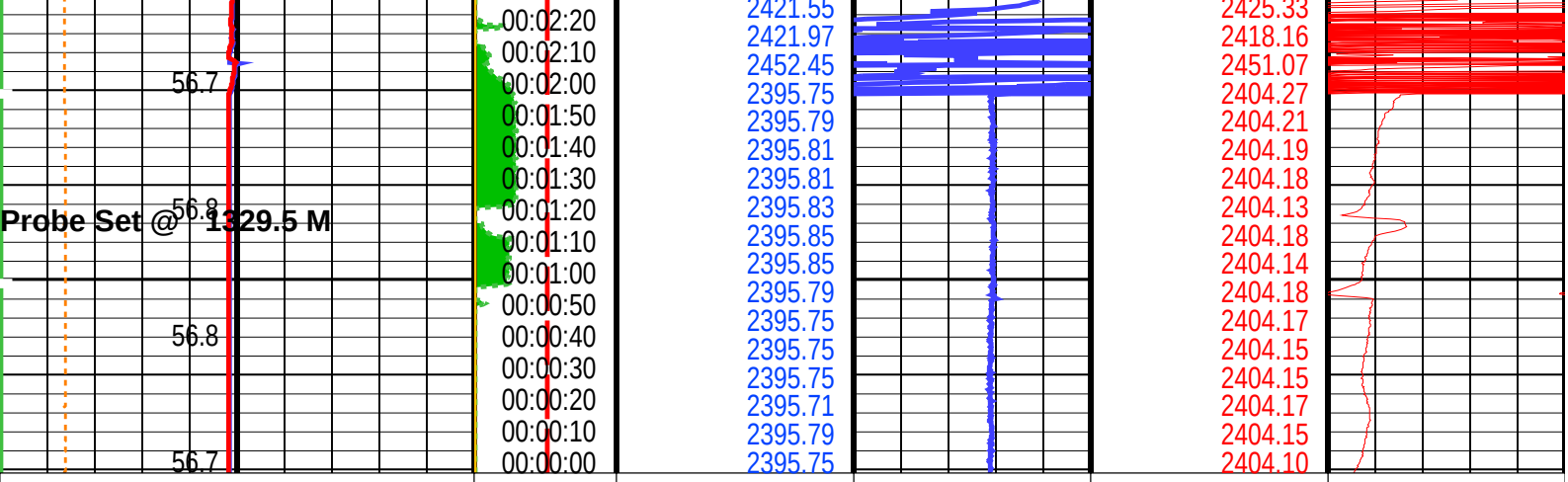
DEFAULT	MDT_OFA_079PTP	FN:133	PRODUCER	04−Mar−2008 16:22	1329.5 M	1.0 M
RTB	MDT_OFA_079PTP	FN:134	PRODUCER	04−Mar−2008 16:22	1329.5 M	1.0 M

Elapsed Time (s)	Event Summary
301.2	Retract Single Probe Module (MRPS) 1
249.6	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
167.7	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
80.4	Probe Set @ 1329.5 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S





MRPS 1 Strain Gauge Pressure (BSG1)	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1)	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000			0 (PSIG) 10		0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1)	MRPOUD Solenoid 3 Status (POUDS3)				
0 (PSIA) 5000	5 (---- 0				
MRPOUD Motor Speed (POUDMS)	MRHY 1 Motor Speed (HMS1) (RPM)				
0 (RPM) 5000	0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (----				
	5 260				
MRPS 1 Resistivity Cell Temperature (B1TR)					
100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.15	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests **Vertical Scale: 1" per 60S** **Graphics File Created: 04-Mar-2008 16:22**

OP System Version: 15C0-309

MCM

MRPS_1	SPC-3397-MDT	MRHY_1	SPC-3397-MDT
MRPO_UD	SPC-3397-MDT	LFA	SPC-3397-MDT
MRMS_1	SPC-3397-MDT	MRPC	SPC-3397-MDT
SGT-L	SRPC-3546-Q1_2008_OP15	TCC-BF	SRPC-3546-Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_057LTP	FN:89	PRODUCER	04−Mar−2008 11:51	1329.5 M	1.0 M

Output DLIS Files

DEFAULT	MDT_OFA_079PTP	FN:133	PRODUCER	04−Mar−2008 16:22
RTB	MDT_OFA_079PTP	FN:134	PRODUCER	04−Mar−2008 16:22

Schlumberger

Pretest @ 1328.8m

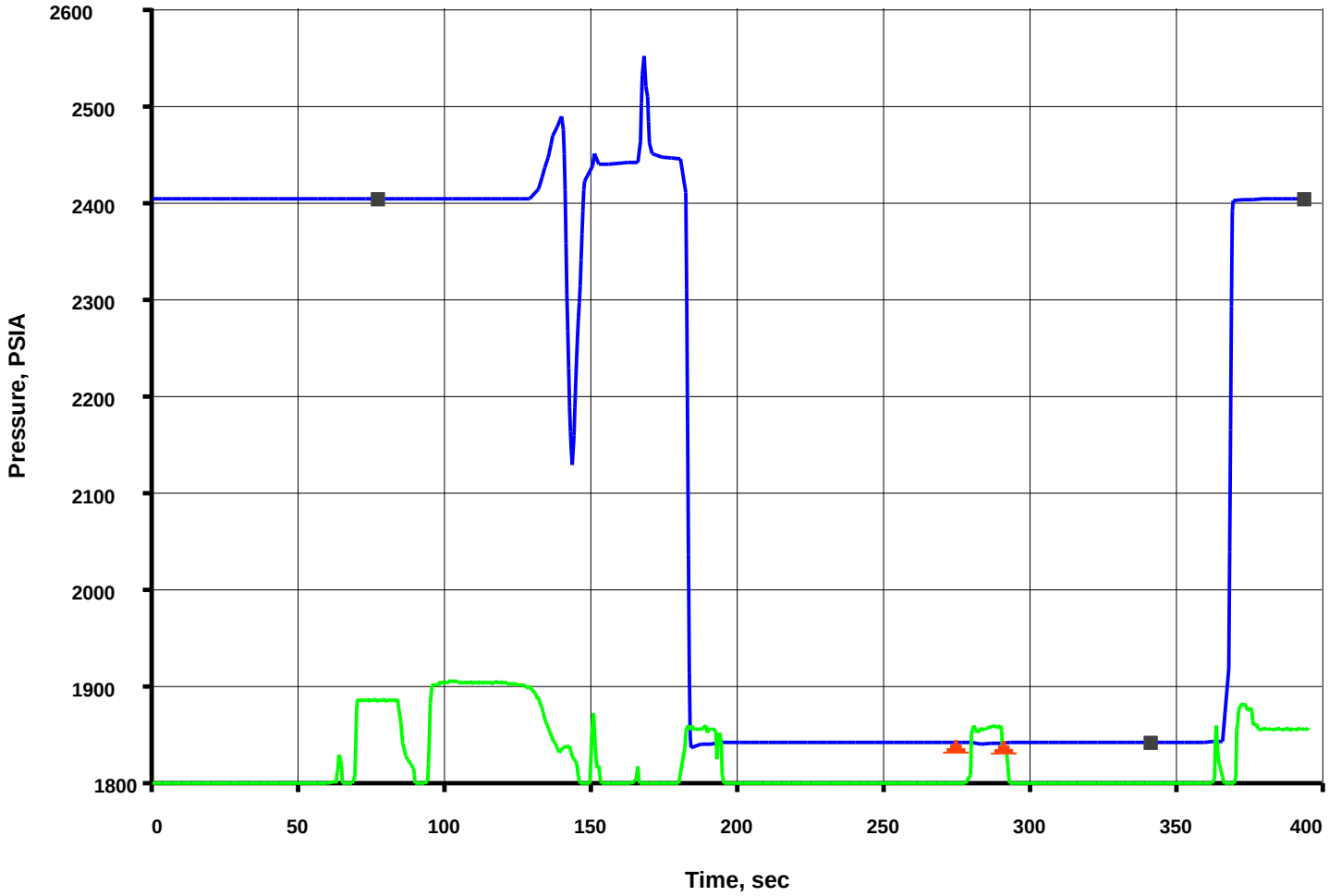
MAXIS Field Log

File 58
4−Mar−2008

Depth, M: 1328.76
Apache Northwest Pty Ltd
Apache/VIC/P−58/WASABI−1
WASABI−1

Volumetric Limited draw−down − Large−Diameter probe

Mud Pressure before test, PSIA:	2402.88
Mud Pressure after test, PSIA:	2402.61
Last build−up pressure, PSIA:	1842.49
Draw−down mobility, md/cp:	1623.1



Pretest Volume: 10.0cc − MRPS_1− BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_058LTP	FN:91	PRODUCER	04−Mar−2008 12:01	1328.8 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_080PTP	FN:135	PRODUCER	04−Mar−2008 16:23	1328.8 M	1.0 M
RTB	MDT_OFA_080PTP	FN:136	PRODUCER	04−Mar−2008 16:23	1328.8 M	1.0 M

Elapsed Time (s)	Event Summary
366.3	Retract Single Probe Module (MRPS) 1
275.1	Vert Pretest 10.0 cc @ 60 C3/M Single Probe Module (MRPS) 1
177.9	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
90.6	Probe Set @ 1328.8 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1)
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

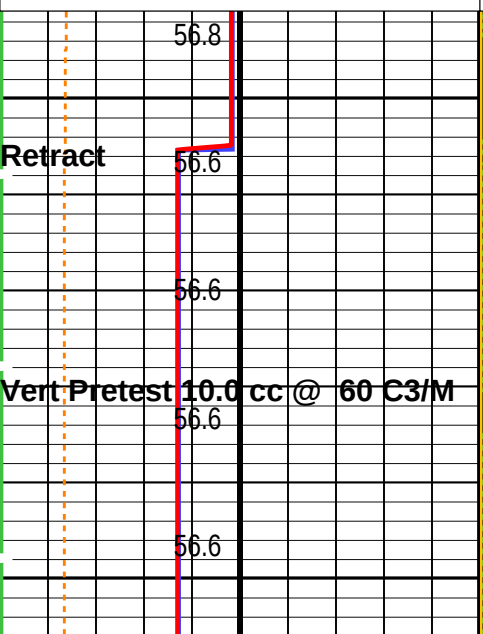
MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

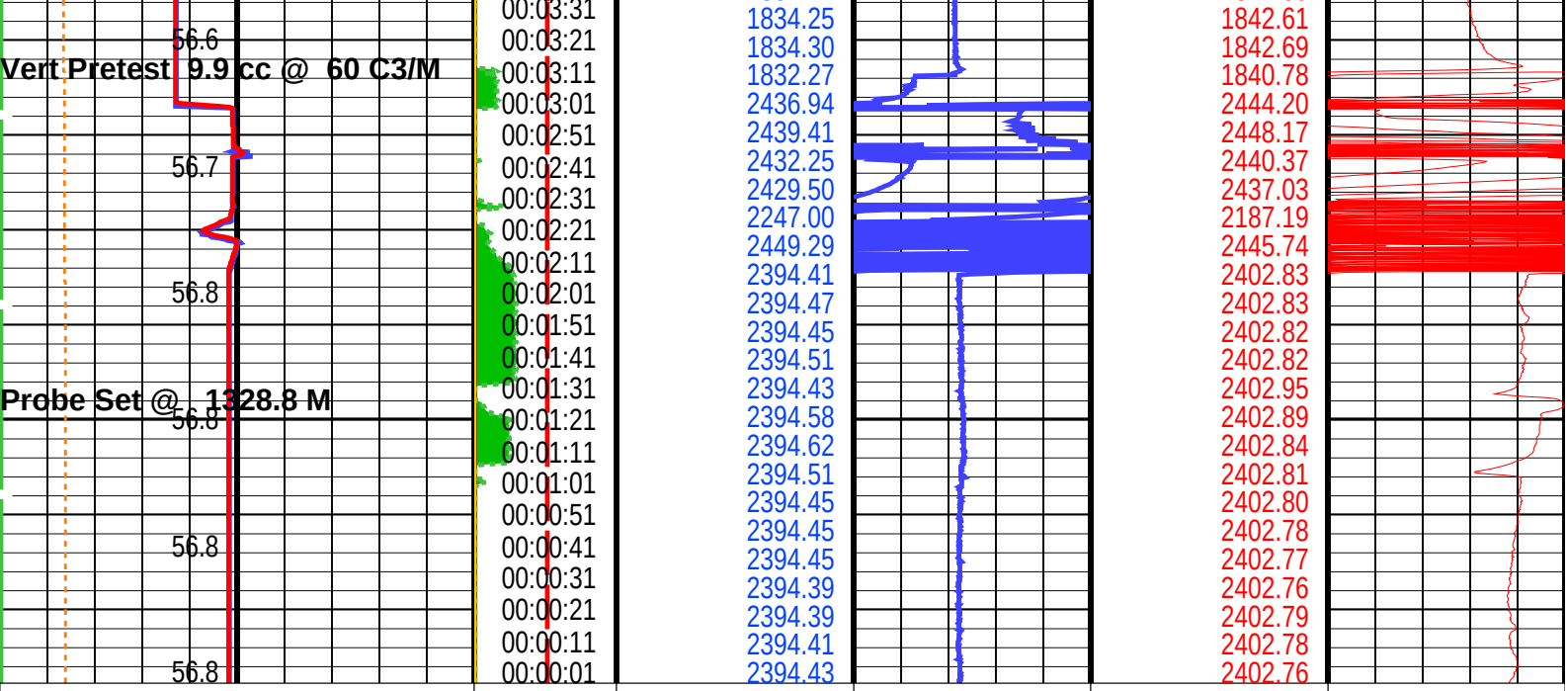
MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (−−−− 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
00:06:41	2394.28		2402.59	
00:06:31	2394.34		2402.61	
00:06:21	2394.40		2402.62	
00:06:11	2394.45		2402.59	
00:06:01	2394.15		2401.22	
00:05:51	1834.20		1842.53	
00:05:41	1834.19		1842.48	
00:05:31	1834.26		1842.49	
00:05:21	1834.24		1842.49	
00:05:11	1834.19		1842.50	
00:05:01	1834.24		1842.49	
00:04:51	1834.20		1842.49	
00:04:41	1834.29		1842.46	
00:04:31	1832.90		1841.22	
00:04:21	1834.22		1842.45	
00:04:11	1834.20		1842.41	
00:04:01	1834.19		1842.51	
00:03:51	1834.20		1842.51	
00:03:41	1834.19		1842.52	
	1834.22		1842.53	
	1834.20		1842.55	
	1834.24		1842.59	





MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.15	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests **Vertical Scale: 1" per 60S** **Graphics File Created: 04-Mar-2008 16:23**

QP System Version: 15C0-309

OP System Version: 15C0-309

MCM

MRPS_1	SPC-3397-MDT	MRHY_1	SPC-3397-MDT
MRPO_UD	SPC-3397-MDT	LFA	SPC-3397-MDT
MRMS_1	SPC-3397-MDT	MRPC	SPC-3397-MDT
SGT-L	SRPC-3546-Q1_2008_OP15	TCC-BF	SRPC-3546-Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_058LTP	FN:91	PRODUCER	04-Mar-2008 12:01	1328.8 M	1.1 M

Output DLIS Files

DEFAULT	MDT_OFA_080PTP	FN:135	PRODUCER	04-Mar-2008 16:23
RTB	MDT_OFA_080PTP	FN:136	PRODUCER	04-Mar-2008 16:23

Schlumberger

Pretest @ 1440m

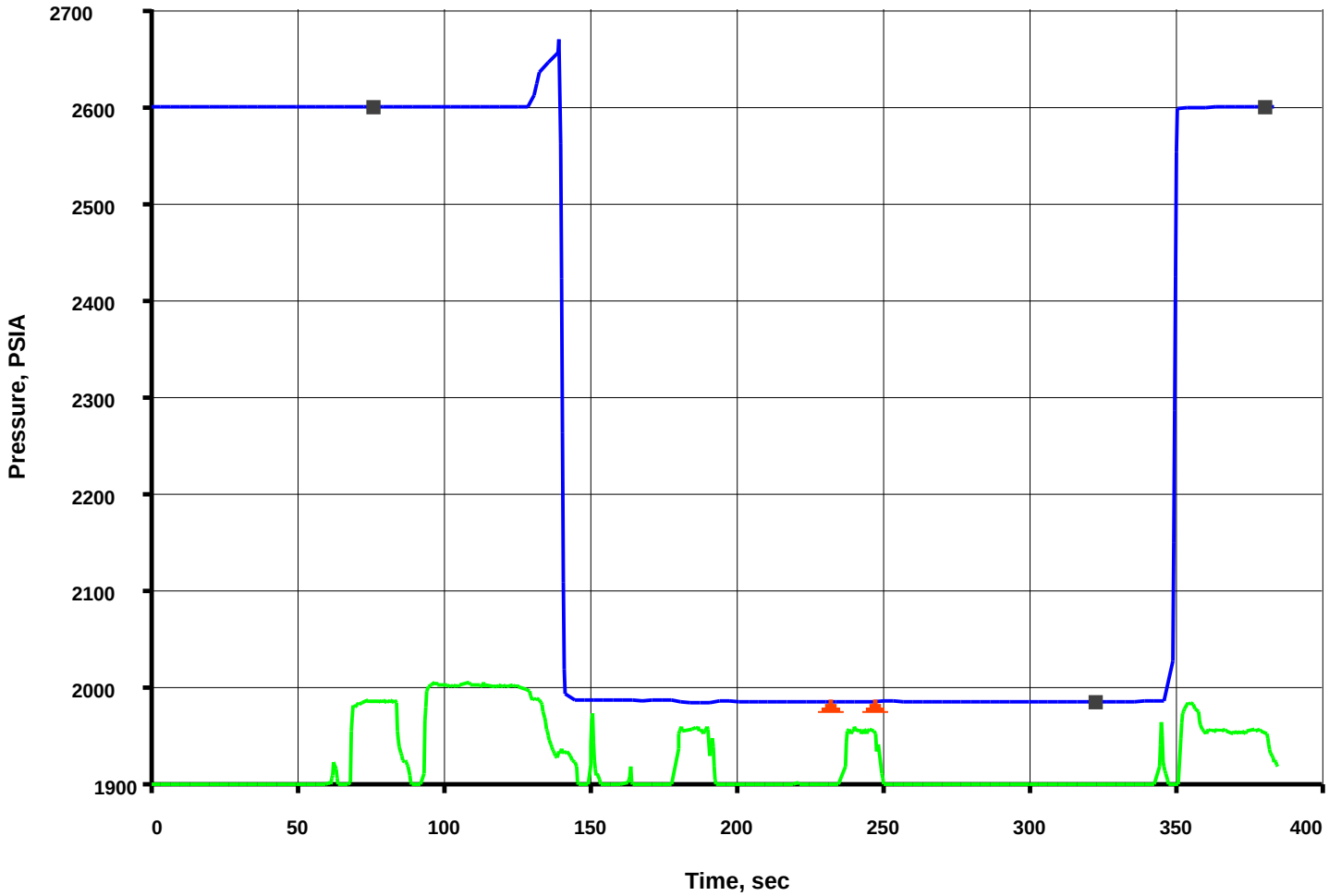
MAXIS Field Log

File 60
4-Mar-2008

Depth, M: 1439.99
Apache Northwest Pty Ltd
Apache/VIC/P-58/WASABI-1
WASABI-1

Volumetric Limited draw-down - Large-Diameter probe

Mud Pressure before test, PSIA:	2598.7
Mud Pressure after test, PSIA:	2598.64
Last build-up pressure, PSIA:	1985.9
Draw-down mobility, md/cp:	3032.3



Pretest Volume: 9.9 cc - MRPS_1- BQP1 Resolution: 0.010psi

Input DLIS Files

DEFAULT	MDT_OFA_060LTP	FN:95	PRODUCER	04−Mar−2008 12:27	1440.0 M	1.0 M

Output DLIS Files

DEFAULT	MDT_OFA_081PTP	FN:137	PRODUCER	04−Mar−2008 16:26	1440.0 M	1.0 M
RTB	MDT_OFA_081PTP	FN:138	PRODUCER	04−Mar−2008 16:26	1440.0 M	1.0 M

Elapsed Time (s)	Event Summary
347.4	Retract Single Probe Module (MRPS) 1
232.2	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
175.2	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
89.1	Probe Set @ 1440.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)

MRMS 1 Upper Valve Position (MUP1)
5 260

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRHY 1 Motor Speed (HMS1) (RPM)
0 8000

MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000

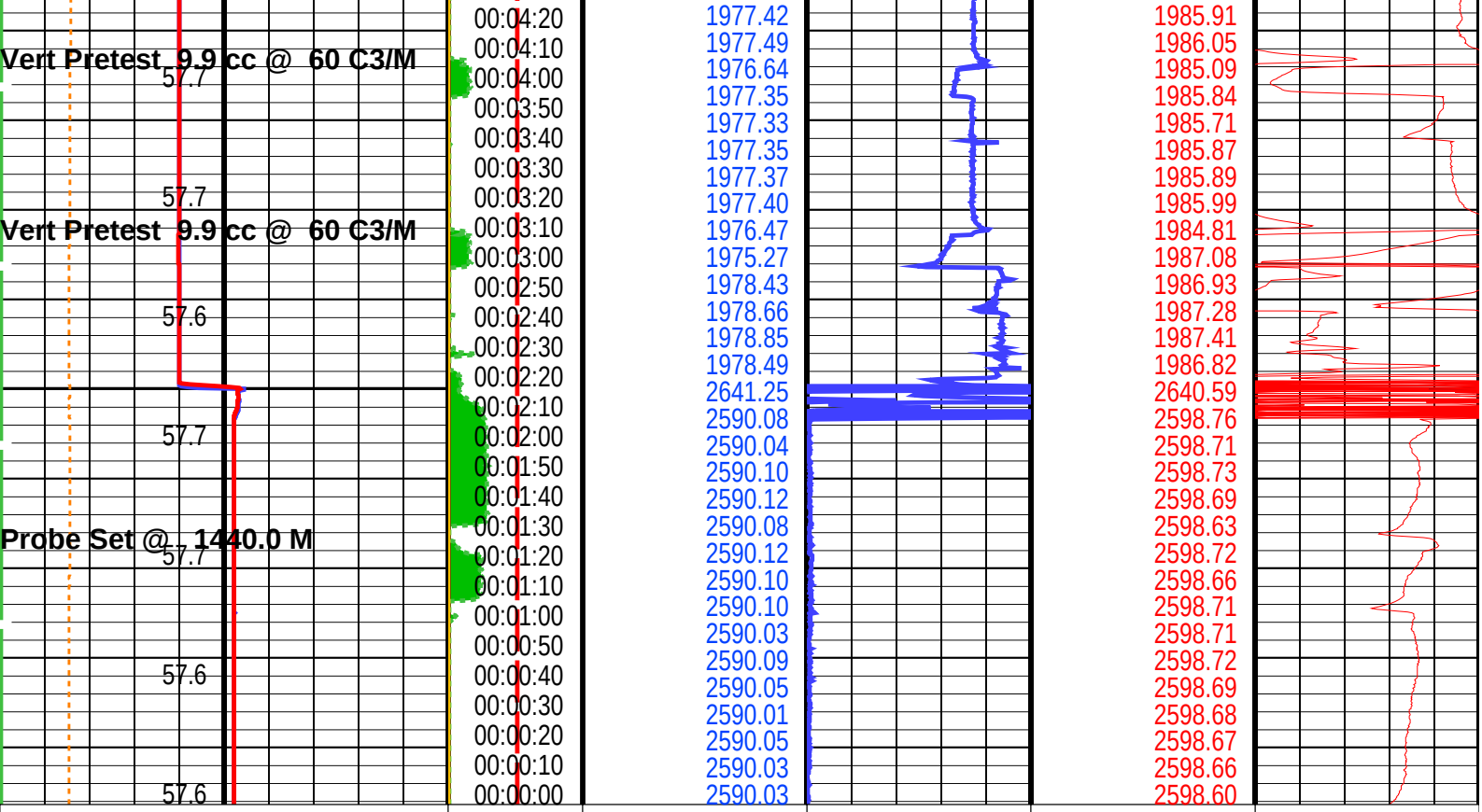
Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
00:06:30	2590.10		2598.67	
00:06:20	2590.14		2598.55	
00:06:10	2590.16		2598.54	
00:06:00	2590.08		2598.50	
00:05:50	2589.79		2597.38	
00:05:40	1977.41		1986.12	
00:05:30	1977.40		1985.90	
00:05:20	1977.43		1985.91	
00:05:10	1977.41		1985.90	
00:05:00	1977.43		1985.90	
00:04:50	1977.42		1985.91	
00:04:40	1977.38		1985.90	
00:04:30	1977.35		1985.91	
	1977.47		1985.91	

57.9

Retract

57.8

57.8



MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	16.5	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		

MRPC: Power Cartridge			
PDCO	Probe Depth Correction Offset	0	M
System and Miscellaneous			
PP	Playback Processing	RECOMPUTE	

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 16:26

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_060LTP	FN:95	PRODUCER	04−Mar−2008 12:27	1440.0 M	1.0 M

Output DLIS Files

DEFAULT	MDT_OFA_081PTP	FN:137	PRODUCER	04−Mar−2008 16:26
RTB	MDT_OFA_081PTP	FN:138	PRODUCER	04−Mar−2008 16:26

Schlumberger

Correlation Pass 1
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT	MDT_OFA_048LUP	FN:71	PRODUCER	04−Mar−2008 10:17
RTB	MDT_OFA_048LUP	FN:72	PRODUCER	04−Mar−2008 10:17

OP System Version: 15C0−309

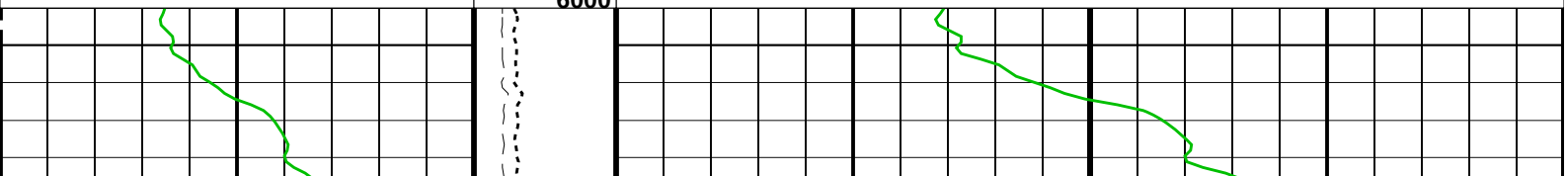
MCM

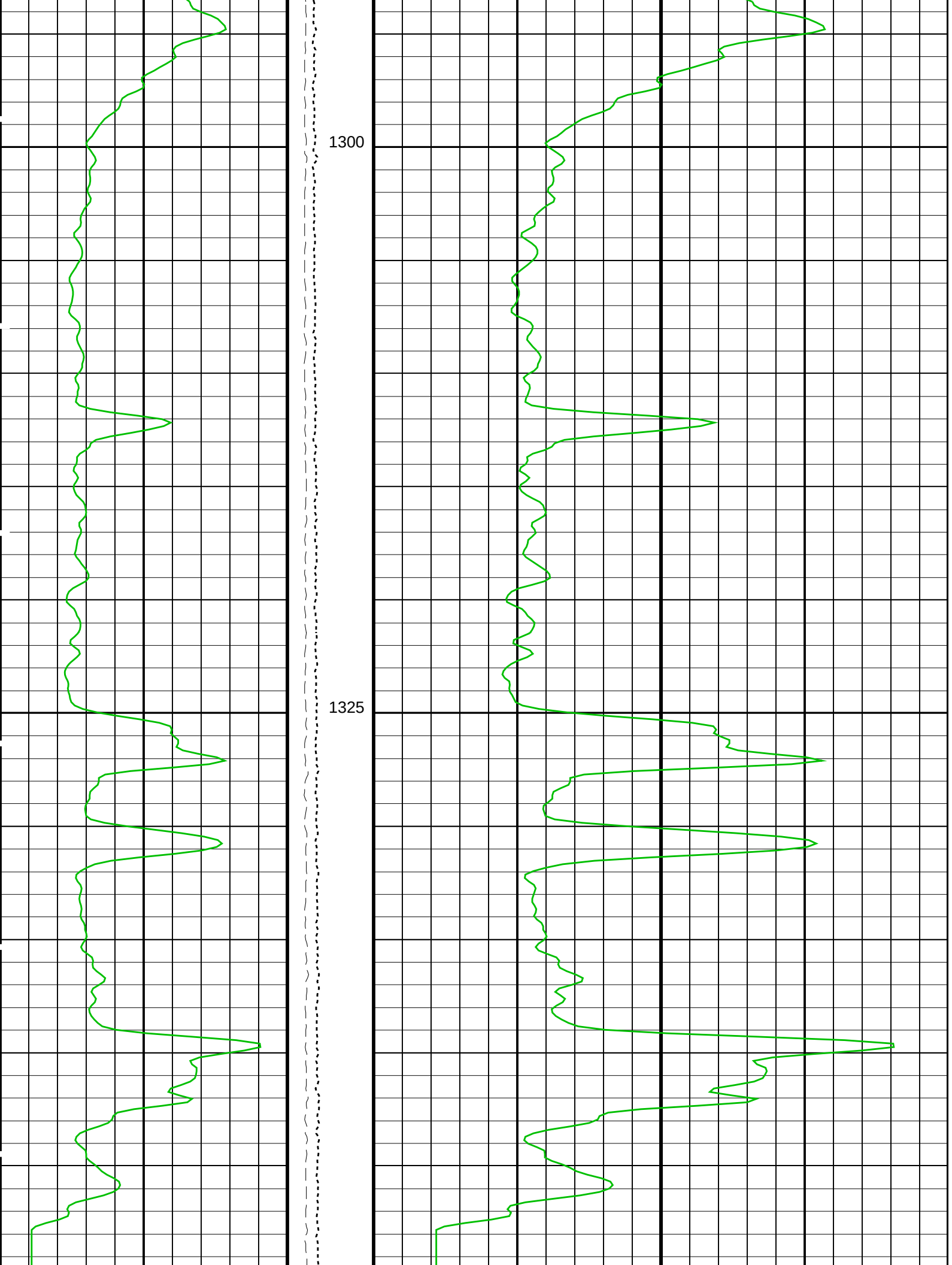
MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

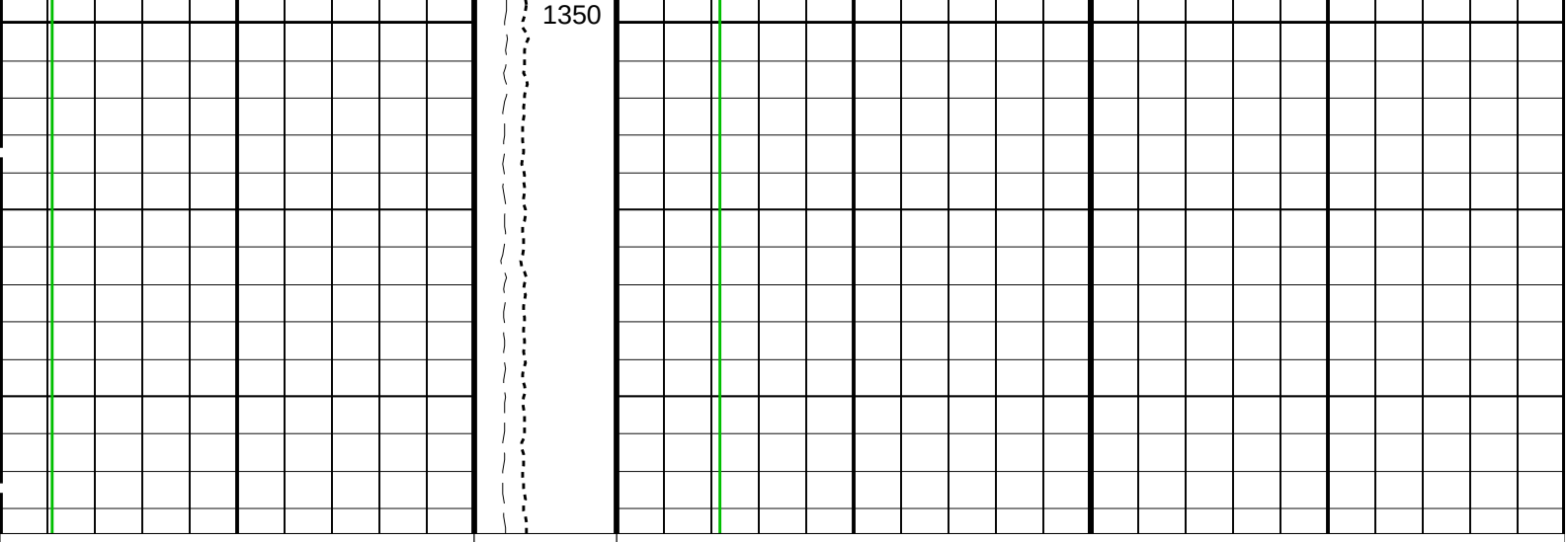
PIP SUMMARY

Time Mark Every 60 S

	Uncalibrated Downhole Force (DF) (LBF) 1000 … 3000	
Gamma Ray (GR) 0 (GAPI) 200	Tension (TENS) (LBF) 4000 … 6000	Gamma Ray (GR) 0 (GAPI) 200




1300
1325



Gamma Ray (GR) (GAPI)	Tension (TENS) (LBF)	Gamma Ray (GR) (GAPI)
0 — 200	4000 — 6000	0 — 200
	Uncalibrated Downhole Force (DF) (LBF) 1000 — 3000	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
PDCO	LFA: Live Fluid Analyzer Probe Depth Correction Offset	0 M
PDCO	MRPC: Power Cartridge Probe Depth Correction Offset	0 M

Format: Correlation Vertical Scale: 1:200 Graphics File Created: 04−Mar−2008 10:17

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Output DLIS Files

DEFAULT	MDT_OFA_048LUP	FN:71	PRODUCER	04−Mar−2008 10:17
RTB	MDT_OFA_048LUP	FN:72	PRODUCER	04−Mar−2008 10:17

Schlumberger

Correlation Pass 2
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd Well: WASABI−1

Input DLIS Files

DEFAULT	MDT_OFA_048LUP	FN:71	PRODUCER	04−Mar−2008 10:17	1363.7 M	1289.0 M

Output DLIS Files

DEFAULT	MDT_OFA_049PUP	FN:73	PRODUCER	04−Mar−2008 10:27	1363.7 M	1289.5 M
RTB	MDT_OFA_049PUP	FN:74	PRODUCER	04−Mar−2008 10:27	1363.7 M	1289.5 M

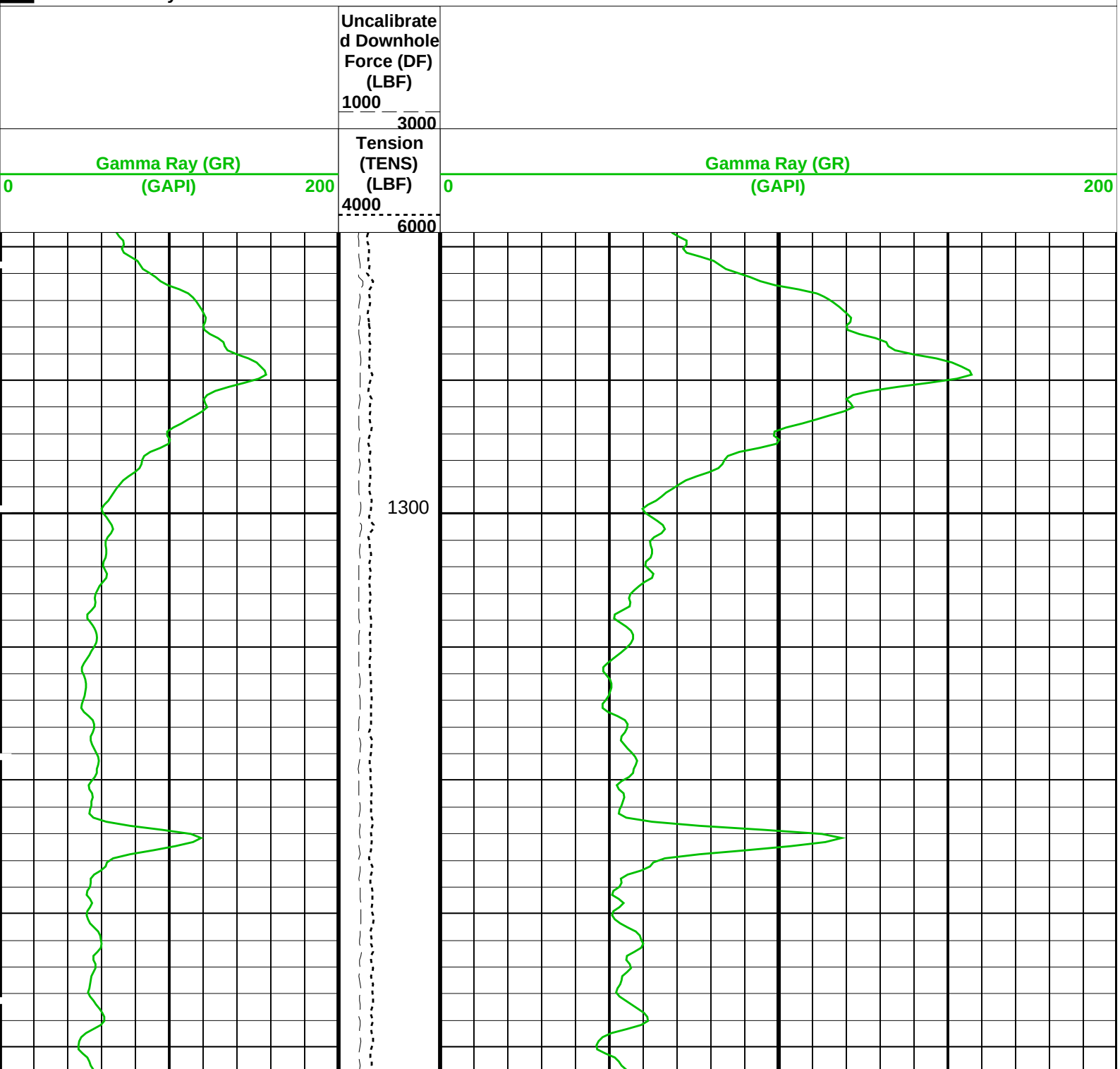
OP System Version: 15C0−309

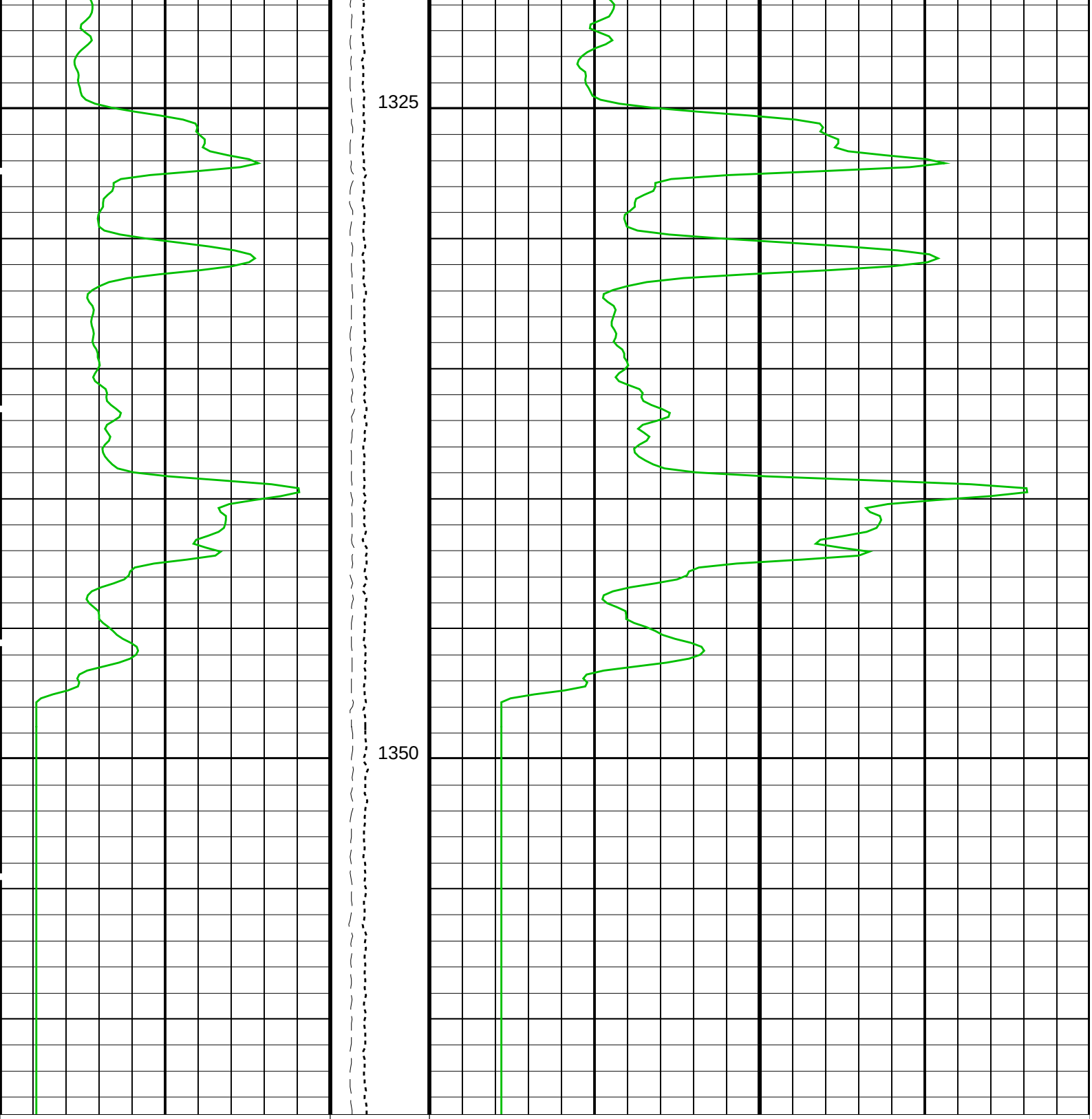
MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

PIP SUMMARY

Time Mark Every 60 S





Gamma Ray (GR) (GAPI)	Tension (TENS) (LBF)	Gamma Ray (GR) (GAPI)
0 — 200	4000 — 6000	0 — 200
	Uncalibrated Downhole Force (DF) (LBF) 1000 — 3000	

PIP SUMMARY

Time Mark Every 60 S

Parameters

PHS Name	Description	Value

DLIS Name	Description	Value	
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	NORMAL	

Format: Correlation Vertical Scale: 1:200 Graphics File Created: 04−Mar−2008 10:27

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_048LUP	FN:71	PRODUCER	04−Mar−2008 10:17	1363.7 M	1289.0 M

Output DLIS Files

DEFAULT	MDT_OFA_049PUP	FN:73	PRODUCER	04−Mar−2008 10:27		
RTB	MDT_OFA_049PUP	FN:74	PRODUCER	04−Mar−2008 10:27		

Schlumberger

Correlation Pass 3
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT	MDT_OFA_059LUP	FN:93	PRODUCER	04−Mar−2008 12:18	1480.3 M	1429.1 M
RTB	MDT_OFA_059LUP	FN:94	PRODUCER	04−Mar−2008 12:18	1480.3 M	1429.1 M

OP System Version: 15C0−309

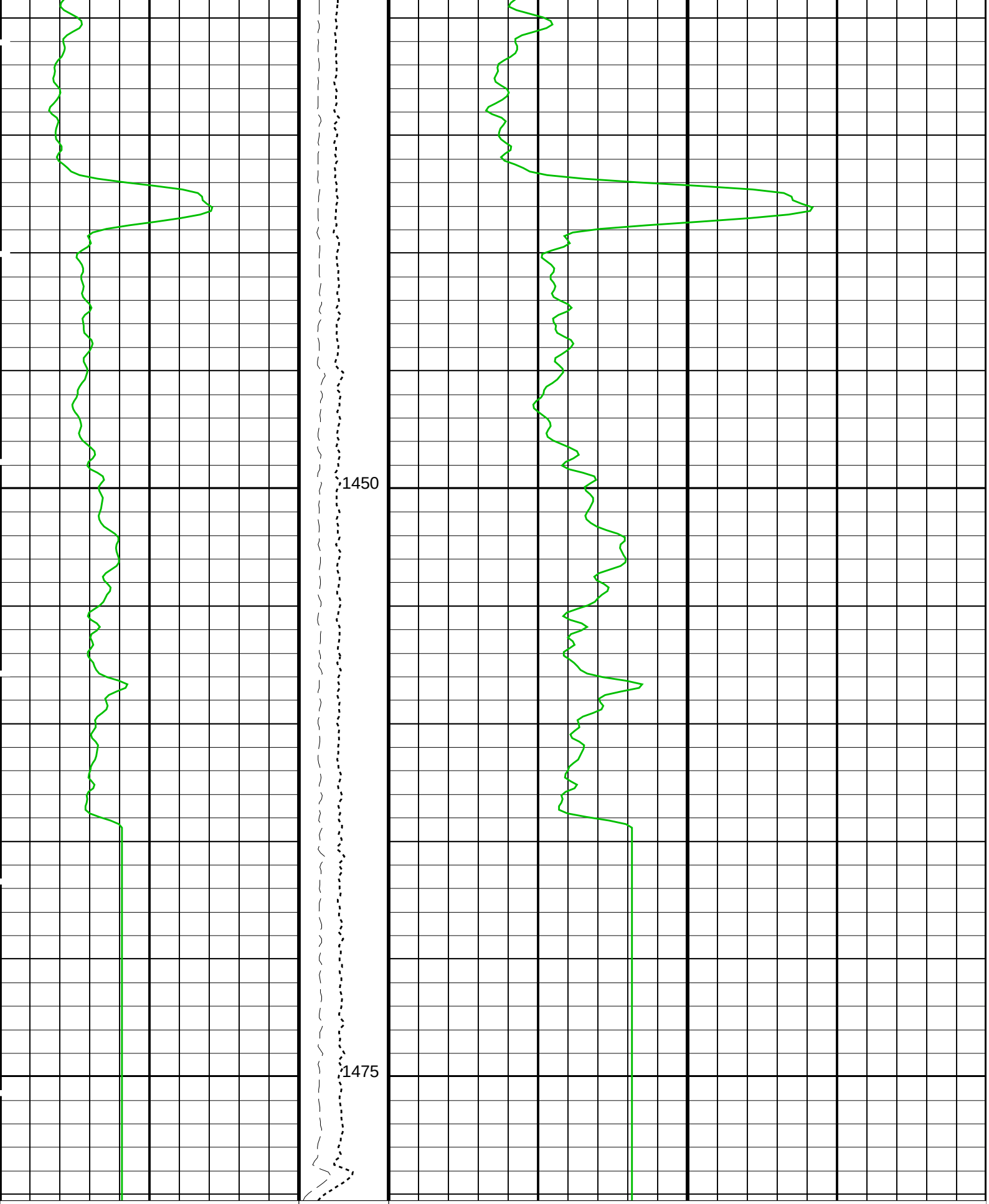
MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

PIP SUMMARY

Time Mark Every 60 S

	Uncalibrated Downhole Force (DF) (LBF) 1000 3000	
Gamma Ray (GR) 0 (GAPI) 200	Tension (TENS) (LBF) 4000 6000	Gamma Ray (GR) 0 (GAPI) 200



Gamma Ray (GR)	Tension (TENS)	Gamma Ray (GR)
0 (GAPI) 200	4000 6000	0 (GAPI) 200
	Uncalibrate	

d Downhole Force (DF) (LBF)
1000 _ _ _
3000

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
DORL	Depth Offset for Repeat Analysis	0.0	M

Format: Correlation **Vertical Scale: 1:200** **Graphics File Created: 04−Mar−2008 12:18**

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Output DLIS Files

DEFAULT	MDT_OFA_059LUP	FN:93	PRODUCER	04−Mar−2008 12:18
RTB	MDT_OFA_059LUP	FN:94	PRODUCER	04−Mar−2008 12:18

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Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Live Fluid Analyzer Wellsite Calibration − Spectrometer Channels							
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32							
Dark Mode − 0	0.02500	0.02742	0.02726	N/A	N/A	N/A	V
Dark Mode − 1	0.02500	0.02755	0.02741	N/A	N/A	N/A	V
Dark Mode − 2	0.02500	0.02697	0.02678	N/A	N/A	N/A	V
Dark Mode − 3	0.02500	0.02725	0.02713	N/A	N/A	N/A	V
Dark Mode − 4	0.02500	0.02724	0.02711	N/A	N/A	N/A	V
Dark Mode − 5	0.02500	0.02731	0.02718	N/A	N/A	N/A	V
Dark Mode − 6	0.02500	0.02735	0.02727	N/A	N/A	N/A	V
Dark Mode − 7	0.02500	0.02740	0.02728	N/A	N/A	N/A	V
Dark Mode − 8	0.02500	0.02780	0.02765	N/A	N/A	N/A	V
Dark Mode − 9	0.02500	0.02754	0.02744	N/A	N/A	N/A	V
Source Mode − 0	1.700	1.138	1.142	N/A	N/A	N/A	V
Source Mode − 1	1.700	1.048	1.055	N/A	N/A	N/A	V
Source Mode − 2	1.700	1.060	1.068	N/A	N/A	N/A	V
Source Mode − 3	1.700	0.5809	0.5855	N/A	N/A	N/A	V
Source Mode − 4	1.700	1.169	1.176	N/A	N/A	N/A	V
Source Mode − 5	1.700	1.017	1.013	N/A	N/A	N/A	V
Source Mode − 6	1.700	0.7577	0.7531	N/A	N/A	N/A	V
Source Mode − 7	1.700	1.191	1.194	N/A	N/A	N/A	V

Source Mode − 8	1.700	1.069	1.081	N/A	N/A	N/A	V
Source Mode − 9	1.700	2.440	2.457	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration − Gas Detector Channels
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Dark Mode − 0	0.02500	0.02744	0.02729	N/A	N/A	N/A	V
Dark Mode − 1	0.02500	0.02726	0.02712	N/A	N/A	N/A	V
Dark Mode − 2	0.02500	0.02713	0.02695	N/A	N/A	N/A	V
Dark Mode − 3	0.02500	0.02742	0.02730	N/A	N/A	N/A	V
Dark Mode − 4	0.02500	0.02744	0.02729	N/A	N/A	N/A	V
Dark Mode − 5	0.02500	0.02705	0.02689	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration − Gas Detector Source Intensity
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Source Intensity Dark Mode	0.02600	0.03064	0.03047	N/A	N/A	N/A	V
Source Intensity Source Mode	0.2500	0.2840	0.2846	N/A	N/A	N/A	V

Live Fluid Analyzer Master Calibration − Spectrometer
Master: 18−Feb−2008 12:21

Dry Dark Mode − 0	0.02500	0.02742	−−	−−	−−	−−	V
Dry Dark Mode − 1	0.02500	0.02755	−−	−−	−−	−−	V
Dry Dark Mode − 2	0.02500	0.02697	−−	−−	−−	−−	V
Dry Dark Mode − 3	0.02500	0.02725	−−	−−	−−	−−	V
Dry Dark Mode − 4	0.02500	0.02724	−−	−−	−−	−−	V
Dry Dark Mode − 5	0.02500	0.02731	−−	−−	−−	−−	V
Dry Dark Mode − 6	0.02500	0.02735	−−	−−	−−	−−	V
Dry Dark Mode − 7	0.02500	0.02740	−−	−−	−−	−−	V
Dry Dark Mode − 8	0.02500	0.02780	−−	−−	−−	−−	V
Dry Dark Mode − 9	0.02500	0.02754	−−	−−	−−	−−	V
Dry Source Mode − 0	1.700	1.138	−−	−−	−−	−−	V
Dry Source Mode − 1	1.700	1.048	−−	−−	−−	−−	V
Dry Source Mode − 2	1.700	1.060	−−	−−	−−	−−	V
Dry Source Mode − 3	1.700	0.5809	−−	−−	−−	−−	V
Dry Source Mode − 4	1.700	1.169	−−	−−	−−	−−	V
Dry Source Mode − 5	1.700	1.017	−−	−−	−−	−−	V
Dry Source Mode − 6	1.700	0.7577	−−	−−	−−	−−	V
Dry Source Mode − 7	1.700	1.191	−−	−−	−−	−−	V
Dry Source Mode − 8	1.700	1.069	−−	−−	−−	−−	V
Dry Source Mode − 9	1.700	2.440	−−	−−	−−	−−	V
Dry Measure Mode − 0	2.700	2.359	−−	−−	−−	−−	V
Dry Measure Mode − 1	2.700	2.409	−−	−−	−−	−−	V
Dry Measure Mode − 2	2.700	2.368	−−	−−	−−	−−	V
Dry Measure Mode − 3	2.700	2.140	−−	−−	−−	−−	V
Dry Measure Mode − 4	2.700	2.566	−−	−−	−−	−−	V
Dry Measure Mode − 5	2.700	2.493	−−	−−	−−	−−	V
Dry Measure Mode − 6	2.700	2.492	−−	−−	−−	−−	V
Dry Measure Mode − 7	2.700	2.491	−−	−−	−−	−−	V
Dry Measure Mode − 8	2.700	1.704	−−	−−	−−	−−	V
Dry Measure Mode − 9	2.700	2.292	−−	−−	−−	−−	V
Oil Dark Mode − 0	0.02500	0.02724	−−	−−	−−	−−	V
Oil Dark Mode − 1	0.02500	0.02744	−−	−−	−−	−−	V
Oil Dark Mode − 2	0.02500	0.02686	−−	−−	−−	−−	V
Oil Dark Mode − 3	0.02500	0.02714	−−	−−	−−	−−	V
Oil Dark Mode − 4	0.02500	0.02711	−−	−−	−−	−−	V
Oil Dark Mode − 5	0.02500	0.02718	−−	−−	−−	−−	V
Oil Dark Mode − 6	0.02500	0.02732	−−	−−	−−	−−	V
Oil Dark Mode − 7	0.02500	0.02728	−−	−−	−−	−−	V
Oil Dark Mode − 8	0.02500	0.02769	−−	−−	−−	−−	V
Oil Dark Mode − 9	0.02500	0.02743	−−	−−	−−	−−	V
Oil Source Mode − 0	1.700	1.141	−−	−−	−−	−−	V
Oil Source Mode − 1	1.700	1.053	−−	−−	−−	−−	V
Oil Source Mode − 2	1.700	1.066	−−	−−	−−	−−	V
Oil Source Mode − 3	1.700	0.5841	−−	−−	−−	−−	V
Oil Source Mode − 4	1.700	1.174	−−	−−	−−	−−	V
Oil Source Mode − 5	1.700	1.014	−−	−−	−−	−−	V
Oil Source Mode − 6	1.700	0.7532	−−	−−	−−	−−	V
Oil Source Mode − 7	1.700	1.194	−−	−−	−−	−−	V
Oil Source Mode − 8	1.700	1.078	−−	−−	−−	−−	V
Oil Source Mode − 9	1.700	2.453	−−	−−	−−	−−	V
Oil Measure Mode − 0	1.000	2.240	−−	−−	−−	−−	V
Oil Measure Mode − 1	1.000	2.790	−−	−−	−−	−−	V
Oil Measure Mode − 2	1.000	2.764	−−	−−	−−	−−	V
Oil Measure Mode − 3	1.000	2.527	−−	−−	−−	−−	V
Oil Measure Mode − 4	1.000	3.009	−−	−−	−−	−−	V
Oil Measure Mode − 5	1.000	2.872	−−	−−	−−	−−	V
Oil Measure Mode − 6	1.000	2.548	−−	−−	−−	−−	V
Oil Measure Mode − 7	1.000	2.836	−−	−−	−−	−−	V
Oil Measure Mode − 8	1.000	0.2992	−−	−−	−−	−−	V
Oil Measure Mode − 9	1.000	1.750	−−	−−	−−	−−	V
Water Dark Mode − 0	0.02500	0.02734	−−	−−	−−	−−	V
Water Dark Mode − 1	0.02500	0.02743	−−	−−	−−	−−	V
Water Dark Mode − 2	0.02500	0.02694	−−	−−	−−	−−	V

Water Dark Mode − 2	0.02500	0.02694	−−	−−	−−	−−	V
Water Dark Mode − 3	0.02500	0.02719	−−	−−	−−	−−	V
Water Dark Mode − 4	0.02500	0.02718	−−	−−	−−	−−	V
Water Dark Mode − 5	0.02500	0.02720	−−	−−	−−	−−	V
Water Dark Mode − 6	0.02500	0.02736	−−	−−	−−	−−	V
Water Dark Mode − 7	0.02500	0.02729	−−	−−	−−	−−	V
Water Dark Mode − 8	0.02500	0.02772	−−	−−	−−	−−	V
Water Dark Mode − 9	0.02500	0.02743	−−	−−	−−	−−	V
Water Source Mode − 0	1.700	1.137	−−	−−	−−	−−	V
Water Source Mode − 1	1.700	1.048	−−	−−	−−	−−	V
Water Source Mode − 2	1.700	1.061	−−	−−	−−	−−	V
Water Source Mode − 3	1.700	0.5812	−−	−−	−−	−−	V
Water Source Mode − 4	1.700	1.169	−−	−−	−−	−−	V
Water Source Mode − 5	1.700	1.015	−−	−−	−−	−−	V
Water Source Mode − 6	1.700	0.7537	−−	−−	−−	−−	V
Water Source Mode − 7	1.700	1.190	−−	−−	−−	−−	V
Water Source Mode − 8	1.700	1.071	−−	−−	−−	−−	V
Water Source Mode − 9	1.700	2.443	−−	−−	−−	−−	V
Water Measure Mode − 0	1.000	0.8187	−−	−−	−−	−−	V
Water Measure Mode − 1	1.000	2.666	−−	−−	−−	−−	V
Water Measure Mode − 2	1.000	2.636	−−	−−	−−	−−	V
Water Measure Mode − 3	1.000	2.400	−−	−−	−−	−−	V
Water Measure Mode − 4	1.000	2.811	−−	−−	−−	−−	V
Water Measure Mode − 5	1.000	2.204	−−	−−	−−	−−	V
Water Measure Mode − 6	1.000	0.03260	−−	−−	−−	−−	V
Water Measure Mode − 7	1.000	0.5636	−−	−−	−−	−−	V
Water Measure Mode − 8	1.000	0.5464	−−	−−	−−	−−	V
Water Measure Mode − 9	1.000	0.03018	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Gas Detector
Master: 18−Feb−2008 12:21

Dry Dark Mode − 0	0.02500	0.02744	−−	−−	−−	−−	V
Dry Dark Mode − 1	0.02500	0.02726	−−	−−	−−	−−	V
Dry Dark Mode − 2	0.02500	0.02713	−−	−−	−−	−−	V
Dry Dark Mode − 3	0.02500	0.02742	−−	−−	−−	−−	V
Dry Dark Mode − 4	0.02500	0.02744	−−	−−	−−	−−	V
Dry Dark Mode − 5	0.02500	0.02705	−−	−−	−−	−−	V
Dry Measure Mode − 0	0	0.1450	−−	−−	−−	−−	V
Dry Measure Mode − 1	0	0.2270	−−	−−	−−	−−	V
Dry Measure Mode − 2	0	0.4472	−−	−−	−−	−−	V
Dry Measure Mode − 3	0	0.4622	−−	−−	−−	−−	V
Dry Measure Mode − 4	0	0.4372	−−	−−	−−	−−	V
Dry Measure Mode − 5	0	0.3442	−−	−−	−−	−−	V
Dry Normalized − 0	0	0.2703	−−	−−	−−	−−	V
Dry Normalized − 1	0	0.4594	−−	−−	−−	−−	V
Dry Normalized − 2	0	0.9660	−−	−−	−−	−−	V
Dry Normalized − 3	0	1.000	−−	−−	−−	−−	V
Dry Normalized − 4	0	0.9425	−−	−−	−−	−−	V
Dry Normalized − 5	0	0.7294	−−	−−	−−	−−	V
Water Dark Mode − 0	0.02500	0.02740	−−	−−	−−	−−	V
Water Dark Mode − 1	0.02500	0.02720	−−	−−	−−	−−	V
Water Dark Mode − 2	0.02500	0.02702	−−	−−	−−	−−	V
Water Dark Mode − 3	0.02500	0.02739	−−	−−	−−	−−	V
Water Dark Mode − 4	0.02500	0.02737	−−	−−	−−	−−	V
Water Dark Mode − 5	0.02500	0.02698	−−	−−	−−	−−	V
Water Measure Mode − 0	0	0.1338	−−	−−	−−	−−	V
Water Measure Mode − 1	0	0.1462	−−	−−	−−	−−	V
Water Measure Mode − 2	0	0.1240	−−	−−	−−	−−	V
Water Measure Mode − 3	0	0.1120	−−	−−	−−	−−	V
Water Measure Mode − 4	0	0.1106	−−	−−	−−	−−	V
Water Measure Mode − 5	0	0.1035	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Gas Detector Source Intensity
Master: 18−Feb−2008 12:21

Source Intensity Dark Mode	0.02600	0.03064	−−	−−	−−	−−	V
Source Intensity Source Mode	0.2500	0.2840	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Absorption Coefficients
Master: 18−Feb−2008 12:25

Oil Absorption Coefficie − 0	0	0.02265	−−	−−	−−	−−	V
Oil Absorption Coefficie − 1	0	−0.06452	−−	−−	−−	−−	V
Oil Absorption Coefficie − 2	0	−0.06786	−−	−−	−−	−−	V
Oil Absorption Coefficie − 3	0	−0.07301	−−	−−	−−	−−	V
Oil Absorption Coefficie − 4	0	−0.06990	−−	−−	−−	−−	V
Oil Absorption Coefficie − 5	0	−0.06209	−−	−−	−−	−−	V
Oil Absorption Coefficie − 6	0	−0.009911	−−	−−	−−	−−	V
Oil Absorption Coefficie − 7	0	−0.05688	−−	−−	−−	−−	V
Oil Absorption Coefficie − 8	0	0.7904	−−	−−	−−	−−	V
Oil Absorption Coefficie − 9	0	0.1186	−−	−−	−−	−−	V
Water Absorption Coeffic − 0	0	0.4692	−−	−−	−−	−−	V
Water Absorption Coeffic − 1	0	−0.04451	−−	−−	−−	−−	V
Water Absorption Coeffic − 2	0	−0.04713	−−	−−	−−	−−	V

Water Absorption Coeffic − 3	0	−0.05030	−−	−−	−−	−−	V
Water Absorption Coeffic − 4	0	−0.04003	−−	−−	−−	−−	V
Water Absorption Coeffic − 5	0	0.05426	−−	−−	−−	−−	V
Water Absorption Coeffic − 6	0	2.673	−−	−−	−−	−−	V
Water Absorption Coeffic − 7	0	0.6622	−−	−−	−−	−−	V
Water Absorption Coeffic − 8	0	0.5094	−−	−−	−−	−−	V
Water Absorption Coeffic − 9	0	2.916	−−	−−	−−	−−	V

Scintillation Gamma−Ray − L Wellsite Calibration − Detector Calibration
Before: 4−Mar−2008 8:20

Gamma Ray Background	30.00	N/A	5.315	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	163.8	N/A	163.8	N/A	N/A	14.89	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

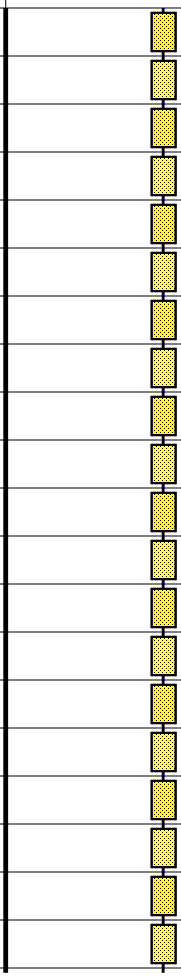
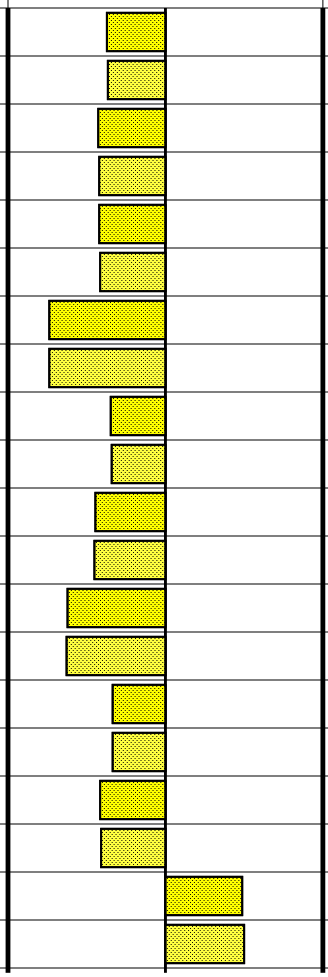
Live Fluid Analyzer / Equipment Identification

Primary Equipment:

Live Fluid Analyzer (TW)	MRFA − EA	8011

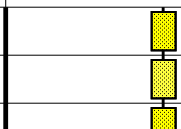
Auxiliary Equipment:

Live Fluid Analyzer Wellsite Calibration
Spectrometer Channels

Idx	Phase	Dark Mode V	Value	Idx	Phase	Source Mode V	Value
0	Master		0.02742	0	Master		1.138
	Before		0.02726		Before		1.142
1	Master		0.02755	1	Master		1.048
	Before		0.02741		Before		1.055
2	Master		0.02697	2	Master		1.060
	Before		0.02678		Before		1.068
3	Master		0.02725	3	Master		0.5809
	Before		0.02713		Before		0.5855
4	Master		0.02724	4	Master		1.169
	Before		0.02711		Before		1.176
5	Master		0.02731	5	Master		1.017
	Before		0.02718		Before		1.013
6	Master		0.02735	6	Master		0.7577
	Before		0.02727		Before		0.7531
7	Master		0.02740	7	Master		1.191
	Before		0.02728		Before		1.194
8	Master		0.02780	8	Master		1.069
	Before		0.02765		Before		1.081
9	Master		0.02754	9	Master		2.440
	Before		0.02744		Before		2.457
		0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)				0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Live Fluid Analyzer Wellsite Calibration
Gas Detector Channels

Idx	Phase	Dark Mode V	Value
0	Master		0.02744
	Before		0.02729
1	Master		0.02726
	Before		0.02712

	Before		0.02712
2	Master		0.02713
	Before		0.02695
3	Master		0.02742
	Before		0.02730
4	Master		0.02744
	Before		0.02729
5	Master		0.02705
	Before		0.02689
	0.01700 (Minimum)	0.02500 (Nominal)	0.03300 (Maximum)

Master: 18−Feb−2008 12:21

Before: 18−Feb−2008 12:32

Live Fluid Analyzer Wellsite Calibration

Gas Detector Source Intensity

Phase	Source Intensity Dark Mode V	Value	Phase	Source Intensity Source Mode V	Value
Master		0.03064	Master		0.2840
Before		0.03047	Before		0.2846
	0.01700 (Minimum) 0.02600 (Nominal) 0.03500 (Maximum)			0.1900 (Minimum) 0.2500 (Nominal) 0.3100 (Maximum)	

Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Live Fluid Analyzer Master Calibration

Spectrometer

Idx	Dry Dark Mode V	Value
0		0.02742
1		0.02755
2		0.02697
3		0.02725
4		0.02724
5		0.02731
6		0.02735
7		0.02740
8		0.02780
9		0.02754
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Dry Source Mode V	Value
0		1.138
1		1.048
2		1.060
3		0.5809
4		1.169
5		1.017
6		0.7577
7		1.191
8		1.069
9		2.440
	0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Idx	Dry Measure Mode V	Value
0		2.359
1		2.409
2		2.368
3		2.140
4		2.566
5		2.493
6		2.492
7		2.491
8		1.704
9		2.292
	1.350 (Minimum) 2.700 (Nominal) 3.200 (Maximum)	

Idx	Oil Dark Mode V	Value
0		0.02724
1		0.02744
2		0.02686
3		0.02714
4		0.02711
5		0.02718
6		0.02732
7		0.02728
8		0.02769
9		0.02743
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Oil Source Mode V	Value
0		1.141
1		1.053
2		1.066
3		0.5841
4		1.174
5		1.014
6		0.7532
7		1.194
8		1.078
9		2.453
	0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Idx	Oil Measure Mode V	Value
0		2.240
1		2.790
2		2.764
3		2.527
4		3.009
5		2.872
6		2.548
7		2.836
8		0.2992
9		1.750
	0 (Minimum) 1.000 (Nominal) 4.500 (Maximum)	

Idx	Water Dark Mode V	Value
0		0.02734

Idx	Water Source Mode V	Value
0		1.137

Idx	Water Measure Mode V	Value
0		0.8187

1		0.02743	1		1.048	1		2.666
2		0.02694	2		1.061	2		2.636
3		0.02719	3		0.5812	3		2.400
4		0.02718	4		1.169	4		2.811
5		0.02720	5		1.015	5		2.204
6		0.02736	6		0.7537	6		0.03260
7		0.02729	7		1.190	7		0.5636
8		0.02772	8		1.071	8		0.5464
9		0.02743	9		2.443	9		0.03018
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)			0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)			0 (Minimum) 1.000 (Nominal) 4.500 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Gas Detector

Idx	Dry Dark Mode V	Value
0		0.02744
1		0.02726
2		0.02713
3		0.02742
4		0.02744
5		0.02705
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Dry Measure Mode V	Value
0		0.1450
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
1		0.2270
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
2		0.4472
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
3		0.4622
	0.3000 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
4		0.4372
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
5		0.3442
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	

Idx	Dry Normalized V	Value
0		0.2703
	0.1000 (Minimum) 0.2400 (Nominal) 0.5000 (Maximum)	
1		0.4594
	0.2000 (Minimum) 0.4600 (Nominal) 0.8000 (Maximum)	
2		0.9660
	0.7000 (Minimum) 1.010 (Nominal) 1.300 (Maximum)	
3		1.000
	1.000 (Minimum) 1.000 (Nominal) 1.000 (Maximum)	
4		0.9425
	0.6000 (Minimum) 0.9200 (Nominal) 1.200 (Maximum)	
5		0.7294
	0.4000 (Minimum) 0.7500 (Nominal) 1.000 (Maximum)	

Idx	Water Dark Mode V	Value
0		0.02740
1		0.02720
2		0.02702
3		0.02739
4		0.02737
5		0.02698
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Water Measure Mode V	Value
0		0.1338
	0 (Minimum) 0.1000 (Nominal) 0.3000 (Maximum)	
1		0.1462
	0 (Minimum) 0.05000 (Nominal) 0.3000 (Maximum)	
2		0.1240
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
3		0.1120
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
4		0.1106
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
5		0.1035
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Gas Detector Source Intensity

Source Intensity Dark Mode V	Value
	0.03064
0.01700 (Minimum) 0.02600 (Nominal) 0.03500 (Maximum)	

Source Intensity Source Mode V	Value
	0.2840
0.1900 (Minimum) 0.2500 (Nominal) 0.3100 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Absorption Coefficients

Idx	Oil Absorption Coefficients V	Value	Idx	Water Absorption Coefficients V	Value
0		0.02265	0		0.4692
−0.010000 (Minimum)	0.05000 (Nominal)	0.1100 (Maximum)	0.4200 (Minimum)	0.4800 (Nominal)	0.5400 (Maximum)
1		−0.06452	1		−0.04451
−0.1300 (Minimum)	−0.07000 (Nominal)	−0.010000 (Maximum)	−0.1200 (Minimum)	−0.06000 (Nominal)	0 (Maximum)
2		−0.06786	2		−0.04713
−0.1300 (Minimum)	−0.07000 (Nominal)	−0.010000 (Maximum)	−0.1200 (Minimum)	−0.06000 (Nominal)	0 (Maximum)
3		−0.07301	3		−0.05030
−0.1300 (Minimum)	−0.07000 (Nominal)	−0.010000 (Maximum)	−0.1200 (Minimum)	−0.06000 (Nominal)	0 (Maximum)
4		−0.06990	4		−0.04003
−0.1300 (Minimum)	−0.07000 (Nominal)	−0.010000 (Maximum)	−0.1000 (Minimum)	−0.04000 (Nominal)	0.02000 (Maximum)
5		−0.06209	5		0.05426
−0.1200 (Minimum)	−0.06000 (Nominal)	0 (Maximum)	0 (Minimum)	0.06000 (Nominal)	0.1200 (Maximum)
6		−0.009911	6		2.673
−0.06000 (Minimum)	0 (Nominal)	0.06000 (Maximum)	2.430 (Minimum)	2.700 (Nominal)	2.970 (Maximum)
7		−0.05688	7		0.6622
−0.1100 (Minimum)	−0.05000 (Nominal)	0.010000 (Maximum)	0.5500 (Minimum)	0.6200 (Nominal)	0.6900 (Maximum)
8		0.7904	8		0.5094
0.6700 (Minimum)	0.7500 (Nominal)	0.8300 (Maximum)	0.4500 (Minimum)	0.5100 (Nominal)	0.5700 (Maximum)
9		0.1186	9		2.916
0.06000 (Minimum)	0.1200 (Nominal)	0.1800 (Maximum)	2.700 (Minimum)	3.000 (Nominal)	50.00 (Maximum)

Master: 18−Feb−2008 12:25

Scintillation Gamma−Ray − L / Equipment Identification

Primary Equipment:		
Scintillation Gamma Cartridge	SGC − SA	735
Scintillation Gamma Detector	SGD − TAB	3465
Auxiliary Equipment:		
Scintillation Gamma Housing	SGH − K	403
Gamma Source Radioactive	GSR − U/Y	

Scintillation Gamma−Ray − L Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		5.315	Before		163.8	Before		165.0
0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	148.9 (Minimum)	163.8 (Nominal)	178.7 (Maximum)	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)

Before: 4−Mar−2008 8:20

Schlumberger

Well:	**WASABI−1**
Field:	**Apache/VIC/P−58/WASABI−1**
Rig:	**West Triton**
Country:	**Australia**

MDT−GR
Suite−1 Run−3
MDT Pretest

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig: West Triton
Field: Apache/VIC/P−58/WASABI−1
Location: Bass Strait
Well: WASABI−1
Company: Apache Northwest Pty Ltd

MDT−GR
Suite−1 Run−3
MDT Sampling

LOCATION

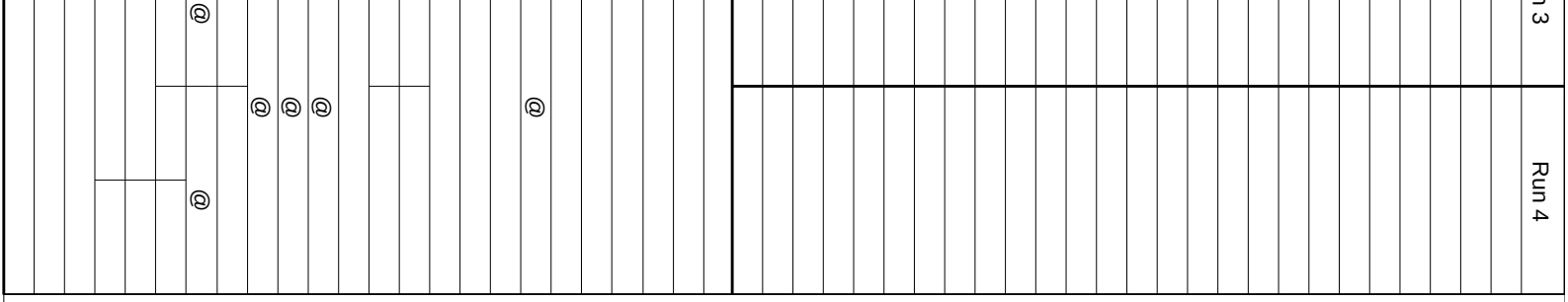
Bass Strait
Northing : 5,739,963.350 m
Easting : 522,993.588 m

Elev.:
G.L. −27 m
D.F. 39 m

Permanent Datum: AHD — Elev.: 0 m
Log Measured From: Drill Floor (RT) — 39.0 m above Perm. Datum
Drilling Measured From: Drill Floor (RT)

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48 deg	147 15' 49.147" E	38 29' 18.157" S

	Run 1	Run 2	Run 3
Logging Date	4−Mar−2008		
Run Number	3		
Depth Driller	2313 m		
Schlumberger Depth	Not Tagged		
Bottom Log Interval	1440 m		
Top Log Interval	1268.5 m		
Casing Driller Size @ Depth	13.375 in @ 2313 m	@	@
Casing Schlumberger	854 m		
Bit Size	12.250 in		
Type Fluid In Hole	KCl/Polymer		
MUD Density / Viscosity	1.21 g/cm3 / 50 s		
MUD Fluid Loss / PH	5 cm3 / 8.7		
MUD Source Of Sample	Flowline		
RM @ Measured Temperature	0.091 ohm.m @ 22 degC	@	@
RMF @ Measured Temperature	0.079 ohm.m @ 22 degC	@	@
RMC @ Measured Temperature	0.109 ohm.m @ 22 degC	@	@
Source RMF / RMC	Press / Press		
RM @ MRT / RMF @ MRT	0.049 @ 59 / 0.043 @ 59	@ / @	@ / @
Maximum Recorded Temperatures	59 degC / 59		
Circulation Stopped / Time	3−Mar−2008 / 10:25		
Logger On Bottom / Time	4−Mar−2008 / 12:27		
Unit Number / Location	41 / AUSL		
Recorded By	A. Dandi/M.Dawson/K. AlBarhi		
Witnessed By	H.Little / A.Cruickshank		



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051	Conveyance Method:	Wireline
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Rig Type:	Offshore_Fixed
Wheel Correction 1:	−5	Calibration Offset:	−610.00		
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: VSI	OS1:
OS2: PEX−HRLA−MSIP−GR−S	OS2:
OS3: CST−GR	OS3:
OS4: VSI	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tool string run as per tool sketch.	
Log correlated to Schlumberger GeoVISION Resistivity Log dated 1−Mar−2008.	
Large Hole Kit and Large−Diameter probe used.	
Sampling was attempted in 2 stations as per client request:	
− Station @ 1328m: 3x 450cc samples were taken. Samples were transferred @ surface by PetroTech as per client request.	
− Station @ 1440m: Large drawdown was encountered due to formation sanding (partial probe blockage), hence client decided to abort station after 3 attempts.	

abort station after 3 attempts.

Tool got hold up @ 1500m MD, client decided to abort lower points and POOH.

Quartz gauge corrections applied: QGCA (Both), QGFD (1 g/cc), QGDA (As per deviation survey).
Max. recorded temperature was 59 degC sourced from LEH−QT thermometers.

Additional mud properties taken from Mud Report dated 2−Mar−2008:
Chlorides = 49,000 mg/L, Barite = 5.00 %
KCL = 9 (% by Wt.)

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL08349210		SERVICE ORDER #:		
PROGRAM VERSION:	15C0−309		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

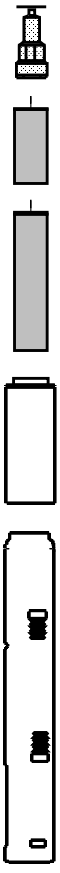
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

MRPP−AA
GSR−U/Y
WITM (CTS)−A

DOWNHOLE EQUIPMENT



LEH−QT 18.82
LEH−QT 2800

TCC−BF 17.93
ECH−KC 2653
TCC−BF 653

SGT−L 17.01
SGH−K 403
SGC−SA 735
SGD−TAB 3465

MRPC 15.34
MRPC−BB

MRMS_1 13.82
BOTT_6−AA 3358
BOTT_5−AA 3354
BOTT_4−AA 3353
BOTT_3−AA 3351
BOTT_2−AA 3347
BOTT_1−AA 3300
MRMS_1−CA 324

LFA 9.80
MRFA−EA 8011

MRPO_UD 8.25
MRPOUD−DU−AA

MRPOUD−CA 494

POUD ___ 4.58

MRHY_1 5.01
MRHY_1−AB 112

HY1 ___ 2.01

MRPS_1 2.44
MRPS_1−DBZ 171

DF
PS1−CQG−G HV
PS1−RES
Tension PS1 ___ TOOL ZERO

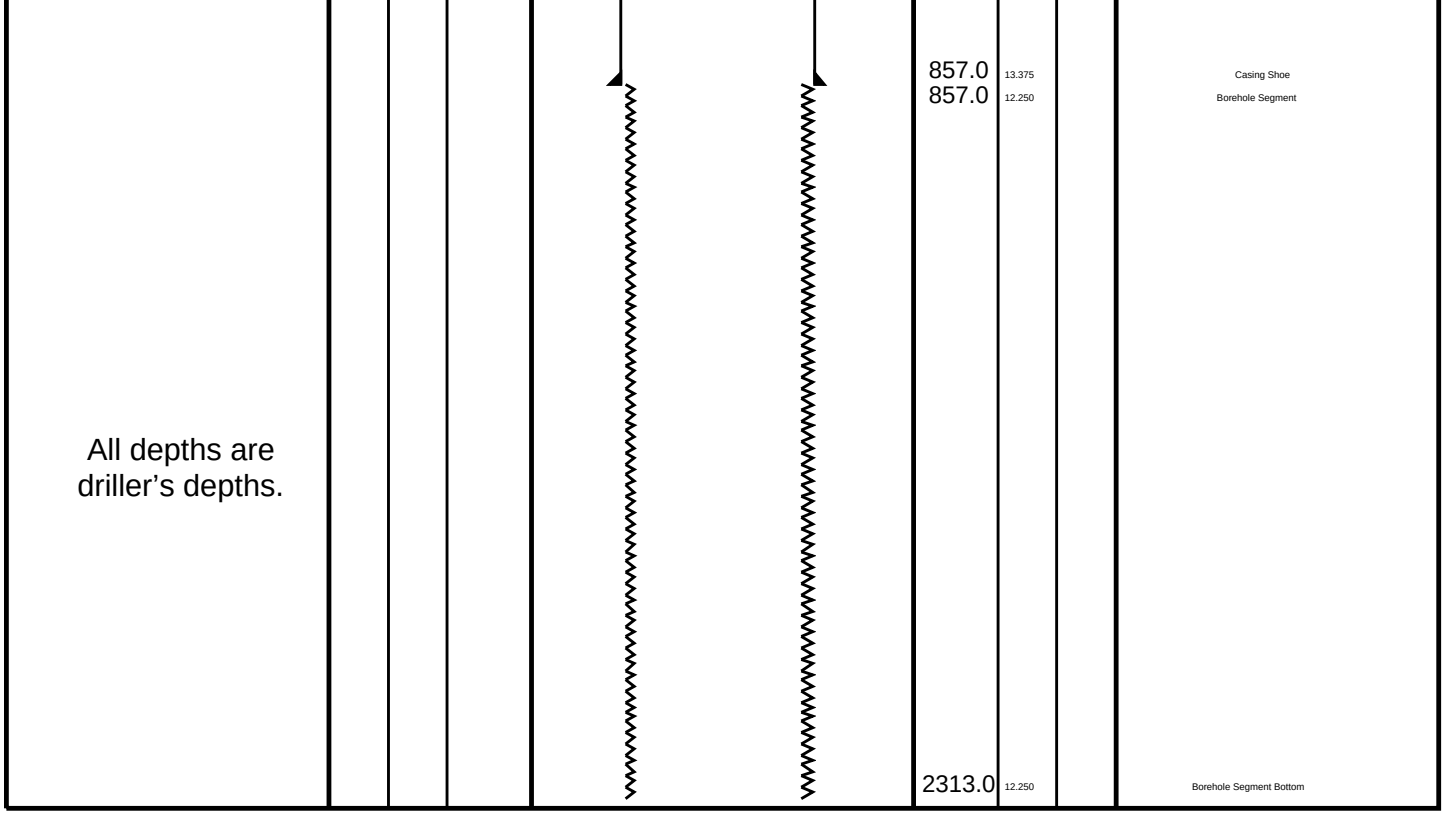
TOOL BOTTOM

MAXIMUM STRING DIAMETER 4.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd
Well: Wasabi−1
Field: Apache/VIC/P−58/WASABI−
State: Victoria
Country: Australia

Drawing Date: 7−Mar−2008
Rig Name: West Triton
Reference Datum: AHD
Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe

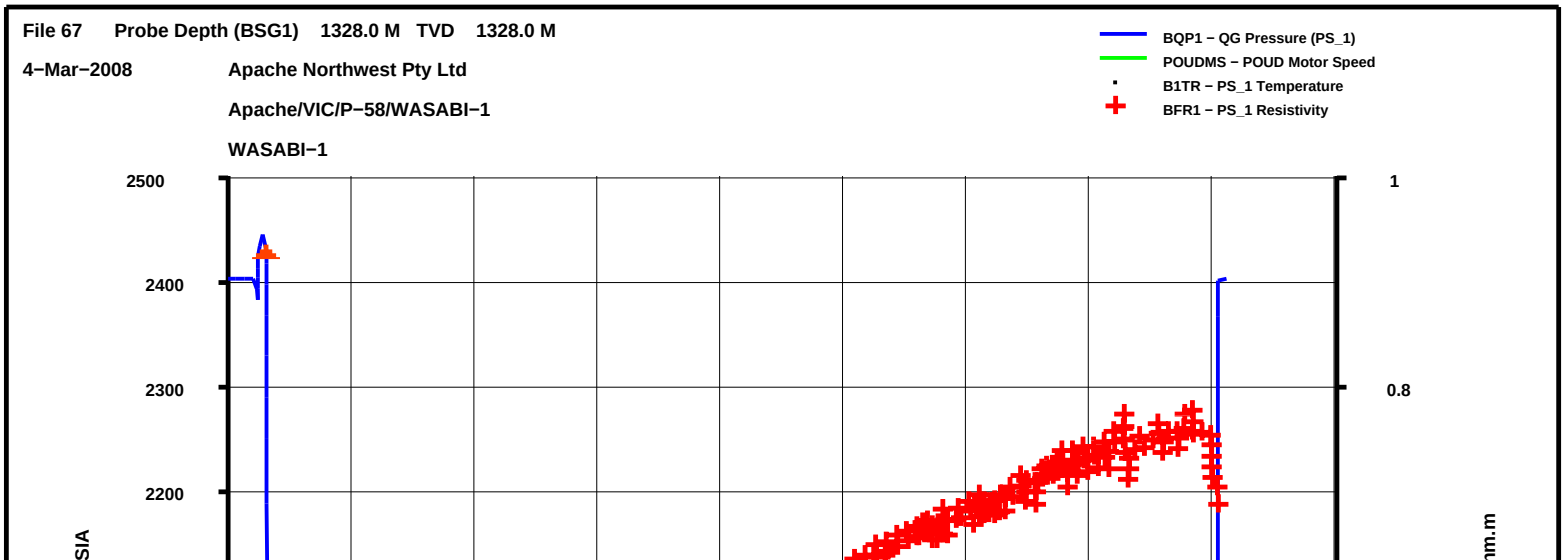


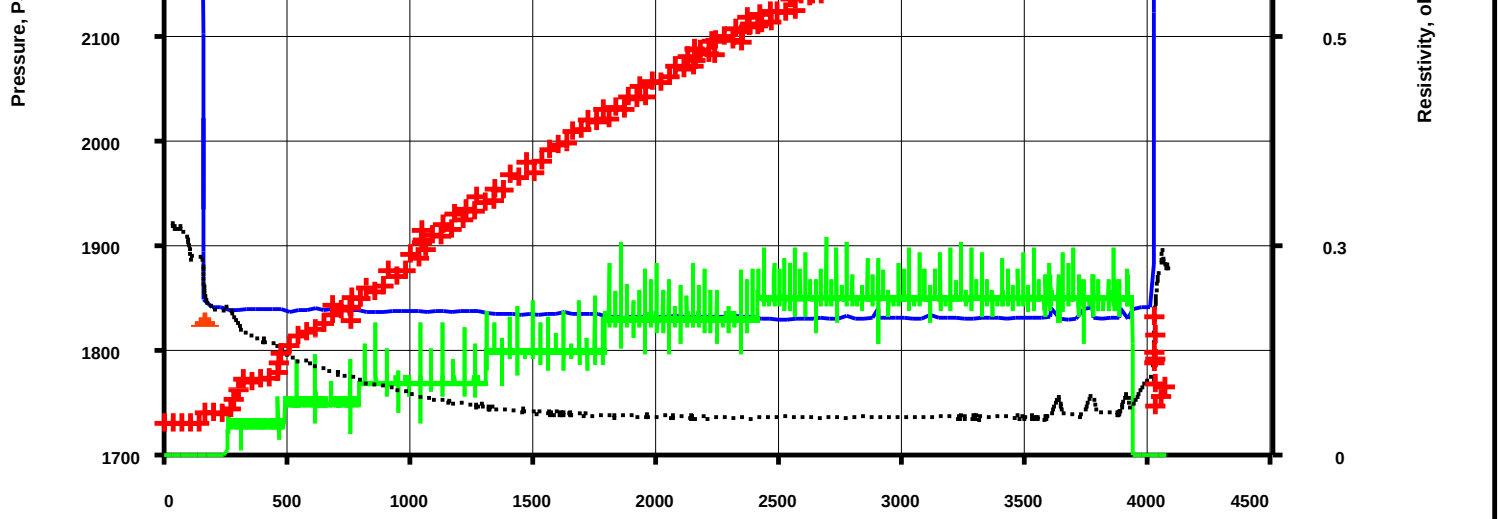
All depths are driller's depths.

Schlumberger

Station @ 1328m

MAXIS Field Log





Start of Test Time: 152.4 sec

Start of Build−up Time: 167.4 sec

Reference pressure st start of build−up (BSG1) 2430.6 PSIG.

Input DLIS Files

DEFAULT	MDT_OFA_067LTP	FN:109	PRODUCER	04−Mar−2008 13:21	1328.0 M	10.4 M

Output DLIS Files

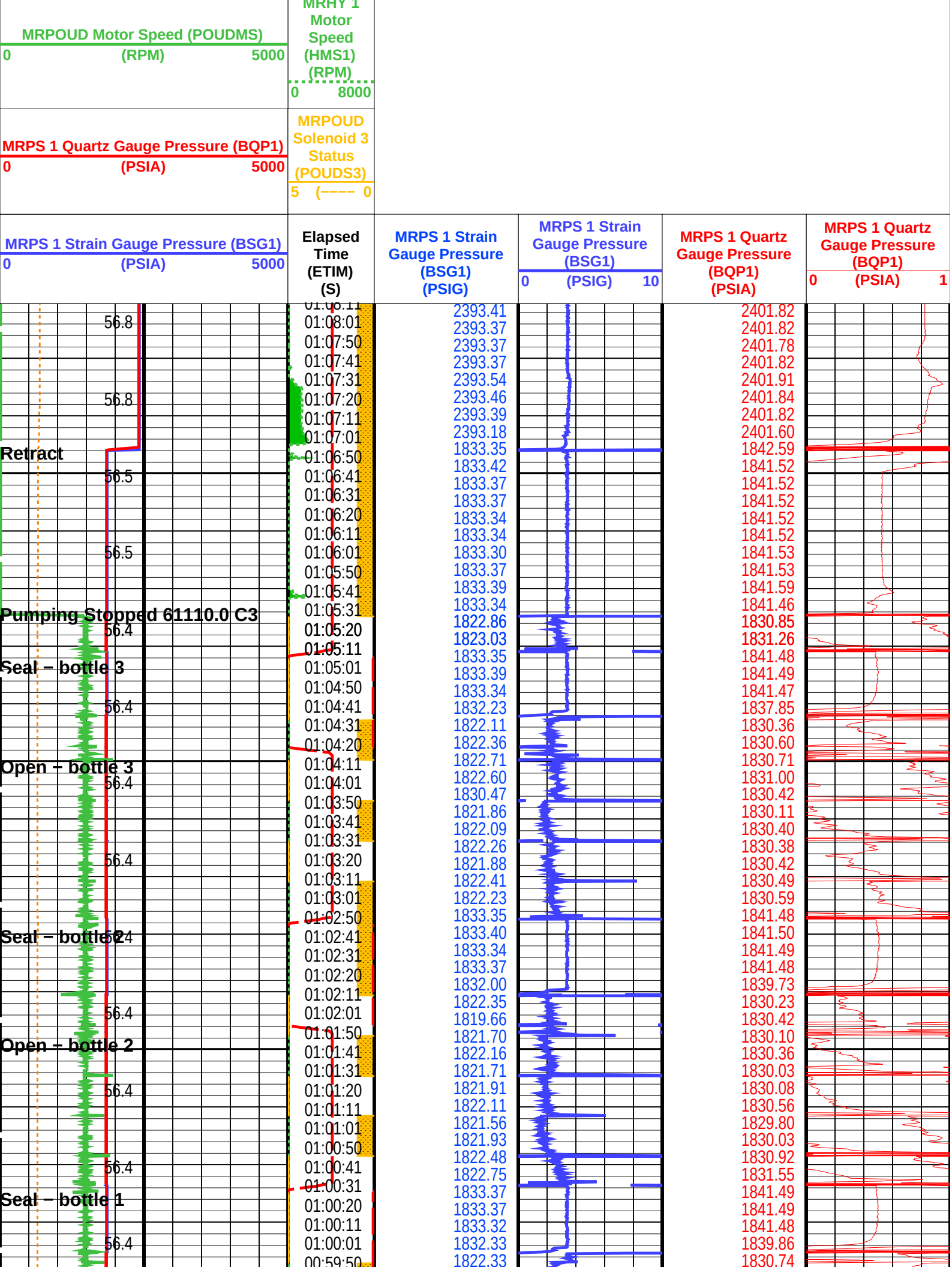
DEFAULT	MDT_OFA_082PTP	FN:139	PRODUCER	04−Mar−2008 16:29	1328.0 M	10.4 M
RTB	MDT_OFA_082PTP	FN:140	PRODUCER	04−Mar−2008 16:29	1328.0 M	10.4 M

Elapsed Time (s)	Event Summary
4015.8	Retract Single Probe Module (MRPS) 1
3931.8	Pumping Stopped 61110.0 C3 Dual Up−down Pumpout Module (MRPOUD)
3904.2	Seal MDT Multi−Sample (MRMS) 1, bottle 3
3852.3	Open MDT Multi−Sample (MRMS) 1, bottle 3, sample number = 3
3764.1	Seal MDT Multi−Sample (MRMS) 1, bottle 2
3707.4	Open MDT Multi−Sample (MRMS) 1, bottle 2, sample number = 2
3627.0	Seal MDT Multi−Sample (MRMS) 1, bottle 1
3567.0	Open MDT Multi−Sample (MRMS) 1, bottle 1, sample number = 1
257.7	Pump Up Started Dual Up−down Pumpout Module (MRPOUD)
152.4	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
67.5	Probe Set @ 1328.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)		MRMS 1 Upper Valve Position (MUP1) (−−−−
100 (DEGC) 150		5 260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0 (RPM) 5000
MRHY 1 Motor Speed (HMS1) (RPM)
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MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 5000
MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0
MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIA) 5000
Elapsed Time (ETIM) (S)
MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)
MRPS 1 Strain Gauge Pressure (BSG1)
0 (PSIG) 10
MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)
MRPS 1 Quartz Gauge Pressure (BQP1)
0 (PSIA) 1
Retract
Pumping Stopped 61110.0 C3
Seal – bottle 3
Open – bottle 3
Seal – bottle 2
Open – bottle 2
Seal – bottle 1
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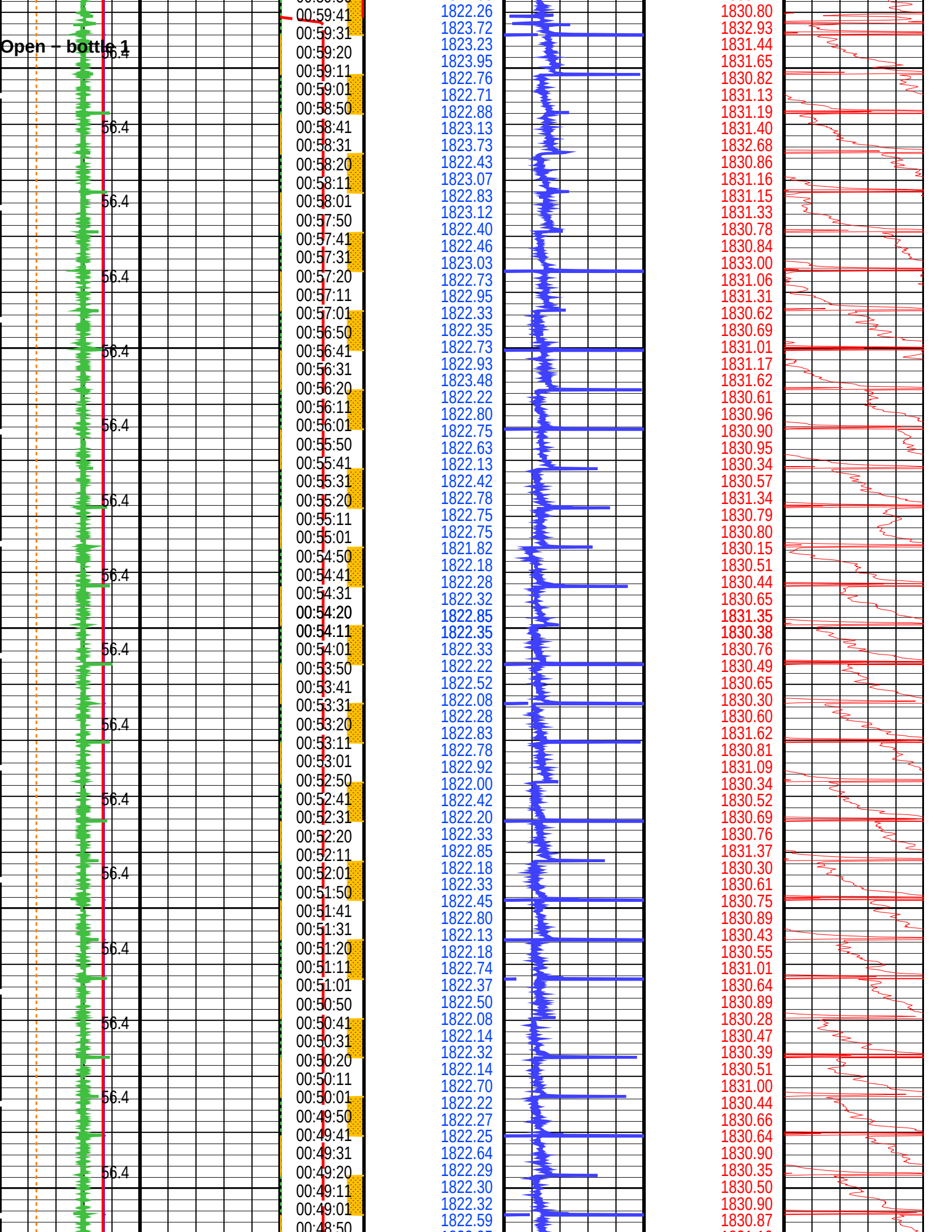
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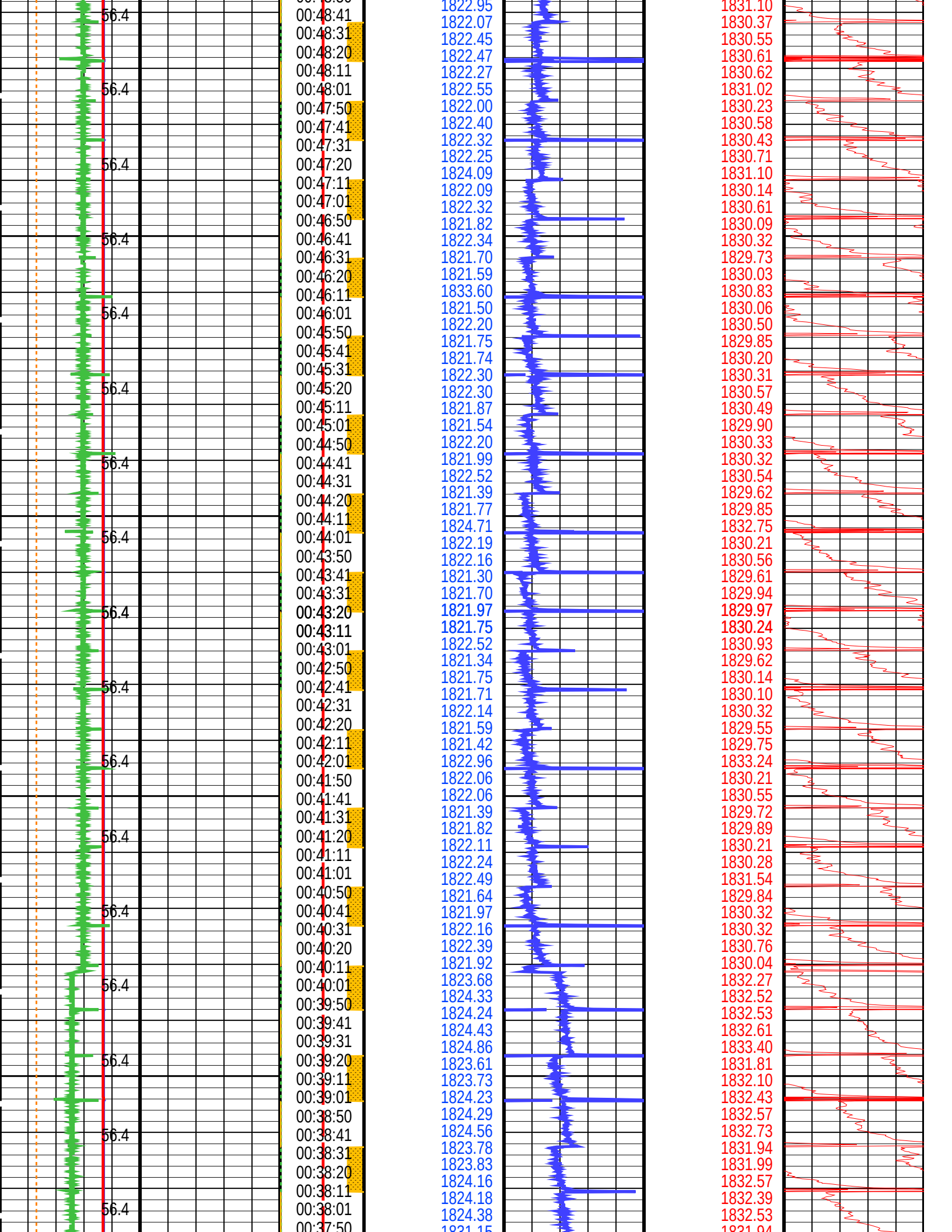
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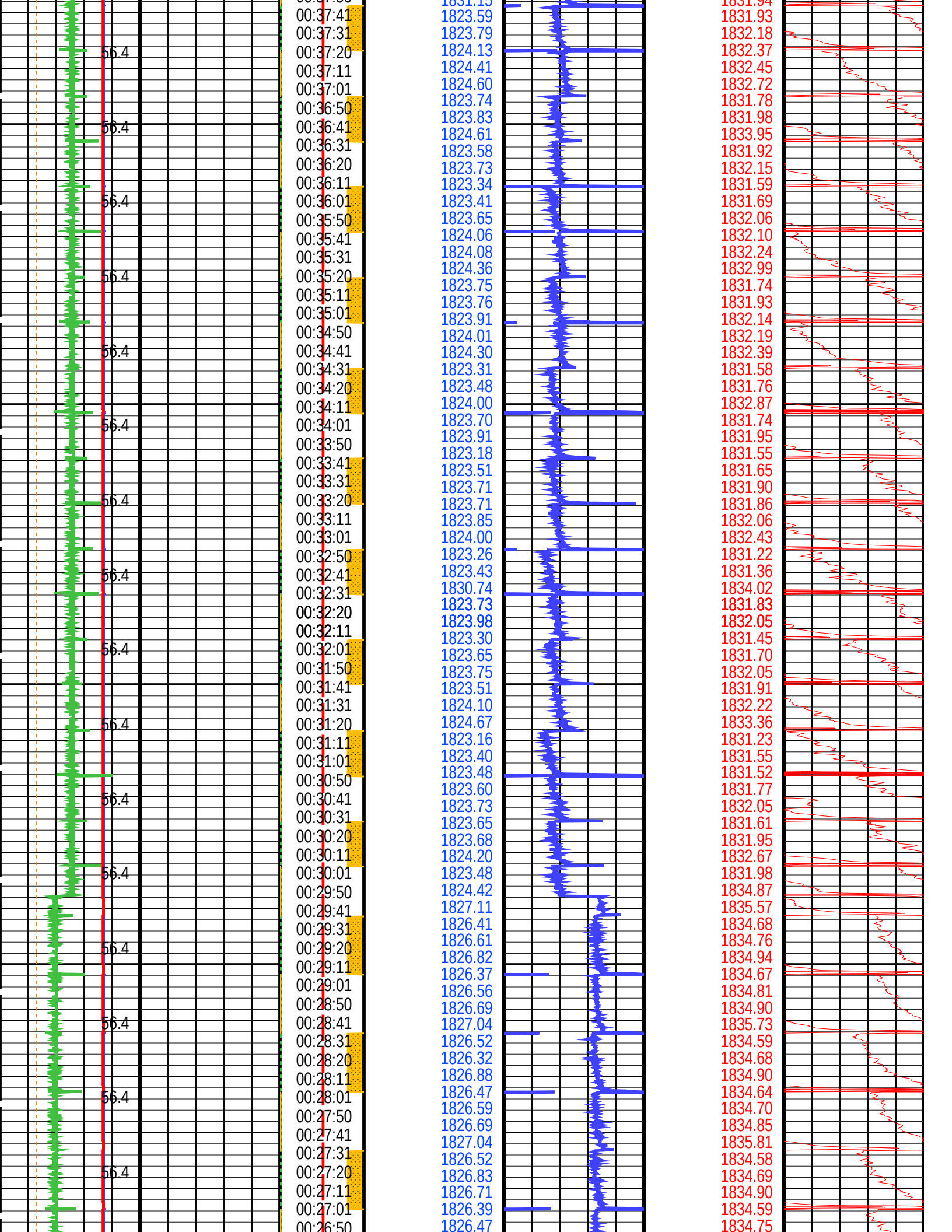
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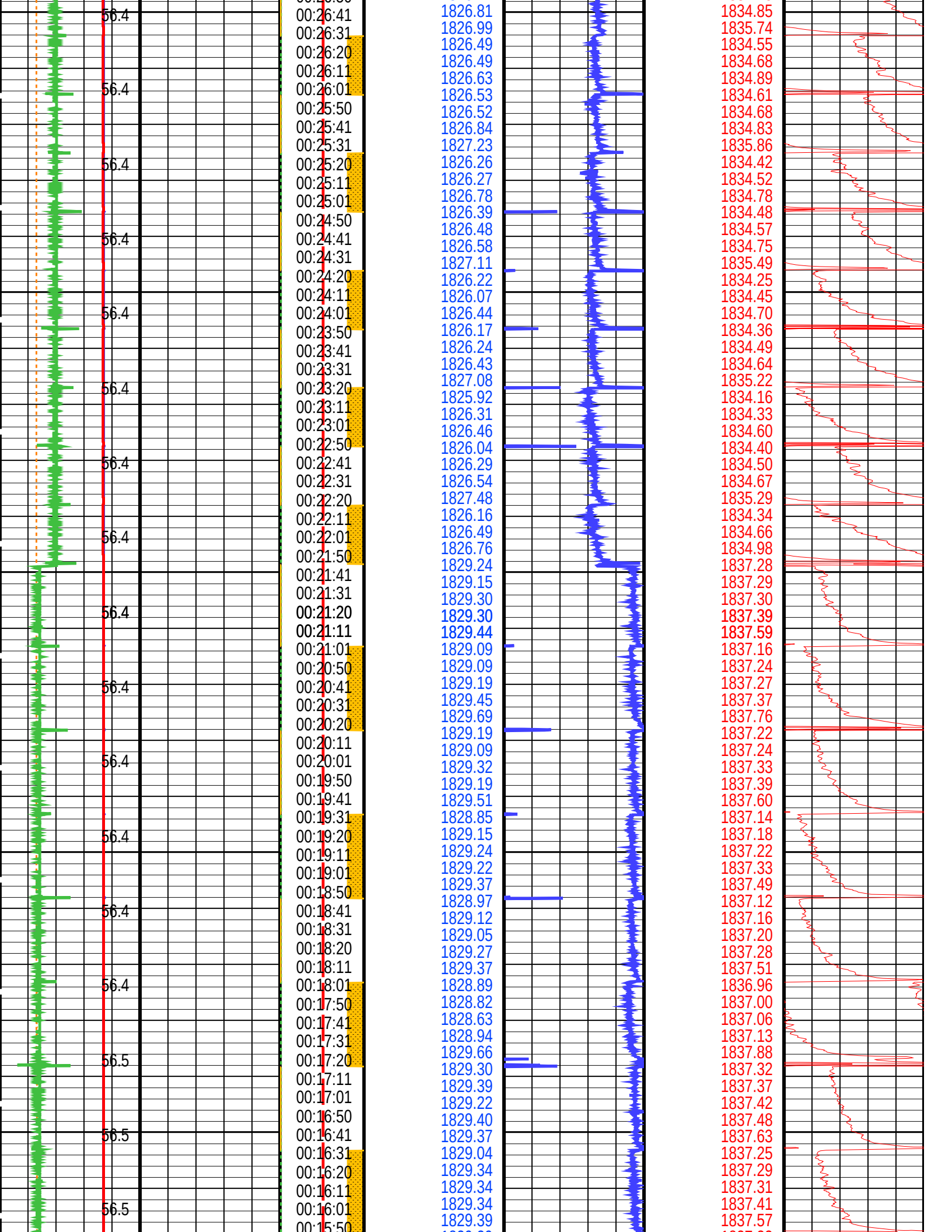
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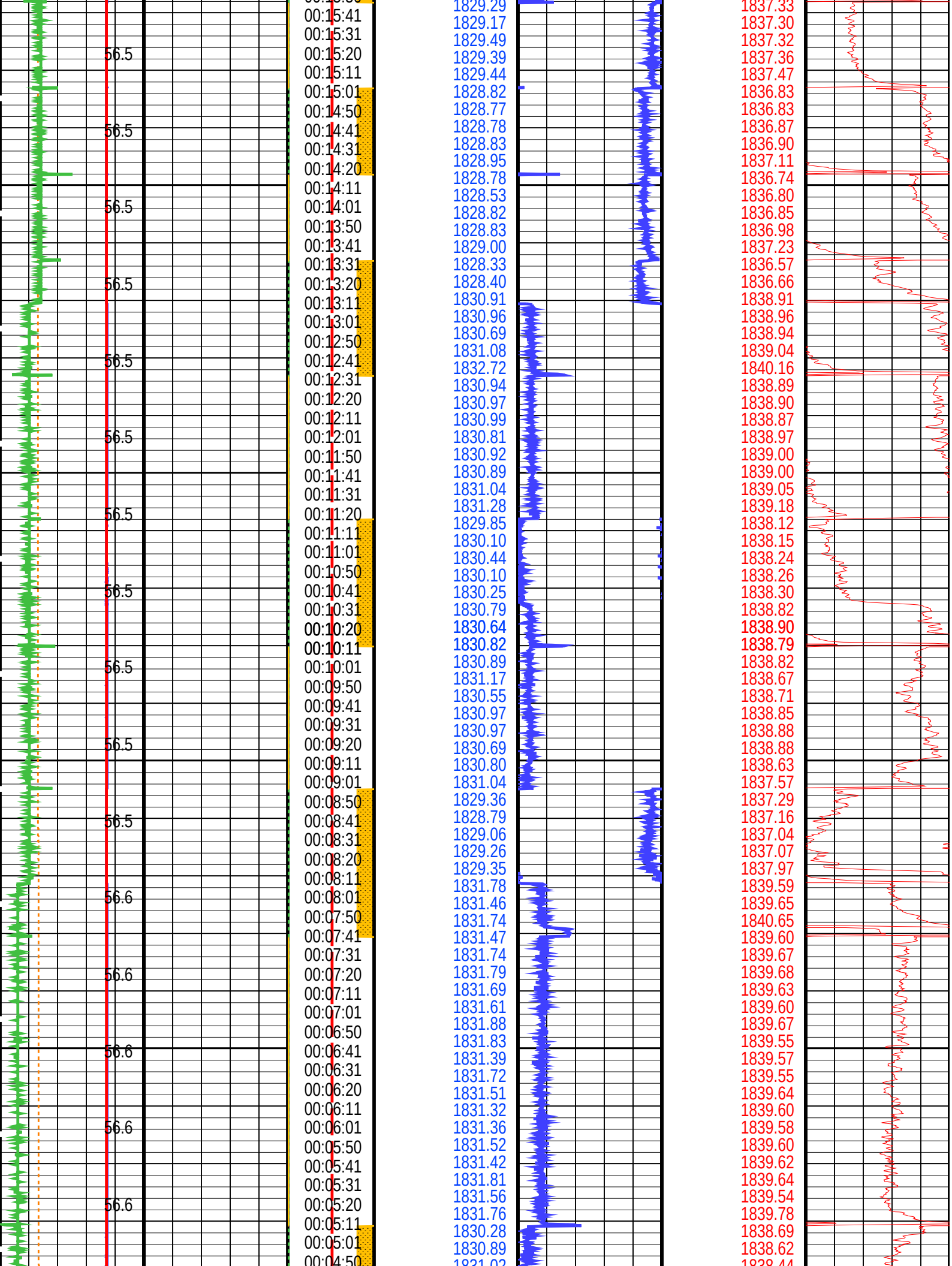
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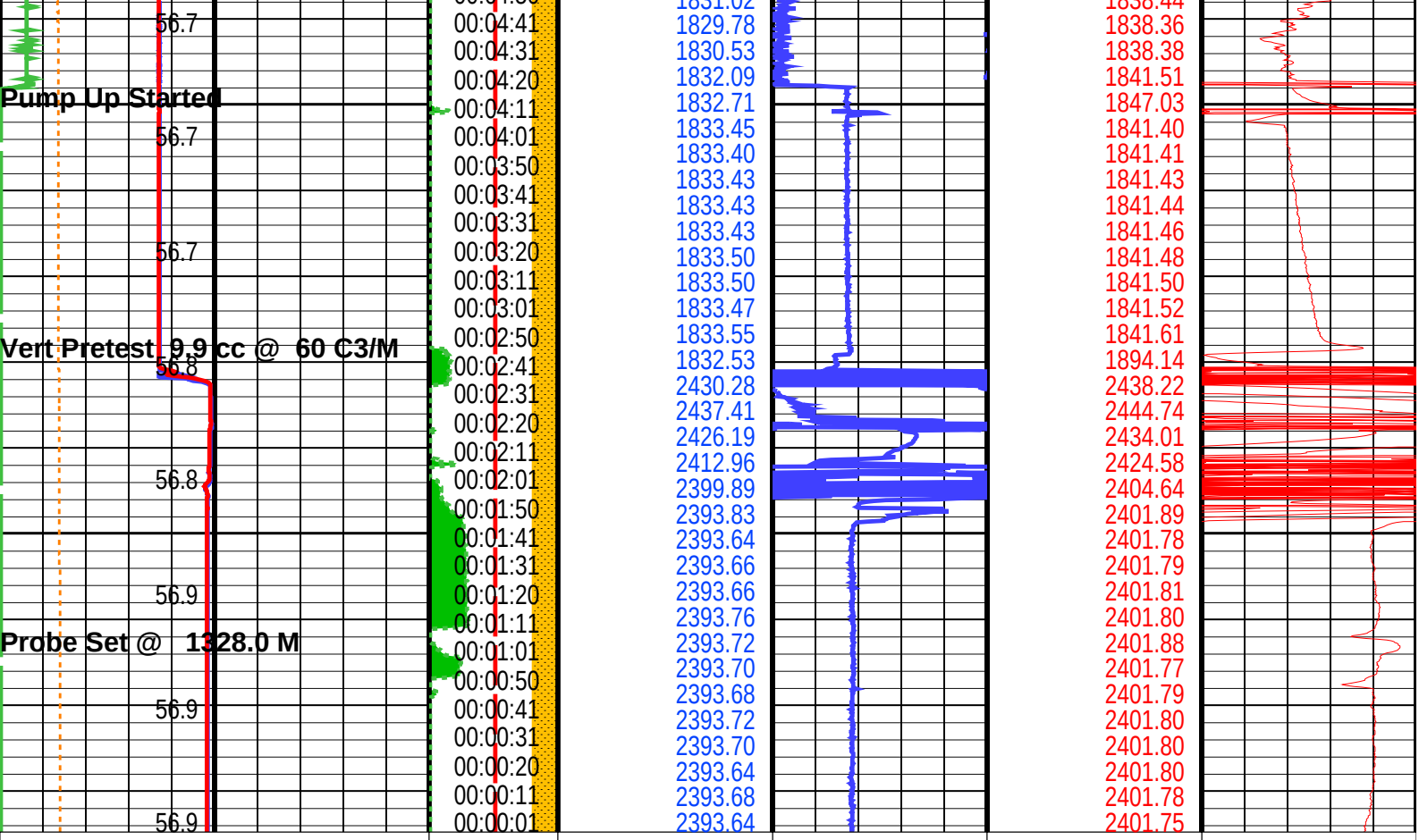


MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.15	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3

LFA: Live Fluid Analyzer

PDCO	Probe Depth Correction Offset	0	M

MRPC: Power Cartridge

PDCO	Probe Depth Correction Offset	0	M

System and Miscellaneous

PP	Playback Processing	RECOMPUTE

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 16:29

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Input DLIS Files

DEFAULT	MDT_OFA_067LTP	FN:109	PRODUCER	04−Mar−2008 13:21	1328.0 M	10.4 M

Output DLIS Files

DEFAULT	MDT_OFA_082PTP	FN:139	PRODUCER	04−Mar−2008 16:29		
RTB	MDT_OFA_082PTP	FN:140	PRODUCER	04−Mar−2008 16:29		

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT	MDT_OFA_067LTP	FN:109	PRODUCER	04−Mar−2008 13:21	1328.0 M	10.4 M
RTB	MDT_OFA_067LTP	FN:110	PRODUCER	04−Mar−2008 13:21	1328.0 M	10.4 M

Elapsed Time (s)	Event Summary
4015.8	Retract Single Probe Module (MRPS) 1
3931.8	Pumping Stopped 61110.0 C3 Dual Up−down Pumpout Module (MRPOUD)
3904.2	Seal MDT Multi−Sample (MRMS) 1, bottle 3
3852.3	Open MDT Multi−Sample (MRMS) 1, bottle 3, sample number = 3
3764.1	Seal MDT Multi−Sample (MRMS) 1, bottle 2
3707.4	Open MDT Multi−Sample (MRMS) 1, bottle 2, sample number = 2
3627.0	Seal MDT Multi−Sample (MRMS) 1, bottle 1
3567.0	Open MDT Multi−Sample (MRMS) 1, bottle 1, sample number = 1
257.7	Pump Up Started Dual Up−down Pumpout Module (MRPOUD)
152.4	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
67.5	Probe Set @ 1328.0 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPOUD Hydraulic Pump Output Volume (POUDPV)
0 (C3) 10000

MRPOUD Hydraulic Pressure (POUDHP)
0 (PSIG) 5000

LFA Optical Density Channel 9 (FAOD_LFA[9])
−36 (−−−− 4

LFA Optical Density Channel 8 (FAOD_LFA[8])
−32 (−−−− 8

LFA Optical Density Channel 7 (FAOD_LFA[7])
−28 (−−−− 12

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (DEGC)

MRPS 1 Resistivity (BFR1) (OHMM)

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

MRPOUD Duty Cycle (POUDDC)
0 (%) 100

MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)

MRPS 1 Quartz Gauge Pressure (BQP1)
3000 (PSIA) 8000

MRMS 1 Upper Valve Position (MUP1)
5 260

High Gas

Oil

LFA Fluid Coloration (FCOL_LFA)
0.0001 0.01

MRPOUD Motor Current (POUDMC)
0 (AMPS) 20

MRPOUD Solenoid 3 Status (POUDS3)
5 0

Medium Gas

Water

LFA Fluid Coloration (FCOL_LFA)
0.000001 0.0001

Pumped Volume (POUDPV) (C3)

Elapsed Time (ETIM) (S)

Low Gas

Highly Absorbing Fluid

MRPS 1 Flowline Fluid Resistivity (BFR1)
0.01 (OHMM) 1

LFA Optical Density Channel 6 (FAOD_LFA[6])
−24 16

LFA Optical Density Channel 5 (FAOD_LFA[5])
−20 20

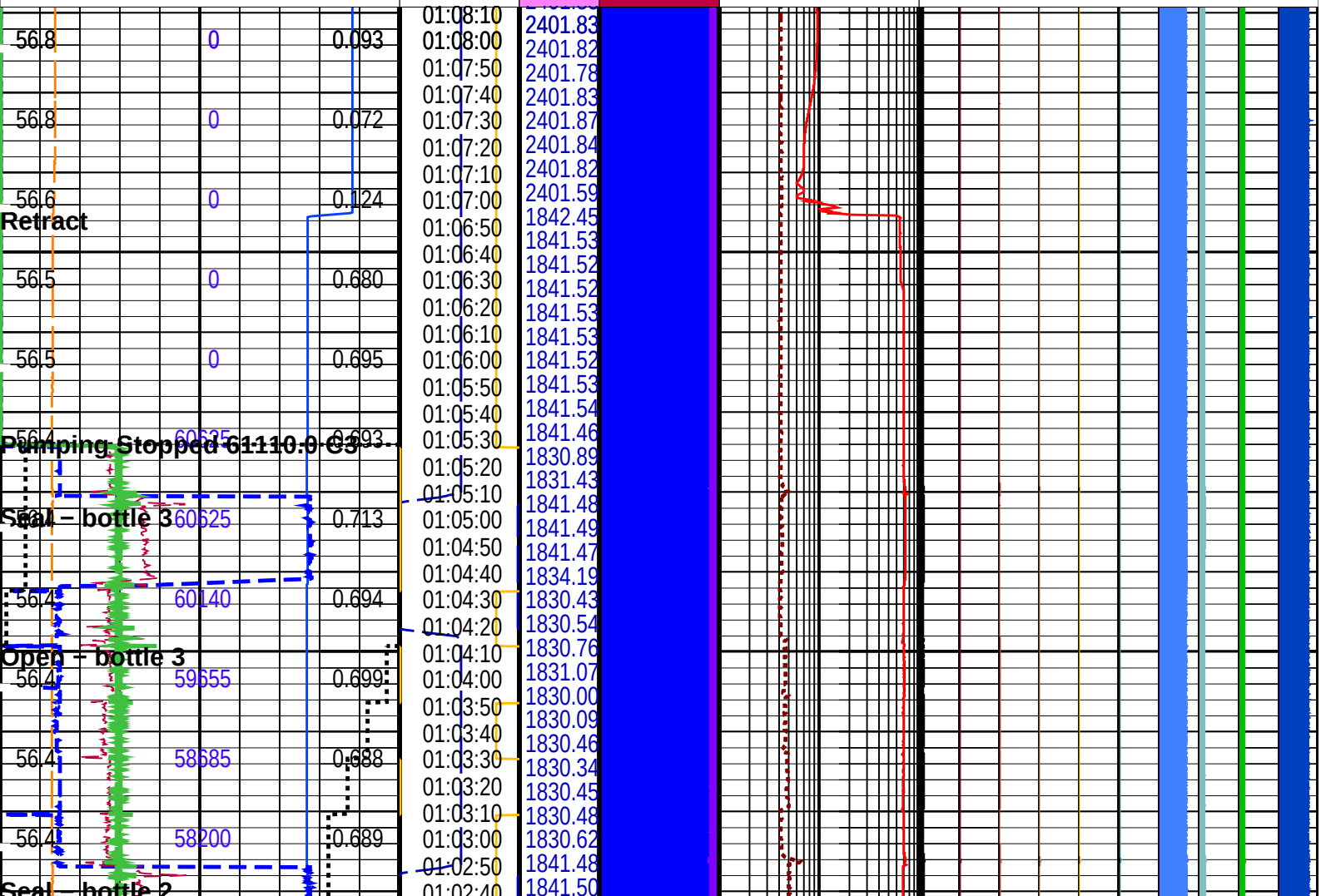
LFA Optical Density Channel 4 (FAOD_LFA[4])
−16 24

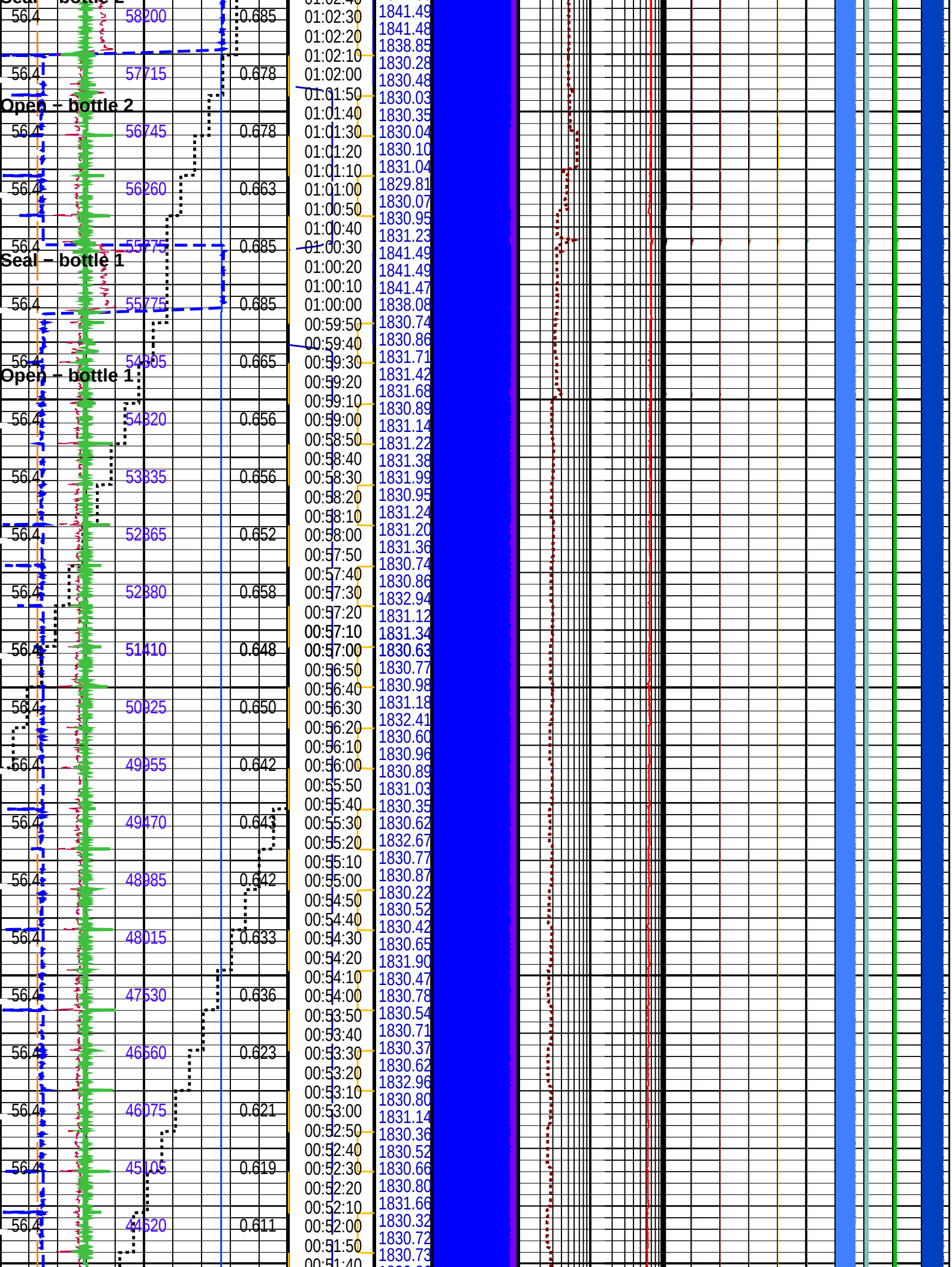
LFA Optical Density Channel 3 (FAOD_LFA[3])
−12 28

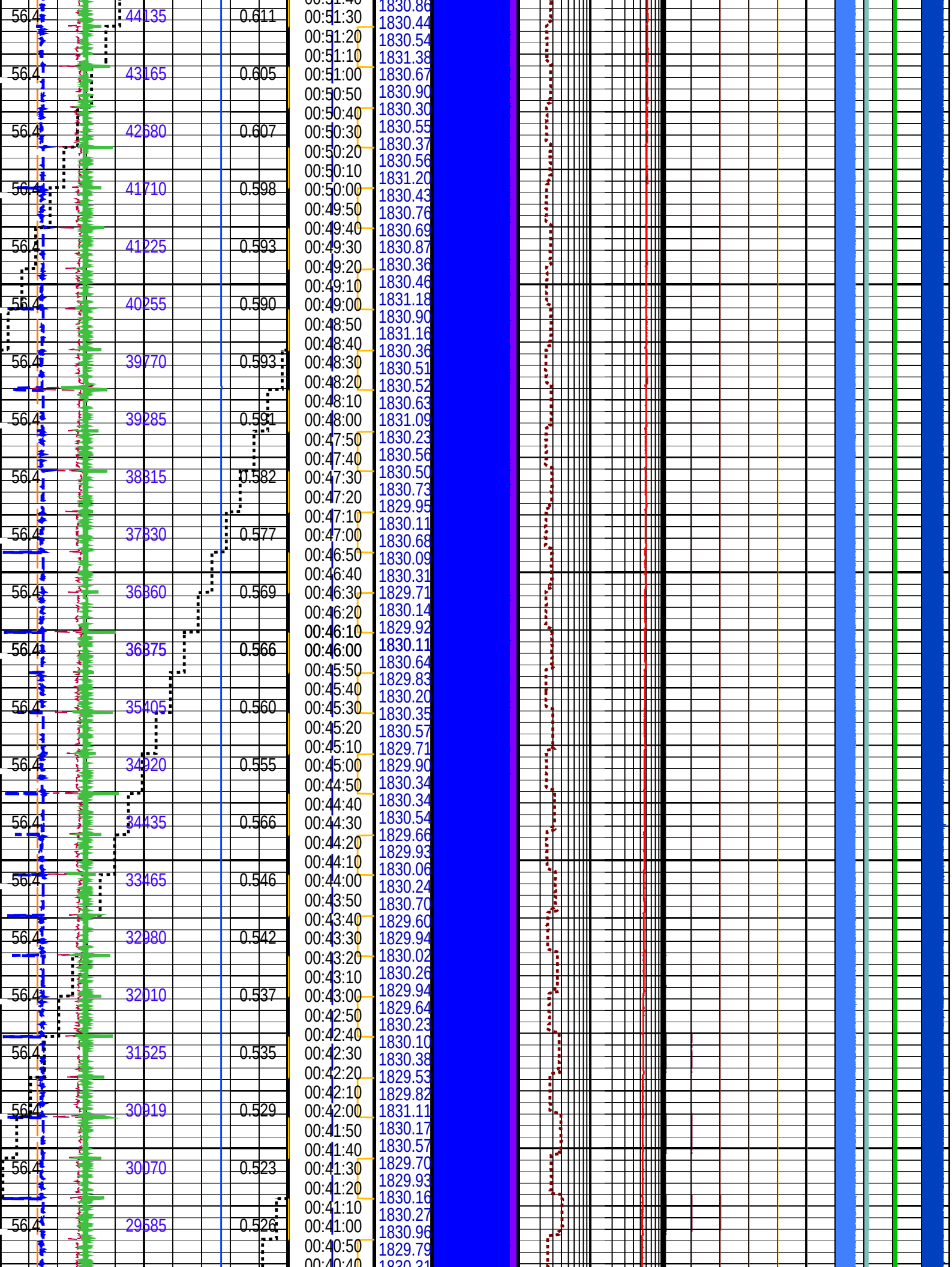
LFA Optical Density Channel 2 (FAOD_LFA[2])
−8 32

LFA Optical Density Channel 1 (FAOD_LFA[1])
−4 36

LFA Optical Density Channel 0 (FAOD_LFA[0])
0 40




Seal – bottle 2
Open – bottle 2
Seal – bottle 1
Open – bottle 1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56.4 41710 0.598
56.4 41225 0.593
56.4 40255 0.590
56.4 39770 0.593
56.4 39285 0.591
56.4 38315 0.582
56.4 37830 0.577
56.4 36860 0.569
56.4 36375 0.566
56.4 35405 0.560
56.4 34920 0.555
56.4 34435 0.566
56.4 33465 0.546
56.4 32980 0.542
56.4 32010 0.537
56.4 31525 0.535
56.4 30919 0.529
56.4 30070 0.523
56.4 29585 0.526
00:51:40 1830.86
00:51:30 1830.44
00:51:20 1830.54
00:51:10 1831.38
00:51:00 1830.67
00:50:50 1830.90
00:50:40 1830.30
00:50:30 1830.55
00:50:20 1830.37
00:50:10 1830.56
00:50:00 1831.20
00:49:50 1830.43
00:49:40 1830.76
00:49:30 1830.69
00:49:20 1830.87
00:49:10 1830.36
00:49:00 1830.46
00:48:50 1831.18
00:48:40 1830.90
00:48:30 1831.16
00:48:20 1830.36
00:48:10 1830.51
00:48:00 1830.52
00:47:50 1830.63
00:47:40 1831.09
00:47:30 1830.23
00:47:20 1830.56
00:47:10 1830.50
00:47:00 1830.73
00:46:50 1829.95
00:46:40 1830.11
00:46:30 1830.68
00:46:20 1830.09
00:46:10 1830.31
00:46:00 1829.71
00:45:50 1830.14
00:45:40 1829.92
00:45:30 1830.11
00:45:20 1830.64
00:45:10 1829.83
00:45:00 1830.20
00:44:50 1830.35
00:44:40 1830.57
00:44:30 1829.71
00:44:20 1829.90
00:44:10 1830.34
00:44:00 1830.34
00:43:50 1830.54
00:43:40 1829.66
00:43:30 1829.93
00:43:20 1830.06
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00:43:00 1830.70
00:42:50 1829.60
00:42:40 1829.94
00:42:30 1830.02
00:42:20 1830.26
00:42:10 1829.94
00:42:00 1829.64
00:41:50 1830.23
00:41:40 1830.10
00:41:30 1830.38
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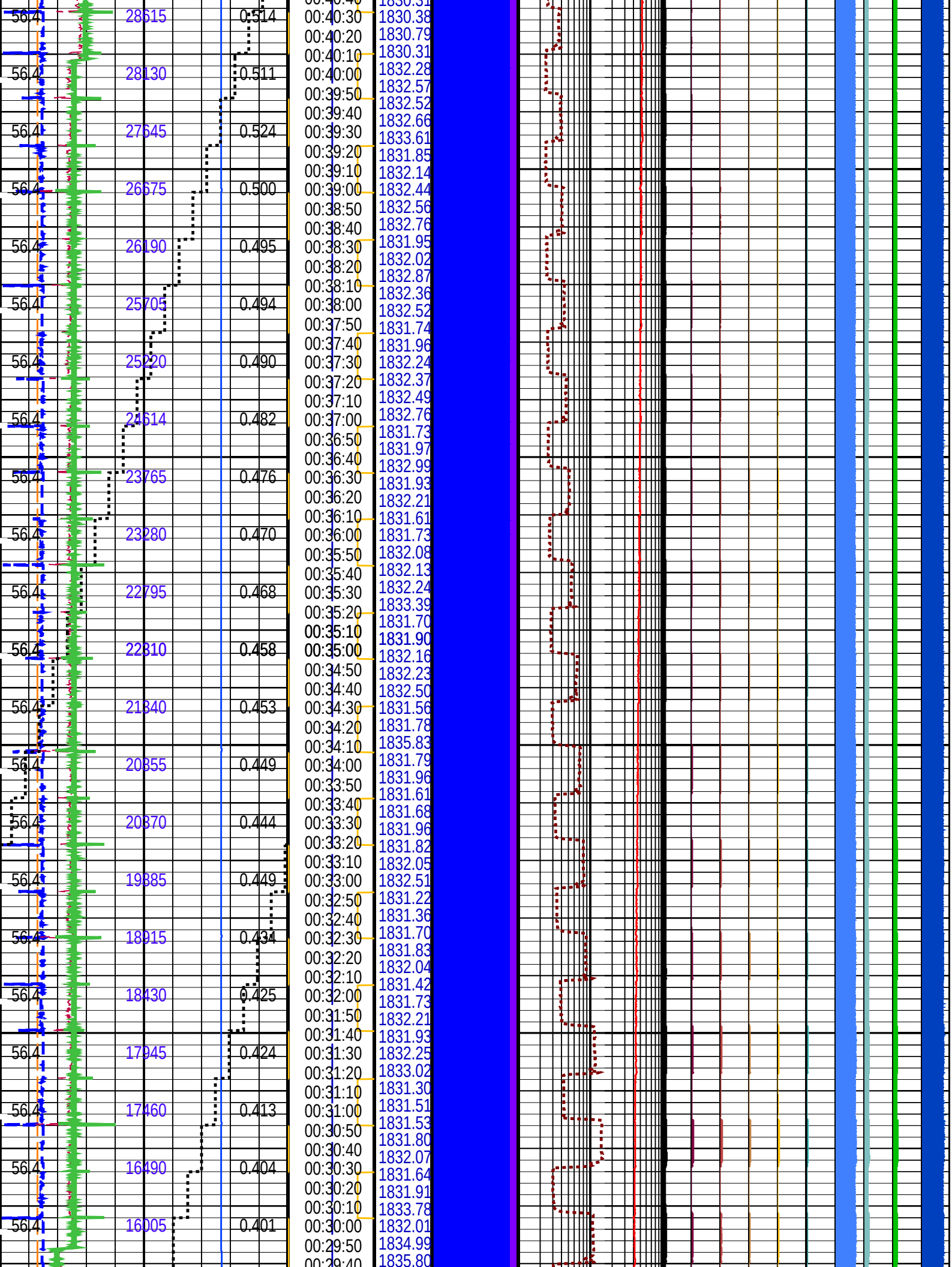
00:39:30 1830.31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56.4 26675 0.500
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56.4 25705 0.494
56.4 25220 0.490
56.4 24614 0.482
56.4 23765 0.476
56.4 23280 0.470
56.4 22795 0.468
56.4 22310 0.458
56.4 21340 0.453
56.4 20855 0.449
56.4 20370 0.444
56.4 19885 0.449
56.4 18915 0.434
56.4 18430 0.425
56.4 17945 0.424
56.4 17460 0.413
56.4 16490 0.404
56.4 16005 0.401
00:40:30 1830.38
00:40:20 1830.79
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00:40:00 1832.28
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00:39:10 1831.85
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00:36:50 1832.49
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00:36:10 1832.99
00:36:00 1831.93
00:35:50 1832.21
00:35:40 1831.61
00:35:30 1831.73
00:35:20 1832.08
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00:35:00 1832.24
00:34:50 1833.39
00:34:40 1831.70
00:34:30 1831.90
00:34:20 1832.16
00:34:10 1832.23
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00:33:40 1831.78
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00:32:50 1831.68
00:32:40 1831.96
00:32:30 1831.82
00:32:20 1832.05
00:32:10 1832.51
00:32:00 1831.22
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00:30:30 1832.25
00:30:20 1833.02
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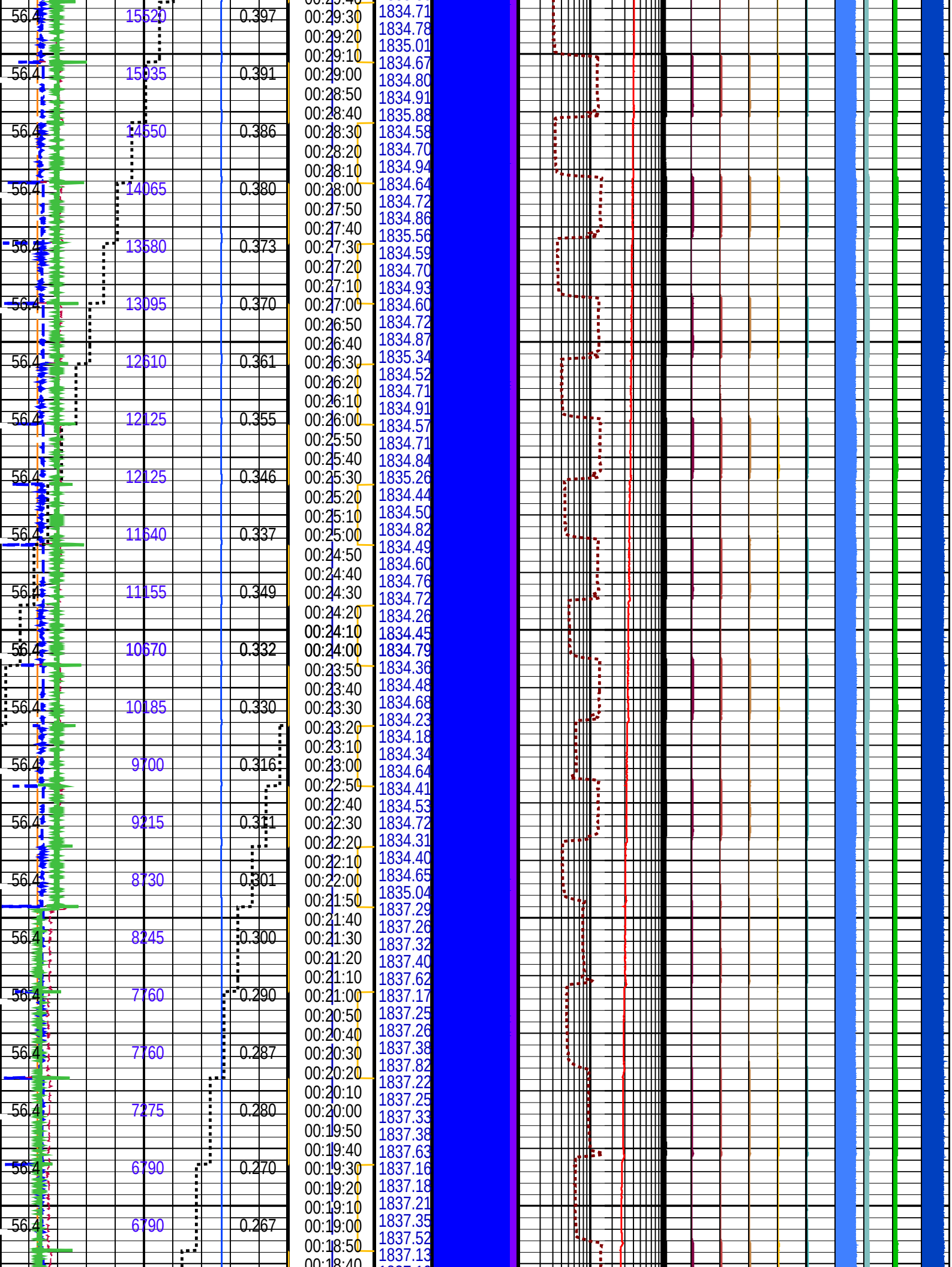
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56.4 13095 0.370
56.4 12610 0.361
56.4 12125 0.355
56.4 12125 0.346
56.4 11640 0.337
56.4 11155 0.349
56.4 10670 0.332
56.4 10185 0.330
56.4 9700 0.316
56.4 9215 0.311
56.4 8730 0.301
56.4 8245 0.300
56.4 7760 0.290
56.4 7760 0.287
56.4 7275 0.280
56.4 6790 0.270
56.4 6790 0.267
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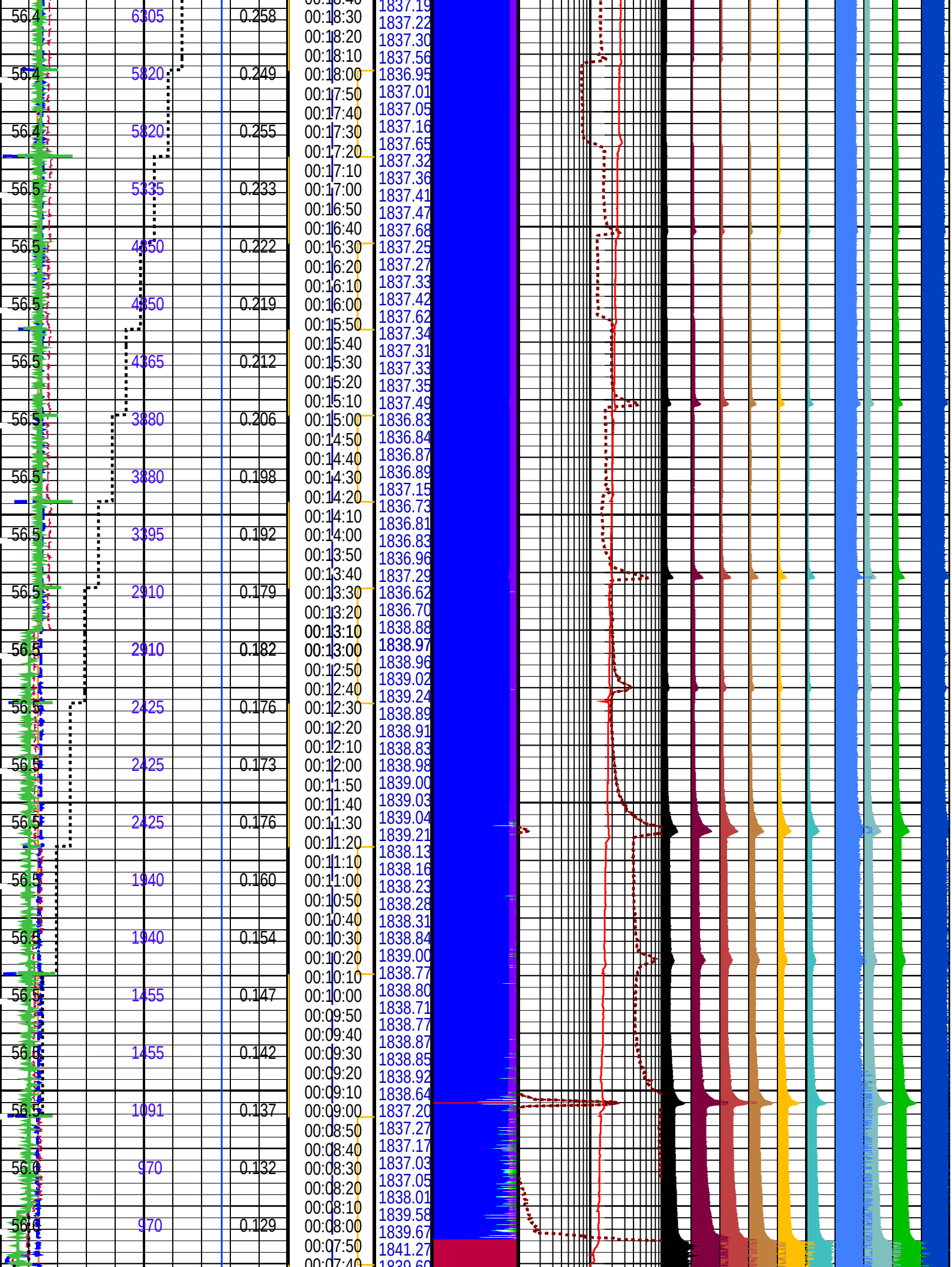
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56.5 3880 0.198
56.5 3395 0.192
56.5 2910 0.179
56.5 2910 0.182
56.5 2425 0.176
56.5 2425 0.173
56.5 2425 0.176
56.5 1940 0.160
56.5 1940 0.154
56.5 1455 0.147
56.5 1455 0.142
56.5 1091 0.137
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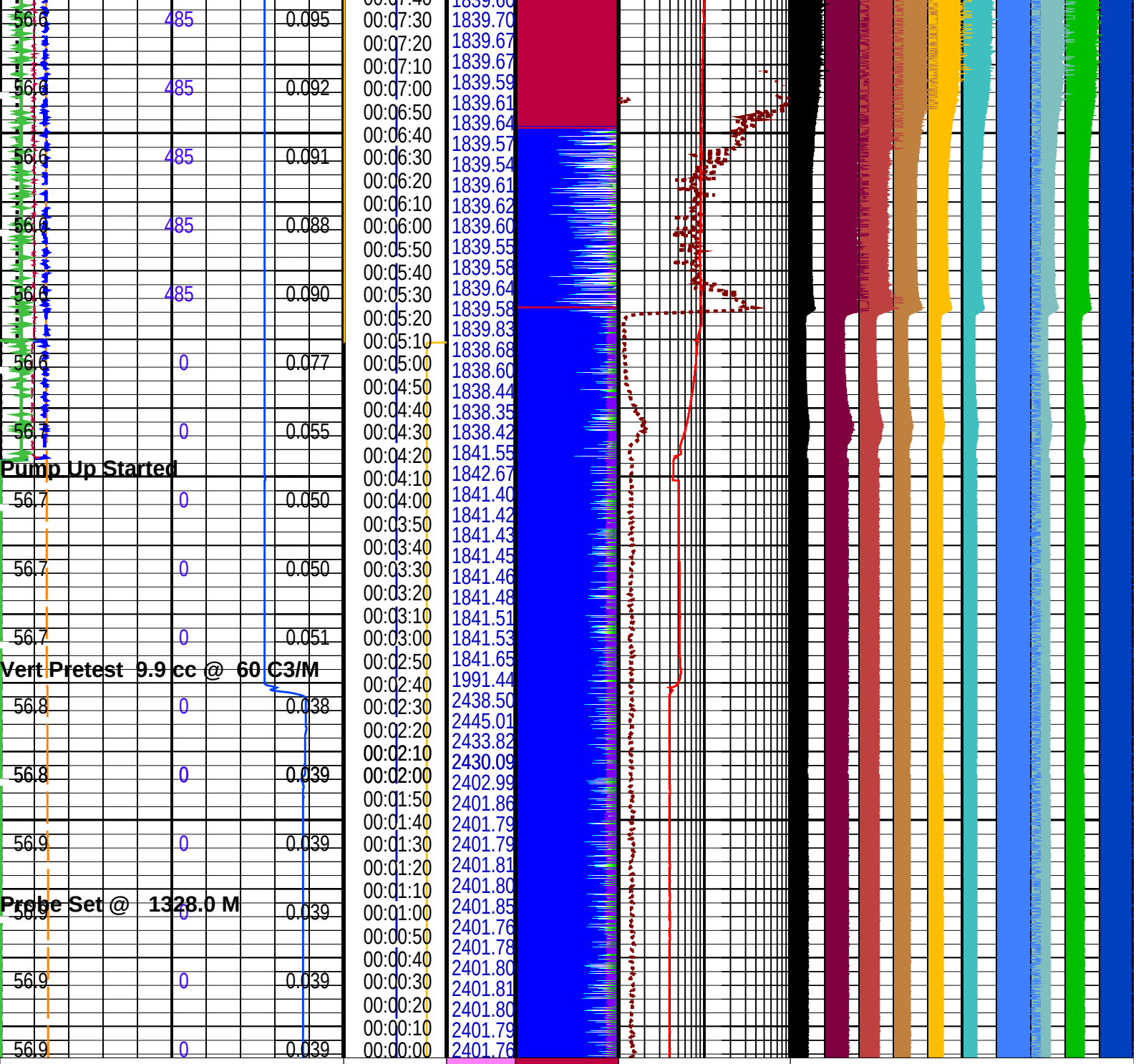
1841.27



Pumped Volume (POUDPV) (C3)	Elapsed Time (ETIM) (S)	Low Gas	Highly Absorbing Fluid	MRPS 1 Flowline Fluid Resistivity (BFR1) 0.01 (OHMM) 1	LFA Optical Density Channel 0 (FAOD_LFA[0]) 0 (---- 40
MRPOUD Motor Current (POUDMC) 0 (AMPS) 20	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0	Medium Gas	Water	LFA Fluid Coloration (FCOL_LFA) (---- 0.000001 0.0001	LFA Optical Density Channel 1 (FAOD_LFA[1]) −4 (---- 36
MRPS 1 Quartz Gauge Pressure (BQP1) 3000 (PSIA) 8000	MRMS 1 Upper Valve Position (MUP1) (---- 5 260	High Gas	Oil	LFA Fluid Coloration (FCOL_LFA) 0.0001 (---- 0.01	LFA Optical Density Channel 2 (FAOD_LFA[2]) −8 (---- 32
MRPOUD Duty Cycle (POUDDC) 0 (%) 100	MRPS 1 Quartz Gauge Pressure (BQP1)				LFA Optical Density Channel 3 (FAOD_LFA[3]) −12 (---- 28

(PSIA)

MRPOUD Motor Speed (POUDMS)

0 (RPM) 5000

MRPS 1 Resistivity Cell Temperature (B1TR) (DEGC)	MRPS 1 Resistivity (BFR1) (OHMM)

MRPS 1 Resistivity Cell Temperature (B1TR)

100 (DEGC) 150

MRPOUD Hydraulic Pressure (POUDHP)

0 (PSIG) 5000

MRPOUD Hydraulic Pump Output Volume (POUDPV)

0 (C3) 10000

LFA Optical Density Channel 4 (FAOD_LFA[4])

−16 (---- 24

LFA Optical Density Channel 5 (FAOD_LFA[5])

−20 (---- 20

LFA Optical Density Channel 6 (FAOD_LFA[6])

−24 (---- 16

LFA Optical Density Channel 7 (FAOD_LFA[7])

−28 (---- 12

LFA Optical Density Channel 8 (FAOD_LFA[8])

−32 (---- 8

LFA Optical Density Channel 9 (FAOD_LFA[9])

−36 (---- 4

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	8.02	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	MRPO_UD: Dual Up−down Pumpout Module (MRPOUD)		
POUDDISPVOL	MRPOUD Displacement Unit Stroke Volume	485	
	LFA: Live Fluid Analyzer		
CEXP_LFA	LFA Coloration Exponent	4.6	
DCDW_LFA	LFA Decolor and Dewater Allow/Disallow for Gas Oil Ratio	ALLOW	
FAGM_LFA	LFA GOR Allow/Disallow Mode	ALLOW	
FAJM_LFA	LFA Job Mode	LFA	
FATCM_LFA	LFA Temp. Coef. Measure Mode	** V **	
FATCS_LFA	LFA Temp. Coef. Source Mode	** V **	
GASH_LFA	LFA Gas Indicator High Level Threshold	0.4	
GASL_LFA	LFA Gas Indicator Low Level Threshold	0.05	
GASM_LFA	LFA Gas Indicator Medium Level Threshold	0.1	
GORD_LFA	LFA GOR Disqualification Level	0.1	
ODTMP_LFA	LFA Optical Density Temperature Correction	ALLOW	
PDCO	Probe Depth Correction Offset	0	M
SATL_LFA	LFA Saturation Level of Optical Density Measurement	** V **	
TCPS_STATUS_LFA	LFA Temperature Compensation Coefficient Status	VALID	
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M

Format: MRPS_LFA_Water Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 13:21

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

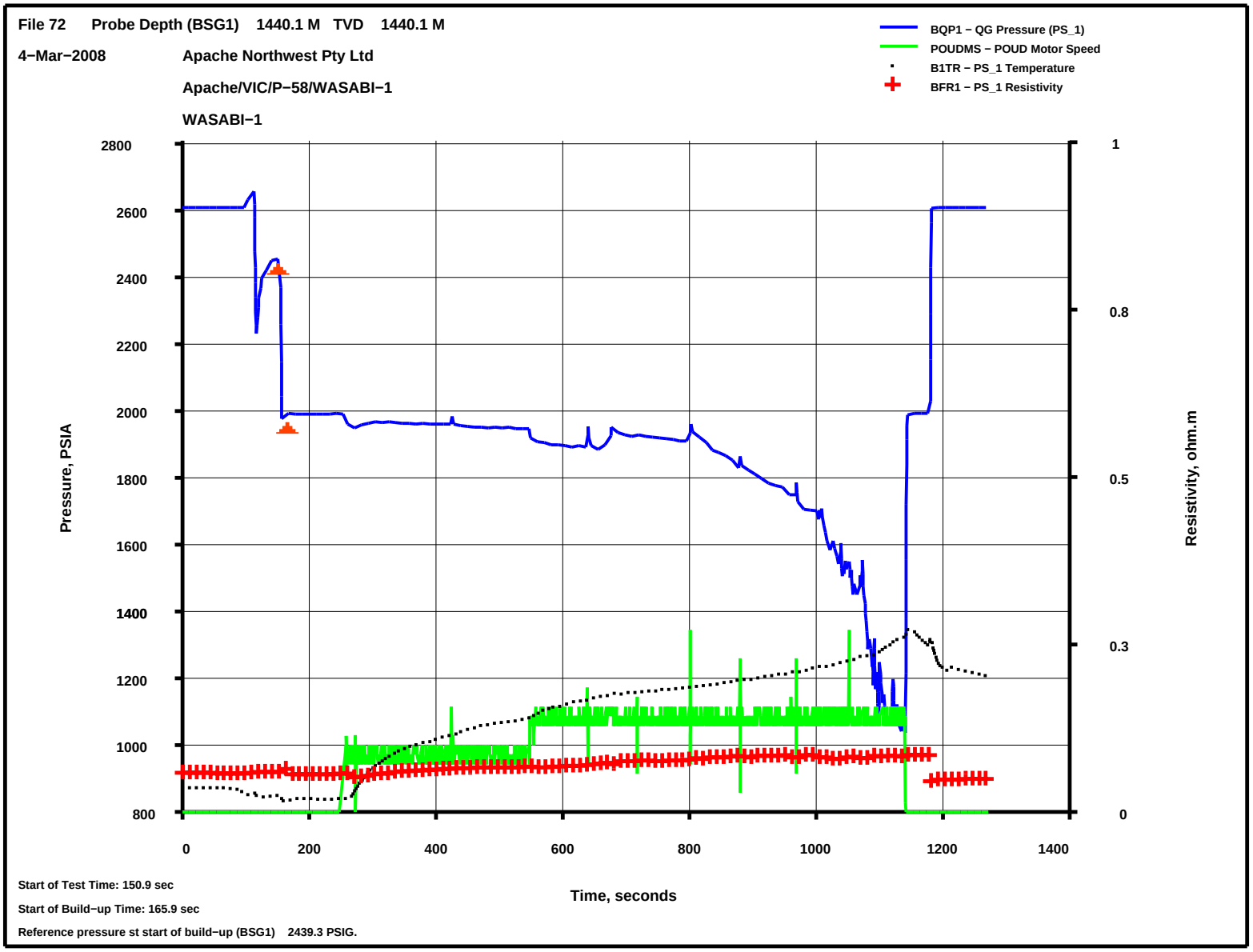
Output DLIS Files

DEFAULT	MDT_OFA_067LTP	FN:109	PRODUCER	04−Mar−2008 13:21
RTB	MDT_OFA_067LTP	FN:110	PRODUCER	04−Mar−2008 13:21

Schlumberger

Station @ 1440.1m

MAXIS Field Log



Output DLIS Files

DEFAULT	MDT_OFA_072LTP	FN:119	PRODUCER	04−Mar−2008 15:19	1440.1 M	3.3 M
RTB	MDT_OFA_072LTP	FN:120	PRODUCER	04−Mar−2008 15:19	1440.1 M	3.3 M

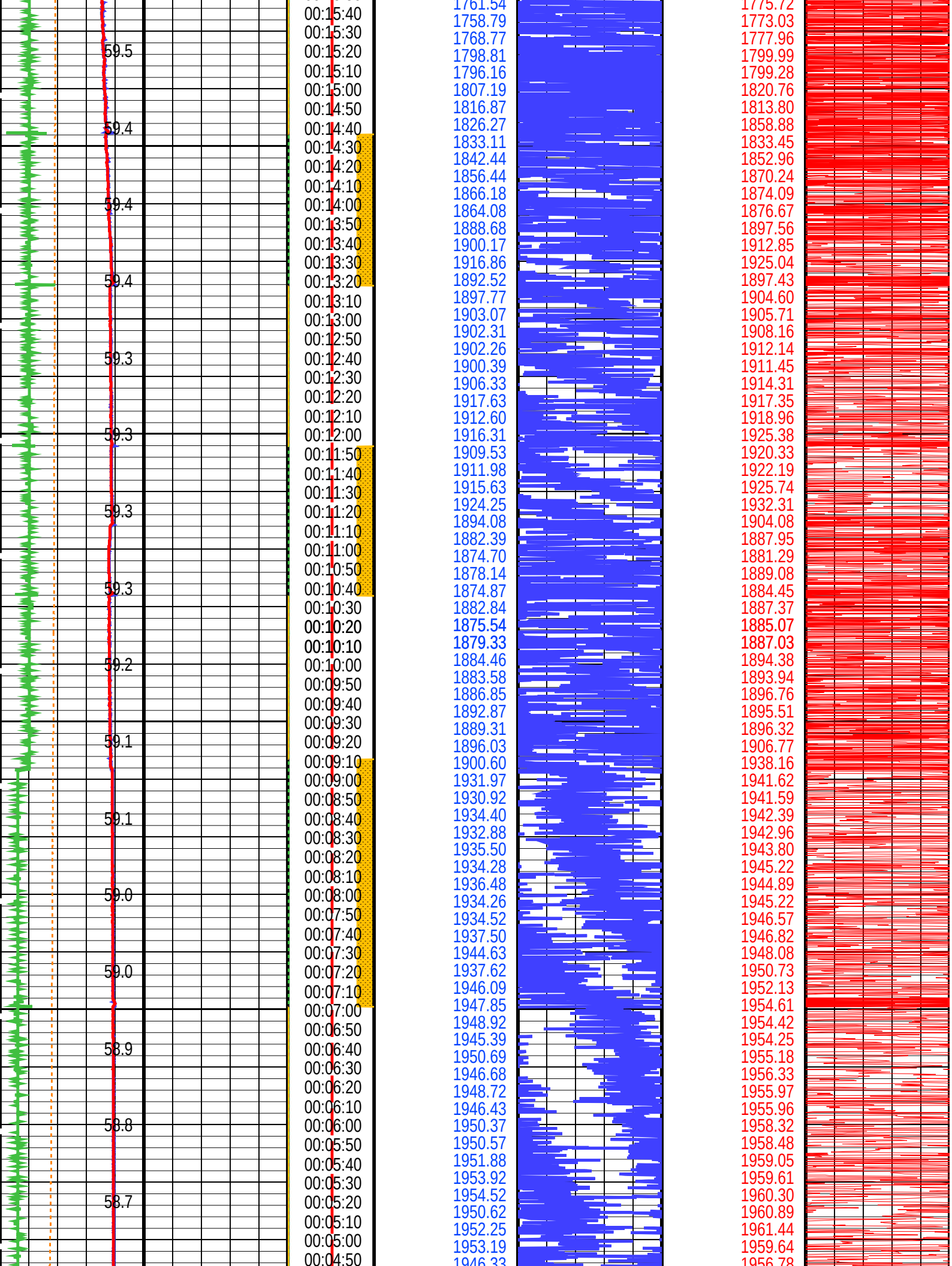
Elapsed Time (s)	Event Summary
1179.3	Retract Single Probe Module (MRPS) 1
1141.8	Pumping Stopped 4365.0 C3 Dual Up−down Pumpout Module (MRPOUD)
953.7	Auto Reset Single Probe Module (MRPS) 1
255.3	Pump Up Started Dual Up−down Pumpout Module (MRPOUD)
150.9	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
63.3	Probe Set @ 1440.1 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150		MRMS 1 Upper Valve Position (MUP1) (----- 5 260
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)		
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000		MRHY 1 Motor Speed (HMS1) (RPM) 0 8000
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000		MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0

MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
59.5	00:21:20	2591.12		2599.68	
	00:21:10	2591.04		2599.68	
	00:21:00	2591.08		2599.68	
	00:20:50	2591.08		2599.71	
59.5	00:20:40	2591.16		2599.78	
	00:20:30	2591.20		2599.78	
	00:20:20	2591.18		2599.78	
	00:20:10	2591.22		2599.81	
59.6	00:20:00	2591.10		2599.73	
	00:19:50	2591.07		2599.70	
	00:19:40	2590.54		2599.39	
Retract	00:19:30	1978.02		1987.49	
	00:19:20	1977.95		1986.39	
59.9	00:19:10	1977.90		1986.42	
	00:19:00	1977.89		1986.49	
Pumping Stopped 4365.0 C3	00:18:50	1944.13		1716.48	
	00:18:40	1032.82		1049.43	
59.8	00:18:30	1090.48		1062.23	
	00:18:20	1070.08		1069.60	
	00:18:10	1141.38		1151.44	
	00:18:00	1071.58		1105.64	
59.7	00:17:50	1346.79		1243.36	
	00:17:40	1338.73		1351.52	
	00:17:30	1457.03		1484.10	
	00:17:20	1465.10		1473.41	
59.6	00:17:10	1552.52		1544.70	
	00:17:00	1488.25		1531.23	
	00:16:50	1524.51		1540.74	
	00:16:40	1547.73		1563.21	
59.6	00:16:30	1599.31		1630.68	
	00:16:20	1677.72		1670.30	
	00:16:10	1673.89		1691.46	
	00:16:00	1684.57		1700.58	
59.5	00:15:50	1689.00		1700.10	
		1711.79		1724.26	
		1718.63		1732.79	
		1763.03		1775.57	
Auto Reset					


59.5
59.4
59.4
59.4
59.3
59.3
59.3
59.3
59.2
59.1
59.1
59.0
59.0
58.9
58.8
58.7
00:15:40
00:15:30
00:15:20
00:15:10
00:15:00
00:14:50
00:14:40
00:14:30
00:14:20
00:14:10
00:14:00
00:13:50
00:13:40
00:13:30
00:13:20
00:13:10
00:13:00
00:12:50
00:12:40
00:12:30
00:12:20
00:12:10
00:12:00
00:11:50
00:11:40
00:11:30
00:11:20
00:11:10
00:11:00
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00:10:10
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00:09:50
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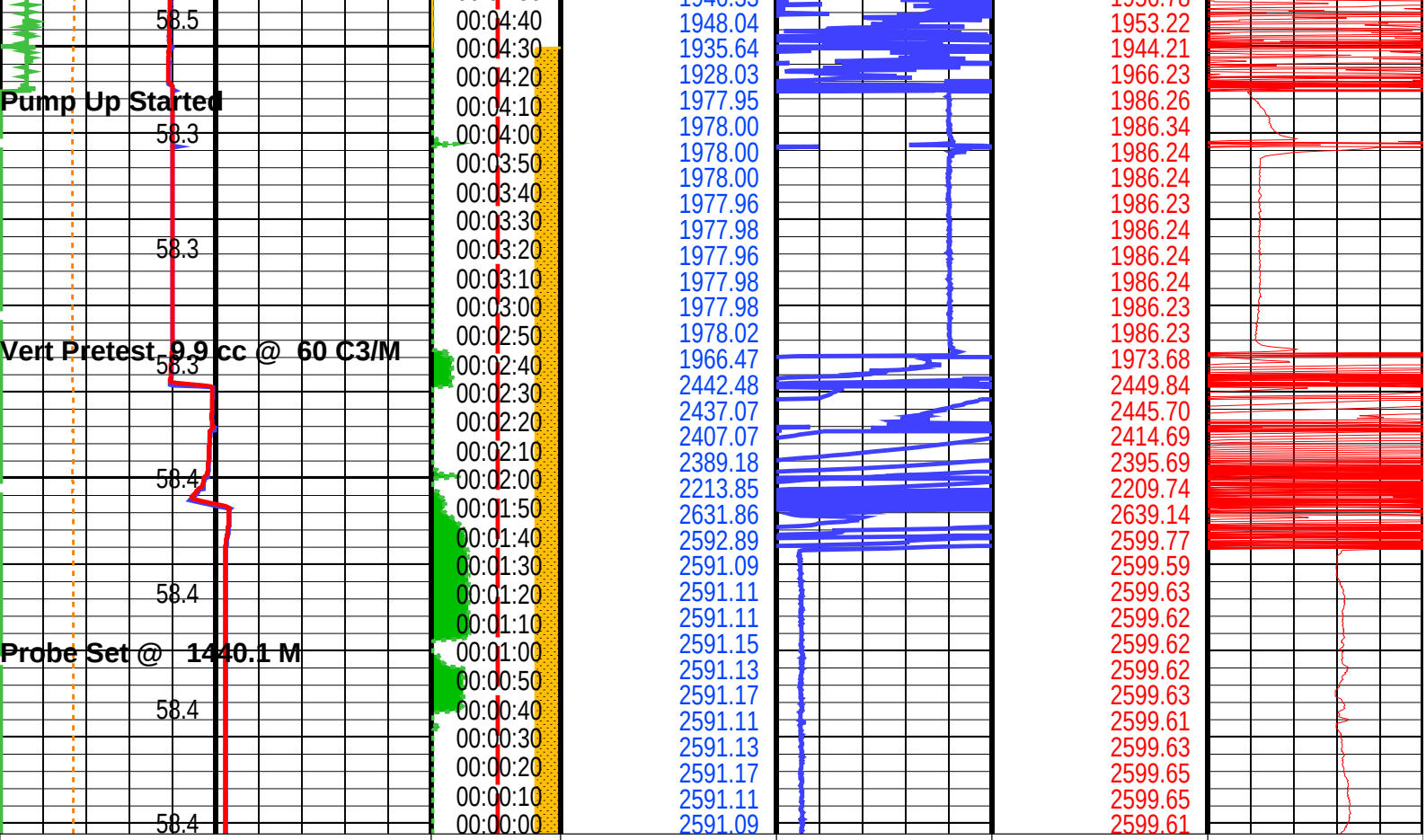
00:07:30
00:07:20
00:07:10
00:07:00
00:06:50
00:06:40
00:06:30
00:06:20
00:06:10
00:06:00
00:05:50
00:05:40
00:05:30
00:05:20
00:05:10
00:05:00
00:04:50
1761.54
1758.79
1768.77
1798.81
1796.16
1807.19
1816.87
1826.27
1833.11
1842.44
1856.44
1866.18
1864.08
1888.68
1900.17
1916.86
1892.52
1897.77
1903.07
1902.31
1902.26
1900.39
1906.33
1917.63
1912.60
1916.31
1909.53
1911.98
1915.63
1924.25
1894.08
1882.39
1874.70
1878.14
1874.87
1882.84
1875.54
1879.33
1884.46
1883.58
1886.85
1892.87
1889.31
1896.03
1900.60
1931.97
1930.92
1934.40
1932.88
1935.50
1934.28
1936.48
1934.26
1934.52
1937.50
1944.63
1937.62
1946.09
1947.85
1948.92
1945.39
1950.69
1946.68
1948.72
1946.43
1950.37
1950.57
1951.88
1953.92
1954.52
1950.62
1952.25
1953.19
1775.72
1773.03
1777.96
1799.99
1799.28
1820.76
1813.80
1858.88
1833.45
1852.96
1870.24
1874.09
1876.67
1897.56
1912.85
1925.04
1897.43
1904.60
1905.71
1908.16
1912.14
1911.45
1914.31
1917.35
1918.96
1925.38
1920.33
1922.19
1925.74
1932.31
1904.08
1887.95
1881.29
1889.08
1884.45
1887.37
1885.07
1887.03
1894.38
1893.94
1896.76
1895.51
1896.32
1906.77
1938.16
1941.62
1941.59
1942.39
1942.96
1943.80
1945.22
1944.89
1945.22
1946.57
1946.82
1948.08
1950.73
1952.13
1954.61
1954.42
1954.25
1955.18
1956.33
1955.97
1955.96
1958.32
1958.48
1959.05
1959.61
1960.30
1960.89
1961.44
1959.64



MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIA) 5000	Elapsed Time (ETIM) (S)	MRPS 1 Strain Gauge Pressure (BSG1) (PSIG)	MRPS 1 Strain Gauge Pressure (BSG1) 0 (PSIG) 10	MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)	MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 1
MRPS 1 Quartz Gauge Pressure (BQP1) 0 (PSIA) 5000	MRPOUD Solenoid 3 Status (POUDS3) 5 (---- 0				
MRPOUD Motor Speed (POUDMS) 0 (RPM) 5000	MRHY 1 Motor Speed (HMS1) (RPM) 0 8000				
MRPS 1 Resistivity Cell Temperature (B1TR) (B1TR) (DEGC)	MRMS 1 Upper Valve Position (MUP1) (---- 5 260				
MRPS 1 Resistivity Cell Temperature (B1TR) 100 (DEGC) 150					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	16.5	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3

LFA: Live Fluid Analyzer

PDCO	Probe Depth Correction Offset	0	M

MRPC: Power Cartridge

PDCO	Probe Depth Correction Offset	0	M

Format: MRPS_Pretests Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 15:19

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Output DLIS Files

DEFAULT	MDT_OFA_072LTP	FN:119	PRODUCER	04−Mar−2008 15:19	
RTB	MDT_OFA_072LTP	FN:120	PRODUCER	04−Mar−2008 15:19	

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT	MDT_OFA_072LTP	FN:119	PRODUCER	04−Mar−2008 15:19	1440.1 M	3.3 M
RTB	MDT_OFA_072LTP	FN:120	PRODUCER	04−Mar−2008 15:19	1440.1 M	3.3 M

Elapsed Time (s)	Event Summary
1179.3	Retract Single Probe Module (MRPS) 1
1141.8	Pumping Stopped 4365.0 C3 Dual Up−down Pumpout Module (MRPOUD)
953.7	Auto Reset Single Probe Module (MRPS) 1
255.3	Pump Up Started Dual Up−down Pumpout Module (MRPOUD)
150.9	Vert Pretest 9.9 cc @ 60 C3/M Single Probe Module (MRPS) 1
63.3	Probe Set @ 1440.1 M Single Probe Module (MRPS) 1

PIP SUMMARY

Time Mark Every 60 S

MRPOUD Hydraulic Pump Output Volume (POUDPV)
0 (C3) 10000

MRPOUD Hydraulic Pressure (POUDHP)
0 (PSIG) 5000

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

MRPS 1 Resistivity Cell Temperature (B1TR) (DEGC)

MRPS 1 Resistivity (BFR1) (OHMM)

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

LFA Optical Density Channel 9 (FAOD_LFA[9])
−36 (−−−− 4

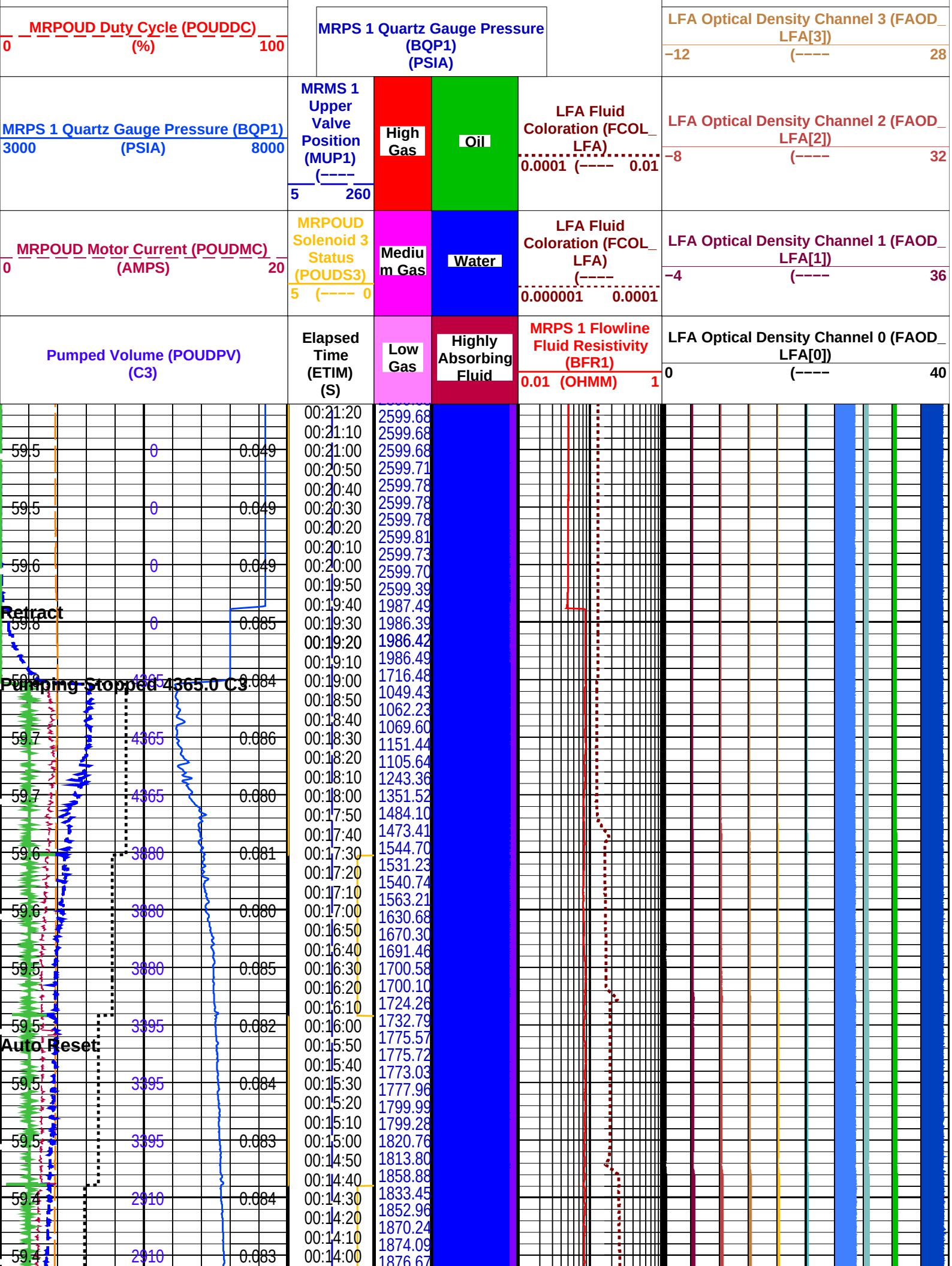
LFA Optical Density Channel 8 (FAOD_LFA[8])
−32 (−−−− 8

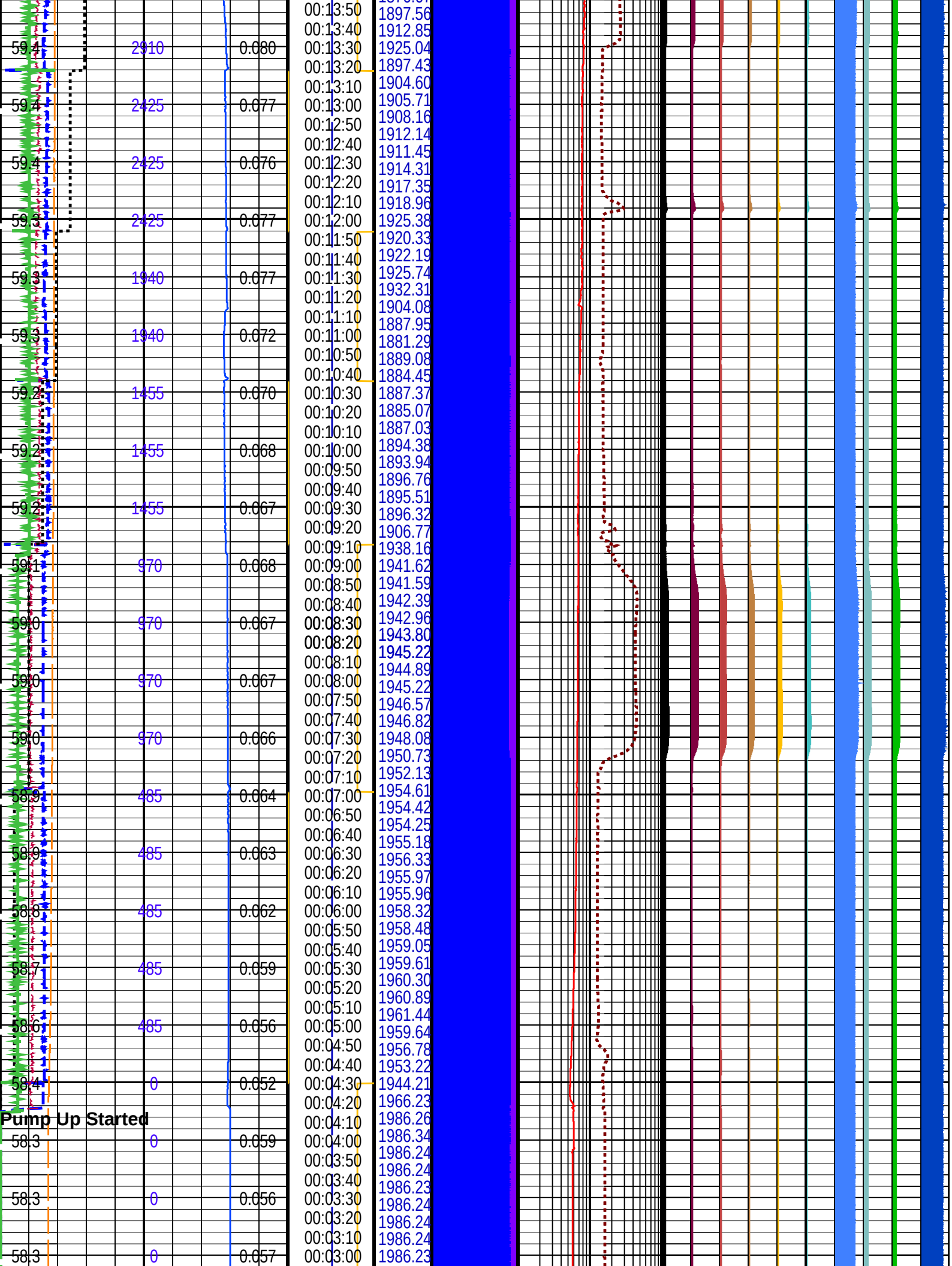
LFA Optical Density Channel 7 (FAOD_LFA[7])
−28 (−−−− 12

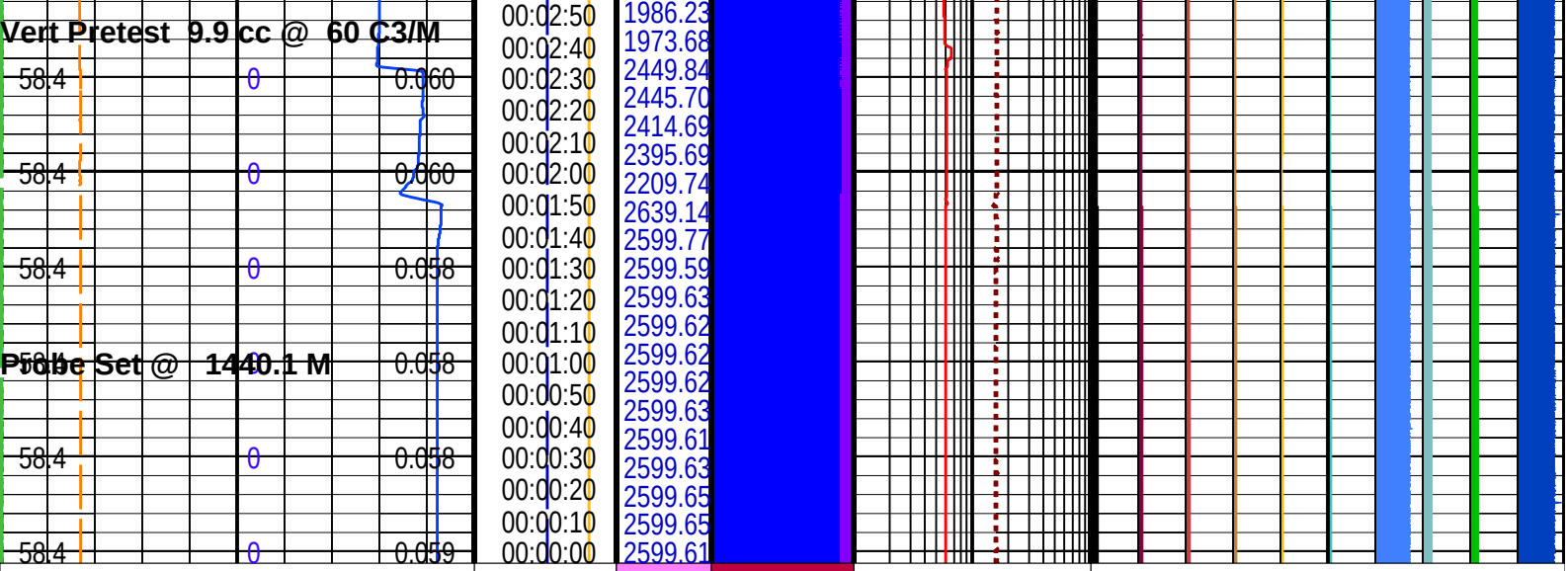
LFA Optical Density Channel 6 (FAOD_LFA[6])
−24 (−−−− 16

LFA Optical Density Channel 5 (FAOD_LFA[5])
−20 (−−−− 20

LFA Optical Density Channel 4 (FAOD_LFA[4])
−16 (−−−− 24


MRPOUD Duty Cycle (POUDDC)
0 (%) 100
MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)
LFA Optical Density Channel 3 (FAOD_LFA[3])
−12 (−−−− 28
MRPS 1 Quartz Gauge Pressure (BQP1)
3000 (PSIA) 8000
MRMS 1 Upper Valve Position (MUP1)
5 (−−−− 260
High Gas
Oil
LFA Fluid Coloration (FCOL_LFA)
0.0001 (−−−− 0.01
LFA Optical Density Channel 2 (FAOD_LFA[2])
−8 (−−−− 32
MRPOUD Motor Current (POUDMC)
0 (AMPS) 20
MRPOUD Solenoid 3 Status (POUDS3)
5 (−−−− 0
Medium Gas
Water
LFA Fluid Coloration (FCOL_LFA)
(−−−−
0.000001 0.0001
LFA Optical Density Channel 1 (FAOD_LFA[1])
−4 (−−−− 36
Pumped Volume (POUDPV) (C3)
Elapsed Time (ETIM) (S)
Low Gas
Highly Absorbing Fluid
MRPS 1 Flowline Fluid Resistivity (BFR1)
0.01 (OHMM) 1
LFA Optical Density Channel 0 (FAOD_LFA[0])
0 (−−−− 40
Retract
Pumping Stopped 4365.0 C3
Auto Reset


59.4 2910 0.080
59.4 2425 0.077
59.4 2425 0.076
59.3 2425 0.077
59.3 1940 0.077
59.3 1940 0.072
59.2 1455 0.070
59.2 1455 0.068
59.2 1455 0.067
59.1 970 0.068
59.0 970 0.067
59.0 970 0.067
59.0 970 0.066
58.9 485 0.064
58.9 485 0.063
58.8 485 0.062
58.7 485 0.059
58.6 485 0.056
58.4 0 0.052
Pump Up Started
58.3 0 0.059
58.3 0 0.056
58.3 0 0.057
00:13:50 1897.56
00:13:40 1912.85
00:13:30 1925.04
00:13:20 1897.43
00:13:10 1904.60
00:13:00 1905.71
00:12:50 1908.16
00:12:40 1912.14
00:12:30 1911.45
00:12:20 1914.31
00:12:10 1917.35
00:12:00 1918.96
00:11:50 1925.38
00:11:40 1920.33
00:11:30 1922.19
00:11:20 1925.74
00:11:10 1932.31
00:11:00 1904.08
00:10:50 1887.95
00:10:40 1881.29
00:10:30 1889.08
00:10:20 1884.45
00:10:10 1887.37
00:10:00 1885.07
00:09:50 1887.03
00:09:40 1894.38
00:09:30 1893.94
00:09:20 1896.76
00:09:10 1895.51
00:09:00 1896.32
00:08:50 1906.77
00:08:40 1938.16
00:08:30 1941.62
00:08:20 1941.59
00:08:10 1942.39
00:08:00 1942.96
00:07:50 1943.80
00:07:40 1945.22
00:07:30 1944.89
00:07:20 1945.22
00:07:10 1946.57
00:07:00 1946.82
00:06:50 1948.08
00:06:40 1950.73
00:06:30 1952.13
00:06:20 1954.61
00:06:10 1954.42
00:06:00 1954.25
00:05:50 1955.18
00:05:40 1956.33
00:05:30 1955.97
00:05:20 1955.96
00:05:10 1958.32
00:05:00 1958.48
00:04:50 1959.05
00:04:40 1959.61
00:04:30 1960.30
00:04:20 1960.89
00:04:10 1961.44
00:04:00 1959.64
00:03:50 1956.78
00:03:40 1953.22
00:03:30 1944.21
00:03:20 1966.23
00:03:10 1986.26
00:03:00 1986.34
1986.24
1986.24
1986.23
1986.24
1986.24
1986.24
1986.23



Pumped Volume (POUDPV) (C3)

Elapsed Time (ETIM) (S)

Low Gas

Highly Absorbing Fluid

MRPS 1 Flowline Fluid Resistivity (BFR1)
0.01 (OHMM) 1

LFA Optical Density Channel 0 (FAOD_LFA[0])
0 (---- 40

MRPOUD Motor Current (POUDMC)
0 (AMPS) 20

MRPOUD Solenoid 3 Status (POUDS3)
5 (---- 0

Medium Gas

Water

LFA Fluid Coloration (FCOL_LFA)
(----
0.000001 0.0001

LFA Optical Density Channel 1 (FAOD_LFA[1])
-4 (---- 36

MRPS 1 Quartz Gauge Pressure (BQP1)
3000 (PSIA) 8000

MRMS 1 Upper Valve Position (MUP1)
(----
5 260

High Gas

Oil

LFA Fluid Coloration (FCOL_LFA)
0.0001 (---- 0.01

LFA Optical Density Channel 2 (FAOD_LFA[2])
-8 (---- 32

MRPOUD Duty Cycle (POUDDC)
0 (%) 100

MRPS 1 Quartz Gauge Pressure (BQP1) (PSIA)

LFA Optical Density Channel 3 (FAOD_LFA[3])
-12 (---- 28

MRPOUD Motor Speed (POUDMS)
0 (RPM) 5000

LFA Optical Density Channel 4 (FAOD_LFA[4])
-16 (---- 24

MRPS 1 Resistivity Cell Temperature (B1TR) (DEGC)

MRPS 1 Resistivity (BFR1) (OHMM)

LFA Optical Density Channel 5 (FAOD_LFA[5])
-20 (---- 20

MRPS 1 Resistivity Cell Temperature (B1TR)
100 (DEGC) 150

LFA Optical Density Channel 6 (FAOD_LFA[6])
-24 (---- 16

MRPOUD Hydraulic Pressure (POUDHP)
0 (PSIG) 5000

LFA Optical Density Channel 7 (FAOD_LFA[7])
-28 (---- 12

MRPOUD Hydraulic Pump Output Volume (POUDPV)
0 (C3) 10000

LFA Optical Density Channel 8 (FAOD_LFA[8])
-32 (---- 8

LFA Optical Density Channel 9 (FAOD_LFA[9])
-36 (---- 4

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	MRPS_1: Single Probe Module (MRPS) 1		
QGCA	Quartz Gauge Pressure Correction Applied	BOTH	
QGDA	Quartz Gauge Deviation Angle	16.5	DEG
QGFD	Quartz Gauge Flow Line Density	1	G/C3
	MRPO_UD: Dual Up−down Pumpout Module (MRPOUD)		
POUDDISPVOL	MRPOUD Displacement Unit Stroke Volume	485	
	LFA: Live Fluid Analyzer		
CEXP_LFA	LFA Coloration Exponent	4.6	
DCDW_LFA	LFA Decolor and Dewater Allow/Disallow for Gas Oil Ratio	ALLOW	
FAGM_LFA	LFA GOR Allow/Disallow Mode	ALLOW	
FAJM_LFA	LFA Job Mode	LFA	
FATCM_LFA	LFA Temp. Coef. Measure Mode	** V **	
FATCS_LFA	LFA Temp. Coef. Source Mode	** V **	
GASH_LFA	LFA Gas Indicator High Level Threshold	0.4	
GASL_LFA	LFA Gas Indicator Low Level Threshold	0.05	
GASM_LFA	LFA Gas Indicator Medium Level Threshold	0.1	
GORD_LFA	LFA GOR Disqualification Level	0.1	
ODTMP_LFA	LFA Optical Density Temperature Correction	ALLOW	
PDCO	Probe Depth Correction Offset	0	M
SATL_LFA	LFA Saturation Level of Optical Density Measurement	** V **	
TCPS_STATUS_LFA	LFA Temperature Compensation Coefficient Status	VALID	
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M

Format: MRPS_LFA_Water Vertical Scale: 1" per 60S Graphics File Created: 04−Mar−2008 15:19

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Output DLIS Files

DEFAULT	MDT_OFA_072LTP	FN:119	PRODUCER	04−Mar−2008 15:19	
RTB	MDT_OFA_072LTP	FN:120	PRODUCER	04−Mar−2008 15:19	

Schlumberger

Correlation Pass
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd Well: WASABI−1

Output DLIS Files

DEFAULT	MDT_OFA_069LUP	FN:113	PRODUCER	04−Mar−2008 14:39	1476.9 M	1432.1 M
RTB	MDT_OFA_069LUP	FN:114	PRODUCER	04−Mar−2008 14:39	1476.9 M	1432.1 M

OP System Version: 15C0−309

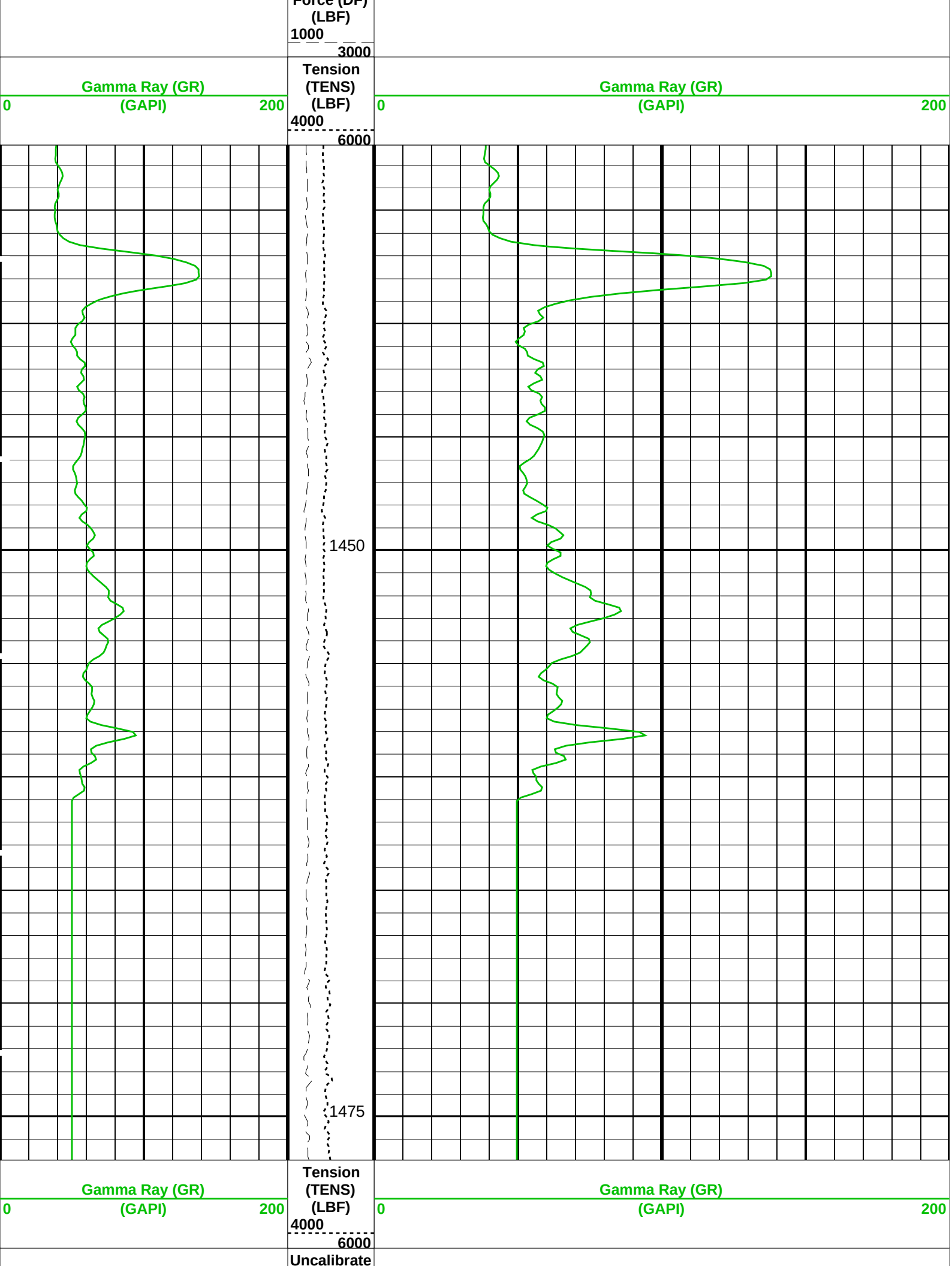
MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

PIP SUMMARY

Time Mark Every 60 S

	Uncalibrated Downhole Force (DF)


Force (DF)
(LBF)
1000
3000
Gamma Ray (GR)
0
(GAPI)
200
Tension
(TENS)
(LBF)
4000
6000
Gamma Ray (GR)
0
(GAPI)
200
1450
1475
Gamma Ray (GR)
0
(GAPI)
200
Tension
(TENS)
(LBF)
4000
6000
Gamma Ray (GR)
0
(GAPI)
200
Uncalibrate

d Downhole Force (DF) (LBF)
1000
3000

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	LFA: Live Fluid Analyzer		
PDCO	Probe Depth Correction Offset	0	M
	MRPC: Power Cartridge		
PDCO	Probe Depth Correction Offset	0	M
	System and Miscellaneous		
DORL	Depth Offset for Repeat Analysis	0.0	M

Format: Correlation **Vertical Scale: 1:200** **Graphics File Created: 04−Mar−2008 14:39**

OP System Version: 15C0−309

MCM

MRPS_1	SPC−3397−MDT	MRHY_1	SPC−3397−MDT
MRPO_UD	SPC−3397−MDT	LFA	SPC−3397−MDT
MRMS_1	SPC−3397−MDT	MRPC	SPC−3397−MDT
SGT−L	SRPC−3546−Q1_2008_OP15	TCC−BF	SRPC−3546−Q1_2008_OP15

Output DLIS Files

DEFAULT	MDT_OFA_069LUP	FN:113	PRODUCER	04−Mar−2008 14:39
RTB	MDT_OFA_069LUP	FN:114	PRODUCER	04−Mar−2008 14:39

Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Live Fluid Analyzer Wellsite Calibration − Spectrometer Channels							
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32							
Dark Mode − 0	0.02500	0.02742	0.02726	N/A	N/A	N/A	V
Dark Mode − 1	0.02500	0.02755	0.02741	N/A	N/A	N/A	V
Dark Mode − 2	0.02500	0.02697	0.02678	N/A	N/A	N/A	V
Dark Mode − 3	0.02500	0.02725	0.02713	N/A	N/A	N/A	V
Dark Mode − 4	0.02500	0.02724	0.02711	N/A	N/A	N/A	V
Dark Mode − 5	0.02500	0.02731	0.02718	N/A	N/A	N/A	V
Dark Mode − 6	0.02500	0.02735	0.02727	N/A	N/A	N/A	V
Dark Mode − 7	0.02500	0.02740	0.02728	N/A	N/A	N/A	V
Dark Mode − 8	0.02500	0.02780	0.02765	N/A	N/A	N/A	V
Dark Mode − 9	0.02500	0.02754	0.02744	N/A	N/A	N/A	V
Source Mode − 0	1.700	1.138	1.142	N/A	N/A	N/A	V
Source Mode − 1	1.700	1.048	1.055	N/A	N/A	N/A	V
Source Mode − 2	1.700	1.060	1.068	N/A	N/A	N/A	V
Source Mode − 3	1.700	0.5809	0.5855	N/A	N/A	N/A	V
Source Mode − 4	1.700	1.169	1.176	N/A	N/A	N/A	V
Source Mode − 5	1.700	1.017	1.013	N/A	N/A	N/A	V
Source Mode − 6	1.700	0.7577	0.7531	N/A	N/A	N/A	V
Source Mode − 7	1.700	1.191	1.194	N/A	N/A	N/A	V

Source Mode − 8	1.700	1.069	1.081	N/A	N/A	N/A	V
Source Mode − 9	1.700	2.440	2.457	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration − Gas Detector Channels
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Dark Mode − 0	0.02500	0.02744	0.02729	N/A	N/A	N/A	V
Dark Mode − 1	0.02500	0.02726	0.02712	N/A	N/A	N/A	V
Dark Mode − 2	0.02500	0.02713	0.02695	N/A	N/A	N/A	V
Dark Mode − 3	0.02500	0.02742	0.02730	N/A	N/A	N/A	V
Dark Mode − 4	0.02500	0.02744	0.02729	N/A	N/A	N/A	V
Dark Mode − 5	0.02500	0.02705	0.02689	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration − Gas Detector Source Intensity
Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Source Intensity Dark Mode	0.02600	0.03064	0.03047	N/A	N/A	N/A	V
Source Intensity Source Mode	0.2500	0.2840	0.2846	N/A	N/A	N/A	V

Live Fluid Analyzer Master Calibration − Spectrometer
Master: 18−Feb−2008 12:21

Dry Dark Mode − 0	0.02500	0.02742	−−	−−	−−	−−	V
Dry Dark Mode − 1	0.02500	0.02755	−−	−−	−−	−−	V
Dry Dark Mode − 2	0.02500	0.02697	−−	−−	−−	−−	V
Dry Dark Mode − 3	0.02500	0.02725	−−	−−	−−	−−	V
Dry Dark Mode − 4	0.02500	0.02724	−−	−−	−−	−−	V
Dry Dark Mode − 5	0.02500	0.02731	−−	−−	−−	−−	V
Dry Dark Mode − 6	0.02500	0.02735	−−	−−	−−	−−	V
Dry Dark Mode − 7	0.02500	0.02740	−−	−−	−−	−−	V
Dry Dark Mode − 8	0.02500	0.02780	−−	−−	−−	−−	V
Dry Dark Mode − 9	0.02500	0.02754	−−	−−	−−	−−	V
Dry Source Mode − 0	1.700	1.138	−−	−−	−−	−−	V
Dry Source Mode − 1	1.700	1.048	−−	−−	−−	−−	V
Dry Source Mode − 2	1.700	1.060	−−	−−	−−	−−	V
Dry Source Mode − 3	1.700	0.5809	−−	−−	−−	−−	V
Dry Source Mode − 4	1.700	1.169	−−	−−	−−	−−	V
Dry Source Mode − 5	1.700	1.017	−−	−−	−−	−−	V
Dry Source Mode − 6	1.700	0.7577	−−	−−	−−	−−	V
Dry Source Mode − 7	1.700	1.191	−−	−−	−−	−−	V
Dry Source Mode − 8	1.700	1.069	−−	−−	−−	−−	V
Dry Source Mode − 9	1.700	2.440	−−	−−	−−	−−	V
Dry Measure Mode − 0	2.700	2.359	−−	−−	−−	−−	V
Dry Measure Mode − 1	2.700	2.409	−−	−−	−−	−−	V
Dry Measure Mode − 2	2.700	2.368	−−	−−	−−	−−	V
Dry Measure Mode − 3	2.700	2.140	−−	−−	−−	−−	V
Dry Measure Mode − 4	2.700	2.566	−−	−−	−−	−−	V
Dry Measure Mode − 5	2.700	2.493	−−	−−	−−	−−	V
Dry Measure Mode − 6	2.700	2.492	−−	−−	−−	−−	V
Dry Measure Mode − 7	2.700	2.491	−−	−−	−−	−−	V
Dry Measure Mode − 8	2.700	1.704	−−	−−	−−	−−	V
Dry Measure Mode − 9	2.700	2.292	−−	−−	−−	−−	V
Oil Dark Mode − 0	0.02500	0.02724	−−	−−	−−	−−	V
Oil Dark Mode − 1	0.02500	0.02744	−−	−−	−−	−−	V
Oil Dark Mode − 2	0.02500	0.02686	−−	−−	−−	−−	V
Oil Dark Mode − 3	0.02500	0.02714	−−	−−	−−	−−	V
Oil Dark Mode − 4	0.02500	0.02711	−−	−−	−−	−−	V
Oil Dark Mode − 5	0.02500	0.02718	−−	−−	−−	−−	V
Oil Dark Mode − 6	0.02500	0.02732	−−	−−	−−	−−	V
Oil Dark Mode − 7	0.02500	0.02728	−−	−−	−−	−−	V
Oil Dark Mode − 8	0.02500	0.02769	−−	−−	−−	−−	V
Oil Dark Mode − 9	0.02500	0.02743	−−	−−	−−	−−	V
Oil Source Mode − 0	1.700	1.141	−−	−−	−−	−−	V
Oil Source Mode − 1	1.700	1.053	−−	−−	−−	−−	V
Oil Source Mode − 2	1.700	1.066	−−	−−	−−	−−	V
Oil Source Mode − 3	1.700	0.5841	−−	−−	−−	−−	V
Oil Source Mode − 4	1.700	1.174	−−	−−	−−	−−	V
Oil Source Mode − 5	1.700	1.014	−−	−−	−−	−−	V
Oil Source Mode − 6	1.700	0.7532	−−	−−	−−	−−	V
Oil Source Mode − 7	1.700	1.194	−−	−−	−−	−−	V
Oil Source Mode − 8	1.700	1.078	−−	−−	−−	−−	V
Oil Source Mode − 9	1.700	2.453	−−	−−	−−	−−	V
Oil Measure Mode − 0	1.000	2.240	−−	−−	−−	−−	V
Oil Measure Mode − 1	1.000	2.790	−−	−−	−−	−−	V
Oil Measure Mode − 2	1.000	2.764	−−	−−	−−	−−	V
Oil Measure Mode − 3	1.000	2.527	−−	−−	−−	−−	V
Oil Measure Mode − 4	1.000	3.009	−−	−−	−−	−−	V
Oil Measure Mode − 5	1.000	2.872	−−	−−	−−	−−	V
Oil Measure Mode − 6	1.000	2.548	−−	−−	−−	−−	V
Oil Measure Mode − 7	1.000	2.836	−−	−−	−−	−−	V
Oil Measure Mode − 8	1.000	0.2992	−−	−−	−−	−−	V
Oil Measure Mode − 9	1.000	1.750	−−	−−	−−	−−	V
Water Dark Mode − 0	0.02500	0.02734	−−	−−	−−	−−	V
Water Dark Mode − 1	0.02500	0.02743	−−	−−	−−	−−	V

Water Dark Mode − 2	0.02500	0.02694	−−	−−	−−	−−	V
Water Dark Mode − 3	0.02500	0.02719	−−	−−	−−	−−	V
Water Dark Mode − 4	0.02500	0.02718	−−	−−	−−	−−	V
Water Dark Mode − 5	0.02500	0.02720	−−	−−	−−	−−	V
Water Dark Mode − 6	0.02500	0.02736	−−	−−	−−	−−	V
Water Dark Mode − 7	0.02500	0.02729	−−	−−	−−	−−	V
Water Dark Mode − 8	0.02500	0.02772	−−	−−	−−	−−	V
Water Dark Mode − 9	0.02500	0.02743	−−	−−	−−	−−	V
Water Source Mode − 0	1.700	1.137	−−	−−	−−	−−	V
Water Source Mode − 1	1.700	1.048	−−	−−	−−	−−	V
Water Source Mode − 2	1.700	1.061	−−	−−	−−	−−	V
Water Source Mode − 3	1.700	0.5812	−−	−−	−−	−−	V
Water Source Mode − 4	1.700	1.169	−−	−−	−−	−−	V
Water Source Mode − 5	1.700	1.015	−−	−−	−−	−−	V
Water Source Mode − 6	1.700	0.7537	−−	−−	−−	−−	V
Water Source Mode − 7	1.700	1.190	−−	−−	−−	−−	V
Water Source Mode − 8	1.700	1.071	−−	−−	−−	−−	V
Water Source Mode − 9	1.700	2.443	−−	−−	−−	−−	V
Water Measure Mode − 0	1.000	0.8187	−−	−−	−−	−−	V
Water Measure Mode − 1	1.000	2.666	−−	−−	−−	−−	V
Water Measure Mode − 2	1.000	2.636	−−	−−	−−	−−	V
Water Measure Mode − 3	1.000	2.400	−−	−−	−−	−−	V
Water Measure Mode − 4	1.000	2.811	−−	−−	−−	−−	V
Water Measure Mode − 5	1.000	2.204	−−	−−	−−	−−	V
Water Measure Mode − 6	1.000	0.03260	−−	−−	−−	−−	V
Water Measure Mode − 7	1.000	0.5636	−−	−−	−−	−−	V
Water Measure Mode − 8	1.000	0.5464	−−	−−	−−	−−	V
Water Measure Mode − 9	1.000	0.03018	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Gas Detector
Master: 18−Feb−2008 12:21

Dry Dark Mode − 0	0.02500	0.02744	−−	−−	−−	−−	V
Dry Dark Mode − 1	0.02500	0.02726	−−	−−	−−	−−	V
Dry Dark Mode − 2	0.02500	0.02713	−−	−−	−−	−−	V
Dry Dark Mode − 3	0.02500	0.02742	−−	−−	−−	−−	V
Dry Dark Mode − 4	0.02500	0.02744	−−	−−	−−	−−	V
Dry Dark Mode − 5	0.02500	0.02705	−−	−−	−−	−−	V
Dry Measure Mode − 0	0	0.1450	−−	−−	−−	−−	V
Dry Measure Mode − 1	0	0.2270	−−	−−	−−	−−	V
Dry Measure Mode − 2	0	0.4472	−−	−−	−−	−−	V
Dry Measure Mode − 3	0	0.4622	−−	−−	−−	−−	V
Dry Measure Mode − 4	0	0.4372	−−	−−	−−	−−	V
Dry Measure Mode − 5	0	0.3442	−−	−−	−−	−−	V
Dry Normalized − 0	0	0.2703	−−	−−	−−	−−	V
Dry Normalized − 1	0	0.4594	−−	−−	−−	−−	V
Dry Normalized − 2	0	0.9660	−−	−−	−−	−−	V
Dry Normalized − 3	0	1.000	−−	−−	−−	−−	V
Dry Normalized − 4	0	0.9425	−−	−−	−−	−−	V
Dry Normalized − 5	0	0.7294	−−	−−	−−	−−	V
Water Dark Mode − 0	0.02500	0.02740	−−	−−	−−	−−	V
Water Dark Mode − 1	0.02500	0.02720	−−	−−	−−	−−	V
Water Dark Mode − 2	0.02500	0.02702	−−	−−	−−	−−	V
Water Dark Mode − 3	0.02500	0.02739	−−	−−	−−	−−	V
Water Dark Mode − 4	0.02500	0.02737	−−	−−	−−	−−	V
Water Dark Mode − 5	0.02500	0.02698	−−	−−	−−	−−	V
Water Measure Mode − 0	0	0.1338	−−	−−	−−	−−	V
Water Measure Mode − 1	0	0.1462	−−	−−	−−	−−	V
Water Measure Mode − 2	0	0.1240	−−	−−	−−	−−	V
Water Measure Mode − 3	0	0.1120	−−	−−	−−	−−	V
Water Measure Mode − 4	0	0.1106	−−	−−	−−	−−	V
Water Measure Mode − 5	0	0.1035	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Gas Detector Source Intensity
Master: 18−Feb−2008 12:21

Source Intensity Dark Mode	0.02600	0.03064	−−	−−	−−	−−	V
Source Intensity Source Mode	0.2500	0.2840	−−	−−	−−	−−	V

Live Fluid Analyzer Master Calibration − Absorption Coefficients
Master: 18−Feb−2008 12:25

Oil Absorption Coefficie − 0	0	0.02265	−−	−−	−−	−−	V
Oil Absorption Coefficie − 1	0	−0.06452	−−	−−	−−	−−	V
Oil Absorption Coefficie − 2	0	−0.06786	−−	−−	−−	−−	V
Oil Absorption Coefficie − 3	0	−0.07301	−−	−−	−−	−−	V
Oil Absorption Coefficie − 4	0	−0.06990	−−	−−	−−	−−	V
Oil Absorption Coefficie − 5	0	−0.06209	−−	−−	−−	−−	V
Oil Absorption Coefficie − 6	0	−0.009911	−−	−−	−−	−−	V
Oil Absorption Coefficie − 7	0	−0.05688	−−	−−	−−	−−	V
Oil Absorption Coefficie − 8	0	0.7904	−−	−−	−−	−−	V
Oil Absorption Coefficie − 9	0	0.1186	−−	−−	−−	−−	V
Water Absorption Coeffic − 0	0	0.4692	−−	−−	−−	−−	V
Water Absorption Coeffic − 1	0	−0.04451	−−	−−	−−	−−	V
Water Absorption Coeffic − 2	0	−0.04713	−−	−−	−−	−−	V

Water Absorption Coeffic − 2	0	−0.04713	−−	−−	−−	−−	V
Water Absorption Coeffic − 3	0	−0.05030	−−	−−	−−	−−	V
Water Absorption Coeffic − 4	0	−0.04003	−−	−−	−−	−−	V
Water Absorption Coeffic − 5	0	0.05426	−−	−−	−−	−−	V
Water Absorption Coeffic − 6	0	2.673	−−	−−	−−	−−	V
Water Absorption Coeffic − 7	0	0.6622	−−	−−	−−	−−	V
Water Absorption Coeffic − 8	0	0.5094	−−	−−	−−	−−	V
Water Absorption Coeffic − 9	0	2.916	−−	−−	−−	−−	V

Scintillation Gamma−Ray − L Wellsite Calibration − Detector Calibration
Before: 4−Mar−2008 8:20

Gamma Ray Background	30.00	N/A	5.315	N/A	N/A	N/A	GAPI
Gamma Ray (Jig − Bkg)	163.8	N/A	163.8	N/A	N/A	14.89	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Live Fluid Analyzer / Equipment Identification

Primary Equipment:

Live Fluid Analyzer (TW)	MRFA − EA	8011

Auxiliary Equipment:

Live Fluid Analyzer Wellsite Calibration
Spectrometer Channels

Idx	Phase	Dark Mode V	Value	Idx	Phase	Source Mode V	Value
0	Master		0.02742	0	Master		1.138
	Before		0.02726		Before		1.142
1	Master		0.02755	1	Master		1.048
	Before		0.02741		Before		1.055
2	Master		0.02697	2	Master		1.060
	Before		0.02678		Before		1.068
3	Master		0.02725	3	Master		0.5809
	Before		0.02713		Before		0.5855
4	Master		0.02724	4	Master		1.169
	Before		0.02711		Before		1.176
5	Master		0.02731	5	Master		1.017
	Before		0.02718		Before		1.013
6	Master		0.02735	6	Master		0.7577
	Before		0.02727		Before		0.7531
7	Master		0.02740	7	Master		1.191
	Before		0.02728		Before		1.194
8	Master		0.02780	8	Master		1.069
	Before		0.02765		Before		1.081
9	Master		0.02754	9	Master		2.440
	Before		0.02744		Before		2.457
		0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)				0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Live Fluid Analyzer Wellsite Calibration
Gas Detector Channels

Idx	Phase	Dark Mode V	Value
0	Master		0.02744
	Before		0.02729
1	Master		0.02726
	Before		0.02710

	Before		0.02712
2	Master		0.02713
	Before		0.02695
3	Master		0.02742
	Before		0.02730
4	Master		0.02744
	Before		0.02729
5	Master		0.02705
	Before		0.02689
	0.01700 (Minimum)	0.02500 (Nominal)	0.03300 (Maximum)

Master: 18−Feb−2008 12:21

Before: 18−Feb−2008 12:32

Live Fluid Analyzer Wellsite Calibration

Gas Detector Source Intensity

Phase	Source Intensity Dark Mode V	Value	Phase	Source Intensity Source Mode V	Value
Master		0.03064	Master		0.2840
Before		0.03047	Before		0.2846
	0.01700 (Minimum) 0.02600 (Nominal) 0.03500 (Maximum)			0.1900 (Minimum) 0.2500 (Nominal) 0.3100 (Maximum)	

Master: 18−Feb−2008 12:21 Before: 18−Feb−2008 12:32

Live Fluid Analyzer Master Calibration

Spectrometer

Idx	Dry Dark Mode V	Value
0		0.02742
1		0.02755
2		0.02697
3		0.02725
4		0.02724
5		0.02731
6		0.02735
7		0.02740
8		0.02780
9		0.02754
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Dry Source Mode V	Value
0		1.138
1		1.048
2		1.060
3		0.5809
4		1.169
5		1.017
6		0.7577
7		1.191
8		1.069
9		2.440
	0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Idx	Dry Measure Mode V	Value
0		2.359
1		2.409
2		2.368
3		2.140
4		2.566
5		2.493
6		2.492
7		2.491
8		1.704
9		2.292
	1.350 (Minimum) 2.700 (Nominal) 3.200 (Maximum)	

Idx	Oil Dark Mode V	Value
0		0.02724
1		0.02744
2		0.02686
3		0.02714
4		0.02711
5		0.02718
6		0.02732
7		0.02728
8		0.02769
9		0.02743
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Oil Source Mode V	Value
0		1.141
1		1.053
2		1.066
3		0.5841
4		1.174
5		1.014
6		0.7532
7		1.194
8		1.078
9		2.453
	0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Idx	Oil Measure Mode V	Value
0		2.240
1		2.790
2		2.764
3		2.527
4		3.009
5		2.872
6		2.548
7		2.836
8		0.2992
9		1.750
	0 (Minimum) 1.000 (Nominal) 4.500 (Maximum)	

Idx	Water Dark Mode V	Value
0		0.02734

Idx	Water Source Mode V	Value
0		1.137

Idx	Water Measure Mode V	Value
0		0.8187

Idx		Value	Idx		Value	Idx		Value
0		0.02734	0		1.137	0		0.8187
1		0.02743	1		1.048	1		2.666
2		0.02694	2		1.061	2		2.636
3		0.02719	3		0.5812	3		2.400
4		0.02718	4		1.169	4		2.811
5		0.02720	5		1.015	5		2.204
6		0.02736	6		0.7537	6		0.03260
7		0.02729	7		1.190	7		0.5636
8		0.02772	8		1.071	8		0.5464
9		0.02743	9		2.443	9		0.03018
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)			0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)			0 (Minimum) 1.000 (Nominal) 4.500 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Gas Detector

Idx	Dry Dark Mode V	Value
0		0.02744
1		0.02726
2		0.02713
3		0.02742
4		0.02744
5		0.02705
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Water Dark Mode V	Value
0		0.02740
1		0.02720
2		0.02702
3		0.02739
4		0.02737
5		0.02698
	0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Idx	Dry Measure Mode V	Value
0		0.1450
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
1		0.2270
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
2		0.4472
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
3		0.4622
	0.3000 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
4		0.4372
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	
5		0.3442
	0 (Minimum) 0.5000 (Nominal) 1.000 (Maximum)	

Idx	Dry Normalized V	Value
0		0.2703
	0.1000 (Minimum) 0.2400 (Nominal) 0.5000 (Maximum)	
1		0.4594
	0.2000 (Minimum) 0.4600 (Nominal) 0.8000 (Maximum)	
2		0.9660
	0.7000 (Minimum) 1.010 (Nominal) 1.300 (Maximum)	
3		1.000
	1.000 (Minimum) 1.000 (Nominal) 1.000 (Maximum)	
4		0.9425
	0.6000 (Minimum) 0.9200 (Nominal) 1.200 (Maximum)	
5		0.7294
	0.4000 (Minimum) 0.7500 (Nominal) 1.000 (Maximum)	

Idx	Water Measure Mode V	Value
0		0.1338
	0 (Minimum) 0.1000 (Nominal) 0.3000 (Maximum)	
1		0.1462
	0 (Minimum) 0.05000 (Nominal) 0.3000 (Maximum)	
2		0.1240
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
3		0.1120
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
4		0.1106
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	
5		0.1035
	0 (Minimum) 0.05000 (Nominal) 0.2000 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Gas Detector Source Intensity

Source Intensity Dark Mode V	Value	Source Intensity Source Mode V	Value
	0.03064		0.2840
0.01700 (Minimum) 0.02600 (Nominal) 0.03500 (Maximum)		0.1900 (Minimum) 0.2500 (Nominal) 0.3100 (Maximum)	

Master: 18−Feb−2008 12:21

Live Fluid Analyzer Master Calibration

Absorption Coefficients

Idx	Oil Absorption Coefficients V	Value	Idx	Water Absorption Coefficients V	Value
0		0.02265	0		0.4692
	−0.010000 (Minimum) 0.05000 (Nominal) 0.1100 (Maximum)			0.4200 (Minimum) 0.4800 (Nominal) 0.5400 (Maximum)	
1		−0.06452	1		−0.04451
	−0.1300 (Minimum) −0.07000 (Nominal) −0.010000 (Maximum)			−0.1200 (Minimum) −0.06000 (Nominal) 0 (Maximum)	
2		−0.06786	2		−0.04713
	−0.1300 (Minimum) −0.07000 (Nominal) −0.010000 (Maximum)			−0.1200 (Minimum) −0.06000 (Nominal) 0 (Maximum)	
3		−0.07301	3		−0.05030
	−0.1300 (Minimum) −0.07000 (Nominal) −0.010000 (Maximum)			−0.1200 (Minimum) −0.06000 (Nominal) 0 (Maximum)	
4		−0.06990	4		−0.04003
	−0.1300 (Minimum) −0.07000 (Nominal) −0.010000 (Maximum)			−0.1000 (Minimum) −0.04000 (Nominal) 0.02000 (Maximum)	
5		−0.06209	5		0.05426
	−0.1200 (Minimum) −0.06000 (Nominal) 0 (Maximum)			0 (Minimum) 0.06000 (Nominal) 0.1200 (Maximum)	
6		−0.009911	6		2.673
	−0.06000 (Minimum) 0 (Nominal) 0.06000 (Maximum)			2.430 (Minimum) 2.700 (Nominal) 2.970 (Maximum)	
7		−0.05688	7		0.6622
	−0.1100 (Minimum) −0.05000 (Nominal) 0.010000 (Maximum)			0.5500 (Minimum) 0.6200 (Nominal) 0.6900 (Maximum)	
8		0.7904	8		0.5094
	0.6700 (Minimum) 0.7500 (Nominal) 0.8300 (Maximum)			0.4500 (Minimum) 0.5100 (Nominal) 0.5700 (Maximum)	
9		0.1186	9		2.916
	0.06000 (Minimum) 0.1200 (Nominal) 0.1800 (Maximum)			2.700 (Minimum) 3.000 (Nominal) 50.00 (Maximum)	

Master: 18−Feb−2008 12:25

Scintillation Gamma−Ray − L / Equipment Identification

Primary Equipment:		
Scintillation Gamma Cartridge	SGC − SA	735
Scintillation Gamma Detector	SGD − TAB	3465
Auxiliary Equipment:		
Scintillation Gamma Housing	SGH − K	403
Gamma Source Radioactive	GSR − U/Y	

Scintillation Gamma−Ray − L Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig − Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		5.315	Before		163.8	Before		165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			148.9 (Minimum) 163.8 (Nominal) 178.7 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 4−Mar−2008 8:20

Schlumberger

Well:	**WASABI−1**
Field:	**Apache/VIC/P−58/WASABI−1**
Rig:	**West Triton**
Country:	**Australia**

MDT−GR
Suite−1 Run−3
MDT Sampling

Schlumberger

Company: **Apache Northwest Pty Ltd**

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton** Country: **Australia**

Rig: West Triton
Field: Apache/VIC/P−58/WASABI−1
Location: Bass Strait
Well: WASABI−1
Company: Apache Northwest Pty Ltd

CST−GR
Suite−1 Run−4
Side Wall Cores, Scale 1:200

LOCATION

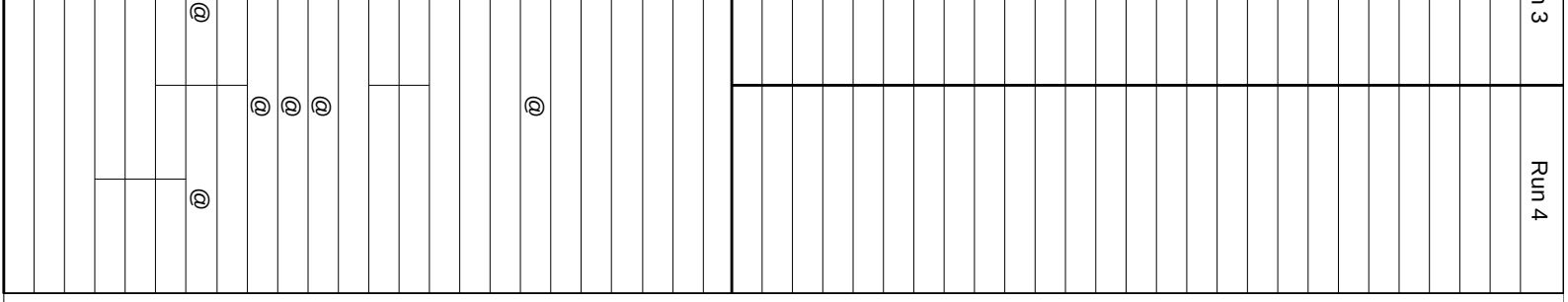
Bass Strait
Northing : 5,739,963.350 m
Easting : 522,993.588 m

Elev.:
G.L. −27 m
D.F. 39 m

Permanent Datum: AHD — Elev.: 0 m
Log Measured From: DRILL FLOOR (RT) — 39.0 m above Perm. Datum
Drilling Measured From: DRILL FLOOR (RT)

State:	Max. Well Deviation	Longitude	Latitude
Victoria	48 deg	147 15' 49.147" E	38 29' 18.157" S

	Run 1	Run 2	Run 3	Run 4
Logging Date			4−Mar−2008	
Run Number			4	
Depth Driller			2313 m	
Schlumberger Depth			Not Tagged	
Bottom Log Interval			1477.2 m	
Top Log Interval			1250 m	
Casing Driller Size @ Depth	@	@	13.375 in @ 857 m	@
Casing Schlumberger			854 m	
Bit Size			12.250 in	
Type Fluid In Hole			KCl/Polymer	
MUD Density / Viscosity			1.21 lbm/gal / 50 s	
MUD Fluid Loss / PH			5 m3 / 8.7	
MUD Source Of Sample			Flowline	
RM @ Measured Temperature	@	@	0.091 ohm.m @ 22 degC	@
RMF @ Measured Temperature	@	@	0.079 ohm.m @ 22 degC	@
RMC @ Measured Temperature	@	@	0.109 ohm.m @ 21 degC	@
Source RMF / RMC			Press / Press	
RM @ MRT / RMF @ MRT	@ / @	@ / @	0.049 @ 59 / 0.043 @ 59	@ / @
Maximum Recorded Temperatures			59 degC / 59	
Circulation Stopped / Time			3−Mar−2008 10:25	
Logger On Bottom / Time			4−Mar−2008 21:44	
Unit Number / Location			41 AUSL	
Recorded By			A. Dandi/M.Dawson/K. AlBarhi	
Witnessed By			H.Little / A.Cruickshank	



DEPTH SUMMARY LISTING

Date Created: 2−MAR−2008 16:47:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−H	Type:	CMTD−B/A	Type:	7−46ZV−XS
Serial Number:	796	Serial Number:	1721	Serial Number:	77178
Calibration Date:	29−Jan−2008	Calibration Date:	27−FEB−2008	Length:	7699.86 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1051		
Calibration Cable Type:	7−46ZV−XS	Calibration Gain:	0.81	Conveyance Method:	Wireline
Wheel Correction 1:	−5	Calibration Offset:	−610.00	Rig Type:	Offshore_Fixed
Wheel Correction 2:	−5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: Wasabi−1 GeoVISION Resistivity RM 200D
Reference Log Run Number: 1
Reference Log Date: 01−March−2008

Depth Control Remarks

1. Schlumberger Depth Control Policy Followed
2. IDW used as primary depth reference
3. Z−Chart used as secondary depth reference
4.
5.
6.

OTHER SERVICES1		OTHER SERVICES2	
OS1:	VSI	OS1:	
OS2:	PEX−HRLA−MSIP−GR−S	OS2:	
OS3:	MDT−GR	OS3:	
OS4:	VSI	OS4:	
OS5:		OS5:	

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tool string run as per tool sketch.	
Log correlated to Schlumberger GeoVISION Resistivity Log dated 1−Mar−2008.	
Max. recorded temperature was 59 degC sourced from LEH−QT thermometers.	
30 Cores attempted, 30 Bullets fired.	
29 Cores recovered, 1 empty.	
Tool got hold up @ 1500m MD, client decided to abort lower points.	

Tool got hold up @ 1300m MD, client decided to abort lower points.

Additional mud properties taken from Mud Report dated 2−Mar−2008:
Chlorides = 49,000 mg/L, Barite = 5.00 %.
KCL = 9 (% by Wt.)

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL08349210		SERVICE ORDER #:		
PROGRAM VERSION:	15C0−309		PROGRAM VERSION:		
FLUID LEVEL:	0 m		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

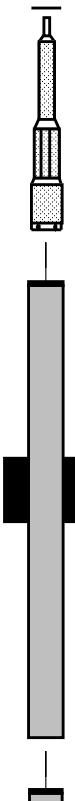
EQUIPMENT DESCRIPTION

RUN 1 | RUN 2

SURFACE EQUIPMENT

WITM (SHM) 969

DOWNHOLE EQUIPMENT



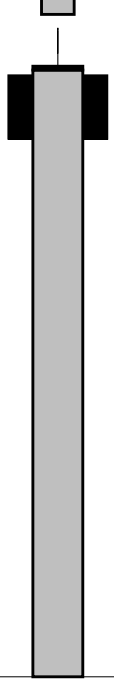
AH−63
AH−63 7101

2.49

CST−C
CST−C 3936

2.39

2.5 IN
Standoff



Tension 0.00

TOOL ZERO

MAXIMUM STRING DIAMETER 10.25 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: Apache Northwest Pty Ltd

Drawing Date: 7−Mar−2008

Well: Wasabi−1

Field: Apache/VIC/P−58/WASABI−

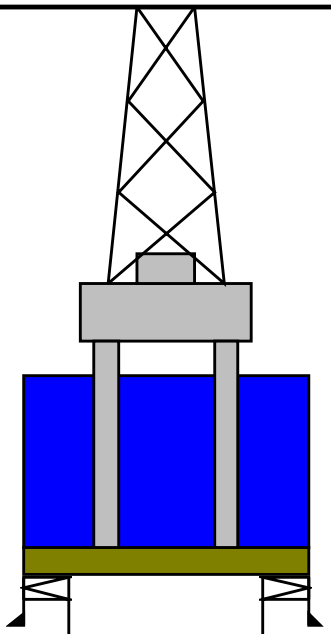
Rig Name: West Triton

State: Victoria

Reference Datum: AHD

Country: Australia

Elevation: 39.0 m

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Kelly Bushing Elevation			39.0					
Derrick Floor Elevation			39.0					
Mean Sea Level			0.0					
					27.0	20.000		Casing String
					101.1	20.000		Casing Shoe

All depths are driller's depths.

Schlumberger

Core Summary

MAXIS Field Log

Schlumberger

Sidewall Core Summary

Date	Engineer	Company
4-Mar-2008	A. Dandi/M.Dawson/K. AlBarhi	Apache Northwest

Bullet No.	Sample Depth (M)	Req. Depth (M)	Status	Tension (KG)
1	1477.1	1477.2	Recovered	0.5
2	1448.1	1448.1	Recovered	139.3
3	1438.4	1438.4	Recovered	108.9
4	1417.5	1417.5	Recovered	332.0
5	1410.4	1410.4	Recovered	0.0
6	1406.2	1406.3	Recovered	74.8
7	1379.3	1379.3	Recovered	776.1
8	1374.2	1374.2	Recovered	204.1
9	1354.1	1354.1	Recovered	240.4
10	1350.0	1350.0	Recovered	184.2
11	1344.4	1344.4	Recovered	373.3
12	1331.0	1331.0	Recovered	147.0
13	1329.4	1329.5	Recovered	22.7
14	1329.0	1329.0	Recovered	143.8
15	1328.5	1328.5	Recovered	240.9
16	1327.3	1327.3	Recovered	794.7
17	1319.2	1319.2	Recovered	389.6
18	1314.4	1314.4	Recovered	212.3
19	1303.0	1303.0	Recovered	214.1
20	1298.1	1298.2	Recovered	0.5
21	1295.1	1295.2	Recovered	225.4
22	1288.0	1288.0	Recovered	367.4
23	1276.8	1276.8	Recovered	315.2
24	1264.5	1264.5	Recovered	220.4
25	1263.0	1262.9	Recovered	284.9
26	1261.3	1261.3	Recovered	21.3
27	1259.3	1259.3	Recovered	294.4
28	1258.1	1258.1	Recovered	402.3
29	1256.4	1256.4	Recovered	340.6
30	1250.0	1250.0	Recovered	261.3

% Recovered	Number Recovered	Num
100	30	30

...ewall Core Summary

Company	Field	Well	Rig	Run
...t Pty Ltd	Apache/VIC/P−58/W/	WASABI−1	West Triton	4

Page 1 of 1

...ber Attempted

Bullet Type	Ring Type	Charge Type	Powder Load (G)	Fast. Leng. (IN)
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0
Combo	Large Re	AHT	8.0	13.0

Schlumberger

Correlation Pass 3
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

Output DLIS Files

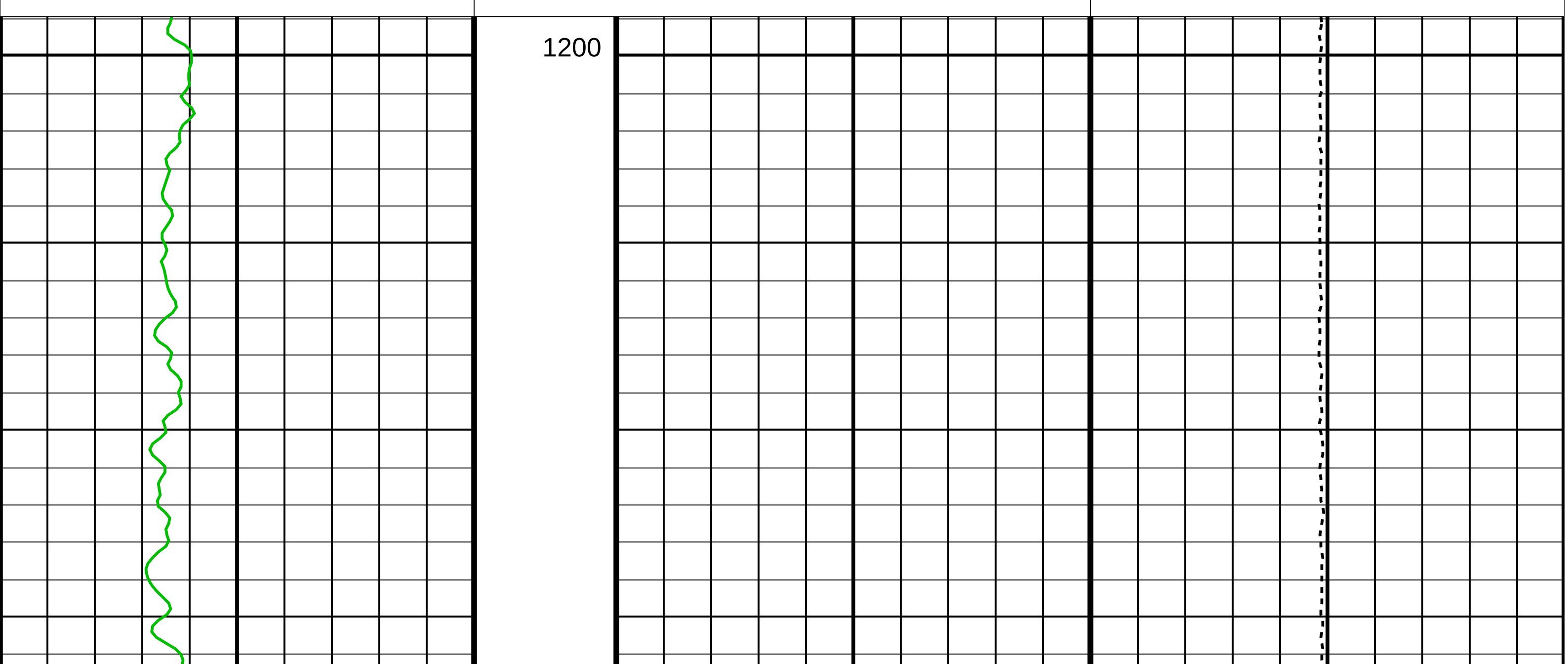
DEFAULT	ST_090LUP	FN:148	PRODUCER	04−Mar−2008 22:44	1294.2 M	1198.9 M

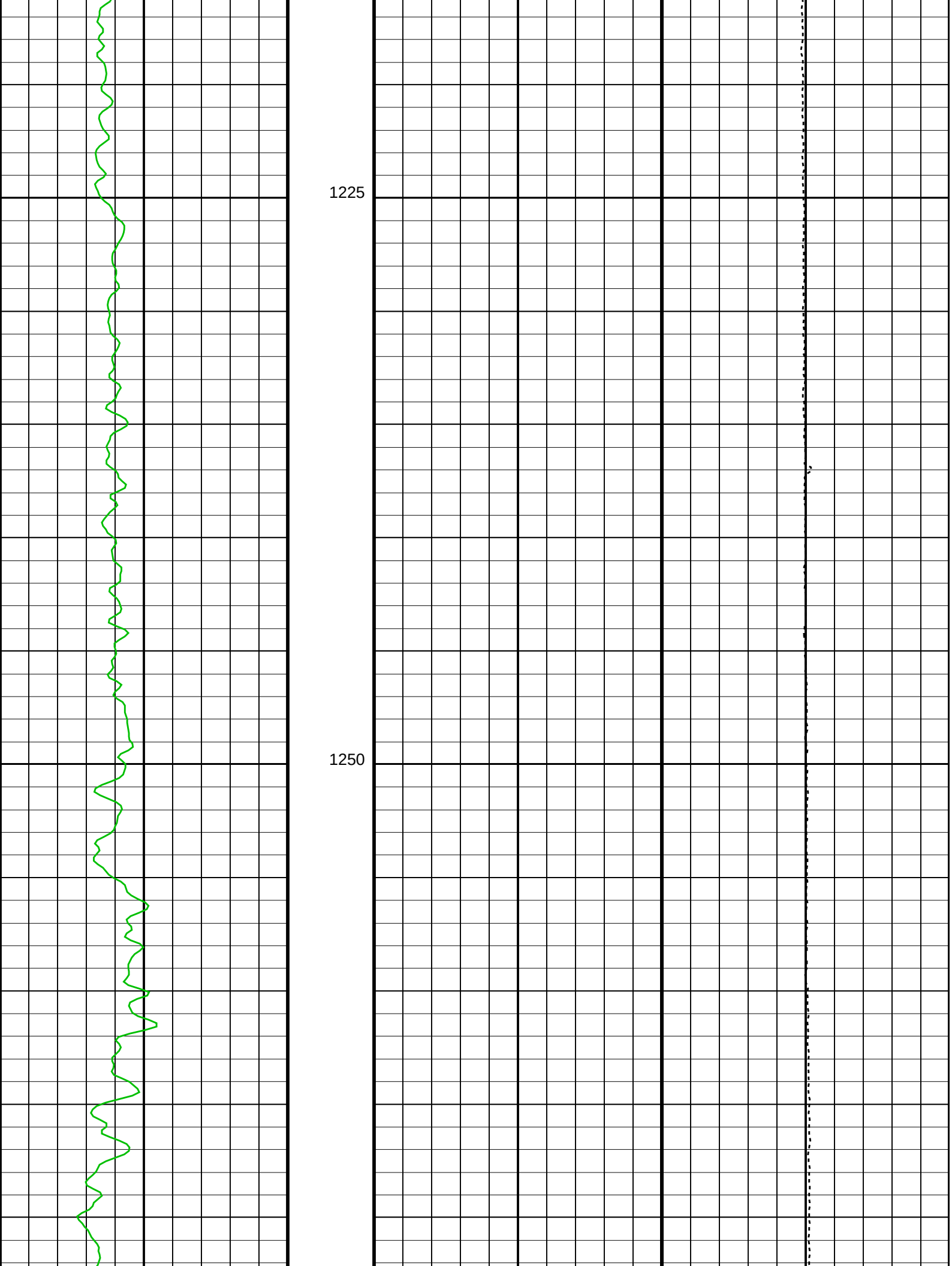
OP System Version: 15C0−309

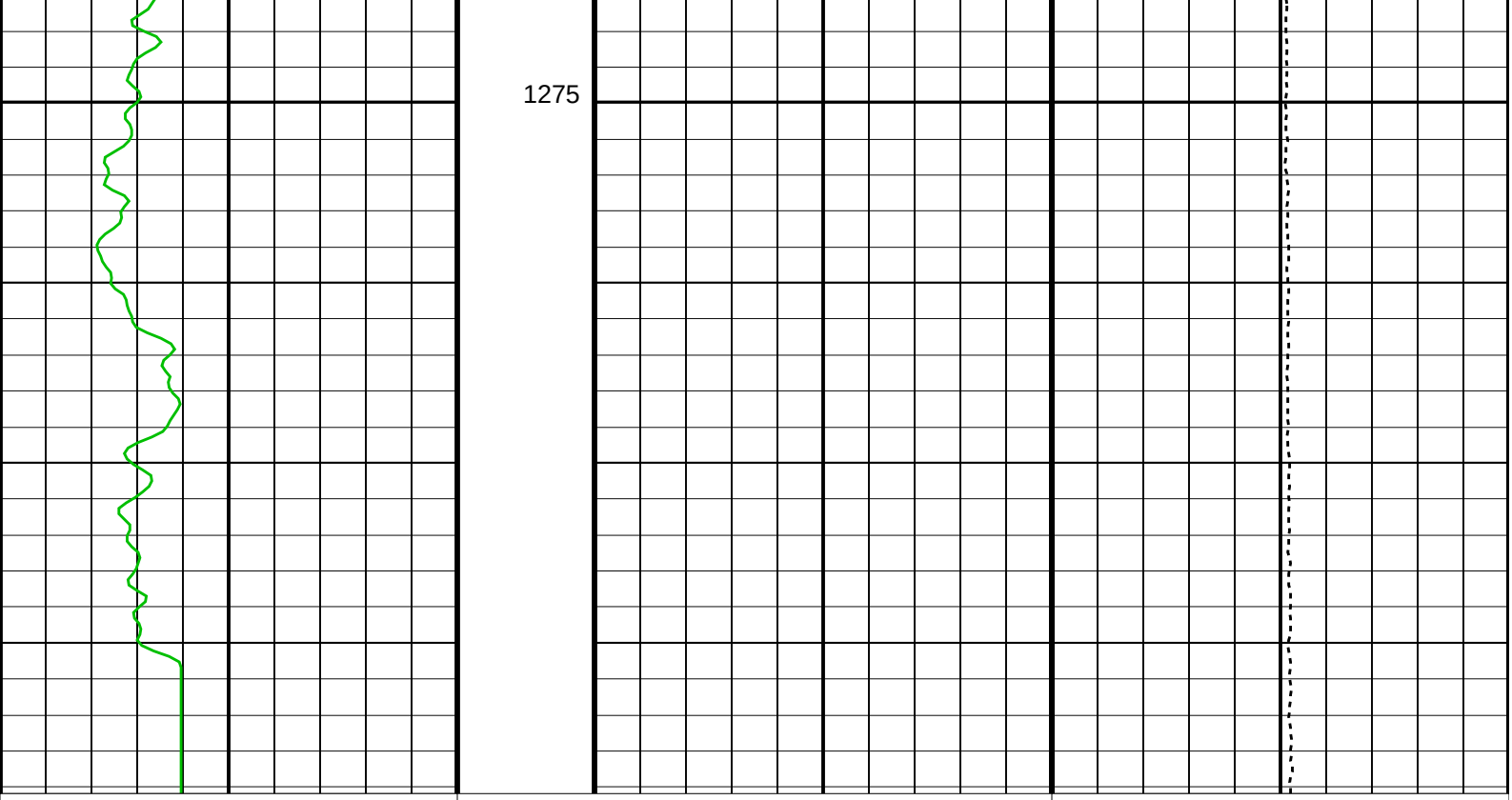
MCM

CST−C	15C0−309	PGGT−D	15C0−309

Gamma Ray (GR)		Tension (TENS)
0 (GAPI) 150		0 (LBF) 3000




1225
1250



Format: CORRELATION **Vertical Scale: 1:200** **Graphics File Created: 04−Mar−2008 22:44**

OP System Version: 15C0−309

MCM

CST−C	15C0−309	PGGT−D	15C0−309

Output DLIS Files

DEFAULT	ST_090LUP	FN:148	PRODUCER	04−Mar−2008 22:44

Schlumberger

Correlation Pass 2
1:200

MAXIS Field Log

Company: Apache Northwest Pty Ltd **Well: WASABI−1**

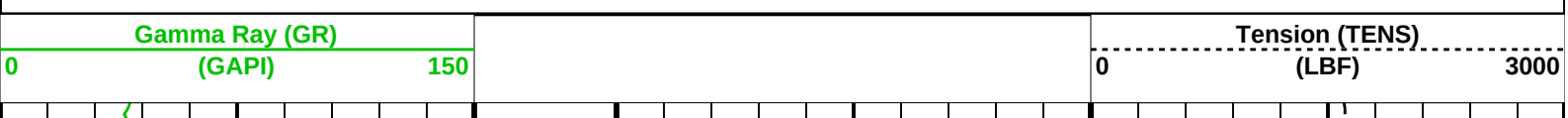
Output DLIS Files

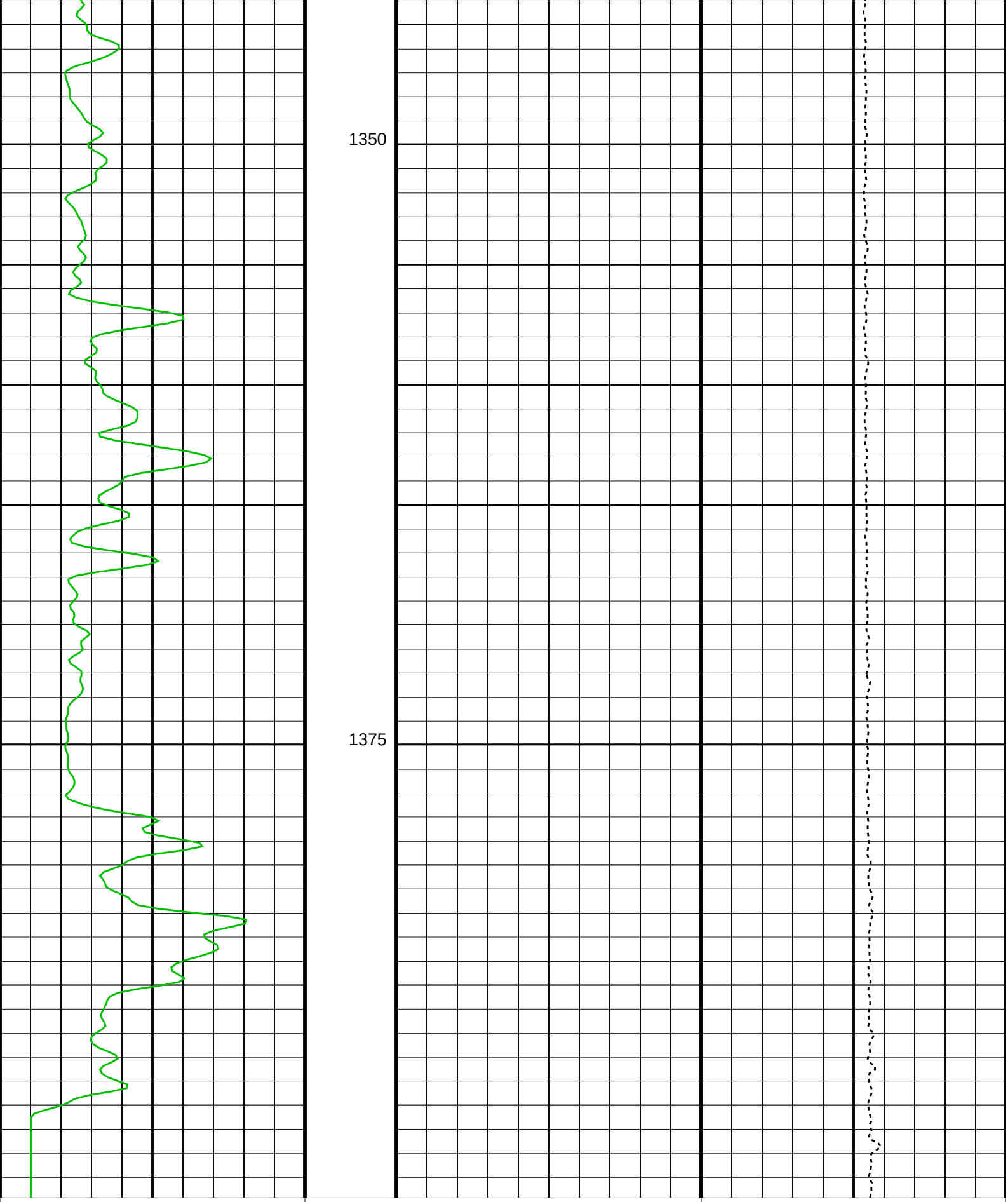
DEFAULT	ST_089LUP	FN:147	PRODUCER	04−Mar−2008 22:12

OP System Version: 15C0−309

MCM

CST−C	15C0−309	PGGT−D	15C0−309





Gamma Ray (GR)
0 (GAPI) 150

Tension (TENS)
0 (LBF) 3000

Format: CORRELATION Vertical Scale: 1:200 Graphics File Created: 04−Mar−2008 22:12

OP System Version: 15C0−309
MCM

CST−C	15C0−309	PGGT−D	15C0−309

Output DLIS Files

DEFAULT	ST_089LUP	FN:147	PRODUCER	04−Mar−2008 22:12

Schlumberger

Correlation Pass 1
1:200

MAXIS Field Log

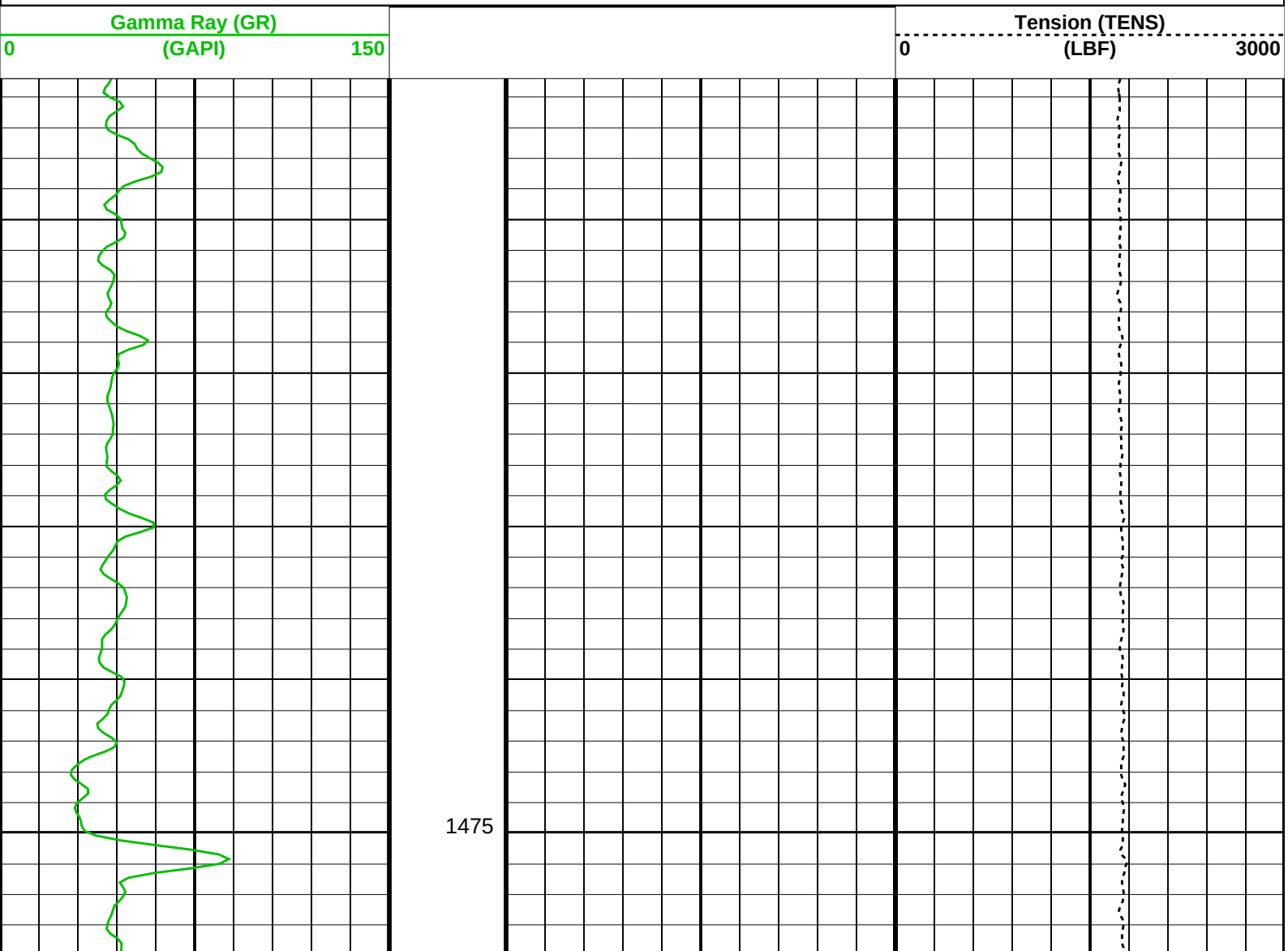
Company: Apache Northwest Pty Ltd **Well: WASABI−1**

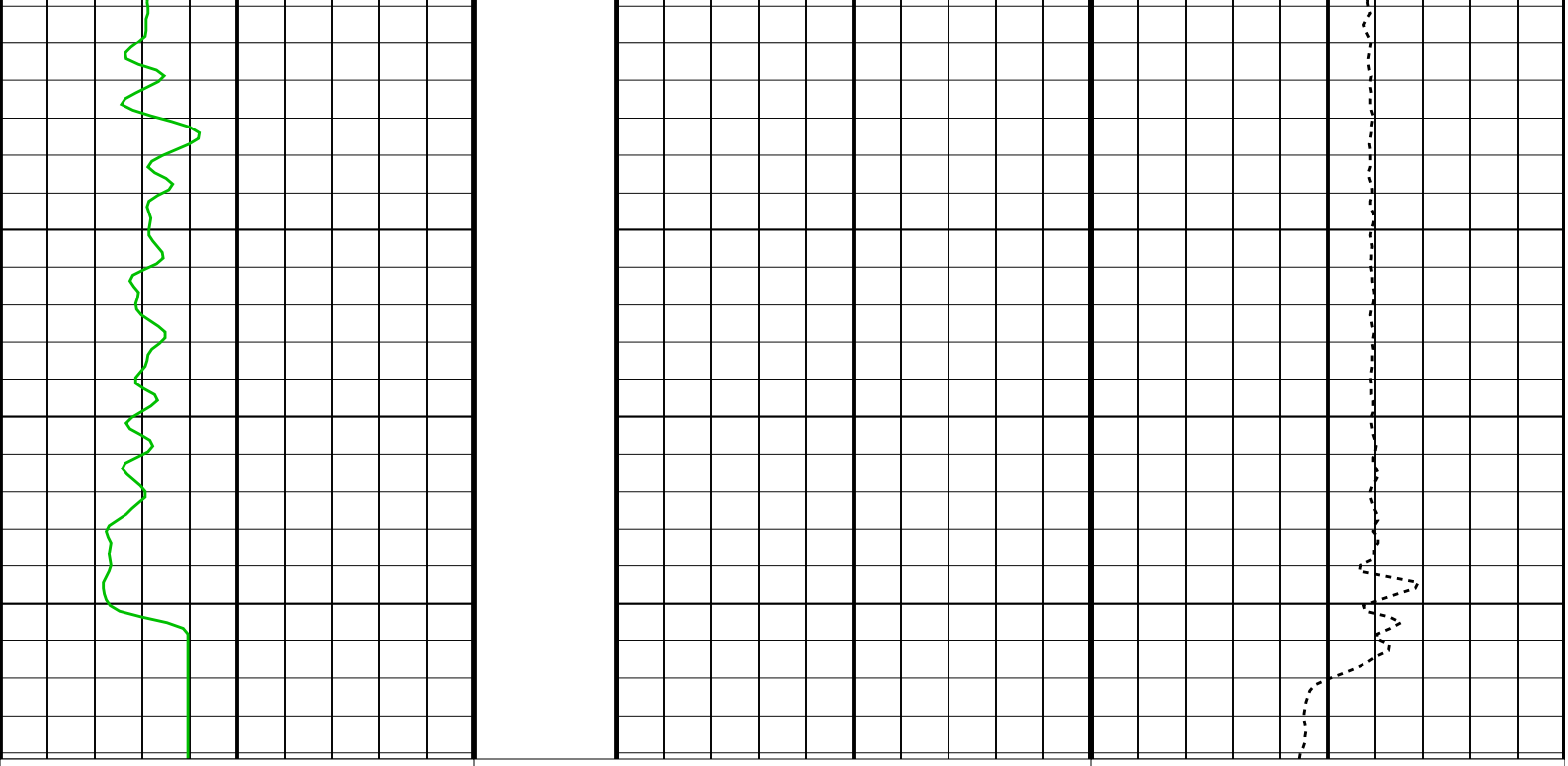
Output DLIS Files

DEFAULT	ST_088LUP	FN:146	PRODUCER	04−Mar−2008 21:42	1499.2 M	1450.4 M

OP System Version: 15C0−309
MCM

CST−C	15C0−309	PGGT−D	15C0−309





Format: CORRELATION **Vertical Scale: 1:200** **Graphics File Created: 04−Mar−2008 21:42**

OP System Version: 15C0−309

MCM

CST−C	**15C0−309**	**PGGT−D**	**15C0−309**

Output DLIS Files

DEFAULT	**ST_088LUP**	**FN:146**	**PRODUCER**	**04−Mar−2008 21:42**

Company: **Apache Northwest Pty Ltd**

Schlumberger

Well: **WASABI−1**
Field: **Apache/VIC/P−58/WASABI−1**
Rig: **West Triton**
Country: **Australia**

CST−GR
Suite−1 Run−4
Side Wall Cores, Scale 1:200

Reservoir Fluid Study

for

Apache Energy Ltd

Wasabi-1

AFL 20080019

CORE LABORATORIES AUSTRALIA PTY LTD

Reservoir Fluids Group

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Tel: (61-8) 9353 3944
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e-mail: corelab.australia@corelab.com
Web: http://www.corelab.com

17th June 2008

Apache Energy Limited,
Level 3, 256 St Georges Terrace,
Perth,
Western Australia, 6000

Attention: Kerry Graham

Dear Kerry ,

Subject: Reservoir Fluid Study: Well: Wasabi-1; Our file: AFL 20080019

Three sub-surface reservoir water samples were forwarded to our Perth laboratory on 30th April 2008 for initial validation, gas-water ratio determination and 12-ion analyses. Presented in the following report are the results of the requested analyses.

Core Laboratories Australia Pty Ltd are very pleased to have been of service to Apache Energy Limited in this work. Should any questions arise concerning the data presented in this report, or if we may be of assistance in any other matter, please do not hesitate to contact us.

Yours Faithfully,
For CORE LABORATORIES AUSTRALIA PTY LTD

Murray Macleod
Laboratory Supervisor

Table of Contents

Section A - Summary of Analysis Methods

Summary of Analysis Methods

Sample Validation and Analysis (BHS Water)

The opening pressure of the pressurised water cylinder was recorded at ambient temperature. The sample was stabilised at 8000 psig and heated to 100°C for twenty-four hours. before being agitated thoroughly to ensure the sample was completely single phase and homogenous. The pressurised water sample was then subjected to an atmospheric (zero) flash analysis whereby the fluids were flashed from working pressure of 8000 psig and 100°C to atmospheric pressure and ambient temperature, and separated into gas and water phases. The gas-water ratio and the evolved gas composition are the data obtained from this test. A 12-ion analysis were performed on the flashed waters. The gas-water ratio was calculated from the volume of gas and weight of water obtained during the flash and denisty of flashed water.

Comments

The compositional data of all the flashed gases indicated low recovery of gas due to small volumes of gas (low gas-water ratio) evolved from the flash analyses and this resulted in greater than normal compositional inaccuracies

Compositional Analysis Databases

For all compositions reported in this study, the molecular weight and density of the individual components are tabulated in Section D of the Appendix.

Section B - Summary of Samples Received and Validation Data

Reported Well and Sampling Information - Bottom Hole Samples

Reservoir and Well Information

Field	n/d
Well	Wasabi-1
Reservoir Fluid	water
Formation	n/d
Reservoir Pressure	n/d
Reservoir Temperature	n/d
Installation	WA-33-R
Test	West Triton
Perforations	n/d

Sampling Information

Date sampled	04-Mar-07
Time sampled	various
Type of samples	Bottom Hole
Sampling company	EXPRO
Sampling point	1328.0 m MDRT
Choke	n/d
Status of well	n/d
Bottomhole pressure	n/d
Bottomhole temperature	n/d
Wellhead flowing pressure	n/d
Wellhead flowing temperature	n/d
Separator pressure	n/d
Separator temperature	n/d
Pressure base	14.696 psia
Temperature base	60°F
Water flowrate	n/d
Gas gravity (Air = 1)	n/d
H2S	n/d
CO2	n/d
BS&W	n/d
Oil gravity at 60°F	n/d

Comments:

n/d - data not supplied

Summary of Bottom Hole Samples Received and Validation Data

Bottom Hole Samples

Sample Number	Chamber NO.	Cylinder No.	Depth (m MDRT)	Shipping :- Pressure (psig)	Shipping :- Temp. (°C)	Opening :- Pressure (psig)	Opening :- Temp. (°C)	Sample Volume (cm^3)	Gas Water Ratio (scf/bbl)
T.01	MPSR 3347	PT-1113	1328.0	1490.0	18.0	1142	17.6	695	1.2
T.02	MPSR 3300	PT-1092	1328.0	1555.0	17.0	55	18.1	680	0.8
T.03	MPSR 1377	PT-2196	1328.0	1480.0	16.0	1507	1220	695	0.9

Note :-
1) Sample volumes at 8000 psig and 100°C
2) Gas-Water ratio determined on all cylinders

Section C - BHS Water

Detailed Flashed Water Analysis from Cylinder PT-1113

Sample No.: T.01

Dissolved Constituent	Units	Results
Ions		
Calcium, Ca	mg/L	29
Magnesium, Mg	mg/L	18
Iron, Fe (soluble)	mg/L	0.39
Sodium, Na	mg/L	346
Potassium, K	mg/L	2180
Strontium, Sr	mg/L	1.0
Barium, Ba	mg/L	2.0
Manganese, Mn	mg/L	0.13
Chloride, Cl	mg/L	2284
Sulphate, SO4	mg/L	44
Bicarbonate, HCO3	mg/L	441
Carbonate, CO3	mg/L	0
Hydroxide, OH	mg/L	0
Basic Properties		
pH	pH units	7.6
Resistivity, @ 25°C	ohm-m	1.110360
Total Dissolved Solids (calculated)	mg/L	5346
Total Dissolved Solids (by evaporation at 110°C)	mg/L	5506
Total Dissolved Solids (by evaporation at 180°C)	mg/L	5425
Density, @ 20°C	gm/cc	1.0017

Detailed Flashed Water Analysis from Cylinder PT-1092

Sample No.: T.02

Dissolved Constituent	Units	Results
Ions		
Calcium, Ca	mg/L	29
Magnesium, Mg	mg/L	20
Iron, Fe (soluble)	mg/L	0.26
Sodium, Na	mg/L	337
Potassium, K	mg/L	2140
Strontium, Sr	mg/L	0.98
Barium, Ba	mg/L	1.9
Manganese, Mn	mg/L	0.1
Chloride, Cl	mg/L	2302
Sulphate, SO4	mg/L	42
Bicarbonate, HCO3	mg/L	419
Carbonate, CO3	mg/L	11
Hydroxide, OH	mg/L	0
Basic Properties		
pH	pH units	8.0
Resistivity, @ 25°C	ohm-m	1.103790
Total Dissolved Solids (calculated)	mg/L	5303
Total Dissolved Solids (by evaporation at 110°C)	mg/L	5445
Total Dissolved Solids (by evaporation at 180°C)	mg/L	5370
Density, @ 20°C	gm/cc	1.0017

Detailed Flashed Water Analysis from Cylinder PT-2196

Sample No.: T.03

Dissolved Constituent	Units	Results
Ions		
Calcium, Ca	mg/L	26
Magnesium, Mg	mg/L	17
Iron, Fe (soluble)	mg/L	0.51
Sodium, Na	mg/L	331
Potassium, K	mg/L	2110
Strontium, Sr	mg/L	1.0
Barium, Ba	mg/L	2.1
Manganese, Mn	mg/L	0.08
Chloride, Cl	mg/L	2270
Sulphate, SO4	mg/L	42
Bicarbonate, HCO3	mg/L	413
Carbonate, CO3	mg/L	8
Hydroxide, OH	mg/L	0
Basic Properties		
pH	pH units	7.6
Resistivity, @ 25°C	ohm-m	1.153888
Total Dissolved Solids (calculated)	mg/L	5221
Total Dissolved Solids (by evaporation at 110°C)	mg/L	5223
Total Dissolved Solids (by evaporation at 180°C)	mg/L	5165
Density, @ 20°C	gm/cc	1.0016

Section D - Appendix

Data Used in Gas Compositional Calculations

Component		Mole Weight (g mol-1)	Density (g cm-3 at 60°F)	Component		Mole Weight (g mol-1)	Density (g cm-3 at 60°F)
Hydrogen	*	2.016	N/A	33DMC5	*	100.20	0.6954
Oxygen/(Argon)	**	31.999	1.1410	Cyclohexane	*	84.16	0.7827
Nitrogen (Corrected)	**	28.013	0.8086	2MC6/23DMC5	*	100.20	0.6917
Methane	**	16.043	0.2997	11DMCYC5/3MC6	*	99.20	0.7253
Carbon Dioxide	**	44.010	0.8172	t13DMCYC5	*	98.19	0.7528
Ethane	**	30.070	0.3558	c13DMCYC5/3EC5	*	99.20	0.7262
Hydrogen Sulphide	**	34.080	0.8006	t12DMCYC5	*	98.19	0.7554
Propane	**	44.097	0.5065	Heptanes (nC7)	*	100.20	0.6875
i-Butane	**	58.123	0.5623	22DMC6	*	114.23	0.6994
n-Butane	**	58.123	0.5834	MCYC6	*	98.19	0.7740
Neo-Pentane	*	72.15	0.5968	ECYC5	*	98.19	0.7704
i-Pentane	**	72.150	0.6238	223TMC5/24&25DMC6	*	114.23	0.7060
n-Pentane	**	72.150	0.6305	ctc124TMCYC5	*	112.21	0.7511
22DMC4	*	86.18	0.6529	ctc123TMCYC5	*	112.21	0.7574
23DMC4/CYC5	*	78.16	0.7129	Toluene	*	92.14	0.8734
2MC5	*	86.18	0.6572	Octanes (nC8)	*	114.23	0.7063
3MC5	*	86.18	0.6682	E-Benzene	*	106.17	0.8735
Hexanes (nC6)	*	86.18	0.6631	M/P-Xylene	*	106.17	0.8671
22DMC5	*	100.20	0.6814	O-Xylene	*	106.17	0.8840
M-C-Pentane	*	84.16	0.7533	Nonanes (nC9)	*	128.26	0.7212
24DMC5	*	100.20	0.6757	Decanes	***	134	0.778
223TMC4	*	100.20	0.6947	Undecanes	***	147	0.789
Benzene	*	78.11	0.8820	Dodecanes	***	161	0.800

Data Source Refs :

* ASTM Data Series Publication DS 4B (1991) - Physical Constants of Hydrocarbon and Non-Hydrocarbon Compounds.

** GPA Table of Physical Constants of Paraffin Hydrocarbons and Other Components of Natural Gas, GPA 2145-96.

*** Journal of Petroleum Technology, Nov 1978, Pages 1649-1655.
Predicting Phase Behaviour of Condensate/Crude Oil Systems Using Methane Interaction Coefficients - D.L. Katz & A. Firoozabadi.

Note :
The gas mole % compositions were calculated from the measured weight % compositions using the most detailed analysis results, involving as many of the above components as were identified. The reported component mole % compositions were then sub-grouped into the generic carbon number components.

Data Used in Liquid Compositional Calculations

Component		Mole Weight (g mol-1)	Density (g cm-3 at 60°F)	Component		Mole Weight (g mol-1)	Density (g cm-3 at 60°F)
Hydrogen	*	2.016	N/A	Undecanes	***	147	0.789
Hyd. sulphide	**	34.080	0.8006	Dodecanes	***	161	0.800
Carbon Dioxide	**	44.010	0.8172	Tridecanes	***	175	0.811
Nitrogen	**	28.013	0.8086	Tetradecanes	***	190	0.822
Methane	**	16.043	0.2997	Pentadecanes	***	206	0.832
Ethane	**	30.070	0.3558	Hexadecanes	***	222	0.839
Propane	**	44.097	0.5065	Heptadecanes	***	237	0.847
i-Butane	**	58.123	0.5623	Octadecanes	***	251	0.852
n-Butane	**	58.123	0.5834	Nonadecanes	***	263	0.857
i-Pentane	**	72.150	0.6238	Eicosanes	***	275	0.862
n-Pentane	**	72.150	0.6305	Heneicosanes	***	291	0.867
Hexanes	**	86.177	0.6634	Docosanes	***	305	0.872
Me-cyclo-pentane	*	84.16	0.7533	Tricosanes	***	318	0.877
Benzene	*	78.11	0.8820	Tetracosanes	***	331	0.881
Cyclo-hexane	*	84.16	0.7827	Pentacosanes	***	345	0.885
Heptanes	**	100.204	0.6874	Hexacosanes	***	359	0.889
Me-cyclo-hexane	*	98.19	0.7740	Heptacosanes	***	374	0.893
Toluene	*	92.14	0.8734	Octacosanes	***	388	0.896
Octanes	**	114.231	0.7061	Nonacosanes	***	402	0.899
Ethyl-benzene	*	106.17	0.8735	Triacontanes	***	416	0.902
Meta/Para-xylene	*	106.17	0.8671	Hentriacontanes	***	430	0.906
Ortho-xylene	*	106.17	0.8840	Dotriacontanes	***	444	0.909
Nonanes	**	128.258	0.7212	Tritriacontanes	***	458	0.912
1-2-4-T-M-benzene	*	120.19	0.8797	Tetratriacontanes	***	472	0.914
Decanes	**	142.285	0.7334	Pentatriacontanes	***	486	0.917

Data Source Refs :

* ASTM Data Series Publication DS 4B (1991) - Physical Constants of Hydrocarbon and Non-Hydrocarbon Compounds.

** GPA Table of Physical Constants of Paraffin Hydrocarbons and Other Components of Natural Gas GPA 2145-96.

*** Journal of Petroleum Technology, Nov 1978, Pages 1649-1655.
Predicting Phase Behaviour of Condensate/Crude Oil Systems Using Methane Interaction Coefficients - D.L. Katz & A. Firoozabadi.

Note :
The residue mole weight and density values (eg heptanes plus, undecanes plus, eicosanes plus) are calculated so that the calculated average mole weights and densities correspond with the measured values. This can lead to anomalous residue mole weights and densities where the Katz and Firoozabadi values may not be suitable for the isomer groups detected.

Report prepared by	**Report approved by**
Daryl Sequeira **Project Coordinator**	**Murray Macleod** **Laboratory Supervisor**

Well Name : WASABI-1

Operator : APACHE ENERGY
Interval : 1230m - 2305m
Scale : 1:5000
Chart date: 19 February 2009

Palynological Data Chart : BASIC DATA
% Abundance histogram : Highest occurrence
Mike Macphail

WASABI-1

Morgan Palaeo Associates
Maitland, South Australia

Enclosure 1

Sampling
Cutting
Core
Sidewall core

Text Keys
*1 % within discipline (40mm=100%)
*2 In-Situ occurrences

Depth | Samples | Dinoflagellate Cysts | FT | ALBO | Spores And Pollen | Samples | Total Count | % Category

% within discipline (40mm=100%)
In-Situ occurrences

*dinocysts% unassigned%, Operculodinium spp., Paralecaniella indentata, Spiniferites spp., Nematosphaeropsis spp., Dapsilidinium spp., Gippslandia extensa, Enneadocysta partridgei, Achomosphaera ., Microforams ., Botryococcus ., Pediastrum ., Araucariacites australis, Baculatisporites spp., Cyathidites (> 45 microns), Cyathidites% spp.%, Dacrycarpites australiensis, Dilwynites spp., gymnosperms% unassigned%, Haloragacidites harrisii, Herkosporites/Neoraistrickia ., Lygistepollenites florinii, Microcachryidites antarcticus, Nothofagidites brachyspinulosus, Nothofagidites deminutus-vansteenisii, Nothofagidites emarcidus-heterus, Nothofagidites falcatus, Nothofagidites flemingii, Periporopollenites spp., Peromonolites spp., Phyllocladidites mawsonii, Podocarpidites (sensu lato), Podosporites/Trichotomosaccite ., Proteacidites spp., spore% trilete%, Spores + hyphae, Tricolporites/Rhoipites spp., angiosperms unassigned, Ilexpollenites spp., Laevigatosporites spp., Malvacipollis spp., Myrtaceisites spp., Nothofagidites goniatus, Nothofagidites (unassigned spp.)., Stereisporites spp., Trilites/Ischyosporites ., Gleicheniidites spp., Matonisporites ornamentalis, Verrucosisporites kopukuensis, Dicotetradites clavatus, Ercipites/Tetradopollis ., Rugulatisporites spp., Concolpites apiculatus, Proteacidites angulatus, Proteacidites pachypolus, Banksieaeidites spp., Stereisporites maastrichtiensis, Lygistepollenites balmei, Polypodiisporites ., Spinizonocolpites prominatus, Australopollis obscurus, Pseudowinterapollis spp., Nothofagidites endurus/senectus, Phyllocladidites reticulosaccatus/verrucosus, Retitriletes spp., Gambierina spp., Latrobosporites spp., Liliacidites spp., Perotriletes spp., spores% monolete%, Tetracolporites verrucosus, Tetradopollis securus, Tricolpites spp., Tricolpites waiparaensis, Leptolepidites spp., Peninsulapollis gillii, Triporopollenites spp.

Samples in Discipline(s) : Paly

In-Situ occurrences
Total count: Total Count
100

In-Situ occurrences
Category %: % Category
FT
DC
ALBO
SP

Depth	Samples	Total Count
1250m	1250.00m SC	150
	1256.00m SC	142
1300m		
	1331.00m SC	174
1350m		
	1380.00-1385.00m CU	201
1400m		
	1439.00m SC	119
1450m		
1500m		
1550m	1540.00-1545.00m CU	185
1600m		
1650m	1645.00-1650.00m CU	106
1700m	1705.00-1710.00m CU	161
1750m		
1800m	1800.00-1805.00m CU	184
1850m		
1900m	1900.00-1905.00m CU	147
1950m		
2000m	2005.00-2010.00m CU	142
2050m		
2100m	2105.00-2110.00m CU	166
2150m	2145.00-2150.00m CU	194
2200m	2185.00-2190.00m CU	159
	2210.00-2215.00m CU	165
2250m		
2300m	2280.00-2285.00m CU	143