Fur Seal-1

VIC/P54

Well Completion Report

Basic Data

July 2006

GENERAL DATA SHEET

Well:	Fur Seal-1	**Partners:**	Apache Energy Ltd (Operator) Apache Northwest Pty Ltd Nexus Energy Vic P54 Pty Ltd
Well Type:	Exploration		
Basin:	Gippsland		
Tenement:	VIC/P54		
Status:	P & A		
Spudded:	03:00 hrs 24 October 2005	**Latitude:**	38º 07' 47.91" S
TD Reached:	01:30 hrs 1 November 2005	**Longitude:**	148º 09' 08.44" E
Rig Released:	18:00 hrs 5 November 2005	**Northing:**	5,779,136.7 mN
Total Depth:	-2588.2 mTVDAHD (2610.0 mMDRT)	**Easting:**	600,995.5 mE
RT Elevation:	21.5 m above AHD	**Datum:**	GDA94
Water Depth:	56.6 m below AHD	**Projection:**	MGA Zone 55, CM 147º East
Drill. Contr.:	Diamond Offshore Pty Ltd	**Rig (Type):**	Ocean Patriot (Semi-submersible)

Wireline Logs

Suite	Run	Log Suite	Interval mTVDAHD (mMDRT)	BHT (°C)	Hrs *	Remarks
1	1	Dual CSAT Checkshot Survey	-2575.2 to -160.5 (2597.0 to 182.0)	109	N/A	Checkshots recorded at 15 m intervals from TD to loss of signal.

* Hours since circulation stopped.

MWD/LWD Logs

Bit No.	Log Suite	Interval mTVDAHD(mMDRT)	Max °C	Hole Size (mm)	Remarks
1	DGR-EWRP4-BAT-DDS-PM	-90.2 to -802.5 (111.7 to 824.0)	25	311	All recorded data recovered at surface.
2	DGR-EWRP4-SLD-CNP-BAT-DDS-PM	-802.5 to -2588.2 (824.0 to 2610.0)	75.5	216	All recorded data recovered at surface.

Hole and Casing Details

Hole Size (mm)	Interval (mMDRT)	Interval (mTVDAHD)	Casing Size (mm)	Depth (mMDRT)	Depth (mTVDAHD)
914	78.1 to 111.7	-56.6 to -90.2	762	111.0	-89.5
406	111.7 to 824.0	-90.2 to -802.5	340	817.6	-796.1
216	824.0 to 2610.0	-802.5 to -2588.2			

Cement Plugs

Plug No.	Interval mTVDAHD (mMDRT)	Tagged
1a	-2588.2 to -2358.3 (2610.0 to 2380.0)	Y
1b	-2358.3 to -2118.3 (2380.0 to 2410.0)	N
1c	-2078.3 to -1018.4 (2100.0 to 1040.0)	N
2	-838.4 to -734.5 (860.0 to 756.0)	Y
3	-138.5 to -78.5 (160.0 to 100.0)	N

Testing: No testing was carried out.

Coring: No conventional or sidewall cores were cut.

Comments: The surface location is 3.5 m on a bearing of 223.4º from the prosposed Fur Seal-1 location.

DIAMOND
OFFSHORE

Ocean Patriot

1,500 FSW Semisubmersible

General Description

Design	Trosvik Bingo 3000
Dimensions	334'6" x 239'5"
Normal Operating draft	77'
Towing Draft	33'
VDL Drilling	5,793,748 lbs
VDL Transit	4,272,559 lbs
VDL Survival	4,735,529 lbs
Quarters Capacity	100
Outfitted water depth	1,500 fsw
Minimum water depth	230 fsw
Usable deck space	

Drilling Equipment

Derrick	Unite D'ingen 185' 1,000,000lbs, 14 lines
Drawworks	Oilwell E-3000, 3,000hp Rated depth 25,000'
Rotary Table	Oilwell A49 ½,
Top Drive	Varco TDS-4S
Motion Compensator	Rucker Model 18-400 400,000lb capacity
Pipehandling	Maritime Hydraulic Racking System Varco AR3200 Iron Roughneck

Mud Circulating System

Mud Pumps	3 x National / Oilwell Triplex 1,600hp
Solids Control	4 x Thule VSM 100 shale shakers

Storage Capacities

Liquid mud – surface	1900 bbls
Liquid Mud – Total	2329 bbls
Base Oil	N/A
Brine	N/A
Bulk Sack Storage	540,000lbs
Bulk P Tanks	20,000 cu ft

Power Equipment

Main Power	4 x EMD L12-645 F178 7600KW
Emergency Power	1 x SSCM Poyaud 520KW

Subsea Equipment

BOP's	2 x Cameron UII Double 18 ¾" 15,000 psi
Annulars	2 x Cameron D Type 18 ¾" 10,000 psi
Riser	30 jts 50' Regan FCH-8
Tensioners	6 x double 80,000lbs Rucker/Shaffer 50' stroke. Total 960,000lbs

Cranes

2 x Liebherr BOS 1500/50 43.34 mt boom

1 x Normar BOP Carrier

Mooring System

5 x 12 Ton Bruce .
3 x 12 Ton Stevpris
8 x 5,250' 84mm K3 stud link chain
4 x Pusnes double windlass winches

Miscellaneous

* Rig has worked in WD approaching 3,000 fsw in past

* Rig is well equipped for Xmas tree handling

* For rig move – Minimum of 1 x 125 ST bollard pull AHT required

Contact Information

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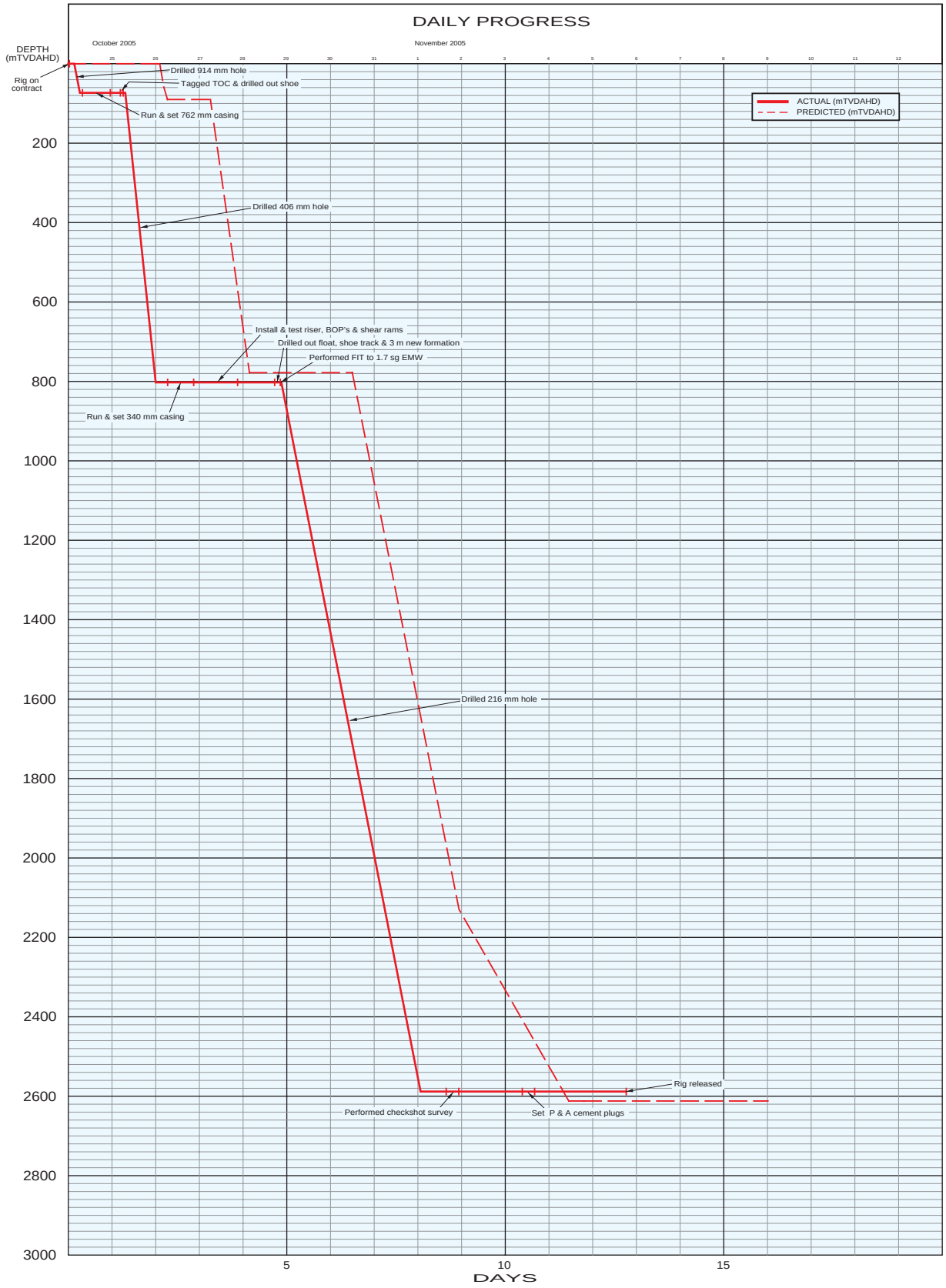
Fur Seal-1



LATITUDE :	38° 07' 47.91" S	UTM:	5,779,136.7 mN
LONGITUDE :	148° 09' 08.44" E		600,995.5 mE
SPUD DATE :	24 October 2005, 03:00 hrs		
REACHED T.D.:	1 November 2005, 01:30 hrs		
ELEVATION R.T.:	21.5 m above AHD		
WATER DEPTH :	56.6 m below AHD		
SEA BED :	78.1 m below R.T.		
STATUS :	Plugged & Abandoned		
RIG :	Ocean Patriot		
RIG RELEASED :	5 November 2005, 18:00 hrs		

Apache Energy

VIC/P 54

GIPPSLAND BASIN

Fur Seal-1

WELL HISTORY

Author :	WCR	Date :	28 June 2006
Drawn :	Perth Exploration Dept.	Plan No.	WHu9462

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	(m)	(m)		1	22/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16		

SUPERVISOR	OIM
J Herriot / B Lawrence	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 61,117.80	DHC: 61,117.80
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 61,117.80

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
	VIC/P54		

LAST SURVEY			ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD	INC	AZM	(SG)	(mm) @ (m)	762.000 (mm) @ 116.00 (m)

CURRENT OPERATIONS

Continuing to tow to Fur Seal-1 location.

24 HR FORECAST

Complete tow. Deploy anchors. Ballast rig. Prepare to spud.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
18:30	00:00	5.50	MIRU	PP	01	Rig on contract to AEL when last anchor was racked at 18:30 hrs. Commenced tow to Fur Seal-1 location with Pacific Wrangler on the tow bridle and Far Grip standing by. Position at 00:00 hrs: 38° 06' 12.21" S 148° 10' 43.1" E Avg speed = 3.4 kts Distance remaining = 2618m

5.50 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs Continued tow from Maclean-1 to Fur Seal-1 location with Pacific Wrangler on the tow bridle. Commenced anchoring operations:

00:22 hrs Stopped tow and connected Far Grip to #4 PCC.
01:08 hrs Anchor #4 on bottom.
01:26 hrs Rig on location.
02:35 hrs #4 PCC passed back to rig.
02:50 hrs #8 PCC passed to Far Grip.
04:30 hrs Anchor #8 on bottom.
05:19 hrs #8 PCC passed back to rig.
05:33 hrs #5 PCC passed to Far Grip.

No accidents or incidents reported.

Safety Efforts:
Stop cards 5, JSAs 23.

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:
AV (DP): (m/min) AV Riser: (m/min)
AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	(m)	(m)		1	22/10/200

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	4		MI	2	
Diamond	50		Fugro	8	
ESS Catering	8		Geoservices	2	
BSOC	1		OMS	3	
Dril-Quip	1		Marcomm	1	
Dowell Schlumberger	2				

Total Personnel on Board: 82

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	0	159	0		159
CEMENT	0	0	125		125
DIESEL	431	331	603		1,365
GEL, FRESH	0	0	42		42
WATER, DRILLING	391	292	605		1,288
WATER, POTABLE	217	268	263		748

Total Water 2,036

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax in - 10, Pax out - 6)	SUPPLY BOAT	Pacific Wrangler - On location.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	3 / 90	0 / /	2.00 / 90 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
/ (kPa)	/ (kPa)	/ (kPa)	22/10/2005					

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	56.62 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		27/10/2005	(m)	(m)	(m)		2	23/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)		1.00	

SUPERVISOR	OIM
J Herriot / B Lawrence	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
	DHC: 0	DHC: 0.00	DHC: 0.00
PERMIT # VIC/P54	CWC: 0	CWC: 0.00	CWC: 0.00
	TOTAL: 0	TOTAL: 0.00	TOTAL: 0.00

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY			ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD	INC	AZM	(SG)	(mm) @ (m)	762.000 (mm) @ 116.00 (m)

CURRENT OPERATIONS

MU cementing stand to rack in derrick.

24 HR FORECAST

Spud well. Drill to 914mm section TD. Run conductor and cmt.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	12:00	12.00	MIRU	PP	01	00:00 - 06:00 hrs Continued tow from Maclean-1 to Fur Seal-1 location with Pacific Wrangler on the tow bridle. Commenced anchoring operations: Far Grip #4 PCC to boat 00:22 hrs, anchor on bottom 01:08 hrs, PCC to rig 02:35 hrs. Far Grip #8 PCC to boat 02:50 hrs, anchor on bottom 04:30 hrs, PCC to rig 05:19 hrs. Far Grip #5 PCC to boat 05:33 hrs, anchor on bottom 06:05 hrs, PCC to rig 06:46 hrs. Far Grip #4 PCC to boat 06:55 hrs, anchor on bottom 08:00 hrs, PCC to rig 08:41 hrs (Re-run). Far Grip #1 PCC to boat 08:48 hrs, anchor on bottom 09:25 hrs, PCC to rig 09:57 hrs. Wrangler #7 PCC to boat 09:33 hrs, anchor on bottom 10:03 hrs, PCC to rig 10:28 hrs. Far Grip #3 PCC to boat 10:07 hrs, anchor on bottom 10:40 hrs, PCC to rig 11:11 hrs. Wrangler #6 PCC to boat 10:34 hrs, anchor on bottom 11:00 hrs, PCC to rig 11:28 hrs. Far Grip #2 PCC to boat 11:16 hrs, anchor on bottom 11:42 hrs, PCC to rig 12:10 hrs.
12:00	13:30	1.50	MIRU	PP	01	Cross tensioned anchors (200MT storm load) and positioned rig over location. Preliminary position is 3.5m at a bearing of 269 deg from plan. Rig heading 249.3 deg TN. Meanwhile commenced ballasting rig.
13:30	16:30	3.00	MIRU	PP	01	Continued ballasting the rig through transition
16:30	00:00	7.50	MIRU	PP	01	Picked up drilling tubulars : drillpipe, HWDP, 209.6mm DC's and 914mm BHA. Ballasting complete at 17:30 hrs.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 00:30 hrs MU and racked cementing stand of TIW's and side entry sub in derrick.

00:30 - 03:00 hrs MU 914mm BHA and RIH. Tagged seabed at 78.12m. Water depth = 56.62m.

03:00 - 05:30 hrs Performed Anderdrift survey - 11 pulses indicating 0° inclination. Drilled 914mm hole to section TD of 111.7m with seawater. Avg ROP = 16.8 m/hr. Circulated 8m3 hi-vis gel sweeps every single and on connections.

05:30 - 06:00 hrs Swept hole with 16m3 hi-vis gel. Performed Anderdrift survey - 9 pulses indicating 1° inclination. Commenced displacing hole with 32m3 hi-vis gel.

No accidents or incidents reported.

Safety Efforts:

Stop cards 4, JSAs 22.

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:

AV (DP): (m/min) AV Riser: (m/min)

AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		27/10/2005	(m)	(m)	(m)		2	23/10/2005

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	4		MI	2	
Diamond	50		Fugro	8	
ESS Catering	8		Geoservices	2	
BSOC	1		OMS	3	
Dril-Quip	1		Marcomm	1	
Dowell Schlumberger	2				

Total Personnel on Board: 82

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	3	159	0		162
CEMENT	115	0	61		176
DIESEL	425	324	590		1,339
GEL, FRESH	87	0	42		129
WATER, DRILLING	376	292	585		1,253
WATER, POTABLE	195	265	258		718

Total Water 1,971

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
SUPPLY BOAT	Far Grip - On location.	SUPPLY BOAT	Pacific Wrangler - On location.

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	1,788	772			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	8 / 112	0 / /	1.00 / 135 /	/	(°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
22/10/2005 / 34,400 (kPa)	22/10/2005 / 17,200 (kPa)	/ (kPa)	22/10/2005					

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 1

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	(m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	111.70 (m)	111.70 (m)	111.70 (m)	1.00	3	24/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	2.00

SUPERVISOR	OIM
J Herriot / D Selman	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 232,511.55	DHC: 232,511.55
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 232,512.00	TOTAL: 232,511.55

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY			ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD	INC	AZM	(SG)	762.000 (mm) @ 111.00 (m)	340.000 (mm) @ 800.00 (m)

CURRENT OPERATIONS

M/U 406mm BHA.

24 HR FORECAST

Finish M/U 406mm BHA and RIH. Tag cmt and drill ahead.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	00:30	0.50	MIRU	PP	01	M/U and racked cementing stand c/w TIW, side entry sub, TIW in derrick.
00:30	03:00	2.50	C-DRL	PP	09	M/U 914mm BHA and RIH. Tagged seabed at 78.12m. Water depth = 56.62m.
03:00	05:30	2.50	C-DRL	PP	10	Took Anderdrift survey - 0° inclination. Drilled 914mm hole to section TD of 111.7m with seawater. Avg ROP = 16.8 m/hr. Circulated 8m3 PHG sweeps every single and on connections.
05:30	06:00	0.50	C-DRL	PP	11	Swept hole with 16m3 hi-vis gel. Performed Anderdrift survey - 1° inclination. Displaced hole with 32m3 PHG.
06:00	07:00	1.00	C-DRL	PP	09	POH from 111.7m to surface with 914mm BHA.
07:00	07:30	0.50	C-CSG	PP	40	Rigged up to run 762mm conductor.
07:30	09:00	1.50	C-CSG	PP	40	M/U 762mm conductor and ran 1 x std DP as a cement stinger. M/U CART to wellhead housing.
09:00	10:00	1.00	C-CSG	PP	40	M/U 762mm conductor to PGB.
10:00	11:00	1.00	C-CSG	PP	40	RIH 762mm conductor on 127mm DP to shoe depth of 111m. Washed down final 5m (fill)
11:00	12:30	1.50	C-CSG	PP	41	Rigged up for cement job. Bullseye angle 2° to starboard. Skidded rig and adjusted guideline tension to reduce angle. Bullseye 1° starboard aft.
12:30	13:30	1.00	C-CSG	PP	41	Cemented conductor : mixed and pumped 26.4 m3 of 1.91 sg slurry c/w 1% CaCl2. Displaced with 2.39m3 SW. Bled back & checked float - OK. Full returns throughout job, good observation of cement at seabed.
13:30	19:00	5.50	C-CSG	PP	45	WOC.
19:00	20:00	1.00	C-CSG	PP	40	Released CART from wellhead housing and POH from 76m. L/D CART. Final bullseye angle 1 deg stbd, housing stickup above seafloor - 2m.
20:00	20:30	0.50	C-CSG	PP	09	L/O 476mm RT. M/U a single of 127mm DP below RT, with Dowell cement plug XO and 4m pup joint above the RT. L/D same.
20:30	22:00	1.50	C-CSG	PP	09	P/U 476mm wellhead and broke out lower 340mm XO joint. L/D same. M/U 476mm RT with cement stinger below the wellhead. L/D same.
22:00	23:00	1.00	C-CSG	PP	09	M/U Deepsea Express cement head and racked same. Broke out 2 x TIW's and pump in sub from cement stand.
23:00	00:00	1.00	C-CSG	PP	09	L/O 914mm BHA.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 03:30 hrs: M/U 406mm BHA.

03:30 - 04:30 hrs: RIH 406mm BHA and upload MWD.

04:30 - 05:00 hrs: Entered 762mm conductor with RIH 406mm BHA. Tagged cement at 111m. Drilled out shoe.

05:00 - 06:00 hrs: Drilled 406mm hole into new formation from 111.7m to 139m.

Final surveyed drillstring position - 3.5m at bearing of 223.4 deg from plan. Rig heading 248.72 TN

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	111.70 (m)	111.70 (m)	111.70 (m)	1.00	3	24/10/2005

06:00 UPDATE

No accidents or incidents reported.

Safety Efforts:

Stop cards 5, JSAs 12.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
1 / 1RR	660.40	Reed	Y11C	M26690	24/24/24/18///////	78.12 / 24/10/2005	0-0-RR-A-0- I-RR-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
1 / 1RR	/ 2.3	60 / 80	3,785.0	5,171	2,267	2.20	33.58	15.26	2.20	33.58	15.26

BHA / HOLE CONDITIONS

BHA	1	JAR S/N		JAR HRS		BIT	1

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
				6,238 N-m	138.14

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Mill	1	0.62	660.40		7.3	
Hole Opener	1	2.42	914.40	74.60	7.3	
Ported Float Sub	1	1.16	241.30		7.3	
Anderdrift	1	3.26	239.70	77.78	7.3	
Spirall Drill Collar	2	18.18	241.30	77.78	7.3	
Cross Over	1	1.45	236.50	77.78	7.3	
Spirall Drill Collar	3	26.80	203.20	77.78	6.3	
Cross Over	1	1.10	200.00	73.02	6.3	
Heavy Weight Drill Pipe	9	83.15	158.75	77.78	4.5	

MUD PROPERTIES

MUD TYPE: SW / Gel Sweeps

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
120	/	/	/	/	/	/	/	/					

DENS	1.06	ECD		PP		DAILY COST		CUM COST		% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	77	6.0	1,245.83
#2	12.0	77	6.0	1,245.83
#3	12.0	77	6.0	1,245.83

SPP: 5,171 (kPa)

AV (DP): (m/min) AV Riser: (m/min)

AV (DC): 6.2 (m/min) HP/in2: 22.183 (kW/cm

SPR

	SPM	PPSR
PUMPS #1		
PUMPS #2		
PUMPS #3		

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	4		MI	2	
Diamond	50		Fugro	7	
ESS Catering	8		Geoservices	2	
Dril-Quip	1		Weatherford	1	
Dowell Schlumberger	3		Sperry Sun	3	

Total Personnel on Board: 81

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	103	54	0		157
CEMENT	156	0	0		156
DIESEL	411	317	590		1,318
GEL, FRESH	99	0	0		99
WATER, DRILLING	820	292	0		1,112
WATER, POTABLE	225	262	0		487

Total Water 1,599

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	111.70 (m)	111.70 (m)	111.70 (m)	1.00	3	24/10/200

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax in - 6, Pax out - 7)	SUPPLY BOAT	Pacific Wrangler - Melbourne.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	5 / 315	0 / /	1.00 / 315 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
22/10/2005 / 34,400 (kPa)	22/10/2005 / 17,200 (kPa)	/ (kPa)	22/10/2005					

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 2

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	(m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	712.30 (m)	824.00 (m)	824.00 (m)	1.87	4	25/10/200

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	3.00

SUPERVISOR	OIM
J Herriot / D Selman	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 314,928.55	DHC: 1,430,472.84
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 1,430,472.84

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 804.24 (m) INC 1.360 AZM 261.580	(SG)	762.000 (mm) @ 111.00 (m)	340.000 (mm) @ 816.00 (m)

CURRENT OPERATIONS

Circulated well clean. Displacing to PHG.

24 HR FORECAST

POH 406mm BHA. RU and RIH 340mm csg. Cmt same.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	03:30	3.50	S-DRL	PP	09	M/U 406mm BHA and installed guide ropes.
03:30	04:30	1.00	S-DRL	PP	09	RIH 406mm BHA and uploaded MWD.
04:30	05:00	0.50	S-DRL	PP	09	Entered 762mm conductor with 406mm BHA. Tagged cement at 111m. Drilled out shoe from 111m to 111.7m.
05:00	06:00	1.00	S-DRL	PP	10	Drilled 406mm hole from 111.7m to 140m. Avg ROP = 28m/hr.
06:00	07:00	1.00	S-DRL	PP	09	Pulled back to 58m. Picked up additional DC stand and DC / Jar stand.
07:00	07:30	0.50	S-DRL	PP	09	RIH with 406mm BHA to 140m.
07:30	18:00	10.50	S-DRL	PP	10	Drilled 406mm hole from 140m to 652m. Avg ROP = 49m/hr. Pumped 8m3 PHG mid-stand and spotted 8m3 PHG around BHA for each connection.
18:00	19:00	1.00	S-DRL	PN	50	Unable to break saver sub from DP due to back-up dies slipping. Changed out same.
19:00	00:00	5.00	S-DRL	PP	10	Drilled 406mm hole from 652m to 824m (section TD). Avg ROP = 34m/hr. Pumped 8m3 PHG mid-stand and spotted 8m3 PHG around BHA for each connection.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 01:30 hrs: Swept hole clean with 24m3 PHG. Displaced well with 143m3 PHG.

01:30 - 03:00 hrs: POH with 406mm BHA on 127mm DP from 824m to 253m. Tight spot at 624m (max overpull 18.1MT).

03:00 - 04:30 hrs: POH and racked 406mm BHA.

04:30 - 05:30 hrs: Laid out MWD and motor.

05:30 - 06:00 hrs: R/U and RIH jetting sub on 127mm DP.

No accidents or incidents reported.

Safety Efforts:

Stop cards 14, JSAs 12.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
2 / 1	406.40	Security	FS2563	10594154	18/18/18/18/18/18///	111.70 / 25/10/2005	0-0------

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
2 / 1	/ 5.8	50 / 100	4,028.7	22,064	2,103	10.60	712.30	67.20	10.60	712.30	67.20

BHA / HOLE CONDITIONS

BHA	2	JAR S/N	11151D	JAR HRS	17.50	BIT	2

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
19.0	95.2	90.7	90.7	14,509 N-m	253.06

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	712.30 (m)	824.00 (m)	824.00 (m)	1.87	4	25/10/2005

BHA / HOLE CONDITIONS

BHA	2	JAR S/N	11151D	JAR HRS	17.50	BIT	2

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.42	406.40		7.6	API REG
Positive Displacement Motor	1	8.54	242.89		7.6	API REG
Cross Over w/ ported float	1	0.97	239.71	80.96	7.6	API REG
Gamma Resistivity Tool	1	7.11	203.20		6.6	API REG
Universal Bottom Hole Orientation Sub	1	2.77	203.20		6.6	API REG
MWD Tool	1	3.11	203.20		6.6	API REG
Sonic Tool	1	6.63	203.20		6.6	API REG
Intergral Blade Stabilizer	1	2.19	381.00	76.20	6.6	API REG
Spirall Drill Collar	6	53.53	203.20	76.20	6.6	API REG
Drilling Jar	1	10.11	209.55	76.20	6.6	API REG
Spirall Drill Collar	2	18.10	203.20	74.61	6.6	API REG
Cross Over	1	1.10	200.02	73.02	4.5	NC 50
Heavy Weight Drill Pipe	15	138.48	160.34	77.79	4.5	NC 50

MUD PROPERTIES

MUD TYPE: SW / Gel Sweeps

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
120	/	/	/	/	/	/	/	/					

DENS	1.06	ECD		PP		DAILY COST		CUM COST	1,040	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	88	6.0	1,423.80
#2	12.0	78	6.0	1,262.01
#3	12.0	83	6.0	1,342.91

SPP: 22,064 (kPa)

AV (DP): 34.5 (m/min) AV Riser: (m/min)

AV (DC): 41.5 (m/min) HP/in2: 21.897 (kW/cm

SPR

	SPM	PPSR
PUMPS #1		
PUMPS #2		
PUMPS #3		

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	3		Dowell Schlumberger	2	
Apache	5		MI	2	
Diamond	50		Fugro	6	
ESS Catering	8		Geoservices	2	
Dril-Quip	1		Weatherford	3	

Total Personnel on Board: 82

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	155	0	0		155
CEMENT	156	0	0		156
DIESEL	395	312	590		1,297
GEL, FRESH	66	0	0		66
WATER, DRILLING	439	292	0		731
WATER, POTABLE	226	259	0		485

Total Water 1,216

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 11, Pax Out - 10)	SUPPLY BOAT	Pacific Wrangler - Melbourne.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	712.30 (m)	824.00 (m)	824.00 (m)	1.87	4	25/10/200

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	3 / 112	0 / /	0.50 / 90 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
22/10/2005 / 34,400 (kPa)	22/10/2005 / 17,200 (kPa)	/ (kPa)	22/10/2005		25/10/2005			25/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 3

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	56.62 (m)

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	0.00	0.000	0.000	0.00	0.00	0.00	0.00	
MWD	147.58	0.200	177.100	147.58	-0.26	0.01	-0.26	0.04
MWD	202.77	0.440	176.340	202.77	-0.56	0.03	-0.56	0.13
MWD	230.70	0.600	175.420	230.70	-0.82	0.05	-0.82	0.17
MWD	259.17	0.440	182.260	259.17	-1.08	0.06	-1.08	0.18
MWD	316.46	0.190	202.220	316.46	-1.38	0.01	-1.38	0.14
MWD	431.05	0.420	169.270	431.04	-1.97	0.02	-1.97	0.07
MWD	574.28	0.770	174.990	574.27	-3.45	0.20	-3.45	0.07
MWD	631.93	0.590	187.000	631.91	-4.13	0.20	-4.13	0.12
MWD	747.01	1.160	234.790	746.98	-5.39	-0.83	-5.39	0.23
MWD	804.24	1.360	261.580	804.20	-5.82	-1.97	-5.82	0.32

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	824.00 (m)	824.00 (m)	2.87	5	26/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	4.00

SUPERVISOR	OIM
J Herriot / D Selman	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 279,261.55	DHC: 910,199.75
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 910,199.75

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 804.24 INC 1.360 AZM 261.580	(SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Continue N/U BOP's.

24 HR FORECAST

Complete N/U BOP's and pressure test. P/U drillpipe. M/U BHA

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	01:30	1.50	S-DRL	PP	11	Swept hole clean with 24m3 PHG. Displaced well with 143m3 PHG.
01:30	03:00	1.50	S-DRL	PP	08	POH with 406mm BHA on 127mm DP from 824m to 253m. Tight spot at 624m (max overpull 18.1MT).
03:00	04:30	1.50	S-DRL	PP	09	POH and racked 406mm BHA.
04:30	05:30	1.00	S-DRL	PP	09	Laid out MWD and motor.
05:30	06:30	1.00	S-DRL	PP	09	R/U and RIH jetting sub on 127mm DP. Jetted wellhead housing. POH.
06:30	08:00	1.50	S-CSG	PP	40	Rigged up to run casing. Held JSA.
08:00	12:00	4.00	S-CSG	PP	40	RIH 340mm casing to 817.6m.
12:00	13:00	1.00	S-CSG	PP	40	M/up 406mm x 340mm crossover joint. Picked up 476mm wellhead, installed Deep Sea Express mandrel & plug basket. M//up wellhead.
13:00	14:00	1.00	S-CSG	PP	40	RIH with 476mm wellhead on 127mm DP. 406mm x 340mm x-over hung up on top of wellhead housing. Repositioned rig to centralise x-over. Whilst repositioning rig, hooked up cement lines to cement head.
14:00	14:30	0.50	S-CSG	PP	40	Landed 476mm wellhead. Performed overpull test (23MT) and confirmed latch.
14:30	15:00	0.50	S-CSG	PP	11	Held JSA. Circulated well.
15:00	16:00	1.00	S-CSG	PP	41	Cemented 340mm casing : Pumped 1.6m3 SW ,tested cement lines to 27,580kPa. Dropped bottom dart and pumped 1.6m3 SW (observed plug shear after 0.8m3). Mixed and pumped 20.5m3 of 1.5sg lead slurry, then 11.6m3 of 1.9sg tail slurry. Dropped top dart and displaced with 1.6m3 of SW (observed plug shear after 0.8m3).
16:00	17:00	1.00	S-CSG	PP	41	Displaced cement with 54.7m3 SW using rig pumps. Bumped plug and pressure tested casing to 20,685kPa for 15 mins. Estimated TOC = 415m
17:00	18:00	1.00	S-CSG	PP	41	R/D cement hose. Released 476mm R/T. Strapped out of hole. Top of 476mm wellhead at 77.2m AHD. L/O Deep Sea Express plug launcher and 476mm wellhead R/T.
18:00	21:00	3.00	S-CSG	PP	09	L/O DC's and jars. L/O Deep Sea Express cement plug stand.
21:00	23:00	2.00	S-CSG	PP	81	R/U to run marine riser and BOP stack. Held JSA. M/U riser double and 4.6m pup joint.
23:00	00:00	1.00	S-CSG	PP	43	Skidded BOP stack on carrier to port. M/U riser assembly to BOP stack. Commenced installing guidelines. **** Note - final elevations (AHD) **** RT elevation : 21.5m Water depth : 58.6m 762mm housing :78.1m 476mm housing (datum) :77.2m

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 01:30 hrs: Continued to install guidelines and pod hose clamps.

01:30 - 02:00 hrs: Lowered BOP's through splash zone.

02:00 - 03:00 hrs: R/U to pressure test choke and kill lines to 1,700kPa for 5 mins and 34,500kPa for 10 mins. R/D test assy.

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	824.00 (m)	824.00 (m)	2.87	5	26/10/200

06:00 UPDATE

03:00 - 04:00 hrs: M/U slip joint and landing joint.

04:00 - 06:00 hrs: Lowered BOP's. N/U choke and kill goosenecks. Pressure test same to 1,700kPa for 5 mins and 34,500kPa for 10 mins.

No accidents or incidents reported.

Safety Efforts:

Stop cards 9, JSAs 26.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
2 / 2	406.40	Security	FS2563	10594154	18/18/18/18/18/18///	111.70 / 25/10/2005	0-2-WT-S-D- I-CT-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP

BHA / HOLE CONDITIONS

BHA	2	JAR S/N	11151D	JAR HRS	24.00	BIT	2

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
19.0	95.2	90.7	90.7	N-m	253.06

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.42	406.40		7.6	API REG
Positive Displacement Motor	1	8.54	242.89		7.6	API REG
Cross Over w/ ported float	1	0.97	239.71	80.96	7.6	API REG
Gamma Resistivity Tool	1	7.11	203.20		6.6	API REG
Universal Bottom Hole Orientation Sub	1	2.77	203.20		6.6	API REG
MWD Tool	1	3.11	203.20		6.6	API REG
Sonic Tool	1	6.63	203.20		6.6	API REG
Intergral Blade Stabilizer	1	2.19	381.00	76.20	6.6	API REG
Spirall Drill Collar	6	53.53	203.20	76.20	6.6	API REG
Drilling Jar	1	10.11	209.55	76.20	6.6	API REG
Spirall Drill Collar	2	18.10	203.20	74.61	6.6	API REG
Cross Over	1	1.10	200.02	73.02	4.5	NC 50
Heavy Weight Drill Pipe	15	138.48	160.34	77.79	4.5	NC 50

MUD PROPERTIES

MUD TYPE: SW / Gel Sweeps

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
120	/	/	/	/	/	/	/	/					

DENS	1.06	ECD		PP		DAILY COST		CUM COST	1,040	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	83	6.0	1,342.91
#2	12.0	83	6.0	1,342.91
#3	12.0	83	6.0	1,342.91

SPP:

AV (DP): 34.5 (m/min) AV Riser: (m/min)

AV (DC): 41.5 (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #1		
PUMPS #2		
PUMPS #3		

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	3		Dowell Schlumberger	2	
Apache	5		MI	2	
Diamond	50		Fugro	6	
ESS Catering	8		Geoservices	2	
Dril-Quip	1		Weatherford	3	

Total Personnel on Board: 82

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	155	0	0		155

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	824.00 (m)	824.00 (m)	2.87	5	26/10/200

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
CEMENT	125	0	0		125
DIESEL	379	308	590		1,277
GEL, FRESH	55	0	0		55
WATER, DRILLING	475	0	0		475
WATER, POTABLE	223	259	0		482

Total Water 957

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
SUPPLY BOAT	Far Grip - On location.	SUPPLY BOAT	Pacific Wrangler - Melbourne.

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	3 / 258	0 / /	2.00 / 225 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
22/10/2005 / 34,400 (kPa)	22/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	22/10/2005		25/10/2005			25/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 4

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	56.62 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	824.00 (m)	824.00 (m)	3.87	6	27/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	5.00

SUPERVISOR	OIM
J Herriot / D Selman	B Scott

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 318,357.19	DHC: 1,905,241.87
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 1,905,241.87

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 804.24 INC 1.360 AZM 261.580	(SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

P/U 127mm DP.

24 HR FORECAST

P/U DP. M/U 216mm BHA. RIH, drill cmt, FIT & drill ahead.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	01:30	1.50	S-NUP	PP	43	Continued to install guidelines and pod hose clamps.
01:30	02:00	0.50	S-NUP	PP	43	Ran BOP's through splash zone.
02:00	03:00	1.00	S-NUP	PP	43	R/U to pressure test choke and kill lines to 1,700kPa for 5 mins and 34,500kPa for 10 mins. R/D test assy.
03:00	04:00	1.00	S-NUP	PP	81	M/U slip joint and landing joint.
04:00	06:00	2.00	S-NUP	PP	43	Lowered BOP's. N/U choke and kill goosenecks then pressure tested to 1,700kPa for 5 mins and 34,500kPa for 10 mins.
06:00	07:30	1.50	S-NUP	PP	43	Locked in SDL ring. Attached storm saddles to guidelines. Moved rig back over location at 06:50 hrs.
07:30	08:30	1.00	S-NUP	PP	43	Landed BOP's with 23MT down weight. Picked up 23MT overpull and verified latched on yellow and blue pod's. M/U RBQ plates to pod reels.
08:30	09:00	0.50	S-NUP	PP	43	Tested shear rams, BOP connection and casing to 1,700kPa for 5 mins and 17,200kPa for 10mins.
09:00	10:00	1.00	S-NUP	PP	81	Unbolted and scoped out slip joint. L/O landing joint.
10:00	10:30	0.50	S-NUP	PN	99	Waited on helicopter to enable crane use.
10:30	11:30	1.00	S-NUP	PP	81	M/U diverter to slip joint and latched same under RT. Picked up 4.5MT overpull to verify latch.
11:30	12:00	0.50	S-NUP	PP	81	R/D riser handling equipment.
12:00	13:00	1.00	S-NUP	PP	43	M/U with BOP pressure testing tool with 4 stands HWDP below & RIH.
13:00	19:00	6.00	S-NUP	PP	43	Pressure tested BOP rams and failsafes on blue pod - 1,700kPa for 5 mins and 34,500kPa for 10 mins. Pressure tested BOP upper and lower annulars - 1,700kPa for 5 mins and 17,200kPa for 10 mins. Upper annular failed to test. Increased activating pressure and retested, OK. Function tested yellow pod.
19:00	20:00	1.00	S-NUP	PP	43	POH with BOP pressure testing tool and L/O same.
20:00	20:30	0.50	S-NUP	PP	14	M/U emergency hang-off tool to 127mm drillpipe and racked back same.
20:30	00:00	3.50	P-DRL	PP	14	Held JSA. P/U 127mm drillpipe.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs: Continued to P/U 127mm DP.

Safety Efforts:

Stop cards 8, JSAs 18.

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
54	10/8	4/6	5.6/	/7.0	/	/	9.00/0.01	0.30/0.50	26,000	100			

DENS	1.20	ECD		PP		DAILY COST		CUM COST	27,129	% OIL	

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	824.00 (m)	824.00 (m)	3.87	6	27/10/2005

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:

AV (DP): (m/min) AV Riser: (m/min)

AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
/	/	/				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	4		Dowell Schlumberger	2	
Apache	7		MI	2	
Diamond	49		Fugro	6	
ESS Catering	8		Geoservices	4	
Dril-Quip	1				

Total Personnel on Board: 83

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	155	0	80		235
CEMENT	125	0	61		186
DIESEL	362	308	534		1,204
GEL, FRESH	55	0	0		55
WATER, DRILLING	826	0	0		826
WATER, POTABLE	216	0	285		501

Total Water 1,327

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 17, Pax Out - 16)	SUPPLY BOAT	Pacific Wrangler - On location.
SUPPLY BOAT	Far Grip - Steaming to Melbourne.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	3 / 248	0 / /	0.50 / 225 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			25/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

LOST TIME? NO

DAYS W/O LTA 5

INCIDENT DESCRIPTION

DATUM SECTION

RT TO AHD	25.00 (m)	AIR GAP		WATER DEPTH	56.62 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	95.00 (m)	919.00 (m)	919.00 (m)	4.87	7	28/10/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	6.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 453,760.39	DHC: 2,669,640.93
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 453,760.00	TOTAL: 2,669,640.93

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 911.81 (m) INC 1.190 AZM 271.360	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Drilling 216mm hole at 919m. Avg ROP = 26.3m/hr.

24 HR FORECAST

Continue drilling 216mm hole section.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	06:30	6.50	P-DRL	PP	14	Continued to P/U 127mm DP.
06:30	10:00	3.50	P-DRL	PP	14	M/U drill collars and jars. POH and racked back same in derrick.
10:00	10:30	0.50	P-DRL	PN	99	Waited on helicopter to enable use of cranes.
10:30	15:00	4.50	P-DRL	PP	09	M/U 216mm BHA and RIH. Shallow tested MWD equipment on first HWDP.
15:00	16:00	1.00	P-DRL	PP	14	RIH 216mm BHA from 260m to 460m whilst P/U 127mm drillpipe.
16:00	16:30	0.50	P-DRL	PP	08	RIH 216mm BHA on 127mm drillpipe to 750m.
16:30	17:00	0.50	P-DRL	PP	74	Held well control / choke drill.
17:00	17:30	0.50	P-DRL	PP	08	Continued to RIH 216mm BHA on 127mm drillpipe. Tagged cement at 790m.
17:30	20:00	2.50	P-DRL	PP	42	Drilled out float, shoe track and new hole to 827m whilst displacing hole to 1.2sg KCl / PHPA mud. Displaced choke and kill lines to 1.2sg mud.
20:00	20:30	0.50	P-DRL	PP	42	Performed FIT to 1.7sg EMW.
20:30	00:00	3.50	P-DRL	PP	10	Drilled 216mm hole from 827m to 919m. Avg ROP = 26.3m/hr.
		24.00 = Total Hours Today				

06:00 UPDATE

00:00 - 06:00 hrs: Continued to drill 216mm hole from 919m to 1147m. Avg ROP 38.0 m/hr

Safety Efforts:

Stop cards 7, JSAs 26.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 3	215.90	Smith	S73VPX	JW0059	15/15/15/16/16/16////	824.00 / 28/10/2005	0-0------

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
3 / 3	0.9 / 6.3	55 / 101	2,266.0	12,411	1,860	2.10	95.00	45.24	2.10	95.00	45.24

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	6.00	BIT	3

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
17.2	90.7	90.7	90.7	16,408 N-m	259.78

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.22			4.5	API REG
Positive Displacement Motor	1	7.70	171.45		4.5	API REG
Ported Float Sub	1	0.88	165.10		4.5	IF
Near Bit Stabilizer	1	1.53	171.45	74.61	4.5	IF
Gamma / Resistivity Tool	1	7.03	171.45		4.5	IF

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	95.00 (m)	919.00 (m)	919.00 (m)	4.87	7	28/10/2005

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928		JAR HRS	6.00	BIT	3

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Logging while Drilling	1	7.24	171.45		4.5	IF
Sonic Tool	1	6.81	171.45		4.5	IF
Bent Sub	1	2.78	171.45		4.5	IF
MWD Pulser Tool	1	3.06	171.45		4.5	IF
Spirall Drill Collar	9	83.68	165.10	73.02	4.5	IF
Drilling Jar	1	9.68	161.92	73.02	4.5	IF
Spirall Drill Collar	2	18.62	165.10	73.02	4.5	IF
Heavy Weight Drill Pipe	12	110.55	160.34	82.55	4.5	IF

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
49	12/10	5/7	6.0/	/8.0	/	0.20/4.9	9.70/0.35	0.20/0.40	27,000	240			1.3

DENS	1.20	ECD	1.23	PP		DAILY COST	14,811	CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	75	6.0	1,213.47
#3	12.0	65	6.0	1,051.67
#				

SPP: 12,411 (kPa)

AV (DP): 94.5 (m/min) AV Riser: 12.3 (m/min)

AV (DC): 148.7 (m/min HP/in2: 10.897 (kW/cm

SPR

	SPM	PPSR
PUMPS #1	50	2,758
PUMPS #3	50	2,689
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
165 / 165	180 / 180	84 / 84				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	4		Dowell Schlumberger	2	
Apache	6		MI	2	
Diamond	47		Fugro	3	
ESS Catering	8		Geoservices	4	

Total Personnel on Board: 76

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	126	0	80		206
CEMENT	125	0	61		186
DIESEL	338	308	532		1,178
GEL, FRESH	47	0	0		47
WATER, DRILLING	814	0	0		814
WATER, POTABLE	216	0	280		496

Total Water 1,310

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 10, Pax Out - 17)	SUPPLY BOAT	Pacific Wrangler - On location.
SUPPLY BOAT	Far Grip - Melbourne.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	6 / 90	0 / /	1.00 / 90 /	/	0 (°C)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	95.00 (m)	919.00 (m)	919.00 (m)	4.87	7	28/10/200

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			25/10/2005

INCIDENT REPORT

INCIDENT TYPE FIRST AID

INCIDENT DESCRIPTION IP struck by lift cap whilst P/U drillpipe.

LOST TIME? NO

DAYS W/O LTA 6

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	854.17	1.080	262.660	854.11	-5.97	-3.02	-5.97	0.17
MWD	882.94	1.070	265.440	882.88	-6.02	-3.56	-6.02	0.06
MWD	911.81	1.190	271.360	911.74	-6.04	-4.13	-6.04	0.17

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	650.00 (m)	1,569.00 (	1,568.60 (	5.87	8	29/10/200

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	7.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 332,547.32	DHC: 3,002,188.25
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 3,002,188.25

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
23/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 1,542.83 (m) INC 0.860 AZM 327.870	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Drilling 216mm hole at 1569m. Avg ROP = 19m/hr.

24 HR FORECAST

Continue drilling 216mm hole.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	17:30	17.50	P-DRL	PP	10	Drilled 216mm hole from 919m 1462m. Avg ROP = 31m/hr.
17:30	18:30	1.00	P-DRL	PN	50	Saver sub backed out of lower IBOP. L/O single and racked back one stand of 127mm drillpipe. Installed new saver sub and RIH.
18:30	00:00	5.50	P-DRL	PP	10	Drilled 216mm hole from 1462m to 1569m. Avg ROP = 19m/hr.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 02:00 hrs: Drilled 216mm hole from 1569m to 1578m. Avg ROP 4.5m/hr.

02:00 - 03:00 hrs: Time shifted forward 1 hour to AESDT.

03:00 - 06:00 hrs: Drilled 216mm hole from 1578m to 1625m. Avg ROP = 15.7m/hr.

Safety Efforts:

Stop cards 6, JSAs 17.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 3	215.90	Smith	S73VPX	JW0059	15/15/15/16/16/16////	824.00 / 28/10/2005	0-0------

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
3 / 3	2.8 / 7.9	55 / 100	2,266.0	17,237	1,860	20.00	650.00	32.50	22.10	745.00	33.71

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	29.00	BIT	3

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
17.2	99.8	104.3	104.3	8,407 N-m	259.78

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.22			4.5	API REG
Positive Displacement Motor	1	7.70	171.45		4.5	API REG
Ported Float Sub	1	0.88	165.10		4.5	IF
Near Bit Stabilizer	1	1.53	171.45	74.61	4.5	IF
Gamma / Resistivity Tool	1	7.03	171.45		4.5	IF
Logging while Drilling	1	7.24	171.45		4.5	IF
Sonic Tool	1	6.81	171.45		4.5	IF
Bent Sub	1	2.78	171.45		4.5	IF
MWD Pulser Tool	1	3.06	171.45		4.5	IF
Spirall Drill Collar	9	83.68	165.10	73.02	4.5	IF
Drilling Jar	1	9.68	161.92	73.02	4.5	IF

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	650.00 (m)	1,569.00 (	1,568.60 (	5.87	8	29/10/200

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928		JAR HRS	29.00	BIT	3

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Spirall Drill Collar	2	18.62	165.10	73.02	4.5	IF
Heavy Weight Drill Pipe	12	110.55	160.34	82.55	4.5	IF

MUD PROPERTIES

MUD TYPE	KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
55	14/13	6/13	5.6/	/9.0	/	0.60/6.0	9.00/0.25	0.15/0.30	34,000	280			2.0

DENS	1.20	ECD	1.26	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	75	6.0	1,213.47
#3	12.0	65	6.0	1,051.67
#				

SPP: 17,237 (kPa)

AV (DP): 94.5 (m/min) AV Riser: 19.6 (m/min)

AV (DC): 148.7 (m/min HP/in2: 10.897 (kW/cm

SPR

	SPM	PPSR
PUMPS #1	50	3,723
PUMPS #3	50	3,792
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
165 / 165	165 / 165	145 / 145				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	4		Dowell Schlumberger	2	
Apache	6		MI	2	
Diamond	47		Fugro	3	
ESS Catering	8		Geoservices	4	

Total Personnel on Board: 76

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	126	0	80		206
CEMENT	125	0	61		186
DIESEL	320	308	529		1,157
GEL, FRESH	47	0	0		47
WATER, DRILLING	657	0	0		657
WATER, POTABLE	211	0	275		486

Total Water 1,143

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
SUPPLY BOAT	Far Grip - Steaming from Melbourne to rig.	SUPPLY BOAT	Pacific Wrangler - On location.

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	4 / 90	0 / /	0.50 / 90 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			25/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

LOST TIME? NO

DAYS W/O LTA 7

INCIDENT DESCRIPTION

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	650.00 (m)	1,569.00 (	1,568.60 (	5.87	8	29/10/200

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	940.40	1.160	271.020	940.33	-6.03	-4.71	-6.03	0.03
MWD	969.00	1.140	275.160	968.92	-5.99	-5.29	-5.99	0.09
MWD	997.65	1.070	274.190	997.57	-5.95	-5.84	-5.95	0.08
MWD	1,026.35	1.050	269.720	1,026.26	-5.93	-6.37	-5.93	0.09
MWD	1,054.97	0.930	273.030	1,054.88	-5.92	-6.86	-5.92	0.14
MWD	1,083.56	0.880	279.710	1,083.46	-5.87	-7.31	-5.87	0.12
MWD	1,112.05	0.860	280.500	1,111.95	-5.79	-7.74	-5.79	0.02
MWD	1,140.78	0.800	280.280	1,140.68	-5.72	-8.15	-5.72	0.06
MWD	1,169.42	0.690	281.950	1,169.32	-5.65	-8.51	-5.65	0.12
MWD	1,198.14	0.810	286.360	1,198.03	-5.56	-8.88	-5.56	0.14
MWD	1,255.86	1.010	305.380	1,255.75	-5.15	-9.68	-5.15	0.19
MWD	1,284.62	0.870	311.340	1,284.50	-4.85	-10.05	-4.85	0.18
MWD	1,313.27	0.860	333.940	1,313.15	-4.52	-10.31	-4.52	0.36
MWD	1,341.99	0.670	334.230	1,341.87	-4.17	-10.48	-4.17	0.20
MWD	1,370.65	0.680	330.150	1,370.52	-3.87	-10.63	-3.87	0.05
MWD	1,427.72	0.770	326.650	1,427.59	-3.26	-11.01	-3.26	0.05
MWD	1,456.16	0.820	328.790	1,456.03	-2.93	-11.22	-2.93	0.06
MWD	1,484.95	0.850	336.790	1,484.81	-2.55	-11.42	-2.55	0.13
MWD	1,513.89	0.880	324.920	1,513.75	-2.18	-11.63	-2.18	0.19
MWD	1,542.83	0.860	327.870	1,542.69	-1.81	-11.87	-1.81	0.05

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	345.00 (m)	1,914.00 (	1,913.40 (	6.87	9	30/10/200

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	8.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 338,046.03	DHC: 3,340,234.28
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 3,340,234.28

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 1,887.20 (m) INC 0.560 AZM 59.170	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Drilling 216mm hole at 1914m.

24 HR FORECAST

Continue drilling 216mm hole.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	02:00	2.00	P-DRL	PP	10	Drilled 216mm hole from 1569m to 1578m. Avg ROP 5m/hr.
02:00	03:00	1.00	P-DRL	CN	99	Time shifted forward 1 hour to AEDST.
03:00	00:00	21.00	P-DRL	PP	10	Drilled 216mm hole from 1578m to 1914m. Avg ROP = 16m/hr.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs: Drilled 216mm hole from 1914m to 2037m. Avg ROP 20.5m/hr.

Safety Efforts:

Stop cards 4, JSAs 18

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 3	215.90	Smith	S73VPX	JW0059	15/15/15/16/16/16////	824.00 / 28/10/2005	0-0------

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
3 / 3	4.9 / 11.3	90 / 100	2,266.0	18,961	1,891	19.70	345.00	17.51	41.80	1,090.00	26.08

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	53.00	BIT	3

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
17.2	108.8	113.4	113.4	7,594 N-m	259.78

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.22			4.5	API REG
Positive Displacement Motor	1	7.70	171.45		4.5	API REG
Ported Float Sub	1	0.88	165.10		4.5	IF
Near Bit Stabilizer	1	1.53	171.45	74.61	4.5	IF
Gamma / Resistivity Tool	1	7.03	171.45		4.5	IF
Logging while Drilling	1	7.24	171.45		4.5	IF
Sonic Tool	1	6.81	171.45		4.5	IF
Bent Sub	1	2.78	171.45		4.5	IF
MWD Pulser Tool	1	3.06	171.45		4.5	IF
Spirall Drill Collar	9	83.68	165.10	73.02	4.5	IF
Drilling Jar	1	9.68	161.92	73.02	4.5	IF
Spirall Drill Collar	2	18.62	165.10	73.02	4.5	IF
Heavy Weight Drill Pipe	12	110.55	160.34	82.55	4.5	IF

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	345.00 (m)	1,914.00 (	1,913.40 (	6.87	9	30/10/200

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
61	22/17	8/16	4.4/	/10.0	/	0.20/30.0	9.00/0.50	0.20/0.40	47,000	320			2.8

DENS	1.22	ECD	1.31	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#1	12.0	75	6.0	1,213.47
#2	12.0	65	6.0	1,051.67
#				

SPP: 18,961 (kPa)

AV (DP): 94.5 (m/min) AV Riser: 19.8 (m/min)

AV (DC): 148.7 (m/min HP/in2: 11.078 (kW/cm

SPR

	SPM	PPSR
PUMPS #1	50	4,068
PUMPS #2	50	4,137
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
120 / 120	120 / 120	120 / 120				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	6		Fugro	3	
Diamond	47		Geoservices	4	
ESS Catering	8		Schlumberger	8	
Dowell Schlumberger	2		Sperry Sun	4	
MI	2				

Total Personnel on Board: 84

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	126	84	80		290
CEMENT	125	80	61		266
DIESEL	304	399	529		1,232
GEL, FRESH	47	0	0		47
WATER, DRILLING	560	802	0		1,362
WATER, POTABLE	221	512	275		1,008

Total Water 2,370

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 8, Pax Out - 0)	SUPPLY BOAT	Pacific Wrangler - Steaming to Melbourne.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	13 / 135	0 / /	0.50 / 135 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 8

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	345.00 (m)	1,914.00 (	1,913.40 (	6.87	9	30/10/200

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	1,571.59	0.870	324.350	1,571.44	-1.45	-12.11	-1.45	0.06
MWD	1,599.70	0.770	338.400	1,599.55	-1.10	-12.31	-1.10	0.24
MWD	1,657.30	0.970	353.390	1,657.14	-0.26	-12.51	-0.26	0.16
MWD	1,686.01	0.880	355.800	1,685.85	0.21	-12.55	0.21	0.10
MWD	1,715.08	0.890	6.110	1,714.92	0.65	-12.54	0.65	0.16
MWD	1,743.68	0.780	6.960	1,743.51	1.07	-12.49	1.07	0.12
MWD	1,772.08	0.500	6.190	1,771.91	1.38	-12.46	1.38	0.30
MWD	1,800.65	0.480	16.780	1,800.48	1.62	-12.41	1.62	0.10
MWD	1,829.26	0.580	38.400	1,829.09	1.85	-12.29	1.85	0.23
MWD	1,858.09	0.500	34.500	1,857.92	2.07	-12.12	2.07	0.09
MWD	1,887.20	0.560	59.170	1,887.03	2.24	-11.93	2.24	0.24

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	640.00 (m)	2,554.00 (	2,553.60 (	7.87	10	31/10/200

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	9.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 344,790.91	DHC: 3,685,147.85
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 3,685,147.85

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00 (m) INC 1.410 AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Drilling 216mm hole at 2554m.

24 HR FORECAST

Drill 216mm hole to TD. CBU and POH. L/O BHA. R/U wireline.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	00:00	24.00	P-DRL	PP	10	Drilled 216mm hole from 1914m to 2554m. Avg ROP 26.7m/hr.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 01:30 hrs: Drilled 216mm hole from 2554m to 2610m (TD). Avg ROP = 37.3m/hr.

01:30 - 03:30 hrs: Circulated well clean (~2 x bottoms-up). Flow checked well - static.

03:30 - 04:00 hrs: POH 216mm BHA on 127mm drillpipe from 2610m to 2467m. Hole pulled tight at 2472m. Max overpull = 22.7MT.

04:00 - 06:00 hrs: Backreamed 216mm BHA on 127mm drillpipe from 2467m to 2239m.

Safety Efforts:

Stop cards 7, JSAs 15

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 3	215.90	Smith	S73VPX	JW0059	15/15/15/16/16/16////	824.00 / 28/10/2005	0-0------

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
3 / 3	2.8 / 13.6	90 / 110	2,266.0	21,719	1,891	19.20	640.00	33.33	61.00	1,730.00	28.36

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	77.00	BIT	3

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
17.2	127.0	131.5	131.5	11,933 N-m	259.78

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.22			4.5	API REG
Positive Displacement Motor	1	7.70	171.45		4.5	API REG
Ported Float Sub	1	0.88	165.10		4.5	IF
Near Bit Stabilizer	1	1.53	171.45	74.61	4.5	IF
Gamma / Resistivity Tool	1	7.03	171.45		4.5	IF
Logging while Drilling	1	7.24	171.45		4.5	IF
Sonic Tool	1	6.81	171.45		4.5	IF
Bent Sub	1	2.78	171.45		4.5	IF
MWD Pulser Tool	1	3.06	171.45		4.5	IF
Spirall Drill Collar	9	83.68	165.10	73.02	4.5	IF
Drilling Jar	1	9.68	161.92	73.02	4.5	IF
Spirall Drill Collar	2	18.62	165.10	73.02	4.5	IF

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	640.00 (m)	2,554.00 (	2,553.60 (	7.87	10	31/10/200

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	77.00	BIT	3

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Heavy Weight Drill Pipe	12	110.55	160.34	82.55	4.5	IF

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
67	26/18	9/19	4.8/	/14.0	/	0.60/42.0	8.90/0.50	0.10/0.20	47,000	360			10.6

DENS	1.22	ECD	1.32	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#2	12.0	75	6.0	1,213.47
#3	12.0	65	6.0	1,051.67
#				

SPP: 21,719 (kPa)

AV (DP): 94.5 (m/min) AV Riser: 19.8 (m/min)

AV (DC): 148.7 (m/min HP/in2: 11.078 (kW/cm

SPR

	SPM	PPSR
PUMPS #2	50	4,482
PUMPS #3	50	4,551
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
180 / 180	180 / 180	145 / 145				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	4		MI	2	
Apache	6		Fugro	3	
Diamond	47		Geoservices	4	
ESS Catering	8		Schlumberger	8	
Dowell Schlumberger	2				

Total Personnel on Board: 84

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	126	84	80		290
CEMENT	125	80	61		266
DIESEL	291	397	529		1,217
GEL, FRESH	47	0	0		47
WATER, DRILLING	452	802	0		1,254
WATER, POTABLE	218	409	275		902

Total Water 2,156

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
SUPPLY BOAT	Far Grip - On location.	SUPPLY BOAT	Pacific Wrangler - Melbourne.

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,219	341			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	8 / 135	1 / /	0.50 / 135 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

LOST TIME? NO

DAYS W/O LTA 9

INCIDENT DESCRIPTION

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	640.00 (m)	2,554.00 (	2,553.60 (	7.87	10	31/10/200

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	1,916.07	0.690	58.490	1,915.90	2.41	-11.66	2.41	0.14
MWD	1,944.74	0.660	50.110	1,944.56	2.60	-11.39	2.60	0.11
MWD	1,973.02	0.750	60.070	1,972.84	2.80	-11.10	2.80	0.16
MWD	2,001.54	0.620	65.930	2,001.36	2.96	-10.80	2.96	0.16
MWD	2,030.20	0.470	54.960	2,030.02	3.09	-10.56	3.09	0.19
MWD	2,058.70	0.510	43.070	2,058.52	3.25	-10.38	3.25	0.11
MWD	2,087.39	0.510	81.710	2,087.21	3.36	-10.16	3.36	0.35
MWD	2,116.44	0.550	117.190	2,116.26	3.31	-9.91	3.31	0.34
MWD	2,144.78	0.560	102.110	2,144.59	3.22	-9.66	3.22	0.15
MWD	2,231.21	0.950	136.210	2,231.02	2.62	-8.75	2.62	0.20
MWD	2,317.05	0.950	103.220	2,316.85	1.94	-7.56	1.94	0.19
MWD	2,402.73	0.930	77.310	2,402.51	1.93	-6.19	1.93	0.15
MWD	2,431.36	1.070	70.010	2,431.14	2.07	-5.71	2.07	0.20
MWD	2,460.09	1.060	56.970	2,459.87	2.31	-5.24	2.31	0.25
MWD	2,488.89	1.280	60.600	2,488.66	2.61	-4.74	2.61	0.24
MWD	2,517.63	1.410	56.390	2,517.39	2.97	-4.16	2.97	0.17
MWD	2,610.00	1.410	56.390	2,609.73	4.22	-2.27	4.22	

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	56.00 (m)	2,610.00 (	2,609.70 (	8.87	11	1/11/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	10.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 327,353.71	DHC: 4,012,501.57
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 4,012,501.57

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00 (m) INC 1.410 AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Performing slip and cut.

24 HR FORECAST

Slip and cut. RIH cementing string. Place P&A cement plugs.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	01:30	1.50	P-DRL	PP	10	Drilled 216mm hole from 2554m to 2610m (TD). Avg ROP = 37.3m/hr.
01:30	03:30	2.00	P-DRL	PP	11	Circulated well clean (~2 x bottoms-up). Flow checked well - static.
03:30	04:00	0.50	P-DRL	PP	08	POH 216mm BHA on 127mm drillpipe from 2610m to 2467m. Hole pulled tight at 2472m. Max overpull = 22.7MT.
04:00	06:00	2.00	P-DRL	PP	23	Backreamed from 2467m to 2210m.
06:00	07:00	1.00	P-DRL	PP	11	Circulated hole clean at 2.3 m3/min whilst reciprocating drillstring from 2210m to 2181m.
07:00	11:00	4.00	P-DRL	PP	08	Pumped slug and continued to POH with 216mm BHA on 127mm drillpipe from 2181m to 260m. Worked through tight hole at 1273m, 910m and 881m. Max overpull = 18.1MT.
11:00	12:30	1.50	P-DRL	PP	09	POH 216mm BHA and racked back same.
12:30	13:00	0.50	P-DRL	PP	09	Removed RA sources from MWD.
13:00	14:30	1.50	P-DRL	PP	09	L/O MWD, PDM and bit.
14:30	16:00	1.50	P-EVAL	PP	32	R/U wireline.
16:00	22:00	6.00	P-EVAL	PP	32	RIH wireline and performed checkshot survey. POH same.
22:00	22:30	0.50	P-EVAL	PP	32	L/O wireline tools and R/D wireline equipment.
22:30	00:00	1.50	P-EVAL	PP	51	Commenced slip and cut.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 00:30 hrs: Continued slip and cut.

00:30 - 01:00 hrs: Serviced TDS and rollers.

01:00 - 02:00 hrs: R/U and RIH 73mm cementing stinger to 193m.

02:00 - 02:30 hrs: M/U cement stand and racked back.

02:30 - 06:00 hrs: RIH 73mm cementing stinger on 127mm drillpipe to 1900m. Broke circulation at 1800m.

Safety Efforts:

Stop cards 11, JSAs 18.

BIT DATA

BIT / RUN	SIZE	MANUF.	TYPE	SERIAL NO.	JETS OR TFA	DEPTH IN / DATE IN	I-O-D-L-B-G-O-R
3 / 3	215.90	Smith	S73VPX	JW0059	15/15/15/16/16/16////	824.00 / 28/10/2005	1-0-ER-N-D- I-WT-TD

BIT OPERATIONS

BIT / RUN	WOB	RPM	FLOW	PRESS	P BIT	HRS	24Hr PROG	24Hr ROP	CUM HRS	CUM PROG	CUM ROP
3 / 3	2.6 / 8.9	90 / 110	2,265.1	22,064	1,905	1.60	56.00	35.00	62.60	1,786.00	28.53

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	56.00 (m)	2,610.00 (	2,609.70 (	8.87	11	1/11/2005

BHA / HOLE CONDITIONS

BHA	3	JAR S/N	WDAH02928	JAR HRS	83.00	BIT	3

BHA WT. BELOW JARS	STRING WT. UP	STRING WT. DN	STRING WT. ROT	TORQUE / UNITS	BHA LENGTH
17.2	127.0	131.5	131.5	10,848 N-m	259.78

ITEM DESCRIPTION	NO. JTS	LENGTH	O.D.	I.D.	CONN SIZE	CONN TYPE
Polycrystalline Diamond Bit	1	0.22			4.5	API REG
Positive Displacement Motor	1	7.70	171.45		4.5	API REG
Ported Float Sub	1	0.88	165.10		4.5	IF
Near Bit Stabilizer	1	1.53	171.45	74.61	4.5	IF
Gamma / Resistivity Tool	1	7.03	171.45		4.5	IF
Logging while Drilling	1	7.24	171.45		4.5	IF
Sonic Tool	1	6.81	171.45		4.5	IF
Bent Sub	1	2.78	171.45		4.5	IF
MWD Pulser Tool	1	3.06	171.45		4.5	IF
Spirall Drill Collar	9	83.68	165.10	73.02	4.5	IF
Drilling Jar	1	9.68	161.92	73.02	4.5	IF
Spirall Drill Collar	2	18.62	165.10	73.02	4.5	IF
Heavy Weight Drill Pipe	12	110.55	160.34	82.55	4.5	IF

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
71	25/19	9/21	4.2/	/13.0	/	0.25/43.0	9.50/1.10	0.10/0.70	50,000	240			7.7

DENS	1.23	ECD	1.32	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#2	12.0	75	6.0	1,213.47
#3	12.0	65	6.0	1,051.67
#				

SPP: 22,064 (kPa)

AV (DP): 94.5 (m/min) AV Riser: 19.8 (m/min)

AV (DC): 148.7 (m/min HP/in2: 11.156 (kW/cm

SPR

	SPM	PPSR
PUMPS #2		
PUMPS #3		
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
120 / 120	145 / 145	145 / 145				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Sperry Sun	4		MI	2	
Apache	6		Fugro	3	
Diamond	48		Geoservices	4	
ESS Catering	8		Schlumberger	6	
Dowell Schlumberger	2				

Total Personnel on Board: 83

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	99	84	80		263
CEMENT	125	80	61		266
DIESEL	275	394	529		1,198
GEL, FRESH	47	0	0		47
WATER, DRILLING	416	802	0		1,218
WATER, POTABLE	204	506	275		985

Total Water 2,203

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 7, Pax Out - 8)	SUPPLY BOAT	Pacific Wrangler - Melbourne.
SUPPLY BOAT	Far Grip - On location.		

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	56.00 (m)	2,610.00 (	2,609.70 (	8.87	11	1/11/2005

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	1,987	573			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	8 / 90	1 / /	1.00 / 135 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

LOST TIME? NO

DAYS W/O LTA 10

INCIDENT DESCRIPTION

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

SURVEYS

TYPE	MD	DEG	AZI	TVD	N/S	E/W	V. SECT	D.L.
MWD	2,610.00	1.410	56.390	2,609.73	4.22	-2.27	4.22	

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	9.87	12	2/11/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	11.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 296,316.33	DHC: 4,308,817.90
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 4,308,817.90

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00 INC 1.410 AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

RIH 127mm drillpipe in order to POH sideways.

24 HR FORECAST

L/O drillpipe in derrick. Tag plug 2, place plug 3. N/D BOPs

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	00:30	0.50	P-EVAL	PP	51	Continued slip and cut.
00:30	01:00	0.50	P-EVAL	PP	51	Serviced TDS and rollers.
01:00	02:00	1.00	PLUG	PP	44	R/U and RIH 73mm cementing stinger to 193m.
02:00	02:30	0.50	PLUG	PP	44	M/U cement stand and racked back.
02:30	07:30	5.00	PLUG	PP	44	RIH 73mm cementing stinger on 127mm drillpipe to 2610m. Broke circulation at 1800m.
07:30	08:30	1.00	PLUG	PP	44	Held JSA. M/U cement stand and hose. Circulated bottoms-up at 3m3/min.
08:30	09:30	1.00	PLUG	PP	44	Broke circulation with cement unit and tested lines to 6,900 kPa. Mixed and pumped cement plug 1a - 9.2m3 of 1.9sg slurry from 2610m to 2380m.
09:30	10:30	1.00	PLUG	PP	44	Pulled back 73mm cementing stinger on 127mm drillpipe from 2610m to 2380m.
10:30	11:00	0.50	PLUG	PP	44	M/U cement stand and hose. Circulated bottoms-up at 3m3/min. Dumped 5.7m3 contaminated WBM overboard.
11:00	12:30	1.50	PLUG	PP	44	Broke circulation with cement unit and tested lines to 6,900 kPa. Mixed and pumped cement plug 1b - 9.2m3 of 1.9sg slurry from 2380m to 2140m. R/D cement line.
12:30	13:00	0.50	PLUG	PP	44	Pulled back 73mm cementing stinger on 127mm drillpipe from 2380m to 2100m.
13:00	13:30	0.50	PLUG	PP	44	Circulated bottoms-up at 3m3/min.
13:30	15:30	2.00	PLUG	PP	44	Pumped slug and POH 73mm cementing stinger on 127mm drillpipe from 2100m to 1040m.
15:30	16:30	1.00	PLUG	PP	44	Circulated and spotted 7.9m3 hi-vis pill.
16:30	17:00	0.50	PLUG	PP	44	Pulled back 73mm cementing stinger on 127mm drillpipe from 1040m to 860m.
17:00	17:30	0.50	PLUG	PP	44	Held JSA. R/U cement stand and hose. Mixed and pumped 7.5m3 of 1.9sg slurry from 860m to 760m.
17:30	18:00	0.50	PLUG	PP	44	Pulled back 73mm cementing stinger on 127mm drillpipe from 860m to 760m.
18:00	19:00	1.00	PLUG	PP	44	Reverse circulated 13.5m3 WBM. Dumped 1.2m3 contaminated cement overboard. Racked back cement stand and pumped slug.
19:00	23:30	4.50	PLUG	PP	44	POH from 760m, laying out 127mm DP and 73mm cementing stinger.
23:30	00:00	0.50	PLUG	PP	08	L/O excess 127mm DP.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs: Continued to lay out 127mm DP.

Safety Efforts:

Stop cards - 9, JSAs - 20 .

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	9.87	12	2/11/2005

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
76	24/22	10/15	4.2/	/13.0	/	0.75/28.0	8.90/0.80	0.10/0.60	48,000	240			8.4

DENS	1.23	ECD	1.26	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:

AV (DP): 126.3 (m/min AV Riser: 16.5 (m/min)

AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
180 / 180	145 / 145	145 / 145				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	4		MI	2	
Diamond	48		Fugro	3	
ESS Catering	8		Geoservices	2	
Dowell Schlumberger	2				

Total Personnel on Board: 69

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	89	84	80		253
CEMENT	90	80	61		231
DIESEL	264	386	483		1,133
GEL, FRESH	47	0	42		89
WATER, DRILLING	343	802	454		1,599
WATER, POTABLE	207	503	281		991

Total Water 2,590

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 0, Pax Out - 14)	SUPPLY BOAT	Pacific Wrangler - On location.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	1,906	654			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	1 / 45	1 / /	0.50 / 90 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

LOST TIME? NO

DAYS W/O LTA 11

INCIDENT DESCRIPTION

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	10.87	13	3/11/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	12.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 301,928.99	DHC: 4,610,746.89
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 4,610,746.89

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00 INC 1.410 AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

N/D riser.

24 HR FORECAST

N/D riser & BOPs. Cut & retrieve WH & housing. Pull anchors.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	08:30	8.50	PLUG	PP	14	Continued to lay out 127mm drillpipe.
08:30	10:00	1.50	PLUG	PP	44	RIH 127mm cementing stinger and tagged cement plug #2 at 756m with 2.3MT.
10:00	10:30	0.50	PLUG	PP	44	Pressure tested cement plug and casing to 6,900 kPa.
10:30	11:00	0.50	PLUG	PP	11	Displaced well with 55.6m3 of 1.22sg inhibited WBM.
11:00	14:00	3.00	PLUG	PP	14	POH and L/O 127mm drillpipe from 756m to 250m. Spotted 7.9m3 hi-vis pill.
14:00	14:30	0.50	PLUG	PP	08	Pulled back 127mm drillpipe from 250m to 160m.
14:30	15:00	0.50	PLUG	PP	44	Displaced choke and kill lines, poor boy degasser, booster and riser with seawater.
15:00	15:30	0.50	PLUG	PP	44	Held JSA. Mixed and pumped cement plug #3 - 4.8m3 of 1.9sg of slurry from 160m to 100m.
15:30	16:00	0.50	PLUG	PP	08	Pulled back 127mm drillpipe from 160m to 100m.
16:00	16:30	0.50	PLUG	PP	11	Reverse circulated.
16:30	19:30	3.00	PLUG	PP	14	POH and L/O 127mm drillpipe from 100m. L/O excess 127mm drillpipe from derrick.
19:30	22:00	2.50	PLUG	PP	14	L/O 165mm drill-collars from derrick.
22:00	00:00	2.00	RDMO	PP	81	M/U wear bushing running tool and RIH same. Jetted BOP stack. Recovered wear bushing with 13.6MT overpull. POH. L/O wear bushing and running tool.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs: N/D riser and BOP's. Whilst N/D BOP's, ROV disconnected HAC joint.

Safety Efforts:

Stop cards 18, JSAs 29 .

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
74	22/26	13/18	5.6/	/13.0	/	0.50/34.0	10.50/1.40	0.50/1.20	48,000	480			9.0

DENS	1.21	ECD	1.26	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:

AV (DP): (m/min) AV Riser: (m/min)

AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
120 / 120	180 / 180	145 / 145				

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	10.87	13	3/11/2005

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	5		Fugro	6	
Diamond	48		Geoservices	2	
ESS Catering	9		Smith	1	
Dowell Schlumberger	1		Dril-Quip	1	
MI	2				

Total Personnel on Board: 75

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	12	172	80		264
CEMENT	83	80	61		224
DIESEL	250	377	471		1,098
GEL, FRESH	47	0	42		89
WATER, DRILLING	319	802	454		1,575
WATER, POTABLE	207	500	276		983

Total Water 2,558

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 10, Pax Out - 2)	SUPPLY BOAT	Far Grip - On location.
HELICOPTER	BZU (Pax In - 0, Pax Out - 2)	SUPPLY BOAT	Pacific Wrangler - On location.

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	2,039	521			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	14 / 203	1 / /	1.00 / 90 /	/	0 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 12

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	11.87	14	4/11/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW	DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00	13.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 329,887.44	DHC: 4,940,634.32
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 4,940,634.32

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY	ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00 INC 1.410 AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

Retrieving anchors

24 HR FORECAST

Retrieve anchors. Hand over rig to Nexus.

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	00:30	0.50	PLUG	PP	81	R/U to pull riser and BOP's.
00:30	01:30	1.00	PLUG	PP	81	Held PJSM. Pulled diverter and L/O same.
01:30	02:30	1.00	PLUG	PP	81	P/U landing joint to slip joint. Scoped in slip joint.
02:30	03:30	1.00	PLUG	PP	81	Unlatched BOP from wellhead and pulled clear. Repositioned rig 10m to starboard. Whilst repositioning rig removed storm saddles.
03:30	05:00	1.50	PLUG	PP	81	Secured SDL ring. Removed choke, kill and booster lines from slip joint. Whislt removing choke and kill lines, ROV hydraulically disconnected HAC joint.
05:00	06:00	1.00	PLUG	PP	81	L/O landing joint and slip joint.
06:00	07:00	1.00	PLUG	PP	81	Pulled riser and landed BOP's on carrier.
07:00	08:00	1.00	PLUG	PP	81	Nippled down riser from BOP's. Removed guidelines from BOP's. Skidded BOP carrier to starboard.
08:00	09:30	1.50	PLUG	PP	81	L/O riser joints.
09:30	10:00	0.50	PLUG	PP	81	Rigged down riser handling equipment whilst repositioning rig over location.
10:00	12:00	2.00	PLUG	PP	66	M/U 508mm x 762mm casing cutter assy (dressed to cut 508mm casing). Attached guide ropes.
12:00	13:00	1.00	PLUG	PP	66	RIH casing cutter assy c/w 476mm wellhead spear and landed out in wellhead.
13:00	14:00	1.00	PLUG	PP	66	Cut 508mm casing (40 mins to cut casing). Pulled free with 47.6MT overpull.
14:00	17:00	3.00	PLUG	PP	66	POH with casing cutter assy c/w 508mm cut-off joint, 762mm HAC joint, wellhed, housing and PGB. Land same on moonpool trolley. Disengaged casing cutter assy from wellhead and laid out same. ROV confirmed seabed clear of debris.
17:00	19:30	2.50	RDMO	PP	66	P/U 47mm wellhead RT and M/U to wellhead in moonpool. Attempted to release 762mm wellhead housing from PGB - unsuccesful (762mm conductor was cemented to PGB). Released 476mm wellhead RT and L/O. #6 Anchor: 17:25 PCC passed to Pacific Wrangler. 17:30 hrs: Pacific Wrangler chased to anchor. 18:00 hrs: Anchor off bottom. Commenced changing out #6 anchor. 19:45 hrs: Commenced hauling in #6 anchor. 19:55 hrs: Cease hauling in anchor - problems with SCR. Troubleshot same. 20:58 hrs: Resumed hauling in #6 anchor. 21:40 hrs: Continued changing out of #6 anchor. 23:45 hrs: Resumed hauling in #6 anchor. 23:55 hrs: #6 anchor racked.
19:30	21:00	1.50	RDMO	PN	66	Repositioned pod hoses in moonpool. Skidded PGB c/w 762mm HAC joint and 508mm cut-off joint to starboard.
21:00	21:30	0.50	RDMO	PP	81	Changed out handling equipment
21:30	00:00	2.50	RDMO	PP	81	L/O 127mm HWDP and 203mm DC's from derrick. #2 Anchor: 22:05 hrs: PCC passed to Far Grip. 22:10 hrs: Far Grip chased to anchor. 22:30 hrs: Rig slacked off chain and Far Grip unseated anchor and inspected jewelry. 22:40 hrs: Commenced hauling in #2 anchor.

24.00 = Total Hours Today

06:00 UPDATE

00:00 - 06:00 hrs:

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	11.87	14	4/11/2005

06:00 UPDATE

#2 Anchor: 00:00 Continued hauling in #2 anchor. 01:50 hrs: #7 anchor bolstered. 02:00 hrs: PCC passed to rig

#7 Anchor: 00:14 hrs: PCC passed to Pacific Wrangler. 00:20 hrs: Pacific Wrangler chased to anchor. 00:38 hrs: Pacific Wrangler unseated anchor. 00:52 hrs: Commenced hauling in #7 anchor. 02:20 hrs: #7 anchor bolstered. 02:27 hrs: PCC passed to rig.

#3 Anchor: 02:12 hrs: PCC passed to Far Grip. 02:20 hrs: Far Grip chased to anchor. 02:50 hrs: Far Grip unseated anchor. 02:55 hrs: Commenced hauling in #3 anchor. 04:30 hrs: #3 anchor bolstered. 04:35 hrs: PCC passed to rig

#4 Anchor: 04:50 hrs: New PCC (for PCC changeout) passed to Far Grip. 05:07 hrs: Anchor PCC passed to Far Grip. 05:15 hrs: Far Grip chased to anchor. 05:58 hrs: Far Grip unseated anchor.

MUD PROPERTIES

MUD TYPE: KCL / PHPA

VIS	PV/YP	GELS	WL/HTHP	FC/T.SOL	OIL/WAT	%Sand/MBT	Ph/pM	Pf/Mf	Cl	Ca	H2S	KCL	LGS
74	22/26	13/18	5.6/	/13.0	/	0.50/34.0	10.50/1.40	0.50/1.20	48,000	480			9.0

DENS	1.21	ECD	1.26	PP		DAILY COST		CUM COST	41,939	% OIL	

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE
#				
#				
#				

SPP:

AV (DP): (m/min) AV Riser: (m/min)

AV (DC): (m/min) HP/in2:

SPR

	SPM	PPSR
PUMPS #		
PUMPS #		
PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
/	/	/				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache	3		Smith	1	
Diamond	48		Dril-Quip	1	
ESS Catering	8		Nexus	2	
Dowell Schlumberger	1		Nexus 3rd Party	2	
MI	2		MO47	4	
Fugro	8		Marcomm	1	
Geoservices	2				

Total Personnel on Board: 83

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	11	172	80		263
CEMENT	72	80	72		224
DIESEL	239	373	457		1,069
GEL, FRESH	47	0	42		89
WATER, DRILLING	306	802	454		1,562
WATER, POTABLE	165	497	271		933

Total Water 2,495

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
HELICOPTER	BZU (Pax In - 15, Pax Out - 7)	SUPPLY BOAT	Pacific Wrangler - On location.
SUPPLY BOAT	Far Grip - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	1,869	691			

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DATE	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	11.87	14	4/11/2005

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	10 / 225	2 / / 8	0.50 / 225 / 3	/	13 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE NONE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 13

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DAT	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	12.87	15	5/11/2005

RIG	FIELD NAME	AUTH TMD	PLANNED DOW DOM	DOL
DIAMOND OFFSHORE OCEAN PATRIOT	FUR SEAL	2,634.00 (m)	16	1.00 14.00

SUPERVISOR	OIM
J Herriot / D Selman	S De Freitas

COUNTRY	DISTRICT	STATE / PROV	COUNTY / PARRISH	RIG PHONE NO	RIG FAX NO
AUSTRALIA	OFFSHORE				

AFE #	AFE COSTS	DAILY COSTS	CUMULATIVE COSTS
1005EG6	DHC: 7,411,296	DHC: 273,221.55	DHC: 5,213,855.87
PERMIT #	CWC: 0	CWC: 0.00	CWC: 0.00
VIC/P54	TOTAL: 7,411,296	TOTAL: 0.00	TOTAL: 5,213,855.87

LST SFTY MEETING	BLOCK	FORMATION	BHA HRS OF SERVICE
30/10/2005	VIC/P54		

LAST SURVEY			ACTUAL LEAKOFF EMW	LAST CASING	NEXT CASING
TMD 2,610.00	INC 1.410	AZM 56.390	1.70 (SG)	340.000 (mm) @ 817.60 (m)	(mm) @ (m)

CURRENT OPERATIONS

24 HR FORECAST

OPERATIONS SUMMARY

FROM	TO	HRS	PHASE	C	CODE	ACTIVITY SUMMARY
00:00	18:00	18.00	RDMO	PP	01	Continue pulling anchors while continuing to de-ballast. Wrangler #6 racked @ 00:001hrs. Wrangler #7 PCC passed to boat @ 00:14hrs, anchor off bottom 00:38hrs, racked @ 02:20hrs. Note: de-ballasting complete @ 00:30hrs. Far Grip #2 racked @ 01:50hrs. Far Grip #3 PCC passed to boat @ 02:12hrs, anchor off bottom 02:50hrs, racked @ 04:30hrs. Note: Wrangler placed on tow bridle @ 03:12hrs. Far Grip #4 PCC passed to boat @ 05:07hrs, anchor off bottom 05:58hrs, racked @ 08:56hrs. Far Grip #8 PCC passed to boat @ 10:52hrs, anchor off bottom 11:22hrs, racked @ 12:35hrs. Far Grip #1 PCC passed to boat @ 13:10hrs, anchor off bottom 13:56hrs, racked @ 15:55hrs. Far Grip #5 PCC passed to boat @ 16:14hrs, anchor off bottom 16:55hrs, racked @ 18:00hrs. Rig under tow to Nexus Culverin-1 location @ 18:00hrs. Statement of facts obtained.

18.00 = Total Hours Today

MUD PUMPS / HYDRAULICS

	STROKE	SPM	LINER	FLOW RATE			SPR		
								SPM	PPSR
#					SPP:		PUMPS #		
#					AV (DP): (m/min)	AV Riser: (m/min)	PUMPS #		
#					AV (DC): (m/min)	HP/in2:	PUMPS #		

SOLIDS CONTROL

SHAKER #1	SHAKER #2	SHAKER #3	DESILTER HRS	DESANDER HRS	CENT #1 HRS	CENT #2 HRS
/	/	/				

PERSONNEL DATA

COMPANY	QTY	HOURS	COMPANY	QTY	HOURS
Apache			Smith		
Diamond	55		Dril-Quip		
ESS Catering	8		Nexus	3	
Dowell Schlumberger	2		Nexus 3rd Party		
MI	2		MO47	4	
Fugro	8		Marcomm	1	
Geoservices	2				

Total Personnel on Board: 85

APACHE ENERGY LIMITED

DAILY DRILLING REPORT

WELL NAME	API #	SPUD DAT	24 HRS PROG	TMD	TVD	DFS	REPT NO	DATE
Fur Seal-1		24/10/2005	(m)	2,610.00 (	2,609.70 (	12.87	15	5/11/2005

MATERIALS ON LOCATION

MATERIALS	RIG	WORKBOAT 1	WORKBOAT 2	OTHER	TOTAL
BARITE BULK	11	173	80		264
CEMENT	72	80	72		224
DIESEL	250	353	445		1,048
GEL, FRESH	47	0	42		89
WATER, DRILLING	319	802	454		1,575
WATER, POTABLE	207	495	268		970

Total Water 2,545

SUPPORT CRAFT

NAME/TYPE	REMARKS	NAME/TYPE	REMARKS
SUPPLY BOAT	Pacific Wrangler - On location.		

DECKLOG

MAX VDL	ACT VDL	AVL VDL	LEG PEN (BOW)	LEG PEN (PORT)	LEG PEN (S'BOARD)
2,560	0	2,560			

WEATHER

TIME	WIND SPEED / DIR	SWELL HT / DIR / PER	WAVE HT / DIR/ PER	CURRENT SPEED / DIR	TEMP
00:00	10 / 225	2 / / 8	0.50 / 225 / 3	/	13 (°C)

SAFETY DRILLS

RAMS	ANNULARS	CASING	BOP DRILL	NEXT BOP PRESS TEST	FIRE DRILL	H2S DRILL	MAN OVERBOARD	ABAN DRILL
27/10/2005 / 34,400 (kPa)	27/10/2005 / 17,200 (kPa)	26/10/2005 / 20,685 (kPa)	27/10/2005		25/10/2005			30/10/2005

INCIDENT REPORT

INCIDENT TYPE

INCIDENT DESCRIPTION

LOST TIME? NO

DAYS W/O LTA 14

DATUM SECTION

RT TO AHD	21.50 (m)	AIR GAP		WATER DEPTH	58.60 (m)

DAILY GEOLOGICAL REPORT

Date:	26 October 2005	**Rig:**	Ocean Patriot
Report Number:	4	**Bit Diameter:**	406mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	762x508mm casing @ 111.0 m MDRT
Spud Date:	24 Oct 05	**Integrity Test:**	N/A
Days From Spud:	1	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	824.0 mMDRT 802.5 mTVDAHD	**Mud Type:**	Seawater with Hi Vis Sweeps
Lag Depth:	824.0 mMDRT	**Mud Chlorides:**	N/A
Last Depth:	139.0 m		
Progress:	685.0 m		
Water Depth:	56.6 m	**Last Survey:**	804.24 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 1.36° Az. 261.58°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 406mm hole from 139.0 m to 824.0 m. Circulated and pumped hi-vis sweep, pulled out of the hole and down loaded the MWD. Ran in hole and jetted the well head.

NEXT 24 HOURS: Run and cement 340mm Casing.

CURRENT OPERATION @ 06:00 HRS (25-Oct-2005): Jetting well head, POOH to run 340mm casing.

GEOLOGICAL SUMMARY

LITHOLOGY
Hole section drilled Riser-less, no cuttings.

GAS SUMMARY
Hole sction drilled Riser-less, no gas measured. No gas flows observed from the ROV.

MUDLOGGING EQUIPMENT / PERSONNEL
All equipment working.

MWD
Tool off-sets:

Gamma Ray	14.98m
Resistivity	11.95m
Directional	18.36m
Sonic	26.13m.

REMARKS
This represents the first Daily Geological Report for Fur Seal-1. The report number coincides with the Daily Drilling Report number.

The Ocean Patriot came on contract at 18:30 hrs 23rd October 2005. Tow to Fur Seal-1 location. 1 km off Fur Seal-1 location at 00:30 24th October 2005. Ran all eight anchors and cross tensioned to 200 MT and ballasted rig down.

Made up 914mm BHA and RIH. Seabed was tagged at 78.1m and Fur Seal-1 was spudded at 03:00 hours and drilled to a depth of 111.7 mMDRT. POOH with 914mm BHA and ran 762 x 508mm casing and cemented.

Pick up 406mm tools and drilled to a depth 824.0 mMDRT. Circulated clean and displaced to PHG. POOH to run casing. Tight spot at 624.0 mMDRT, pulled 18 MT over. Worked through. Rig up and running 340mm casing.

MWD tools for the 216mm hole section are due out tomorrow morning (26th October)

Final rig position:

Latitude:	38° 07' 47.91" South
Longitude:	148° 09' 08.44" East
Easting:	600 995.5 mE
Northing:	5 779 136.7 mN

The final rig heading is 248.72° True. This position is 249.44° (GRID)

RT-AHD	21.5 m
Water Depth	56.6 m
RT-Seabed	78.1 m

WELLSITE GEOLOGIST

Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	27 October 2005	**Rig:**	Ocean Patriot
Report Number:	5	**Bit Diameter:**	n/a
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm set at 817.6mMDRT
Spud Date:	24-Oct-2005 07:17 Hours	**Integrity Test:**	N/A
Days From Spud:	2	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	824.0 mMDRT 824.0 mTVDAHD	**Mud Type:**	Well displaced with PHG
Lag Depth:	824.0 mMDRT	**Mud Chlorides:**	
Last Depth:	824.0 m MDRT		
Progress:	0 m		
Water Depth:	58.6 mAHD	**Last Survey:**	804.24 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 1.36° Az. 261.58°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Rigged up and ran 340 mm casing to 817.6 m, landed performed over-pull test to confirm latch. Held JSA and circulated well. Tested cement lines and cemented casing with 20.5 m3 of 1.5 sg lead slurry and 11.6 m3 of 1.9 sg tail slurry. Displaced casing with 54.7 m3 of sea water from the rig pumps. Pressure tested casing, and rigged down cementing equipment. Held JSA, rigged up and ran marine riser and BOP stack. Installed choke and kill lines and pressure tested. Landed BOP, confirmed latch with over-pull test. Pressure tested shear rams against casing and rigged down riser handling equipment.

NEXT 24 HOURS: Pressure test BOP's. Make up 216mm drilling assembly, initialize and function test LWD. Run into the hole with 216m BHA.

CURRENT OPERATION @ 06:00 HRS (26-Oct-2005): Laid down diverter running tool. Rig down riser handling equipment.

GEOLOGICAL SUMMARY

LITHOLOGY
No drilling last 24 hours

GAS SUMMARY
No Gas recorded, returns to the seafloor.

MUDLOGGING EQUIPMENT / PERSONNEL
All equipment working. Gas system is recalibrated. Rubber pump component in the resival gas trap changed out.

MWD
Tools for the 216mm hole section will arrive on the rig this morning.

REMARKS
Final depth datum:
RT-AHD 21.5 m
Water Depth 58.6 m
476 mm housing 77.2 mTVDAHD
762 mm housing 78.1 mTVDAHD

WELLSITE GEOLOGISTS
Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	28 October 2005	**Rig:**	Ocean Patriot
Report Number:	6	**Bit Diameter:**	n/a (not made up)
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 mMDRT
Spud Date:	24-Oct-2005	**Integrity Test:**	n/a (not yet conducted)
Days From Spud:	4	**Mud Weight:**	1.06 sg
Depth @ 0600 Hrs:	824.0 mMDRT 802.5 mTVDAHD	**Mud Type:**	Well displaced with PHG
Lag Depth:	n/a	**Mud Chlorides:**	N/A
Last Depth:	824.0 mMDRT		
Progress:	0 m		
Water Depth:	58.6 m	**Last Survey:**	804.24 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 1.36° Az. 261.58°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Land BOP's and pressure test, 1700 kPa / 5 min - 17200 kPa / 10 min. Install slip joint, make up diverter, rig down riser handling equipment. Make up BOP pressure testing tool and test BOP's, blue pod 1700 kPa / 5 min - 34500 kPa / 10 min, Upper and lower annulars 1700 kPa / 5 min - 17200 kPa / 10 min, function test yellow pod. Pull out BOP test tool and lay down. Held JSA and commence making up 127 mm drill pipe.

NEXT 24 HOURS: Make up 127 mm drill pipe. Make up 216 mm hole section BHA. Initialize LWD and load sources. Run into hole, perform well control drill. Drill out 340 mm shoe while displacing to KCL / PHPA mud. Drill ahead 3.0 m of new formation and conduct a FIT to 1.70 sg EMW. Drill ahead 216mm hole.

CURRENT OPERATION @ 06:00 HRS (28-Oct-2005): Making up 127 mm Drill Pipe.

GEOLOGICAL SUMMARY

LITHOLOGY
No drilling last 24 hours

GAS SUMMARY
No Gas Data

MUDLOGGING EQUIPMENT / PERSONNEL
All equipment working.

MWD
Checking tools.
CTN Porosity tool has failed its surface test and will be replaced with the CNP tool. The tool memory has been set for 6 days.

REMARKS

WELLSITE GEOLOGISTS
Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	29 October 2005	**Rig:**	Ocean Patriot
Report Number:	7	**Bit Diameter:**	216 mm
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 mMDRT
Spud Date:	24-Oct-2005 03:30 Hours	**FIT:**	1.70 sg EMW @ 827.0 mMDRT
Days From Spud:	5.1	**Mud Weight:**	1.22 sg
Depth @ 0600 Hrs:	1148.0 mMDRT		1.25 sg
	1126.5 mTVDAHD	**Mud Type:**	KCL/PHPA
Lag Depth:	1132.0 mMDRT	**Mud Chlorides:**	30000 mg/L
Last Depth:	824.0 mMDRT		1.03 sg
Progress:	324.0 m		
Water Depth:	58.6 m	**Last Survey:**	1054.97 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 0.93°
			Az. 273.03°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Made up 127 mm drill pipe. Made up 216 mm hole section BHA. Initialized LWD and loaded sources. Ran into hole. Drilled out 340 mm shoe while displacing to KCL / PHPA mud. Drilled ahead 3 m of new formation and conducted a FIT to 1.70 sg EMW. Drilled ahead 216 mm hole.

NEXT 24 HOURS: Drill ahead 216 mm hole.

CURRENT OPERATION @ 06:00 HRS (29-Oct-2005): Drilling ahead 216 mm hole.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 824.0 to 840.0 mMDRT (-802.5 to -818.5 mTVDAHD)
ROP (Range): 65.0 to 65.0 m/h
Av. ROP: 65.0 m/h

Massive Argillaceous Calcilutite

ARGILLACEOUS CALCILUTITE 100% : Medium grey to light grey, rarely pale brown to yellowish brown, soft to firm, amorphous to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments. Minor cement contamination.

INTERVAL: 840.0 to 920.0 mMDRT (-818.5 to -898.4 mTVDAHD)
ROP (Range): 6.0 to 142.0 m/h
Av. ROP: 58.0 m/h

Interbedded Argillaceous Calcilutite with minor Calcarenite and Calcisiltite

ARGILLACEOUS CALCILUTITE (80-90%) : Light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments.
CALCARENITE (0-10%) : Light brown to yellowish brown, firm to moderately hard, occasionally brittle, massive to blocky, moderately argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace assorted fossil fragments.
CALCISILTITE (0-10%) : Light brown-grey to pale yellowish brown, firm to moderately hard, amorphous to locally sub-blocky, moderately argillaceous, trace micropyrite, trace black lithic specks.

INTERVAL: 920.0 to 980.0 mMDRT (-898.4 to -958.4 mTVDAHD)
ROP (Range): 15.0 to 123.0 m/h

Av. ROP: 49.0 m/h

Interbedded Marl with minor Argillaceous Calcilutite and Calcisiltite

MARL (20-100%) : Greenish grey to light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micropyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.
ARGILLACEOUS CALCILUTITE (0-80%) : as above
CALCISILTITE (0-20%) : as above

INTERVAL: 980.0 to 1132.0 mMDRT (-958.4 mTVDAHD)
ROP (Range): 21.0 to 86.0 m/h
Av. ROP: 59.0 m/h

Massive Marl

MARL 100% : Greenish grey to light olive grey, soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micropyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.

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)**
824.0 - 843.0	1.04	1861	13	3	5	1	4
840.0 - 920.0	0.63	4288	30	7	11	1	4
920.0 - 1132.0	1.26	2983	21	5	8	1	1

CALCIMETRY

Interval (m MDRT)	Calcite Range	Dolomite Range
824.0 - 830.0	72 - 72 %	No Valid Data
860.0 - 880.0	73 - 73 %	No Valid Data
920.0 - 940.0	60 - 60 %	No Valid Data
960.0 - 980.0	55 - 55 %	No Valid Data
1000.0 - 1020.0	52 - 52 %	No Valid Data
1040.0 - 1060.0	58 - 58 %	No Valid Data

Calcimetry will be carried out every 40m until such time as data values approach zero.

MWD
Sensor to bit distances:

Directional 32.73 m

BAT Sonic	28.03 m
CNP Porosity	23.21 m
SLD Density	20.40 m
EWR-P4 Resistivity	13.72 m
DGR Gamma Ray	11.51 m

WELLSITE GEOLOGISTS
Rob Blackmore / Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	30 October 2005	**Rig:**	Ocean Patriot
Report Number:	8	**Bit Diameter:**	216 mm (8.5")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 mMDRT
Spud Date:	24-Oct-2005 03:30 Hours	**FIT:**	1.70 sg EMW @ 827.0 mMDRT
Days From Spud:	6.1	**Mud Weight:**	1.20 sg
Depth @ 0600 Hrs:	1623.0 mMDRT 1601.4 mTVDAHD	**Mud Type:**	KCL/PHPA
Lag Depth:	1612.0 mMDRT	**Mud Chlorides:**	34, 000 mg/L
Last Depth:	1148.0 m MDRT		1.03 sg
Progress:	475 m		
Water Depth:	58.6 m	**Last Survey:**	1571.59 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 0.87° Az. 324.35°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 216 mm hole in the Gippsland Limestone.

NEXT 24 HOURS: Drill ahead 216 mm hole.

CURRENT OPERATION @ 06:00 HRS (30-Oct-2005): Drilling ahead 216 mm hole.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1132.0 to 1160.0 mMDRT (-1110.4 to -1138.4 mTVDAHD)
ROP (Range): 20.0 to 64.0 m/h
Av. ROP: 47.0 m/h

Massive Marl:
MARL (100%): light grey, light olive grey, very soft, sticky, sub-blocky to dominantly amorphous, trace very fine carbonaceous / lithic fragments, trace very fine pyrite, trace calcareous silt.

INTERVAL: 1160.0 to 1270.0 mMDRT (-1138.4 to -1248.4 mTVDAHD)
ROP (Range): 10.5 to 77.0 m/h
Av. ROP: 40.0 m/h

Dominantly Marl with minor Argillaceous Calcilutite
MARL (80 - 95%): light olive grey to slightly greenish grey, soft, sticky, trace quartz silt, trace carbonaceous specks, trace very fine disseminated pyrite.
ARGILLACEOUS CALCILUTITE (5 - 20%): off white, very light grey, very soft, sub-blocky to dominantly amorphous, trace carbonaceous specks.

INTERVAL: 1270.0 to 1360.0 mMDRT (-1248.4 to -1338.4 mTVDAHD)
ROP (Range): 14.0 to 102.0 m/h
Av. ROP: 44.0 m/h

Massive Marl
MARL (100%): medium grey to light medium grey, soft, sub-blocky, trace very fine pyrite in part, trace carbonaceous specks, trace micro fossils including forams and echinoids.

INTERVAL: 1360.0 to 1400.0 mMDRT (-1338.4 to -1378.4 mTVDAHD)
ROP (Range): 14.0 to 91.0 m/h

Av. ROP: 40.0 m/h

Interbedded Marl and Calcareous Claystone
CALCAREOUS CLAYSTONE (30-40%): medium light grey to medium grey, soft, sub-blocky, trace carbonaceous specks, trace forams and micro fossils, trace glauconite.
MARL (60-70%) : medium light grey to medium grey, soft, sub blocky, trace very fine pyrite in part, trace carbonaceous specks, trace micro-fossils including forams and echinoids.

INTERVAL: 1400.0 to 1612.0 m MDRT (-1378.3 to -1590.4 m TVDAHD)
ROP (Range): 4.0 to 103.0 m/h
Av. ROP: 22.0 m/h

Massive Calcareous Claystone
CALCAREOUS CLAYSTONE (100%): light grey to medium grey, soft to firm, sub-blocky to blocky, trace carbonaceous specks, common forams and micro-fossils, trace micro-pyrite, trace glauconite and rare hard brittle shelly material.

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)
1132.0 - 1160.0	0.76	7359	51	19	22	2	4
1160.0 - 1270.0	0.5	4681	28	10	16	1	4
1270.0 - 1360.0	0.43	4083	30	15	13	2	5
1360.0 - 1400.0	0.31	2892	22	10	7	2	6
1400.0 - 1460.0	0.4	3504	29	17	7	3	9
1400.0 - 1600.0	0.27	2441	20	11	12	2	5

Gas Peak

INTERVAL (m MDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
1141.0 - 1141.0	1.03	10055	71	28	26	4	6
1166.5 - 1166.5	0.93	8992	63	22	28	3	7
1286.0 - 1286.0	0.81	8012	54	23	37	4	10

CALCIMETRY

Interval (m MDRT)	Calcite Range	Dolomite Range
1080.0 - 1100.0	59 - 59 %	nil
1120.0 - 1140.0	58 - 58 %	nil
1160.0 - 1180.0	60 - 60 %	nil
1200.0 - 1220.0	61 - 61 %	nil
1240.0 - 1260.0	74 - 74 %	nil
1280.0 - 1300.0	40 - 40 %	nil
1320.0 - 1340.0	42 - 42 %	nil
1360.0 - 1380.0	35 - 35 %	nil
1400.0 - 1420.0	31 - 31 %	nil
1440.0 - 1460.0	34 - 34 %	nil
1480.0 - 1500.0	38 - 38 %	nil
1520.0 - 1540.0	38 - 38 %	nil

Calcimetry will be carried out every 40m until such time as data values approach zero.

MWD
Sensor to bit distances:

Directional	32.73 m
BAT Sonic	28.03 m
CNP Porosity	23.21 m
SLD Density	20.40 m
EWR-P4 Resistivity	13.72 m
DGR Gamma Ray	11.51 m

WELLSITE GEOLOGISTS
Rob Blackmore / Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	31 October 2005	**Rig:**	Ocean Patriot
Report Number:	9	**Bit Diameter:**	216 mm (8.5")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 m MDRT
Spud Date:	24-Oct-2005 03:30 Hours	**FIT:**	1.70 sg EMW @ 827.0 m MDRT
Days From Spud:	7.1	**Mud Weight:**	1.22 sg
Depth @ 0600 Hrs:	2036.0 mMDRT 2014.3 mTVDAHD		1.26 sg
		Mud Type:	KCL/PHPA
Lag Depth:	2020.0 mMDRT	**Mud Chlorides:**	47, 000 mg/L
Last Depth:	1623.0 m MDRT		1.03 sg
Progress:	413.0 m		
Water Depth:	58.6 m	**Last Survey:**	2001.54 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 0.62° Az. 65.93°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 216 mm hole. Top Lakes Entrance Formation at 1820.0 mMDRT.

NEXT 24 HOURS: Drill ahead 216 mm hole.

CURRENT OPERATION @ 06:00 HRS (31-Oct-2005): Drilling ahead 216 mm hole in the Lakes Entrance Formation

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 1600.0 to 1820.0 mMDRT (-1578.4 to -1798.3 mTVDAHD)
ROP (Range): 2.0 to 56.0 m/h
Av. ROP: 20.0 m/h

Massive Calcareous Claystone
CALCAREOUS CLAYSTONE (100%): dominantly light medium grey - medium grey, soft to occasionally firm, sub-blocky to amorphous, trace very fine disseminated pyrite, trace micro-fossils, trace dark grey to black streaks and specks of carbonaceous material.

INTERVAL: 1820.0 to 1880.0 mMDRT (-1798.3 to -1858.3 mTVDAHD)
ROP (Range): 12.0 to 94.0 m/h
Av. ROP: 32.0 m/h

Predominantly Massive Calcareous Claystone with trace Calcisiltite
CALCISILTITE (Tr-0%): predominantly off white to very light grey, occasionally very pale grey-brown, very soft to moderately firm, amorphous, trace calcareous silt grains, trace carbonaceous specks, grading into Calcareous Claystone.
CALCAREOUS CLAYSTONE (100%): light grey - medium grey, soft to rarely firm, sub-blocky to amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous, becoming less calcareous and lighter in colour with depth.

INTERVAL: 1880.0 to 2020.0 mMDRT (-1858.3 mTVDAHD)
ROP (Range): 10.0 to 89.0 m/h
Av. ROP: 27.0 m/h

Massive Calcareous Claystone
CALCAREOUS CLAYSTONE (100%): light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous,

becoming less calcareous and lighter in colour with depth.

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)
1600.0 - 1820.0	0.22	1969	20	11	11	2	6
1820.0 - 1880.0	0.3	2558	31	20	19	5	10
1880.0 - 2020.0	0.23	1886	25	17	18	6	17

Gas Peak							
INTERVAL (m MDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
1808.0 - 1808.0	0.43	2855	33	21	22	6	12
1845.0 - 1845.0	0.5	3884	45	30	27	8	22

Connection Gas							
INTERVAL (m MDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
1965.0 - 1976.0	0.24	1882	27	19	20	7	24
2001.0 - 2013.0	0.23	1846	25	17	18	6	20

CALCIMETRY

Interval (m MDRT)	Calcite Range	Dolomite Range
1640.0 – 1660.0	34%	nil
1680.0 – 1700.0	31%	nil
1720.0 - 1740.0	30 %	nil
1760.0 - 1780.0	31 %	nil
1800.0 - 1820.0	29 %	nil
1840.0 - 1860.0	32 %	nil
1880.0 - 1900.0	24 %	nil
1920.0 – 1940.0	25 %	nil

MWD
Sensor to bit distances:

Directional	32.73 m
BAT Sonic	28.03 m
CNP Porosity	23.21 m
SLD Density	20.40 m
EWR-P4 Resistivity	13.72 m
DGR Gamma Ray	11.51 m

WIRELINE
Wireline crew onboard checking tools.

WELLSITE GEOLOGISTS
Rob Blackmore / Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	01 November 2005	**Rig:**	Ocean Patriot
Report Number:	10	**Bit Diameter:**	216 mm (8.5")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 mMDRT
Spud Date:	24-Oct-2005 03:30 Hours	**FIT:**	1.70 sg EMW @ 827.0 mMDRT
Days From Spud:	8.1	**Mud Weight:**	1.22 sg
Depth @ 0600 Hrs:	2610.0 mMDRT 2588.5 mTVDAHD	**Mud Type:**	KCL/PHPA
Lag Depth:	2610.0 mMDRT	**Mud Chlorides:**	47, 000 mg/L
Last Depth:	2036.0 m MDRT		1.03 sg
Progress:	574.0 m		
Water Depth:	58.6 m	**Last Survey:**	2610.0 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 1.41° Az. 56.39°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 216 mm hole to TD at 2610 mMDRT.

NEXT 24 HOURS: POOH to run wireline log. Run (1) Dual CSAT (check shot)

CURRENT OPERATION @ 06:00 HRS (01-Nov-2005): Pulling out of hole after reaching TD of 2610.0 mMDRT at 01:45 hrs on the 1st November 2005.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 2020.0 to 2198.0 m MDRT (-1998.3 to -2176.3 m TVDAHD)
ROP (Range): 11.0 to 81.0 m/h
Av. ROP: 37.0 m/h

Massive Calcareous Claystone
CALCAREOUS CLAYSTONE (100%) : light grey - medium light grey, rare medium grey, soft to occasionally firm, sub blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, rare glauconite.

INTERVAL: 2198.0 to 2210.0 m MDRT (-2176.3 to -2188.3 m TVDAHD)
ROP (Range): 21.0 to 46.0 m/h
Av. ROP: 35.0 m/h

Massive Calcareous Claystone with trace Sandstone and Siltstone
SILTSTONE (0-1%): brownish grey, very soft to firm, sub-blocky to amorphous, micro micaceous, carbonaceous specks and flakes, very argillaceous.
SANDSTONE (0-1%): clear to off-white, fine to medium, moderately sorted, rounded to angular, moderate to poor sphericity, common argillaceous matrix, trace glauconite, poor to fair inferred porosity, no fluorescence.
CALCAREOUS CLAYSTONE (98-100%): light grey - medium light grey, rare medium grey, soft to occasionally firm, sub-blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, glauconite and small glauconite nodules.

INTERVAL: 2210.0 to 2240.0 m MDRT (-2188.3 to -2218.3 m TVDAHD)
ROP (Range): 24.0 to 85.0 m/h
Av. ROP: 47.0 m/h

Siltstone, Carbonaceous Siltstone occasionally grading to Coal, Calcareous Claystone and trace Sandstone

SILTSTONE (60-80%): brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.
CARBONACEOUS SILTSTONE (trace): brownish black to black, firm, brittle in part, silty, gradational to Coal in part.
CALCAREOUS CLAYSTONE (20 - 40%) : light grey, off white, very soft to firm, sub blocky to amorphous in part, glauconitic in part.
SANDSTONE (trace): very light grey, soft aggregates, very fine to fine grained, well sorted, rounded, 60% argillaceous matrix, matrix supported. No fluorescence.
SANDSTONE (trace): clear to off white, medium to coarse and loose, poorly sorted, sub rounded to very angular, commonly fractured grains, moderate to poor sphericity, fair inferred porosity. No fluorescence.

INTERVAL: 2240.0 to 2270.0 m MDRT (-2218.3 to -2248.3 m TVDAHD)
ROP (Range): 15.0 to 63.0 m/h
Av. ROP: 40.0 m/h

Claystone, Siltstone and minor Sandstone
CLAYSTONE (60 - 80%): very light grey, light greyish brown, very soft to rarely firm, calcareous, rare glauconite, trace very fine sand grains.
SILTSTONE (10 - 40%): brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.
SANDSTONE (0 - 10%): clear, loose, medium to coarse, moderately sorted, sub angular to rounded, moderate sphericity, fair to good inferred porosity. No fluorescence.

INTERVAL: 2270.0 to 2344.0 m MDRT (-2248.3 to -2322.3 m TVDAHD)
ROP (Range): 17.0 to 63.0 m/h
Av. ROP: 39.0 m/h

Interbedded Kaolinitic Sandstone and Sandstone with minor interbedded Siltstone
KAOLINITIC SANDSTONE (0-95%) : white to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub-angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity, no fluorescence.
SANDSTONE (0-90%) : clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, moderate sphericity, high sphericity in fine component, common white argillaceous matrix washing out in part, occasionally matrix supported in fine aggregates, poor - fair inferred porosity. No Fluorescence.
SILTSTONE (5-40%): brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.
.

INTERVAL: 2344.0 to 2370.0 m MDRT (-2322.3 to -2348.3 m TVDAHD)
ROP (Range): 13.0 to 67.0 m/h
Av. ROP: 34.0 m/h

Massive Siltstone with interbedded minor Kaolinitic Sandstone

SILTSTONE (90-100%): brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.
KAOLINITIC SANDSTONE (0-10%) : white to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub -angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity. No fluorescence.

INTERVAL: 2370.0 to 2565.0 m MDRT (-2348.3 to -2543.3 m TVDAHD)
ROP (Range): 15.0 to 88.0 m/h
Av. ROP: 42.0 m/h

Interbedded Argillaceous Sandstone with Siltstone, Carbonaceous Siltstone and trace Coal

ARGILLACEOUS SANDSTONE (30-90%): clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, common off-white argillaceous matrix washing out in part, poor - fair inferred porosity. No Fluorescence.
SILTSTONE (0-70%): brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.
CARBONACEOUS SILTSTONE (0-10%): light grey to speckled black/white, soft to firm, sub-blocky to blocky, common platy carbonaceous specks, rare carbonaceous laminae, rare to common disseminated pyrite, grading into Siltstone.
COAL (0-Tr%) : black to dark brown, sub-blocky to platy, firm to brittle, hackly fracture, shiny lustre to dull matt colour.

INTERVAL: 2565.0 to 2610.0 m MDRT (-2543.3 to -2588.5 m TVDAHD)
ROP (Range): 17.0 to 106.0 m/h
Av. ROP: 42.0 m/h

Massive Claystone with minor interbedded Argillaceous Sandstone, Silty Claystone and trace Coal
CLAYSTONE (70-90%): light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.
ARGILLACEOUS SANDSTONE (0-10%): white to light grey, fine to medium grained, sub-angular to sub-rounded, moderately sorted, trace calcite cement, trace nodular and disseminated pyrite, local aggregates weakly cemented, moderate inferred porosity. No shows. (probably cavings)
COAL (0-Tr%): brownish black, mainly shiny lustre, platy to blocky, firm to brittle, slightly argillaceous in part.
SILTY CLAYSTONE (10-30%): light brownish grey to light olive grey, occasionally white, soft to amorphous, trace carbonaceous specks, trace micromica, rare very fine sand, trace pyrite, grading into Claystone.

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)
2020.0 - 2198.0	0.34	2607	67	39	43	17	49
2198.0 - 2210.0	0.37	2171	78	39	34	16	52
2210.0 - 2240.0	0.97	9337	598	215	92	36	44
2240.0 - 2270.0	1.08	9932	695	244	82	34	32
2270.0 - 2344.0	0.67	5667	261	100	43	22	24
2344.0 - 2370.0	1.25	10203	756	376	92	88	47
2370.0 - 2565.0	0.78	6326	386	182	52	52	33
2370.0 - 2460.0	0.92	7378	463	220	66	61	40
2565.0 - 2610.0	0.74	6467	340	130	35	27	23

Gas Peak

INTERVAL (m MDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
2222.5 - 2222.5	1.47	11889	721	232	102	37	58
2260.0 - 2260.0	1.79	14371	912	339	116	58	43
2348.5 - 2348.5	1.72	13528	856	360	102	79	50
2585.0 - 2585.0	1.24	11071	610	227	56	50	38

CALCIMETRY

Interval (m MDRT)	Calcite Range	Dolomite Range
1920.0 - 1940.0	25 - 25 %	nil
1960.0 - 1980.0	18 - 18 %	nil
2000.0 - 2020.0	22 - 22 %	nil
2070.0 - 2090.0	27 - 27 %	nil
2110.0 - 2130.0	24 - 24 %	nil
2150.0 - 2170.0	21 - 21 %	nil

Calcimetry measurements ceased at 2170 mMDRT.

MWD

Sensor to bit distances:

Directional	32.73 m
BAT Sonic	28.03 m
CNP Porosity	23.21 m
SLD Density	20.40 m
EWR-P4 Resistivity	13.72 m
DGR Gamma Ray	11.51 m

WIRELINE

Wireline crew onboard seismic tools have been checked.

REMARKS

TD 2610.0 mMDRT at 01:45 hrs on the 1st November 2005.

WELLSITE GEOLOGISTS

Rob Blackmore / Mike Woodmansee

DAILY GEOLOGICAL REPORT

Date:	02 November 2005	**Rig:**	Ocean Patriot
Report Number:	11	**Bit Diameter:**	216 mm (8.5")
Report Period:	06:00 - 06:00 Hours	**Last Casing:**	340 mm @ 817.6 mMDRT
Spud Date:	24-Oct-2005 03:30 Hours	**FIT:**	1.70 sg EMW @ 827.0 mMDRT
Days From Spud:	9.1	**Mud Weight:**	1.22 sg
Depth @ 0600 Hrs:	2610.0 mMDRT		
		Mud Type:	KCL/PHPA
Lag Depth:	2610.0 mMDRT	**Mud Chlorides:**	47, 000 mg/L
Last Depth:	2610.0 mMDRT		
Progress:	0 m		
Water Depth:	58.6 m	**Last Survey:**	2610.0 mMDRT
RT:	21.5 m	**Deviation:**	Inc. 1.41° Az. 56.30°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Pulled out of hole with BHA from 2610.0 mMDRT. Rigged up and ran checkshot survey from 2600.0 to 200.0 mMDRT. Rigged down wireline and proceeded with P & A program.

NEXT 24 HOURS: P & A well.

CURRENT OPERATION @ 06:00 HRS (02-Nov-2005): Running in hole to set cement plugs.

GEOLOGICAL SUMMARY

WIRELINE
Recorded 25 seismic stations from 2600.0 to 200.0 mMDRT at 100 m spacings.

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-Nov-2005	KCL/PHPA	1.22	8.9	7.5	47000	0	0.072	0.059	0.083

RUN SUMMARY

Run #	Tool String	Log From Depth (m)	Log To Depth (m)	Repeat From Depth (m)	Repeat To Depth (m)	Comments
1	Dual CSAT checkshot	2600.0	200.0	N/A	N/A	Job completed without incident. Checkshots recorded every 100 m from TD to loss of signal.

WELLSITE GEOLOGISTS
Rob Blackmore / Mike Woodmansee

APACHE ENERGY LIMITED

Bits Summary Report

Legal Well Name:	Fur Seal-1		
Common Well Name:	Fur Seal-1	Spud Date:	24/10/2005
Event Name:	OFFSHORE-ORIG DRLG	Start: 26/10/2005	End: 5/11/2005
Contractor Name:	DIAMOND OFFSHORE	Rig Release: 5/11/2005	
Rig Name:	OCEAN PATRIOT	Rig Number:	

Bit No/ Run	Size (mm)	Make/ Type	IADC Code	Serial Number	TFA (mm²) JETS (/32")	TMD In/ Out (m)	Total Drilled (m)	Cum./ Tot Rot Hours	ROP	WOB Min/Max (Tonnes)	RPM	Pump Press (kPa)	Pump Output (L/min)	deltaP Bit (kPa)	Nozzle Velocity (m/s)	HHP (kW/cm²)	API Cond. I O D L B G O R
1/	660.40	Reed /	111	M26690	1,015.4	78.12/	33.58	2.20	15.26	/	60	5,171	3,785.0	2,267	62.1	22.183	--RR-A
1RR		Y11C			24/24/24/18/ / / / /	111.70		2.20		2.3	80						0- I-RR-TD
	Remarks																
2/	406.40	Security /		10594154	1,122.3	111.70/	712.30	10.60	67.20	/	50	22,064	4,028.7	2,103	59.8	21.897	-2-WT-S
2		FS2563			18/18/18/18/18 18/18/ / /	824.00		12.80		5.8	100						D- I-CT-TD
	Remarks																
3/	215.90	Smith /	S223	JW0059	714.0	824.00/	1,786.00	62.60	28.53	0.9/	55	22,064	2,265.1	1,905	52.9	11.156	1--ER-N
3		S73VPX			15/15/15/16/16 16/ / / /	2,610.00		75.40		13.6	110						D- I-WT-TD
	Remarks																

Fluids Recap

Apache Energy Ltd

Fur Seal-1
Gippsland
Vertical Exploration
Vic/P54

Prepared by: **Steve Jones**

Fur Seal-1 Mud Recap (Rev 0)

MI SWACO

M-I *L.L.C.*

ONE-TRAX

DRILLING FLUID DATA MANAGEMENT SYSTEM

Operator:	Apache Energy Ltd	**Spud Date:**	24/10/2005
Well Name:	Fur Seal-1	**TD Date:**	01/11/2005
Field/Area:	Gippsland	**Location Code:**	7001
Description:	Vertical Exploration	**Project Engineer:**	Steve Jones
Location:	Vic/P54	**Mud Engineer:**	J Singh / J Mclaughlin
Warehouse:	Melbourne	**Mud Engineer:**	M Duff / G Sharpe
Contractor:	Diamond Offshore	**M-I Well No.**	28765

Comments:

Type	Size mm	Depth m	TVD m	Hole mm	Max MW sp.gr.	Fluid 1	Fluid2	Drilling Problem	Days	Cost $
Casing	762	112	112	914	1.06	Spud Mud	Spud Mud	None	2	7358.95
Casing	340	816	816	406	1.06	Spud Mud	Spud Mud	None	2	10593.26
Open Hole	.	2610	2610	216	1.23	KCL/PHPA	GLYDRIL	BHA/Bit Balling	9	107009.35
										124961.56

Total Depth: 2610 m | TVD: 2610 m | Water Depth: 57 m | Drilling Days: 11 | Total Cost: 124,961.55

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

CONTENTS:

- DISCUSSION BY INTERVAL
- DAILY DISCUSSION REPORT
- COST BY INTERVAL
- DAILY VOLUME SUMMARY SHEET
- TOTAL MATERIAL COST
- DRILLING FLUIDS SUMMARY
- PRODUCT CONSUMPTION
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DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

DISCUSSION

BY

INTERVAL

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

INTRODUCTION

Apache Energy Limited was the operator for the exploration well Fur Seal-1 drilled using the semi-submersible drilling rig, Ocean Patriot. The well was located in permit Vic/P54 in the Gippsland Basin, offshore Victoria, Australia. The rig was towed from Maclean-1 on 22 October 2005. The target zones were the Kingfish and Volador formations.

The Fur Seal-1 well was spudded on 24 October 2005 at 03:00 hrs using 660mm (26″) bit and 914 mm (36″) hole opener and drilled to 111.7m. The conductor casing was run and set as per plan.

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FUR SEAL-1

Interval I	Seabed-111.7 m	914 mm (36″) Hole section	762mm (30″) conductor set @ 111.0m

MUD TYPE : SEAWATER – PHG SWEEPS

HOLE PROBLEMS : None

MUD PROPERTIES :

Mud Weight	:	1.06 sg
API Filtrate	:	Not controlled
Funnel Viscosity	:	>120 sec / lt
6RPM	:	> 40

OPERATIONS

The well was spudded 24 October 2005 at 03:00 using 660 mm (26") bit x 914 mm (36") HO assembly after performing sea bed survey. The air gap was 21.5m and the water depth recorded was 58.6m. (RT to sea bed = 80m). The drilling was initiated using flocculated gel and then seawater was pumped at 4164lpm (1100 gpm) and PHG sweeps every single of drilling. The interval depth was 111.7m and was drilled in three hours. The string was pulled out of hole and 762 x 508mm (30 x 20″) conductor casing was run to bottom and cemented as per plan.

MUD

397.5 m^3 of prehydrated gel was mixed in the surface pits in preparation for drilling using 27 lbs per barrel of bentonite.

22 m^3 of PHG was flocculated with 11 m^3 of seawater in a separate pit and pumped at spudding to avoid any washouts. Thereafter 8 m^3 PHG was pumped every single to TD and hole swept with 16 m^3 of PHG. The drilled interval was displaced with 32 m^3 of PHG prior to pull out of hole to run conductor casing.

A total of 87.5 m^3 PHG was used for this section and the remaining 310 m^3 were transferred to the next interval.

SOLIDS CONTROL

Riserless drilling with returns to sea bed. No solids equipment required.

OBSERVATIONS AND RECOMMENDATIONS

The mud program adequately addressed the potential drilling conditions and no changes are recommended.

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Interval II	111.7 - 824m	406 mm (16″) Hole section	340 mm (13⅜") Casing

MUD TYPE : SEAWATER – PHG SWEEPS

HOLE PROBLEMS : None

MUD PROPERTIES :

Mud Weight	:	1.06 sg
API Filtrate	:	Not controlled
Funnel Viscosity	:	>120 sec/ lt
6RPM	:	> 40

OPERATIONS

A 406mm (16") PDC bit, motor and MWD were picked up and RIH. Tagging cement then drilling out the shoe with seawater. The hole was drilled to 824m, pumping 8 m^3 PHG sweeps each mid stand and prior to connections to cover the BHA. At TD a 24 m^3 PHG sweep was circulated, then the hole was displaced with 95.4 m^3 of PHG before POOH to run 340 mm (13⅜") casing. The casing was run and cemented with no problems.

MUD

A total of 423 m^3 of 85 kg/m^3 prehydrated gel (PHG) (~ 30 ppb) was used with no problems.

SOLIDS CONTROL

Riserless drilling with returns to sea bed. No solids equipment required.

OBSERVATIONS AND RECOMMENDATIONS

The mud program adequately addressed the potential drilling conditions and no changes are recommended.

COST ANALYSIS

The mud cost for the two tophole intervals came in 13% lower than predicted at $17,952.

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Interval III	824 - 2610m	216 mm (8½″) Hole section	P&A

MUD TYPE : KCl/PHPA/GLYCOL (WBM)

HOLE PROBLEMS : Bit balling in Gippsland Formation
High MBT

MUD PROPERTIES :

Mud Weight	:	1.20 to 1.23 sg
API Filtrate	:	< 5.0
Glycol	:	2-3%
LGS%	:	< 7
6RPM	:	6-12

OPERATIONS

RIH with 216mm (8½") BHA and displaced to a KCl/PHPA system at 810m while drilling the shoe track. An FIT was performed at 827m with an EMW = 1.7 sg. Drilling then continued with mud motor and MWD at 600 gpm. Slow ROP and bit balling were encountered from 1550 to 1700m. The ROP increased at 1800m prior to entering the Lakes Entrance formation. From 2200m to TD drilled with an average ROP 30 m/hr. At 2610m, TD, circulated bottoms up until hole was clean, 1.5 x BU and then POOH. The first five stands pulled easily but then it was tight to about 2200m, bottom of the Lakes Entrance, so back-reaming was required. A VSP log was run and then the well was P&A.

MUD

The programmed mud was for 8% KCl/2.8 kg/m^3 (1 ppb) PHPA system. In the initial mix the PHPA was added at 1.4 kg/m^3 (0.5 ppb) to prevent losses at the shakers on the first circulations, until the mud was warmed and sheared. Also due to logistic problems, the KCl was late arriving at the rig so the initial mix was only 6 wt% KCl, but by 1600m the KCl had been increased to 8% and the PHPA to 2.8 kg/m^3 (1 ppb).

From 1550 to 1700m low ROP (<15m/hr) and bit balling was a problem and cuttings quality was poor, with copious quantities of sludgy clay being observed at the shakers. Two 8 m^3 seawater sweeps were pumped to alleviate the bit balling, as per Apache's instructions, but this had no positive effect, possibly making matters worse. The KCl and PHPA content were increased to 8 - 9 wt% and 11 kg/m^3 (1.3 ppb) respectively, which appeared to alleviate the bit balling problem. However the ROP remained low ~20 m/hr until at 1800m when it suddenly increased to >30 m/hr.

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FUR SEAL-1

No change in lithology was noted at this point but is should be noted that 2.3% glycol had just started to be added to the mud at this point. The program had called for 2% glycol to be added at 1700m, however due to the slow ROP and minimal stock available Apache decided to delay adding the Glydril to the active system.

The addition of fresh PHPA to the active system resulted in a noticeable increase of sludgy cuttings at the shakers possibly from around the 340mm (13⅜") casing shoe and the bottom of the 533 mm (21") riser. Once in the Lakes Entrance the MBT increased rapidly to 43 kg/m^3 and other than using large scale dilution there was no way to control it as the centrifuge was not operational and the desilter was in poor condition.

SOLIDS CONTROL

84 mesh and 52 mesh screens were fitted to the shakers for the initial circulations of the KCl/PHPA mud and were more than adequate for the task. Then the screens were fined up to 12 x 165 mesh and 4 x 110 mesh screens. These new screens handled the 600 gpm flow rate well, although when the booster pump was used there were some losses. At 1800m 4 x 180 mesh screens were installed on a couple of the shakers and although the shakers were able to handle the PHPA mud on these fine screens, the screen usage was extremely high as a result of the screens developing holes through both the fine and coarse backing mesh. The fine screens ran out so the more plentiful coarser screens were used, however it should be noted the coarser screens were destroyed almost as quickly as the finer screens.

The desilter and desander were run minimal hours because they were in poor condition and discharged too much mud. The desilter was discharging 25 – 35 bbls/hr with 1.27-1.58 sg underflow, with an active mud weight of 1.22 sg.

The centrifuge was not run as there was no centrifuge operator onboard the rig.

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FUR SEAL-1

P&A OPERATIONS

The well was plugged with 4 cement plugs as per Apache's program. The first cement plug was from 2610 - 2380m. On circulating bottoms up cement was observed strung out through the mud system and 15 m^3 mud was dumped at the shakers. The second plug was from 2370 - 2140m and no cement was observed in the mud. The mud left in the open hole above the 2nd cement plug was treated with 0.2 kg/m^3 Glute-25 as per Apache's instructions as well as having a pH>10.5. An 8 m^3 PHG pill was spotted at 1040m and then the bit POOH to 860m. The 3rd plug was set from 860 - 760m and was reversed circulated from 760m. 1 m^3 of cement contaminated mud (1.74 sg) was observed and dumped at the shakers. The mud left in the casing from 760 - 250m was inhibited with pH>10, sulphite > 400mg/l and 4.7 kg/m^3 SafeCor as per Apache's instructions. A 50 bbl Hi-Vis pill was set at 250m then pulled back to 160m and displaced the casing and riser to seawater. The fourth cement plug was set from 160 to 100m. The drill pipe was reverse circulated two times and the remaining tubulars were laid out. The well was P&A and rig moved off location on 5 November.

COST ANALYSIS

The mud cost for the 216mm (8½") section was 20% less than predicted at $107,009. Several factors contributed to the reduced cost.

1. The mud weight was kept to a minimum reducing the amount of barite used. The programmed mud weight was for 1.2 – 1.3 sg. Hole conditions indicated that there was no requirement to increase the mud weight so the mud weight was maintained at 1.20 – 1.23 sg.

2. At 1700m 2.0% Glydril LC was to be added to enhance the claystone inhibition. However at the Company man's request the Glydril was not added until 1800m resulting in a reduction in the total used.

3. At 2200m G-Seal (8.6 kg/m^3) was added to stabilise the coal anticipated in the formation. As drilling progressed no coal was encountered and no further G-Seal was added to the mud.

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FUR SEAL-1

OBSERVATIONS AND RECOMMENDATIONS

When problems were encountered with bit balling and low ROP the M-I mud engineer recommended to Apache that they add the Glydril earlier than programmed, however this was turned down primarily because of minimal stock being available onboard. However, it should be noted that as soon as the Glydril was added to the system (at 1800m) there was a marked increase in ROP (50%) without any other obvious contributing factor.

The tight hole on the trip out from TD did not seem to be related to the coal beds as no evidence of coal cavings were observed even when back reaming out of the hole. This tightness was most likely due to not having run any wiper trips in the 216 mm (8½") interval and having drilled with a KCl/PHPA mud system. It is usual with this mud system for the hole to require wiping clean at least once before freeing up.

The solids control equipment on this rig is in very poor condition. The desilter and desander need to be completely stripped and at least 30% of the cones replaced. As for the shakers this engineer has never seen shakers screens destroyed so quickly, in some cases in less than 12 hrs and in such a precise manner. Briefly, the damage to the screens occurs in one or two squares on the slotted edges where the back and front screen meet. Not only does the fine mesh wear off but also the coarse screen underneath breaks so there is one or two rectangular holes (40mm x 150m) in the screen, whilst the remainder of the screen is in perfect condition. Other than changing out the shakers the only other thing I can think of that might help is putting finer scalping mesh screens (30 or 40 mesh) on to try to reduce the load on the screens. At present there has been no explanation for the screen damage.

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

DAILY DISCUSSION

REPORT

MI SWACO	Operator : Apache Energy Ltd	Field/Area : Gippsland	Daily Discussion
	Well Name : Fur Seal-1	Description : Vertical Exploration	
	Contractor : Diamond Offshore	Location : Vic/P54	M-I Well : **28765**

22/10/2005	TD = 0 m	Day -1

Pulled anchors. Moving rig to next location.

23/10/2005	TD = 0 m	Day 0

Arrived on location. Run Anchors. Ballast down. Preparing to spud.
Start mixing spud mud.

24/10/2005	TD = 111.7 m	Day 1

Spud well @ 03:00 using 200 bbl Floc Gel. Drill 36" hole to 111.7 m using 60+50 bbl sweeps. Swept hole with 100 bbl at TD and displaced hole with 200 bbl. POOH. Run conductor and cemented. WOC.
Mixed PHG for sweeps. Also used 26 bags CaCl2 for cement mix water. Used 210 bbl for sweeps and 200 bbl PHG to fill hole. Mixed more PHG while WOC. Dressed shakers with 7 x 52 & 9 x 84 mesh used screens.

25/10/2005	TD = 824 m	Day 2

Made up 406mm (16") BHA. RIH tag cement at 113m. Drilled ahead to 406mm interval TD 824m. Pumped 24m3 HiVis PHG sweep at TD. Circulating sweep out of hole.
Mixed PHG mud to maintain volumes to TD. Sweep hole with 8m3 Hivis mid-stand & spot 8m3 around BHA prior to connections. Received 52.5mT barite from Far Grip.

406 (16") interval TD @ 824m.

26/10/2005	TD = 824 m	Day 3

POOH, Ran & cemented casing @816m. Running riser.
Displaced well with 95.4m3 of PHG mud. Ran casing & filled with PHG as per program. Kept 82m3 for drilling out the shoe track. Begin mixing 1.2sg KCl/PHPA premix.

Ran & cemented 340mm (13 3/8" casing).

27/10/2005	TD = 824 m	Day 4

Run and Tested BOP stack. Pick up drillpipe.
Mixed 8% KCL/PHPA/Polymer mud in preperation for the 8 1/2 section.

28/10/2005	TD = 919 m	Day 5

Drilled out cement to 810 m, pumped 50bbl PHG sweep and displaced to KCl/PHPA mud. Drilled remainder of cement shoe and 3m of new formation. Conditioned mud then conducted FIT , established EMW 14.2 ppg. Continued to drill 8 1/2" interval.
Pumped 8m3 PHG sweep prior to displacing to KCl/PHPA mud while drilling casing shoe.

Drill out shoe track. FIT EMW = 14.2ppg. Drill 8 1/2" interval.

29/10/2005	TD = 1569 m	Day 6

Drilling ahead from 916 to 1462m. Change out saver sub. Drill ahead to 1569m.
Added Duovis to active to boost low end rheology. Adding KCl & PHPA to increase inhibition to programmed specifications. Adding OS-1 as per programme. Replaced used screens with new 12 x 165 mesh and 4 x 145 mesh. Added 0.5 ppb Polypac UL to reduce fluid loss. Ran desilter to reduce mud weight (13.8 ppg output). Cuttings becoming more indistinct & mushy - MBT still low.

Drill ahead 8 1/2" interval.

30/10/2005	TD = 1914 m	Day 7

Drill ahead from 1569 to 1914m.
Increased KCl content & PHPA in active to 8+% & 3.7kg/m3 as encountering bit balling. Pumped 8m3 seawater to clear bit balling - did not improve conditions. Ran desilter for 3 1/2hrs but losing too much mud so turned off. Losing some mud over shakers particularly when starting booster pump. Changed out 165 shaker screen shaker 1. Replaced worn screens with 1 x 145 mesh and 6 x 120 mesh. Added 2% Glydril LC into active at approx 1800m. Maintaining 3% Glycol with Glydril MC.

Drilling 8 1/2" interval through Gippsland Formation. Getting some bit balling.

31/10/2005	TD = 2554 m	Day 8

Continued to drill 8 1/2" hole from 1914 to 2554m
Added PHPA to active - saw increase in fine sludge at shakers. Adding Glydril to increase conc to 2.5-3%. Added 3ppb G-seal to active at 2200m. Replaced worn screens with 7 x 180 and 7 x 145 mesh. Maintaining mud weight and properties with addition of premix. Some down hole losses occured at 2250 m (20bbls), these healed naturally. Losing 30bbls/hr while running desilter UF-10.6ppg

Continue to drill 8 1/2" interval

1/11/2005	TD = 2610 m	Day 9

Drilled to TD at 2610m, circulated until hole clean. Pull 5 stds to 2468m. Backream tight hole to 2239m - max o/pull 50k. Circulate & work pipe through 2210 to 2181m. Pump slug & POOH, work through tight spots at 1273m & 910m. L/d MWD, R/UP wireline & run log#1 c/stat-gr. R/d wireline & slip & cut.
G-Seal additions ceased as no evidence of substantial coal seams and no cavings. Added Polyplus/PolyPAC/Glydrill to maintain properties as drilling to TD.

Reached TD, 2610m, at 0145hrs. POOH & run VSP log prior to P&A.

2/11/2005	TD = 2610 m	Day 10

RIH with 2 7/8" stinger & P&A as per Apache program. Pump cement plug 1 at 2610m, POOH to 2380m & circ bttms up, dumping contaminated mud. Pumped cement plug 2, POOH to 2100m & circ bttms up. POOH to 1040m, circ bttms up & spot 8m3 HiVis pill. POOH to 860m, pump cement plug 3. POOH to 760m & reverse circ, dump cement. POOH lay down 5" DP & 2 7/8" tubing. RIH 5" DP
Observed ~0.5m3 cement strung out in mud on bottoms up from plug 1. Dumped cement & contaminated mud overboard. No cement contamination detected after plug 2. Pumped 8m3 PHG pill at 1040m. Dumped 1m3 1.74sg contaminated mud when reverse circulating after plug 3. Added Safecor and OS-1 to active to displace casing prior to plug 4.

P&A well with 4 cement plugs - 2 in Open Hole, 1 at 13 3/8" casing shoe & 4th at wellhead.

3/11/2005	TD = 2610 m	Day 11

WOC - lay down excess DP. RIH with 5" mule shoe, tag cement @756m, pressure test @1000psi. Displace hole to inhibited mud. POH sideways to 250m. Spot 8m3 HiVis pill. POH to 160m & displace well to seawater. Set cement plug 4. Reverse circ @100m. Lay down excess DP/DC. Jet BOp & recover wearbush
Left 40m3 Inhibited Mud in 13 3/8" casing from 750m to 250m. All mud in surface pits has been dumped.

Completed P&A.

MI SWACO	**Operator :** Apache Energy Ltd **Well Name :** Fur Seal-1 **Contractor :** Diamond Offshore	**Field/Area :** Gippsland **Description :** Vertical Exploration **Location :** Vic/P54	**Daily Discussion** M-I Well : **28765**

4/11/2005	TD = 2610 m	Day 12

Pull BOP stack. Cut 20" & recover wellhead. Commence deballast & anchor handling.
Cleanout mud pits & flush solids control equipment.

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

COST

BY

INTERVAL

PRODUCT SUMMARY

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54

SUMMARY OF PRODUCT USAGE FOR 914 mm INTERVAL 23/10/2005 - 24/10/2005, 0 - 111.7 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST ($)	PROD COST ($)
1 - CALCIUM CHLORIDE Sacks	25 KG BG	26	12.50	325.00
2 - CAUSTIC SODA	25 KG DM	2	25.99	51.98
3 - MI Gel (Bulk)	1 MT BG	29	241.09	6981.97
SUB TOTAL:				7358.95
TAX:				0.00
WATER-BASED MUD TOTAL COST:				7358.95
TOTAL MUD COST FOR INTERVAL:				7358.95

PRODUCT SUMMARY

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54

SUMMARY OF PRODUCT USAGE FOR 406 mm INTERVAL 25/10/2005 - 26/10/2005, 111.7 - 824 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST ($)	PROD COST ($)
1 - CAUSTIC SODA	25 KG DM	5	25.99	129.95
2 - MI Gel (Bulk)	1 MT BG	43	241.09	10463.31
SUB TOTAL:				10593.26
TAX:				0.00
WATER-BASED MUD TOTAL COST:				10593.26
TOTAL MUD COST FOR INTERVAL:				10593.26

MI SWACO

PRODUCT SUMMARY

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54

SUMMARY OF PRODUCT USAGE FOR 216 mm INTERVAL 27/10/2005 - 4/11/2005, 824 - 2610 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST ($)	PROD COST ($)
1 - CAUSTIC SODA	25 KG DM	3	25.99	77.97
2 - DEFOAM A	5 GA CN	9	73.98	665.82
3 - DUO-VIS	25 KG BG	77	240.61	18526.97
4 - GLUTE 25	25 LT CN	2	117.33	234.66
5 - OS-1	25 KG BG	39	34.07	1328.73
6 - POLYPAC UL	25 KG BG	110	101.92	11211.20
7 - SODIUM BICARBONATE	25 KG BG	15	12.88	193.20
8 - KWIKSEAL MEDIUM	40 LB BG	1	26.68	26.68
9 - POTASSIUM HYDROXIDE	25 KG CN	26	30.29	787.54
10 - KCl BB	1 MT BG	55	557.41	30657.55
11 - MI BAR (Bulk)	1 MT BG	57	177.19	10011.24
12 - MI Gel (Bulk)	1 MT BG	8	241.09	1928.72
13 - POLY PLUS DRY	25 KG BG	53	85.24	4517.72
14 - MAGNAFLOC 5250	25 KG BG	26	108.75	2827.50
15 - SAFE-COR	55 GA DM	1	457.97	457.97
16 - GLYDRIL LC	55 GA DM	20	733.45	14669.00
17 - GLYDRIL MC	220 KG DM	8	468.26	3746.08
18 - GSEAL	25 KG BG	63	81.60	5140.80

SUB TOTAL:	107009.35
TAX:	0.00
WATER-BASED MUD TOTAL COST:	107009.35

TOTAL MUD COST FOR INTERVAL: 107009.35

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

DAILY VOLUME

SUMMARY SHEET

Apache Energy

Furseal-1

Daily Volume Summary

36" Interval - Seawater/Gel Sweeps

		Mud Volume (m3)					Volume Built m3								Volume Lost m3							
Date	**Depth**	**Hole**	**Surf**	**Premix**	**Reserve**	**Total**	**Drill**	**Mud**	**Synthetic**	**Brine**	**Chemical**	**Barite**	**Daily**	**Cum**	**Displace**	**Centri-**	**Desilter**	**Dump**	**Hole**	**Sweeps**	**Daily**	**Cummul**
		Active	Active			**Vol**	Water	Received	Added	Added	Volume	Volume	**Built**	**Built**	ment	fuge			Displ		**Lost**	**Lost**
24-Oct-05	111.7				310.0	**310.0**	386.5				11.0		**397.5**	**397.5**					31.8	55.7	**87.5**	**87.5**

16" Interval - Seawater / Hi Vis Sweeps

		Mud Volume (m3)					Volume Built m3								Volume Lost m3							
Date	Depth	Hole	Surf	Premix	Reserve	**Total**	Drill	Mud	Synthetic	Brine	Chemical	Barite	**Daily**	**Cum**	Displace	Centri-	Transfer	Dump	Fill	Sweeps	**Daily**	**Cummul**
		Active	Active			**Vol**	Water	Received	Added	Added	Volume	Volume	**Built**	**Built**	ment	fuge	Next Sec		Casing		**Lost**	**Lost**
25-Oct-05	824				256.9	**256.9**	399.2				12.6		**411.8**	**411.8**						465.0	**465.0**	**465.0**
26-Oct-05	824				82.0	**82.0**					11.0		**11.0**	**422.8**	94.5			18.0	66.6		**179.1**	**644.1**
						0.0							**0.0**	**422.8**							**0.0**	**0.0**

8.5" Interval - KCl/PHPA/Glydrill

		Mud Volume (bbl)					Volume Built bbl								Volume Lost bbl							
Date	Depth	Hole	Surf	Premix	Reserve	**Total**	Drill	Mud	Synthetic	Brine	Chemical	Barite	**Daily**	**Cum**	Shakers	Sweeps	Desilter	Dump	Hole	Other	**Daily**	**Cummul**
		Active	Active		(Brine)	**Vol**	Water	Received	Added	Added	Volume	Volume	**Built**	**Built**							**Lost**	**Lost**
27-Oct-05	824		82		176	**258**	163				13		**176**	**176**							**0**	**0**
28-Oct-05	927	66	90		117	**273**	32				5		**37**	**213**	1	15		6			**22**	**22**
29-Oct-05	1566	84	90		165	**339**	75				12		**87**	**300**	18		3			1	**22**	**43**
30-Oct-05	1914	94	90		149	**333**					8		**8**	**308**	6		8				**14**	**57**
31-Oct-05	2544	112	88		144	**344**	49				8		**56**	**364**	24		15	1	3	2	**45**	**102**
01-Nov-05	2610	142	71		129	**342**					7		**7**	**371**	4		5				**9**	**111**
02-Nov-05	2610	140	41		139	**320**							**0**	**371**				22			**22**	**133**
03-Nov-05	2610					**0**							**0**	**371**				223	98		**321**	**453**

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

TOTAL

MATERIAL

COST

MI SWACO

PRODUCT SUMMARY

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54

SUMMARY OF PRODUCT USAGE FOR INTERVAL 22/10/2005 - 4/11/2005, 0 - 2610 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST ($)	PROD COST ($)
1 - CALCIUM CHLORIDE Sacks	25 KG BG	26	12.50	325.00
2 - CAUSTIC SODA	25 KG DM	10	25.99	259.90
3 - DEFOAM A	5 GA CN	9	73.98	665.82
4 - DUO-VIS	25 KG BG	77	240.61	18526.97
5 - GLUTE 25	25 LT CN	2	117.33	234.66
6 - OS-1	25 KG BG	39	34.07	1328.73
7 - POLYPAC UL	25 KG BG	110	101.92	11211.20
8 - SODIUM BICARBONATE	25 KG BG	15	12.88	193.20
9 - KWIKSEAL MEDIUM	40 LB BG	1	26.68	26.68
10 - POTASSIUM HYDROXIDE	25 KG CN	26	30.29	787.54
11 - KCl BB	1 MT BG	55	557.41	30657.55
12 - MI BAR (Bulk)	1 MT BG	57	177.19	10011.24
13 - MI Gel (Bulk)	1 MT BG	80	241.09	19373.99
14 - POLY PLUS DRY	25 KG BG	53	85.24	4517.72
15 - MAGNAFLOC 5250	25 KG BG	26	108.75	2827.50
16 - SAFE-COR	55 GA DM	1	457.97	457.97
17 - GLYDRIL LC	55 GA DM	20	733.45	14669.00
18 - GLYDRIL MC	220 KG DM	8	468.26	3746.08
19 - GSEAL	25 KG BG	63	81.60	5140.80

SUB TOTAL:	124961.55
TAX:	0.00
WATER-BASED MUD TOTAL COST:	124961.55

TOTAL MUD COST FOR INTERVAL: 124961.55

DRILLING FLUIDS RECAP FOR APACHE ENERGY FUR SEAL-1

DRILLING

FLUIDS

SUMMARY

DRILLING FLUIDS SUMMARY

Operator : Apache Energy Ltd
Field/Area : Gippsland
Well Name : Fur Seal-1
Description : Vertical Exploration
Contractor : Diamond Offshore
Location : Vic/P54

Date		22/10/2005	23/10/2005	24/10/2005	25/10/2005	25/10/2005	26/10/2005
Depth/TVD	m	/	/	111.7/111.7	371/371	595/ 595	824/824
Activity		ove Rig to Locati	Prepare to Spud	P/U 16" BHA	Circulating BU	Circulating BU	Running Riser
Mud Type				SW/PHG Swee	SW/PHG Swee	SW/PHG Swee	SW/PHG Swee
Hole Size	mm	0	914	914	406	406	406
Circ Volume	m³						
Flow Rate	L/min	0	0	0	4028	4028	0
Circ Pressure	kPa	0	0	0	2900	2900	0
Avg ROP	m/hr	0	0	0	0	0	0
Sample From				Pit 3	Pit #3	Pit #5	Pit 1
Flow Line Temp	°C						
Mud Weight	sp.gr.	@ °C	@ °C	1.06 @ °C	1.06 @ °C	1.06@ °C	1.06 @ °C
Funnel Viscosity	s/L			> 120	> 120	>120	>120
PV	cP						
YP	Pa						
R600/R300/R200		/ /	/ /	/ /	/ /	/ /	/ /
R100/R6/R3		/ /	/ /	/ /	/ /	/ /	/ /
10s/10m/30m Gel	Pa	//	//	//	//	//	//
API Fluid Loss	cc/30 min						
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	/	/	/	/	/	/
Solids	%Vol						
Oil/Water	%Vol	/	/	/	/	/	/
Sand	%Vol						
MBT	kg/m³						
pH							
Alkal Mud (Pm)							
Pf/Mf		/	/	/	/	/	/
Chlorides	mg/l						
Hardness Ca							
KCl	Wt%						
PHPA	ppb						
Glydrill	%						
Sulphite Excess	mg/l						
Daily Mud Cost	$	0.00	0.00	7358.95	7941.27		2651.99
Cuml Mud Cost	$	0.00	0.00	7358.95	15300.22		17952.21
Sales Engineer			Mark Du/Jasdeep	Mark Du/Jasdeep	Mark Du/Joe McL	Mark Du/Joe McL	Mark Du/Joe McL
Products Used				CaCl2 / 26	NaOH / 5		BulkGel / 11
				NaOH / 2	BulkGel / 32.4		
				BulkGel / 28.96			

REMARKS

22/10/2005:
23/10/2005:
24/10/2005:
25/10/2005: 406 (16") interval TD @ 824m.

26/10/2005: Ran & cemented 340mm (13 3/8" casing).

DRILLING FLUIDS SUMMARY

Operator : Apache Energy Ltd
Field/Area : Gippsland
Well Name : Fur Seal-1
Description : Vertical Exploration
Contractor : Diamond Offshore
Location : Vic/P54

Date		27/10/2005	28/10/2005	28/10/2005	29/10/2005	29/10/2005	30/10/2005
Depth/TVD	m	824/824	835/835	824/ 824	1541/1541	1236/ 1236	1854/1854
Activity		Testing BOP	Drilling 8 1/2"	Drilling 8 1/2"	Drilling 8 1/2"	Drilling 8 1/2"	Drilling 8 1/2"
Mud Type		KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA
Hole Size	mm	406	216	216	216	216	216
Circ Volume	m³		156.3	156.3	174.2	174.2	183.8
Flow Rate	L/min	0	2265	2265	2265	2265	2265
Circ Pressure	kPa	0	11307	11307	14100	14100	17440
Avg ROP	m/hr	0	40	40	27	27	27
Sample From		Pit 3	FlowLine	Pit #4	Flow Line	Pit#3	F/Line
Flow Line Temp	°C	n/a	17	n/a	37	36	44
Mud Weight	sp.gr.	1.20@20 °C	1.2@17 °C	1.22@20 °C	1.2@21 °C	1.21 @ 20 °C	1.22@35 °C
Funnel Viscosity	s/L	54	49	55	55	62	61
PV	cP	10	12	16	14	14	22
YP	Pa	8	10	11	13	15	17.5
R600/R300/R200		36/26/20	44/32/25	54/38/31	54/40/32	58/44/37	79/57/47
R100/R6/R3		14/4/3	19/6/4	22/7/6	24/7/5	27/10/8	35/9/7
10s/10m/30m Gel	Pa	4/6/	5/7/8	6/8/9	6/13/19	9/14/18	8/16/22
API Fluid Loss	cc/30 min	5.6	6	5	5.6	5.2	4.4
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/
Solids	%Vol	7	8	6	9	9	10
Oil/Water	%Vol	/93	/92	/94	/91	/91	/90
Sand	%Vol	nil	0.2	-	0.6	0.5	0.2
MBT	kg/m³	nil	5	-	15	10	30
pH		9.0	9.7	9	9	9.3	9
Alkal Mud (Pm)		Tr	0.35	0.5	0.25	1.0	0.5
Pf/Mf		0.3/0.5	0.2/0.4	0.3/0.5	0.15/0.3	0.2/0.6	0.2/0.4
Chlorides	mg/l	26000	27000	30000	34000	34000	47000
Hardness Ca		100	240	100	280	200	320
KCl	Wt%		5.5	5.5	7	6	8
PHPA	ppb		0.5	0.5	1	0.7	1.3
Glydrill	%						3
Sulphite Excess	mg/l				50	250	100
Daily Mud Cost	$	20053.58	9285.61		24074.70		23158.54
Cuml Mud Cost	$	38005.79	47291.40		71366.10		94524.64
Sales Engineer		Mark Du/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL
Products Used		Duovis / 20	DFOAM / 1		DFOAM / 6		DFOAM / 1
		PacUL / 25	Duovis / 10		Duovis / 27		Duovis / 10
		Bicarb / 12	PacUL / 13		OS-1 / 12		OS-1 / 9
		KClBB / 17	KwikM / 1		PacUL / 27		PacUL / 20
		BulkBar / 15	KClBB / 2		Bicarb / 3		KOH / 9
		MagnaF / 12	BulkBar / 15		KOH / 7		KClBB / 6
			BulkGel / 8		KClBB / 20		Poly+ / 13
			MagnaF / 6		Poly+ / 20		GlyLC / 16
					MagnaF / 8		GlyMC / 4

REMARKS

27/10/2005:

28/10/2005: Drill out shoe track. FIT EMW = 14.2ppg. Drill 8 1/2" interval.

29/10/2005: Drill ahead 8 1/2" interval.

30/10/2005: Drilling 8 1/2" interval through Gippsland Formation. Getting some bit balling.

DRILLING FLUIDS SUMMARY

Operator : Apache Energy Ltd
Field/Area : Gippsland
Well Name : Fur Seal-1
Description : Vertical Exploration
Contractor : Diamond Offshore
Location : Vic/P54

Date		30/10/2005	31/10/2005	31/10/2005	1/11/2005	2/11/2005	3/11/2005
Depth/TVD	m	1662/1662	2470/2470	2095/2095	2610/2610	2610/2610	750/ 750
Activity		Drilling 8 1/2"	Drilling 8 1/2"	Drilling 8 1/2"	Slip & Cut	P&A	Recover BOPs
Mud Type		KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA	KCl/PHPA
Hole Size	mm	216	216	216	216	216	216
Circ Volume	m³	183.8	199.8	199.8	213.4	181.7	
Flow Rate	L/min	2265	2265	2265	2265	2993	0
Circ Pressure	kPa	17440	20700	20700	20700	20700	0
Avg ROP	m/hr	27	27	27	28	0	0
Sample From		Pit#3	F/Line	Pit#3	Pit #3	B/up	Pit 3
Flow Line Temp	°C	40	49	60	60	31	n/a
Mud Weight	sp.gr.	1.22@20 °C	1.22@49 °C	1.22@35 °C	1.23@45 °C	1.23@25 °C	1.21 @30 °C
Funnel Viscosity	s/L	54	67	62	71	76	74
PV	cP	16	26	22	25	24	22
YP	Pa	16	18.5	19	19	22.5	26
R600/R300/R200		64/48/39	89/63/52	82/60/51	88/63/52	93/69/57	96/74/59
R100/R6/R3		29/8/6	38/10/8	38/10/8	37/10/7	43/12/9	45/15/13
10s/10m/30m Gel	Pa	8/12/19	9/19/27	9/21/27	9/21/30	10/15/25	13/18/30
API Fluid Loss	cc/30 min	5.6	4.8	4.8	4.2	4.2	5.6
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/
Solids	%Vol	10	14	11	13	13	13
Oil/Water	%Vol	/90	/86	/89	/87	/87	/87
Sand	%Vol	0.25	0.6	0.75	0.25	0.75	0.5
MBT	kg/m³	20	42	34	43	28	34
pH		9.2	8.9	9.1	9.5	8.9	10.5
Alkal Mud (Pm)		0.9	0.5	0.7	1.1	0.8	1.4
Pf/Mf		0.2/0.7	0.1/0.2	0.12/0.7	0.1/0.7	0.1/0.6	0.5/1.2
Chlorides	mg/l	47000	47000	45000	50000	48000	48000
Hardness Ca		240	360	240	240	240	480
KCl	Wt%	8	7.5	7.5	8.5	6	7
PHPA	ppb	1.3	1.2	1.2	1.3	1.0	0.7
Glydrill	%	nil	2.5	2.5	2.8	2.5	2.5
Sulphite Excess	mg/l	50	50	100	250	50	400
Daily Mud Cost	$		19098.61		6933.38	940.95	73.98
Cuml Mud Cost	$		113623.25		120556.63	121497.58	121571.56
Sales Engineer		Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL	Glen Sh/Joe McL
Products Used			Duovis / 10		OS-1 / 2	NaOH / 3	DFOAM / 1
			OS-1 / 11		PacUL / 5	Glut / 2	
			PacUL / 20		KOH / 2	OS-1 / 5	
			KOH / 8		BulkBar / 26.5	SAFE-CO / 1	
			KClBB / 10		Poly+ / 3		
			Poly+ / 17		GlyLC / 4		
			GlyMC / 4				
			Gseal / 63				

REMARKS

31/10/2005: Continue to drill 8 1/2" interval

1/11/2005: Reached TD, 2610m, at 0145hrs. POOH & run VSP log prior to P&A.
2/11/2005: P&A well with 4 cement plugs - 2 in Open Hole, 1 at 13 3/8" casing shoe & 4th at wellhead.
3/11/2005: Completed P&A.

DRILLING FLUIDS SUMMARY

Operator : Apache Energy Ltd
Field/Area : Gippsland
Well Name : Fur Seal-1
Description : Vertical Exploration
Contractor : Diamond Offshore
Location : Vic/P54

Date		4/11/2005
Depth/TVD	m	/
Activity		Anchor Handling
Mud Type		KCl/PHPA
Hole Size	mm	216
Circ Volume	m³	
Flow Rate	L/min	0
Circ Pressure	kPa	0
Avg ROP	m/hr	0
Sample From		
Flow Line Temp	°C	
Mud Weight	sp.gr.	@ °C
Funnel Viscosity	s/L	
PV	cP	
YP	Pa	
R600/R300/R200		/ /
R100/R6/R3		/ /
10s/10m/30m Gel	Pa	//
API Fluid Loss	cc/30 min	
HTHP Fluid Loss	cc/30 min	
Cake API/HT	1/32"	/
Solids	%Vol	
Oil/Water	%Vol	/
Sand	%Vol	
MBT	kg/m³	
pH		
Alkal Mud (Pm)		
Pf/Mf		/
Chlorides	mg/l	
Hardness Ca		
KCl	Wt%	
PHPA	ppb	
Glydrill	%	
Sulphite Excess	mg/l	
Daily Mud Cost	$	0.00
Cuml Mud Cost	$	121571.56
Sales Engineer		Glen Sh/Joe McL
Products Used		

REMARKS

4/11/2005:

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

PRODUCT

CONSUMPTION

Product Consumption

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Location : Vic/P54
Field/Area: Gippsland

Contractor: Diamond Offshore
M-I Engineer: J Singh / J Mclaughlin
Rig Name: Ocean Patriot
Stock Point: Melbourne

Product Name	Product Price	Oct 22, 2005 Qty	Oct 22, 2005 Cost	Oct 23, 2005 Qty	Oct 23, 2005 Cost	Oct 24, 2005 Qty	Oct 24, 2005 Cost	Oct 25, 2005 Qty	Oct 25, 2005 Cost	Oct 26, 2005 Qty	Oct 26, 2005 Cost	Page Totals
		DATES										
CALCIUM CHLORIDE Sacks	12.50		0.00		0.00	26	325.00		0.00		0.00	325.00
CAUSTIC SODA	25.99		0.00		0.00	2	51.98	5	129.95		0.00	181.93
CITRIC ACID	42.79		0.00		0.00		0.00		0.00		0.00	0.00
DEFOAM A	73.98		0.00		0.00		0.00		0.00		0.00	0.00
DUO-VIS	240.61		0.00		0.00		0.00		0.00		0.00	0.00
GLUTE 25	117.33		0.00		0.00		0.00		0.00		0.00	0.00
GUAR GUM	94.51		0.00		0.00		0.00		0.00		0.00	0.00
KWIK SEAL FINE	26.68		0.00		0.00		0.00		0.00		0.00	0.00
LIME	6.78		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	34.07		0.00		0.00		0.00		0.00		0.00	0.00
PIPE-LAX W	357.82		0.00		0.00		0.00		0.00		0.00	0.00
POLYPAC UL	101.92		0.00		0.00		0.00		0.00		0.00	0.00
SODA ASH	12.88		0.00		0.00		0.00		0.00		0.00	0.00
SODIUM BICARBONATE	12.88		0.00		0.00		0.00		0.00		0.00	0.00
KWIKSEAL MEDIUM	26.68		0.00		0.00		0.00		0.00		0.00	0.00
MIX II FINE	25.49		0.00		0.00		0.00		0.00		0.00	0.00
MIX II MEDIUM	25.49		0.00		0.00		0.00		0.00		0.00	0.00
POTASSIUM HYDROXIDE	30.29		0.00		0.00		0.00		0.00		0.00	0.00
KCl BB	557.41		0.00		0.00		0.00		0.00		0.00	0.00
MI BAR (Bulk)	177.19		0.00		0.00		0.00		0.00		0.00	0.00
MI Gel (Bulk)	241.09		0.00		0.00	29	6981.97	32	7811.32	11	2651.99	17445.28
POLY PLUS DRY	85.24		0.00		0.00		0.00		0.00		0.00	0.00
MAGNAFLOC 5250	108.75		0.00		0.00		0.00		0.00		0.00	0.00
SAFE-COR	457.97		0.00		0.00		0.00		0.00		0.00	0.00
CONQOR 303A	457.97		0.00		0.00		0.00		0.00		0.00	0.00
GLYDRIL LC	733.45		0.00		0.00		0.00		0.00		0.00	0.00
GLYDRIL MC	468.26		0.00		0.00		0.00		0.00		0.00	0.00
GSEAL	81.60		0.00		0.00		0.00		0.00		0.00	0.00
Cumulative Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Daily Product			0.00		0.00		7358.95		7941.27		2651.99	17952.21
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			0.00		0.00		7358.95		15300.22		17952.21	17952.21
Cumulative Cost			0.00		0.00		7358.95		15300.22		17952.21	17952.21

Product Consumption

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Location : Vic/P54
Field/Area: Gippsland

Contractor: Diamond Offshore
M-I Engineer: J Singh / J Mclaughlin
Rig Name: Ocean Patriot
Stock Point: Melbourne

Product	DATES											
	Previous	Oct 27, 2005		Oct 28, 2005		Oct 29, 2005		Oct 30, 2005		Oct 31, 2005		Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
CALCIUM CHLORIDE Sacks	325.00		0.00		0.00		0.00		0.00		0.00	325.00
CAUSTIC SODA	181.93		0.00		0.00		0.00		0.00		0.00	181.93
CITRIC ACID	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DEFOAM A	0.00		0.00	1	73.98	6	443.88	1	73.98		0.00	591.84
DUO-VIS	0.00	20	4812.20	10	2406.10	27	6496.47	10	2406.10	10	2406.10	18526.97
GLUTE 25	0.00		0.00		0.00		0.00		0.00		0.00	0.00
GUAR GUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
KWIK SEAL FINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
LIME	0.00		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	0.00		0.00		0.00	12	408.84	9	306.63	11	374.77	1090.24
PIPE-LAX W	0.00		0.00		0.00		0.00		0.00		0.00	0.00
POLYPAC UL	0.00	25	2548.00	13	1324.96	27	2751.84	20	2038.40	20	2038.40	10701.60
SODA ASH	0.00		0.00		0.00		0.00		0.00		0.00	0.00
SODIUM BICARBONATE	0.00	12	154.56		0.00	3	38.64		0.00		0.00	193.20
KWIKSEAL MEDIUM	0.00		0.00	1	26.68		0.00		0.00		0.00	26.68
MIX II FINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
MIX II MEDIUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
POTASSIUM HYDROXIDE	0.00		0.00		0.00	7	212.03	9	272.61	8	242.32	726.96
KCl BB	0.00	17	9475.97	2	1114.82	20	11148.20	6	3344.46	10	5574.10	30657.55
MI BAR (Bulk)	0.00	15	2657.85	15	2657.85		0.00		0.00		0.00	5315.70
MI Gel (Bulk)	17445.28		0.00	8	1928.72		0.00		0.00		0.00	19374.00
POLY PLUS DRY	0.00		0.00		0.00	20	1704.80	13	1108.12	17	1449.08	4262.00
MAGNAFLOC 5250	0.00	12	1305.00	6	652.50	8	870.00		0.00		0.00	2827.50
SAFE-COR	0.00		0.00		0.00		0.00		0.00		0.00	0.00
CONQOR 303A	0.00		0.00		0.00		0.00		0.00		0.00	0.00
GLYDRIL LC	0.00		0.00		0.00		0.00	16	11735.20		0.00	11735.20
GLYDRIL MC	0.00		0.00		0.00		0.00	4	1873.04	4	1873.04	3746.08
GSEAL	0.00		0.00		0.00		0.00		0.00	63	5140.80	5140.80
Cumulative Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Daily Product			20953.58		10185.61		24074.70		23158.54		19098.61	115423.25
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			38905.79		49091.40		73166.10		96324.64		115423.25	115423.25
Cumulative Cost			38905.79		49091.40		73166.10		96324.64		115423.25	115423.25

Product Consumption

Operator : Apache Energy Ltd
Well Name : Fur Seal-1
Location : Vic/P54
Field/Area: Gippsland

Contractor: Diamond Offshore
M-I Engineer: J Singh / J Mclaughlin
Rig Name: Ocean Patriot
Stock Point: Melbourne

	DATES											
Product	Previous	Nov 1, 2005		Nov 2, 2005		Nov 3, 2005		Nov 4, 2005				Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
CALCIUM CHLORIDE Sacks	325.00		0.00		0.00		0.00		0.00			325.00
CAUSTIC SODA	181.93		0.00	3	77.97		0.00		0.00			259.90
CITRIC ACID	0.00		0.00		0.00		0.00		0.00			0.00
DEFOAM A	591.84		0.00		0.00	1	73.98		0.00			665.82
DUO-VIS	18526.97		0.00		0.00		0.00		0.00			18526.97
GLUTE 25	0.00		0.00	2	234.66		0.00		0.00			234.66
GUAR GUM	0.00		0.00		0.00		0.00		0.00			0.00
KWIK SEAL FINE	0.00		0.00		0.00		0.00		0.00			0.00
LIME	0.00		0.00		0.00		0.00		0.00			0.00
OS-1	1090.24	2	68.14	5	170.35		0.00		0.00			1328.73
PIPE-LAX W	0.00		0.00		0.00		0.00		0.00			0.00
POLYPAC UL	10701.60	5	509.60		0.00		0.00		0.00			11211.20
SODA ASH	0.00		0.00		0.00		0.00		0.00			0.00
SODIUM BICARBONATE	193.20		0.00		0.00		0.00		0.00			193.20
KWIKSEAL MEDIUM	26.68		0.00		0.00		0.00		0.00			26.68
MIX II FINE	0.00		0.00		0.00		0.00		0.00			0.00
MIX II MEDIUM	0.00		0.00		0.00		0.00		0.00			0.00
POTASSIUM HYDROXIDE	726.96	2	60.58		0.00		0.00		0.00			787.54
KCl BB	30657.55		0.00		0.00		0.00		0.00			30657.55
MI BAR (Bulk)	5315.70	27	4695.54		0.00		0.00		0.00			10011.24
MI Gel (Bulk)	19374.00		0.00		0.00		0.00		0.00			19374.00
POLY PLUS DRY	4262.00	3	255.72		0.00		0.00		0.00			4517.72
MAGNAFLOC 5250	2827.50		0.00		0.00		0.00		0.00			2827.50
SAFE-COR	0.00		0.00	1	457.97		0.00		0.00			457.97
CONQOR 303A	0.00		0.00		0.00		0.00		0.00			0.00
GLYDRIL LC	11735.20	4	2933.80		0.00		0.00		0.00			14669.00
GLYDRIL MC	3746.08		0.00		0.00		0.00		0.00			3746.08
GSEAL	5140.80		0.00		0.00		0.00		0.00			5140.80
Cumulative Engineering			0.00		0.00		0.00		0.00			0.00
Daily Product			8523.38		940.95		73.98		0.00			124961.56
Daily Sales Tax			0		0		0		0			0.00
Cumulative Product			123946.63		124887.58		124961.56		124961.56			124961.56
Cumulative Cost			123946.63		124887.58		124961.56		124961.56			124961.56

DRILLING FLUIDS RECAP FOR APACHE ENERGY
FUR SEAL-1

DAILY

MUD

REPORTS

WATER-BASED MUD REPORT No. 1

Date	24/10/2005	**Depth/TVD**	111.7 m / 111.7 m
Spud Date	24/10/2005	**Mud Type**	SW/PHG Sweeps
Water Depth	57	**Activity**	P/U 16" BHA

Operator : Apache Energy Ltd
Report For : John Herriot/Dwayne Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Troy Williams

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 914 mm		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		762mm @112m (112TVD)	13.3	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size mm	Length m	Intermediate	Active Pits	Pump Cap	L/stk	L/stk
				Pump stk/min		
Drill Pipe Size mm	Length m	Intermediate	Total Circulating Vol	Flow Rate	L/min	
				Bottoms Up		
Drill Collar Size mm	Length m	Production or Liner	In Storage 310.2	Total Circ Time		
				Circulating Pressure		

MUD PROPERTIES

Sample From		Pit 3@06:00	
Flow Line Temp	°C		
Depth/TVD	m	111.7/111.7	
Mud Weight	sp.gr.	1.06	
Funnel Viscosity	s/L	> 120	
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	Pa		
10s/10m/30m Gel	Pa		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	kg/m³		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	Wt%		
PHPA	ppb		
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CALCIUM CHLORIDE Sacks	25 KG BG	26.00
CAUSTIC SODA	25 KG DM	2.00
MI Gel (Bulk)	1 MT BG	28.96

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 52	0
Shaker 2	3 x 52, 1 x 84	0
Shaker 3	4 x 84	0
Shaker 4	4 x 84	0
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.07
Viscosity	> 120
Filtrate	NC

REMARKS AND TREATMENT

Mixed PHG for sweeps. Also used 26 bags CaCl2 for cement mix water. Used 210 bbl for sweeps and 200 bbl PHG to fill hole. Mixed more PHG while WOC. Dressed shakers with 7 x 52 & 9 x 84 mesh used screens.

REMARKS

Spud well @ 03:00 using 200 bbl Floc Gel. Drill 36" hole to 111.7 m using 60+50 bbl sweeps. Swept hole with 100 bbl at TD and displaced hole with 200 bbl. POOH. Run conductor and cemented. WOC.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	3	Oil Added	0	NaCl	/	np/na Values	
Drilling	3	Water Added	386.5	KCl	/	kp/ka (Pa·s^n)	
Tripping	1	Mud Received	0	Low Gravity	/	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP (kWatt / HSI)	
Running Casing	7	Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	
Cementing	1	Evaporation	0	Weight Material	/	Ann. Vel DP (m/min)	
Wait on Cement	9	Solids Control	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Formation	0	Inert/React		Crit Vel DP (m/min)	
		Left in Hole	0	Average SG		Crit Vel DC (m/min)	
		Sweeps	55.7	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Jasdeep Singh Mark Duff 08-9302 3790			$ 7,358.95	$ 7,358.95

WATER-BASED MUD REPORT No. 2

Date	25/10/2005	**Depth/TVD**	824 m / 824 m
Spud Date	24/10/2005	**Mud Type**	SW/PHG Sweeps
Water Depth	57	**Activity**	Circulating BU

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Troy Williams

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY

Bit Size 406 mm Sec FS 2563		
Nozzles 7x18 / 1/32"		
Drill Pipe Size	Length	
160 mm	795 m	
Drill Pipe Size	Length	
203 mm	20 m	
Drill Collar Size	Length	
mm	m	

CASING

Surface
762mm @112m (112TVD)
Intermediate
340mm @816m (816TVD)
Intermediate
Production or Liner

MUD VOLUME (m³)

Hole
94.2
Active Pits
Total Circulating Vol
94.2
In Storage
256.9

CIRCULATION DATA

Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Pump Cap	16.176 L/stk	16.176 L/stk
Pump stk/min	88@97%	78@97%
Flow Rate	4028 L/min	
Bottoms Up	22.4 min	5576 stk
Total Circ Time	23.4 min	5822 stk
Circulating Pressure	2900 kPa	

MUD PROPERTIES

Sample From		Pit #3@11:30	Pit #5@17:00
Flow Line Temp	°C		
Depth/TVD	m	371/371	595/595
Mud Weight	sp.gr.	1.06	1.06
Funnel Viscosity	s/L	> 120	>120
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	Pa		
10s/10m/30m Gel	Pa		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	kg/m³		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	Wt%		
PHPA	ppb		
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CAUSTIC SODA	25 KG DM	5.00
MI Gel (Bulk)	1 MT BG	32.40

SOLIDS EQUIP

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 52	0
Shaker 2	3 x 52, 1 x 84	0
Shaker 3	4 x 84	0
Shaker 4	4 x 84	0
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.07
Viscosity	> 120
Filtrate	NC

REMARKS AND TREATMENT

Mixed PHG mud to maintain volumes to TD. Sweep hole with 8m3 Hivis mid-stand & spot 8m3 around BHA prior to connections. Received 52.5mT barite from Far Grip.

REMARKS

Made up 406mm (16") BHA. RIH tag cement at 113m. Drilled ahead to 406mm interval TD 824m. Pumped 24m3 HiVis PHG sweep at TD. Circulating sweep out of hole.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	/	np/na Values	
Drilling	19	Water Added	399.2	KCl	/	kp/ka (Pa·s^n)	
Tripping	5	Mud Received	0	Low Gravity	/	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP (kWatt / HSI)	
		Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	60
		Evaporation	0	Weight Material	/	Ann. Vel DP (m/min)	
		Solids Control	0	Chemical Conc	- /	Ann. Vel DC (m/min)	41.49
		Formation	0	Inert/React		Crit Vel DP (m/min)	
		Left in Hole	0	Average SG		Crit Vel DC (m/min)	
		Sweeps	464.99	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Mark Duff 08-9302 3790			$ 7,941.27	$ 15,300.22

WATER-BASED MUD REPORT No. 3

Date	26/10/2005	**Depth/TVD**	824 m / 824 m
Spud Date	24/10/2005	**Mud Type**	SW/PHG Sweeps
Water Depth	57	**Activity**	Running Riser

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Troy Williams

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 406 mm		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		762mm @112m (112TVD)	58.5	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size mm	Length m	Intermediate	Active Pits	Pump Cap	L/stk	L/stk
		340mm @816m (816TVD)		Pump stk/min		
Drill Pipe Size mm	Length m	Intermediate	Total Circulating Vol	Flow Rate	L/min	
				Bottoms Up		
Drill Collar Size mm	Length m	Production or Liner	In Storage 82	Total Circ Time		
				Circulating Pressure		

MUD PROPERTIES

Sample From		Pit 1@19:00	
Flow Line Temp	°C		
Depth/TVD	m	824/824	
Mud Weight	sp.gr.	1.06	
Funnel Viscosity	s/L	>120	
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	Pa		
10s/10m/30m Gel	Pa		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	kg/m³		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	Wt%		
PHPA	ppb		
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
MI Gel (Bulk)	1 MT BG	11.00

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 52	0
Shaker 2	3 x 52, 1 x 84	0
Shaker 3	4 x 84	0
Shaker 4	4 x 84	0
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.07
Viscosity	> 120
Filtrate	NC

REMARKS AND TREATMENT

Displaced well with 95.4m3 of PHG mud. Ran casing & filled with PHG as per program. Kept 82m3 for drilling out the shoe track. Begin mixing 1.2sg KCl/PHPA premix.

REMARKS

POOH, Ran & cemented casing @816m. Running riser.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	2	Oil Added	0	NaCl	/	np/na Values	
Drilling		Water Added	0	KCl	/	kp/ka (Pa·s^n)	
Tripping	10	Mud Received	0	Low Gravity	/	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	18	Bentonite	/	Bit HHP (kWatt / HSI)	
Running Casing	6	Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	
Wait on Cement	6	Evaporation	0	Weight Material	/	Ann. Vel DP (m/min)	
		Solids Control	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Formation	0	Inert/React		Crit Vel DP (m/min)	
		Left in Hole	66.6	Average SG		Crit Vel DC (m/min)	
		Sweeps	0	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Mark Duff 08-9302 3790			$ 2,651.99	$ 17,952.21

WATER-BASED MUD REPORT No. 4

Date	27/10/2005	**Depth/TVD**	824 m / 824 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Testing BOP

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Troy Williams

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY

Bit Size	406 mm	Smith S73VPX
Nozzles	6x15 /	1/32"
Drill Pipe Size	Length	
mm	m	
Drill Pipe Size	Length	
mm	m	
Drill Collar Size	Length	
mm	m	

CASING

Surface	
762mm	@112m (112TVD)
Intermediate	
340mm	@816m (816TVD)
Intermediate	
mm	@2610m (2610TVD)
Production or Liner	

MUD VOLUME (m³)

Hole	
74	
Active Pits	
Total Circulating Vol	
In Storage	
258.5	

CIRCULATION DATA

Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Pump Cap	L/stk	L/stk
Pump stk/min		
Flow Rate	L/min	
Bottoms Up		
Total Circ Time		
Circulating Pressure		

MUD PROPERTIES

Sample From		Pit 3@16:00	
Flow Line Temp	°C	n/a	
Depth/TVD	m	824/824	
Mud Weight	sp.gr.	1.20@20°C	
Funnel Viscosity	s/L	54	
Rheology Temp	°C	49	
R600/R300		36/26	
R200/R100		20/14	
R6/R3		4/3	
PV	cP	10	
YP	Pa	8.	
10s/10m/30m Gel	Pa	4/6/	
API Fluid Loss	cc/30 min	5.6	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	7	
Oil/Water	%Vol	/93	
Sand	%Vol	nil	
MBT	kg/m³	nil	
pH		9.0	
Alkal Mud (Pm)		Tr	
Pf/Mf		0.3/0.5	
Chlorides	mg/l	26000	
Hardness Ca	mg/l	100	
KCl	Wt%		
PHPA	ppb		
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DUO-VIS	25 KG BG	20.00
POLYPAC UL	25 KG BG	25.00
SODIUM BICARBONATE	25 KG BG	12.00
KCl BB	1 MT BG	17.00
MI BAR (Bulk)	1 MT BG	15.00
MAGNAFLOC 5250	25 KG BG	12.00

SOLIDS EQUIP

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 52	0
Shaker 2	3 x 52, 1 x 84	0
Shaker 3	4 x 84	0
Shaker 4	4 x 84	0
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.07
Viscosity	> 120
Filtrate	NC

REMARKS AND TREATMENT

Mixed 8% KCL/PHPA/Polymer mud in preperation for the 8 1/2 section.

REMARKS

Run and Tested BOP stack. Pick up drillpipe.

TIME DISTR

TIME DISTR	Last 24 Hrs
Rig Up/Service	24
Drilling	
Tripping	
Non-Productive Tim	

MUD VOL ACCTG (m³)

Oil Added	0
Water Added	163.3
Mud Received	0
Dumped	0
Shakers	0
Evaporation	0
Solids Control	0
Formation	0
Left in Hole	0
Sweeps	0

SOLIDS ANALYSIS (%/kg/m³)

NaCl	./ -.5
KCl	2./ 52.5
Low Gravity	./ 1.
Bentonite	./ .
Drill Solids	-.1/ -1.6
Weight Material	5./ 208.8
Chemical Conc	- / 2.5
Inert/React	-
Average SG	4.19
Carb/BiCarb (m mole/L)	6./ 30.

MUD RHEOLOGY & HYDRAULICS

np/na Values	
kp/ka (Pa·s^n)	
Bit Loss (kPa / %)	
Bit HHP (kWatt / HSI)	
Bit Jet Vel (m/s)	
Ann. Vel DP (m/min)	
Ann. Vel DC (m/min)	
Crit Vel DP (m/min)	
Crit Vel DC (m/min)	

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Mark Duff 08-9302 3790			$ 20,953.58	$ 38,905.79

WATER-BASED MUD REPORT No. 5

Date	28/10/2005	**Depth/TVD**	919 m / 919 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Drilling 8 1/2"

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)
Bit Size 216 mm Smith S73VPX		Surface	Hole
Nozzles 6x15 / 1/32"		762mm @112m (112TVD)	65.9
Drill Pipe Size	Length	Intermediate	Active Pits
127 mm	655 m	340mm @816m (816TVD)	90.4
Drill Pipe Size	Length	Intermediate	Total Circulating Vol
127 mm	108 m	mm @2610m (2610TVD)	156.3
Drill Collar Size	Length	Production or Liner	In Storage
165 mm	156 m		117

CIRCULATION DATA		
Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Pump Cap	16.176 L/stk	16.176 L/stk
Pump stk/min	65@97%	75@97%
Flow Rate	2265 L/min	
Bottoms Up	28.1 min	3938 stk
Total Circ Time	69 min	9659 stk
Circulating Pressure	11307 kPa	

MUD PROPERTIES

Sample From		lowLine@20:4	Pit #4@02:00
Flow Line Temp	°C	17	n/a
Depth/TVD	m	835/835	824/824
Mud Weight	sp.gr.	1.2@17°C	1.22@20°C
Funnel Viscosity	s/L	49	55
Rheology Temp	°C	49	49
R600/R300		44/32	54/38
R200/R100		25/19	31/22
R6/R3		6/4	7/6
PV	cP	12	16
YP	Pa	10.	11.
10s/10m/30m Gel	Pa	5/7/8	6/8/9
API Fluid Loss	cc/30 min	6	5
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	8	6
Oil/Water	%Vol	/92	/94
Sand	%Vol	0.2	-
MBT	kg/m³	5	-
pH		9.7	9
Alkal Mud (Pm)		0.35	0.5
Pf/Mf		0.2/0.4	0.3/0.5
Chlorides	mg/l	27000	30000
Hardness Ca	mg/l	240	100
KCl	Wt%	5.5	5.5
PHPA	ppb	0.5	0.5
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DEFOAM A	5 GA CN	1.00
DUO-VIS	25 KG BG	10.00
POLYPAC UL	25 KG BG	13.00
KWIKSEAL MEDIUM	40 LB BG	1.00
KCl BB	1 MT BG	2.00
MI BAR (Bulk)	1 MT BG	15.00
MI Gel (Bulk)	1 MT BG	8.00
MAGNAFLOC 5250	25 KG BG	6.00

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 165	5
Shaker 2	3 x 165, 1 x 18	5
Shaker 3	4 x 84	5
Shaker 4	4 x 84	5
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

Pumped 8m3 PHG sweep prior to displacing to KCl/PHPA mud while drilling casing shoe.

REMARKS

Drilled out cement to 810 m, pumped 50bbl PHG sweep and displaced to KCl/PHPA mud. Drilled remainder of cement shoe and 3m of new formation. Conditioned mud then conducted FIT , established EMW 14.2 ppg. Continued to drill 8 1/2" interval.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ 1.1	np/na Values	0.459/0.444
Drilling	6	Water Added	31.7	KCl	2./ 51.9	kp/ka (Pa·s^n)	1.945/2.067
Tripping	18	Mud Received	0	Low Gravity	1.3/ 34.6	Bit Loss (kPa / %)	2124 / 18.8
Non-Productive Tim		Dumped	5.5	Bentonite	.1/ 1.6	Bit HHP (kWatt / HSI)	80 / 1.9
		Shakers	0.6	Drill Solids	1.2/ 30.5	Bit Jet Vel (m/s)	57
		Evaporation	0	Weight Material	4.7/ 195.5	Ann. Vel DP (m/min)	34.71
		Solids Control	0	Chemical Conc	- / 2.5	Ann. Vel DC (m/min)	148.43
		Formation	0	Inert/React	5.4186	Crit Vel DP (m/min)	76
		Left in Hole	0	Average SG	3.82	Crit Vel DC (m/min)	111
		Sweeps	15.9	Carb/BiCarb (m mole/L)	3.9/ 3.9	ECD @ 919 (sp.gr.)	1.23

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 10,185.61	$ 49,091.40

WATER-BASED MUD REPORT No. 6

Date	29/10/2005	**Depth/TVD**	1569 m / 1569 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Drilling 8 1/2"

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm Smith S73VPX		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 6x15 / 1/32"		762mm @112m (112TVD)	84.2	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	16.176 L/stk	16.176 L/stk
127 mm	1305 m	340mm @816m (816TVD)	90	Pump stk/min	65@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	2265	L/min
127 mm	108 m	mm @2610m (2610TVD)	174.2	Bottoms Up	35.6 min	4987 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	76.9 min	10765 stk
165 mm	156 m		164.5	Circulating Pressure	14100 kPa	

MUD PROPERTIES

Sample From		low Line@21:	Pit#3@09:00
Flow Line Temp	°C	37	36
Depth/TVD	m	1541/1541	1236/1236
Mud Weight	sp.gr.	1.2@21°C	1.21@20°C
Funnel Viscosity	s/L	55	62
Rheology Temp	°C	49	49
R600/R300		54/40	58/44
R200/R100		32/24	37/27
R6/R3		7/5	10/8
PV	cP	14	14
YP	Pa	13.	15.
10s/10m/30m Gel	Pa	6/13/19	9/14/18
API Fluid Loss	cc/30 min	5.6	5.2
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	9	9
Oil/Water	%Vol	/91	/91
Sand	%Vol	0.6	0.5
MBT	kg/m³	15	10
pH		9	9.3
Alkal Mud (Pm)		0.25	1.0
Pf/Mf		0.15/0.3	0.2/0.6
Chlorides	mg/l	34000	34000
Hardness Ca	mg/l	280	200
KCl	Wt%	7	6
PHPA	ppb	1	0.7
Glydrill	%		
Sulphite Excess	mg/l	50	250

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DEFOAM A	5 GA CN	6.00
DUO-VIS	25 KG BG	27.00
OS-1	25 KG BG	12.00
POLYPAC UL	25 KG BG	27.00
SODIUM BICARBONATE	25 KG BG	3.00
POTASSIUM HYDROXIDE	25 KG CN	7.00
KCl BB	1 MT BG	20.00
POLY PLUS DRY	25 KG BG	20.00
MAGNAFLOC 5250	25 KG BG	8.00

SOLIDS EQUIP	Size	Hr
Shaker 1	4 x 165	24
Shaker 2	4 x 165	24
Shaker 3	4 x 145	24
Shaker 4	4 x 165	24
D-Sander		0
D-Silter		1
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

Added Duovis to active to boost low end rheology. Adding KCl & PHPA to increase inhibition to programmed specifications. Adding OS-1 as per programme. Replaced used screens with new 12 x 165 mesh and 4 x 145 mesh. Added 0.5 ppb Polypac UL to reduce fluid loss. Ran desilter to reduce mud weight (13.8 ppg output). Cuttings becoming more indistinct & mushy - MBT still low.

REMARKS

Drilling ahead from 916 to 1462m. Change out saver sub. Drill ahead to 1569m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	1	Oil Added	0	NaCl	./ -.7	np/na Values	0.433/0.447
Drilling	23	Water Added	75.1	KCl	2.6/ 67.7	kp/ka (Pa·s^n)	2.868/2.572
Tripping		Mud Received	0	Low Gravity	2./ 52.8	Bit Loss (kPa / %)	2124 / 15.1
Non-Productive Tim		Dumped	0	Bentonite	.4/ 11.5	Bit HHP (kWatt / HSI)	80 / 1.9
		Shakers	17.8	Drill Solids	1.3/ 31.3	Bit Jet Vel (m/s)	57
		Evaporation	0.5	Weight Material	4.4/ 183.9	Ann. Vel DP (m/min)	87.78
		Solids Control	3.1	Chemical Conc	- / 10.	Ann. Vel DC (m/min)	132.53
		Formation	0	Inert/React	1.8549	Crit Vel DP (m/min)	108
		Left in Hole	0	Average SG	3.66	Crit Vel DC (m/min)	125
		Sweeps	0	Carb/BiCarb (m mole/L)	3./ 15.	ECD @ 1569 (sp.gr.)	1.26

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 24,074.70	$ 73,166.10

WATER-BASED MUD REPORT No. 7

Date	30/10/2005	**Depth/TVD**	1914 m / 1914 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Drilling 8 1/2"

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm Smith S73VPX		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 6x15 / 1/32"		762mm @112m (112TVD)	93.8	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	16.176 L/stk	16.176 L/stk
127 mm	1650 m	340mm @816m (816TVD)	90	Pump stk/min	65@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	2265 L/min	
127 mm	108 m	mm @2610m (2610TVD)	183.8	Bottoms Up	39.6 min	5537 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	81.1 min	11359 stk
165 mm	156 m		149.1	Circulating Pressure	17440 kPa	

MUD PROPERTIES

Sample From		F/Line@21:00	Pit#3@09:00
Flow Line Temp	°C	44	40
Depth/TVD	m	1854/1854	1662/1662
Mud Weight	sp.gr.	1.22@35°C	1.22@20°C
Funnel Viscosity	s/L	61	54
Rheology Temp	°C	49	49
R600/R300		79/57	64/48
R200/R100		47/35	39/29
R6/R3		9/7	8/6
PV	cP	22	16
YP	Pa	17.5	16.
10s/10m/30m Gel	Pa	8/16/22	8/12/19
API Fluid Loss	cc/30 min	4.4	5.6
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	10	10
Oil/Water	%Vol	/90	/90
Sand	%Vol	0.2	0.25
MBT	kg/m³	30	20
pH		9	9.2
Alkal Mud (Pm)		0.5	0.9
Pf/Mf		0.2/0.4	0.2/0.7
Chlorides	mg/l	47000	47000
Hardness Ca	mg/l	320	240
KCl	Wt%	8	8
PHPA	ppb	1.3	1.3
Glydrill	%	3	nil
Sulphite Excess	mg/l	100	50

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DEFOAM A	5 GA CN	1.00
DUO-VIS	25 KG BG	10.00
OS-1	25 KG BG	9.00
POLYPAC UL	25 KG BG	20.00
POTASSIUM HYDROXIDE	25 KG CN	9.00
KCl BB	1 MT BG	6.00
POLY PLUS DRY	25 KG BG	13.00
GLYDRIL LC	55 GA DM	16.00
GLYDRIL MC	220 KG DM	4.00

SOLIDS EQUIP	Size	Hr
Shaker 1	3 x 165, 1x 120	22
Shaker 2	2 x 165, 2 x 12	24
Shaker 3	2 x 145, 2 x 12	24
Shaker 4	4 x 165	24
D-Sander		0
D-Silter		3.5
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

Increased KCl content & PHPA in active to 8+% & 3.7kg/m3 as encountering bit balling. Pumped 8m3 seawater to clear bit balling - did not improve conditions. Ran desilter for 3 1/2hrs but losing too much mud so turned off. Losing some mud over shakers particularly when starting booster pump. Changed out 165 shaker screen shaker 1. Replaced worn screens with 1 x 145 mesh and 6 x 120 mesh. Added 2% Glydril LC into active at approx 1800m. Maintaining 3% Glycol with Glydril MC.

REMARKS

Drill ahead from 1569 to 1914m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	.3/ 10.6	np/na Values	0.471/0.459
Drilling	24	Water Added	0	KCl	3./ 77.9	kp/ka (Pa·s^n)	3.226/3.533
Tripping		Mud Received	0	Low Gravity	2.8/ 71.7	Bit Loss (kPa / %)	2159 / 12.4
Non-Productive Tim		Dumped	0	Bentonite	1./ 26.	Bit HHP (kWatt / HSI)	81 / 1.9
		Shakers	5.8	Drill Solids	1.4/ 35.6	Bit Jet Vel (m/s)	57
		Evaporation	0	Weight Material	3.9/ 164.3	Ann. Vel DP (m/min)	87.78
		Solids Control	8	Chemical Conc	- / 10.	Ann. Vel DC (m/min)	132.53
		Formation	0	Inert/React	1.0556	Crit Vel DP (m/min)	136
		Left in Hole	0	Average SG	3.5	Crit Vel DC (m/min)	159
		Sweeps	0	Carb/BiCarb (m mole/L)	4./ 20.	ECD @ 1914 (sp.gr.)	1.31

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 23,158.54	$ 96,324.64

WATER-BASED MUD REPORT No. 8

Date	31/10/2005	**Depth/TVD**	2554 m / 2554 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Drilling 8 1/2"

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)
Bit Size 216 mm Smith S73VPX		Surface	Hole
Nozzles 6x15 / 1/32"		762mm @112m (112TVD)	111.6
Drill Pipe Size	Length	Intermediate	Active Pits
127 mm	2290 m	340mm @816m (816TVD)	88.2
Drill Pipe Size	Length	Intermediate	Total Circulating Vol
127 mm	108 m	mm @2610m (2610TVD)	199.8
Drill Collar Size	Length	Production or Liner	In Storage
165 mm	156 m		143.8

CIRCULATION DATA		
Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Pump Cap	16.176 L/stk	16.176 L/stk
Pump stk/min	65@97%	75@97%
Flow Rate	2265 L/min	
Bottoms Up	46.8 min	6558 stk
Total Circ Time	88.2 min	12347 stk
Circulating Pressure	20700 kPa	

MUD PROPERTIES

Sample From		F/Line@21:00	Pit#3@09:00
Flow Line Temp	°C	49	60
Depth/TVD	m	2470/2470	2095/2095
Mud Weight	sp.gr.	1.22@49°C	1.22@35°C
Funnel Viscosity	s/L	67	62
Rheology Temp	°C	49	49
R600/R300		89/63	82/60
R200/R100		52/38	51/38
R6/R3		10/8	10/8
PV	cP	26	22
YP	Pa	18.5	19.
10s/10m/30m Gel	Pa	9/19/27	9/21/27
API Fluid Loss	cc/30 min	4.8	4.8
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	14	11
Oil/Water	%Vol	/86	/89
Sand	%Vol	0.6	0.75
MBT	kg/m³	42	34
pH		8.9	9.1
Alkal Mud (Pm)		0.5	0.7
Pf/Mf		0.1/0.2	0.12/0.7
Chlorides	mg/l	47000	45000
Hardness Ca	mg/l	360	240
KCl	Wt%	7.5	7.5
PHPA	ppb	1.2	1.2
Glydrill	%	2.5	2.5
Sulphite Excess	mg/l	50	100

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DUO-VIS	25 KG BG	10.00
OS-1	25 KG BG	11.00
POLYPAC UL	25 KG BG	20.00
POTASSIUM HYDROXIDE	25 KG CN	8.00
KCl BB	1 MT BG	10.00
POLY PLUS DRY	25 KG BG	17.00
GLYDRIL MC	220 KG DM	4.00
GSEAL	25 KG BG	63.00

SOLIDS EQUIP	Size	Hr
Shaker 1	2x180,2x120	24
Shaker 2	2x180,2x145	24
Shaker 3	1x200,3x145	24
Shaker 4	4x145	24
D-Sander		0
D-Silter		3
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

Added PHPA to active - saw increase in fine sludge at shakers. Adding Glydril to increase conc to 2.5-3%. Added 3ppb G-seal to active at 2200m. Replaced worn screens with 7 x 180 and 7 x 145 mesh. Maintaining mud weight and properties with addition of premix. Some down hole losses occured at 2250 m (20bbls), these healed naturally. Losing 30bbls/hr while running desilter UF-10.6ppg

REMARKS

Continued to drill 8 1/2" hole from 1914 to 2554m

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	.5/ 15.3	np/na Values	0.498/0.444
Drilling	24	Water Added	48.6	KCl	2.6/ 67.5	kp/ka (Pa·s^n)	3.003/4.135
Tripping		Mud Received	0	Low Gravity	10.6/ 275.7	Bit Loss (kPa / %)	2159 / 10.4
Non-Productive Tim		Dumped	1	Bentonite	.5/ 14.	Bit HHP (kWatt / HSI)	81 / 1.9
		Shakers	24.3	Drill Solids	10.1/ 251.6	Bit Jet Vel (m/s)	57
		Evaporation	2	Weight Material	.3/ 13.8	Ann. Vel DP (m/min)	87.78
		Solids Control	15	Chemical Conc	- / 10.	Ann. Vel DC (m/min)	132.53
		Formation	3.1	Inert/React	5.3258	Crit Vel DP (m/min)	144
		Left in Hole	0	Average SG	2.55	Crit Vel DC (m/min)	166
		Sweeps	0	Carb/BiCarb (m mole/L)	2./ 12.6	ECD @ 2554 (sp.gr.)	1.32

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 19,098.61	$ 115,423.25

WATER-BASED MUD REPORT No. 9

Date	1/11/2005	**Depth/TVD**	2610 m / 2610 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Slip & Cut

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm Smith S73VPX		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 6x15 / 1/32"		762mm @112m (112TVD)	142	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	16.176 L/stk	16.176 L/stk
127 mm	m	340mm @816m (816TVD)	71.4	Pump stk/min	65@97%	75@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	2265 L/min	
127 mm	m	mm @2610m (2610TVD)	71.4	Bottoms Up	min 0 stk	
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	31.5 min 4413 stk	
165 mm	m		128.9	Circulating Pressure	20700 kPa	

MUD PROPERTIES

Sample From		Pit #3@03:00	
Flow Line Temp	°C	60	
Depth/TVD	m	2610/2610	
Mud Weight	sp.gr.	1.23@45°C	
Funnel Viscosity	s/L	71	
Rheology Temp	°C	49	
R600/R300		88/63	
R200/R100		52/37	
R6/R3		10/7	
PV	cP	25	
YP	Pa	19.	
10s/10m/30m Gel	Pa	9/21/30	
API Fluid Loss	cc/30 min	4.2	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	13	
Oil/Water	%Vol	/87	
Sand	%Vol	0.25	
MBT	kg/m³	43	
pH		9.5	
Alkal Mud (Pm)		1.1	
Pf/Mf		0.1/0.7	
Chlorides	mg/l	50000	
Hardness Ca	mg/l	240	
KCl	Wt%	8.5	
PHPA	ppb	1.3	
Glydrill	%	2.8	
Sulphite Excess	mg/l	250	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
OS-1	25 KG BG	2.00
POLYPAC UL	25 KG BG	5.00
POTASSIUM HYDROXIDE	25 KG CN	2.00
MI BAR (Bulk)	1 MT BG	26.50
POLY PLUS DRY	25 KG BG	3.00
GLYDRIL LC	55 GA DM	4.00

SOLIDS EQUIP	Size	Hr
Shaker 1	2x180,2x120	6
Shaker 2	2x180,2x145	6
Shaker 3	1x200,3x145	6
Shaker 4	4x145	6
D-Sander		0
D-Silter		3
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

G-Seal additions ceased as no evidence of substantial coal seams and no cavings. Added Polyplus/PolyPAC/Glydrill to maintain properties as drilling to TD.

REMARKS

Drilled to TD at 2610m, circulated until hole clean. Pull 5 stds to 2468m. Backream tight hole to 2239m - max o/pull 50k. Circulate & work pipe through 2210 to 2181m. Pump slug & POOH, work through tight spots at 1273m & 910m. L/d MWD, R/UP wireline & run log#1 c/stat- gr. R/d wireline & slip & cut.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	1.5	Oil Added	0	NaCl	.3/ 10.6	np/na Values	
Drilling	1.5	Water Added	0	KCl	3.1/ 80.6	kp/ka (Pa·s^n)	
Tripping	11.5	Mud Received	0	Low Gravity	7.7/ 199.9	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	0	Bentonite	1./ 24.9	Bit HHP (kWatt / HSI)	
Condition Mud	1.5	Shakers	4.1	Drill Solids	6.5/ 163.	Bit Jet Vel (m/s)	
Wireline Logs	8	Evaporation	0	Weight Material	1.9/ 78.2	Ann. Vel DP (m/min)	
		Solids Control	4.5	Chemical Conc	- / 12.	Ann. Vel DC (m/min)	
		Formation	0	Inert/React	3.369	Crit Vel DP (m/min)	
		Left in Hole	0	Average SG	2.83	Crit Vel DC (m/min)	
		Sweeps	0	Carb/BiCarb (m mole/L)	2./ 3.1		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 8,523.38	$ 123,946.63

WATER-BASED MUD REPORT No. 10

Date	2/11/2005	**Depth/TVD**	2610 m / 2610 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	P&A

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		762mm @112m (112TVD)	140.2(Tot)/66.8(Bit)	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	16.176 L/stk	16.176 L/stk
89 mm	760 m	340mm @816m (816TVD)	66	Pump stk/min	93@97%	92@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	2993 L/min	
127 mm	m	mm @2610m (2610TVD)	132.8	Bottoms Up	21.3 min	3947 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	44.4 min	8207 stk
165 mm	m		139.3	Circulating Pressure	20700 kPa	

MUD PROPERTIES

Sample From		B/up@08:30	
Flow Line Temp	°C	31	
Depth/TVD	m	2610/2610	
Mud Weight	sp.gr.	1.23@25°C	
Funnel Viscosity	s/L	76	
Rheology Temp	°C	49	
R600/R300		93/69	
R200/R100		57/43	
R6/R3		12/9	
PV	cP	24	
YP	Pa	22.5	
10s/10m/30m Gel	Pa	10/15/25	
API Fluid Loss	cc/30 min	4.2	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	13	
Oil/Water	%Vol	/87	
Sand	%Vol	0.75	
MBT	kg/m³	28	
pH		8.9	
Alkal Mud (Pm)		0.8	
Pf/Mf		0.1/0.6	
Chlorides	mg/l	48000	
Hardness Ca	mg/l	240	
KCl	Wt%	6	
PHPA	ppb	1.0	
Glydrill	%	2.5	
Sulphite Excess	mg/l	50	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CAUSTIC SODA	25 KG DM	3.00
GLUTE 25	25 LT CN	2.00
OS-1	25 KG BG	5.00
SAFE-COR	55 GA DM	1.00

SOLIDS EQUIP	Size	Hr
Shaker 1	2x180,2x120	7
Shaker 2	2x180,2x145	7
Shaker 3	1x200,3x145	7
Shaker 4	4x145	7
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	1.2
Viscosity	6rpm 8-10
Filtrate	<5

REMARKS AND TREATMENT

Observed ~0.5m3 cement strung out in mud on bottoms up from plug 1. Dumped cement & contaminated mud overboard. No cement contamination detected after plug 2. Pumped 8m3 PHG pill at 1040m. Dumped 1m3 1.74sg contaminated mud when reverse circulating after plug 3. Added Safecor and OS-1 to active to displace casing prior to plug 4.

REMARKS

RIH with 2 7/8" stinger & P&A as per Apache program. Pump cement plug 1 at 2610m, POOH to 2380m & circ bttms up, dumping contaminated mud. Pumped cement plug 2, POOH to 2100m & circ bttms up. POOH to 1040m, circ bttms up & spot 8m3 HiVis pill. POOH to 860m, pump cement plug 3. POOH to 760m & reverse circ, dump cement. POOH lay down 5" DP & 2 7/8" tubing. RIH 5" DP

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	1	Oil Added	0	NaCl	.8/ 26.1	np/na Values	0.431/0.446
Drilling		Water Added	0	KCl	2.1/ 56.	kp/ka (Pa·s^n)	5.020/4.639
Tripping	16	Mud Received	0	Low Gravity	8.4/ 218.4	Bit Loss (kPa / %)	/
Non-Productive Tim		Dumped	21.6	Bentonite	.2/ 5.7	Bit HHP (kWatt / HSI)	/
Condition Mud	4	Shakers	0	Drill Solids	8./ 200.7	Bit Jet Vel (m/s)	
Cementing	3	Evaporation	0	Weight Material	1.7/ 69.5	Ann. Vel DP (m/min)	15.61
		Solids Control	0	Chemical Conc	- / 12.	Ann. Vel DC (m/min)	41.74
		Formation	0	Inert/React	6.3722	Crit Vel DP (m/min)	101
		Left in Hole	0	Average SG	2.78	Crit Vel DC (m/min)	120
		Sweeps	0	Carb/BiCarb (m mole/L)	2./ 12.6	ECD @ 760 (sp.gr.)	1.26

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 940.95	$ 124,887.58

WATER-BASED MUD REPORT No. 11

Date	3/11/2005	**Depth/TVD**	2610 m / 2610 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Recover BOPs

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		762mm @112m (112TVD)	142	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	L/stk	L/stk
89 mm	m	340mm @816m (816TVD)		Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	L/min	
127 mm	m	mm @2610m (2610TVD)		Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
165 mm	m			Circulating Pressure		

MUD PROPERTIES

Sample From		Pit 3@10:00	
Flow Line Temp	°C	n/a	
Depth/TVD	m	750/750	
Mud Weight	sp.gr.	1.21@30°C	
Funnel Viscosity	s/L	74	
Rheology Temp	°C	49	
R600/R300		96/74	
R200/R100		59/45	
R6/R3		15/13	
PV	cP	22	
YP	Pa	26.	
10s/10m/30m Gel	Pa	13/18/30	
API Fluid Loss	cc/30 min	5.6	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	13	
Oil/Water	%Vol	/87	
Sand	%Vol	0.5	
MBT	kg/m³	34	
pH		10.5	
Alkal Mud (Pm)		1.4	
Pf/Mf		0.5/1.2	
Chlorides	mg/l	48000	
Hardness Ca	mg/l	480	
KCl	Wt%	7	
PHPA	ppb	0.7	
Glydrill	%	2.5	
Sulphite Excess	mg/l	400	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
DEFOAM A	5 GA CN	1.00

SOLIDS EQUIP	Size	Hr
Shaker 1	2x180,2x120	5
Shaker 2	2x180,2x145	5
Shaker 3	1x200,3x145	5
Shaker 4	4x145	5
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	
Viscosity	
Filtrate	

REMARKS AND TREATMENT

Left 40m3 Inhibited Mud in 13 3/8" casing from 750m to 250m. All mud in surface pits has been dumped.

REMARKS

WOC - lay down excess DP. RIH with 5" mule shoe, tag cement @756m, pressure test @1000psi. Displace hole to inhibited mud. POH sideways to 250m. Spot 8m3 HiVis pill. POH to 160m & displace well to seawater. Set cement plug 4. Reverse circ @100m. Lay down excess DP/DC. Jet BOp & recover wearbush

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	.8/ 26.1	np/na Values	
Drilling		Water Added	0	KCl	2.1/ 56.	kp/ka (Pa·s^n)	
Tripping	20	Mud Received	0	Low Gravity	9./ 233.7	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	223.5	Bentonite	.4/ 10.5	Bit HHP (kWatt / HSI)	
Condition Mud	1	Shakers	0	Drill Solids	8.5/ 211.2	Bit Jet Vel (m/s)	
Testing	0.5	Evaporation	0	Weight Material	1.1/ 44.8	Ann. Vel DP (m/min)	
Cementing	0.5	Solids Control	0	Chemical Conc	- / 12.	Ann. Vel DC (m/min)	
BOP NU	2	Formation	0	Inert/React	5.5212	Crit Vel DP (m/min)	
		Left in Hole	97.5	Average SG	2.68	Crit Vel DC (m/min)	
		Sweeps	0	Carb/BiCarb (m mole/L)	9.7/ 1.5		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 73.98	$ 124,961.56

WATER-BASED MUD REPORT No. 12

Date	4/11/2005	**Depth/TVD**	2610 m / 2610 m
Spud Date	24/10/2005	**Mud Type**	KCl/PHPA
Water Depth	57	**Activity**	Anchor Handling

Operator : Apache Energy Ltd
Report For : John Herriot/Duane Selman
Well Name : Fur Seal-1
Contractor : Diamond Offshore
Report For : Paul Baker/Mike Praznik

Field/Area : Gippsland
Description : Vertical Exploration
Location : Vic/P54
M-I Well No. : 28765

DRILLING ASSEMBLY		CASING	MUD VOLUME (m³)	CIRCULATION DATA		
Bit Size 216 mm		Surface	Hole	Pump Make	NATIONAL 12P-160	NATIONAL 12P-160
Nozzles 1/32"		762mm @112m (112TVD)	142	Pump Size	52.4 X 304.8mn	152.4 X 304.8mm
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	L/stk	L/stk
89 mm	m	340mm @816m (816TVD)		Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	L/min	
127 mm	m	mm @2610m (2610TVD)		Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
165 mm	m			Circulating Pressure		

MUD PROPERTIES

Sample From			
Flow Line Temp	°C		
Depth/TVD	m		
Mud Weight	sp.gr.		
Funnel Viscosity	s/L		
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	Pa		
10s/10m/30m Gel	Pa		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	kg/m³		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	Wt%		
PHPA	ppb		
Glydrill	%		
Sulphite Excess	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt

SOLIDS EQUIP	Size	Hr
Shaker 1		0
Shaker 2		0
Shaker 3		0
Shaker 4		0
D-Sander		0
D-Silter		0
Centrifuge		0

MUD PROPERTY SPECIFICATIONS

Weight	
Viscosity	
Filtrate	

REMARKS AND TREATMENT

Cleanout mud pits & flush solids control equipment.

REMARKS

Pull BOP stack. Cut 20" & recover wellhead. Commence deballast & anchor handling.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(m³)	SOLIDS ANALYSIS (%/kg/m³)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	24	Oil Added	0	NaCl	.8/	np/na Values	
Drilling		Water Added	0	KCl	/	kp/ka (Pa·s^n)	
Tripping		Mud Received	0	Low Gravity	/	Bit Loss (kPa / %)	
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP (kWatt / HSI)	
		Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	
		Evaporation	0	Weight Material	/	Ann. Vel DP (m/min)	
		Solids Control	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Formation	0	Inert/React		Crit Vel DP (m/min)	
		Left in Hole	0	Average SG		Crit Vel DC (m/min)	
		Sweeps	0	Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Joe McLaughlin Glen Sharpe 08-9302 3790			$ 0.00	$ 124,961.56

APACHE ENERGY LIMITED

CASING RECORD

Well Name:	Fur Seal-1	RIG:	Ocean Patriot	PERMIT:	VIC-54P	DATE:	24-Oct-05
HOLE SIZE (mm):	914	CASING (mm):	762	RT-s'bed (m):	80.10		
TD (m):	113.7	Shoe @ (m):	113.7	RT-MLS(m):	0.00		
TVD (m)	113.7			WellHead (m):	0.00		

JTS	SIZE mm	Weight Kg/m	Grade	Conn	Burst (kpa)	Collapse (kpa)	Tensile Yield (t)
4	762	461.3	X52	SF60	22964	10893	2149728

MILL CERTIFICATE Nos./PO's

DESCRIPTION	Length (m)	Bottom (mRT)	Top (mRT)
Shoe Joint - 20" x 30"	11.12	113.70	102.58
Intermediate Joint	12.00	102.58	90.58
Lower HAC	7.30	90.58	83.28
Upper HAC	4.65	83.28	78.63
RT - 30" Housing	78.63	78.63	0.00
Total length	113.70		

Run time (hrs):	1	Running speed min/joint:	10

CENTRALISER DETAILS:	Semi rigid	Rigid	Bow	Turbolisers	Other
Number installed:	-	-	-	-	
Interval (m):	-	-	-	-	

Pip Tag (mRT):		MLS Depth:	0.00	MLS length (m):	

Total Casing on Board:	4	Casing Damage Details:	
Total Casing Run in Hole:	4		
Total Casing Leftover:	0		

Pup Joints:	0	Number Run:	0	No. returned:	0

Equipment used:			
Service Company:	Dril-Quip	No. of Personnel:	1

Comments

Washed casing down for last 5m.

Supervisors:	J. Herriot / D. Selman	

APACHE ENERGY LIMITED

CASING RECORD

Well Name:	Fur Seal-1	RIG:	Ocean Patriot	PERMIT:	VIC-54P	DATE:	26-Oct-05
HOLE SIZE (mm):	406	CASING (mm):	340	RT-s'bed (m):	80.10		
TD (m):	824	Shoe @ (m):	817.604	RT-MLS(m):	0.00		
TVD (m)	824			WellHead (m):	77.20		

JTS	SIZE mm	Weight Kg/m	Grade	Conn	Burst (kpa)	Collapse (kpa)	Tensile Yield (t)
66	340	101.2	X52	BTC	34574	15592	705989

MILL CERTIFICATE Nos./PO's

DESCRIPTION	Length (m)	Bottom (mRT)	Top (mRT)
Shoe Joint	12.49	817.60	805.11
Intermediate Joint	12.57	805.11	792.55
Float Collar Joint	13.02	792.55	779.53
56 x L80 Joints	690.72	779.53	88.81
XO Joint	3.04	88.81	85.77
Wellhead Joint	8.90	85.77	76.87
RT - Top Wellhead	76.87	76.87	0.00
Total length	817.61		
Run time (hrs): 4	Running speed min/joint:		4

CENTRALISER DETAILS:	Semi rigid	Rigid	Bow	Turbolisers	Other
Number installed:	-	-	3	-	
Interval (m):	-	-	780-817	-	

Pip Tag (mRT):	MLS Depth: 0.00	MLS length (m):	

Total Casing on Board:	66	Casing Damage Details:	
Total Casing Run in Hole:	59		
Total Casing Leftover:	7		

Pup Joints:	0	Number Run:	0	No. returned:	0

Equipment used:

Service Company: Weatherford No. of Personnel: 3

Comments

Casing run without incident.

Supervisors: J. Herriot / D. Selman

APACHE ENERGY LIMITED

WELL CEMENTING REPORT

WELL #	Fur Seal-1	PERMIT #	VIC-54P	Rig Name:	Ocean Patri	Date:	24-Oct-05

Last Csg (mm):	0	Set at (m):	0.00	Wt (kg/m):	0	Grade:	0
This Csg (mm):	762	Set at (m):	113.70	Wt (kg/m):	101	Grade:	X52
Hole size (mm):	914	Depth (m):	113.70				
Cement Co:	Dowell	Cementer:	W. Comben	Co Reps:	J. Herriot / D. Selman		

Mud type:	PHG	Density (sg):	1.06	Visc(secs):	>120	Yield Pt:	

Cement Data

Source Details:							
Lead from (m):		Lead to (m):		Excess		Cement type:	
Density (sg):		Yield Ratio		Sacks No:		Slurry m^3:	
Additives:							
Tail from (m):	78.12	Tail to (m):	113.7	Excess	200	Cement type:	Glass G
Density (sg):	1.90	Yield Ratio	1.19	Sacks No:	800	Slurry m^3:	27
Additives:	0.01 gps D175						
Pre-flush type:	SW	Density(sg):	1.02	Vol (m^3)	9.5		
Cement Volume:							
Caliper (mm):	914				Total Cement Volume (m^3):		27

Mix water data

Lead Type:		Density(sg):		Lt/sx:		Vol m^3:	
Base chlorides:		Additives:					
Tail Type:	SW	Density(sg):	1.02	Lt/sx:	20.22	Vol m^3:	16.20
Base chlorides:		Additives:					

Displacement Details

	Behind (m^3)	Displ (m^3)
Cement Pump		2.4
Rig Pump		
Rate (m3/m)		0.8
Theoretical Volume (m^3)	2.40	

Job Time Details

	lead	tail
Lab. Test "t" time		3:50
Exposure Time		
Actual VolumePumped (m^3)	2.40	

Job Summary:

Operation	time (hr)	Rate (m3/m)	kPa
Broke circulation with Dowell	12:30	0.8	1,200
Conductor pumped off bottom - 2m , circulated back down			
Pumped flouroscene	12:45	0.8	1,200
Mixed & pumped 27m3 of 1.9 sg slurry	12:50	0.8	1,200
Displaced with s/water	13:30	1.6	1,500

Comments:

Full returns throughout cement job, good indication of cement at seafloor.

APACHE ENERGY LIMITED

WELL CEMENTING REPORT

WELL #	Fur Seal-1	PERMIT #	VIC-54P	Rig Name:	Ocean Patri	Date:	26-Oct-05

Last Csg (mm):	762	Set at (m):	113.70	Wt (kg/m):	461	Grade:	X52
This Csg (mm):	340	Set at (m):	817.60	Wt (kg/m):	101	Grade:	L80
Hole size (mm):	406	Depth (m):	824.00				
Cement Co:	Dowell	Cementer:	P. Mew	Co Reps:	J. Herriot / D. Selman		

Mud type:	PHG	Density (sg):	1.06	Visc(secs):	>120	Yield Pt:	

Cement Data

Source Details:							
Lead from (m):	300	Lead to (m):	650	Excess	50	Cement type:	Class G
Density (sg):	1.5	Yield Ratio	2.23	Sacks No:	327	Slurry m^3:	21
Additives:	0.01 gps D175, 0.01 gps D75						
Tail from (m):	650	Tail to (m):	817.6	Excess	50	Cement type:	Glass G
Density (sg):	1.90	Yield Ratio	1.18	Sacks No:	357	Slurry m^3:	12
Additives:	0.01 gps D175						
Pre-flush type:	SW	Density(sg):	1.02	Vol (m^3)	3.2		
Cement Volume:							
Caliper (mm):	406				Total Cement Volume (m^3):		33

Mix water data

Lead Type:	SW	Density(sg):	1.02	Lt/sx:	48.20	Vol m^3:	16.40
Base chlorides:		Additives:					
Tail Type:	SW	Density(sg):	1.02	Lt/sx:	20.10	Vol m^3:	7.00
Base chlorides:		Additives:					

Displacement Details

	Behind (m^3)	Displ (m^3)
Cement Pump	1.6	
Rig Pump		54.70
Rate (m3/m)	0.8	2.4
Theoretical Volume (m^3)	55.60	

Job Time Details

	lead	tail
Lab. Test "t" time	5:49	3:10
Exposure Time		

Actual VolumePumped (m^3) 56.30

Job Summary:

Operation	time (hr)	Rate (m3/m)	kPa
Pumped 1.6m3 SW	14:57	0.8	880
Pressure tested lines to 27,580 kPa	14:59		27,580
Dropped bottom dart. Pumped 1.6m3 SW - plug sheared after 0.87m3	15:03	0.8	689
Mixed and pumped 20.7m3 of 1.5sg slurry	15:15	1.3	1,889
Mixed and pumped 11.9m3 of 1.9sg slurry	15:39	0.8	1,765
Dropped top dart. Pumped 1.6m3 SW - plug sheared after 0.8m3	15:55	0.8	
Displaced cement with rig pumps	16:00	2.4	
Bumped plug and pressure tested casing to 20,685kPa for 15 mins	16:32		20,685
Bled lines - no return flow observed	16:48		
End of operation	17:09		

Comments:

Cementing operation performed without incident.

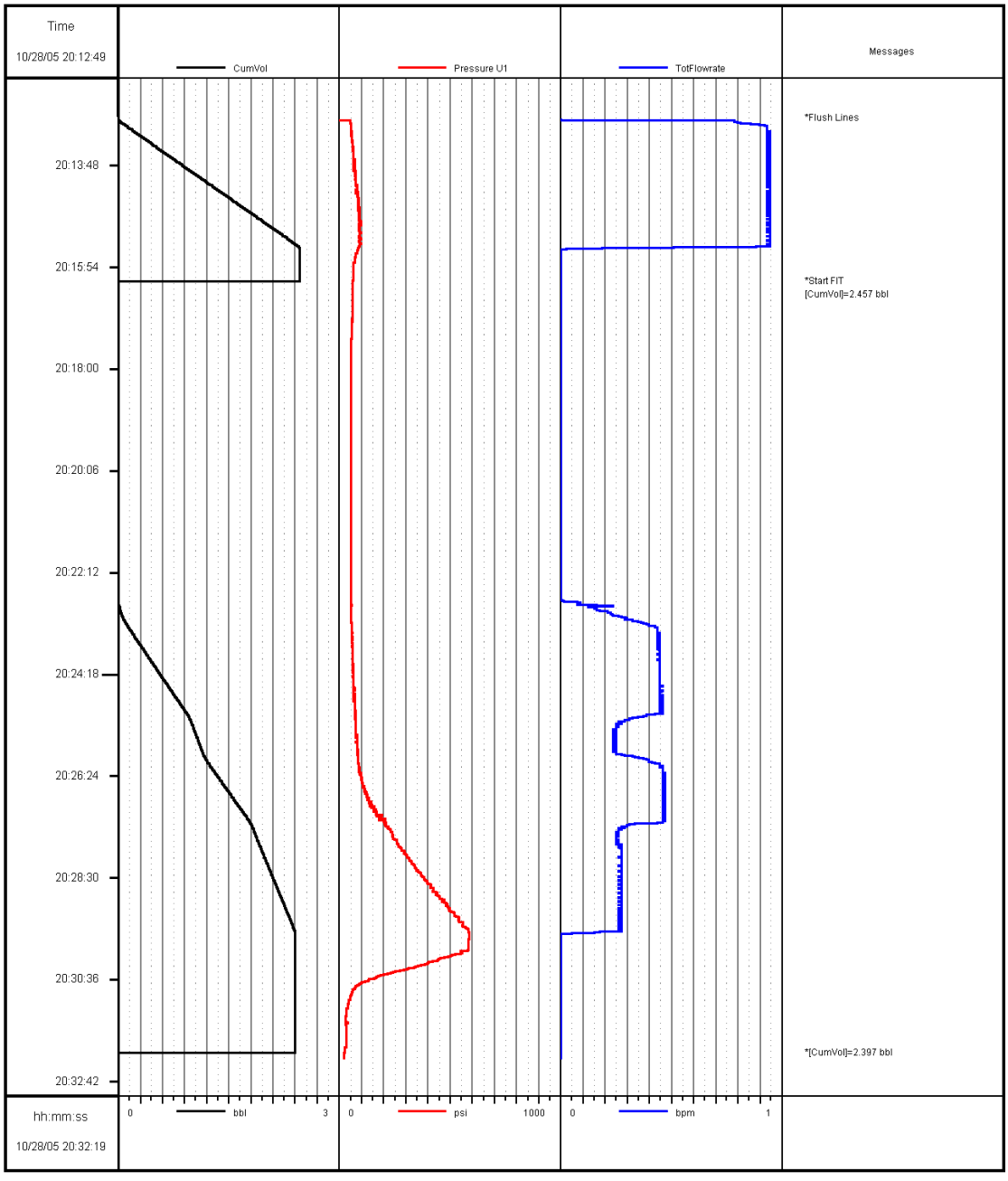
Fur Seal-1 340mm FIT Graph.bmp (1400x1900x16 bmp)

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	
Country	Australia	**Job Date**	28/10/2005 20:12:49

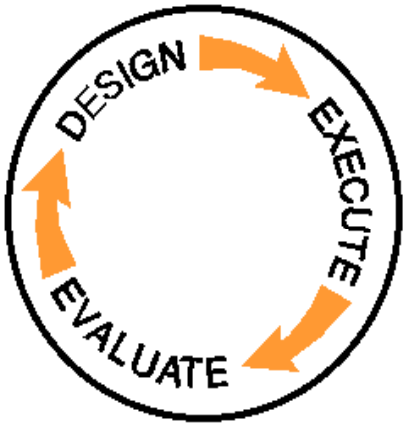


* Mark of Schlumberger

Schlumberger

Cementing End Of Well Report

Fur Seal-1



Rig	:	Ocean Patriot
Well Type	:	Exploration
Customer	:	Apache
Prepared by	:	Pam Kosarek

e-mail pkosarek@perth.oilfield.slb.com
Tel (61) - 8 – 9420 4639
Fax (61) - 8 – 9322 3110

Date	:	16 January 2006

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Well Summary

Client Representative			
No	**First Name**	**Last Name**	**Position**
1	John	Harriot	Drilling Supervisor

Dowell Supervisor			
No	**First Name**	**Last Name**	**Position**
1	Wayne	Comben	Field Specialist
2	Ameer	Moustafa	Cementing Assistant
3	Peter	Mew	Field Specialist
4	Reece	Beresford	Field Specialist

Cement Job Summary

Date	Job Type	Material/Fluid Used			Cement Slurry		Displacement		Spacer		Cement Head	Plugs	
		Material	Con.	Quantity	Density	Volume	Fluid	Volume	Type	Volume		Top	Bottom
24-Oct-05	30" Casing	G Cement D175 S001 Dye	- 0.01 gal/sk 1.0% BWOC -	805 sx 10 gal 760 lb 1kg	15.8 ppg	170 bbl	SW	15 bbl	SW	60 bbl			
26-Oct-05	13 3/8 Casing	G Cement D175 D075 D175	- 0.01 gal/sk 0.42 gal/sk 0.01 gal/sk	700 sx 7 gal 165 gal 3 gal	12.5 ppg 15.8 ppg	130 bbl 75 bbl	SW Rig Pumps	10 bbl	SW	20 bbl	DSE	1	1
2-Nov-05	Plug 1A	G Cement D047 D110 D145A D193	 0.01 gal/sk 0.012 gal/sk 0.06 gal/sk 0.75 gal/sk	285 sx 5 gal 5 gal 30 gal 228 gal	15.8 ppg	58 bbl	DW Mud	3.8 bbl 129 bbl	DW	10 bbl			
2-Nov-05	Plug 1B	G Cement D047 D110 D145A D193	 0.01 gal/sk 0.012 gal/sk 0.06 gal/sk 0.75 gal/sk	285 sx 5 gal 5 gal 30 gal 227 gal	15.8 ppg	58 bbl	DW Mud	3.8 bbl 117 bbl	DW	10 bbl			
2-Nov-05	Plug 2	G Cement D047	 0.01 gal/sk	235 sx 3 gal	15.8 ppg	48 bbl	DW Mud	3.8 bbl 38 bbl	DW	25 bbl			
3-Nov-05	Plug 3	G Cement D047	 0.01 gal/sk	140 sx 2 gal	15.8 ppg	30 bbl	DW SW	3.8 bbl 5.5 bbl	DW	10 bbl			

Miscellaneous Pumping and Pressure Testing

Job	Job Started Date	Type of Fluid	Pressure Max, Psi	Job Finished Date
Pressure Test Choke and Kill Manifold	10/22/2005	SW	5000	10/23/2005
BOP Test	10/27/2005	SW	586	10/27/2005
13 3/8" FIT	10/28/2005	SW	586	10/28/2005

END OF WELL REPORT
Fur Seal-1
JOB DESIGN & EXECUTION SUMMARY

36" HOLE / 30" CASING

1.1 Drilling/Casing:

The 36" hole was drilled to a depth of 111.7 m (seabed at 80 m) with seawater and PHB sweeps. 30" Conductor casing was run and set at 111 m with a 5" DP inner string.

1.2 Design

Single 15.8ppg tail slurry was planned to provide strong cement at the 30" shoe:

Tail Slurry
G Cement:
Seawater: 5.313 gal/sk
D047 (antifoam): 0.01 gps
S001 (accelerator): 1.0 % BWOC
Density – 15.8 ppg
Yield – 1.19 cuft/sk
Slurry Volume – 170 bbls
TOC - Seabed
Open Hole Excess – 200%

1.3 Execution

While circulating with seawater after the casing was landed, a Job Hazard Analysis with the Rig Crews and Barge Captain was performed to inform them of their job role and the potential hazards that they may face.

Job Procedure:

1) Pump 60 bbl sea water with dye
2) Mix & pump 170 bbls of tail slurry @ 15.8ppg
3) Displace with 15 bbls seawater
4) Bleed off pressure and check floats

1.4 Evaluation

Job was executed according to procedure.

16" HOLE / 13 3/8" CASING

2.1 Drilling/Casing:

16" hole was drilled to a total depth of 824 m with seawater and PHB sweeps.13 3/8" casing was run and set at 817.6 m. DeepSea EXPRES cement head was used for plug release (13 3/8" DSE top and bottom plugs) on this casing string.

2.2 Design:

Lead Slurry	Tail Slurry
G Cement	G Cement
Sea water: 12.718 gal/sk	Sea water: 5.324 gal/sk
D175 (antifoam): 0.01 gal/sk	D175 (antifoam): 0.01 gal/sk
D075 (extender): 0.42 gal/sk	
Density – 12.5 ppg	Density – 15.8 ppg
Yield – 2.23 cuft/sk	Yield – 1.18 cuft/sk
Slurry Volume – 130 bbl	Slurry Volume – 75 bbl

2.3 Execution:

After the casing was landed and cement line rigged up, a Job Hazard Analysis with the Rig Crews and Barge Captain was performed to inform them of their job role and the potential hazards that they may face.

Job Procedure:

1) Pump 10 bbl seawater with dye
2) Pressure test lines to 4000 psi
3) Drop bottom dart
4) Pump 10 bbl seawater with dye
5) Mix & pump 130 bbl of Lead slurry @ 12.5 ppg
6) Mix & pump 75 bbl of Tail slurry @ 15.8 ppg
7) Drop top dart
8) Displace with 10 bbl of seawater
9) Switch to rig pumps for final displacement
10) Bump plug and test casing for 15 minutes
11) Bleed off pressure and check floats ok

2.4 Evaluation:

Job was executed according to procedure.

WELL ABANDONMENT

3.1 Well Abandonment

After completion of the 8 1/2" hole section to 2610 m and formation evaluation, the well was abandoned using cement plugs.

3.2 Design:

Plug 1a	Plug 1b	Plug 2	Plug 3
G Cement	G Cement	G Cement	G Cement
Drill water: 4.320 gal/sk	Drill water: 4.320 gal/sk	Sea Water: 5.324 gal/sk	Sea Water: 5.324 gal/sk
D047 (antifoam): 0.01 gal/sk	D047 (antifoam): 0.01 gal/sk	D047 (antifoam): 0.01 gal/sk	D047 (antifoam): 0.01 gal/sk
D145A (dispersant): 0.06 gal/sk	D145A (dispersant): 0.06 gal/sk		
D193 (fluid loss): 0.75 gal/sk	D193 (fluid loss): 0.75 gal/sk		
D110 (retarder): 0.012 gal/sk	D110 (retarder): 0.012 gal/sk		
Density – 15.8 ppg	Density – 15.8 ppg	Density – 15.8 ppg	Density – 15.8 ppg
Yield – 1.16 cuft/sk	Yield – 1.16 cuft/sk	Yield – 1.18 cuft/sk	Yield – 1.18 cuft/sk
Slurry Volume – 58 bbl	Slurry Volume – 58 bbl	Slurry Volume – 48 bbl	Slurry Volume – 30 bbl

3.3 Execution:

Before each job a Job Hazard Analysis with the Rig Crews and Barge Captain was performed to inform them of their job role and the potential hazards that they may face.

Job Procedure Plug 1a:

1) Pump 5 bbl drill water
2) Pressure test lines to 1000 psi
3) Pump 5 bbl drill water
4) Mix & Pump 58 bbl slurry @ 15.8 ppg
5) Pump 3.8 bbl drill water
6) Displace with 129 bbl mud
7) Bleed off and check returns

Job Procedure Plug 1b:

1) Pump 5 bbl drill water.
2) Pressure test lines to 1000 psi
3) Pump 5 bbl drill water
4) Mix & Pump 58 bbl slurry @ 15.8 ppg
5) Pump 3.8 bbl drill water
6) Displace with 117 bbl mud
7) Bleed off and check returns

Job Procedure Plug 2:

1) Pump 5 bbl drill water.
2) Pressure test lines to 1000 psi
3) Pump 20 bbl drill water
4) Mix & Pump 48 bbl slurry @ 15.8 ppg
5) Pump 3.8 bbl drill water
6) Displace with 38 bbl mud
7) Bleed off and check returns
8) POOH and WOC

9) Plug tagged at 752 m

Job Procedure Plug 3:

1) Pump 5 bbl drill water.
2) Pressure test lines to 1000 psi
3) Pump 5 bbl drill water
4) Mix & Pump 30 bbl slurry @ 15.8 ppg
5) Pump 3.8 bbl drill water.
6) Displace with 5.5 bbl seawater
7) Bleed off and check returns

3.4 Evaluation

The jobs were performed as per design and procedure. Plugs placed successfully.

Schlumberger

Section 1: Laboratory Cement Test Report-Fur Seal 1 30" Conductor

Well Data

						Signatures
Fluid No	**: AUPT 668001**	Client	: Santos	Location / Rig	: Ocean Patriot	
Date	: 21-10-2005	Well Name	: Fur Seal 1	Field	: Conductor	

Job Type	Conductor	Depth	116.0 m	TVD	116.0 m
BHST	13 degC	BHCT	25 degC	BHP	329 psi
Starting Temp.	27 degC	Time to Temp.	00:12 hr:mn	Heating Rate	
Starting Pressure	35 psi	Time to Pressure	00:12 hr:mn	Schedule	( )

Composition

Density	**15.80 lb/gal**	**Yield**	**1.19 ft3/sk**	**Mix Fluid**	**5.323 gal/sk**
Porosity	59.8 %	Solid Fraction	40.2 %	Slurry type	**( )**

Code	Concentration	Component	Lot Number
G		Blend	Rig
Sea water	5.313 gal/sk	Base Fluid	Rig
D047	0.010 gal/sk	ANTIFOAM	Lab
S001	1.000 %BWOC	ACCELERATOR	Lab

Rheology (Average readings)

(rpm)	(deg)	(deg)
300	78.0	
200	63.0	
100	41.0	
60	31.0	
30	27.0	
6	18.5	
3	13.5	
10 sec Gel	20	
10 min Gel	28	
Temperature	27 degC	(degC)
	P_v : 59.344 cP T_y : 20.66 lbf/100ft2	

Thickening Time

Consistency	Time
40 Bc	02:20 hr:mn
70 Bc	02:59 hr:mn
100 Bc	03:38 hr:mn
Remark : Thickening time do not include batch time	

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

Schlumberger

Laboratory Cement Test Report-Fur Seal 1 1338 Lead

Fluid No	: AUPT 785002	Client	: Apache	Location / Rig	: Ocean Patriot
Date	: Oct-25-2005	Well Name	: Fur Seal 1	Field	: Vic

Signatures
Brenton

Job Type	Casing	Depth	800.0 m	TVD	800.0 m
BHST	40 degC	BHCT	31 degC	BHP	1544 psi
Starting Temp.	27 degC	Time to Temp.	00:19 hr:mn	Heating Rate	0.62 degF/min
Starting Pressure	316 psi	Time to Pressure	00:19 hr:mn	Schedule	9.3-2

Composition

Density	**12.50 lb/gal**	**Yield**	**2.23 ft3/sk**	**Mix Fluid**	**13.148 gal/sk**
Porosity	78.9 %	Solid Fraction	21.1 %	Slurry type	**Conventional**

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	199.77 lb/ft3	Rig
Sea water	12.718 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		antifoam		Lab
D075	0.420 gal/sk		extender		Lab

Rheology (Average readings)

(rpm)	(deg)	(deg)
300	28.0	
200	21.0	
100	17.5	
60	14.5	
30	11.5	
6	9.5	
3	2.5	
10 sec Gel	10	
10 min Gel	15	
Temperature	27 degC	(degC)

	Pv : 17.342 cP Ty : 10.56 lbf/100ft2	k : (lbf.s^n/ft2) n : ( ) Ty : (lbf/100ft2)

Thickening Time

Consistency	Time
40 Bc	04:48 hr:mn
70 Bc	05:49 hr:mn
100 Bc	06:50 hr:mn
Remark : Thickening time do not include batch time	

Free Fluid

2.5 mL/250mL	in 2 hrs
At 27 degC and 0 deg incl.	
Sedimentation	None

Water Analysis

Chloride	Calcium	Magnesium
>3000.00 mg/L	(lb/bbl)	(lb/bbl)

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

Schlumberger

Laboratory Cement Test Report-Fur Seal 1 1338 Tail

						Signatures
Fluid No	**: AUPT 785001**	Client	: Apache	Location / Rig	: Ocean Patriot	
Date	: Oct-25-2005	Well Name	: Fur Seal 1	Field	: Vic	Brenton

Job Type	Casing	Depth	800.0 m	TVD	800.0 m
BHST	40 degC	BHCT	31 degC	BHP	1544 psi
Starting Temp.	27 degC	Time to Temp.	00:19 hr:mn	Heating Rate	0.62 degF/min
Starting Pressure	316 psi	Time to Pressure	00:19 hr:mn	Schedule	9.3-2

Composition

Density	**15.80 lb/gal**	**Yield**	**1.18 ft3/sk**	**Mix Fluid**	**5.334 gal/sk**
Porosity	60.2 %	Solid Fraction	39.8 %	Slurry type	**Conventional**

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	199.77 lb/ft3	Rig
Sea water	5.324 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		antifoam		Lab

Rheology (Average readings)

(rpm)	(deg)	(deg)
300	126.0	
200	110.0	
100	95.0	
60	81.0	
30	73.0	
6	26.0	
3	23.0	
10 sec Gel	23	
10 min Gel	29	
Temperature	27 degC	(degC)

Pv : 57.675 cP Ty : 70.66 lbf/100ft2	k : (lbf.s^n/ft2) n : ( ) Ty : (lbf/100ft2)

Thickening Time

Consistency	Time
40 Bc	02:20 hr:mn
70 Bc	03:10 hr:mn
100 Bc	03:40 hr:mn
Remark : Thickening time do not include batch time	

Free Fluid

1.2 mL/250mL At 27 degC and 0 deg incl.	in 2 hrs
Sedimentation	None

Water Analysis

Chloride	Calcium	Magnesium
3000.00 mg/L	(lb/bbl)	(lb/bbl)

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

Schlumberger

Laboratory Cement Test Report-Fur Seal 1 Plug 1A and 1B

Fluid No	**: AUPT 788001**	Client	: Apache	Location / Rig	: Ocean Patriot
Date	: Oct-29-2005	Well Name	: Fur Seal 1	Field	: Vic

Signatures

Brenton

Job Type	Casing	Depth	2500.0 m	TVD	2500.0 m
BHST	112 degC	BHCT	81 degC	BHP	4675 psi
Starting Temp.	27 degC	Time to Temp.	00:19 hr:mn	Heating Rate	5.02 degF/min
Starting Pressure	1030 psi	Time to Pressure	00:19 hr:mn	Schedule	( )

Composition

Density	**15.80 lb/gal**	**Yield**	**1.16 ft3/sk**	**Mix Fluid**	**5.152 gal/sk**
Porosity	59.4 %	Solid Fraction	40.6 %	Slurry type	**Conventional**

Code	Concentration	Sack Reference	Component	Blend Density	Lot Number
G		94 lb of BLEND	Blend	199.77 lb/ft3	Rig
Fresh water	4.320 gal/sk		Base Fluid		Rig
D047	0.010 gal/sk		antifoam		Lab
D145A	0.060 gal/sk		dispersant		Lab
D193	0.750 gal/sk		fluid loss		Lab
D110	0.012 gal/sk		retarder		Lab

Rheology (Average readings)

(rpm)	(deg)	(deg)
300	90.0	
200	71.5	
100	50.5	
60	26.0	
30	18.5	
6	16.0	
3	11.0	
10 sec Gel	16	
10 min Gel	27	
Temperature	27 degC	(degC)

Pv : 81.980 cP Ty : 13.81 lbf/100ft2	k : (lbf.s^n/ft2) n : ( ) Ty : (lbf/100ft2)

Thickening Time

Consistency	Time
40 Bc	02:46 hr:mn
70 Bc	03:10 hr:mn
100 Bc	03:15 hr:mn
Remark : Thickening time do not include batch time	

Free Fluid

1.0 mL/250mL	in 2 hrs
At 27 degC and 0 deg incl.	
Sedimentation	None

Water Analysis

Chloride	Calcium	Magnesium
100.00 mg/L	(lb/bbl)	(lb/bbl)

Fluid Loss

API Fluid Loss			60	mL
30 mL in	30 minutes	at 81 degC		and 1000 psi

Comments

General Comment :
Fann Reading Comment :
Thickening Time Comment :
Other test Comment : ; ; ; ;

DISTRICT	STATION	TYPE SERVICE	COMPANY	Schlumberger
APG		Choke Manifold Test	Apache	

RIG	TYPE OF WELL	FIELD	WELL No.	SERVICE REPORT
Ocean Patriot	Appraisal		Furseal #1	

TIME AND DATE JOB STARTED	TOTAL DEPTH	SIZE HOLE	DEVIATION	BHST	BHCT	INVOICE NUMBER
19:10 22.10.05						

TIME & DATE JOB COMPLETED	DRILL FLUID			FORMATION	SIR NUMBER
05:00 23.10.05	Type	Wt.	Vis		

Casing							Previous Casing		
Size	Depth	Type	Wt.	Volume	Allowable Press.	Collar at	TOP	Bottom	Size

Completion							BRIDGE PLUG		TAIL PIPE	
Size	Depth	Type	Wt.	Packer @	top	Shoe Depth	Type	Depth	Type	Depth

CASING EQUIPMENT USED				CEMENT HEAD	MUD CIRCULATION PRIOR TO JOB		
SHOE Float Stab	COLLAR Float Stab	PLUGS Top Bottom	CENT. Qty. Type		Time - Min.	Vol. BBLS	Press - PSI

WASH			SPACER											
Wt.	Vol. BBLS	Fill	Wt.	Vol. BBLS	Fill	Wt.	Vol.	Mix Water	Fill	Wt.	Vol.	Mix Water	Fill

EQUIPMENT						DURING JOB WAS PIPE	PARAMETERS RECORDED: ON:					MUD RETURNS
LAS / LPJ	Pump Unit	Batch Mixer	Compressor / RCM	Pump Unit S/No.		Rotated / Reciprocated	Press	Rate	Vol	Dty	Recorder	LOST DURING JOB BBLS

LEAD SLURRY	TAIL SLURRY	MATERIALS USED

TIME	PRESSURE Low	PRESSURE High	VOLUME BBL	VOLUME BPM	LT MIN	RECORD OF SERVICE
19:23			24	4		
19:38	250	5,000				Test # 1- Valves: 1,2,5,29,30,31,32
20:18	250	5,000				Test # 2 -Valves: 1,2,5,25,26,27,28
20:43	250	5,000				Test # 3 -Valves: 1,2,5,17,18,19,20
21:10	250	5,000				Test # 4 -Valves: 3,4,6,11,12,15,16
21:35	250	5,000				Test # 5 -Valves: 7,15,16,4
21:57	250	5,000				Test # 6 - Valves: 8,15,16,4
22:20	250	5,000				Test # 7 -Valves: 9
22:48	250	5,000				Test # 8 - Valves : 10
23-10-05						
00:52	250	5,000				Test # 9 - Standpipe Valve Kelly Hose Swivel Packing Failed Test
			2	1		Flush
01:42		5,000				Test # 9 - Standpipe Valve Kelly Hose Swivel Packing Failed Test
01:50	300	5,000				Test # 10-Upper I bop
02:15	300	5,000				Test # 11-Lower I bop
02:34	300	5000				Test #12-FOBV #1
02:51	300	5,000				Test # 13- FOBV #2
03:09	300	5000				Test #14 -TIW
04:12		4,000				Test # 15-Check Kelly Hose
04:28	300	5,000				Test #16 -Stand pipe V/v #1,Kelly Hose& swivel pcking

No. OF DS PERSONNEL ON JOB					STEM1 DONE? YES X NO	TOTAL LOST TIME H	TOTAL OPERATING TIME 10 H
SUP		S.S	1		CUSTOMER COMMENTS		
MECH		F.E.		HEL 1			

DS REPRESENTATIVE
Wayne Comben/Ameer Moustafa

QUALITY OF SERVICE GOOD ✓ SATISFACTORY ☐ POOR ☐

CUSTOMER REPRESENTATIVE
John Herriot

DISTRICT	STATION	TYPE SERVICE	COMPANY	Schlumberger
APG		30" Casing Job	Apache	
RIG	TYPE OF WELL	FIELD	WELL No.	SERVICE REPORT
Ocean Patriot	Appraisal		Furseal#1	

TIME AND DATE JOB STARTED	TOTAL DEPTH	SIZE HOLE	DEVIATION	BHST	BHCT	INVOICE NUMBER
	116m			13 deg	25 deg	

TIME & DATE JOB COMPLETED	DRILL FLUID			FORMATION	SIR NUMBER
	Type	Wt.	Vis	Gippsland Limestone	

Casing							Previous Casing		
Size	Depth	Type	Wt.	Volume	Allowable Press.	Collar at	TOP	Bottom	Size
30"x20"	116m	X52	725						

Completion							BRIDGE PLUG		TAIL PIPE	
Size	Depth	Type	Wt.	Packer @	top	Shoe Depth	Type	Depth	Type	Depth

CASING EQUIPMENT USED				CEMENT HEAD	MUD CIRCULATION PRIOR TO JOB		
SHOE (Float Stab)	COLLAR (Float Stab)	PLUGS Top	Bottom	CENT. Qty. Type		Time - Min.	Vol. BBLS	Press - PSI

WASH			SPACER										
Wt.	Vol. BBLS	Fill	8.5ppg Wt.	60bbls Vol. BBLS	Fill	Wt.	Vol.	Mix Water	Fill	15.8ppg Wt.	170 Vol.	102bbls Mix Water	116m Fill

EQUIPMENT							DURING JOB WAS PIPE	PARAMETERS RECORDED:				ON:	MUD RETURNS
	LAS	X	Pump		Batch		Compressor	Rotated	X	X	X	X	Prism	LOST DURING JOB
X	LPJ		Unit		Mixer	X	RCM	Reciprocated	Press	Rate	Vol	Dty	Recorder	BBLS

Pump Unit S/No.

LEAD SLURRY	TAIL SLURRY	MATERIALS USED
	Class"G"neat + 0.01gps D175 + 1% BWOC CaCl2 + 5.??gps Seawater @ 15.8ppg w/ 1.19cf/sk yield	10 gal of D175

TIME	PRESSURE Low	PRESSURE High	VOLUME BBL	VOLUME BPM	LT MIN	RECORD OF SERVICE
12:31			60	8		Pump 60 bbls of Seawater with Flourescene dye as spacer
12:55			170	4.5		Mix and pump 170bbls of slurry @ 15.8ppg (Mix fluid = 102bbls)
13:33			15	6.5		Displace with 15bbls of Seawater
13:35						Bleed off and check return
13:39						End of job

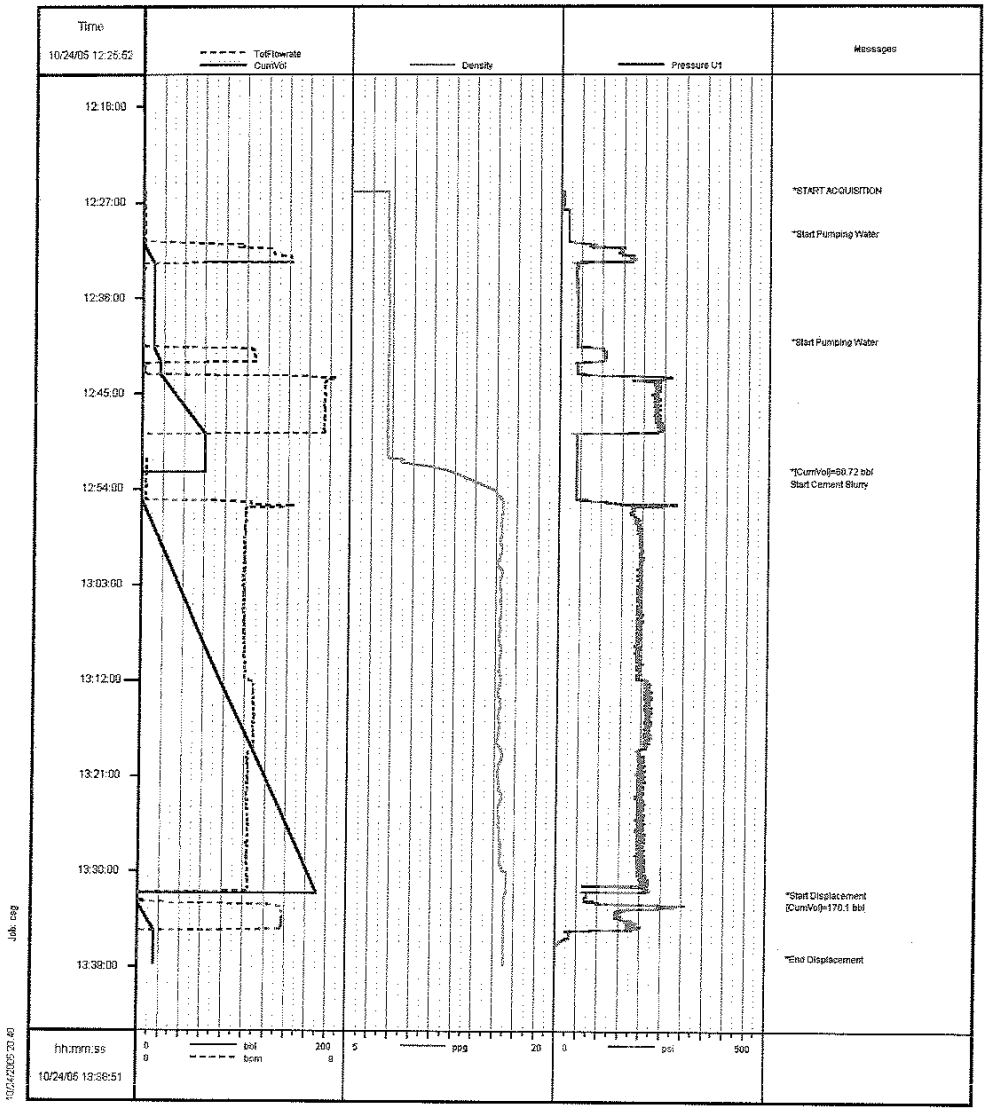
No. OF DS PERSONNEL ON JOB					STEM1 DONE? YES X NO	TOTAL LOST TIME H	TOTAL OPERATING TIME 2 H
SUP		S.S	1		CUSTOMER COMMENTS	DS REPRESENTATIVE	
MECH		F.E.		HEL 1		Wayne Comben/Peter Mew	
QUALITY OF SERVICE	GOOD X	SATISFACTORY		POOR		CUSTOMER REPRESENTATIVE John Herriot	

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	
Country	Australia	**Job Date**	24/10/2005 12:25:52



* Mark of Schlumberger

DISTRICT	STATION	TYPE SERVICE	COMPANY	**Schlumberger**
APG		13 3/8" Casing Job	APACHE ~~Buss Strait Oil Co.~~	

RIG	TYPE OF WELL	FIELD	WELL No.	SERVICE REPORT
Ocean Patriot	Appraisal	Furseal	Furseal 1	

TIME AND DATE JOB STARTED	TOTAL DEPTH	SIZE HOLE	DEVIATION	BHST	BHCT	INVOICE NUMBER
26/10/2005 14:45	~~355m~~ 815m	16"				

TIME & DATE JOB COMPLETED	DRILL FLUID			FORMATION	SIR NUMBER
	Type	Wt.	Vis		
26/10/2005 17:18					

Casing							Previous Casing		
13 3/8"	815m	L-80	68ppf	350bbl		790.77m		116m	20"
Size	Depth	Type	Wt.	Volume	Allowable Press.	Collar at	TOP	Bottom	Size

Completion							BRIDGE PLUG		TAIL PIPE	
Size	Depth	Type	Wt.	Packer @	top	Shoe Depth	Type	Depth	Type	Depth

CASING EQUIPMENT USED				CEMENT HEAD	MUD CIRCULATION PRIOR TO JOB		
SHOE x	COLLAR x	PLUGS x x	CENT.	DSEH	15		
Float Stab	Float Stab	Top Bottom	Qty. Type		Time - Min.	Vol. BBLS	Press - PSI

WASH			SPACER										
			8.6ppg	20bbls		12.5ppg	130bbls	103bbls		15.8ppg	75bbls	44bbls	
Wt.	Vol. BBLS	Fill	Wt.	Vol. BBLS	Fill	Wt.	Vol.	Mix Water	Fill	Wt.	Vol.	Mix Water	Fill

EQUIPMENT						DURING JOB WAS PIPE	PARAMETERS RECORDED: ON:					MUD RETURNS	
X LAS	X Pump	Batch	Compressor			Rotated	X	X	X	X	Prism	LOST DURING JOB	No
LPJ	Unit	Mixer	X RCM	Pump Unit S/No.		Reciprocated	Press	Rate	Vol	Dty	Recorder	BBLS	

LEAD SLURRY	TAIL SLURRY	MATERIALS USED	
Class"G" neat + 0.01gps D175 + 0.42gps D75 12.72gps Seawater @ 12.5ppg w/ 2.23cf/sk yield	Class"G"neat + 0.01gps D175 + 5.31gps Seawater @ 15.8ppg w/ 1.18cf/sk yield	D175 Antifoam = 10 gals D75 Extender = 165 gals	DST Top Plug DST Bottom Plug

TIME	PRESSURE Low	PRESSURE High	VOLUME BBL	VOLUME BPM	LT MIN	RECORD OF SERVICE
14:57		128	10	5		Pump 10bbls of Seawater
14:59		4,000				Pressure test line to 4000psi - Ok
15:03						Drop bottom dart
15:10		100	10	5		Pump 10bbls of Seawater (Plug sheared after 5.5bbls)
15:15		274	130	8		Mix and pump 130 bbls of Cement Slurry @ 12.5ppg (Mix fluid = 103bbls)
15:39		256	75	5		Mix and pump 75 bbls of Cement Slurry @ 15.8ppg (Mix fluid = 44bbls)
15:55						Drop Top dart
15:56			10	5		Displace with 10 bbls of Seawater behind (Plug sheared after 5bbls)
16:00						Switch over to rig pump for final displacement
16:32		3000				Bump plug, Test casing for 15 minutes, Floats held.
16:48						Bleed off and check return, No back flow observed
17:09						End of job, WOC

No. OF DS PERSONNEL ON JOB				STEM1 DONE? YES X NO	TOTAL LOST TIME H	TOTAL OPERATING TIME 3 H
SUP		S.S	1	CUSTOMER COMMENTS		
MECH		F.E.		HEL	1	

DS REPRESENTATIVE

Peter Mew / Reece Beresford

QUALITY OF SERVICE GOOD X SATISFACTORY POOR

CUSTOMER REPRESENTATIVE

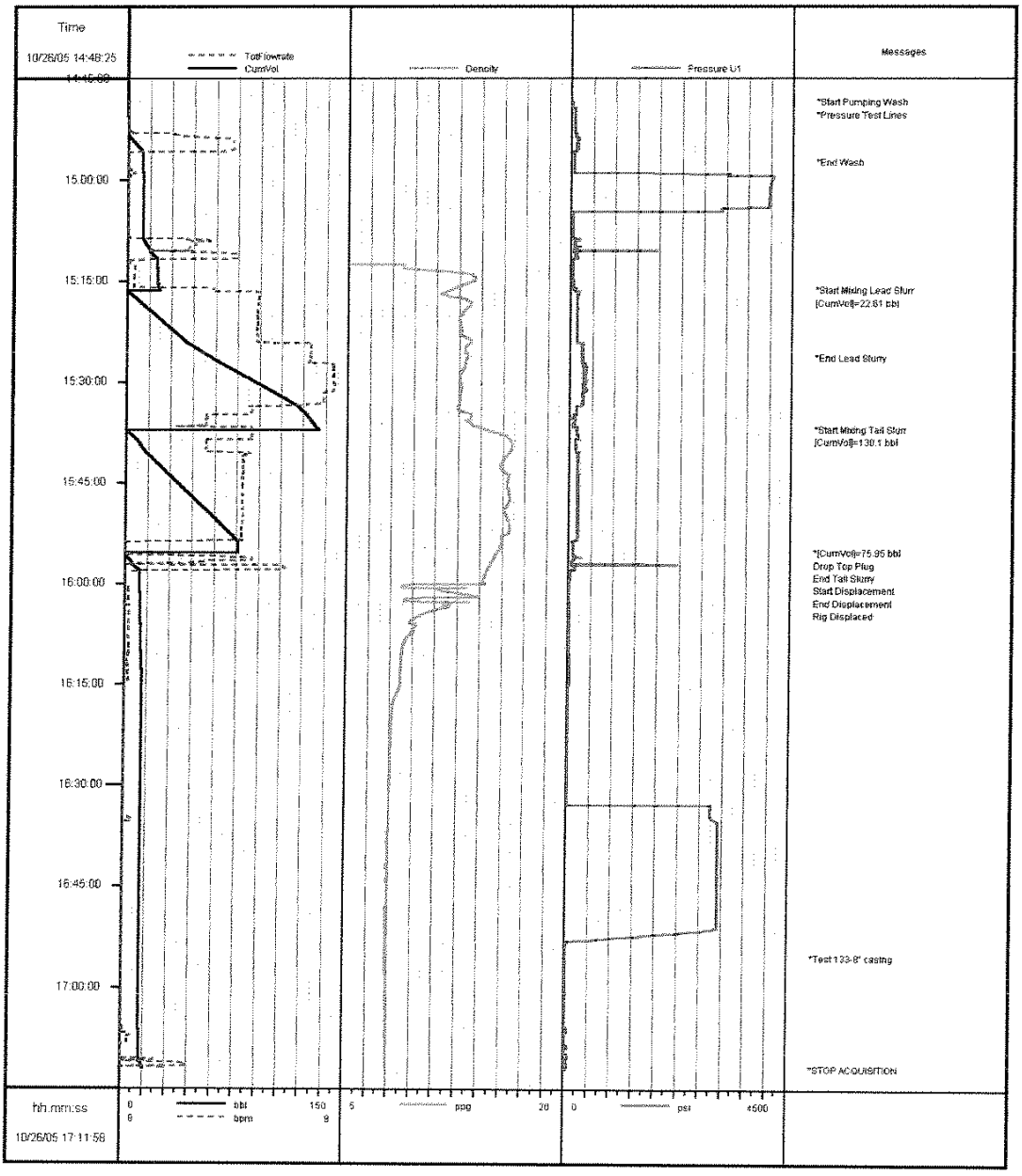
John Harriot

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	
Country	Australia	**Job Date**	26/10/2005 14:48:25



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Schlumberger

BOP TESTING
SERVICE REPORT

TREATMENT NUMBER	DATE
	27/10/2005
DISTRICT	PAGE OF
CAS	

NAME	Apache	RIG NAME	Ocean Patriot
AND		WELL NAME & NO.	Fur Seal # 1
ADDRESS		LOCATION	
ZIP		COUNTY/PARISH	STATE

SPECIAL INSTRUCTIONS

BOP TEST

Test Number	TIME	PRESSURE		RATE		FLUID TYPE	SERVICE LOG DETAIL
		LOW	HIGH	LOW	HIGH		
1	08:40-09:08	250	2500	5	10	SW	Shear rams casing
2	13:29-14:00	250	5000	5	10	SW	Middle Pipe Rams Outer Choke
3	14:05-14:28	250	5000	5	10	SW	Middle Pipe Rams Inner Choke
4	14:30-14:50	250	5000	5	10	SW	Lower Pipe Rames
5	15:15-15:38	250	5000	5	10	SW	Upper Pipe Rams Lower Outer Kill
6	15:41-15:57	250	5000	5	10	SW	Upper Pipe Rams Lower inner Kill
7	16:04-16:23	250	2500	5	10	SW	Lower Annular Upper Outer Kill
8	16:28-18:45	250	2500	5	10	SW	Upper Annular Upper Inner Kill

Schlumberger Private

CUSTOMER REPRESENTATIVE	SERVICE SUPERVISOR
John Harriot	Reece Beresford

Schlumberger

FIT TESTING
SERVICE REPORT

TREATMENT NUMBER	DATE
DISTRICT	PAGE OF
CAS	1

NAME Apache
AND
ADDRESS
ZIP
RIG NAME Ocean Patrioot
WELL NAME & NO. Fur Seal # 1
LOCATION
COUNTY/PARISH
STATE

SPECIAL INSTRUCTIONS

FIT @ 13 3/8" casing Shoe

Test Number	TIME	PRESSURE		RATE		FLUID TYPE	SERVICE LOG DETAIL
		LOW	HIGH	LOW	HIGH		
	20:22		53		0.5	SW	Flush lines
							FIT
					0.5		1/2 bbl - 59psi
					0.5		3/4 bbl - 64psi
					0.5		1 bbl- 73psi
					0.5		1 1/4 bbl - 91psi
					0.5		1 1/2 bbl - 119 psi
					0.5		1 3/4 bbl - 206 psi
					0.25		2 bbls - 288 psi
					0.25		2 1/4 bbl - 471 psi
			586		0.25		2 1/2 bbl - 586 psi
	20:31						Bleed off 2.5 bbls

Schlumberger Private

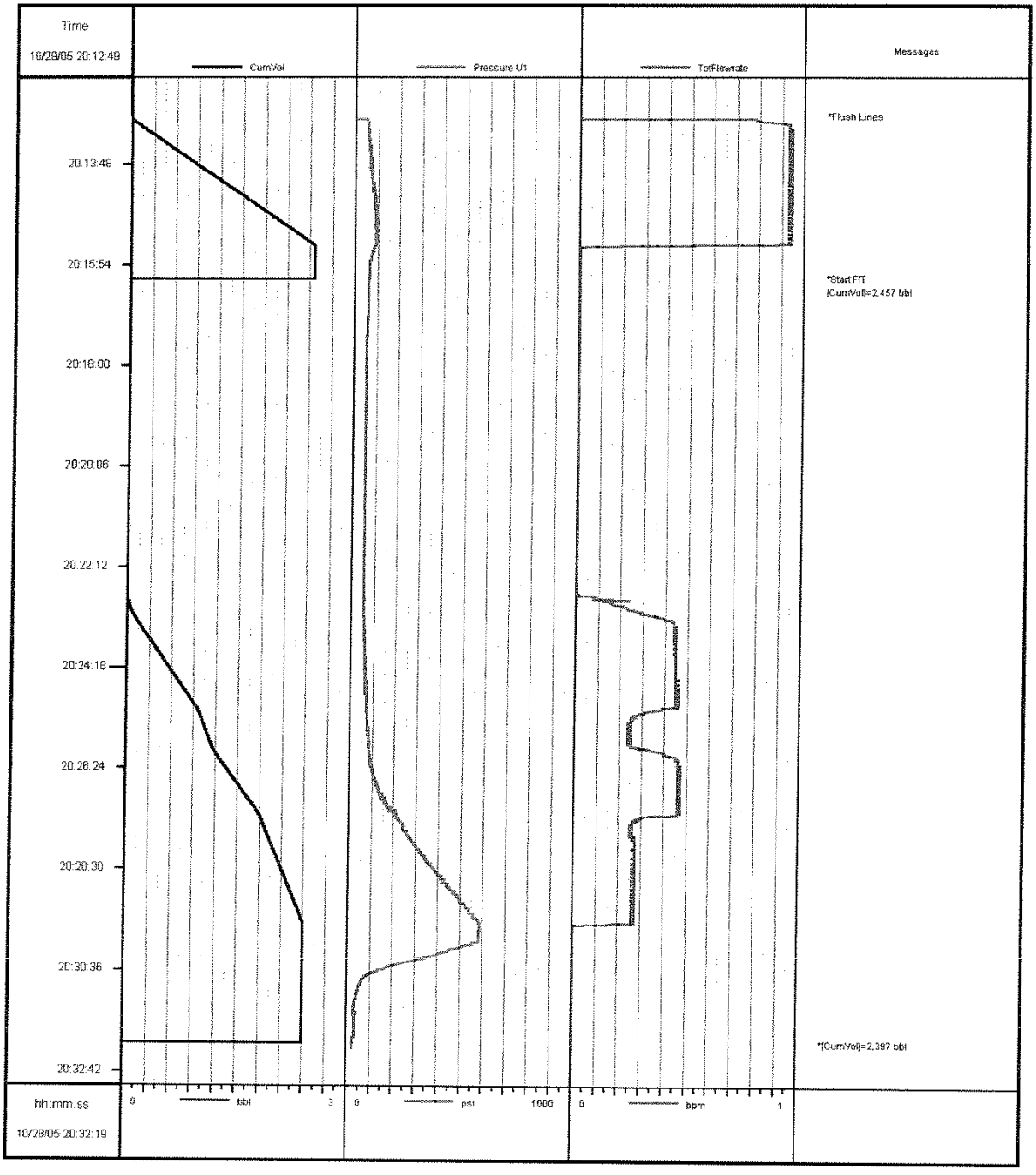
CUSTOMER REPRESENTATIVE	SERVICE SUPERVISOR
John Harriot	P Mew

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	
Country	Australia	**Job Date**	28/10/2005 20:12:49



Job: fit
10/28/2005 20:37

* Mark of Schlumberger

DISTRICT	STATION	TYPE SERVICE	COMPANY	Schlumberger
APG		P&A	APACHE ~~Bass Strait Oil Co.~~	

RIG	TYPE OF WELL	FIELD	WELL No.	SERVICE REPORT
Ocean Patriot	Appraisal	Furseal	Furseal 1	

TIME AND DATE JOB STARTED	TOTAL DEPTH	SIZE HOLE	DEVIATION	BHST	BHCT	INVOICE NUMBER
2/11/2005 09:00 hrs	2610	8.5				

TIME & DATE JOB COMPLETED	DRILL FLUID			FORMATION	SIR NUMBER
	Type	Wt.	Vis		
2/11/2005 18:00 hrs					

Casing							Previous Casing		
13 3/8"	815m	L-80	68ppf	350bbl		790.77m		116m	20"
Size	Depth	Type	Wt.	Volume	Allowable Press.	Collar at	TOP	Bottom	Size

Completion							BRIDGE PLUG		TAIL PIPE	
8.5	2610	OH								
Size	Depth	Type	Wt.	Packer @	top	Shoe Depth	Type	Depth	Type	Depth

CASING EQUIPMENT USED					CEMENT HEAD	MUD CIRCULATION PRIOR TO JOB		
SHOE x	COLLAR x	PLUGS x	x	CENT.				
Float Stab	Float Stab	Top	Bottom	Qty. Type		Time - Min.	Vol. BBLS	Press - PSI

WASH			SPACER											
			8.6ppg											
Wt.	Vol. BBLS	Fill	Wt.	Vol. BBLS	Fill	Wt.	Vol.	Mix Water	Fill	Wt.	Vol.	Mix Water	Fill	

EQUIPMENT							DURING JOB WAS PIPE	PARAMETERS RECORDED: ON:					MUD RETURNS	
X	LAS	X	Pump		Batch		Rotated	X	X	X	X	Prism	LOST DURING JOB	NO
	LPJ		Unit		Mixer	X	RCM	Press	Rate	Vol	Dty	Recorder	BBLS	

Plug # 1a & 1b	Plug # 3	MATERIALS USED
Class G + 0.75 D193 + 0.01gps DO47+ 0.012gps D110 + 0.06gps D145A	Class g + 0.01gps DO47	D-193 Fluid Loss = 455 gal D-145A Dispersent = 60 gal D-110 Retarder = 10 gal Do-47 Anti Fome = 15 gal
Plug # 2		
Class G + 0.01 DO47		

TIME	PRESSURE Low	PRESSURE High	VOLUME BBL	VOLUME BPM	LT MIN	RECORD OF SERVICE
08:33						PLUG # 1a 2610 - 2380m
				4		Pump 5bbls of Drill water
		1,000				Pressure test line to 1000psi - Ok
				4		Pump 5bbls of Drill water
				5		Mix & Pump 58 bbls slurry @ 15.8 ppg
				3		Balance with 3.8 bbls Drill water
				7		Displace with 129 bbls of Mud behind.
						Bleed off and check return, No back flow observed
09:37						Rig POOH to deapth of next plug
11:17						PLUG # 1b 2370 - 2140m
				4		Pump 5bbls of Drill water
		1000				Pressure test line to 1000psi - Ok
				4		Pump 5bbls of Drill water
				5		Mix & Pump 58 bbls slurry @ 15.8 ppg
				3		Balance with 3.8 bbls Drill water
				7		Displace with 117 bbls of Mud behind.
						Bleed off and check return, No back flow observed
12:09						Rig POOH to deapth of next plug
17:05						PLUG # 2 860 - 760m Taged @ 752m
				5		Pump 5bbls of Drill water
						Pressure test line to 1000psi - Ok
				5		Pump 20bbls of Drill water
				5		Mix & Pump 48 bbls slurry @ 15.8 ppg
				3		Balance with 3.8 bbls Drill water
				7		Displace with 38 bbls of Mud behind.
						Bleed off and check return, No back flow observed
17:38						Rig POOH laying down pipe

No. OF DS PERSONNEL ON JOB						STEM1 DONE? YES X NO	TOTAL LOST TIME H	TOTAL OPERATING TIME 9 H
SUP		S.S	1					
MECH		F.E.		HEL	1			

CUSTOMER COMMENTS

DS REPRESENTATIVE

Peter Mew / Reece Beresford

QUALITY OF SERVICE GOOD ✓ SATISFACTORY ☐ POOR ☐

CUSTOMER REPRESENTATIVE

John Harriot

DISTRICT	STATION	TYPE SERVICE	COMPANY	Schlumberger
APG		P & A	Apache ~~Bass Strait Oil Co.~~	

RIG	TYPE OF WELL	FIELD	WELL No.	SERVICE REPORT
Ocean Patriot	Appraisal	Furseal	Furseal 1	

TIME AND DATE JOB STARTED	TOTAL DEPTH	SIZE HOLE	DEVIATION	BHST	BHCT	INVOICE NUMBER
3/11/2005 15:22 hrs	2610	8 1/2"				

TIME & DATE JOB COMPLETED	DRILL FLUID			FORMATION	SIR NUMBER
	Type	Wt.	Vis		
3/11/2005 16:00 hrs					

Casing							Previous Casing		
13 3/8"	815m	L-80	68ppf	350bbl		790.77m		116m	20"
Size	Depth	Type	Wt.	Volume	Allowable Press.	Collar at	TOP	Bottom	Size

Completion							BRIDGE PLUG		TAIL PIPE	
8.5	2610	OH								
Size	Depth	Type	Wt.	Packer @	top	Shoe Depth	Type	Depth	Type	Depth

CASING EQUIPMENT USED					CEMENT HEAD	MUD CIRCULATION PRIOR TO JOB		
SHOE x	COLLAR x	PLUGS x	x	CENT.				
Float Stab	Float Stab	Top	Bottom	Qty. Type		Time - Min.	Vol. BBLS	Press - PSI

WASH			SPACER										
			8.6ppg										
Wt.	Vol. BBLS	Fill	Wt.	Vol. BBLS	Fill	Wt.	Vol.	Mix Water	Fill	Wt.	Vol.	Mix Water	Fill

EQUIPMENT							DURING JOB WAS PIPE	PARAMETERS RECORDED: ON:					MUD RETURNS	
X LAS	X Pump	Batch	Compressor				Rotated	X	X	X	X	Prism	LOST DURING JOB	No
LPJ	Unit	Mixer	X RCM	Pump Unit S/No.			Reciprocated	Press	Rate	Vol	Dty	Recorder	BBLS	

Plug # 1a & 1b
Class G + 0.75 D193 + 0.01gps DO47+ 0.012gps D110 + 0.06gps D145A

Plug # 2
Class G + 0.01 DO47

Plug # 3
Class g + 0.01gps DO47

MATERIALS USED
D-193 Fluid Loss = 455 gal
D-145A Dispersent = 60 gal
D-110 Retarder = 10 gal
Do-47 Anti Fome = 15 gal

TIME	PRESSURE Low	PRESSURE High	VOLUME BBL	VOLUME BPM	LT MIN	RECORD OF SERVICE
15:22						PLUG # 3 160 - 100m
				4		Pump 5bbls of Drill water
		1,000				Pressure test line to 1000psi - Ok
				4		Pump 5bbls of Drill water
				5		Mix & Pump 30 bbls slurry @ 15.8 ppg
				3		Balance with 3.8 bbls Drill water
				7		Displace with 5.5 bbls of Sea Water behind.
16:00						Bleed off and check return. No back flow observed

No. OF DS PERSONNEL ON JOB						STEM1 DONE? YES X NO	TOTAL LOST TIME H	TOTAL OPERATING TIME 1 H
SUP		S.S	1			CUSTOMER COMMENTS	DS REPRESENTATIVE	
MECH		F.E.		HEL			Peter Mew / Reece Beresford	

QUALITY OF SERVICE GOOD ✓ SATISFACTORY ☐ POOR ☐

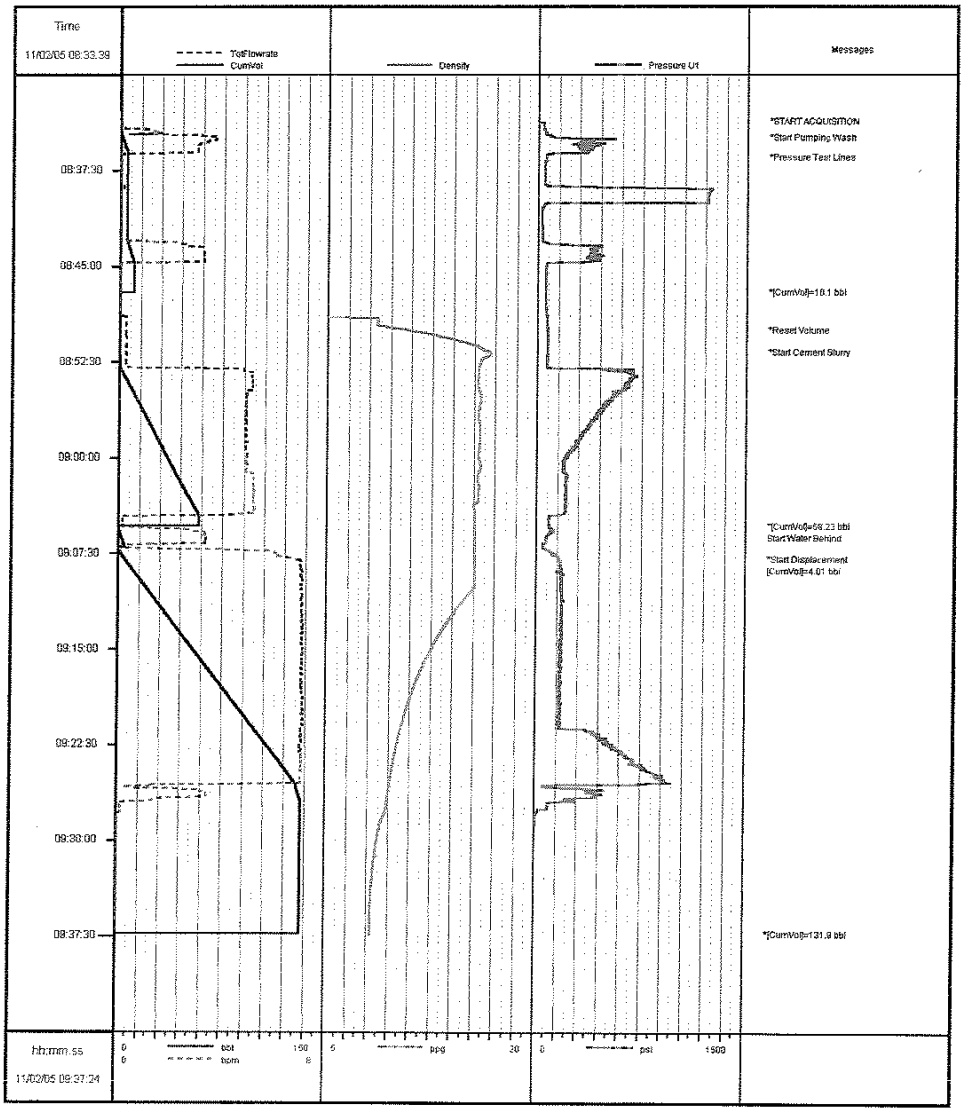
CUSTOMER REPRESENTATIVE
John Harriot

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	P&A Plug 1A
Country	Australia	**Job Date**	02/11/2005 08:33:39



Job: shapiog1

11/03/2005 22:46

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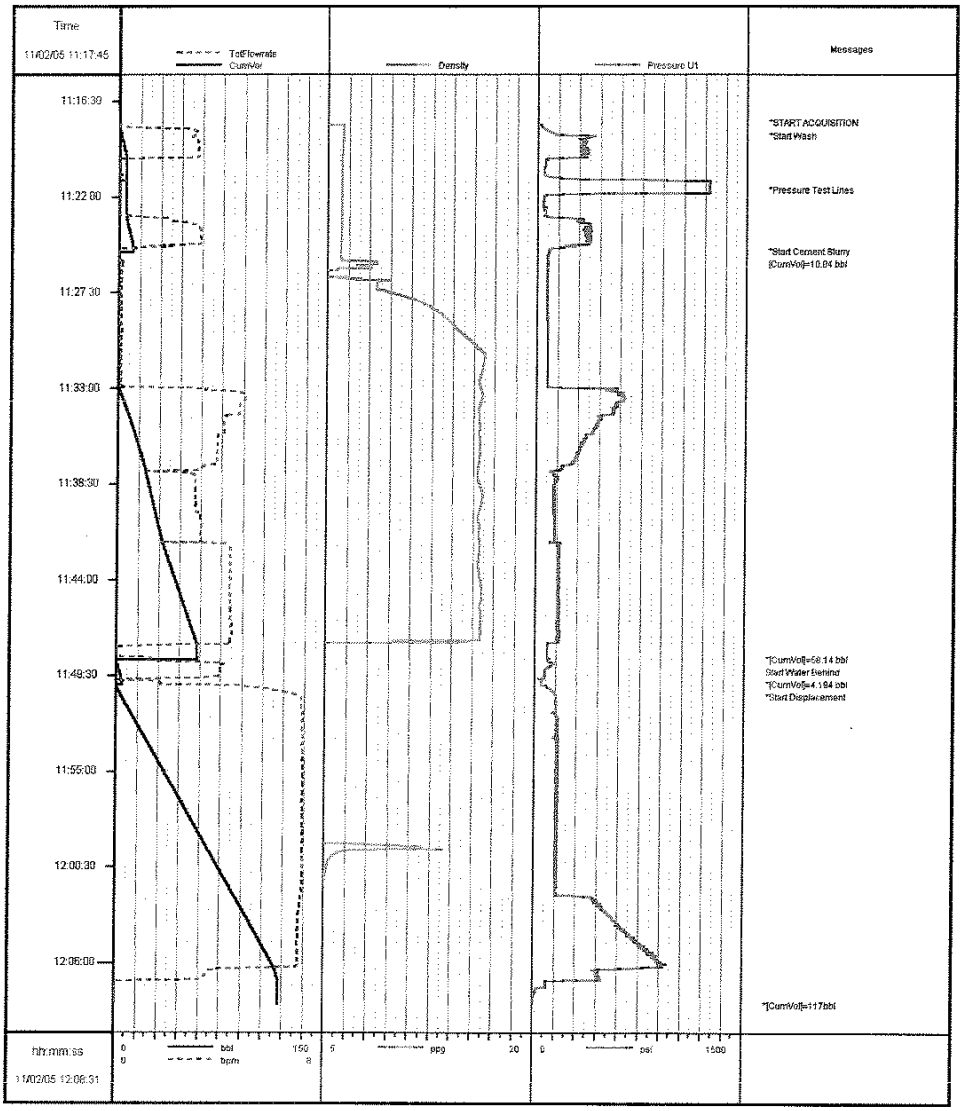
Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well Furseal1	**Client** Apache
Field	**SIR No.** 244 Rev 1B
Country Australia	**Job Date** 02/11/2005 11:17:45



Job Enabled2

11/03/2005 20:52

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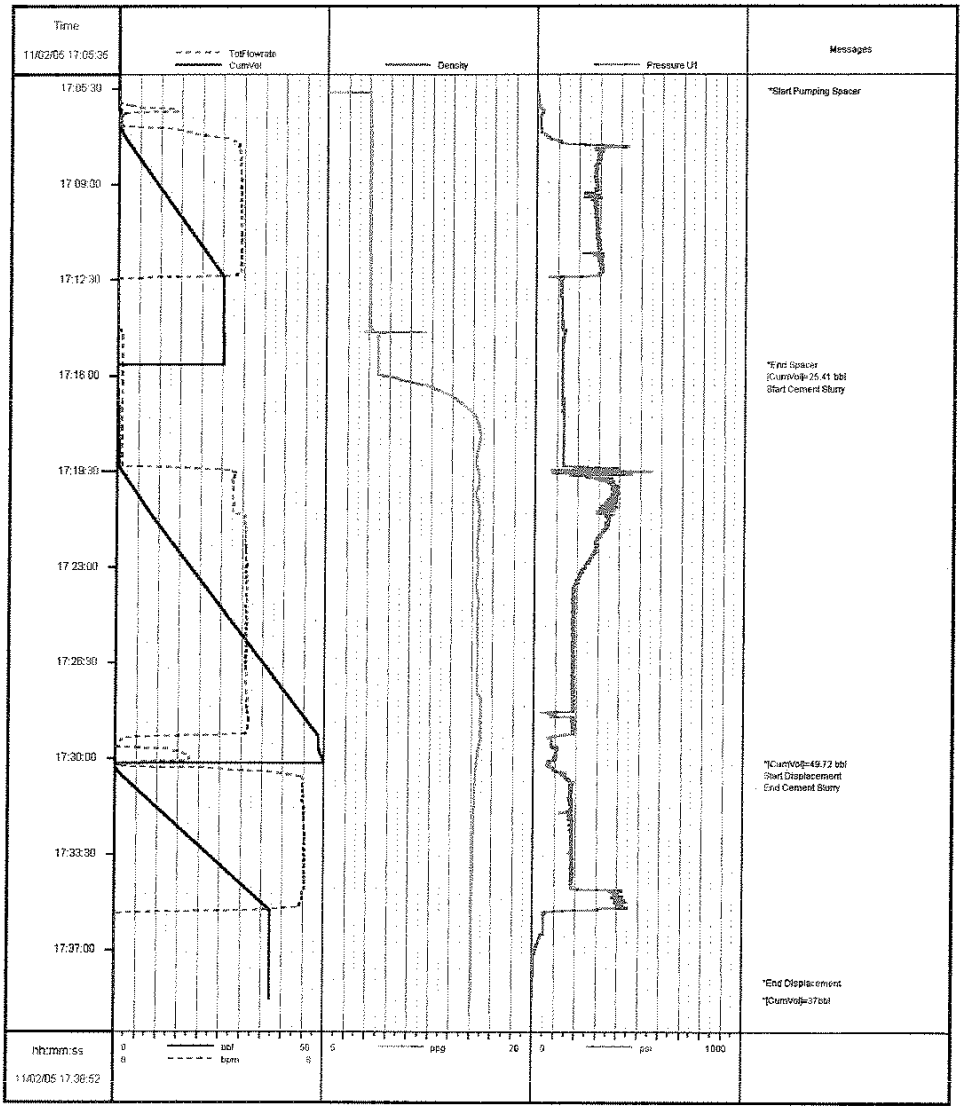
Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well Furseal1	**Client** Apache
Field	**SIR No.** Ptn Rev 2
Country Australia	**Job Date** 02/11/2005 17:05:35



Job: smapfug3

11/04/2005 08:18

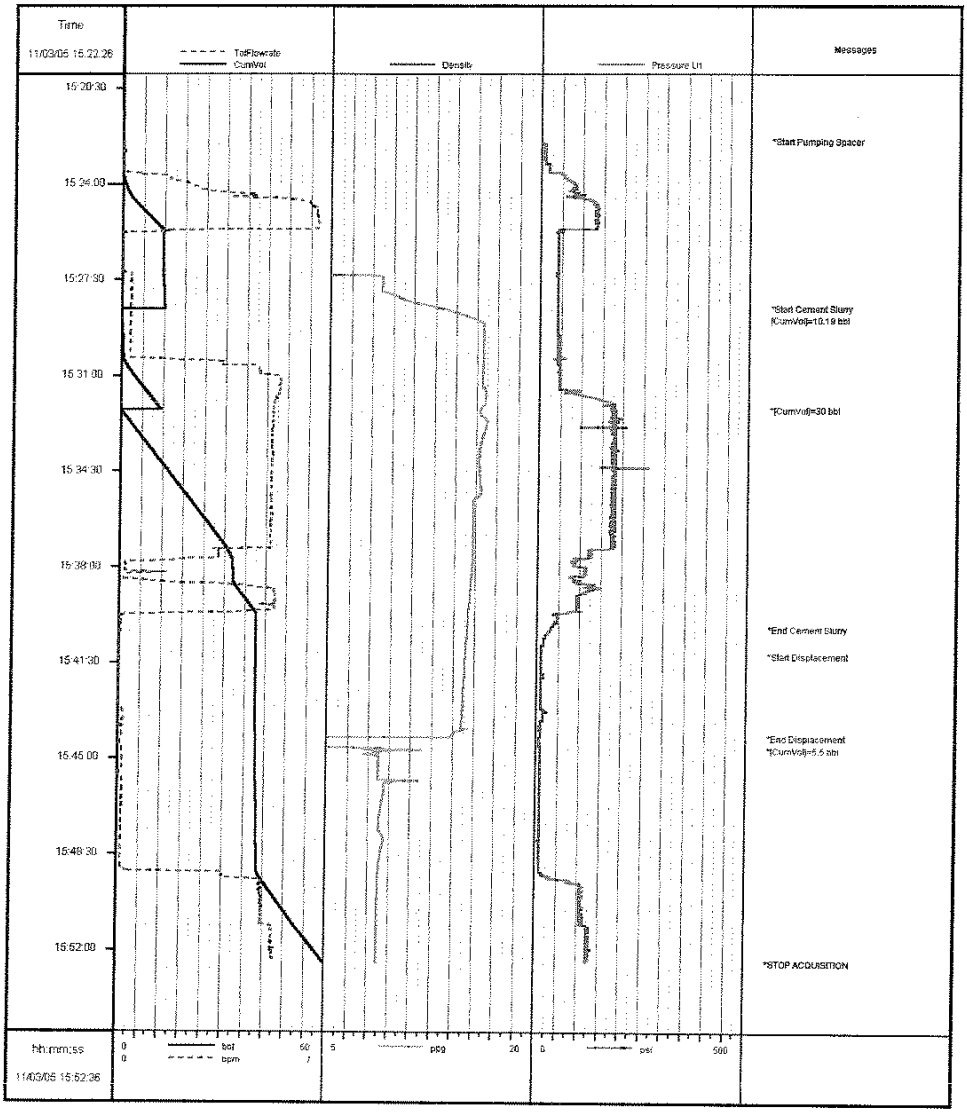
* Mark of Schlumberger

Schlumberger
Dowell

Cementing Job Report

PRISM* V2.22

Well	Furseal1	**Client**	Apache
Field		**SIR No.**	RIG 3
Country	Australia	**Job Date**	03/11/2005 15:22:26



Job snapshot

11/03/2005 16:03

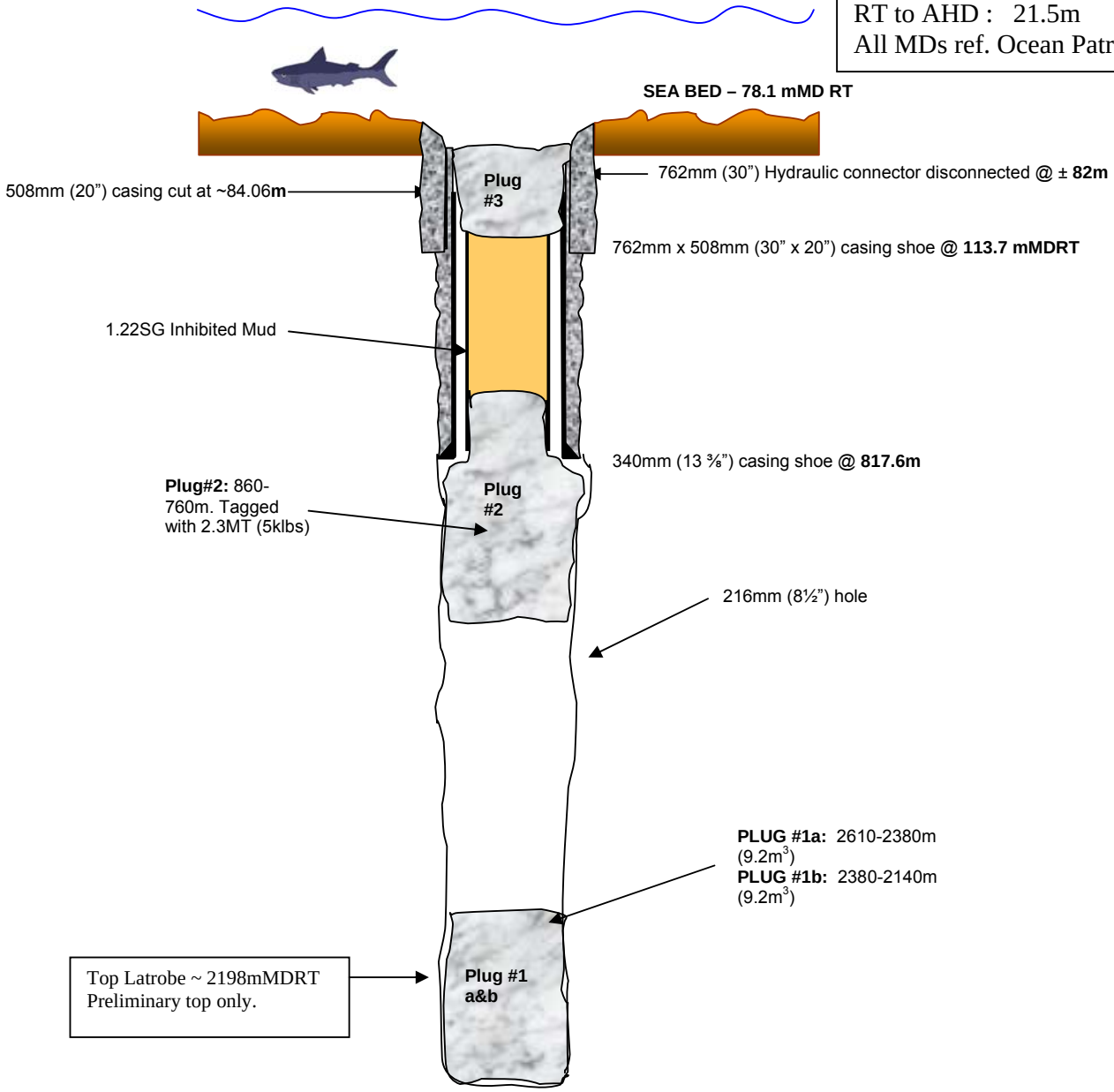
* Mark of Schlumberger

1st November 2005

WELL ABANDONMENT DIAGRAM

Fur Seal-1

Rig : **Ocean Patriot**
RT to AHD : 21.5m
All MDs ref. Ocean Patriot RT



Fur Seal-1 TD 2610mMDRT reached at 01:30 1st Nov. 05

REPORT FOR THE OCEAN PATRIOT RIG MOVE TO FUR SEAL-1 LOCATION

FUGRO SURVEY JOB NO. - P0369

Client : Apache Energy Ltd
Level 3
256 St George's Terrace
Perth 6000
Western Australia

Date of Survey : 21 October – 25 October 2005

0	Final			31 October 2005
Rev	Description	Checked	Approved	Date

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APPENDIX B : FINAL POSITIONING DATA
APPENDIX C : DGPS AND GYRO CHECKS
APPENDIX D : CLIENT SUPPLIED INFORMATION

ABSTRACT

Between 21 October and 25 October 2005, Fugro Survey Pty Ltd (Fugro) provided equipment and personnel for the semi-submersible Mobile Offshore Drilling Unit Ocean Patriot rig move from Maclean-1 to Fur Seal-1 location in Permit VIC/P-47 in Bass Strait, Australia.

Surface positioning was provided by Fugro's Multiple Reference Differential Global Positioning System (MRDGPS) and Starfix.Seis Navigation Software.

The final position for the drill stem derived from DGPS observations at Fur Seal-1 location is:

Location Name:	**Fur Seal-1**
Easting (m):	600995.5
Northing (m):	5779136.7
Latitude:	38° 07' 47.91" S
Longitude:	148° 09' 08.44" E
Rig Heading:	248.72° (True)

This position is 3.5m on a bearing of 223.4° (Grid) from the proposed Fur Seal-1 location.

All coordinates in this report are referenced to the Geocentric Datum of Australia 1994 (GDA94) and projected onto the Map Grid of Australia 1994 (MGA94) Zone 55 (CM 147° E), unless otherwise stated.

All times in this report are quoted in Australian Eastern Standard Time (EST) unless otherwise stated.

1.0 INTRODUCTION

Fugro Survey Pty Ltd (Fugro) was contracted by Apache Energy Ltd to provide navigation and positioning survey services on board the semi-submersible Mobile Offshore Drilling Unit (MODU) *Ocean Patriot*, during the rig move to Fur Seal-1 location in Permit VIC/P-47, Bass Strait, Australia.

A general location diagram is shown as Figure 1-1.

This report details equipment used, survey parameters adopted, procedures employed and the results achieved. A section on safety is included in Section 3.0 of this report.

1.1 Scope of Work

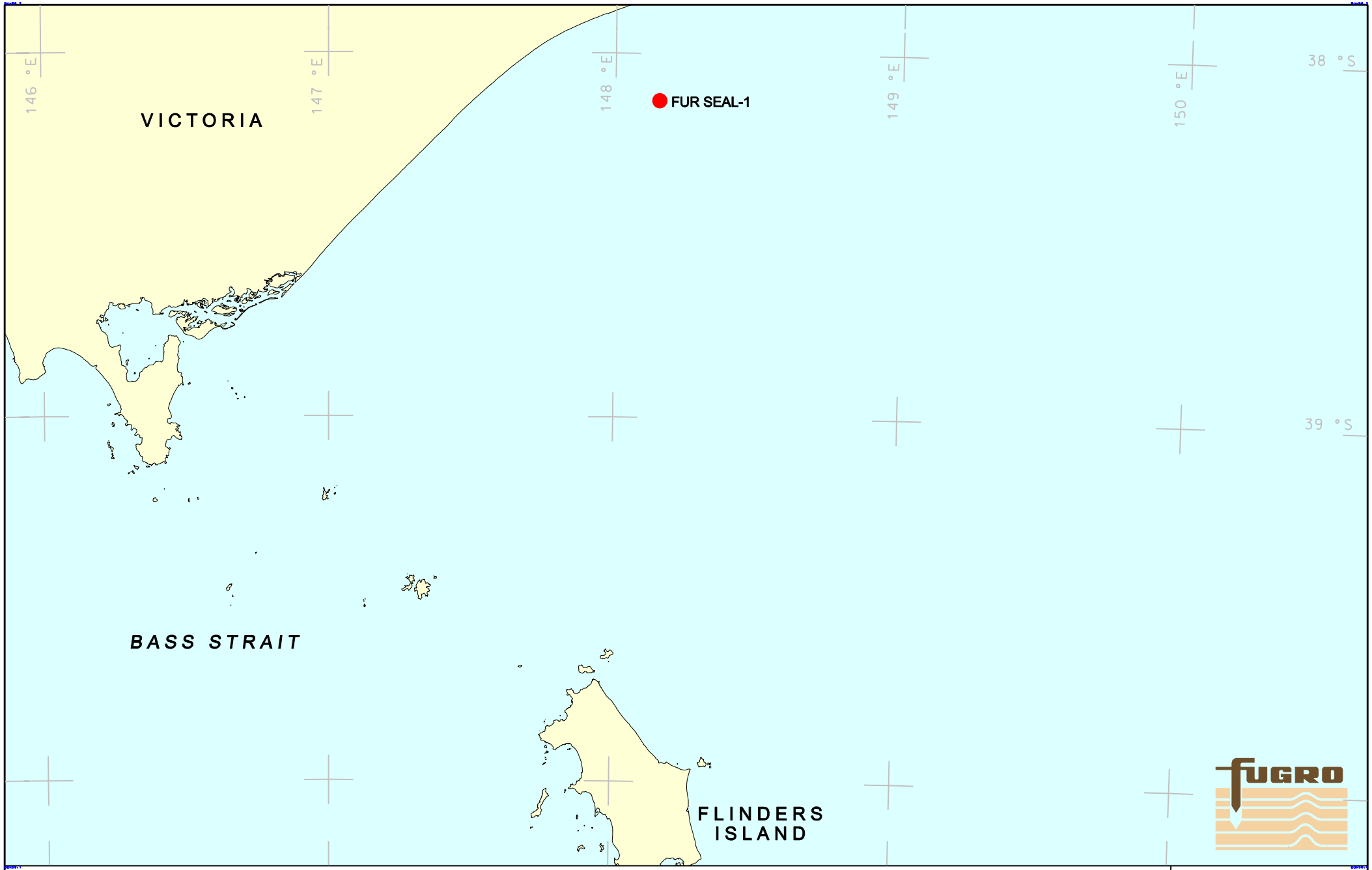
Personnel and equipment were provided on a 24 hour per day basis for:

- Calibration and function testing of the survey equipment on board the rig and the two Anchor Handling Vessels (AHVs).
- Surface navigation for the *Ocean Patriot*, using Fugro's MRDGPS (Multi Reference DGPS) and Starfix.Spot DGPS services.
- Surface navigation for AHVs during anchoring operations, using Starfix.Spot DGPS.
- Final rig surface positioning at Fur Seal-1 location using DGPS observations.
- Final reporting of the positioning results.

1.2 Sequence of Events

On 21 October 2005, K.E.Ong and M.Elmslie departed Perth for Melbourne and on the 22 October 2005, arrived onboard the *Ocean Patriot*. Anchors were recovered at Maclean-1 on 22 October 2005, with the tow commencing at 18:27 on the same day. On 23 October 2005, anchors were deployed with the rig positioned on location at Fur Seal-1 at 13:33. Fugro personnel departed the rig on 24 October 2005 and 25 October 2005.

Further details of Fugro's involvement in the rig move are presented in the Daily Operations Reports included in Appendix A.



GENERAL LOCATION DIAGRAM

FIGURE 1-1

u:p0369\dgn\figure\report\figure1-1.dgn

2.0 RESULTS

2.1 Final Position

The final position of the *Ocean Patriot* drill stem at Fur Seal-1 location was established by calculating the mean position from one hour of DGPS data logged between 20:25 and 21:25 on 24 October 2005. During this period, calculated drill stem coordinates from the primary and secondary positioning systems were logged at five second intervals in Starfix.Seis. Data from the primary positioning system was used for the final position calculation.

Differential GPS corrections were derived using a multi-reference solution with base station data from Bathurst, Cobar and Melbourne.

GDA94 geographical positions for the Fur Seal-1 location are shown in Table 2-1.

GDA94			
Position	**Method**	**Latitude**	**Longitude**
Drill Stem at Surface	MRDGPS	38° 07' 47.91" S	148° 09' 08.44" E
Proposed Location	-	38° 07' 47.82" S	148° 09' 08.53" E

TABLE 2-1 : GEOGRAPHICAL POSITIONS FOR FUR SEAL-1

GDA94 grid coordinates (CM 147° E) for the Fur Seal-1 location are shown in Table 2-2.

GDA94, MGA, CM147°E			
Position	**Method**	**Easting (m)**	**Northing (m)**
Drill Stem at Surface	MRDGPS	600995.5	5779136.7
Proposed Location	-	600997.9	5779139.3

TABLE 2-2 : GRID COORDINATES FOR FUR SEAL-1

This position is 3.5m at a bearing of 223.4° (Grid) from the design location.

A copy of the original rig position field reports are contained in Appendix B.

2.2 Rig Heading

The heading of the *Ocean Patriot* at Fur Seal-1 location was established by calculating the average heading during one hour of corrected gyro compass readings logged between 20:25 and 21:25 on 24 October 2005. During this period, gyro readings were logged at five second intervals in Starfix.Seis.

The *Ocean Patriot's* heading at the Fur Seal-1 location is shown in Table 2-3.

Description	**Method**	**True**	**Grid**
Rig Heading	Gyro	248.72	249.44°
Proposed Heading	-	250°	**-**

TABLE 2-3 : RIG HEADING AT FUR SEAL-1

2.3 Anchor Positions

The approximate locations of the *Ocean Patriot's* anchors at Fur Seal-1 are shown in Table 2-4.

GDA94, MGA, CM147°E				
Anchor	**Easting (m)**	**Northing (m)**	**Azimuth**	**Deployed By**
1	599862	5779362	280.9°	*Far Grip*
2	600105	5779897	311.4°	*Far Grip*
3	601215	5780263	10.9°	*Far Grip*
4	601670	5779943	40.8°	*Far Grip*
5	601991	5778935	100.6°	*Far Grip*
6	601829	5778416	131.1°	*Pacific Wrangler*
7	600795	5778085	189.9°	*Pacific Wrangler*
8	600324	5778331	220.3°	*Far Grip*

TABLE 2-4 : FUR SEAL-1 ANCHOR POSITIONS

The approximate coordinates of the *Ocean Patriot'*s anchors were calculated from:

- The azimuth from the fairlead position to the AHVs stern position at the time of anchor deployment.
- The range from the fairlead position to the anchor, as obtained from the on board chain counter, corrected for catenary.

3.0 SAFETY

All work undertaken by Fugro personnel during the project was performed within the guidelines of Fugro's Safety Policy, as defined in Fugro's Safety Manual (SMS-P01) and Offshore Survey Safety Practices (SMS-SP26).

Fugro personnel worked within all project safety guidelines and plans adopted by Apache and Diamond Offshore.

No safety incidents involving Fugro personnel were reported during the project.

Fugro personnel attended a vessel induction, pre-rig move meeting and weekly safety meeting whilst on board.

A Project Specific Safety Plan was developed for positioning services on board the *Ocean Patriot* for the Fur Seal-1 rig move.

4.0 SURVEY OPERATIONS

4.1 Mobilisation

K.E.Ong and M.Elmslie departed Perth on 21 October 2005, and arrived onboard the rig on 22 October 2005, whilst it was located at Maclean-1. Following a rig induction, the survey equipment on board was powered up and system and function tests completed.

4.2 General Survey Procedures

Anchor recovery at Maclean-1 was accomplished at 18:27 on 22 October 2005. The tow to Fur Seal-1 was conducted with the *Pacific Wrangler* connected to the main tow bridle.

The *Pacific Wrangler* manoeuvred the rig onto Fur Seal-1 location using an approach run-in line of two nautical miles extended from Anchor #4 drop point through to the proposed location. Anchoring operations commenced at 01:08 on 23 October 2005, with the deployment of anchor #4 by the *Far Grip.* The *Pacific Wrangler* continued the tow along the run-in, with the rig paying out anchor chain until positioned over the proposed Fur Seal-1 location.

After establishing that Anchor #4 was holding and the rig was maintaining its position, the *Far Grip* ran Anchors #8 and #5. Then *Far Grip* was required to rerun anchor #4 before it ran Anchors #1, #3 and #2. The *Pacific Wrangler* was released from the tow bridle after the primary anchors were deployed and subsequently ran Anchors #6 and #7.

During the deployment of each anchor, the AHVs were provided with a waypoint and the corresponding run line via the Wombat telemetry system. The AHVs ran out the anchor chain along this line to the desired drop point. The anchor chain was stretched out and the anchor lowered to the seabed. After confirming that the anchor was holding, the vessel then stripped the chain chaser back to the rig.

The *Ocean Patriot* was positioned over Fur Seal-1 location with all anchoring and pre-tensioning complete at 13:33 on 23 October 2005. Final position data was logged between 20:25 and 21:25 on 24 October 2005. After the 30-inch casing was cemented, a rig positioning field report was issued to the Apache Energy Ltd survey representative (see Appendix B).

4.3 Demobilisation

All navigation systems on board the *Ocean Patriot* and the AHVs were left operational for the anchor recovery at Fur Seal-1.

Fugro personnel departed the rig and returned to Perth on 24 and 25 October 2005.

5.0 EQUIPMENT CALIBRATION

5.1 DGPS Navigation Integrity Check

In order to check the correct operation of the navigation systems installed on board the *Ocean Patriot*, DGPS data was logged for 10 minutes on 22 October 2005, whilst the rig was located at Maclean-1.

A comparison of the primary and secondary DGPS was also conducted. The results from both of these tests are provided in Table 5-1.

GDA94, MGA, CM 147°E		
	Easting (m)	**Northing (m)**
Established Well Coordinates	635831.9	5787927.9
Observed Coordinates	635820.21	5787865.33
Difference (rig had commenced recovery anchor and moved off location)	11.69	62.57
Primary Navigation	635820.21	5787865.33
Secondary Navigation	635821.30	5787864.93
Difference	-1.08	0.40

TABLE 5-1 : DGPS NAVIGATION INTEGRITY CHECK

The DGPS checks described above demonstrated that the navigation systems on board the *Ocean Patriot* were set up and working correctly.

A positioning check list was completed at Fur Seal-1 location to confirm the proposed rig position and ensure that the correct geodetic datum, transformation and projection parameters were being used. Geodetic calculations were performed using Starfix.Seis.

Details of all positioning checks are provided in Appendix C.

5.2 Gyro Compass Calibration

The calibration of the survey gyrocompass was carried out on 24 October 2005, whilst the rig was located at Fur Seal-1.

A series of observations were made to the platforms from which the rig heading was calculated. The calculated values were then compared to the observed gyro compass values logged in Starfix.Seis and a mean C-O value of +0.00° was determined. No correction was applied in the navigation suite.

Details of the gyro calibration are included in Appendix C.

6.0 SURVEY PARAMETERS

6.1 Geodetic Parameters

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 2005.75) 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 (Table 6-1) was used in Fugro's software, to transform WGS84 (ITRF2000 Epoch 2005.50) 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 2005.50) to GDA94			
dX	-0.0156m	rX	+0.01445"
dY	-0.0349m	rY	+0.013050"
dZ	-0.0513m	rZ	+0.015037"
		dS	+0.004977ppm

TABLE 6-1 : TRANSFORMATION PARAMETERS

The proposed drilling location and all project coordinates are grid coordinates on the Map Grid of Australia.

Grid	**:**	**Map Grid of Australia (MGA94)**
Projection	:	Transverse Mercator
Latitude of Origin	:	0°
Central Meridian	:	147° E (UTM Zone 55)
Central Scale Factor	:	0.9996
False Easting	:	500000m
False Northing	:	10000000m
Units	:	Metres

6.2 Differential GPS Reference Stations

Fugro's Differential GPS Reference Stations are currently defined in the ITRF2000 (Epoch 2005.75) datum and are shown in Table 6-2.

ITRF 2000, EPOCH 2005.75					
Station	**Id**	**Latitude**	**Longitude**	**Height (m)**	**Uplink**
Bathurst	336	33° 25' 46.88203" S	149° 34' 01.96830" E	756.661	Optus/APSat
Cobar	316	31° 29' 57.43417" S	145° 50' 20.34389" E	270.165	Optus/APSat
Melbourne	385	37° 48' 29.00801" S	144° 57' 48.02855" E	82.059	Optus/APSat

TABLE 6-2 : DGPS REFERENCE STATIONS

6.3 Project Coordinates and Tolerances

Project target coordinates and surface tolerance for Fur Seal-1 location were supplied by Upstream and are shown in Table 6-3. Client supplied information is provided in Appendix D.

GDA94, MGA, CM 147°E			
Location	**Easting (m)**	**Northing (m)**	**Tolerances**
Fur Seal-1	600997.9	5779139.3	25m radius

TABLE 6-3 : PROJECT DESIGN COORDINATES

7.0 SURVEY EQUIPMENT, VESSEL AND PERSONNEL

7.1 Equipment

Survey equipment used for the positioning of the *Ocean Patriot* was as follows:

Ocean Patriot

2 x Starfix satellite DGPS (1 Optus link, 1 APSat link)
2 x Trimble 4000 series GPS receivers
2 x Pentium III computers, running Fugro's Starfix.Seis navigation software suite (1 spare)
4 x 15" monitors (2 Seis, 1 Helm, 1 spare)
1 x SG Brown gyro compass
1 x Tokimec gyro compass (spare)
2 x Uninterruptible power supply units (UPS)
1 x Teledesign radio/modem
1 x Theodolite, tripod and dark glass
1 x Printer

AHVs (complete system per vessel, plus one complete set of spares)

1 x Pentium computers, running Starfix Display/Wombat
1 x Monitors
1 x Trimble 4000 series GPS receiver
1 x Fluxgate compasses
1 x Teledesign radio/modems

All systems were provided complete with all necessary cabling, connectors, power supplies, antennae, accessories, manuals and consumables.

Refer to Figure 7-1 for an equipment flow diagram for the *Ocean Patriot* and Figure 7-2 for the equipment flow diagram for the AHVs.

7.2 Vessels

The vessels used for anchor handling and towing the *Ocean Patriot* were the *Pacific Wrangler* and the *Far Grip*. Refer to Figure 7-3, Figure 7-4 and Figure 7-5 for the vessel offset diagrams.

7.3 Personnel

Fugro personnel involved in the rig move and positioning operations were as follows:

M. Elmslie	Surveyor	21 Oct – 24 Oct 2005
K.E. Ong	Surveyor	21 Oct – 25 Oct 2005

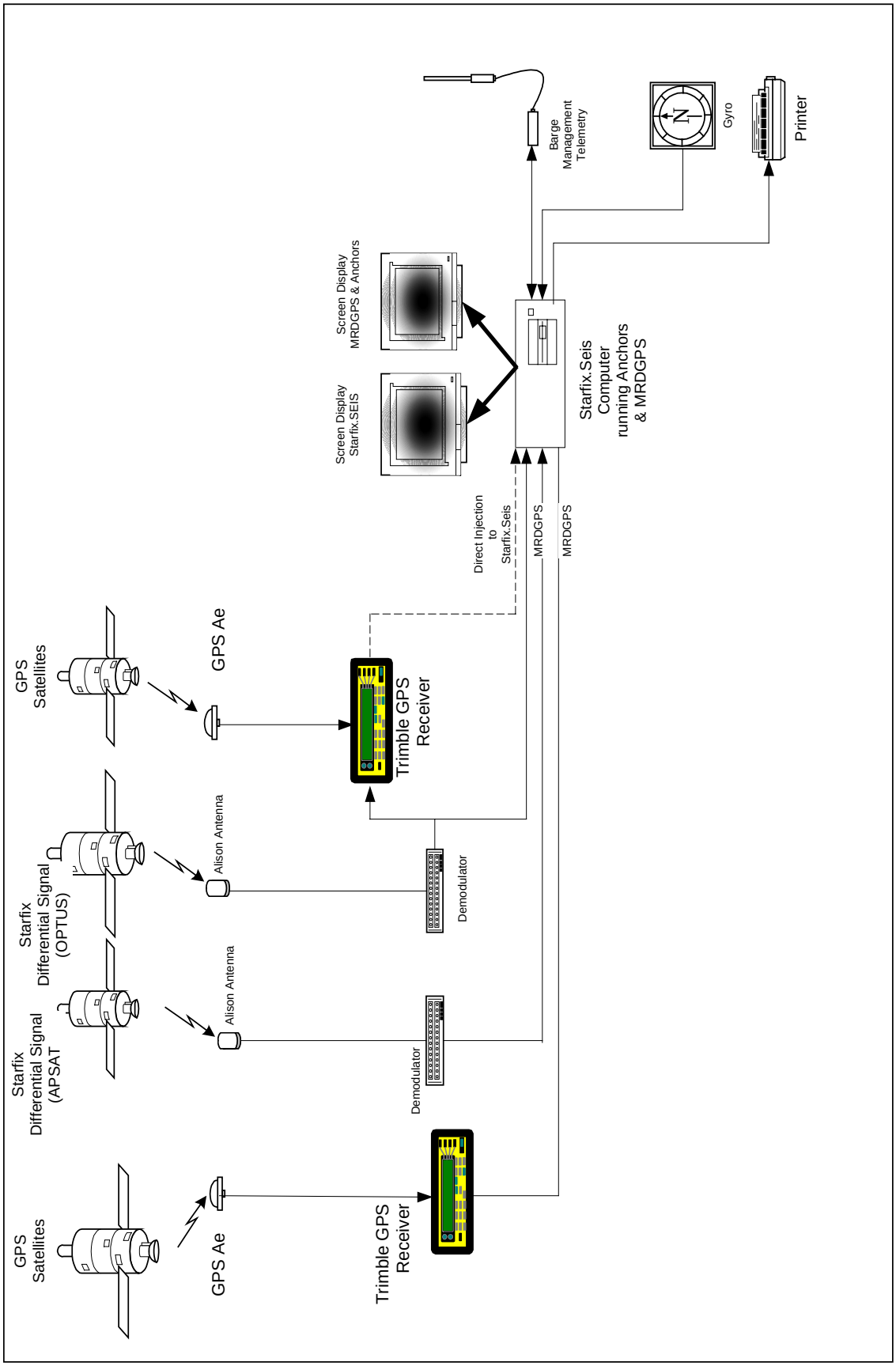


FIGURE 7-1 : EQUIPMENT FLOW DIAGRAM – MODU *OCEAN PATRIOT*

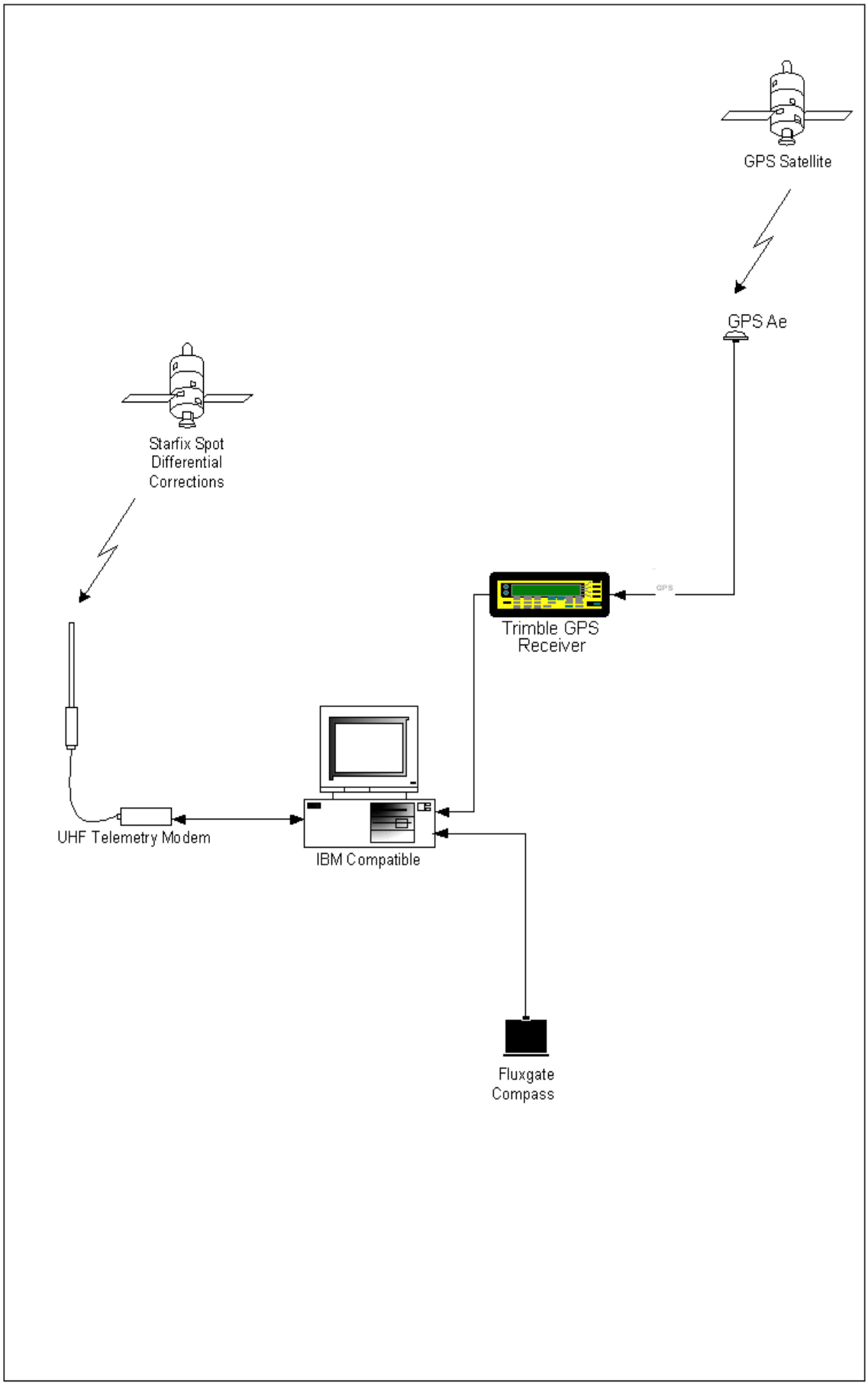
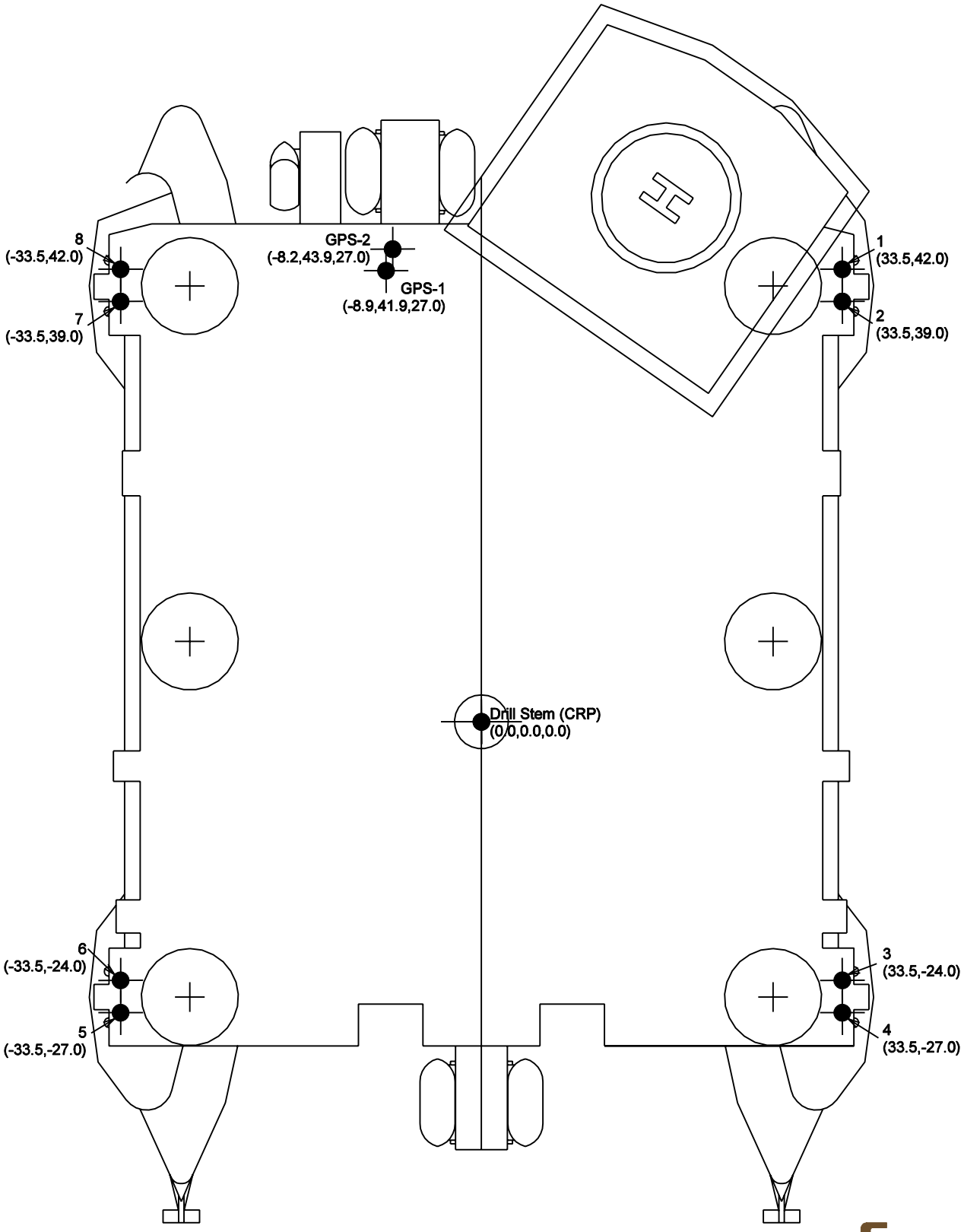


FIGURE 7-2 : EQUIPMENT FLOW DIAGRAM – AHVS



VESSEL OFFSET DIAGRAM – OCEAN PATRIOT

FIGURE 7–3

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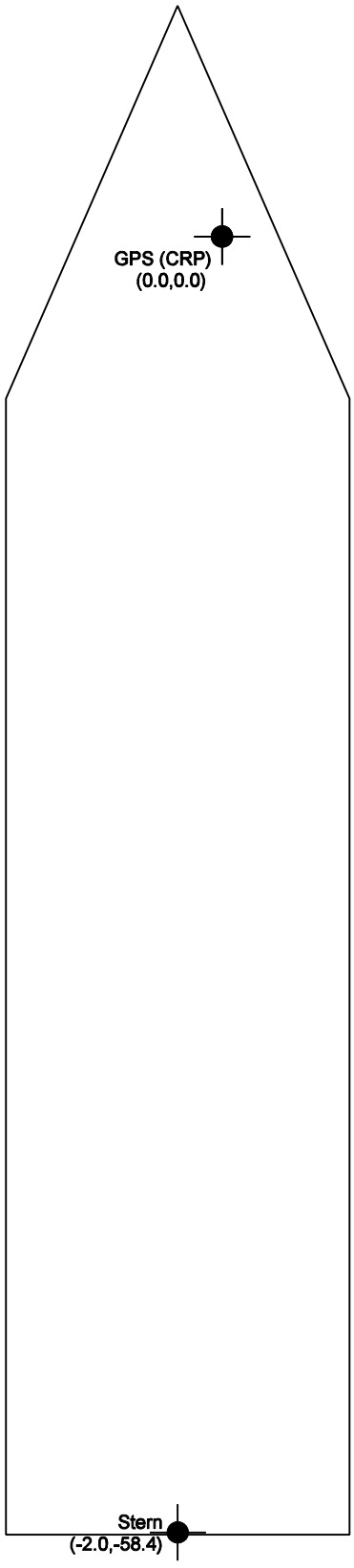

VESSEL OFFSET DIAGRAM – PACIFIC WRANGLER

FIGURE 7–4

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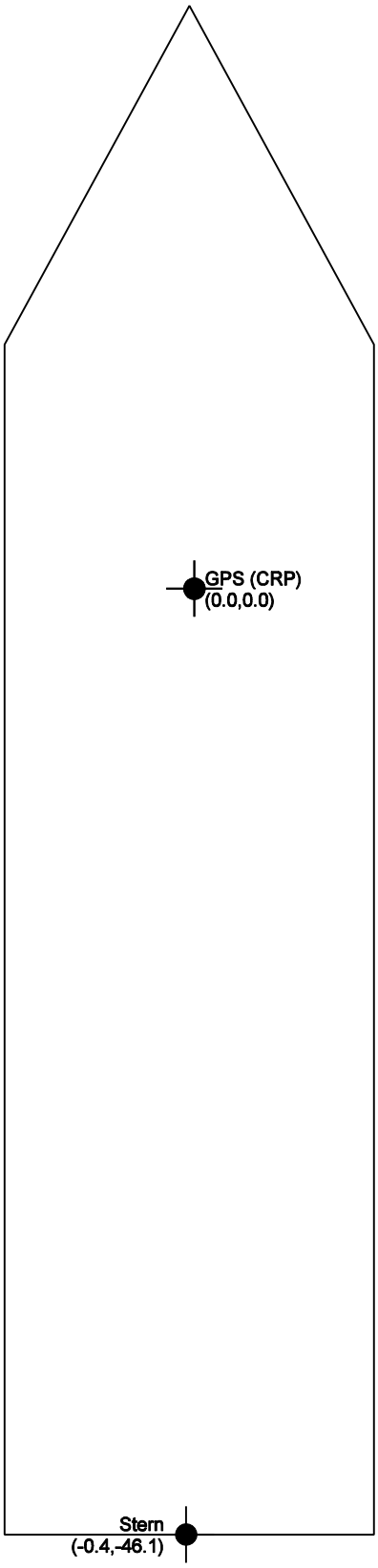

VESSEL OFFSET DIAGRAM – FAR GRIP

FIGURE 7–5

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8.0 CONCLUSIONS AND RECOMMENDATIONS

- The *Ocean Patriot* was successfully positioned during the towing and anchoring operations and at Fur Seal-1 location.
- The *Far Grip* and *Pacific Wrangler* were successfully positioned during the towing and anchoring operations.
- The surface position of Fur Seal-1 well was determined.

9.0 DISTRIBUTION

Copies of this report have been distributed as follows:

Apache Energy Ltd	: 3 hard copies
Attn: Paul O'Shea	: 1 electronic copy
Fugro Survey Pty Ltd	: 1 hard copy
	: 1 electronic copy

APPENDIX A
DAILY OPERATIONS REPORTS

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: BASS STRAIT OIL CO.	LOCATION: GILBERT-1	DATE: 21/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0367

FROM	TO	SUMMARY OF OPERATIONS
1300	1845	Fugro Personnel travel from Perth to Melbourne.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	M.Elmslie	Surveyor
Gyrocompass	1	Trimble Receivers	2	E.Ong	Surveyor
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		

VEHICLES:

CONSUMABLES:

ACCOMMODATION: HOLIDAY INN

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0367-09

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: BASS STRAIT OIL CO.	LOCATION: GILBERT-1	DATE: 22/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0367

FROM	TO	SUMMARY OF OPERATIONS
0730		Fugro Personnel check out of accommodation.
1005	1200	Travel from Essendon airport to Ocean Patriot.
1300	1330	E.Ong attends rig induction.
1311		Pacific Wrangler connected to tow bridle.
1358	1408	Check position fix conducted.
1408	1830	Continue anchor recovery operations.
1830		#5 Anchor bolstered, rig under tow. Rig changes hands from BSOC to Apache.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	M.Elmslie	Surveyor
Gyrocompass	1	Trimble Receivers	2	E.Ong	Surveyor
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		
VEHICLES:					
CONSUMABLES:					
ACCOMMODATION:					

AUTHORISED CONTRACT CHANGES / COMMENTS: ANCHOR RECOVERY OPERATIONS HAD ALREADY COMMENCED WHEN FUGRO PERSONNEL ARRIVED ONBOARD RIG.

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0367-10

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: APACHE	LOCATION: FUR SEAL-1	DATE: 22/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0369

FROM	TO	SUMMARY OF OPERATIONS
1830	2359	Rig handed over from BSOC. Under tow to Fur Seal-1 location.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	M.Elmslie	Surveyor
Gyrocompass	1	Trimble Receivers	2	E.Ong	Surveyor
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		

VEHICLES:		
CONSUMABLES:		
ACCOMMODATION:		

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0369-1

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: APACHE	LOCATION: FUR SEAL-1	DATE: 23/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0369

FROM	TO	SUMMARY OF OPERATIONS
0022		Far grip connected to #4 Anchor.
0108		Anchor 4 on bottom.
0135		Position check anchor 4, (E601512, N5780234) by Far Grip, approx. 300m off int.loc
0250		#8 PCC pass to Far Grip.
0430		Anchor 8 on bottom. (E600286, N5778286) by Far Grip.
0533		#5 PCC pass to Far Grip.
0605		Anchor 5 on bottom. (E602030, N5778927) by Far Grip.
0655		#4 PCC pass to Far Grip.
0724		Anchor 4 on Far Grip stern roller.
0800		Anchor 4 on bottom. (E601701, N5779979) by Far Grip.
0840		#1 PCC pass to Far Grip.
0855		Tow bridle disconnected from Pacific Wrangler.
0925		Anchor 1 on bottom. (E599827, N5779369) by Far Grip.
0933		#7 PCC pass to Pacific Wrangler.
1002		Anchor 7 on bottom. (E600790, N5778062) by Pacific Wrangler.
1010		#3 PCC pass to Far Grip.
1025		#6 PCC pass to Pacific Wrangler.
1039		Anchor 3 on bottom. (E601222, N5780299) by Far Grip.
1059		Anchor 6 on bottom. (E601846, N5778402) by Pacific Wrangler.
1116		#2 PCC pass to Far Grip.
1141		Anchor 2 on bottom. (E600062, N5779933) by Far Grip.
1200		Commence storm tensioning.
1257		Tensioning complete, skidding rig into location.
1333		Rig on location.
1334	1344	Preliminary position fix on drill stem, 3.5m at a bearing of 269.5°G from Fur Seal-1.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	M.Elmslie	Surveyor
Gyrocompass	1	Trimble Receivers	2	E.Ong	Surveyor
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		
VEHICLES:					
CONSUMABLES:					
ACCOMMODATION:					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0369-2

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: APACHE	LOCATION: FUR SEAL-1	DATE: 24/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0369

FROM	TO	SUMMARY OF OPERATIONS
0100	0130	K.E.Ong attend safety meeting.
0815	0830	Gyro calibration with observation to platforms. Results : C-O's +0.1°.
1120		M.Elmslie depart rig to Essendon. Then flight Melbourne to Perth.
2025		Commence logging final drillstem position.
2125		Complete logging final drillstem position.
2155		Submit field report to client representative.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	M.Elmslie	Surveyor
Gyrocompass	1	Trimble Receivers	2	E.Ong	Surveyor
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		
VEHICLES:					
CONSUMABLES:					
ACCOMMODATION:					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0369-3

Fugro Survey Pty Ltd
PM-F50

DAILY OPERATIONS REPORT

CLIENT: APACHE	LOCATION: FUR SEAL-1	DATE: 25/10/2005
PROJECT: RIG MOVE	VESSEL: OCEAN PATRIOT	JOB NO: P0369

FROM	TO	SUMMARY OF OPERATIONS
1100		E.Ong depart Ocean Patriot for Essendon and flight back to Perth from Melbourne.

EQUIPMENT	NO.	EQUIPMENT	NO.	PERSONNEL	TITLE
Seis Computer	1	Laptop	1	E.Ong	Surveyor
Gyrocompass	1	Trimble Receivers	2		
Demodulators	2	Theodolite	1		
AHV x 2 (Wombat)	2	Radio Modem	1		
VEHICLES:					
CONSUMABLES:					
ACCOMMODATION:					

AUTHORISED CONTRACT CHANGES / COMMENTS:

Party Chief Signature:	Client Representative Signature:	D O R Number
		P0369-4

APPENDIX B
FINAL POSITIONING DATA

RIG POSITION FIELD REPORT

Fur Seal-1

Client :	**Apache**	**Job Number :**	**P0369**
Rig :	**Ocean Patriot**	**Date:**	**24-Oct-05**
Project :	**Rig Move to Fur Seal-1, Bass Strait**		
Attention :	**J.Herriot** **Apache Representive**		

The Final surface location of the drill stem on the Ocean Patriot was derived from 60min of observations of the Primary Differential GPS Data, between 20:25:44hrs and 21:25:43hrs on completion of anchor pre-tensioning, ballasting operations and spudding operations.

The results of the observations are as follows:

Geographical Coordinates			**Grid Coordinates**	
Latitude (ϕ)	**-038° 07' 47.91"**	**South**	**Easting**	**600995.5**
Longitude (λ)	**148° 09' 8.44"**	**East**	**Northing**	**5779136.7**

The drill stem position is **3.5 m** at a bearing of **223.4°** Grid from the design location.

The Client supplied design locati(Fur Seal-1 .

Geographical Coordinates			**Grid Coordinates**	
Latitude (ϕ)	**-038° 07' 47.82"**	**South**	**Easting**	**600997.9**
Longitude (λ)	**148° 09' 8.53"**	**East**	**Northing**	**5779139.3**

The Ocean Patriot's rig heading, derived from the mean of 60 minutes of gyro heading data is:

248.72° TRUE 249.44° Grid

All coordinates in this field report are quoted in the following coordinate system:

Datum :	GDA94 (Australia-ITRF-2005.50)	Projection :	Transverse Mercator (UTM)	
Spheroid :	GRS80	Zone (Central Meridian) :	55	147° East

The approximate positions of the rig anchors corrected for catenary are as follows:

Anchor	Easting	Northing	Azimuth(°) - True
1	599862	5779362	280.9°
2	600105	5779897	311.4°
3	601215	5780263	10.9°
4	601670	5779943	40.8°
5	601991	5778935	100.6°
6	601829	5778416	131.1°
7	600795	5778085	189.9°
8	600324	5778331	220.3°

Party Chief/Surveyor: K.E.Ong J.Herriot

APPENDIX C
DGPS AND GYRO CHECKS

RIG POSITIONING
DGPS CHECK LIST (PRE RIG MOVE)

Client : Apache **Job Number :** P0369

Rig : Ocean Patriot **Date:** 22-Oct-05

Project : Rig Move to Fur Seal-1, Bass Strait
from Maclean-1 to Fur Seal-1

1) ESTABLISHED WELL COORDINATES

Horizontal Datum: GRS80

Observe 10minutes of DGPS data, logging both Primary and Secondary systems.
Establish a mean drill stem position from the primary navigation system and compare against the established well coordinates.

	Easting	Northing
Established Well Coordinates	635833.52	5787924.15
Observed Coordinates	635820.21	5787865.33
Differences	13.31	58.82

Note: Prior to logging DGPS data for the check fix, the Ocean Patriot had commenced anchor recovery and had moved off location.

Ensure agreement OK(?) Y / N
If No, Check and ensure that rig has not moved off location.

2) PRIMARY/SECONDARY NAV SYSTEMS

From the data logged above, compare the observed coordinates for both Primary and Secondary navigation systems.

	Easting	Northing
Primary Navigation	635820.21	5787865.33
Secondary Navigation	635821.30	5787864.93
Differences	-1.08	0.40

Ensure agreement OK(?) Y / N
If No, Check antenna offsets and gyro calibration.

Party Chief/Surveyor: _____ Client Representative: _____
Mick Elmslie J.Herriot

RIG POSITIONING
GEODESY AND COORDINATE CHECK LIST

Client :	**Apache**	**Job Number :**	**P0369**
Rig :	**Ocean Patriot**	**Date:**	**October 24, 2005**
Project :	**Rig Move to Fur Seal-1, Bass Strait**		

1. CONFIRMATION OF PROPOSED RIG COORDINATES and HEADING.

Well Name	**Fur Seal-1**		Ensure agreement with Client onsite prior to any positioning
Well Location – Latitude(ϕ)	-038° 07' 47.82"	S	Operations. OK (?) **Y** / N.
Well Location – Longitude(λ)	148° 09' 8.53"	E	
Rig Heading (True)	250° T		

2. GEODETIC PARAMETERS (WGS84 to LOCAL DATUM)

DATUM:	Dx	-0.01600 m	Ensure agreement with Client onsite prior to positioning operations.
GRS80	Dy	-0.03500 m	OK (?) **Y** / N.
	Dz	-0.05100 m	
	Rx	0.01450 "	
Projection:	Ry	0.01310 "	
	Rz	0.01500 "	
Transverse Mercator (UTM)	Ds	0.00500 ppm	
UTM Zone		55	
Central Meridian		147° East	

3. CHECK TRANSFORMATION OF SITE COORDINATES.

Well Location – Easting	600997.9	Ensure agreement with Starfix.Seis. OK (?) **Y** / N
Well Location – Northing	5779139.3	If not, CHECK and RECALC.
Convergence at Location	0.71 °	
Rig Heading (° Grid)	250.71°	

4. MEAS. ANT. OFFSETS from ANT. TO D/STEM (Rel. to Datum) (Measure two (2) separate directions, verifying closure.)	**NAV #1 SYSTEM**	**NAV #2 SYSTEM**
Delta X(m)	-8.86 m	-8.24 m
Delta Y(m)	41.86 m	43.86 m
Angle between Rig Centreline and Antenna(s) (Grid)	348.05°	349.4°
Distance between Drill Stem and Antenna (m)	42.79 m	44.63 m

5. MANUAL COORDINATE VERIFICATION FOR ANTENNAS		**NAV #1 SYSTEM**	**NAV #2 SYSTEM**
Proposed Drill Stem Position	Easting	600997.9	600997.9
	Northing	5779139.3	5779139.3
Drill Stem to Antenna	Proposed Hdg (G)	250.712°	250.712°
Brg (G) = Prop. Hdg. + Angle btwn centreline and antenna		238.761°	240.071°
	Distance (m)	42.79 m	44.63 m
Calculated Antenna	Easting	600961.32	600959.22
Coordinates (Local Datum)	Northing	5779117.11	5779117.03
	Latitude (ϕ)	-038° 07' 48.56" S	-038° 07' 48.56" S
	Longitude (λ)	148° 09' 7.04" E	148° 09' 6.96" E
Calculated Proposed Antenna Coords (WGS 84)	Latitude (ϕ)	-038° 07' 48.54" S	-038° 07' 48.54" S
	Longitude (λ)	148° 09' 7.05" E	148° 09' 6.97" E

6. POST RIG MOVE - OBSERVED ANTENNA COORD

Observed GPS Receiver Antenna Position in	Latitude (ϕ)	-38 ° 07' 48.65 " S	-38 ° 07' 48.67 " S
WGS84.	Longitude (λ)	148 ° 9' 06.98 " E	148 ° 9' 06.93 " E

Ensure agreement between calculated and observed coordinates. If **NO,** check calcs., antenna offsets. OK(?) Y / N

Surveyor : K.E.Ong Client Rep : J.Herriot Date : 24/OCT/05

GYRO COMPASS CALIBRATION BY PLATFORM - CALCULATION SUMMARY

Client:	**Apache**	**Job Number:**	**P0369**	**Vessel/Location:**	**Ocean Patriot/Fur Seal-1**
Datum:	**GDA94**	**Compass/Fugro No.**	**SGBrown**	**Point Scale Factor:**	**0.9997**
Survey Station:	**Helideck**	**Easting:**	**600951.3**	**Northing:**	**5779123.1**
Grid Bearing between:	**152.2000**				
Reference Pt:	**Marlin (MAR)**	**Easting:**	**606854.9**	**Northing:**	**5767912.4**
Convergence:	**0° 42' 40.5"**				

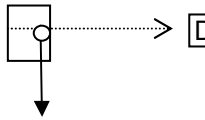
Obs No	UTC Time	Observed to	Observed Bearing (Mar) D	M	S	Observe Reference Bearing D	M	S	Reduced Angle D	M	S	Calc.True Heading	Gyro Reading	Difference (degrees)
1	22:15:30	(MAR)	213	6	38	130	18	50	82	47	48	68.69	68.7	-0.01
2	22:17:00	(MAR)	213	6	40	130	18	50	82	47	50	68.69	68.7	-0.01

Comments:

Note 1 : Ensure gyro offset in nav system/software is set to zero before commencing observations.

Note 2: True Bearing = Grid Bearing - Convergence (Conv is +ve East of CM and -ve West of CM)

SKETCH:



Mean	-0.01
Std. Dev	0.00

Surveyor:- **Ong** **Date:** 25-Oct-05

GYRO COMPASS CALIBRATION BY PLATFORM - CALCULATION SUMMARY

Client:	**Apache**	**Job Number:**	**P0369**	**Vessel/Location:**	**Ocean Patriot/Fur Seal-1**		
Datum:	**GDA94**	**Compass/Fugro No.**	**SGBrown**		**Point Scale Factor:**	**0.9997**	
Survey Station:	**Helideck**	**Easting:**	**600951.3**	**Northing:**	**5779123.1**	**Grid Bearing between:**	**238.2000**
Reference Pt:	**Snaper (SNP)**	**Easting:**	**589741.3**	**Northing:**	**5772183.1**	**Convergence:**	**0° 42' 40.5"**

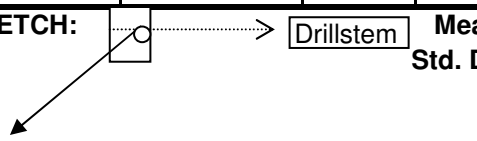
Obs No	UTC Time	Observed to	Observed Bearing (SNP) D	M	S	Observe Reference Bearing D	M	S	Reduced Angle D	M	S	Calc.True Heading	Gyro Reading	Difference (degrees)
1	22:16:30	SNP	298	59	28	130	18	50	168	40	38	68.81	68.7	0.11
2	22:17:50	SNP	298	59	40	130	18	50	168	40	50	68.81	68.7	0.11

Comments:

Note 1 : Ensure gyro offset in nav system/software is set to zero before commencing observations.

Note 2: True Bearing = Grid Bearing - Convergence (Conv is +ve East of CM and -ve West of CM)

SKETCH:



Mean	0.11
Std. Dev	0.00

Surveyor:- **Ong** **Date:** 25-Oct-05

APPENDIX D
CLIENT SUPPLIED INFORMATION

1. Well Summary

Well name		Fur Seal-1
Type of Well		Exploration – Vertical
Permit		VIC/P-54
Operator		Apache Energy Ltd.
Objectives	***Primary***	Kingfish Formation
	Secondary	Volador Formations
Seismic Line		Northern Fields 3D Inline 3195 at Xline 7787
Geographical Location	***Latitude***	38° 07' 47.82" S
	Longitude	148° 09' 08.53" E
	Northing	5,779,139.3 m N
	Easting	600,997.9 m E
Approximate Elevation (RT-AHD)		22m
Water Depth		58m (AHD)
General Reference Datum		GDA94 / UTM Zone 55S, CM – 147°E
Surface Survey Tolerance		25m radius
Target Tolerance		50m radius
Rig Heading		~~±045°~~ 250°
Anticipated Spud Date		27/10/05
Proposed Total Depth		2636mRT
Estimated Time to Drill		16 days
Drilling Contractor		Diamond Offshore
Rig Type		Semi submersible
Rig Name		Ocean Patriot
Attendant Craft	**AHSV 1**	Far Grip
	AHSV 2	Pacific Wrangler
	Helicopter	Bristow Super Puma from Essendon

Apache

Cuttings Descriptions Report

Well Name :	Fur Seal -1	**Print Date**	16/01/2006
Wellsite Geologist(s) :	M Woodmansee R Blackmore		

Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
Main				
824.0 - 830.0	100	**ARGILLACEOUS CALCILUTITE:** medium grey to light grey, rarely pale brown to yellowish brown, soft to firm, amorphous to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments. Minor cement contamination.	72	
830.0 - 840.0	100	**ARGILLACEOUS CALCILUTITE:** light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments.		
840.0 - 860.0	90 10	**ARGILLACEOUS CALCILUTITE:** light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments. **CALCARENITE:** light brown to yellowish brown, firm to moderately hard, occasionally brittle, massive to blocky, moderately argillaceous with trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace assorted fossil fragments.		
860.0 - 880.0	90 10	**ARGILLACEOUS CALCILUTITE:** as above **CALCISILTITE:** light brown-grey to pale yellowish brown, firm to moderately hard, amorphous to locally sub-blocky, moderately argillaceous, trace micropyrite, trace black lithic specks.	73	
880.0 - 900.0	95 5	**ARGILLACEOUS CALCILUTITE:** as above **CALCISILTITE:** as above		
900.0 - 920.0	80 20	**ARGILLACEOUS CALCILUTITE:** as above **CALCISILTITE:** as above		
920.0 - 940.0	80 20	**ARGILLACEOUS CALCILUTITE:** as above **MARL:** Light grey to medium greenish grey, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments.	60	
940.0 - 960.0	100	**MARL:** as above		
960.0 - 980.0	80 20	**MARL:** as above **CALCISILTITE:** light brown-grey to pale yellowish brown, firm to moderately hard, amorphous to locally sub-blocky, moderately argillaceous, trace micropyrite, trace black lithic specks.	55	
980.0 - 1000.0	100	**MARL:** light to medium grey, occasionally light olive grey, very soft to dispersive, trace fine quartz silt, trace micropyrite, trace forams and assorted fossil fragments.		
1000.0 - 1020.0	100	**MARL:** light grey to medium greenish grey, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micropyrite, trace pyrite nodules, trace forams and assorted fossil fragments.	52	
1020.0 - 1040.0	100	**MARL:** greenish grey to light olive grey, soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micropyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.		
1040.0 - 1060.0	100	**MARL:** as above	58	
1060.0 - 1080.0	100	**MARL:** as above		
1080.0 - 1100.0	100	**MARL:** as above	59	
1100.0 - 1120.0	100	**MARL:** light olive grey to slightly greenish grey, soft, sticky, trace quartz silt, trace carbonaceous specks, trace very fine disseminated pyrite.		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1120.0 - 1140.0	100	**MARL:** as above	58	
1140.0 - 1160.0	100	**MARL:** light grey, light olive grey, very soft, sticky, subblocky to dominantly amorphous, trace very fine carbonaceous / lithic fragments, trace very fine pyrite, trace calcareous silt.		
1160.0 - 1180.0	90 10	**MARL:** as above **ARGILLACEOUS CALCILUTITE:** off white, very light grey, very soft, subblocky to dominantly amorphous, trace carbonaceous specks.	60	
1180.0 - 1200.0	90 10	**MARL:** as above **ARGILLACEOUS CALCILUTITE:** as above		
1200.0 - 1220.0	95 5	**MARL:** light olive grey to slightly greenish grey, soft, sticky, trace quartz silt, trace carbonaceous specks, trace very fine disseminated pyrite. **ARGILLACEOUS CALCILUTITE:** as above	61	
1220.0 - 1240.0	80 20	**MARL:** as above **ARGILLACEOUS CALCILUTITE:** Argillaceous Calcilutite: off white, very light grey, very sift, amorphous, trace glauconite, trace calcareous sand grains.		
1240.0 - 1260.0	80 20	**MARL:** as above **ARGILLACEOUS CALCILUTITE:** as above	74	
1260.0 - 1280.0	90 10	**MARL:** medium grey to very light grey, soft, sub blocky, rare very fine pyrite, trace carbonaceous specks. **ARGILLACEOUS CALCILUTITE:** as above		
1280.0 - 1300.0	100	**MARL:** As above	40	
1300.0 - 1320.0	100	**MARL:** as above trace white Calcilutite.		
1320.0 - 1340.0	100	**MARL:** medium grey to light medium grey, soft, sub blocky, trace very fine pyrite in part, trace carbonaceous specks, trace micro fossils including forams and echinoids.	42	
1340.0 - 1360.0	100	**MARL:** as above		
1360.0 - 1380.0	70 30	**MARL:** as above **CALCAREOUS CLAYSTONE:** medium light grey to medium grey, soft, sub blocky, trace carbonaceous specks, trace forams and micro fossils, trace glauconite.	35	
1380.0 - 1400.0	60 40	**MARL:** medium light grey to medium grey, soft, sub blocky, trace very fine pyrite in part, trace carbonaceous specks, trace micro fossils including forams and echinoids. **CALCAREOUS CLAYSTONE:** as above		
1400.0 - 1420.0	100	**CALCAREOUS CLAYSTONE:** light olive grey to medium grey, very soft, sub blocky to occasionally amorphous, trace calcareous silt grains, trace forams and micro fossils, rare very fine carbonaceous specks, trace very fine pyrite in part.	31	
1420.0 - 1440.0	100	**CALCAREOUS CLAYSTONE:** as above		
1440.0 - 1460.0	100	**CALCAREOUS CLAYSTONE:** light grey to medium grey, soft to firm, sub-blocky to blocky, trace carbonaceous specks, common forams and micro-fossils, trace micropyrite, rare hard brittle shelly material.	34	
1460.0 - 1480.0	100	**CALCAREOUS CLAYSTONE:** as above		
1480.0 - 1500.0	100	**CALCAREOUS CLAYSTONE:** as above	38	
1500.0 - 1520.0	100	**CALCAREOUS CLAYSTONE:** light grey to medium grey, soft to firm, sub-blocky to blocky, common forams and micro-fossils, trace micro-pyrite, rare yellowish-brown hard brittle shelly material, trace nodular and disseminated pyrite, trace light brown brittle dolomite, trace fine glauconite grains.		
1520.0 - 1540.0	100	**CALCAREOUS CLAYSTONE:** light grey to medium grey, soft to firm, sub-blocky to blocky, common forams and micro-fossils, trace disseminated pyrite.	38	
1540.0 - 1560.0	100	**CALCAREOUS CLAYSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
1560.0 - 1580.0	100	**CALCAREOUS CLAYSTONE:** as above	32	
1580.0 - 1600.0	100	**CALCAREOUS CLAYSTONE:** as above		
1600.0 - 1620.0	100	**CALCAREOUS CLAYSTONE:** as above	39	
1620.0 - 1640.0	100	**CALCAREOUS CLAYSTONE:** dominantly light medium grey - medium grey, soft - rare firm, sub blocky, commonly deformable, trace very fine disseminated pyrite, trace microfossils, commonly homogenous.		
1640.0 - 1660.0	100	**CALCAREOUS CLAYSTONE:** as above	34	
1660.0 - 1680.0	100	**CALCAREOUS CLAYSTONE:** as above		
1680.0 - 1700.0	100	**CALCAREOUS CLAYSTONE:** as above	31	
1700.0 - 1720.0	100	**CALCAREOUS CLAYSTONE:** dominantly light medium grey - medium grey, soft - rare firm, sub blocky, commonly deformable, trace very fine disseminated pyrite, trace microfossils, commonly homogenous.		
1720.0 - 1740.0	100	**CALCAREOUS CLAYSTONE:** as above	30	
1740.0 - 1760.0	100	**CALCAREOUS CLAYSTONE:** as above		
1760.0 - 1780.0	100	**CALCAREOUS CLAYSTONE:** dominantly light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, trace micro-fossils, commonly homogenous.	31	
1780.0 - 1800.0	100	**CALCAREOUS CLAYSTONE:** as above		
1800.0 - 1820.0	100	**CALCAREOUS CLAYSTONE:** dominantly light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous.	29	
1820.0 - 1840.0	100	**CALCAREOUS CLAYSTONE:** light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous, becoming less calcareous and lighter in colour with depth.		
1840.0 - 1860.0	100 0	**CALCAREOUS CLAYSTONE:** as above **CALCISILTITE:** predominantly off white to very light grey, occasionally very pale grey-brown, very soft to moderately firm, amorphous, trace calcareous silt grains, grading into calcareous claystone.	32	
1860.0 - 1880.0	95 5	**CALCAREOUS CLAYSTONE:** as above **CALCISILTITE:** as above with trace carbonaceous specks.		
1880.0 - 1900.0	100	**CALCAREOUS CLAYSTONE:** as above	24	
1900.0 - 1920.0	100	**CALCAREOUS CLAYSTONE:** as above		
1920.0 - 1940.0	100	**CALCAREOUS CLAYSTONE:** light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous, becoming less calcareous and lighter in colour with depth.	25	
1940.0 - 1960.0	100	**CALCAREOUS CLAYSTONE:** as above		
1960.0 - 1980.0	100	**CALCAREOUS CLAYSTONE:** as above	18	
1980.0 - 2000.0	100	**CALCAREOUS CLAYSTONE:** as above		
2000.0 - 2020.0	100	**CALCAREOUS CLAYSTONE:** light grey, medium light grey, very soft, sticky, sub blocky to amorphous, trace very fine pyrite, trace dark lithic specks.	22	
2020.0 - 2040.0	100	**CALCAREOUS CLAYSTONE:** as above trace glauconite, trace dark carbonaceous and pyritic patches.		
2040.0 - 2060.0	100	**CALCAREOUS CLAYSTONE:** as above		
2060.0 - 2070.0	100	**CALCAREOUS CLAYSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2070.0 - 2080.0	100	**CALCAREOUS CLAYSTONE:** as above		
2080.0 - 2090.0	100	**CALCAREOUS CLAYSTONE:** light grey to occasionally medium grey, soft, sub blocky to amorphous, trace very fine disseminated pyrite, occasional very small dark carbonaceous and pyritic patches, trace glauconite.	27	
2090.0 - 2100.0	100	**CALCAREOUS CLAYSTONE:** as above		
2100.0 - 2110.0	100	**CALCAREOUS CLAYSTONE:** light grey to medium light grey, soft - trace firm, sub blocky to amorphous, trace very fine disseminated pyrite, occasional very small dark carbonaceous and pyritic patches, trace glauconite.		
2110.0 - 2120.0	100	**CALCAREOUS CLAYSTONE:** as above		
2120.0 - 2130.0	100	**CALCAREOUS CLAYSTONE:** as above: trace calcite.	24	
2130.0 - 2140.0	100	**CALCAREOUS CLAYSTONE:** as above		
2140.0 - 2150.0	100	**CALCAREOUS CLAYSTONE:** as above		
2150.0 - 2160.0	100	**CALCAREOUS CLAYSTONE:** as above		
2160.0 - 2170.0	100	**CALCAREOUS CLAYSTONE:** as above	21	
2170.0 - 2180.0	100	**CALCAREOUS CLAYSTONE:** light grey - medium light grey, rare medium grey, soft to occasionally firm, sub blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, rare glauconite.		
2180.0 - 2190.0	100	**CALCAREOUS CLAYSTONE:** as above		
2190.0 - 2200.0	99	**CALCAREOUS CLAYSTONE:** light grey - medium light grey, rare medium grey, soft to occasionally firm, sub blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, glauconite and small glauconite nodules.		
	1	**SANDSTONE:** clear to off white, fine to medium, moderately sorted, rounded to angular, moderate to poor sphericity, common argillaceous matrix, poor to fair inferred porosity, no fluorescence.		
2205.0 - 2210.0	98	**CALCAREOUS CLAYSTONE:** light grey - medium light grey, rare medium grey, soft to occasionally firm, sub blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, glauconite and small glauconite nodules.		
	1	**SILTSTONE:** brownish grey, very soft to firm, sub blocky to amorphous, micro micaceous, carbonaceous specks and flakes, very argillaceous.		
	1	**SANDSTONE:** clear to off white, fine to medium, moderately sorted, rounded to angular, moderate to poor sphericity, common argillaceous matrix, trace glauconite, poor to fair inferred porosity, no fluorescence.		
2210.0 - 2215.0	59	**SILTSTONE:** brownish grey, very soft to firm, micro mica, common carbonaceous grains and flakes, very argillaceous in part, gradational to Carbonaceous Siltstone in part.		
	40	**CALCAREOUS CLAYSTONE:** as above probably cavings		
	1	**CARBONACEOUS SILTSTONE:** brownish black to black, firm, brittle in part, silty, gradational to Coal in part.		
2215.0 - 2220.0	69	**SILTSTONE:** brownish grey, very soft to firm, micro mica, common carbonaceous grains and flakes, very argillaceous in part, trace fine pyrite, gradational to Carbonaceous Siltstone in part.		
	30	**CALCAREOUS CLAYSTONE:** as above		
	1	**CARBONACEOUS SILTSTONE:** as above		
2220.0 - 2225.0	70	**SILTSTONE:** as above		
	30	**CALCAREOUS CLAYSTONE:** light grey, off white, very soft to firm, sub blocky to amorphous in part, glauconitic in part.		
2225.0 - 2230.0	70	**SILTSTONE:** brownish grey, very soft to rarely firm, sub blocky, rare sub fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.		
	30	**CALCAREOUS CLAYSTONE:** very light grey, very light brown, very soft, sub blocky to commonly amorphous, trace glauconite, occasionally containing very fine to fine, well rounded and sorted sand.		
	1	**SANDSTONE:** very light grey, soft aggregates, very fine to fine grained, well sorted, rounded, 60% argillaceous matrix, matrix supported. No fluorescence.		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		Also trace loose medium to coarse grains, moderately sorted, angular to rounded. No fluorescence.		
2230.0 - 2235.0	79	**SILTSTONE:** as above		
	20	**CALCAREOUS CLAYSTONE:** as above		
	1	**SANDSTONE:** clear to off white, medium to coarse and loose, occasionally fine, poorly sorted, sub rounded to very angular, commonly fractured grains, moderate to poor sphericity, 10-40% argillaceous matrix in fine aggregates, fair inferred porosity, no fluorescence.		
2235.0 - 2240.0	70	**CLAYSTONE:** very light grey, light greyish / brown, very soft to firm, calcareous, trace glauconite, trace very fine sand grains.		
	30	**SILTSTONE:** as above		
	1	**SANDSTONE:** as above		
2240.0 - 2245.0	60	**CLAYSTONE:** as above		
	40	**SILTSTONE:** as above		
2245.0 - 2250.0	70	**CLAYSTONE:** as above		
	30	**SILTSTONE:** as above		
2250.0 - 2255.0	80	**CLAYSTONE:** as above		
	20	**SILTSTONE:** brownish grey, very soft to rarely firm, sub blocky, rare sub fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.		
2255.0 - 2260.0	79	**CLAYSTONE:** very light grey, light greyish brown, very soft to rarely firm, calcareous, rare glauconite, trace very fine sand grains.		
	20	**SILTSTONE:** as above		
	1	**SANDSTONE:** clear, loose, medium to coarse, moderately sorted, sub angular to rounded, moderate sphericity, fair to good inferred porosity. No fluorescence.		
2260.0 - 2265.0	79	**CLAYSTONE:** as above		
	20	**SILTSTONE:** as above		
	1	**SANDSTONE:** as above		
2265.0 - 2270.0	75	**CLAYSTONE:** as above		
	15	**SANDSTONE:** clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, moderate sphericity, high sphericity in fine component, common white argillaceous matrix washing out in part, occasionally matrix supported in fine aggregates, poor - fair inferred porosity. No Fluorescence.		
	10	**SILTSTONE:** as above		
2270.0 - 2275.0	90	**KAOLINITIC SANDSTONE:** white to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity, no fluorescence.		
	10	**CLAYSTONE:** as above		
2275.0 - 2280.0	80	**SANDSTONE:** clear, translucent, white, loose to soft aggregates, medium to coarse, occasionally fine, moderately sorted, sub angular to rounded, moderate sphericity, white kaolinite matrix 0 - 50%, good inferred porosity, no fluorescence.		
	20	**SILTSTONE:** light grey to brownish grey, very soft to firm, arenaceous to very argillaceous, trace carbonaceous specks, occasional very fine pyrite.		
2280.0 - 2285.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2285.0 - 2290.0	90	**SANDSTONE:** clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, moderate sphericity, high sphericity in fine component, common white argillaceous matrix washing out in part, occasionally matrix supported in fine aggregates, poor - fair inferred porosity. No Fluorescence.		
	10	**SILTSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2290.0 - 2295.0	90	**SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2295.0 - 2300.0	95	**KAOLINITIC SANDSTONE:** white, very light grey, clear, loose to very soft aggregates, fine to coarse, poorly sorted, sub angular to rounded, moderate sphericity, abundant white kaolinite matrix to 90%, matrix supported in part, poor to fair inferred porosity, no fluorescence.		
	5	**SILTSTONE:** as above		
2300.0 - 2305.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2305.0 - 2310.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2310.0 - 2315.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2315.0 - 2320.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2320.0 - 2325.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2325.0 - 2330.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2330.0 - 2335.0	95	**KAOLINITIC SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2335.0 - 2340.0	85	**KAOLINITIC SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	5	**COAL:** black to dark brown, sub-blocky to platy, firm to brittle, shiny lustre to dull matt colour.		
2340.0 - 2345.0	50	**KAOLINITIC SANDSTONE:** white to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity, no fluorescence.		
	40	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	10	**COAL:** as above		
2345.0 - 2350.0	80	**SILTSTONE:** as above		
	15	**KAOLINITIC SANDSTONE:** as above		
	5	**COAL:** as above		
2350.0 - 2355.0	95	**SILTSTONE:** as above		
	5	**KAOLINITIC SANDSTONE:** as above		
	0	**COAL:** as above		
2355.0 - 2360.0	100	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	0	**COAL:**		
2360.0 - 2365.0	100	**SILTSTONE:** as above		
	0	**COAL:**		
2365.0 - 2370.0	90	**SILTSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2365.0 - 2370.0	10	**KAOLINITIC SANDSTONE:** white to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity, no fluorescence.		
	0	**COAL:**		
2370.0 - 2375.0	90	**SILTSTONE:** as above		
	10	**KAOLINITIC SANDSTONE:** as above		
	0	**COAL:**		
2375.0 - 2380.0	80	**SILTSTONE:** as above		
	20	**KAOLINITIC SANDSTONE:** as above		
2380.0 - 2385.0	50	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	50	**KAOLINITIC SANDSTONE:** as above		
2385.0 - 2390.0	90	**KAOLINITIC SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2390.0 - 2395.0	90	**ARGILLACEOUS SANDSTONE:** white to very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub-angular to sub-rounded, common white argillaceous matrix (some rock flour?) washing out in part, poor - fair inferred porosity. No Fluorescence.		
	10	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
2395.0 - 2400.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2400.0 - 2405.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2405.0 - 2410.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2410.0 - 2415.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
2415.0 - 2420.0	70	**SILTSTONE:** light to medium brown, occasionally dark brown, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	30	**ARGILLACEOUS SANDSTONE:** white to light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub-angular to sub-rounded, common white argillaceous matrix washing out in part, poor - fair inferred porosity. No Fluorescence.		
2420.0 - 2425.0	60	**ARGILLACEOUS SANDSTONE:** as above		
	40	**SILTSTONE:** as above		
2425.0 - 2430.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	0	**COAL:** black to dark brown, sub-blocky to platy, firm to brittle, shiny lustre to dull matt colour.		
2430.0 - 2435.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	0	**COAL:**		
2435.0 - 2440.0	90	**ARGILLACEOUS SANDSTONE:** clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, common white argillaceous matrix washing out in part,		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
		poor - fair inferred porosity. No Fluorescence.		
	10	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
2440.0 - 2445.0	70	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	30	**ARGILLACEOUS SANDSTONE:** as above		
2445.0 - 2450.0	70	**ARGILLACEOUS SANDSTONE:** as above		
	30	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
2450.0 - 2455.0	80	**SILTSTONE:** as above		
	20	**ARGILLACEOUS SANDSTONE:** as above		
2455.0 - 2460.0	70	**SILTSTONE:** as above		
	30	**ARGILLACEOUS SANDSTONE:** as above		
2460.0 - 2465.0	80	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	10	**CARBONACEOUS SILTSTONE:** light grey to speckled white, soft to firm, sub-blocky to blocky, common platy carbonaceous specks, rarely in laminae, rare to common disseminated pyrite, grading into Siltstone.		
2465.0 - 2470.0	70	**SILTSTONE:** as above		
	20	**CARBONACEOUS SILTSTONE:** as above		
	10	**ARGILLACEOUS SANDSTONE:** as above		
2470.0 - 2475.0	50	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	30	**ARGILLACEOUS SANDSTONE:** white to light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub-angular to sub-rounded, common white argillaceous matrix washing out in part, poor - fair inferred porosity. No Fluorescence.		
	20	**CARBONACEOUS SILTSTONE:** as above		
2475.0 - 2480.0	90	**ARGILLACEOUS SANDSTONE:** as above		
	5	**CARBONACEOUS SILTSTONE:** as above		
	5	**SILTSTONE:** as above		
2480.0 - 2485.0	60	**SILTSTONE:** as above		
	30	**ARGILLACEOUS SANDSTONE:** as above		
	10	**CARBONACEOUS SILTSTONE:** as above		
2485.0 - 2490.0	70	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	20	**CARBONACEOUS SILTSTONE:** light grey to speckled white, soft to firm, sub-blocky to blocky, common platy carbonaceous specks, rarely in laminae, rare to common disseminated pyrite, grading into Siltstone.		
	10	**ARGILLACEOUS SANDSTONE:** white to light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub-angular to sub-rounded, common white argillaceous matrix washing out in part, poor - fair inferred porosity. No Fluorescence.		
2490.0 - 2495.0	70	**SILTSTONE:** as above		
	20	**CARBONACEOUS SILTSTONE:** as above		
	10	**ARGILLACEOUS SANDSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2495.0 - 2500.0	70	**SILTSTONE:** as above		
	20	**CARBONACEOUS SILTSTONE:** as above		
	10	**ARGILLACEOUS SANDSTONE:** white to light grey, generally loose but firm in rare aggregates, fine to very coarse, very rarely granular in size, poorly sorted, sub-angular to sub-rounded, common white argillaceous matrix washing out in part, poor inferred porosity. No Fluorescence.		
2500.0 - 2505.0	85	**SILTSTONE:** as above		
	10	**ARGILLACEOUS SANDSTONE:** as above		
	5	**CARBONACEOUS SILTSTONE:** as above		
2505.0 - 2510.0	70	**ARGILLACEOUS SANDSTONE:** white to light grey, generally loose but firm in rare aggregates, fine to very coarse, very rarely granular in size, poorly sorted, sub-angular to sub-rounded, very common white argillaceous matrix washing out in part, moderate to poor inferred porosity. No Fluorescence.		
	20	**SILTSTONE:** as above		
	10	**CARBONACEOUS SILTSTONE:** as above		
2510.0 - 2515.0	80	**ARGILLACEOUS SANDSTONE:** white to light grey, generally loose but firm in rare aggregates, fine to very coarse, very rarely granular in size, poorly sorted, sub-angular to sub-rounded, abundant white argillaceous matrix washing out in part, poor inferred porosity, trace pyrite. No Fluorescence.		
	20	**SILTSTONE:** as above		
2515.0 - 2520.0	80	**SILTSTONE:** as above		
	20	**ARGILLACEOUS SANDSTONE:** as above		
2520.0 - 2525.0	70	**ARGILLACEOUS SANDSTONE:** as above		
	30	**SILTSTONE:** as above		
2525.0 - 2530.0	70	**ARGILLACEOUS SANDSTONE:** as above		
	30	**SILTSTONE:** as above		
2530.0 - 2535.0	70	**ARGILLACEOUS SANDSTONE:** as above		
	30	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
2535.0 - 2540.0	50	**ARGILLACEOUS SANDSTONE:** white to light grey, generally loose but firm in rare aggregates, fine to very coarse, very rarely granular in size, poorly sorted, sub-angular to sub-rounded, abundant white argillaceous matrix washing out in part, poor inferred porosity, trace pyrite. No Fluorescence.		
	30	**SILTSTONE:** as above		
	20	**CLAYSTONE:** white to pale grey, very soft to dispersive, non-calcareous, difficult to distinguish from argillaceous matrix.		
2540.0 - 2545.0	70	**ARGILLACEOUS SANDSTONE:** as above		
	20	**CLAYSTONE:** as above		
	10	**SILTSTONE:** as above		
2545.0 - 2550.0	85	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fiissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.		
	5	**CLAYSTONE:** as above		
2550.0 - 2555.0	60	**SILTSTONE:** as above		
	20	**ARGILLACEOUS SANDSTONE:** as above		
	20	**CLAYSTONE:** white to pale grey, very soft to dispersive, non-calcareous, difficult to distinguish from argillaceous matrix.		
2555.0 - 2560.0	40	**ARGILLACEOUS SANDSTONE:** as above		

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Interval (m)	%	Lithology / Show Descriptions	Ca (%)	Mg (%)
2555.0 - 2560.0	40	**SILTSTONE:** as above		
	20	**CLAYSTONE:** as above		
2560.0 - 2565.0	80	**ARGILLACEOUS SANDSTONE:** as above		
	10	**SILTSTONE:** as above		
	10	**CLAYSTONE:** as above		
2565.0 - 2570.0	90	**CLAYSTONE:** white to pale grey, very soft to dispersive, non-calcareous, difficult to distinguish from argillaceous matrix, occasional black streaks		
	5	**ARGILLACEOUS SANDSTONE:** white to light grey, fine to medium grained, subangular to subrounded, moderately sorted, trace calcite cement, trace nodular and disseminated pyrite, local aggregates weakly cemented, moderate inferred porosity, no shows.		
	5	**SILTSTONE:** as above		
2570.0 - 2575.0	90	**CLAYSTONE:** light brownish grey to light olive grey, occasionally white, soft to amorphous, occasionally firm, trace carbonaceous specks, trace micromica, rare very fine sand, trace pyrite, grading into Claystone.		
	5	**SILTSTONE:** light brownish grey to light olive grey, occasionally white, soft to amorphous, trace carbonaceous specks, trace micromica, rare very fine sand, trace pyrite, grading into Claystone.		
	5	**ARGILLACEOUS SANDSTONE:** as above		
2575.0 - 2580.0	90	**CLAYSTONE:** as above		
	5	**ARGILLACEOUS SANDSTONE:** as above		
	5	**SILTSTONE:** as above		
2580.0 - 2585.0	90	**CLAYSTONE:** light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.		
	10	**ARGILLACEOUS SANDSTONE:** white to light grey, fine to medium grained, subangular to subrounded, moderately sorted, trace calcite cement, trace nodular and disseminated pyrite, local aggregates weakly cemented, moderate inferred porosity, no shows.		
	0	**COAL:** brownish black, mainly shiny lustre, platy to blocky, firm to brittle, slightly argillaceous in part.		
2585.0 - 2590.0	70	**CLAYSTONE:** light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.		
	30	**SILTY CLAYSTONE:** light brownish grey to light olive grey, occasionally white, soft to amorphous, trace carbonaceous specks, trace micromica, rare very fine sand, trace pyrite, grading into Claystone.		
	0	**COAL:** as above		
2590.0 - 2595.0	80	**CLAYSTONE:** as above		
	20	**SILTY CLAYSTONE:** as above		
	0	**COAL:** as above		
2595.0 - 2600.0	90	**CLAYSTONE:** light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.		
	10	**SILTY CLAYSTONE:** as above		
	0	**COAL:** as above		
2600.0 - 2605.0	90	**CLAYSTONE:** as above		
	10	**SILTY CLAYSTONE:** as above		
	0	**COAL:** as above		
2605.0 - 2610.0	90	**CLAYSTONE:** light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.		
	10	**SILTY CLAYSTONE:** light brownish grey to light olive grey, occasionally white, soft to amorphous, trace carbonaceous specks, trace micromica, rare very fine sand, trace pyrite, grading into Claystone.		
	0	**COAL:** brownish black, mainly shiny luster, platy to blocky, firm to brittle, slightly argillaceous in part.		

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HALLIBURTON

Sperry Drilling Services

LWD End of Well Report

for

Apache Energy Ltd

Fur Seal -1

Rig: Ocean Patriot

Field: Exploration

Country: Australia

Job No: AU-FE-0003890148

Date: 25th October 2005

HALLIBURTON

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General Information

Company:	Apache Energy Ltd	
Rig:	Ocean Patriot	
Well:	Fur Seal-1	
Field:	Exploration	
Country:	Australia	
API Number:		
Sperry-Sun Job Number:	AU-FE-0003890148	
Job start date:	25-Oct-05	
Job end date:	01-Nov-05	
North reference:	Grid	
Declination:	13.083	deg
Dip angle:	-68.668	deg
Total magnetic field:	59915	nT
Date of magnetic data:	24-Oct-05	
Wellhead coordinates N:	38 deg. 7 min 47.91 sec South	
Wellhead coordinates E:	148 deg. 9 min 8.44 sec East	
Vertical section direction:	Closure	
MWD Engineers:	A. Oraekwuotu	J. Nicolson
	B. Glassborow	A. Rule
Company Representatives:	J. Herriot	
Company Geologist:	M. Woodmansee	R. Blackmore
Lease Name:	VIC/P-54	
Unit Number:	182	
State:	Victoria	
County:		

Operational Overview

Sperry Drilling Services (Halliburton) were contracted by Apache Energy Ltd to provide Logging While Drilling (LWD) services for the drilling of exploration well Fur Seal-1, in permit VIC/P-54, from the semi-submersible drilling rig Ocean Patriot.

311mm (12 1/4") Hole Section:
This hole section was drilled in one bit run using Sperry's Formation Evaluation While Drilling (FEWD) tool suite, comprising of Dual Gamma Ray (DGR), Electromagnetic Wave Resistivity (EWR-P4) and Bi-Modal Acoustic Sonic Tool (BAT) for Formation Evaluation. A Drillstring Dynamics Sensor (DDS) was used for drilling optimisation and a Position Monitor (PM) for directional control. This section was drilled to 824.0 mMDRT.

206mm (8 1/2") Hole Section:
This hole section was drilled in one bit run using Sperry's Wireline Replacement (QUAD) tool suite, comprising of a Dual Gamma Ray (DGR), Electromagnetic Wave Resistivity (EWR-P4), Stabilized Litho Density (SLD), Compensated Neutron Porosity (CNP) with Bi-Modal Acoustic Sonic Tool (BAT) for reservoir evaluation. A Drillstring Dynamics Sensor (DDS) was used for drilling optimisation and a Position Monitor (PM) for directional control. Fur Seal-1 was drilled to a well TD of 2610.0 mMDRT.

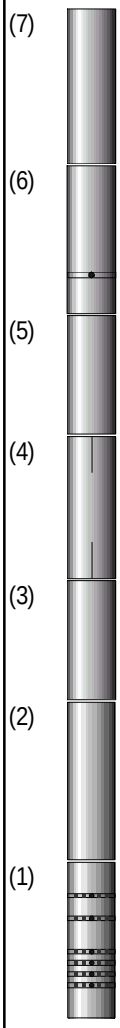
Summary of MWD runs

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. (degC)	Serv. Int.	Trip for MWD	Failure Type
0100	2	311.00	DIR-FE	111.70	824.00	712.00	25-Oct-05 03:08	26-Oct-05 05:54	26.76	26.76	15.80	25.00	No	No	
0200	3	216.00	DIR-FE-NUKE	824.00	2610.00	1786.00	28-Oct-05 12:54	01-Nov-05 14:23	97.47	97.47	75.49	78.00	No	No	
TOTALS ==>						2498.00			124.23	124.23	91.29		0	0	

Bitrun Summary

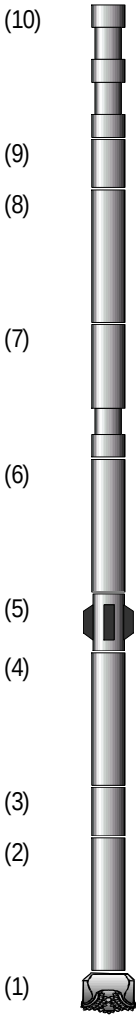
Run Time Data		Drilling Data			Mud Data				
MWD Run :	0100	Start Depth :	111.70	m	Mud Type :	Seawater/PHG			
Rig Bit No:	2	End Depth :	824.00	m	Weight / Visc :	1.06	sg /	N/A	spqt
Hole Size :	311.00 mm	Footage :	712.00	m	Chlorides :	N/A	ppm		
Run Start :	25-Oct-05 03:08	Avg. Flow Rate :	1060	gpm	PV / YP :	N/A	cp /	N/A	lhf2
Run End :	26-Oct-05 05:54	Avg. RPM :	100	rpm	Solids/Sand :		% /		%
BRT Hrs :	26.76	Avg. WOB :	10.00	klb	%Oil / O:W :		% /		
Circ. Hrs :	15.80	Avg. ROP :	67.10	m/hr	pH/Fluid Loss:	N/A	pH /	N/A	mptm
Oper. Hrs :	26.76	Avg. SPP :	3000	psig	Max. Temp. :	25.00	degC		

MWD Schematics



7. BAT
SN : 136555
26.13 m From Bit
6. Positive Pulser
SN : 8351
5. TM
SN : 177893
4. PM
SN : 022873
18.36 m From Bit
3. HCIM
SN : 074608
2. DGR
SN : 184694
14.98 m From Bit
1. EWR-P4
SN : 123048
11.95 m From Bit

BHA Schematics



	Component	Length (m)	O.D. (mm)	I.D. (mm)
10.	HWDP	138.10	162.000	78.000
09.	Cross Over Sub	1.10	203.000	71.000
08.	Drill Collar	17.47	203.200	76.200
07.	Drilling Jars	9.05	203.000	70.000
06.	Drill Collar	70.48	203.200	76.200
05.	Integral Blade Stabilizer	2.15	203.000	74.000
04.	MWD	19.61	203.000	74.000
03.	Cross Over Sub	0.97	244.000	75.000
02.	9-5/8" SperryDrill Lobe 6/7 5 stg	8.54	244.602	0.000
01.	PDC Security FS2563	0.42	311.000	50.800

Comments

Drilled out shoe, cement and shoe track. Drilled 406 mm (16") hole from 111.7 to 824.0 mMDRT. All recorded data recovered at surface.

MWD Performance

Tool OD / Type :	203.00	mm /	P4M	
MWD Real-time%:	95.00	%		
MWD Recorded%:	100.00	%		
Min. Inc. :	0.19	deg /	316.46	m
Max. Inc. :	1.36	deg /	804.24	m
Final Az. :	261.58	deg		
Max Op. Press. :	1202	psig		

Bitrun Summary

Run Time Data

MWD Run :	0200
Rig Bit No:	3
Hole Size :	216.00 mm
Run Start :	28-Oct-05 12:54
Run End :	01-Nov-05 14:23
BRT Hrs :	97.47
Circ. Hrs :	75.49
Oper. Hrs :	97.47

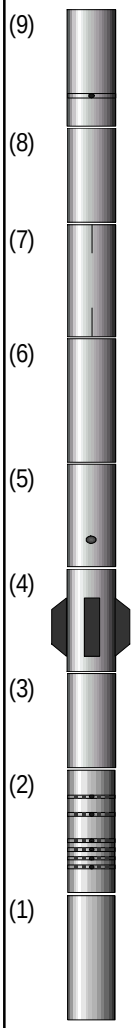
Drilling Data

Start Depth :	824.00	m
End Depth :	2610.00	m
Footage :	1786.00	m
Avg. Flow Rate :	600	gpm
Avg. RPM :	100	rpm
Avg. WOB :	16.00	klb
Avg. ROP :	29.63	m/hr
Avg. SPP :	2490	psig

Mud Data

Mud Type :	KCl/PHPA			
Weight / Visc :	1.22	sg /	67.00	spqt
Chlorides :	47000	ppm		
PV / YP :	26.00	cp /	18.50	lhf2
Solids/Sand :	14	% /	0.6	%
%Oil / O:W :	0	% /	0:91	
pH/Fluid Loss:	8.90	pH /	4.80	mptm
Max. Temp. :	78.00	degC		

MWD Schematics



9. Positive Pulser
SN: 8047

8. TM
SN: 177893

7. PM
SN: 126995
32.73 m From Bit

6. BAT
SN: 195076
28.03 m From Bit

5. CNP
SN: 087644
23.21 m From Bit

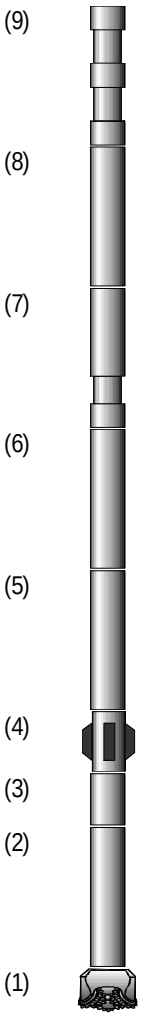
4. SLD
SN: 071411
20.40 m From Bit

3. HCIM
SN: 209729

2. EWR-P4
SN: 165129
13.72 m From Bit

1. DGR
SN: 53520
11.51 m From Bit

BHA Schematics



	Component	Length (m)	O.D. (mm)	I.D. (mm)
09.	HWDP	110.55	162.000	78.000
08.	Drill Collar	18.62	171.450	76.200
07.	Drilling Jars	9.68	171.450	70.000
06.	Drill Collar	83.68	171.450	76.200
05.	MWD	26.92	171.450	74.000
04.	Integral Blade Stabilizer	1.53	171.450	74.000
03.	Float Sub	0.88	171.450	74.000
02.	6 3/4" SperryDrill 6/7 Lobe 5 stg	7.70	171.450	74.000
01.	PDC Smith S73VPX	0.22	216.000	50.800

Comments

Drilled shoe, cement, and rathole to 826.0 m. Drilled 3m of new formation and perform FIT. Drilled ahead 8½" hole to 2610.0 mMDRT. All recorded data recovered at surface.

MWD Performance

Tool OD / Type :	171.00	mm /	QUAD	
MWD Real-time%:	95.80	%		
MWD Recorded%:	100.00	%		
Min. Inc. :	0.47	deg /	2030.20	m
Max. Inc. :	1.41	deg /	2517.63	m
Final Az. :	56.39	deg		
Max Op. Press. :	4525	psig		

Directional Survey Data

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
147.58	0.20	177.10	147.58	0.26 S	0.01 E	-0.26	TIE-IN
202.77	0.44	176.34	202.77	0.57 S	0.03 E	-0.57	0.13
230.70	0.60	175.42	230.70	0.82 S	0.05 E	-0.82	0.17
259.17	0.44	182.26	259.17	1.08 S	0.06 E	-1.08	0.17
316.46	0.19	202.22	316.46	1.39 S	0.01 E	-1.39	0.14
431.05	0.42	169.27	431.04	1.98 S	0.02 E	-1.98	0.08
574.28	0.77	174.99	574.27	3.46 S	0.20 E	-3.46	0.07
631.93	0.59	187.00	631.91	4.14 S	0.20 E	-4.14	0.12
747.01	1.16	234.79	746.98	5.40 S	0.82 W	-5.40	0.23
804.24	1.36	261.58	804.20	5.83 S	1.96 W	-5.83	0.32
825.39	1.41	257.87	825.34	5.92 S	2.47 W	-5.92	0.15
854.17	1.08	262.66	854.11	6.03 S	3.08 W	-6.03	0.36
882.94	1.07	265.44	882.88	6.09 S	3.62 W	-6.09	0.05
911.81	1.19	271.36	911.74	6.10 S	4.19 W	-6.10	0.17
940.40	1.16	271.02	940.33	6.09 S	4.77 W	-6.09	0.04
969.00	1.14	275.16	968.92	6.06 S	5.35 W	-6.06	0.09
997.65	1.07	274.19	997.57	6.01 S	5.90 W	-6.01	0.09
1026.35	1.05	269.72	1026.26	5.99 S	6.43 W	-5.99	0.09
1054.97	0.93	273.03	1054.88	5.98 S	6.92 W	-5.98	0.14
1083.56	0.88	279.71	1083.46	5.93 S	7.37 W	-5.93	0.12
1112.05	0.86	280.50	1111.95	5.86 S	7.79 W	-5.86	0.02
1140.78	0.80	280.28	1140.68	5.78 S	8.21 W	-5.78	0.06
1169.42	0.69	281.95	1169.31	5.71 S	8.57 W	-5.71	0.12
1198.14	0.81	286.36	1198.03	5.62 S	8.93 W	-5.62	0.14
1255.86	1.01	305.38	1255.74	5.21 S	9.74 W	-5.21	0.19
1284.62	0.87	311.34	1284.50	4.92 S	10.10 W	-4.92	0.18
1313.27	0.86	333.94	1313.15	4.58 S	10.36 W	-4.58	0.35
1341.99	0.67	334.23	1341.86	4.24 S	10.53 W	-4.24	0.21
1370.65	0.68	330.15	1370.52	3.94 S	10.69 W	-3.94	0.05
1427.72	0.77	326.65	1427.59	3.33 S	11.07 W	-3.33	0.05
1456.16	0.82	328.79	1456.03	2.99 S	11.28 W	-2.99	0.07
1484.95	0.85	336.79	1484.81	2.62 S	11.47 W	-2.62	0.12
1513.89	0.88	324.92	1513.75	2.24 S	11.68 W	-2.24	0.19
1542.83	0.86	327.87	1542.69	1.88 S	11.92 W	-1.88	0.05
1571.59	0.87	324.35	1571.44	1.52 S	12.17 W	-1.52	0.06
1599.70	0.77	338.40	1599.55	1.17 S	12.36 W	-1.17	0.24
1657.30	0.97	353.39	1657.14	0.32 S	12.56 W	-0.32	0.15
1686.01	0.88	355.80	1685.85	0.14 N	12.60 W	0.14	0.10
1715.08	0.89	6.11	1714.92	0.59 N	12.60 W	0.59	0.16
1743.68	0.78	6.96	1743.51	1.00 N	12.55 W	1.00	0.12

Directional Survey Data

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
1772.08	0.50	6.19	1771.91	1.32 N	12.51 W	1.32	0.29
1800.65	0.48	16.78	1800.48	1.55 N	12.46 W	1.55	0.10
1829.26	0.58	38.40	1829.09	1.78 N	12.34 W	1.78	0.23
1858.09	0.50	34.50	1857.92	2.00 N	12.18 W	2.00	0.09
1887.20	0.56	59.17	1887.03	2.18 N	11.98 W	2.18	0.24
1916.07	0.69	58.49	1915.89	2.34 N	11.72 W	2.34	0.14
1944.74	0.66	50.11	1944.56	2.54 N	11.44 W	2.54	0.11
1973.02	0.75	60.07	1972.84	2.73 N	11.16 W	2.73	0.16
2001.54	0.62	65.93	2001.36	2.89 N	10.85 W	2.89	0.15
2030.20	0.47	54.96	2030.02	3.02 N	10.61 W	3.02	0.19
2058.70	0.51	43.07	2058.52	3.18 N	10.43 W	3.18	0.11
2087.39	0.51	81.71	2087.20	3.29 N	10.22 W	3.29	0.35
2116.44	0.55	117.19	2116.25	3.24 N	9.97 W	3.24	0.34
2144.78	0.56	102.11	2144.59	3.15 N	9.71 W	3.15	0.16
2231.21	0.95	136.21	2231.02	2.55 N	8.80 W	2.55	0.20
2317.05	0.95	103.22	2316.84	1.87 N	7.62 W	1.87	0.19
2402.73	0.93	77.31	2402.51	1.86 N	6.25 W	1.86	0.15
2431.36	1.07	70.01	2431.14	2.00 N	5.78 W	2.00	0.20
2460.09	1.06	56.97	2459.86	2.24 N	5.30 W	2.24	0.25
2488.89	1.28	60.60	2488.66	2.54 N	4.80 W	2.54	0.24
2517.63	1.41	56.39	2517.39	2.90 N	4.23 W	2.90	0.17
2610.00	1.41	56.39	2609.73	4.15 N	2.33 W	4.15	0.00

Directional Survey Data

CALCULATION BASED ON Minimum Curvature METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.80 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.00 METRES
IS 4.76 METRES ALONG 330.68 DEGREES (GRID)

Final Survey projected to TD.
RT - AHD = 21.5 m

Sperry Drilling Services

1 : 200

MWD

EWR Electromagnetic Wave Resistivity
DGR Dual Gamma Ray
SLD Stabilized Litho-Density
CNP Compensated Neutron Porosity
BAT Bi-Modal Acoustic

Country	: **Australia**
Field	: **Exploration**
Location	: **Lat: 38° 7' 47.91" South** **Long: 148° 9' 8.44" East**
Well	: **Fur Seal-1**
Company	: **Apache Energy Ltd**
Rig	: **Ocean Patriot**

LOCATION

Latitude : **38° 7' 47.91" South**
Longitude : **148° 9' 8.44" East**
UTM Easting = **600,995.50 m**
UTM Northing = **5,779,136.70 m**

Company : **Apache Energy Ltd**
Rig : **Ocean Patriot**
Well : **Fur Seal-1**
Field : **Exploration**
Country : **Australia**
DOE Number :

Other Services

Permanent Datum : **AHD** Elevation : **0.00 m**
Log Measured From : **Drill Floor** **21.50 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

MD LOG

Elev. KB
DF **21.50 m**
GL
WD **56.62 m**

Depth Logged : **111.70 m** To **2,610.00 m** Unit No. : **182** Job No. : : **AU-FE-0003890148**
Date Logged : **25-Oct-05** To **01-Nov-05** Plot Type : **Final**
Total Depth MD : **2,610.00 m** TVD: **2,609.73 m** Plot Date : **18-May-06**
Spud Date : **24-Oct-05**

Borehole Record (MD)

Run No.	Size	From	To
2	311.000 mm	111.70 m	824.00 m
3	216.000 mm	824.00 m	2610.00 m

Casing Record (MD)

Run No.	Size	Weight	From	To
	762.000 mm	307.00 kg/m	80.10 m	111.00 m
	340.000 mm	101.20 kg/m	80.10 m	817.60 m

Borehole Record (MD)

Run No.	Size	From	To

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	26-Oct-05	01-Nov-05			
Rig Bit Number	2	3			
Bit Size (mm)	311	216			
Tool Nominal OD (mm)	203	171			
Log Start Depth (MD, m)	111.7	824.0			
Log End Depth (MD, m)	824.0	2,610			
Drill or Wipe	Drilling	Drilling			
Drill/Wipe Start Date and Time	25-Oct-05 04:40	28-Oct-05 05:10			
Drill/Wipe End Date and Time	25-Oct-05 23:59	01-Nov-05 01:45			
Min Inc (deg) @ Depth (MD, m)	0.19 @ 316.46	0.47 @ 2,030.20			
Max Inc (deg) @ Depth (MD, m)	1.36 @ 804.24	1.41 @ 2,517.63			
Bit TFA(in2) / Bit Type	1.74 / Security FS2563	1.11 / Smith S73VPX			
Flow Rate (gpm)	1,060	600			
Max AV (mpm) / CV (mpm) @ MWD	N/A / N/A	181.5 / 137.2			
Fluid Type	Seawater/PHG	KCl/PHPA			
Density (sg) / Viscosity (spqt)	1.06 / N/A	1.22 / 67.0			
Filtrate CL (ppm)	N/A	47,000			
pH / Fluid Loss (mptm)	N/A / N/A	8.9 / 4.8			
PV (cp) / YP (lhf2)	N/A / N/A	26 / 18.5			
% Solids / % Sand	N/A / N/A	14 / 0.6			
% Oil / Oil:Water Ratio	N/A / N/A	N/A / 0:91			
Rm @ Measured Temp (degC)	N/A @ N/A	0.11 @ 24.0			
Rmf @ Measured Temp (degC)	N/A @ N/A	0.09 @ 22.0			
Rmc @ Measured Temp (degC)	N/A @ N/A	0.25 @ 24.0			
Max Tool Temp (degC) / Source	25.0 / EWR-P4	78.0 / EWR-P4			
Rm @ Max Tool Temp (degC)	N/A @ 25.0	0.05 @ 78.0			
Lead MWD Engineer	A. Oraekwuotu	A.Oraekwuotu/A.Rule			
Customer Representative	J. Herriot	J. Herriot			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	68.18	68.18			
Sub Serial Number	198838	195232			
Insert Serial Number	074608	209729			
Logging String Serial Number	90086009H1GVR8	90086708H1RGV6			
Date and Time Initialized	25-Oct-05 03:08	28-Oct-05 12:54			
Date and Time Read	26-Oct-05 05:54:00	01-Nov-05 14:23:00			

Directional Sensor Information

Tool Type	PM	PM			
Distance From Bit (m)	18.36	32.73			
Software Version	N/A	N/A			
Sub Serial Number	124777	178482			
Sonde Serial Number	022873	126995			
Sensor ID Number	022873	126995			
Survey String Serial Number	90086411M8	90082559			
Toolface Offset (deg)	N/A	N/A			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (m)	14.98	11.51			
Recorded Sample Period (sec)	10	10			
Software Version	N/A	N/A			
Sub Serial Number	210651	64636			
Insert/Sonde Serial Number	184694	53520			

Resistivity Sensor Information

Tool Type	EWR-P4	EWR-P4			
Distance From Bit (m)	11.95	13.72			
Recorded Sample Period (sec)	12	12			
Software Version	1.38	1.38			
Sub Serial Number	122988	139216			
Receiver Insert Serial Number	123048	165129			
Transmitter Insert Serial Number	78411	110610			
Receiver Orientation	Down	Down			

Neutron Sensor Information

Tool Type		CNP			
Distance From Bit (m)		23.21			
Recorded Sample Period (sec)		10			
Sub Serial Number		186641			
Insert Serial Number		087644			
Source Serial Number		4070NK			
Source Factor		1.1400			
Pin Orientation		Up			

Density Sensor Information

Tool Type		SLD			
Distance From Bit (m)		20.40			
Recorded Sample Period (sec)		14			
Software Version		11.00			
Sub Serial Number		058245			
Insert Serial Number		071411			
Sensor ID Number		33			
Source Serial Number		2570			
Pin Orientation		Up			
Stabilizer Blade O.D. (mm)		209.55			
DPA Offset		N/A			

Sonic Sensor Information

Tool Type	BAT	BAT			

Distance From Bit (m)	26.13	28.03			
Recorded Sample Period (sec)	15	14			
Software Version	4.00	4.00			
Sub Serial Number	144401	1150515			
Receiver Insert Serial Number	136555	195076			
Transmitter Insert Serial Number	143996	191710			

REMARKS

1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.

2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.

3. Curve mnemonics are :
   - SROP - Smoothed Rate of Penetration, m/hr
   - SGRC - Smoothed Dual Gamma Ray Combined, api
   - SHSI - Smoothed Hole Size Indicator from Density Tool, in
   - SEXP - Smoothed Extra Shallow Phase Shift Derived Resistivity, ohmm
   - SESP - Smoothed Shallow Phase Shift Derived Resistivity, ohmm
   - SEMP - Smoothed Medium Phase Shift Derived Resistivity, ohmm
   - SEDP - Smoothed Deep Phase Shift Derived Resistivity, ohmm
   - SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc
   - SCO2 - Smoothed Best Bin Stand-off Correction, g/cc
   - SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e
   - NUCL - Smoothed CNP Neutron Porosity, v/v
   - BATC - Bi-Modal Acoustic Compressional Slowness, us/ft

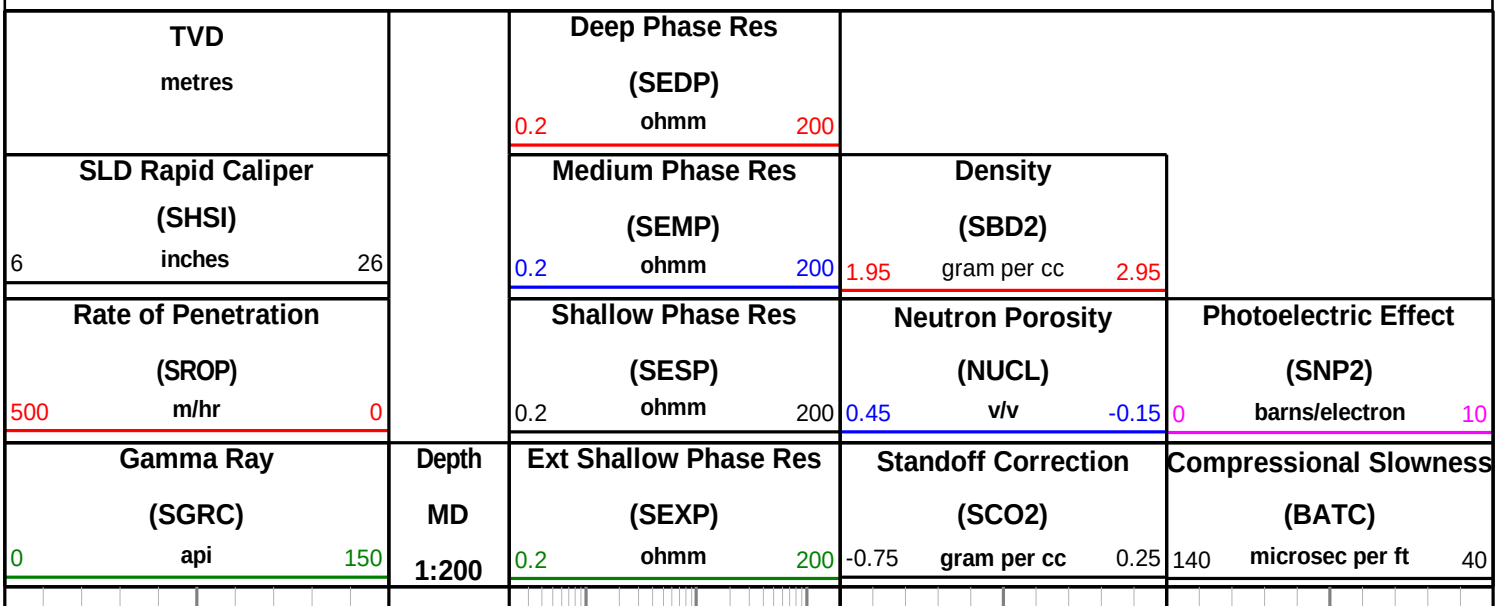
4. CNP data was processed uging the CNP-E algorithim using the following parameters and is based on a Limestone matrix:
   - MW = 1.20 - 1.22 SG
   - Formation Salinity = 24,000 ppm Cl
   - Mud Salinity = 27,000 - 47,000 ppm Cl
   - Matrix Density = 2.71 g/cc
   - Fluid Density = 1.00 g/cc

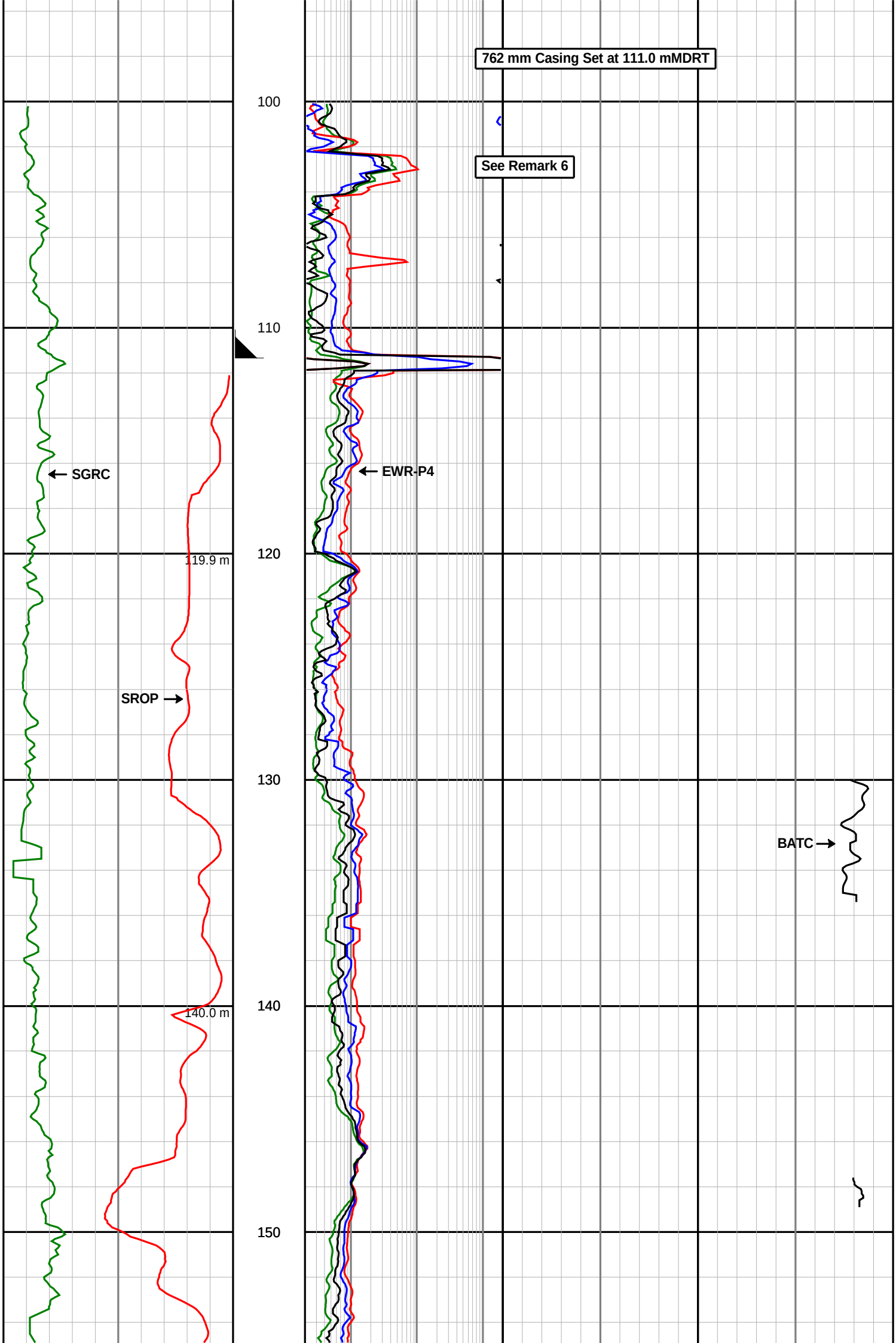
5. CNP data has been reprocessed using borehole diameterform the density tool.

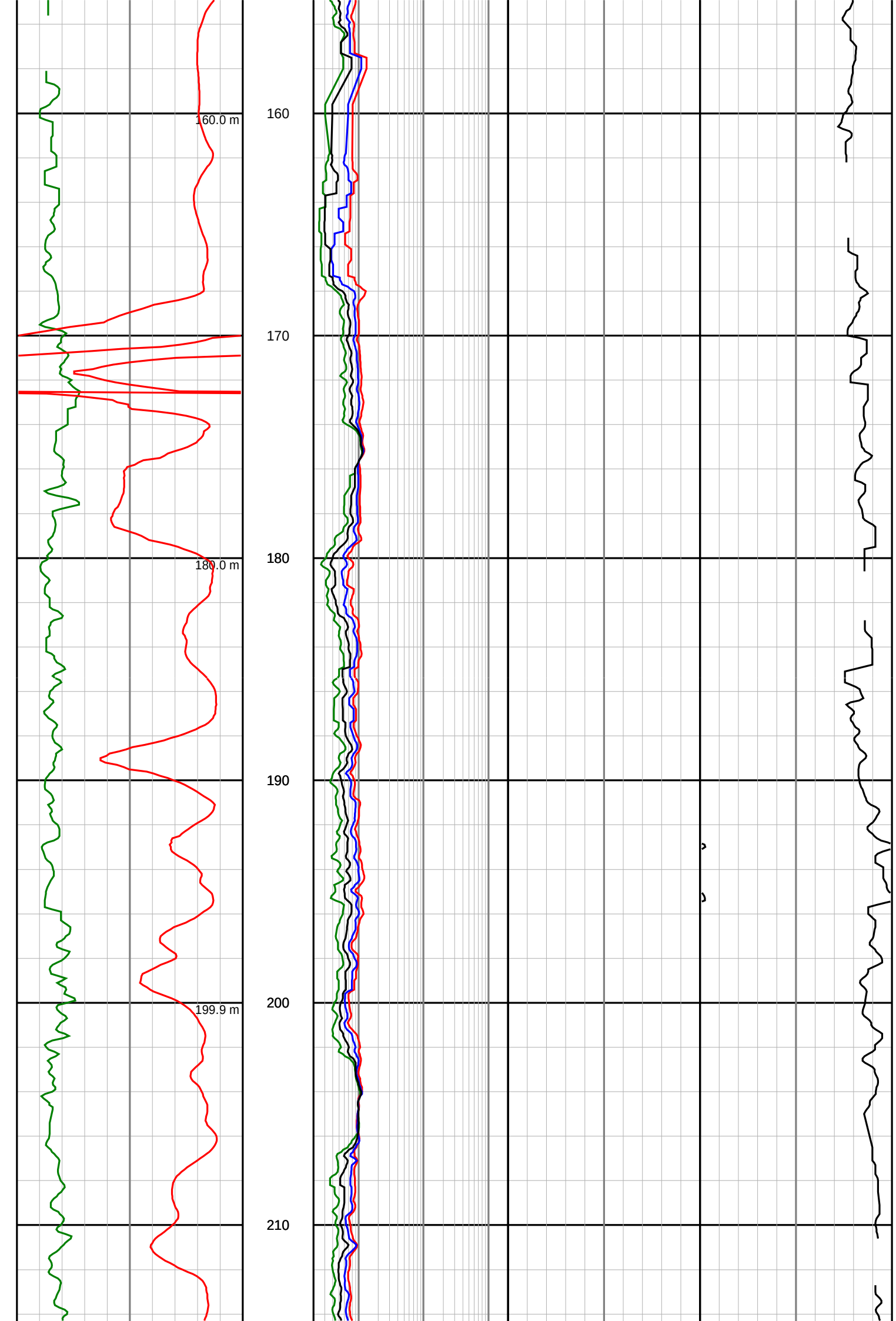
6. Data from intervals from 100.0 to 111.0 and 809.5 to 817.6 mMDRT were logged behind casing.

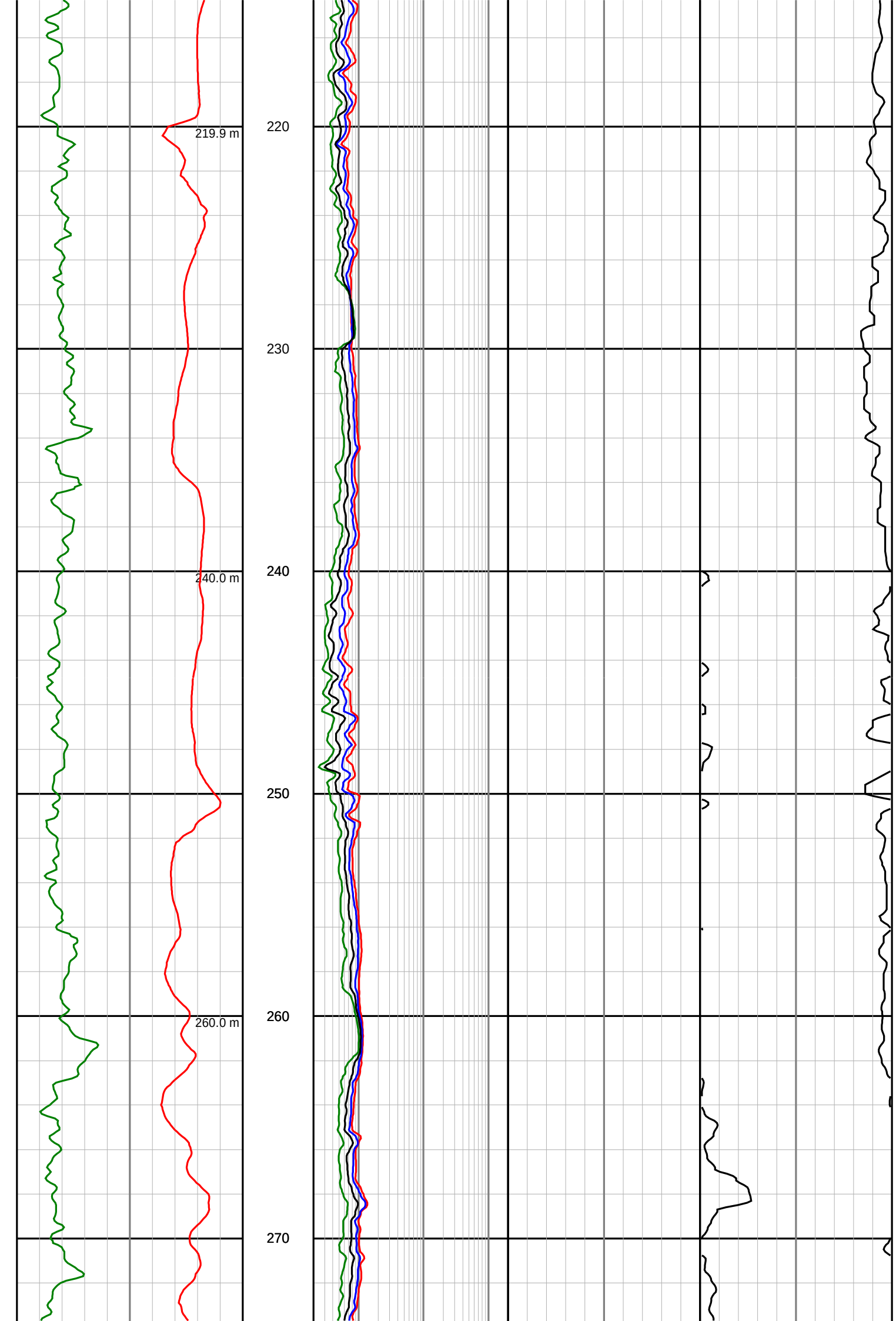
WARRANTY

HALLIBURTON ENERGY SERVICES (HES) WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HES CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HES MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HES.




762 mm Casing Set at 111.0 mMDRT
See Remark 6
100
110
120
130
140
150
SGRC
EWR-P4
SROP
BATC
119.9 m
140.0 m


160.0 m
160
170
180.0 m
180
190
199.9 m
200
210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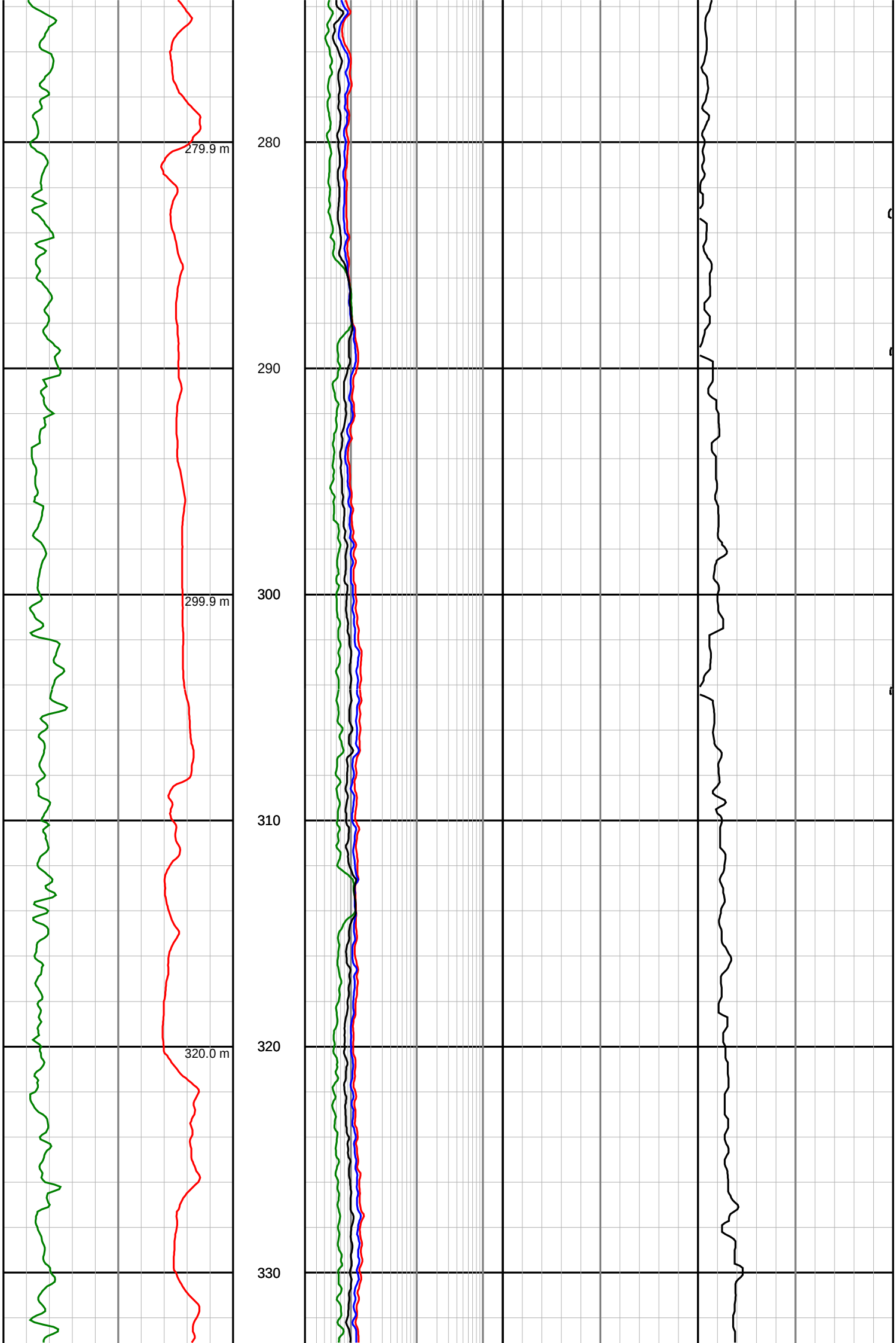
220
230
240.0 m
240
250
260.0 m
260
270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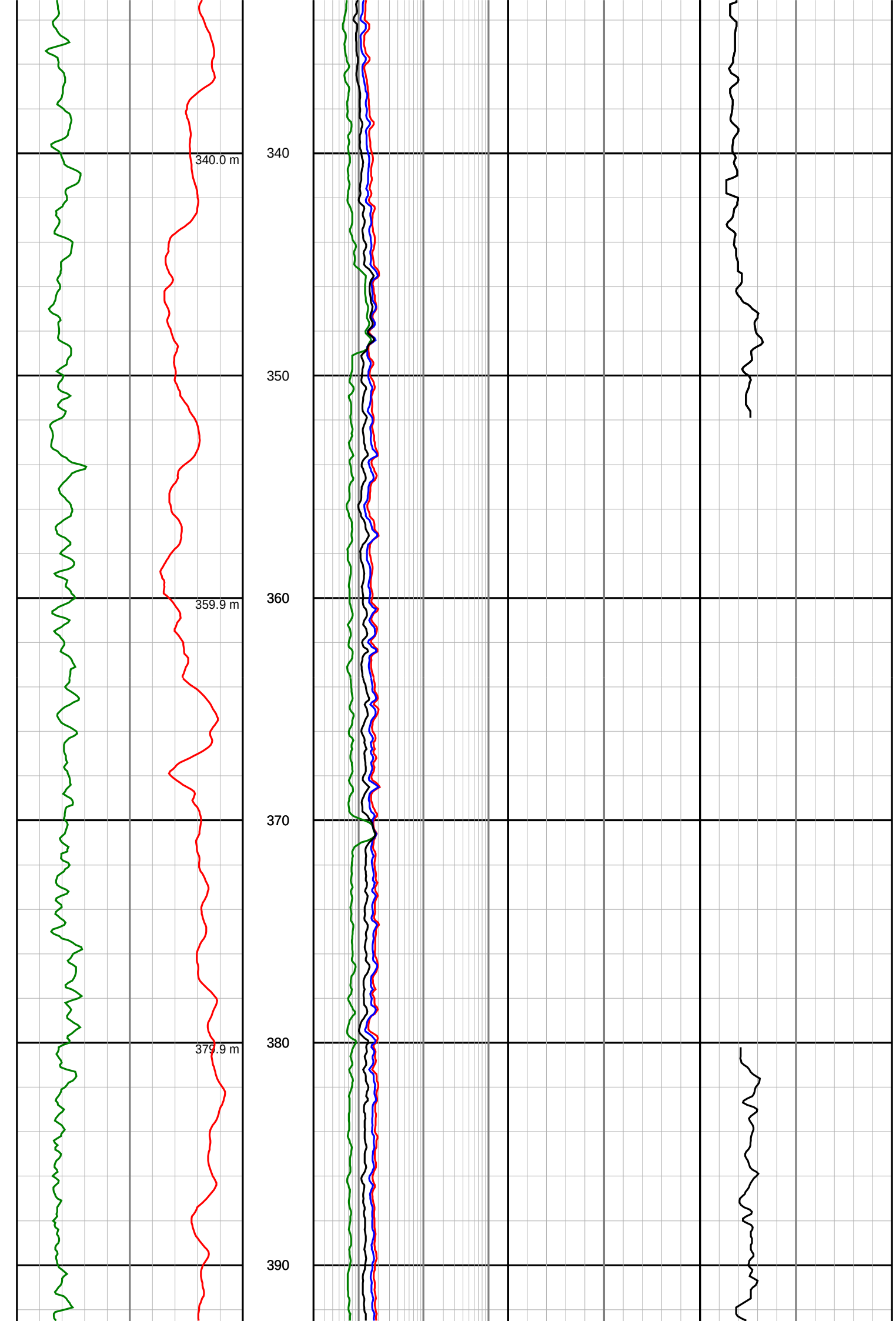
299.9 m
320.0 m
280
290
300
310
320
330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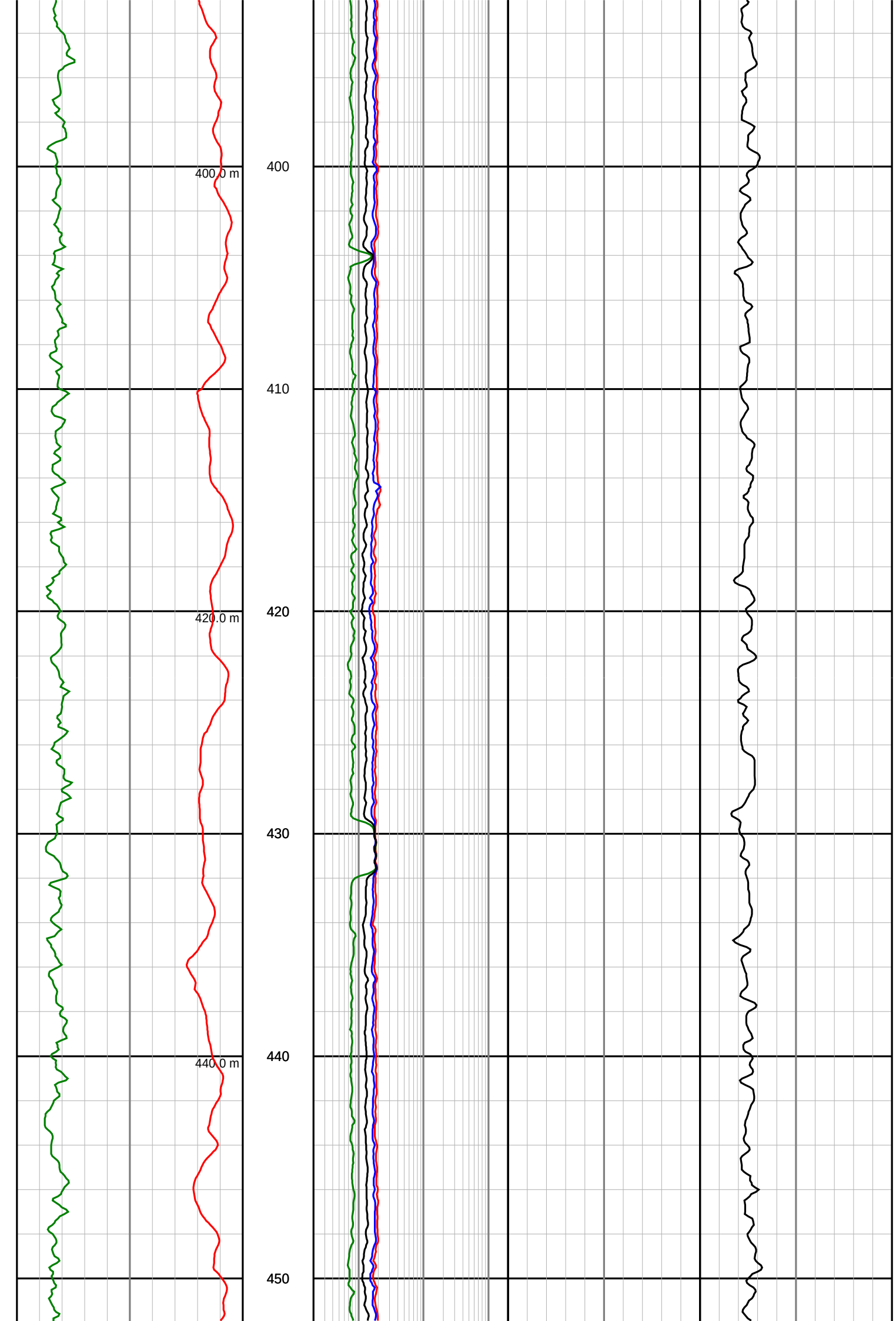
340
350
359.9 m
360
370
379.9 m
380
390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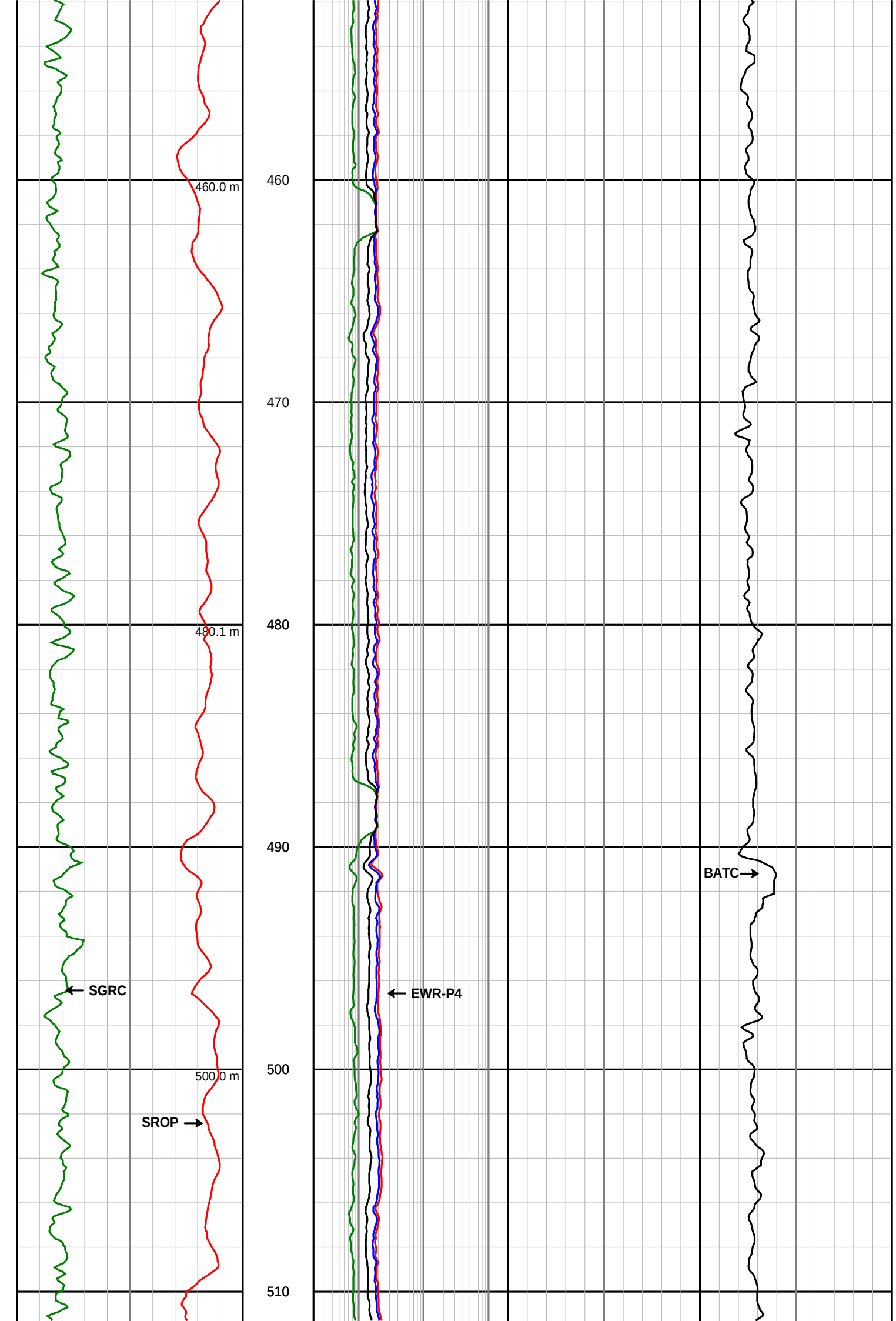
420.0 m
440.0 m
400
410
420
430
440
450


460.0 m
460
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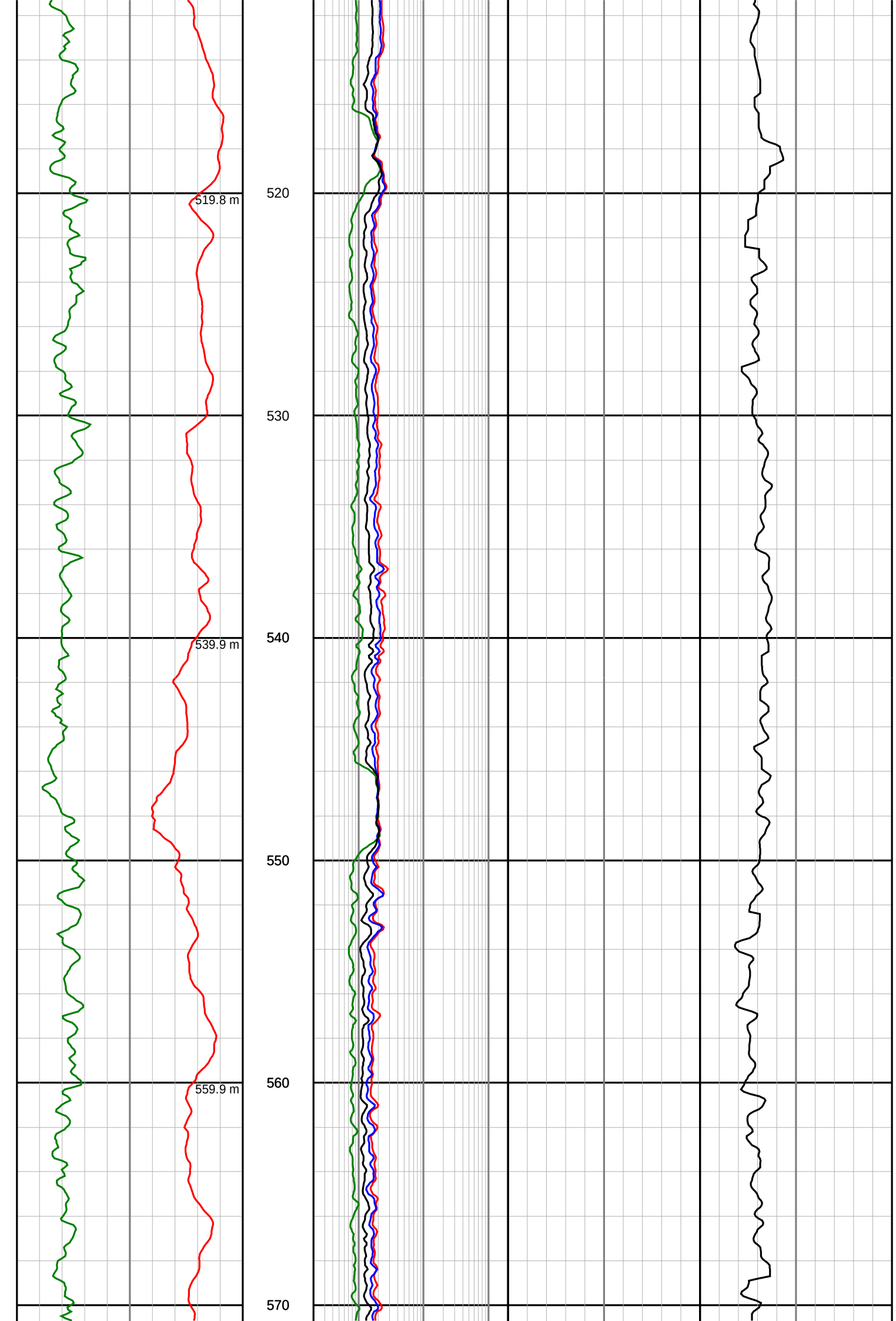
480.1 m
480
490
500.0 m
500
510
SGRC
SROP
EWR-P4
BATC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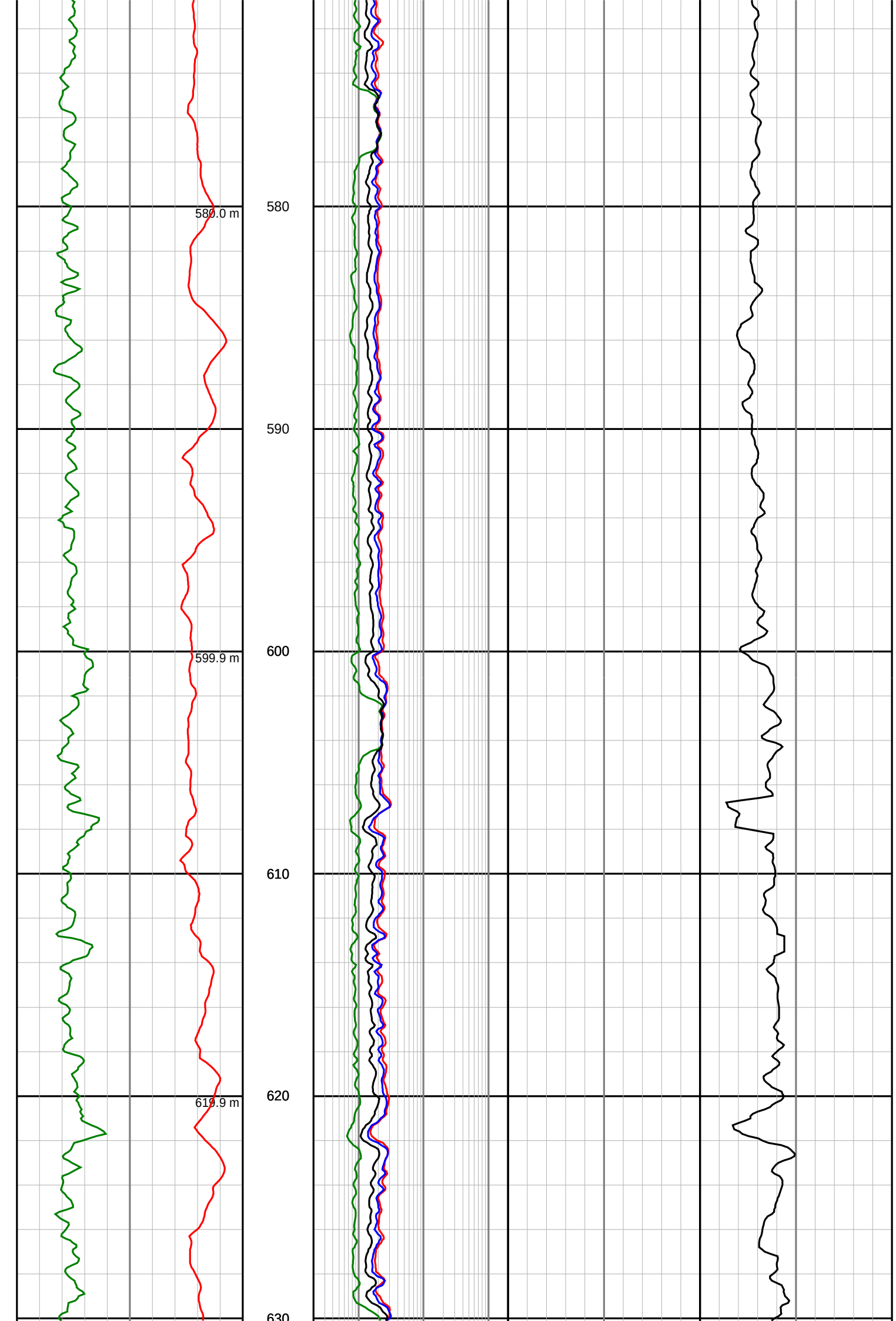
520
530
539.9 m
540
550
559.9 m
560
570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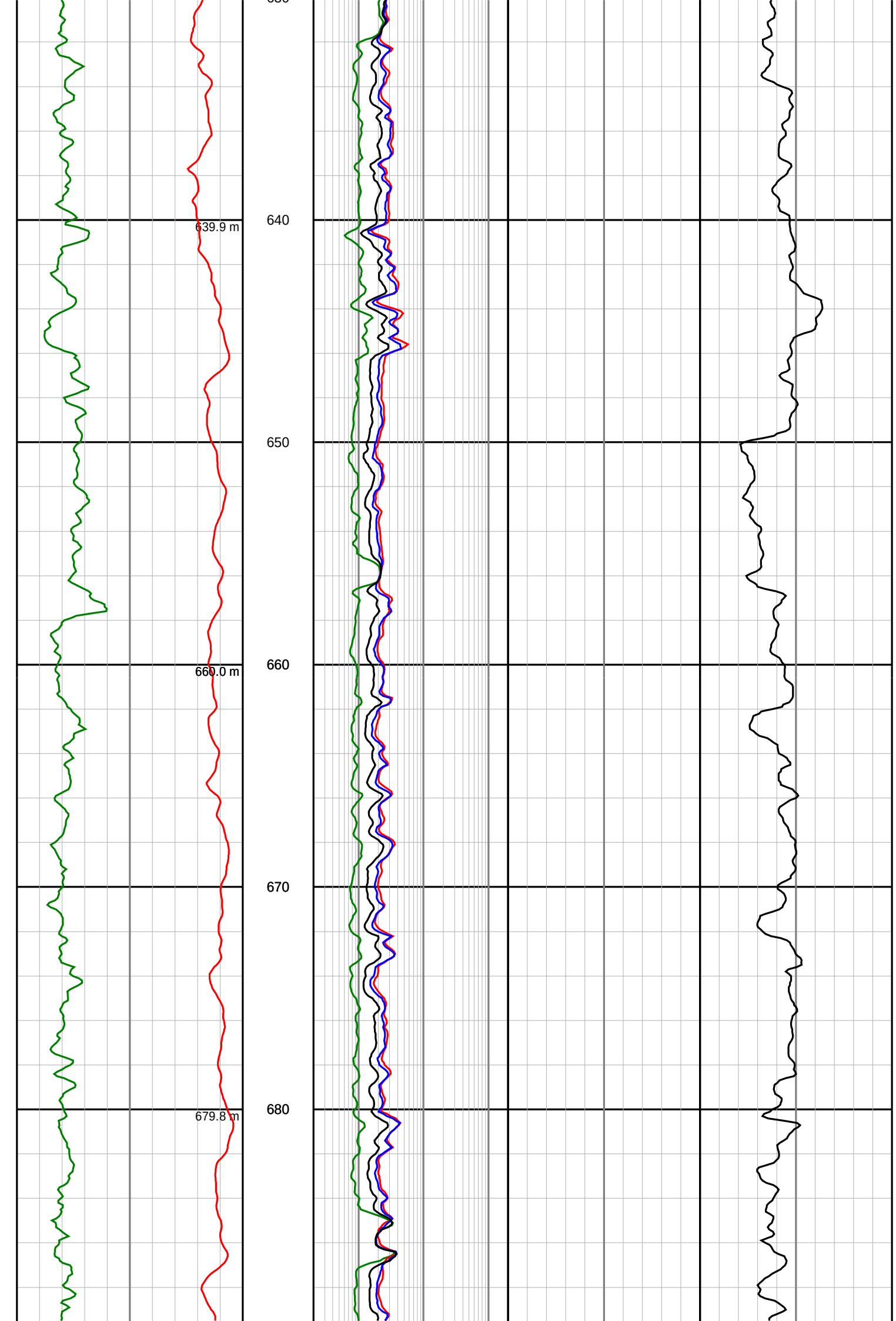
599.9 m
619.9 m
580
590
600
610
620
630


639.9 m
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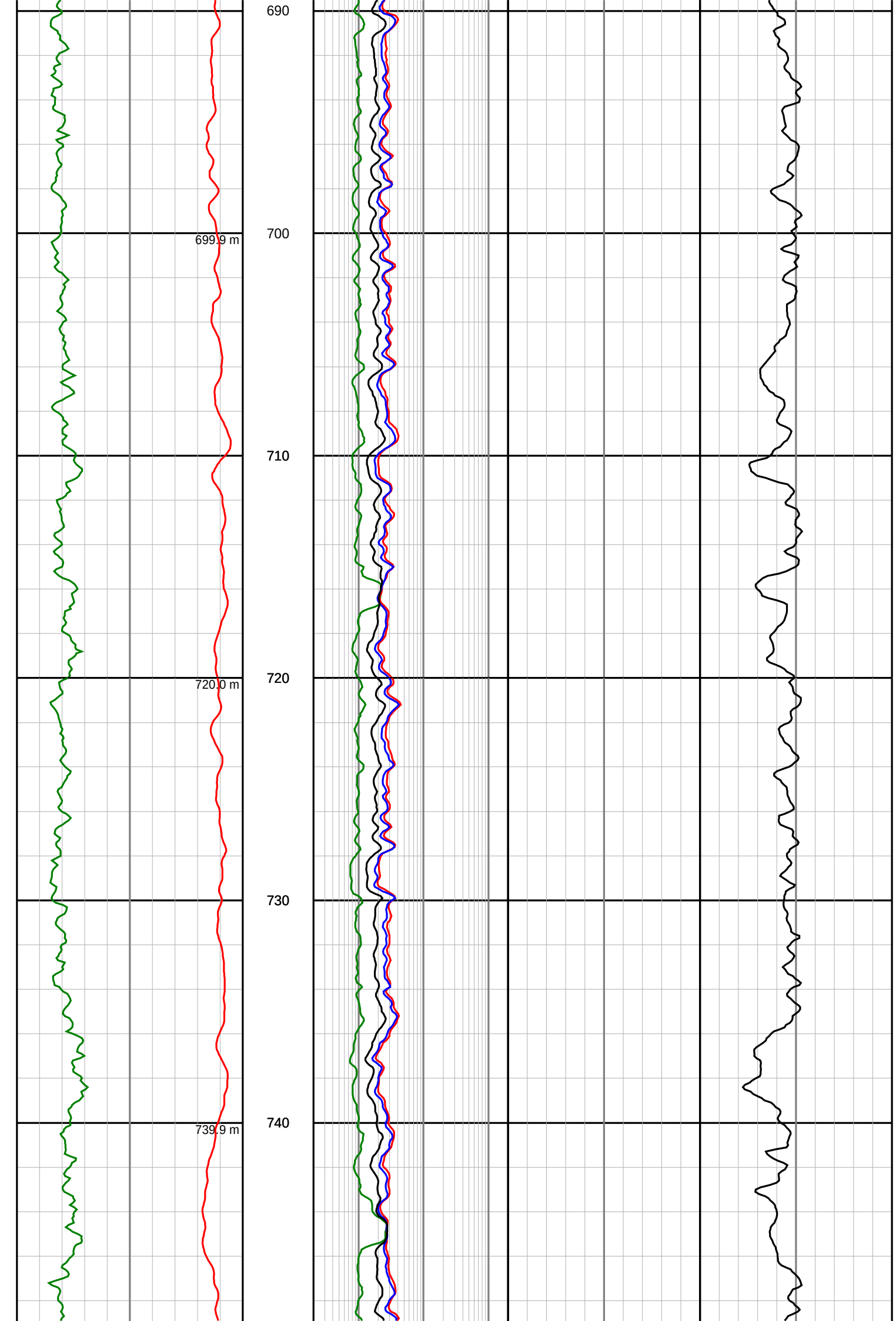
650
660.0 m
660
670
679.8 m
680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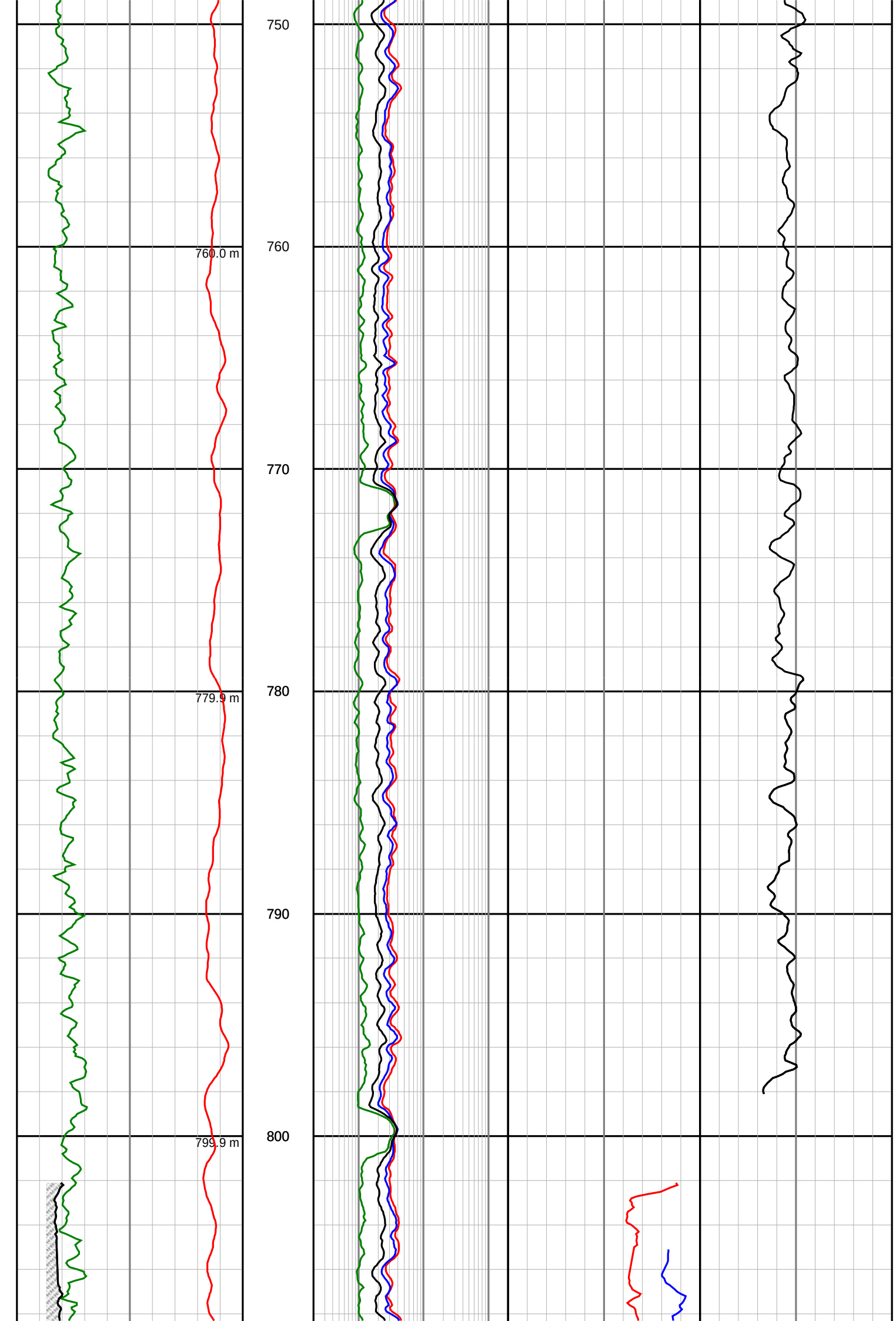
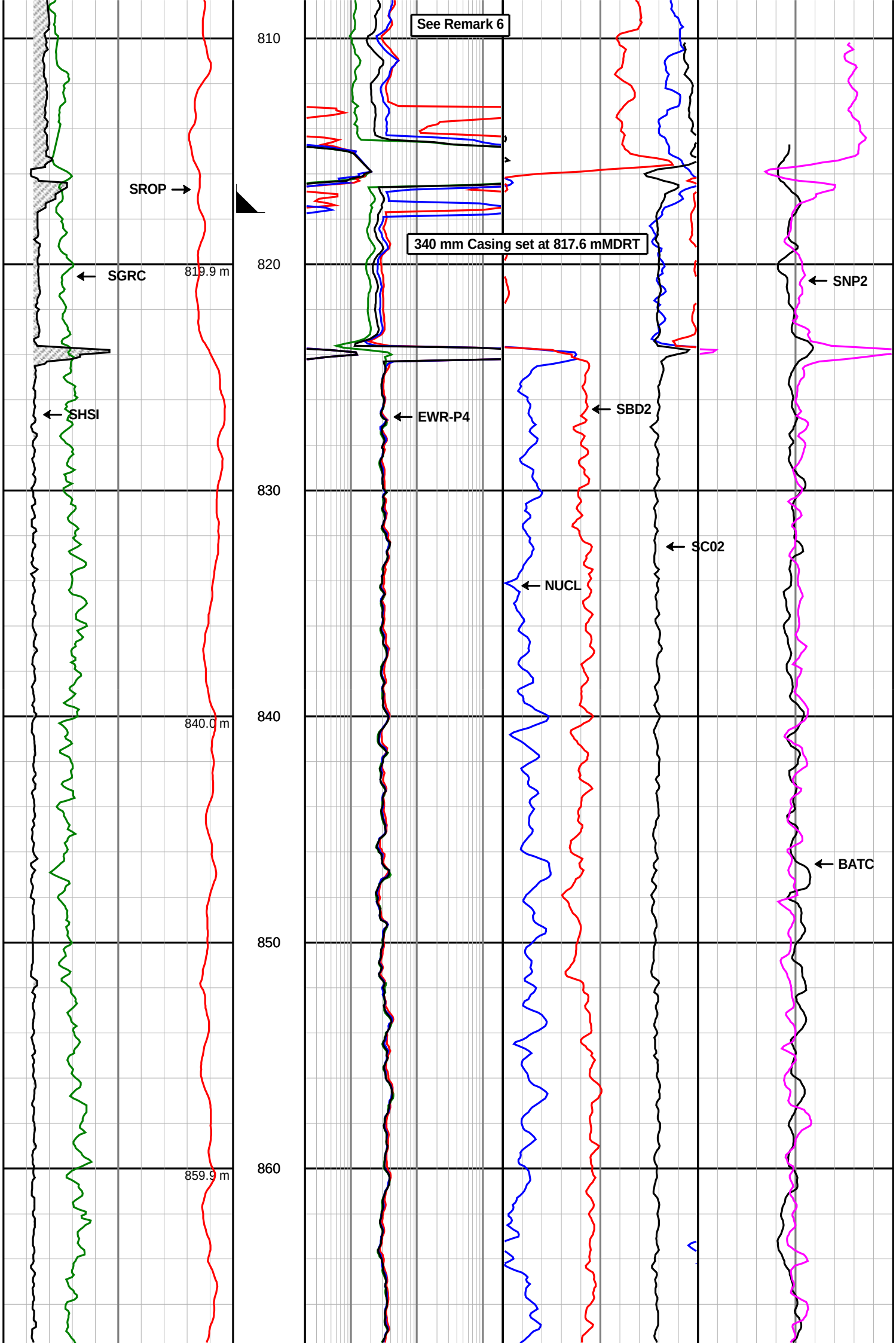
699.9 m
700
710
720.0 m
720
730
739.9 m
740


750
760.0 m
760
770
779.9 m
780
790
799.9 m
800


See Remark 6
340 mm Casing set at 817.6 mMDRT
SROP
SGRC
819.9 m
SHSI
EWR-P4
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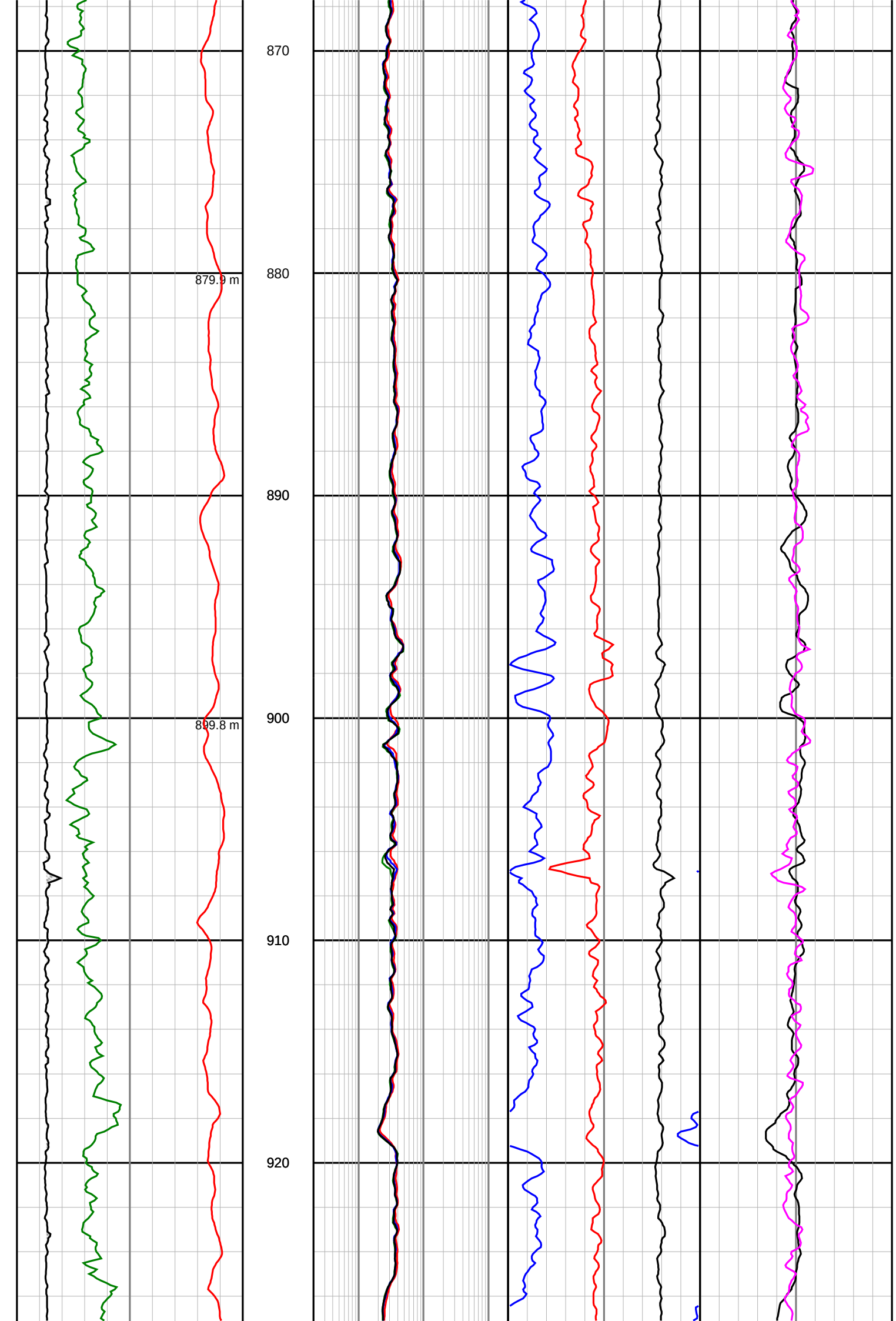
SNP2
SC02
NUCL
BATC
840.0 m
859.9 m
810
820
830
840
850
860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890
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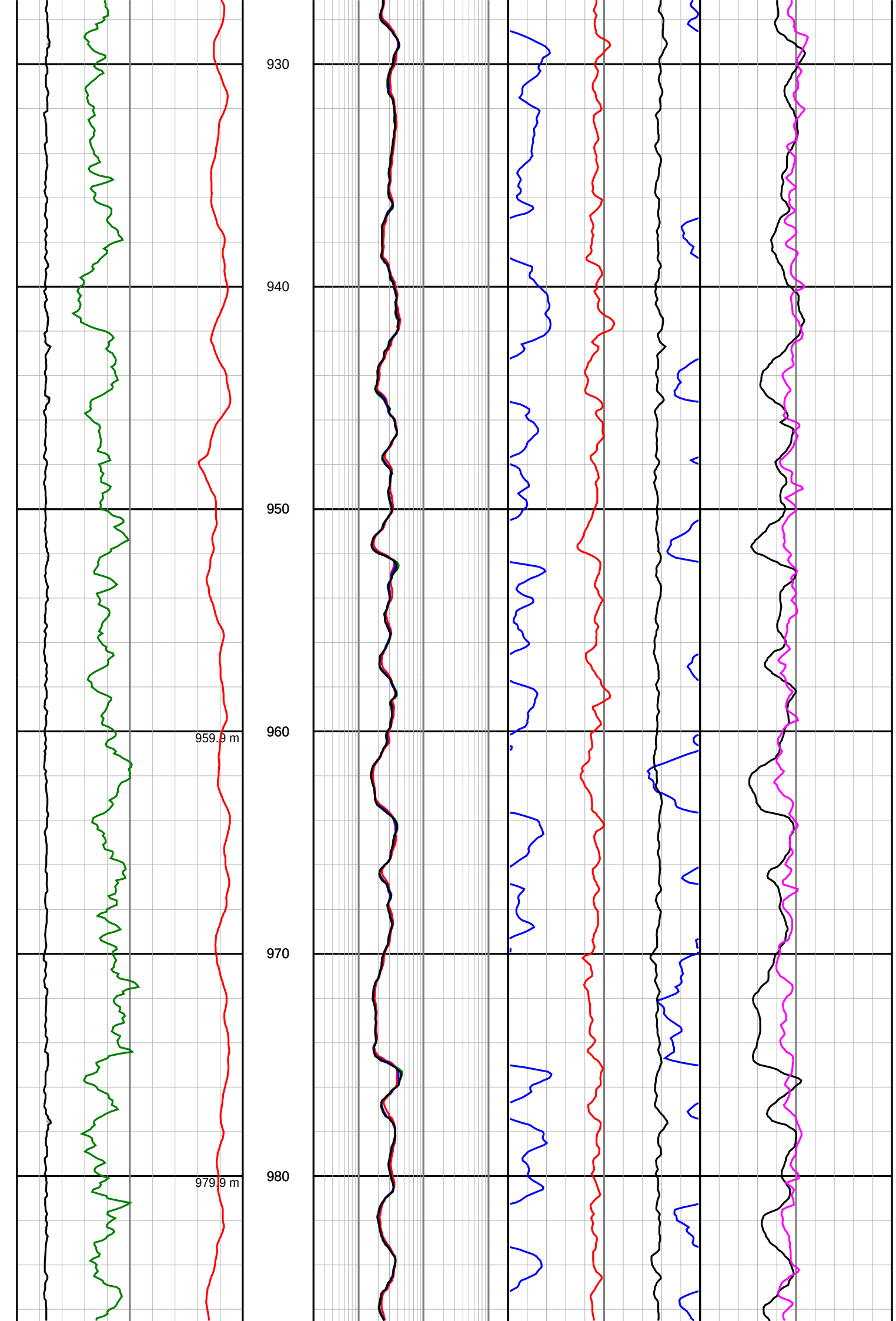
900
910
920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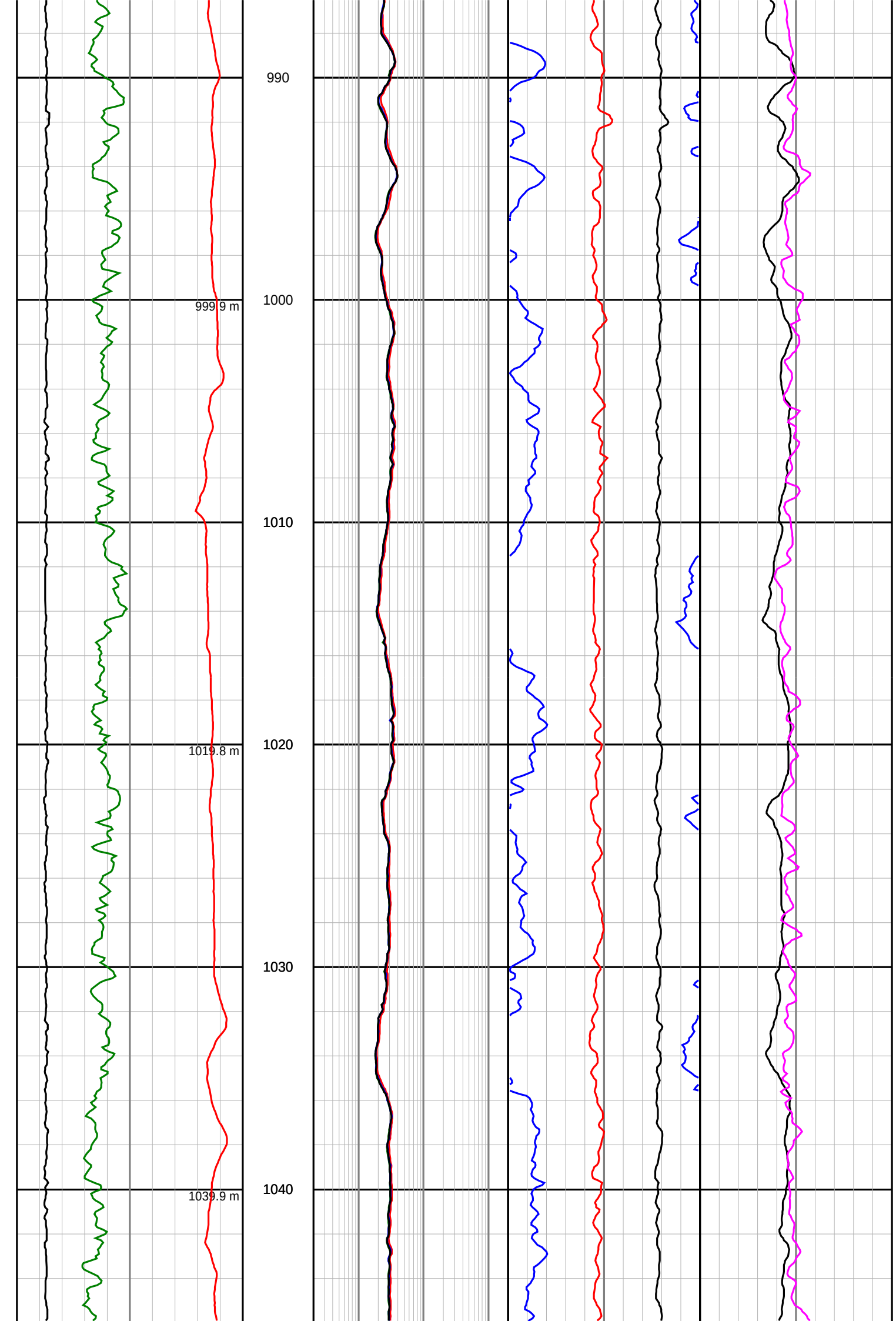
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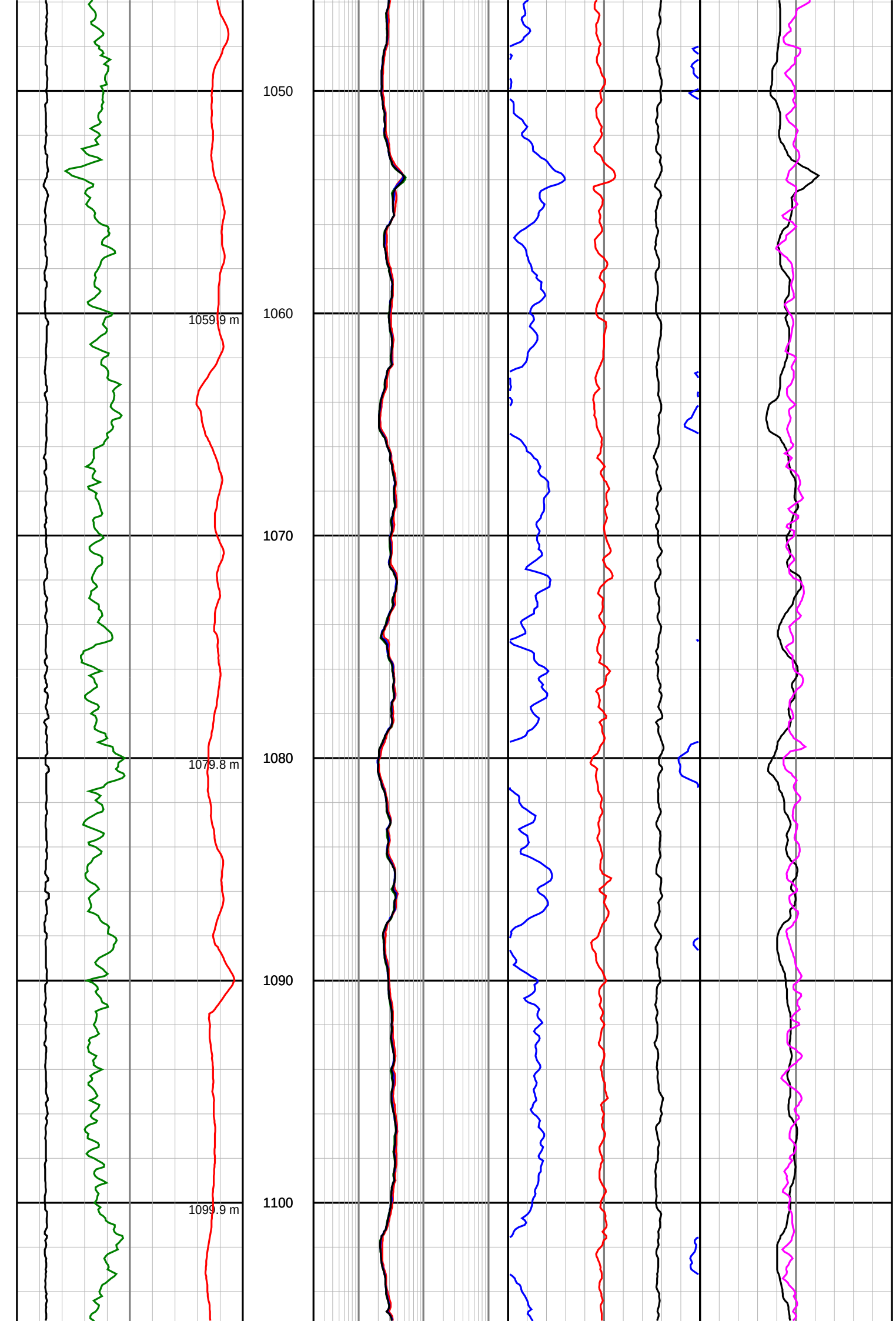
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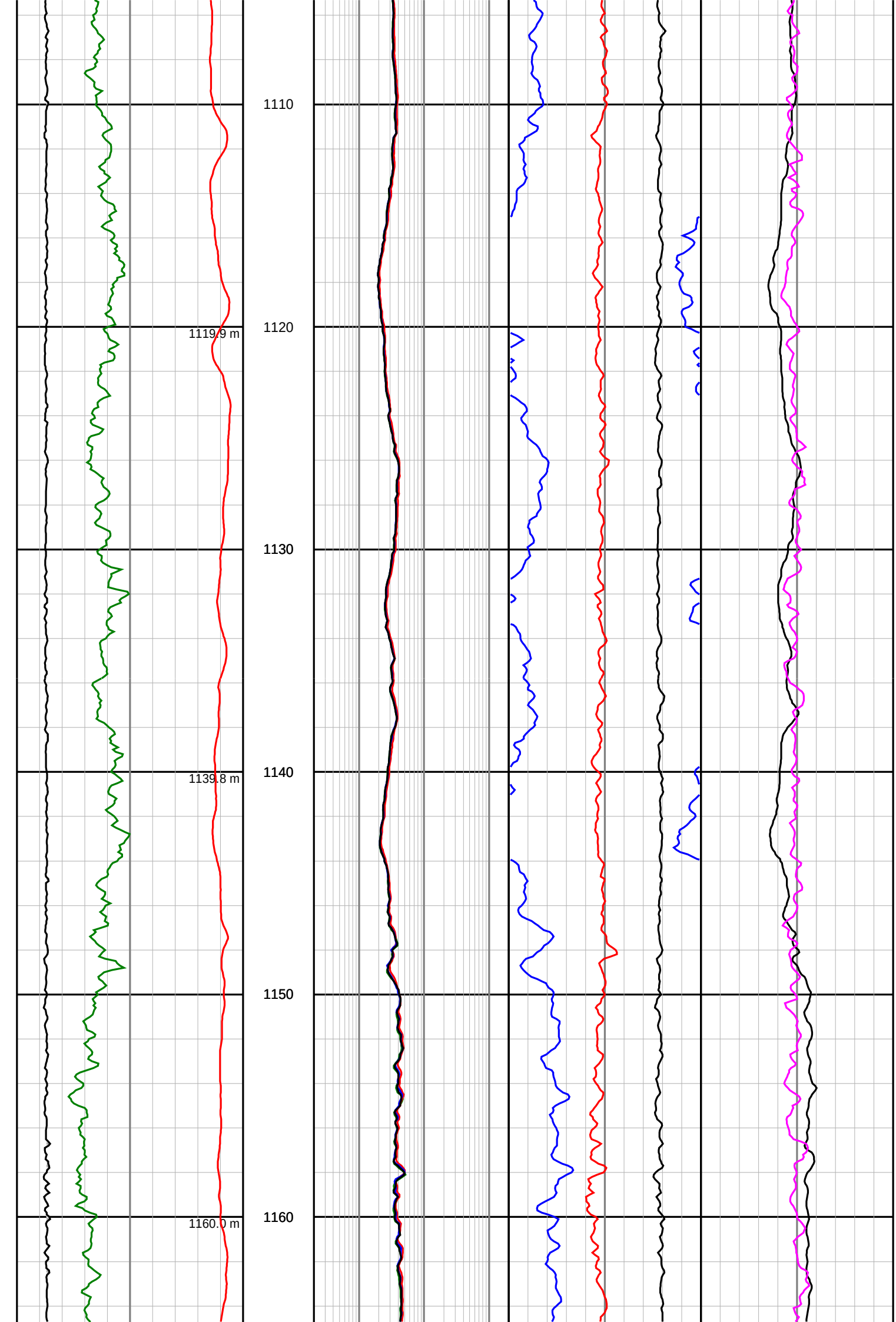
1080
1090
1099.9 m
1100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1119.9 m
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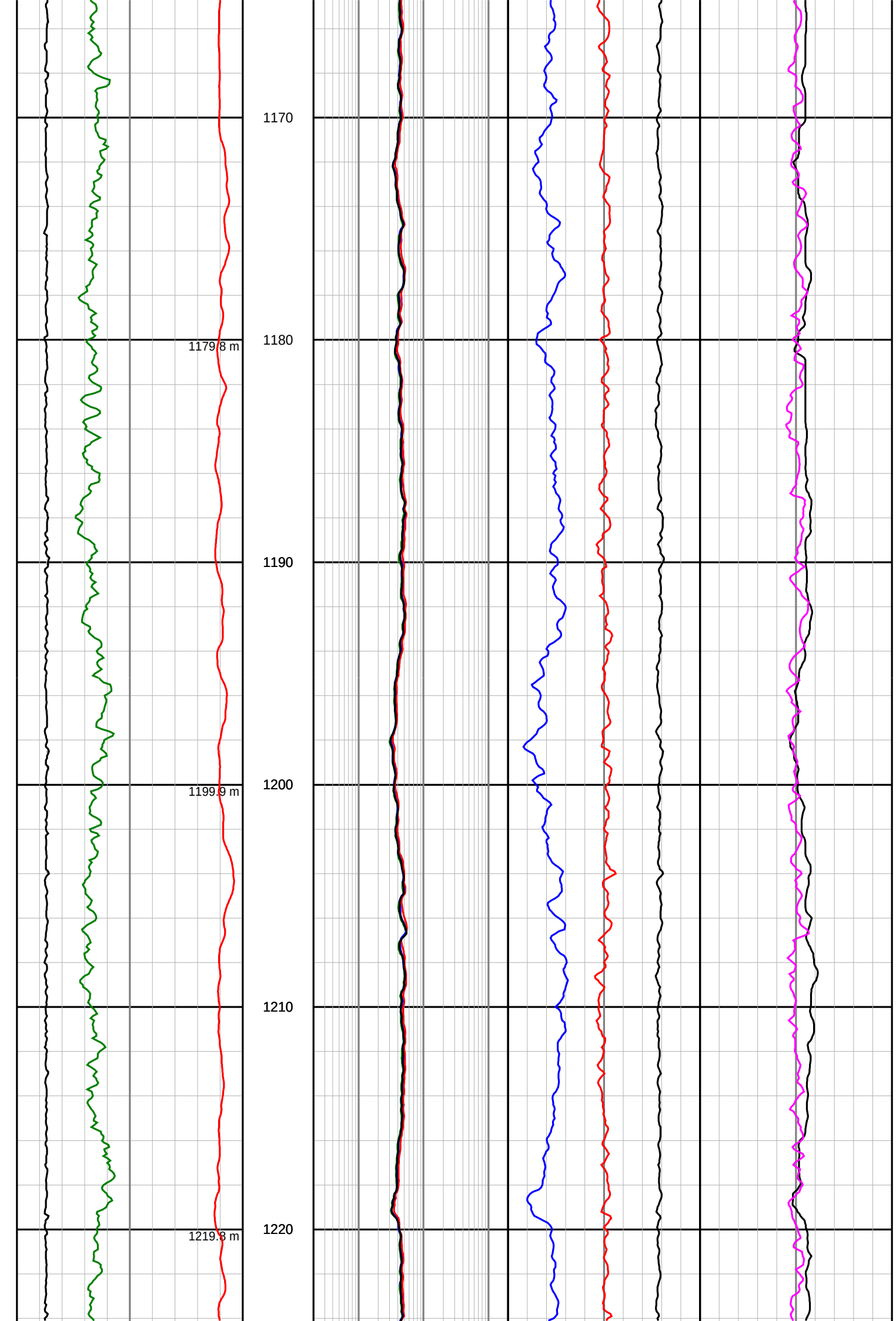
1140
1139.8 m
1150
1160
1160.0 m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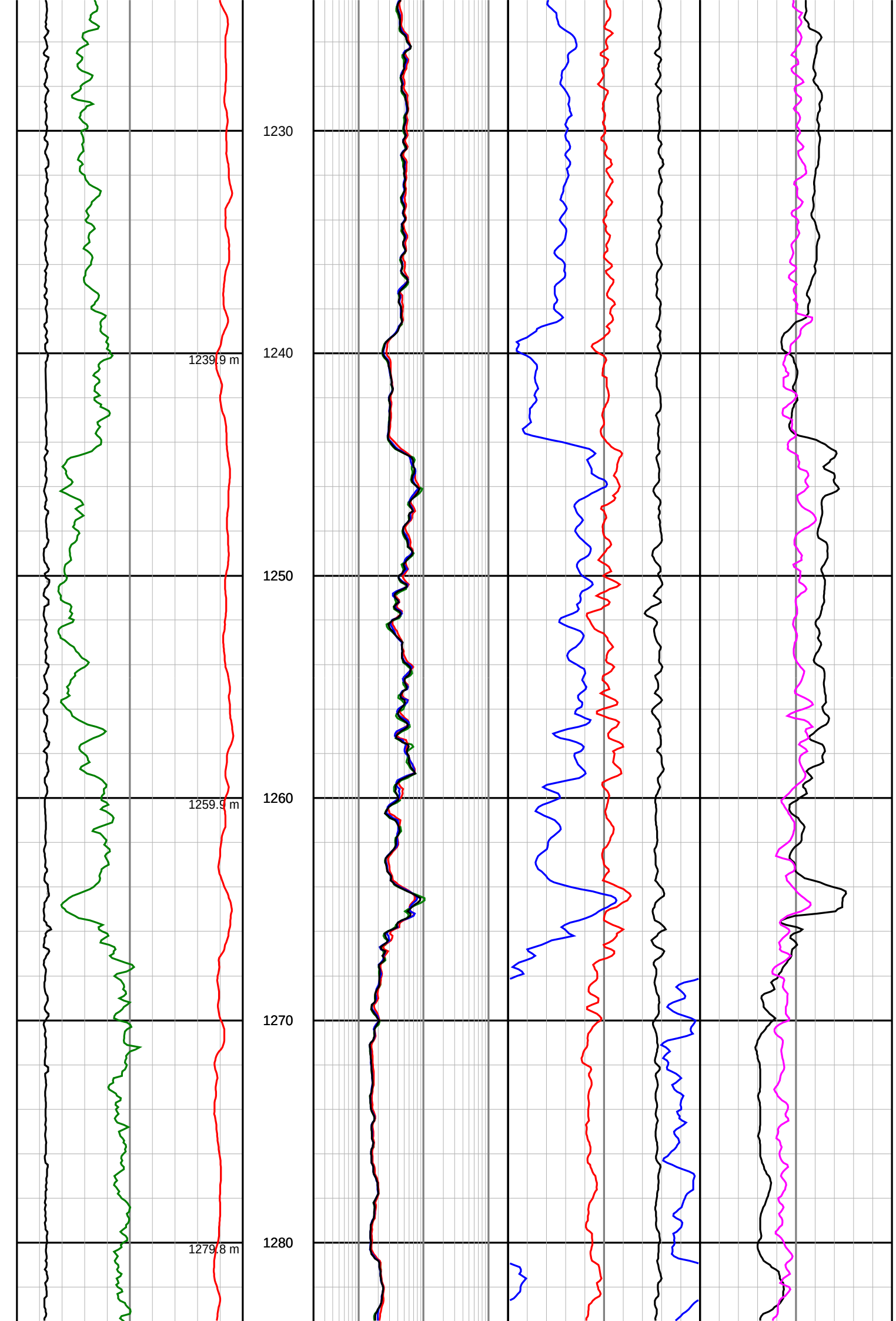
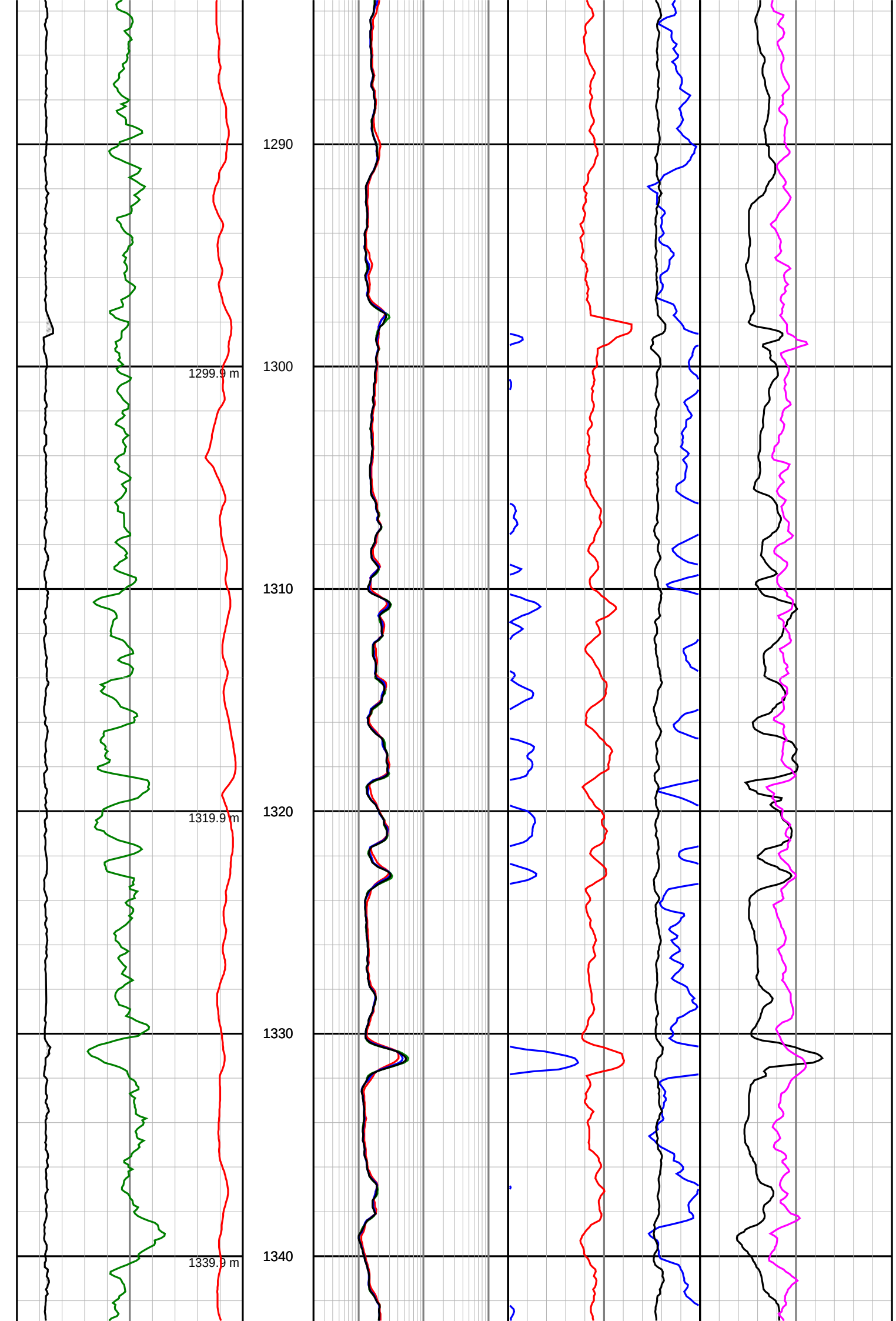
1179.8 m
1180
1190
1199.9 m
1200
1210
1219.3 m
1220


1230
1239.9 m
1240
1250
1259.9 m
1260
1270
1279.8 m
1280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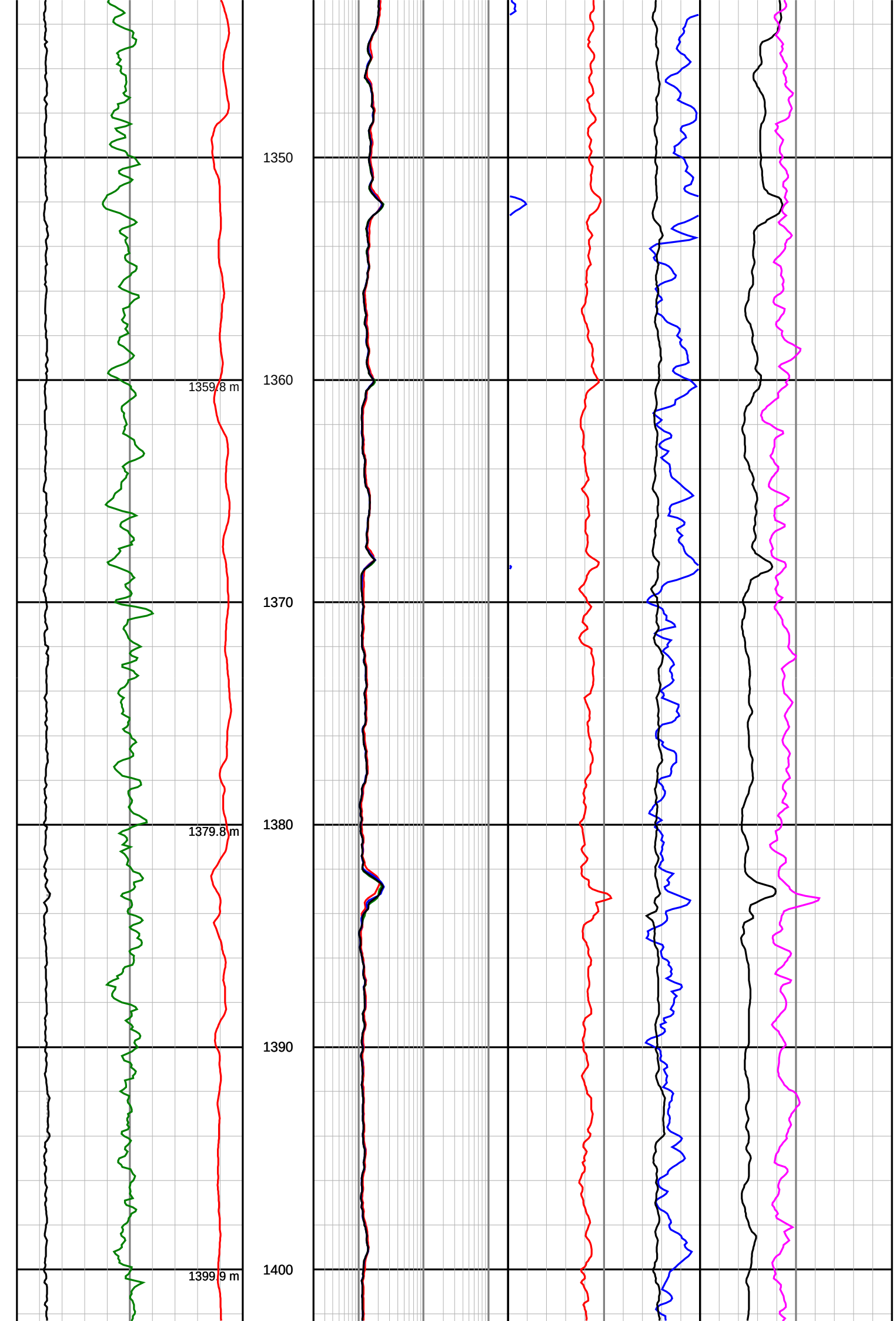
1299.9 m
1300
1310
1319.9 m
1320
1330
1339.9 m
1340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1359.8 m
1360
1370
1379.8 m
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1390
1399.9 m
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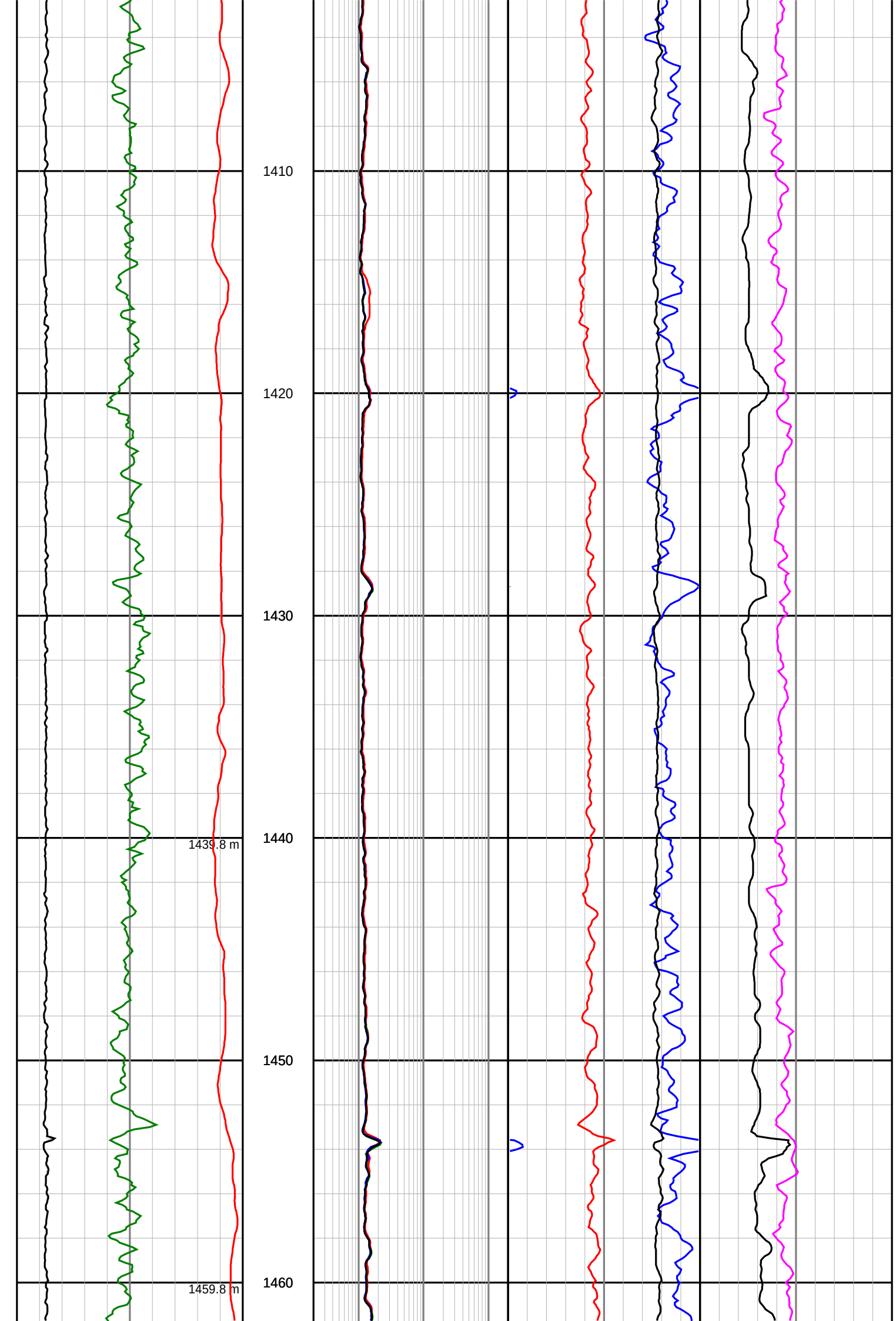
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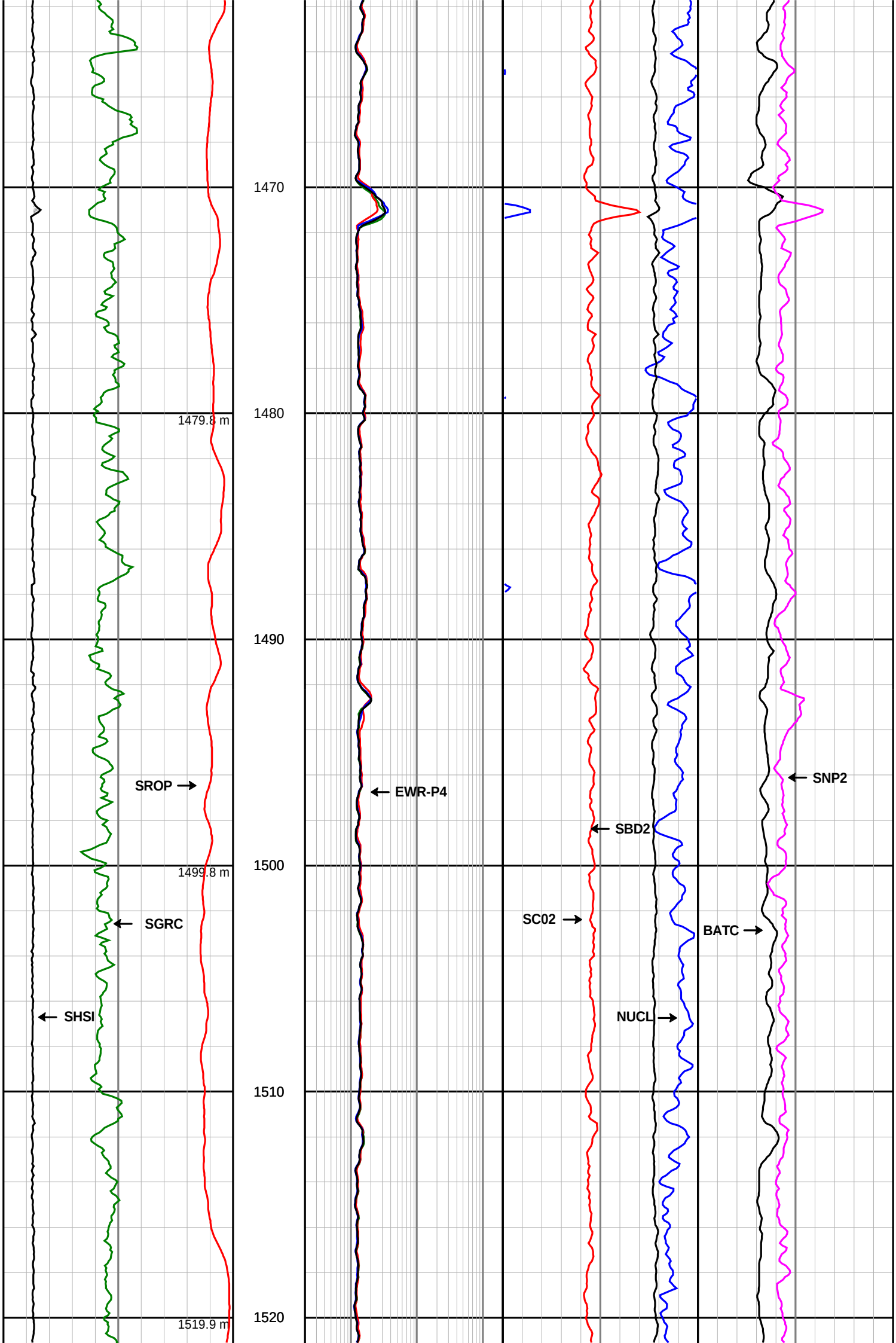
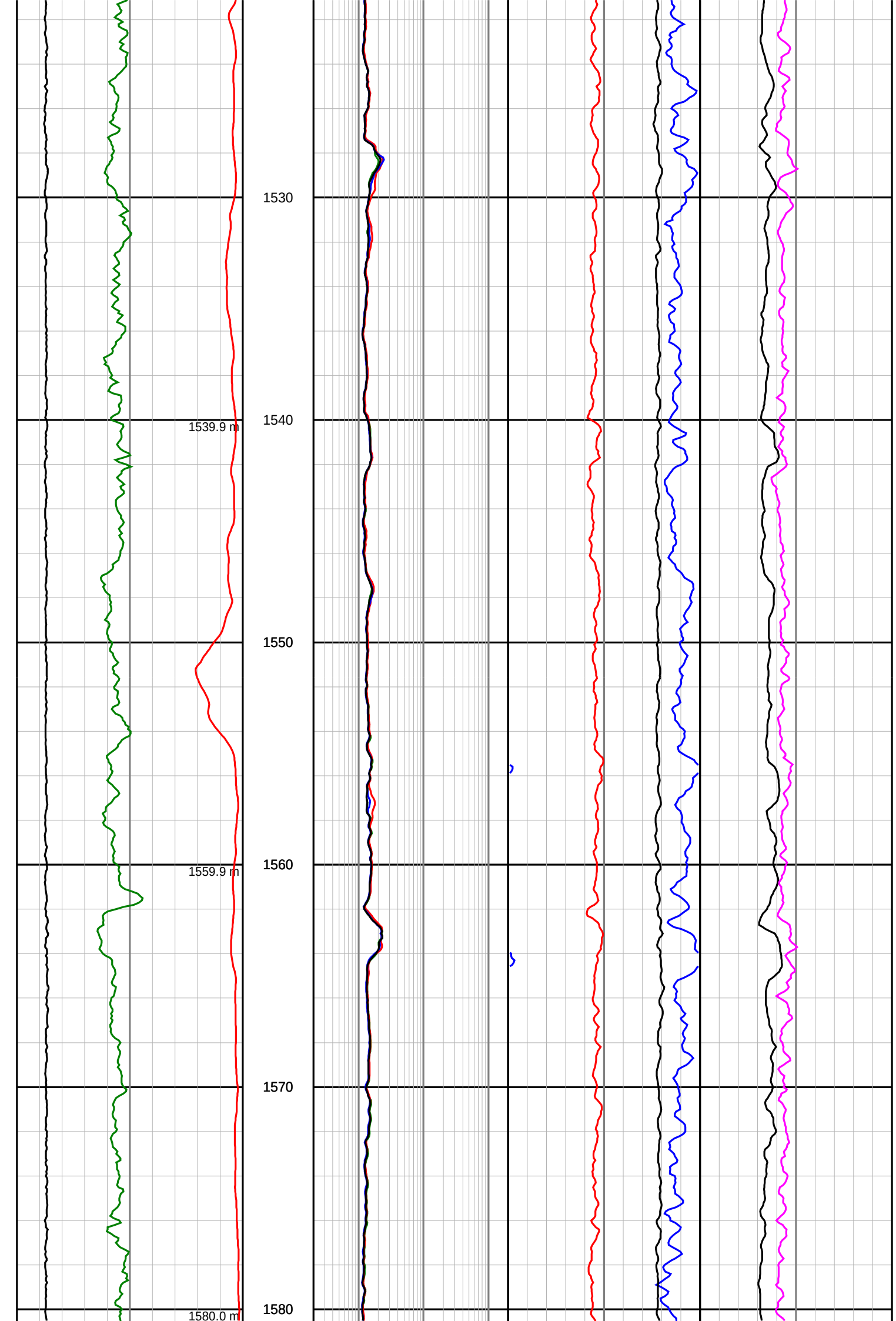
1460
1459.8 m


1470
1480
1490
1500
1510
1520
1479.8 m
1499.8 m
1519.9 m
SROP
SGRC
SHSI
EWR-P4
SBD2
SC02
NUCL
BATC
SNP2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1580.0 m
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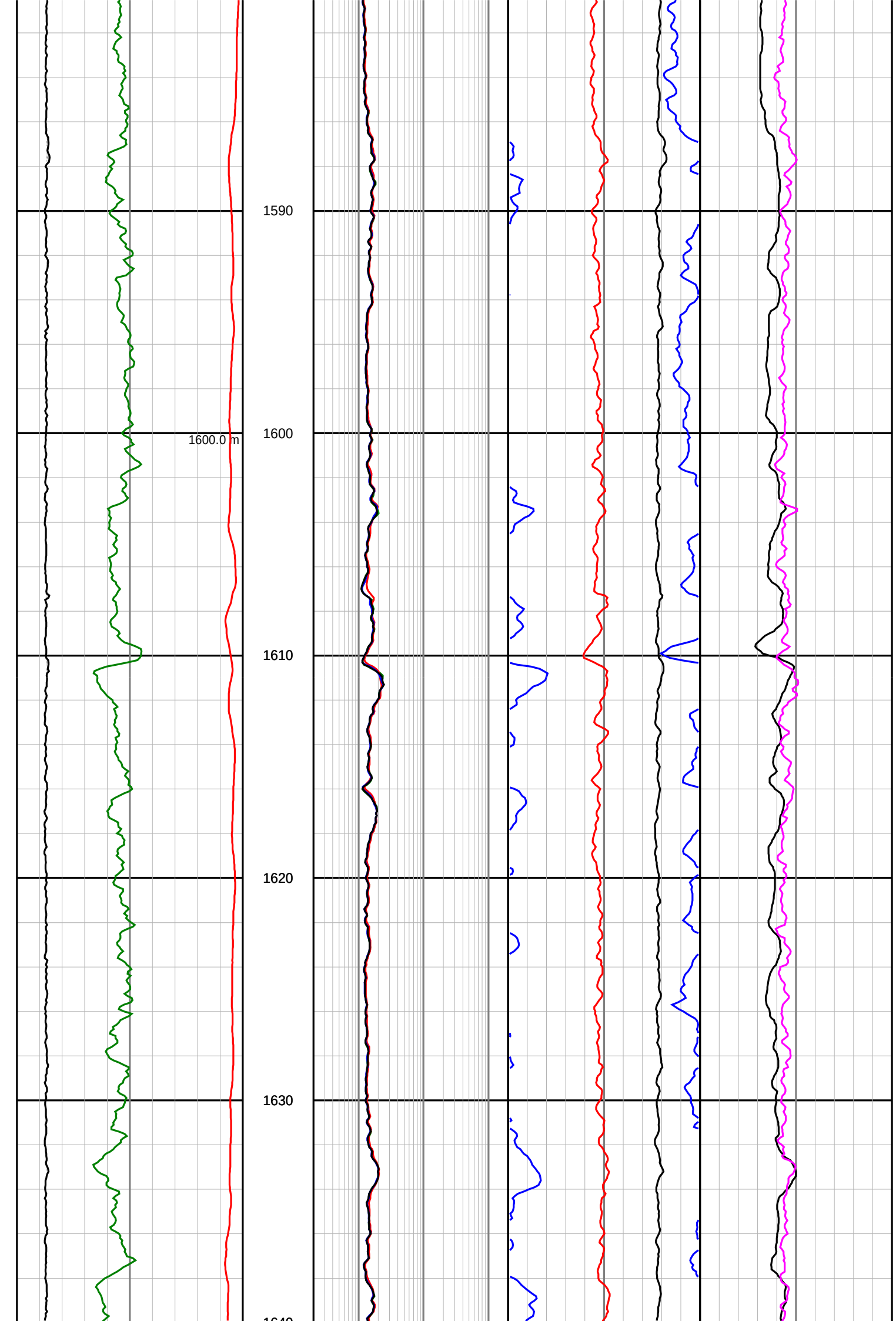
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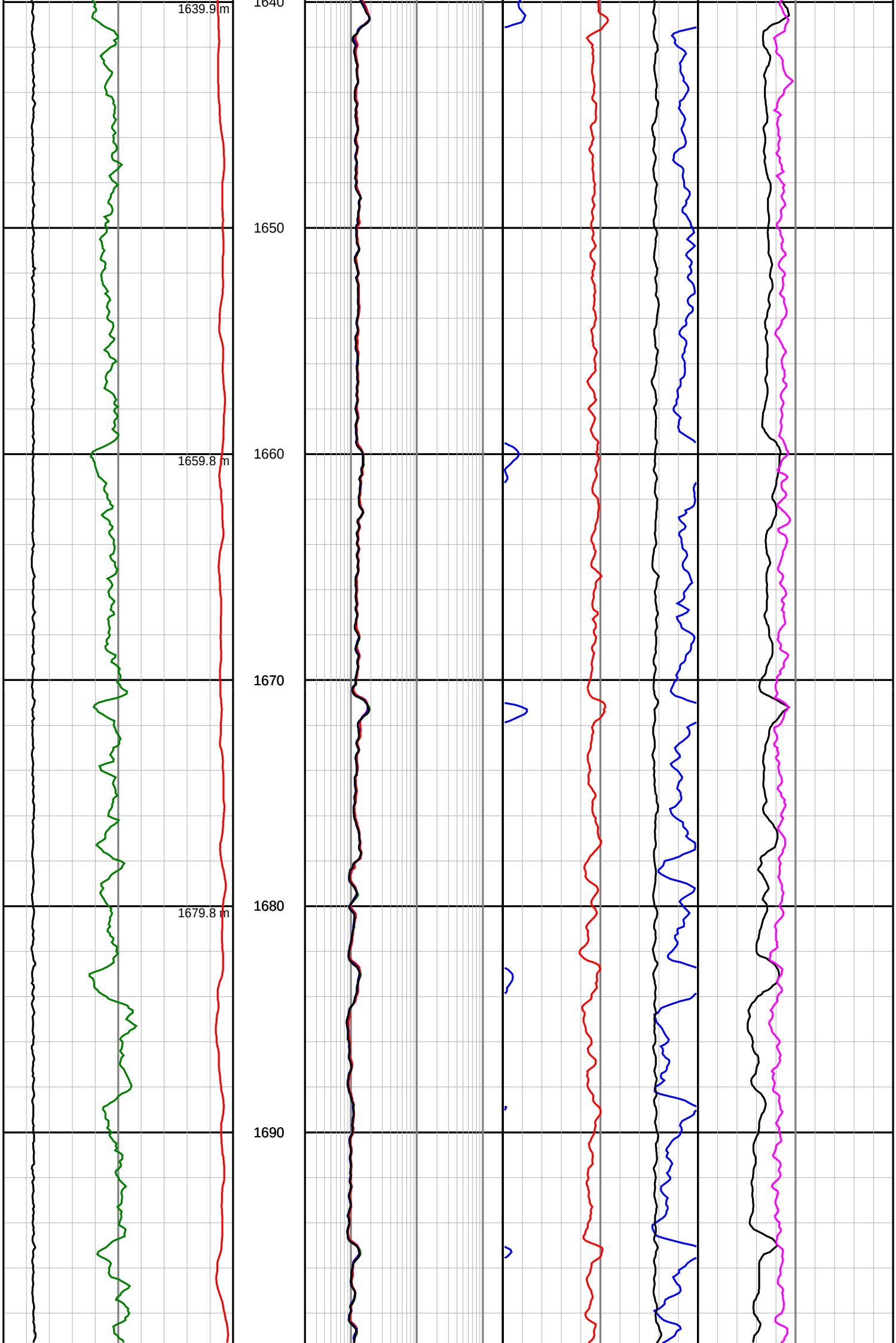
1600
1610
1620
1630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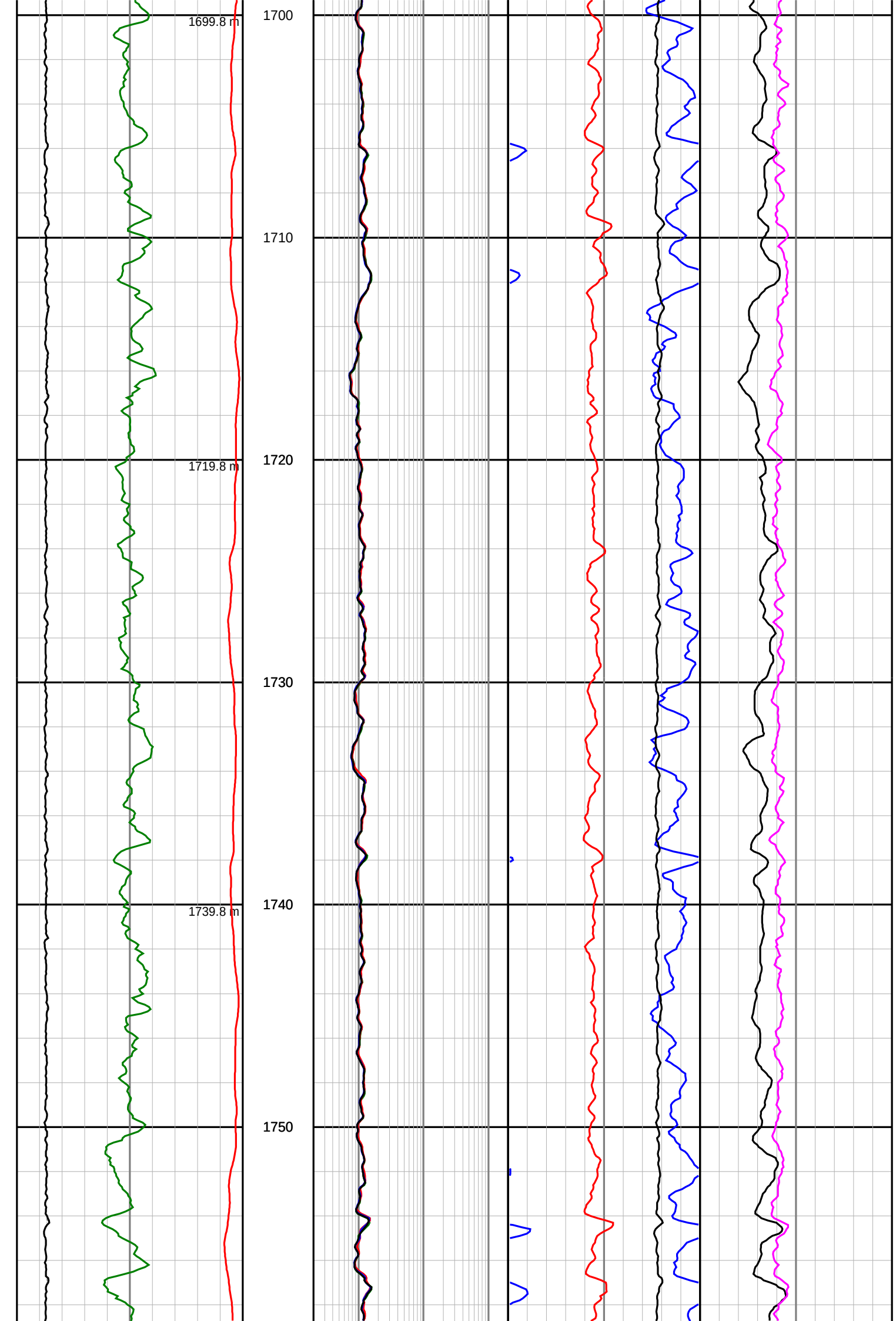
1679.8 m
1680
1690


1699.8 m
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1710
1719.8 m
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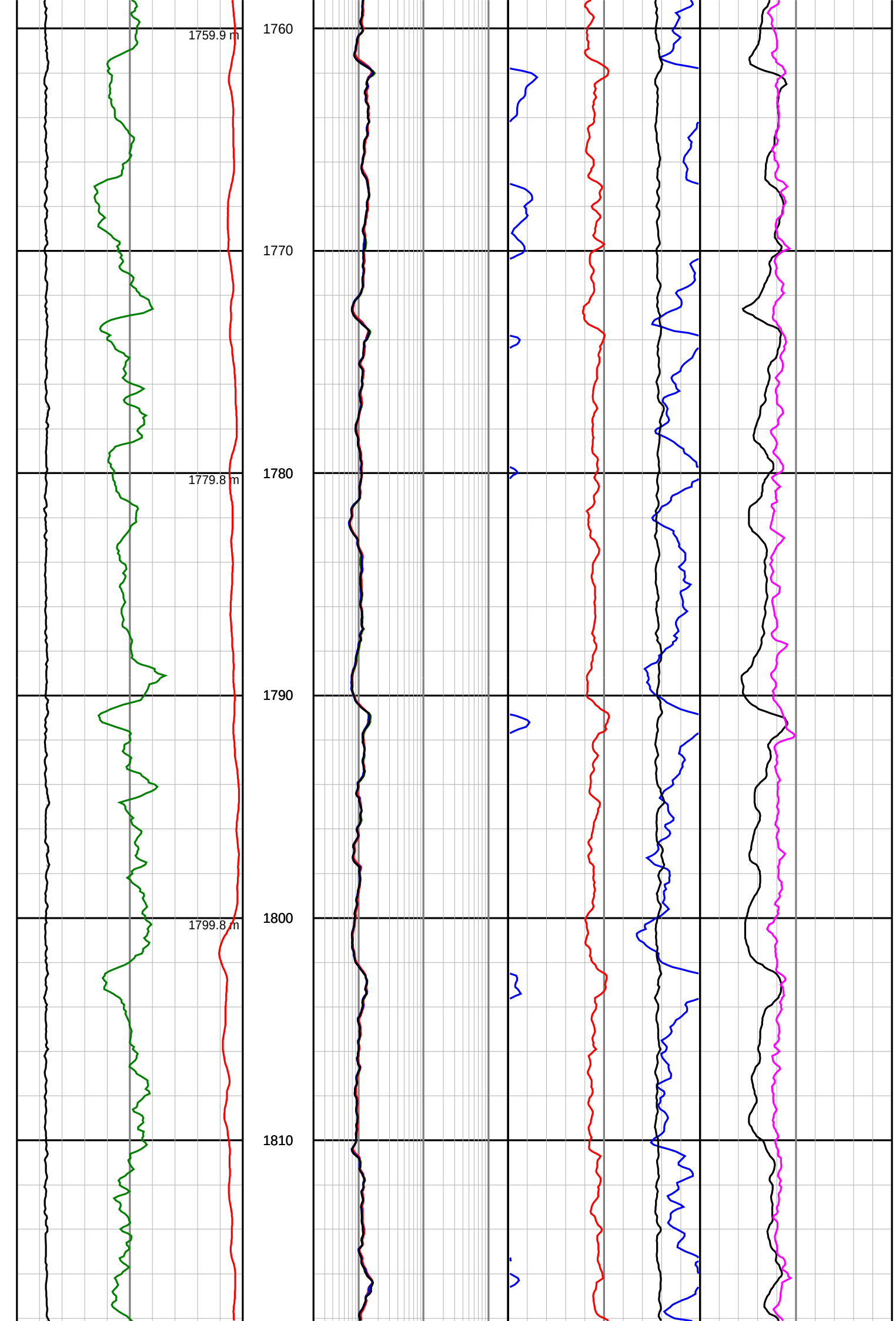
1730
1739.8 m
1740
1750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1779.8 m
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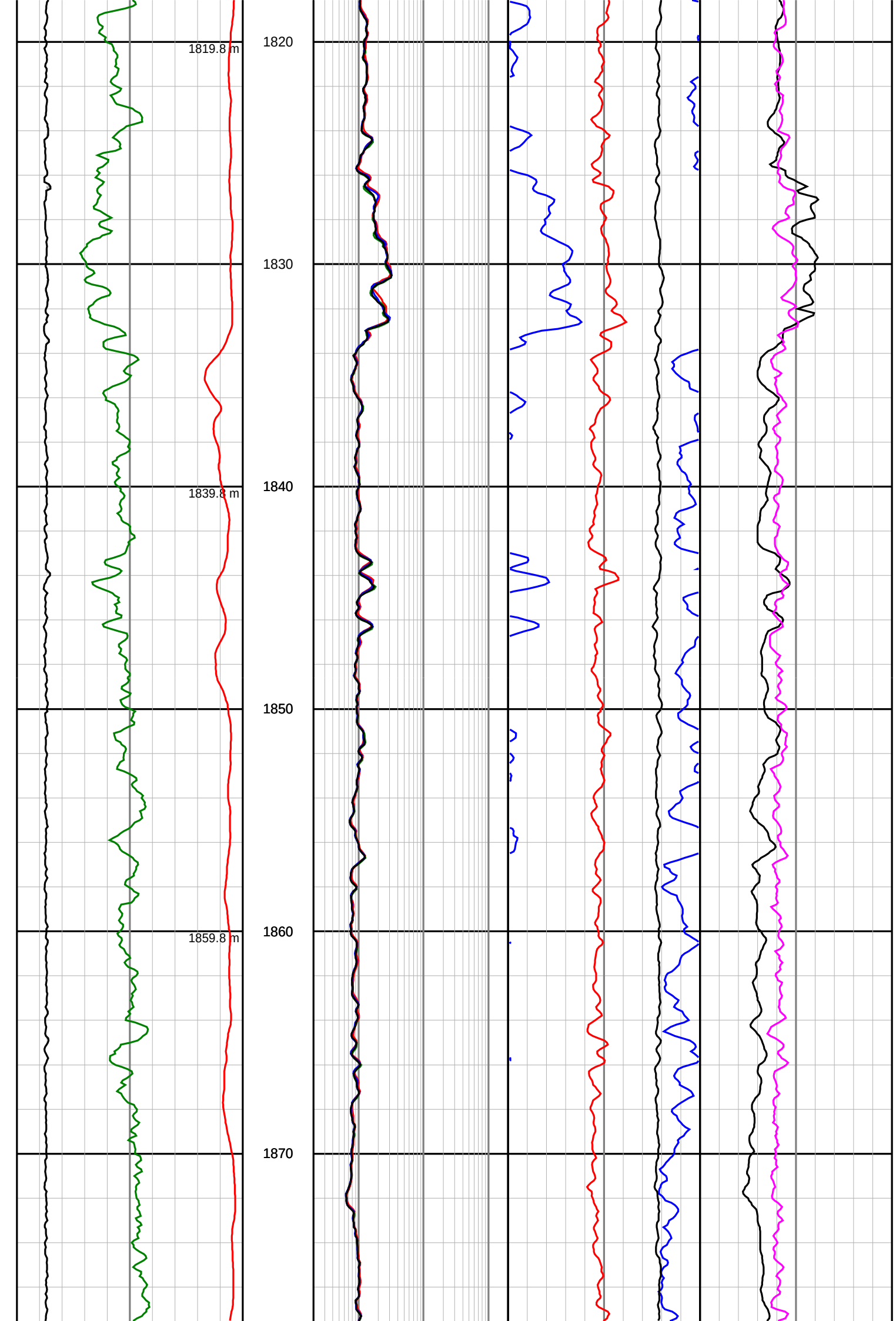
1799.8 m
1800
1810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1830
1839.8 m
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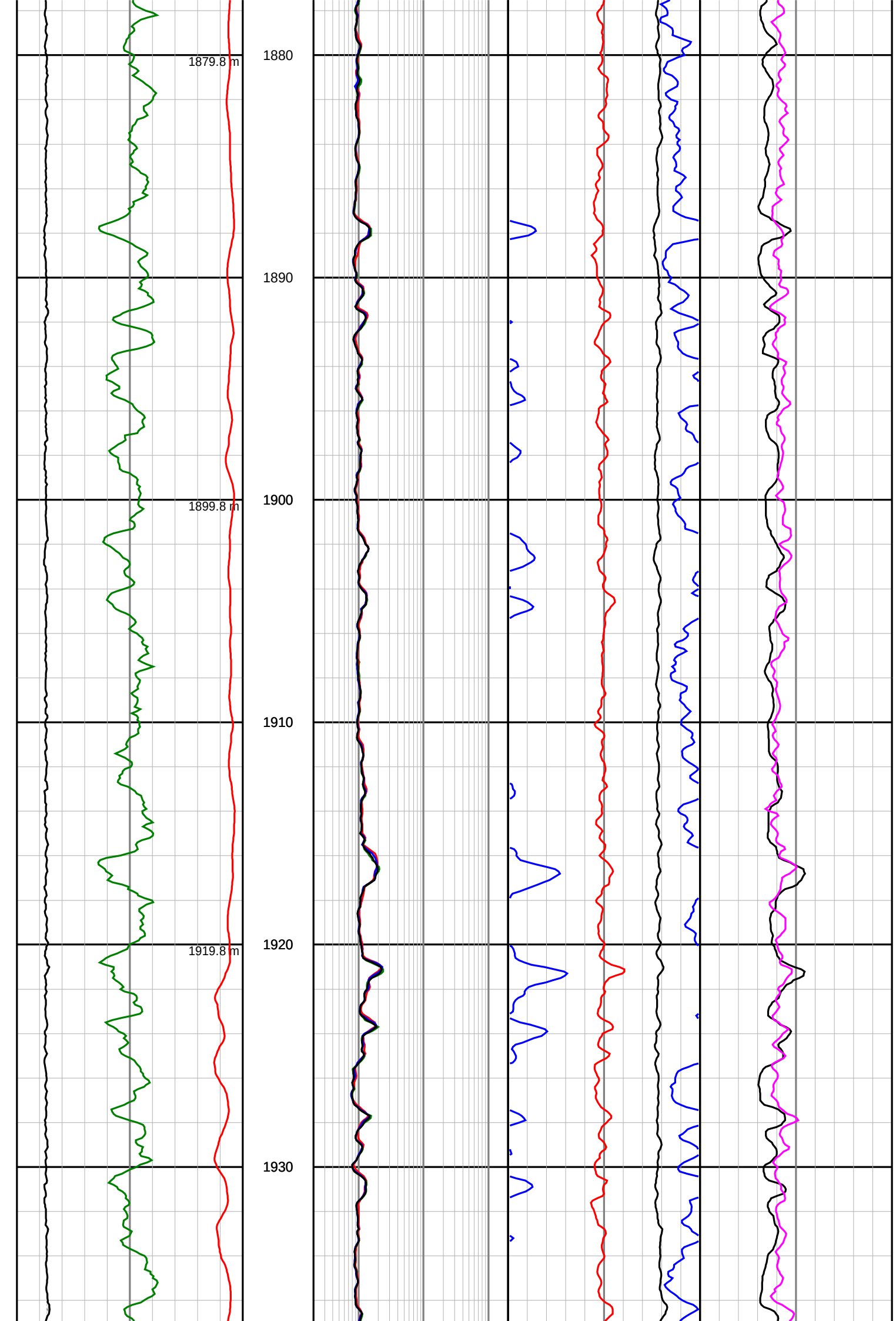
1850
1859.8 m
1860
1870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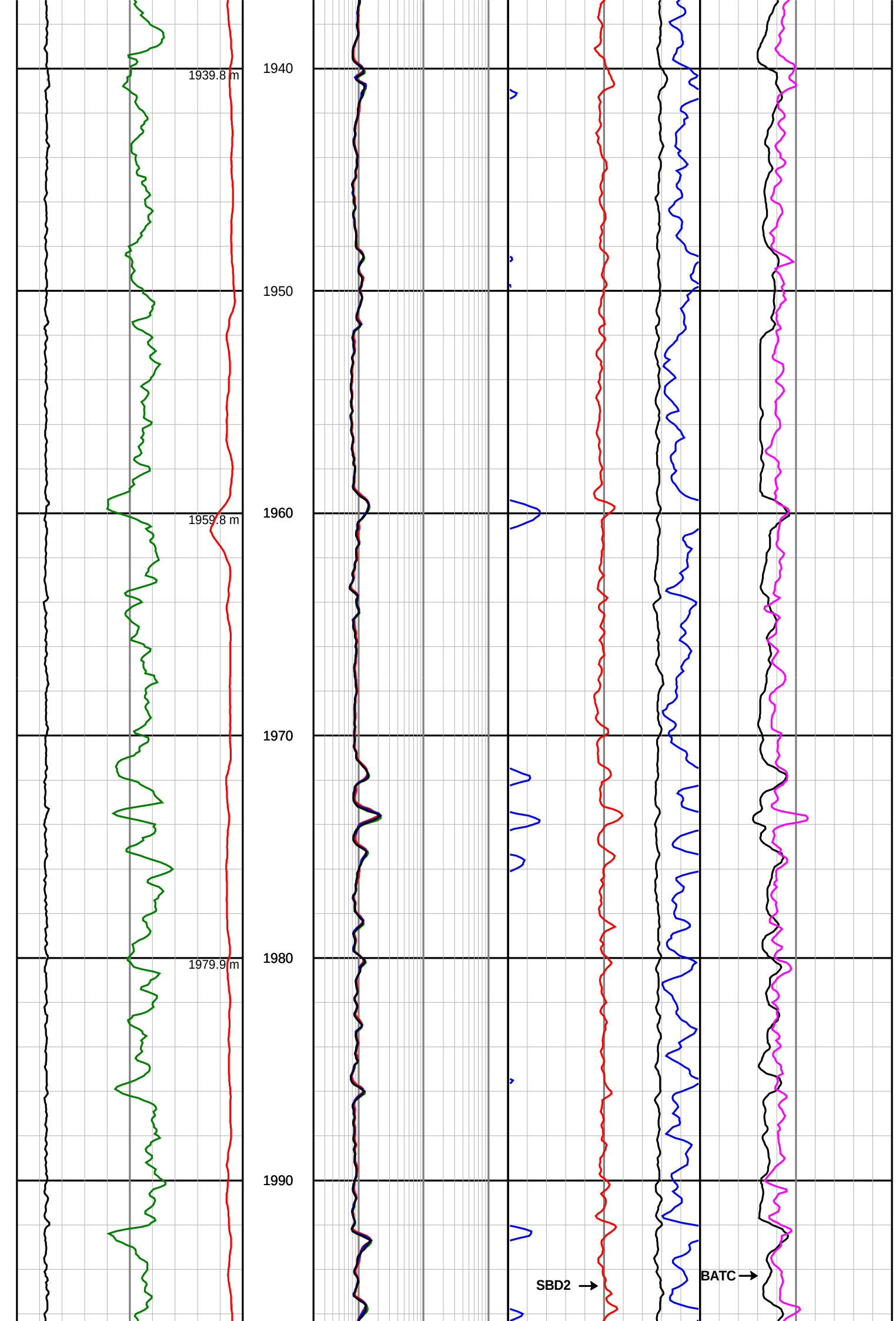
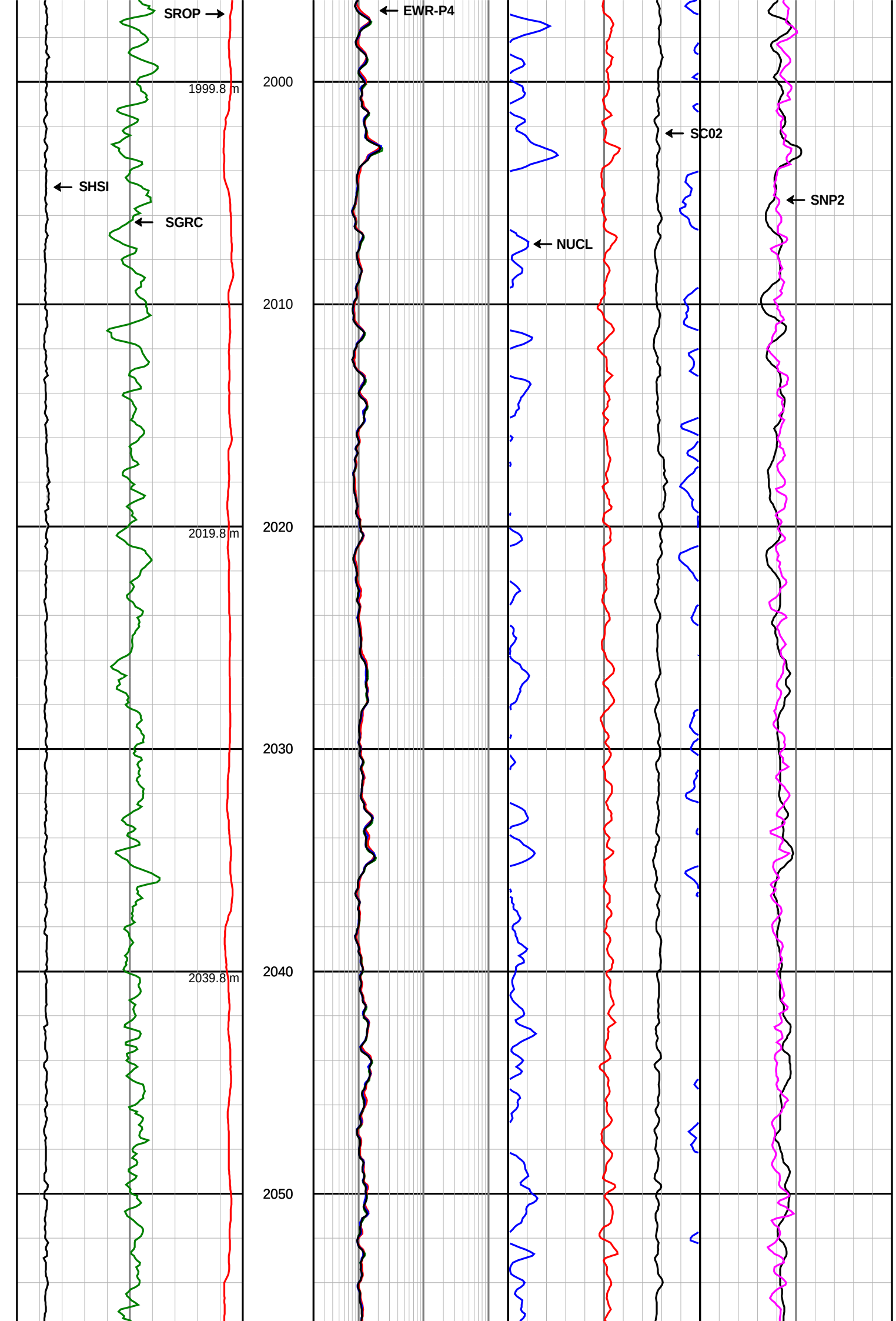
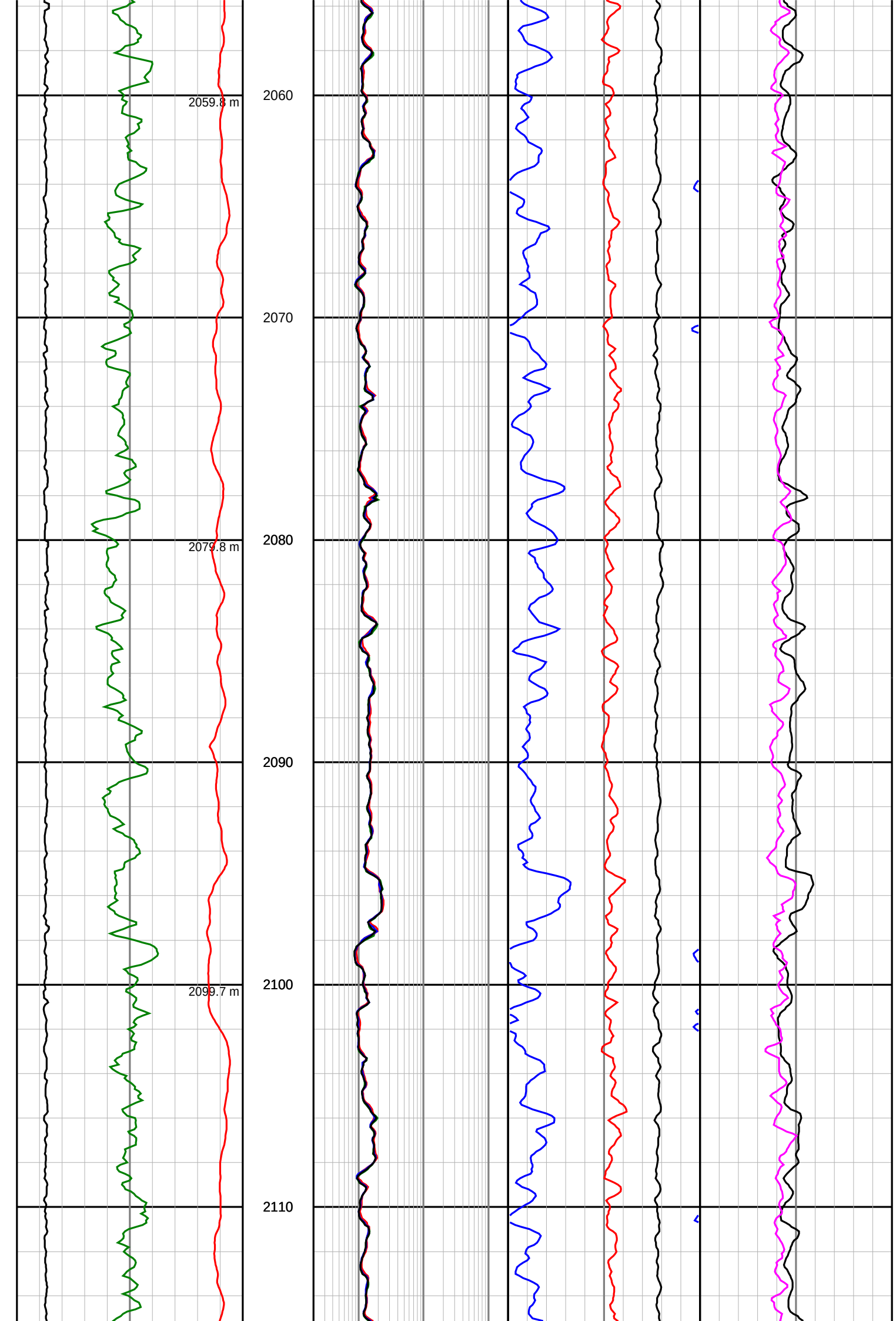
1890
1899.8 m
1900
1910
1919.8 m
1920
1930


1939.8 m
1940
1950
1959.8 m
1960
1970
1979.9 m
1980
1990
SBD2
BATC


SROP
1999.8 m
SHSI
SGRC
2019.8 m
2039.8 m
2000
2010
2020
2030
2040
2050
EWR-P4
NUCL
SC02
SNP2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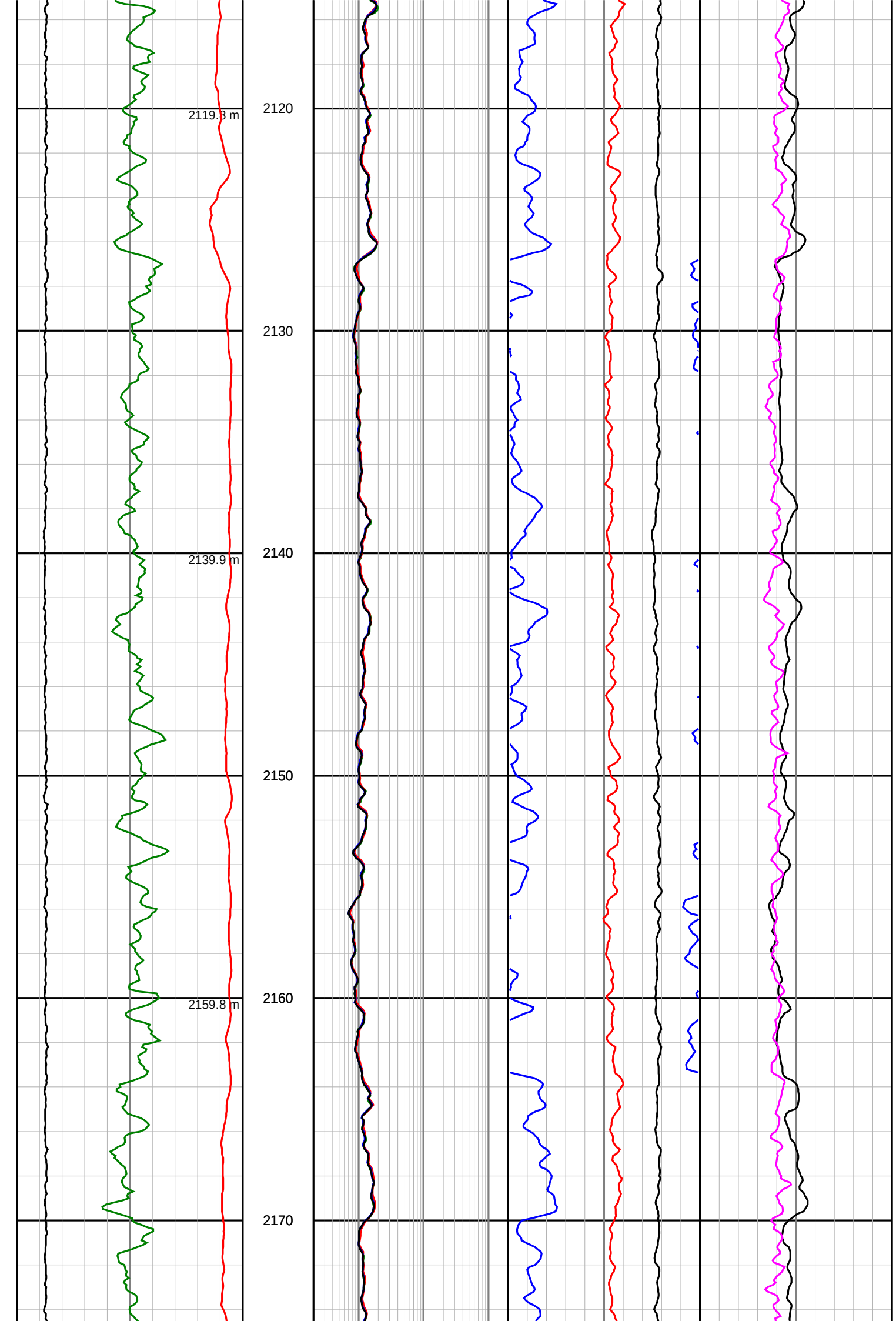
2060
2070
2079.8 m
2080
2090
2099.7 m
2100
2110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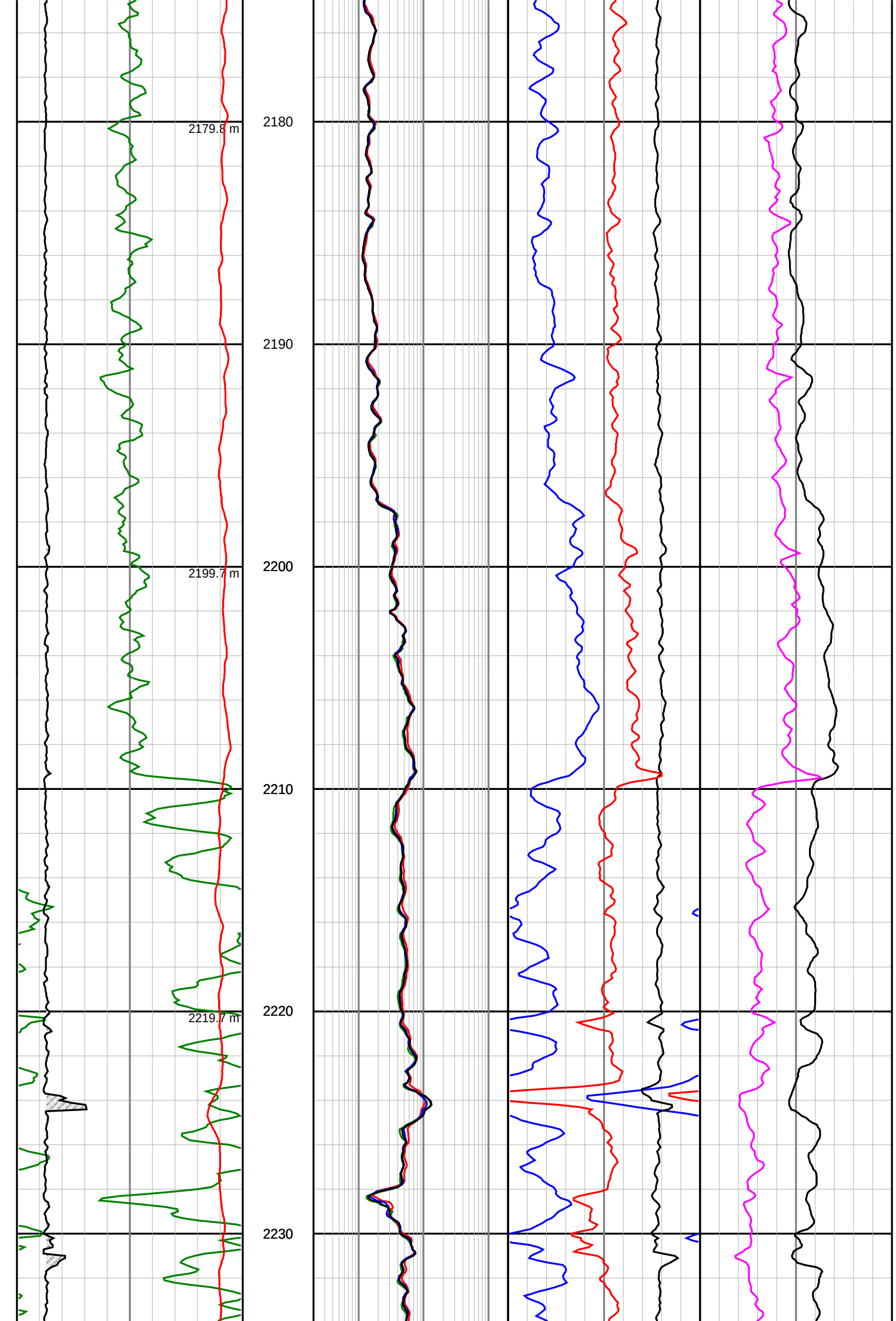
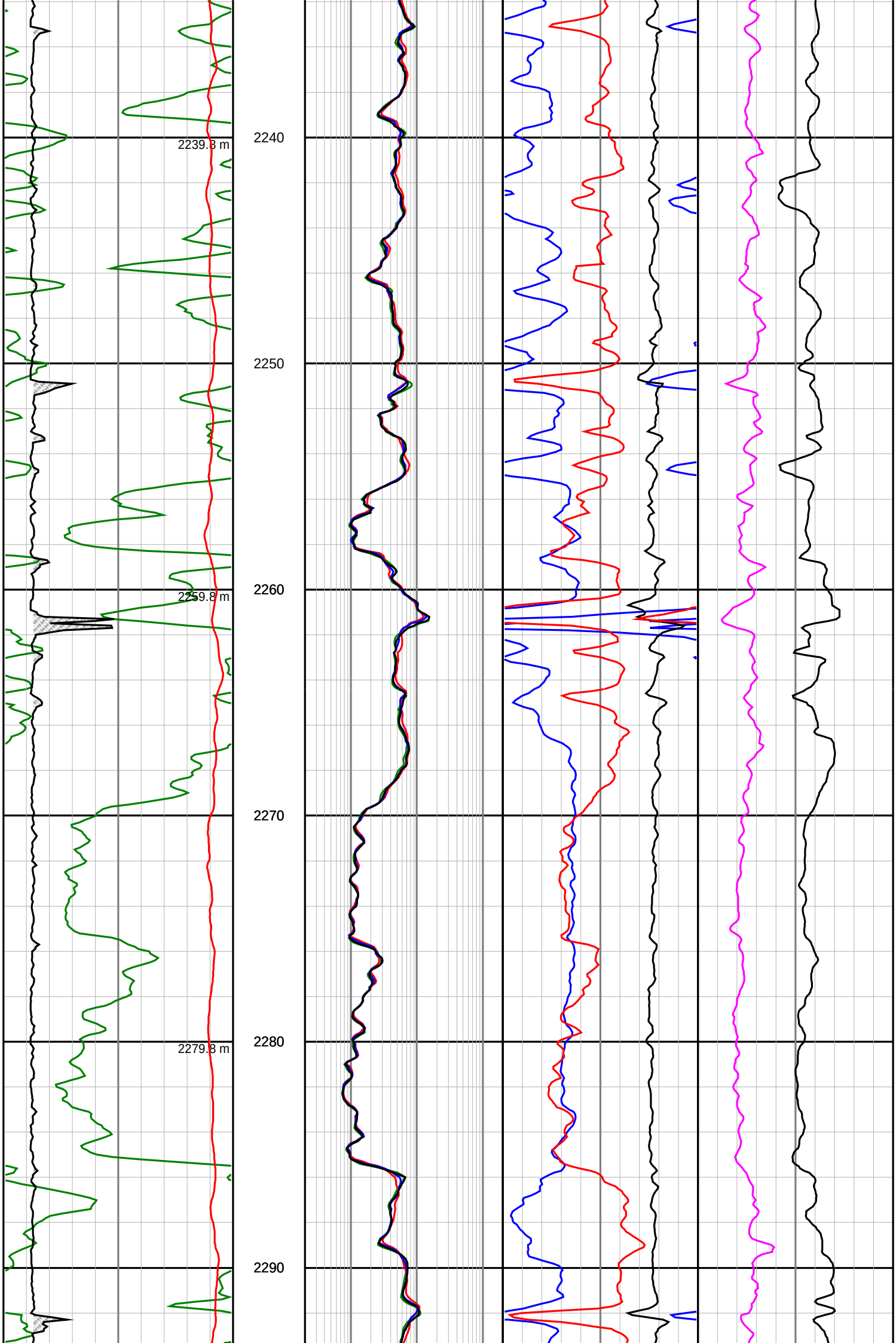
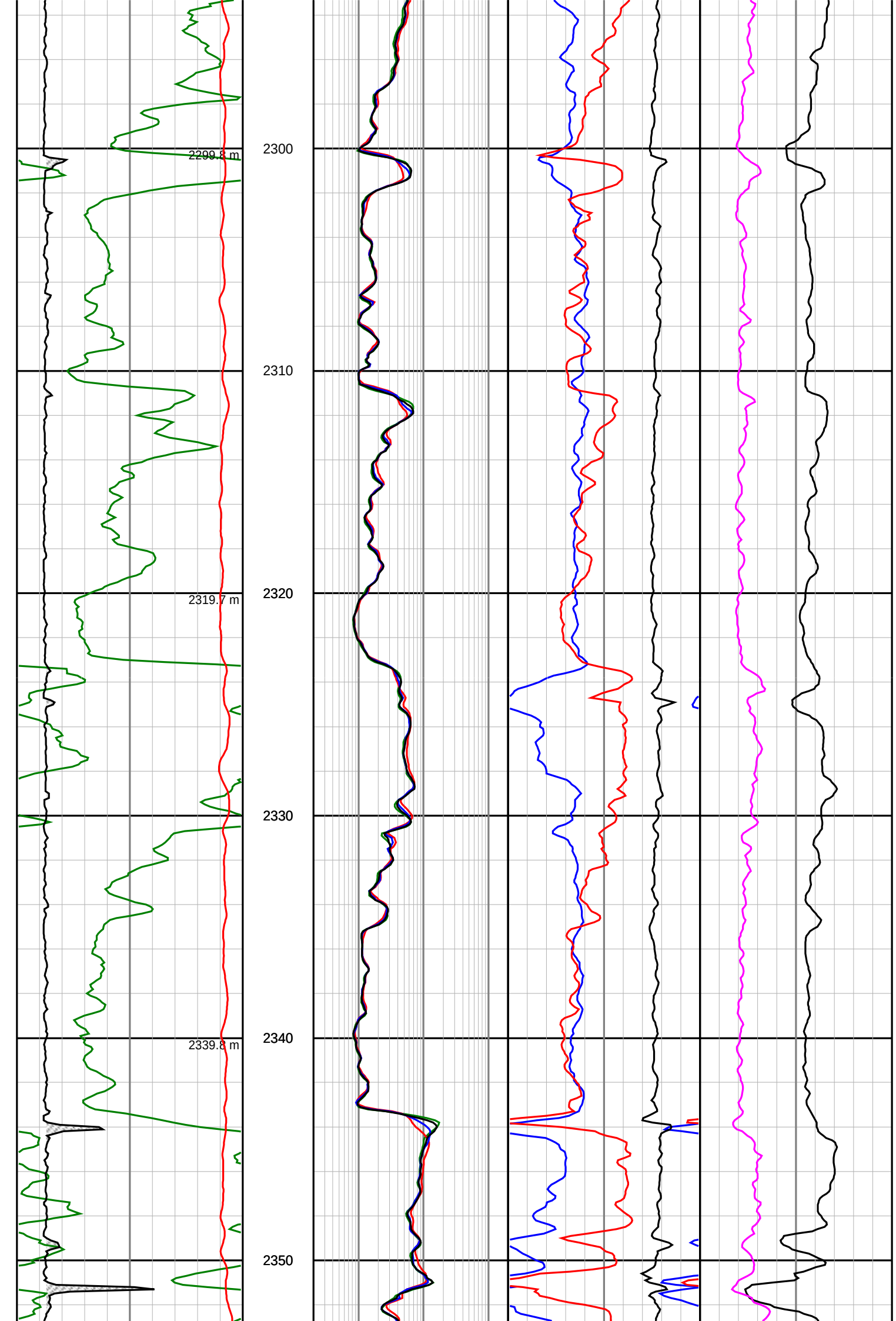
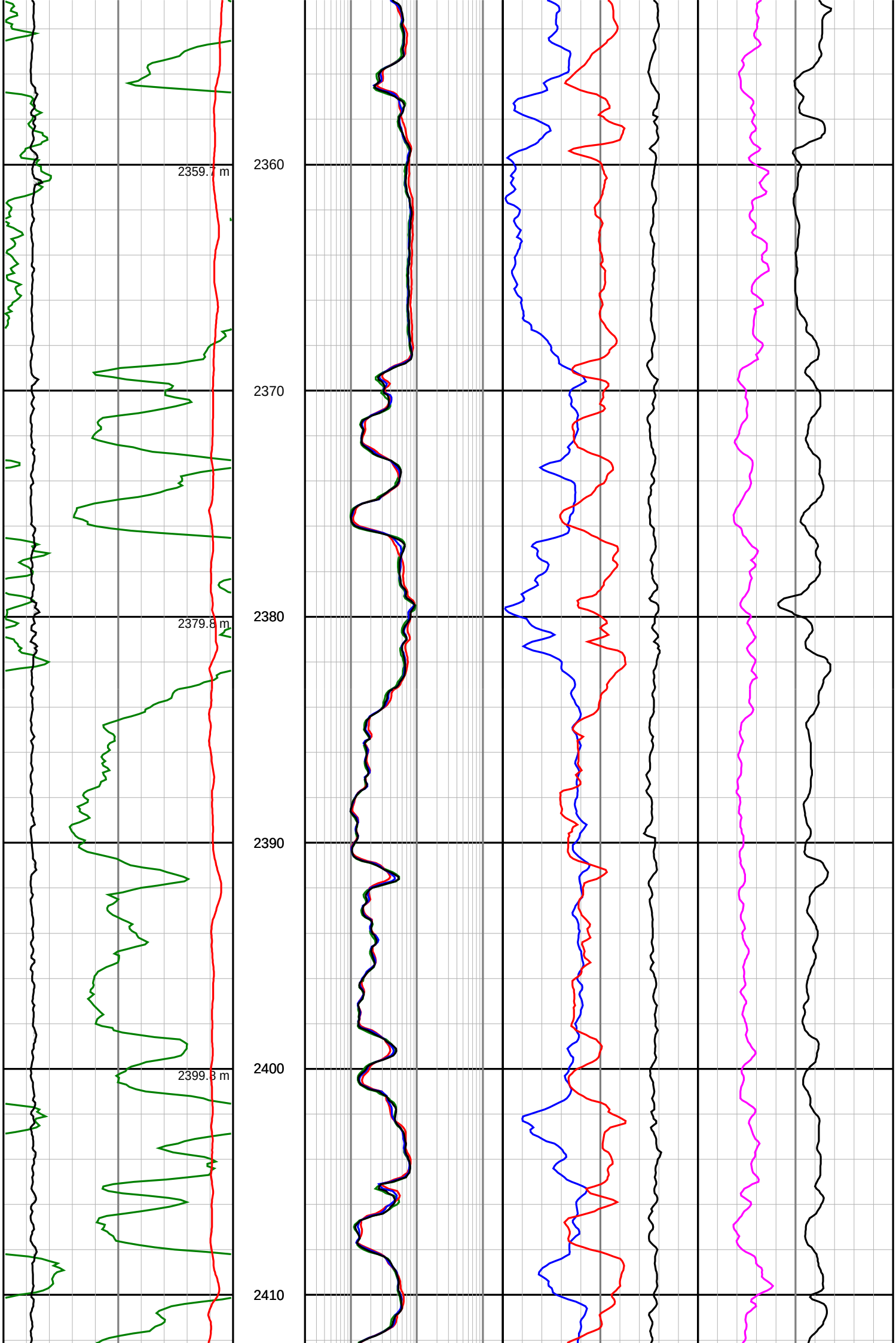
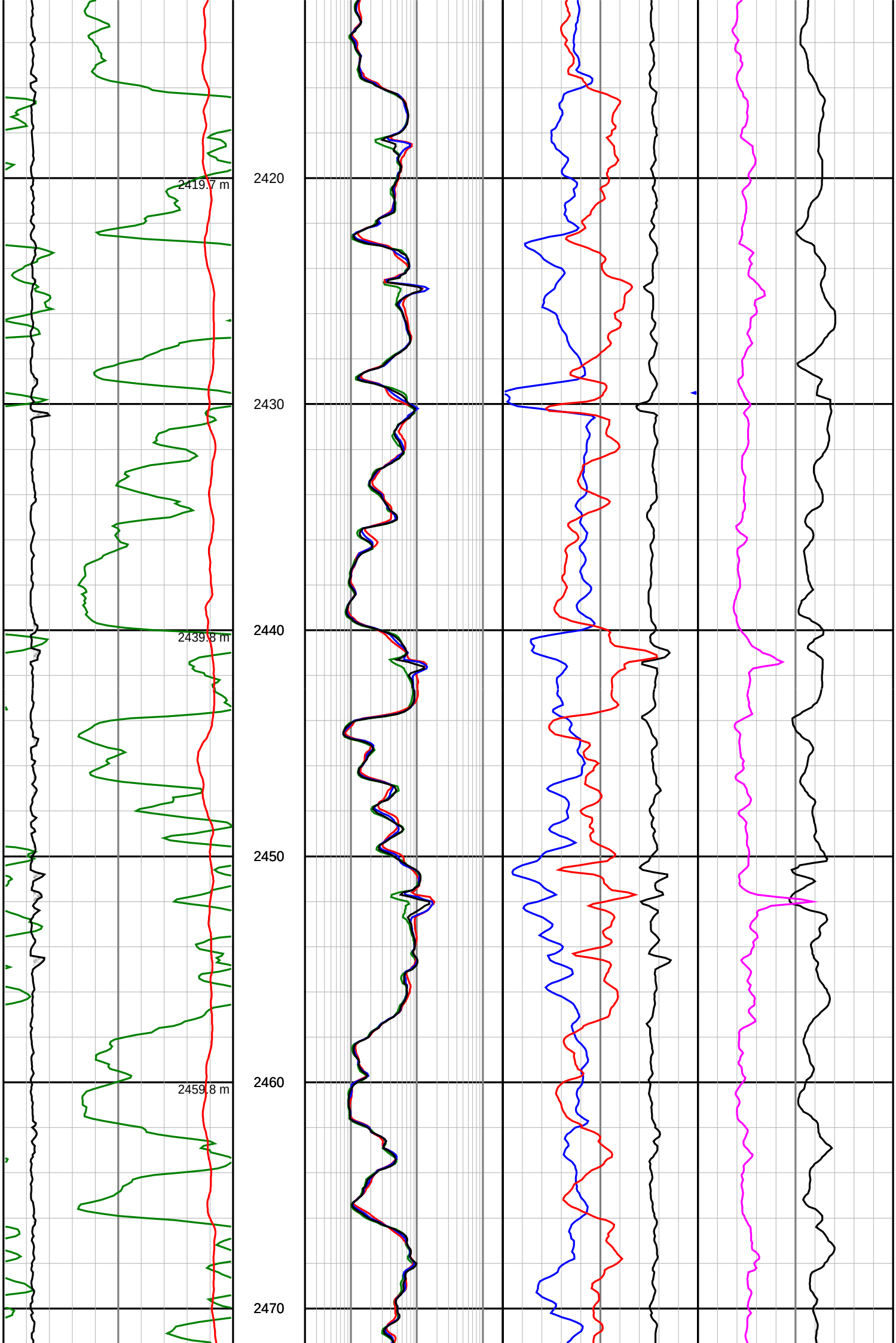
2139.9 m
2140
2150
2159.8 m
2160
2170

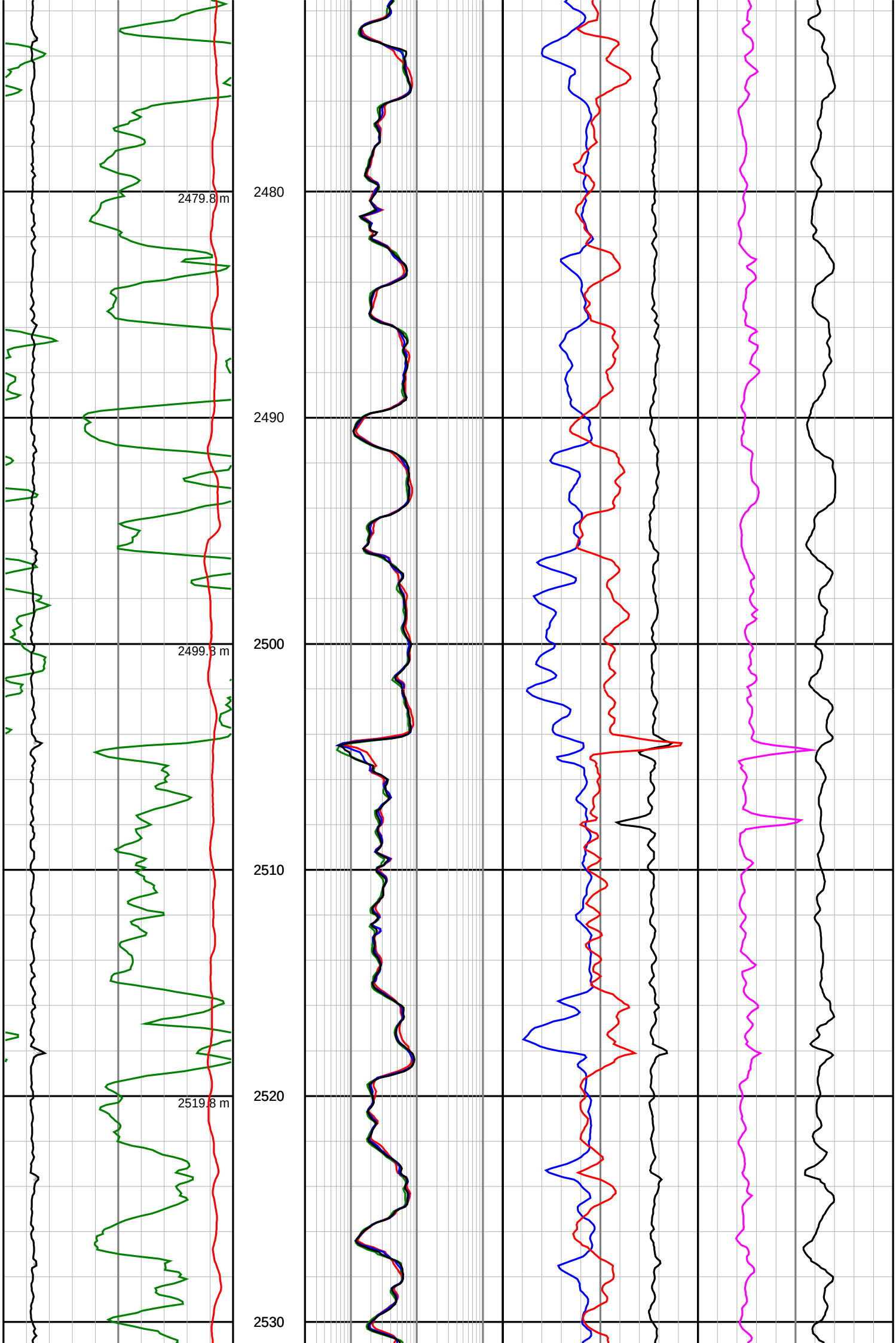

2179.8 m
2180
2190
2199.7 m
2200
2210
2219.7 m
2220
2230

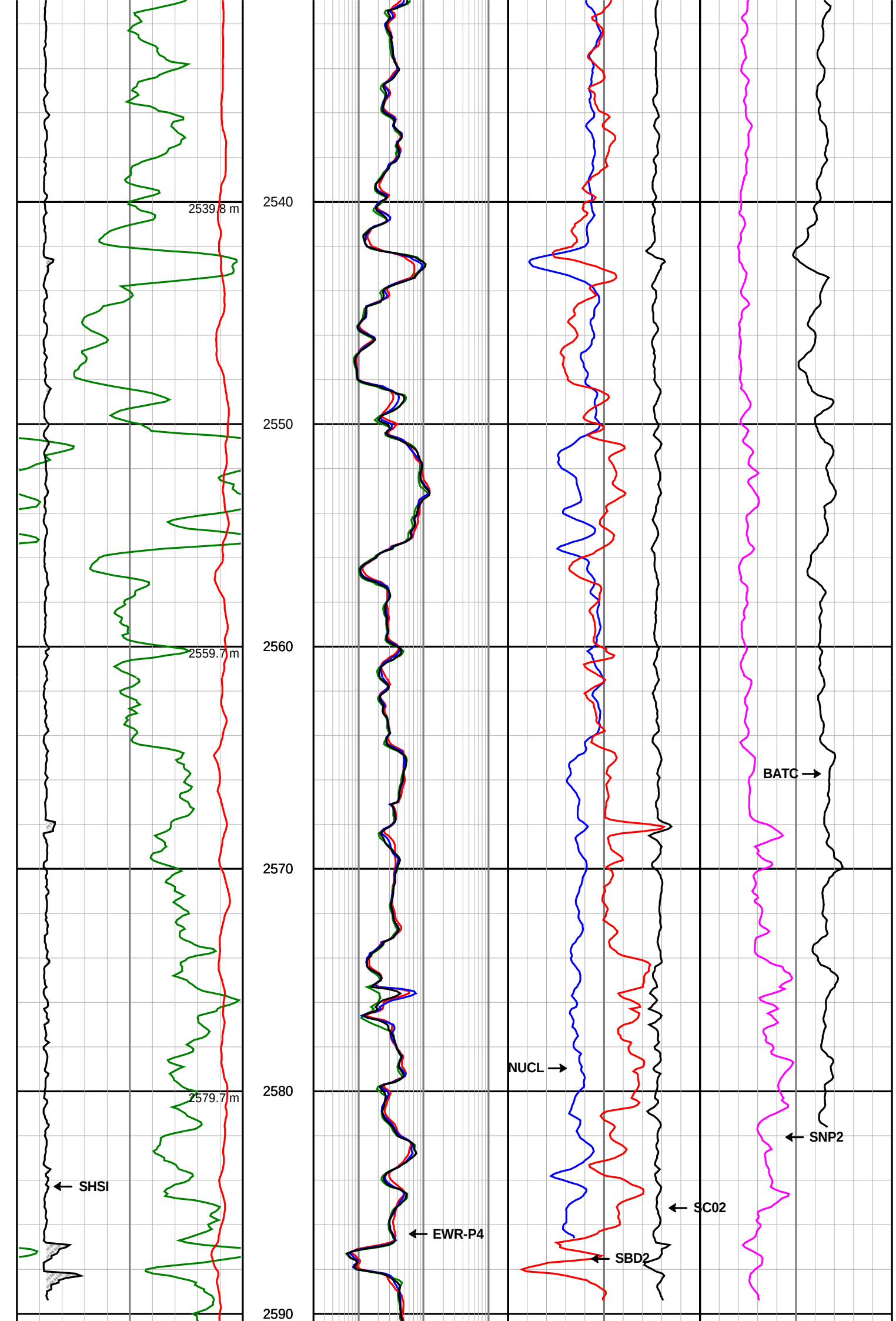

2239.8 m
2240
2250
2259.8 m
2260
2270
2279.8 m
2280
2290

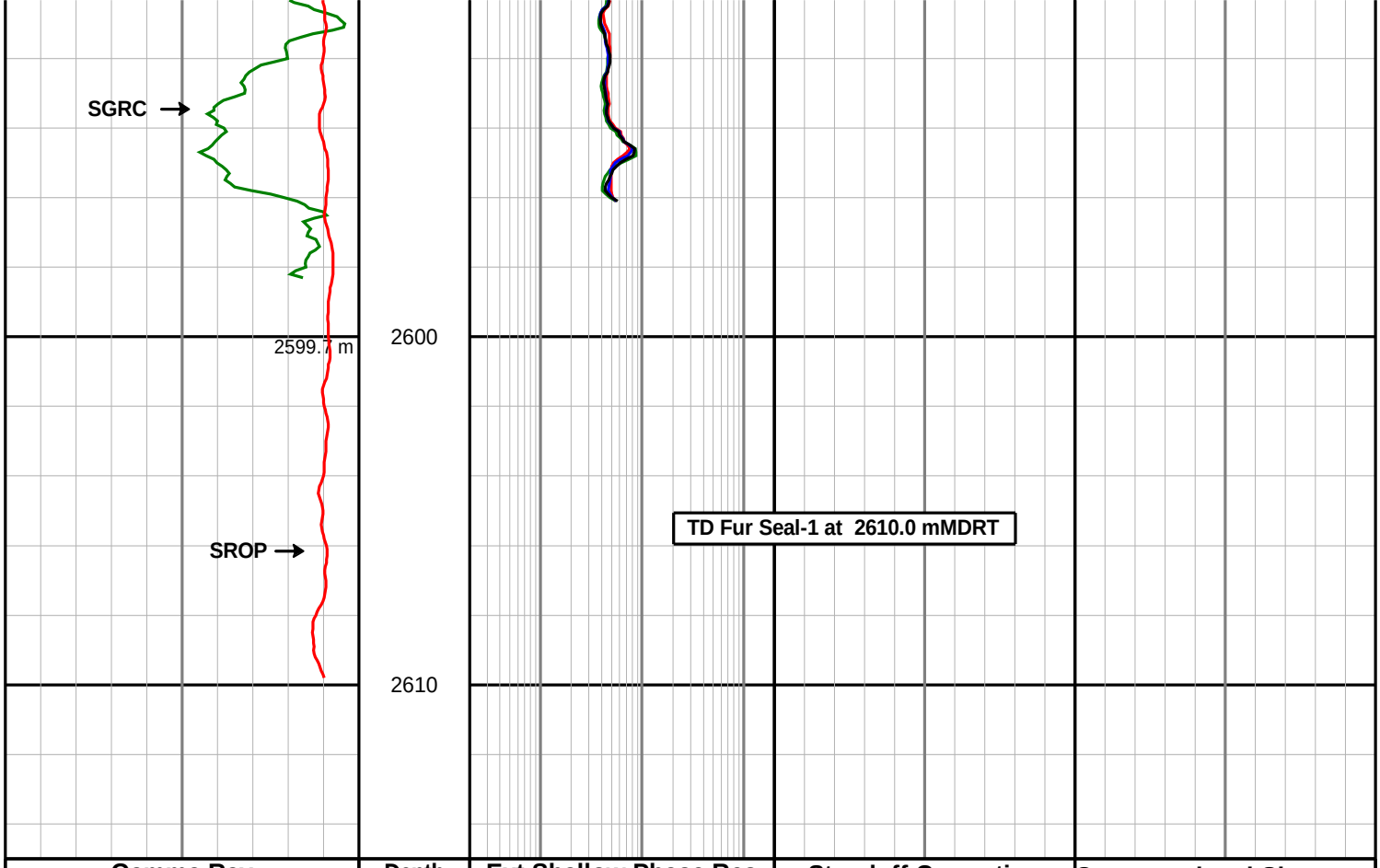

2299.8 m
2300
2310
2319.7 m
2320
2330
2339.8 m
2340
2350


2359.7 m
2360
2370
2379.8 m
2380
2390
2399.8 m
2400
2410


2419.7 m
2420
2430
2439.3 m
2440
2450
2459.8 m
2460
2470


2479.8 m
2480
2490
2499.3 m
2500
2510
2519.8 m
2520
2530


2539.8 m
2540
2550
2559.7 m
2560
2570
2579.7 m
2580
2590
SHSI
EWR-P4
NUCL
SC02
SBD2
BATC
SNP2



Gamma Ray (SGRC)	Depth	Ext Shallow Phase Res (SEXP)	Standoff Correction (SCO2)	Compressional Slowness (BATC)
0 api 150	MD	0.2 ohmm 200	-0.75 gram per cc 0.25	140 microsec per ft 40
	1:200			

Rate of Penetration (SROP)		Shallow Phase Res (SESP)	Neutron Porosity (NUCL)	Photoelectric Effect (SNP2)
500 m/hr 0		0.2 ohmm 200	0.45 v/v -0.15	0 barns/electron 10

SLD Rapid Caliper (SHSI)		Medium Phase Res (SEMP)	Density (SBD2)	
6 inches 26		0.2 ohmm 200	1.95 gram per cc 2.95	

TVD		Deep Phase Res (SEDP)		
metres		0.2 ohmm 200		

INSITE

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Apache Energy Ltd
Fur Seal-1
Exploration
Victoria
Australia
AU-FE-0003890148
Final Survey projected to TD. RT to AHD = 21.5m.

Measured Depth (metres)	*Inclination (degrees)*	*Direction (degrees)*	*Vertical Depth (metres)*	*Latitude (metres)*	*Departure (metres)*	*Vertical Section (metres)*	*Dogleg (deg/30m)*

Fur Seal-1

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
147.580	0.20	177.10	147.580	0.260 S	0.013 E	-0.260	0.04
202.770	0.44	176.34	202.769	0.569 S	0.032 E	-0.569	0.13
230.700	0.60	175.42	230.698	0.821 S	0.050 E	-0.821	0.17
259.170	0.44	182.26	259.166	1.079 S	0.058 E	-1.079	0.17
316.460	0.19	202.22	316.456	1.388 S	0.014 E	-1.388	0.14
431.050	0.42	169.27	431.044	1.977 S	0.022 E	-1.977	0.08
574.280	0.77	174.99	574.266	3.457 S	0.205 E	-3.457	0.07
631.930	0.59	187.00	631.912	4.138 S	0.203 E	-4.138	0.12
747.010	1.16	234.79	746.979	5.397 S	0.820 W	-5.397	0.23
804.240	1.36	261.58	804.196	5.830 S	1.963 W	-5.830	0.32
825.390	1.41	257.87	825.340	5.921 S	2.465 W	-5.921	0.15
854.170	1.08	262.66	854.113	6.030 S	3.081 W	-6.030	0.36
882.940	1.07	265.44	882.878	6.086 S	3.618 W	-6.086	0.05
911.810	1.19	271.36	911.742	6.100 S	4.189 W	-6.100	0.17
940.400	1.16	271.02	940.326	6.088 S	4.775 W	-6.088	0.04
969.000	1.14	275.16	968.921	6.057 S	5.347 W	-6.057	0.09
997.650	1.07	274.19	997.565	6.012 S	5.898 W	-6.012	0.09
1026.350	1.05	269.72	1026.260	5.994 S	6.426 W	-5.994	0.09
1054.970	0.93	273.03	1054.876	5.983 S	6.920 W	-5.983	0.14
1083.560	0.88	279.71	1083.463	5.934 S	7.368 W	-5.934	0.12
1112.050	0.86	280.50	1111.949	5.858 S	7.794 W	-5.858	0.02
1140.780	0.80	280.28	1140.676	5.782 S	8.205 W	-5.782	0.06
1169.420	0.69	281.95	1169.314	5.711 S	8.571 W	-5.711	0.12
1198.140	0.81	286.36	1198.031	5.618 S	8.934 W	-5.618	0.14
1255.860	1.01	305.38	1255.744	5.211 S	9.736 W	-5.211	0.19
1284.620	0.87	311.34	1284.500	4.921 S	10.105 W	-4.921	0.18
1313.270	0.86	333.94	1313.147	4.585 S	10.362 W	-4.585	0.35
1341.990	0.67	334.23	1341.865	4.241 S	10.529 W	-4.241	0.21
1370.650	0.68	330.15	1370.523	3.942 S	10.687 W	-3.942	0.05
1427.720	0.77	326.65	1427.588	3.328 S	11.066 W	-3.328	0.05
1456.160	0.82	328.79	1456.025	2.995 S	11.277 W	-2.995	0.07
1484.950	0.85	336.79	1484.812	2.622 S	11.468 W	-2.622	0.12
1513.890	0.88	324.92	1513.749	2.244 S	11.680 W	-2.244	0.19
1542.830	0.86	327.87	1542.686	1.878 S	11.923 W	-1.878	0.05
1571.590	0.87	324.35	1571.442	1.517 S	12.166 W	-1.517	0.06
1599.700	0.77	338.40	1599.549	1.166 S	12.360 W	-1.166	0.24
1657.300	0.97	353.39	1657.143	0.322 S	12.559 W	-0.322	0.15
1686.010	0.88	355.80	1685.849	0.138 N	12.603 W	0.138	0.10
1715.080	0.89	6.11	1714.916	0.585 N	12.596 W	0.585	0.16
1743.680	0.78	6.96	1743.513	1.000 N	12.548 W	1.000	0.12
1772.080	0.50	6.19	1771.911	1.316 N	12.511 W	1.316	0.29
1800.650	0.48	16.78	1800.480	1.554 N	12.464 W	1.554	0.10
1829.260	0.58	38.40	1829.089	1.782 N	12.339 W	1.782	0.23
1858.090	0.50	34.50	1857.917	2.000 N	12.178 W	2.000	0.09
1887.200	0.56	59.17	1887.026	2.177 N	11.984 W	2.177	0.24
1916.070	0.69	58.49	1915.894	2.340 N	11.715 W	2.340	0.14
1944.740	0.66	50.11	1944.562	2.536 N	11.442 W	2.536	0.11
1973.020	0.75	60.07	1972.840	2.732 N	11.157 W	2.732	0.16
2001.540	0.62	65.93	2001.358	2.888 N	10.854 W	2.888	0.15
2030.200	0.47	54.96	2030.017	3.020 N	10.615 W	3.020	0.19
2058.700	0.51	43.07	2058.516	3.179 N	10.433 W	3.179	0.11
2087.390	0.51	81.71	2087.205	3.290 N	10.221 W	3.290	0.35
2116.440	0.55	117.19	2116.254	3.244 N	9.970 W	3.244	0.34
2144.780	0.56	102.11	2144.592	3.153 N	9.713 W	3.153	0.16
2231.210	0.95	136.21	2231.015	2.547 N	8.802 W	2.547	0.20
2317.050	0.95	103.22	2316.844	1.871 N	7.619 W	1.871	0.19
2402.730	0.93	77.31	2402.513	1.861 N	6.254 W	1.861	0.15
2431.360	1.07	70.01	2431.139	2.003 N	5.778 W	2.003	0.20
2460.090	1.06	56.97	2459.864	2.239 N	5.303 W	2.239	0.25

HALLIBURTON

Fur Seal-1

Measured Depth (metres)	*Inclination (degrees)*	*Direction (degrees)*	*Vertical Depth (metres)*	*Latitude (metres)*	*Departure (metres)*	*Vertical Section (metres)*	*Dogleg (deg/30m)*
2488.890	1.28	60.60	2488.658	2.543 N	4.799 W	2.543	0.24
2517.630	1.41	56.39	2517.390	2.896 N	4.225 W	2.896	0.17
2610.000	1.41	56.39	2609.732	4.153 N	2.333 W	4.153	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.79 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

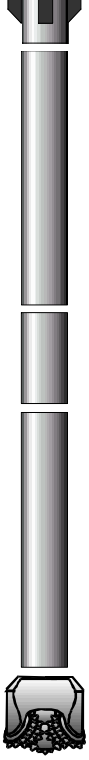
HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.000 METRES
IS 4.764 METRES ALONG 330.68 DEGREES (GRID)

MWD RUN 100 - BHA

	Component Length (m)	Cumulative Length (m)
		267.89
HWDP	138.100	
		129.79
Cross Over Sub	1.100	
		128.69
Drill Collar	17.470	
		111.22
Drilling Jars	9.050	
		102.17
Drill Collar	70.480	
		31.69
Integral Blade Stabilizer	2.150	

MWD RUN 100 - MWD

	Sensor Measure Point Distance To Bit (m)
Sonic	
Pulser	
Processor	
Directional	18.360
Processor	



MWD

19.610

29.54

Cross Over Sub

.970

9.93

9-5/8" SperryDrill Lobe 3/4 - 4M, DI

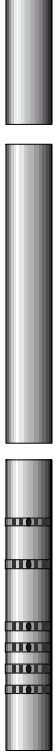
8.540

8.96

PDC

.420

0.42



Gamma Ray

14.980

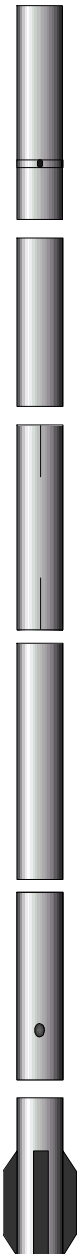
Resistivity

11.950

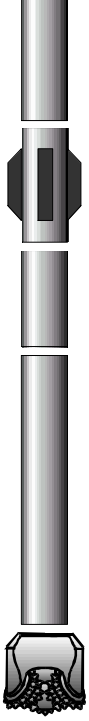
MWD RUN 200 - BHA

	Component Length (m)	Cumulative Length (m)
HWDP	110.550	259.78
Drill Collar	18.620	149.23
Drilling Jars	9.680	130.61
Drill Collar	83.680	120.93
MWD	26.920	37.25

MWD RUN 200 - MWD



	Sensor Measure Point Distance To Bit (m)
Pulser	
Processor	
Directional	32.730
Sonic	
Neutron	
Density	20.400



Integral Blade Stabilizer

1.530

10.33

Float Sub

.880

8.80

7.92

9-5/8" SperryDrill Lobe 3/4 - 4M, Dl

7.700

PDC

.220

0.22

Processor

Resistivity

13.720

Gamma Ray

11.510

Sperry Drilling Services

1 : 500

MWD

EWR Electromagnetic Wave Resistivity
DGR Dual Gamma Ray
SLD Stabilized Litho-Density
CNP Compensated Neutron Porosity
BAT Bi-Modal Acoustic

Country	: Australia
Field	: Exploration
Location	: Lat: 38° 7' 47.91" South Long: 148° 9' 8.44" East
Well	: Fur Seal-1
Company	: Apache Energy Ltd
Rig	: Ocean Patriot

LOCATION

Latitude : 38° 7' 47.91" South
Longitude : 148° 9' 8.44" East
UTM Easting = 600,995.50 m
UTM Northing = 5,779,136.70 m

Other Services

Company : Apache Energy Ltd
Rig : Ocean Patriot
Well : Fur Seal-1
Field : Exploration
Country : Australia
DOE Number :

Permanent Datum : AHD
Elevation : 0.00 m
Log Measured From : Drill Floor
21.50 m Above Permanent Datum
Drilling Measured From : Drill Floor

MD LOG

Elev. KB
DF 21.50 m
GL
WD 56.62 m

Job No. : AU-FE-0003890148

Depth Logged : 112.00 m To 2,610.00 m
Date Logged : 25-Oct-05 To 01-Nov-05
Total Depth MD : 2,610.00 m TVD: 2,609.73 m
Spud Date : 24-Oct-05

Unit No. : 182
Plot Type : Final
Plot Date : 17-May-06

Borehole Record (MD)

Run No.	Size	From	To
2	311.000 mm	111.70 m	824.00 m
3	216.000 mm	824.00 m	2,610.00 m

Casing Record (MD)

Run No.	Size	Weight	From	To
	762.000 mm	307.00 kg/m	80.10 m	111.00 m
	340.000 mm	101.20 kg/m	80.10 m	817.60 m

Borehole Record (MD)

Run No.	Size	From	To

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	26-Oct-05	01-Nov-05			
Rig Bit Number	2	3			
Bit Size (mm)	311	216			
Tool Nominal OD (mm)	203	171			
Log Start Depth (MD, m)	111.7	824.0			
Log End Depth (MD, m)	824.0	2,610			
Drill or Wipe	Drilling	Drilling			
Drill/Wipe Start Date and Time	25-Oct-05 04:40	28-Oct-05 05:10			
Drill/Wipe End Date and Time	25-Oct-05 23:59	01-Nov-05 01:45			
Min Inc (deg) @ Depth (MD, m)	0.19 @ 316.46	0.47 @ 2,030.20			
Max Inc (deg) @ Depth (MD, m)	1.36 @ 804.24	1.41 @ 2,517.63			
Bit TFA(in2) / Bit Type	1.74 / Security FS2563	1.11 / Smith S73VPX			
Flow Rate (gpm)	1,060	600			
Max AV (mpm) / CV (mpm) @ MWD	N/A / N/A	181.5 / 137.2			
Fluid Type	Seawater/PHG	KCl/PHPA			
Density (sg) / Viscosity (spqt)	1.06 / N/A	1.22 / 67.0			
Filtrate CL (ppm)	N/A	47,000			
pH / Fluid Loss (mptm)	N/A / N/A	8.9 / 4.8			
PV (cp) / YP (lhf2)	N/A / N/A	26 / 18.5			
% Solids / % Sand	N/A / N/A	14 / 0.6			
% Oil / Oil:Water Ratio	N/A / N/A	N/A / 0:91			
Rm @ Measured Temp (degC)	N/A @ N/A	0.11 @ 24.0			
Rmf @ Measured Temp (degC)	N/A @ N/A	0.09 @ 22.0			
Rmc @ Measured Temp (degC)	N/A @ N/A	0.25 @ 24.0			
Max Tool Temp (degC) / Source	25.0 / EWR-P4	78.0 / EWR-P4			
Rm @ Max Tool Temp (degC)	N/A @ 25.0	0.05 @ 78.0			
Lead MWD Engineer	A. Oraekwuotu	A.Oraekwuotu/A.Rule			
Customer Representative	J. Herriot	J. Herriot			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	68.18	68.18			
Sub Serial Number	198838	195232			
Insert Serial Number	074608	209729			
Logging String Serial Number	90086009H1GVR8	90086708H1RGV6			
Date and Time Initialized	25-Oct-05 03:08	28-Oct-05 12:54			
Date and Time Read	26-Oct-05 05:54:00	01-Nov-05 14:23:00			

Directional Sensor Information

Tool Type	PM	PM			
Distance From Bit (m)	18.36	32.73			
Software Version	N/A	N/A			
Sub Serial Number	124777	178482			
Sonde Serial Number	022873	126995			
Sensor ID Number	022873	126995			
Survey String Serial Number	90086411M8	90082559			
Toolface Offset (deg)	N/A	N/A			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (m)	14.98	11.51			
Recorded Sample Period (sec)	10	10			
Software Version	N/A	N/A			
Sub Serial Number	210651	64636			
Insert/Sonde Serial Number	184694	53520			

Resistivity Sensor Information

Tool Type	EWR-P4	EWR-P4			
Distance From Bit (m)	11.95	13.72			
Recorded Sample Period (sec)	12	12			
Software Version	1.38	1.38			
Sub Serial Number	122988	139216			
Receiver Insert Serial Number	123048	165129			
Transmitter Insert Serial Number	78411	110610			
Receiver Orientation	Down	Down			

Neutron Sensor Information

Tool Type		CNP			
Distance From Bit (m)		23.21			
Recorded Sample Period (sec)		10			
Sub Serial Number		186641			
Insert Serial Number		087644			
Source Serial Number		4070NK			
Source Factor		1.1400			
Pin Orientation		Up			

Density Sensor Information

Tool Type		SLD			
Distance From Bit (m)		20.40			
Recorded Sample Period (sec)		14			
Software Version		11.00			
Sub Serial Number		058245			
Insert Serial Number		071411			
Sensor ID Number		33			
Source Serial Number		2570			
Pin Orientation		Up			
Stabilizer Blade O.D. (mm)		209.55			
DPA Offset		N/A			

Sonic Sensor Information

Tool Type	BAT	BAT			

Distance From Bit (m)	26.13	28.03			
Recorded Sample Period (sec)	15	14			
Software Version	4.00	4.00			
Sub Serial Number	144401	1150515			
Receiver Insert Serial Number	136555	195076			
Transmitter Insert Serial Number	143996	191710			

REMARKS

1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.

2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.

3. Curve mnemonics are :
   - SROP - Smoothed Rate of Penetration, m/hr
   - SGRC - Smoothed Dual Gamma Ray Combined, api
   - SHSI - Smoothed Hole Size Indicator from Density Tool, in
   - SEXP - Smoothed Extra Shallow Phase Shift Derived Resistivity, ohmm
   - SESP - Smoothed Shallow Phase Shift Derived Resistivity, ohmm
   - SEMP - Smoothed Medium Phase Shift Derived Resistivity, ohmm
   - SEDP - Smoothed Deep Phase Shift Derived Resistivity, ohmm
   - SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc
   - SCO2 - Smoothed Best Bin Stand-off Correction, g/cc
   - SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e
   - NUCL - Smoothed CNP Neutron Porosity, v/v
   - BATC - Bi-Modal Acoustic Compressional Slowness, us/ft

4. CNP data was processed uging the CNP-E algorithim using the following parameters and is based on a Limestone matrix:
   - MW = 1.20 - 1.22 SG
   - Formation Salinity = 24,000 ppm Cl
   - Mud Salinity = 27,000 - 47,000 ppm Cl
   - Matrix Density = 2.71 g/cc
   - Fluid Density = 1.00 g/cc

5. CNP data has been reprocessed using borehole diameter from the density tool.

6. Data from intervals from 100.0 to 111.0 and 809.5 to 817.6 mMDRT were logged behind casing.

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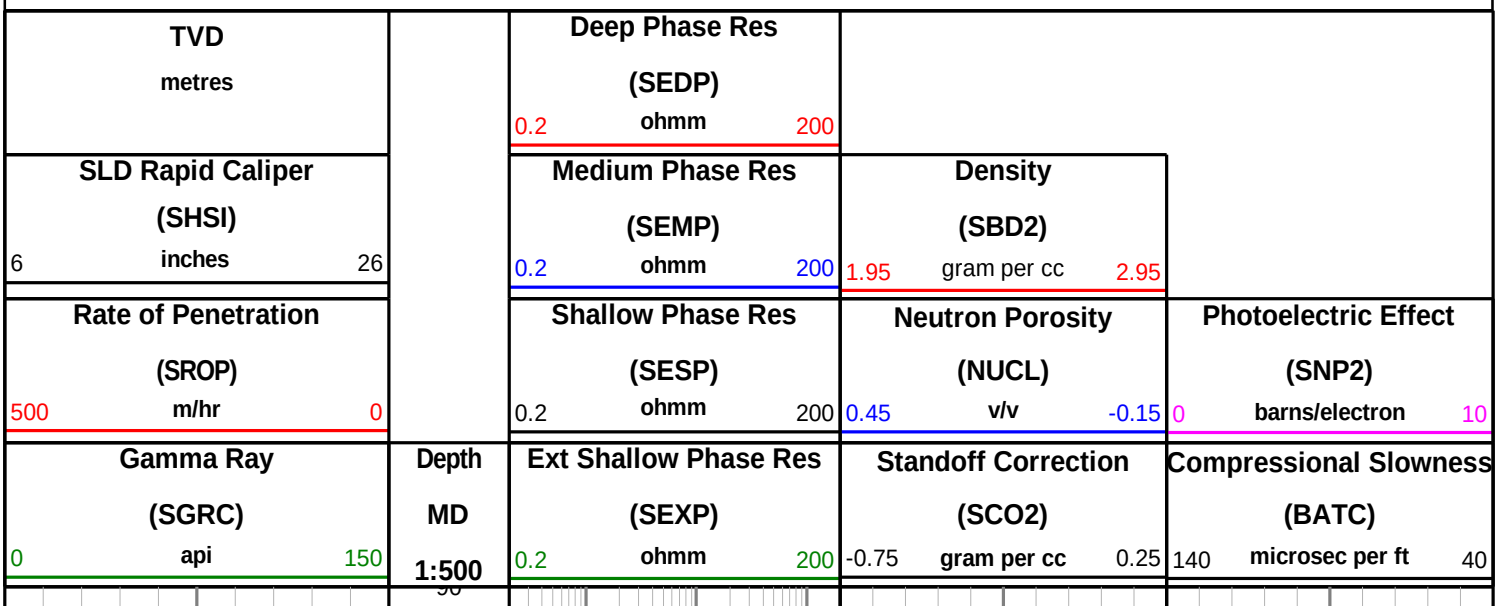
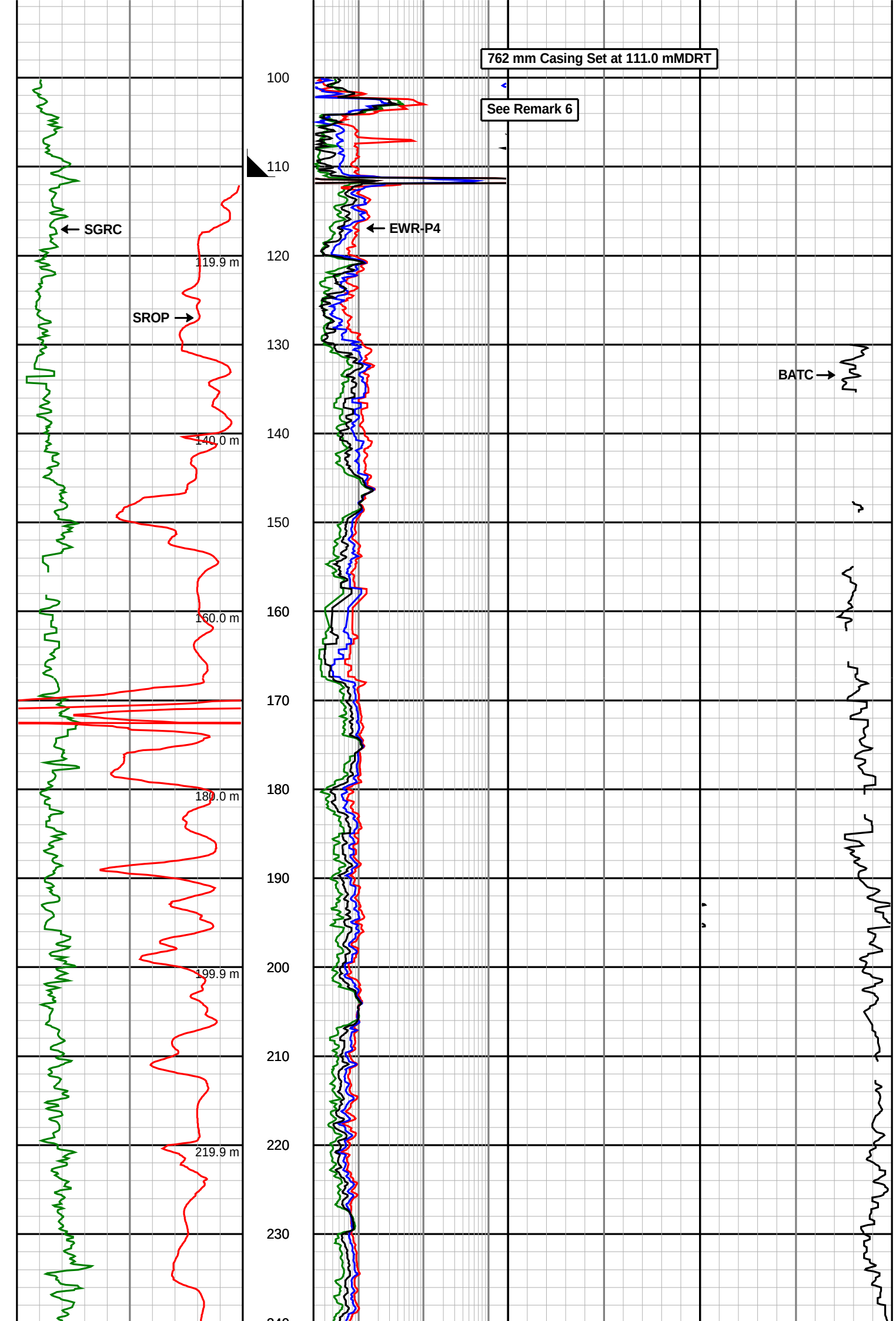
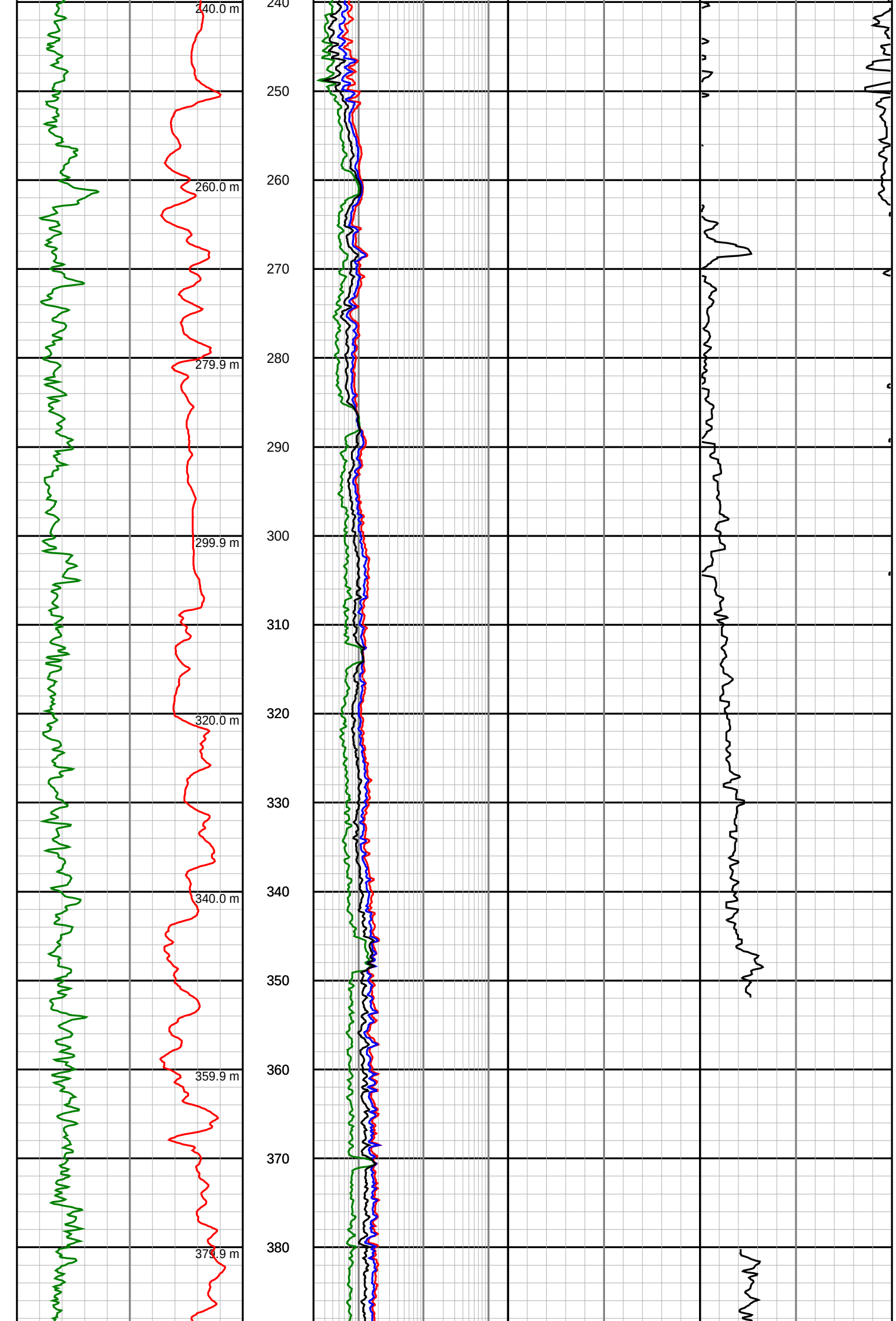



762 mm Casing Set at 111.0 mMDRT
See Remark 6
SGRC
SROP
EWR-P4
BATC
119.9 m
140.0 m
160.0 m
180.0 m
199.9 m
219.9 m
100
110
120
130
140
150
160
170
180
190
200
210
220
230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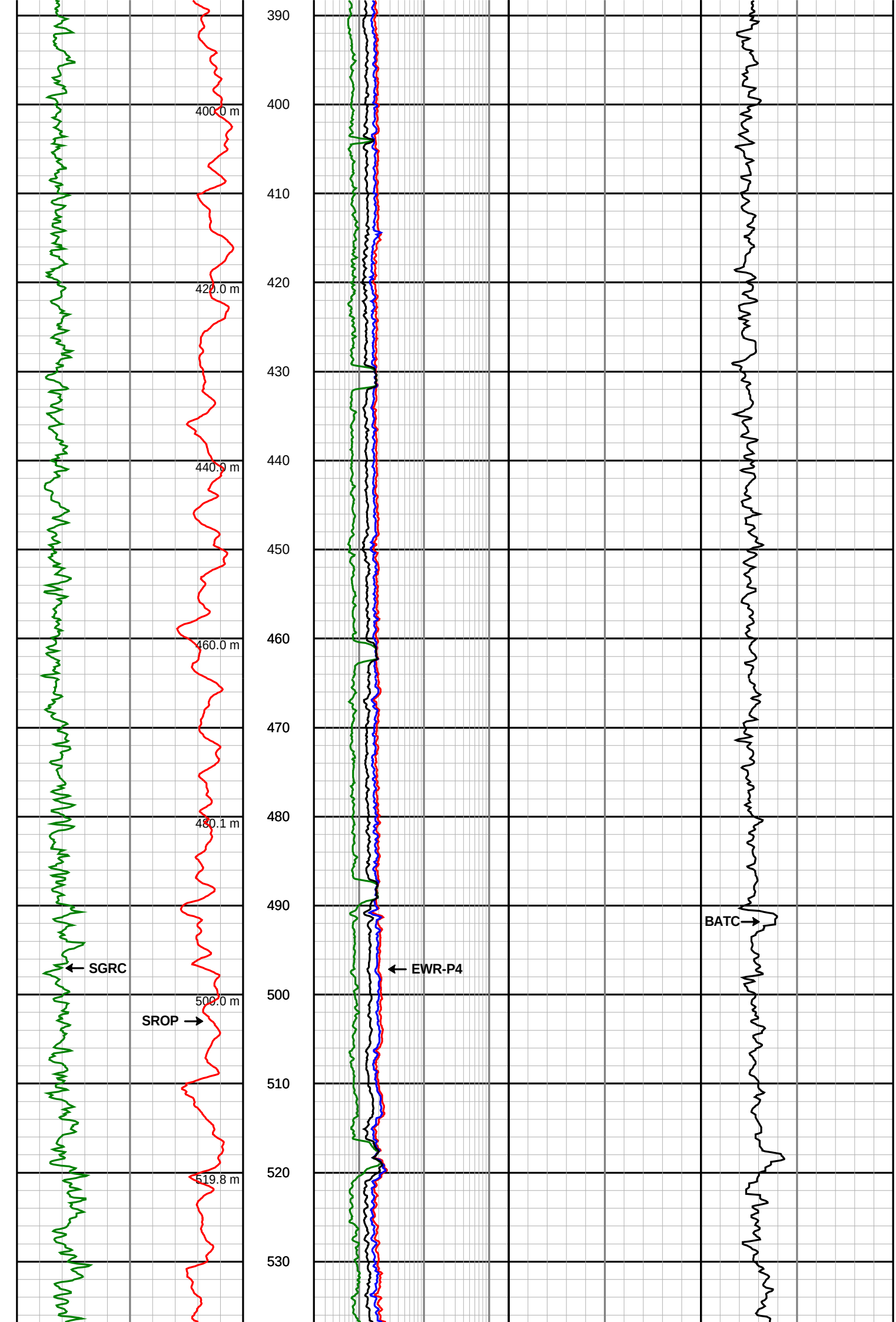
260.0 m
279.9 m
299.9 m
320.0 m
340.0 m
359.9 m
379.9 m
240
250
260
270
280
290
300
310
320
330
340
350
360
370
380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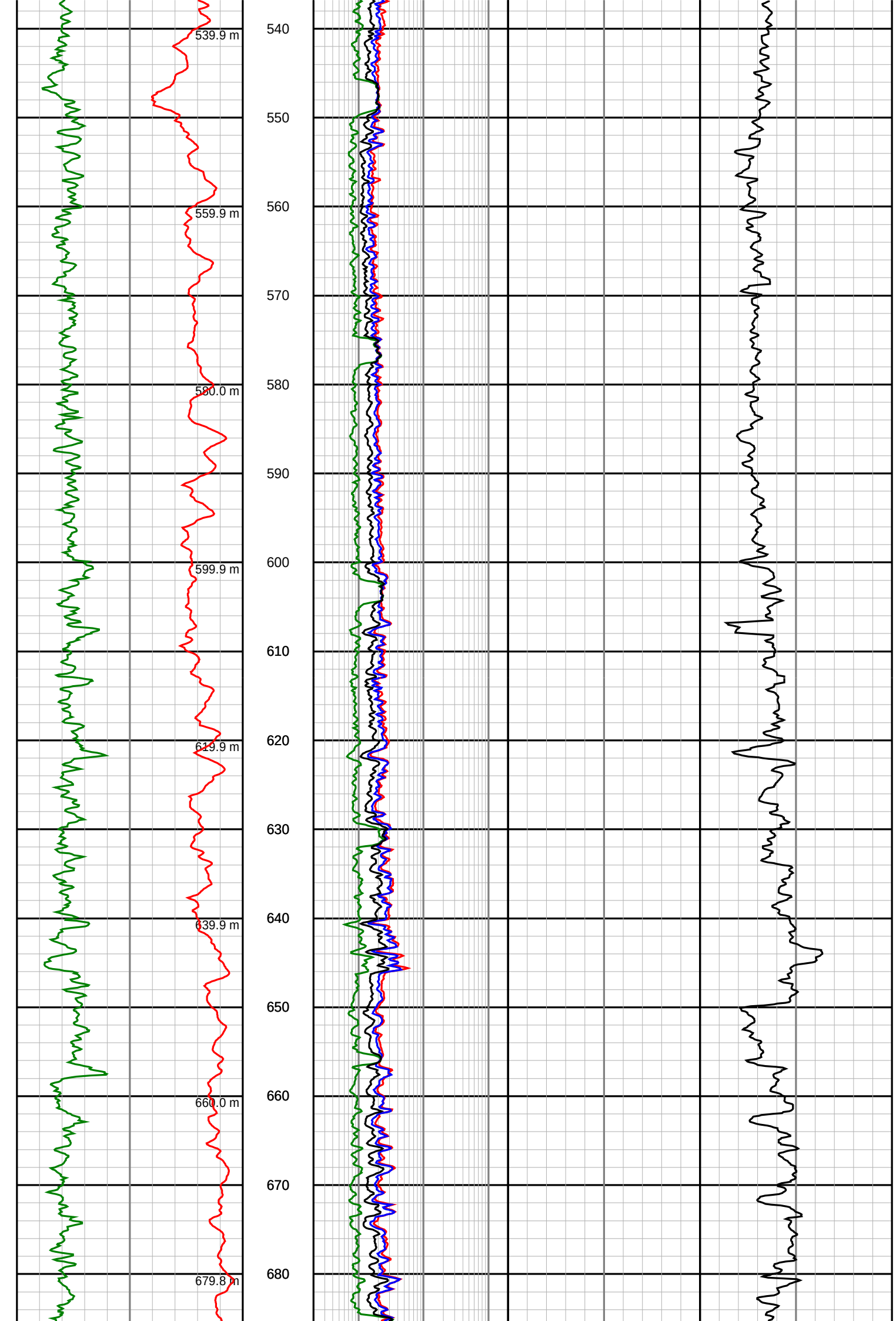
400
400.0 m
410
420
420.0 m
430
440
440.0 m
450
460
460.0 m
470
480
480.1 m
490
500
500.0 m
510
520
519.8 m
530
SGRC
SROP
EWR-P4
BATC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559.9 m
580.0 m
599.9 m
619.9 m
639.9 m
660.0 m
679.8 m
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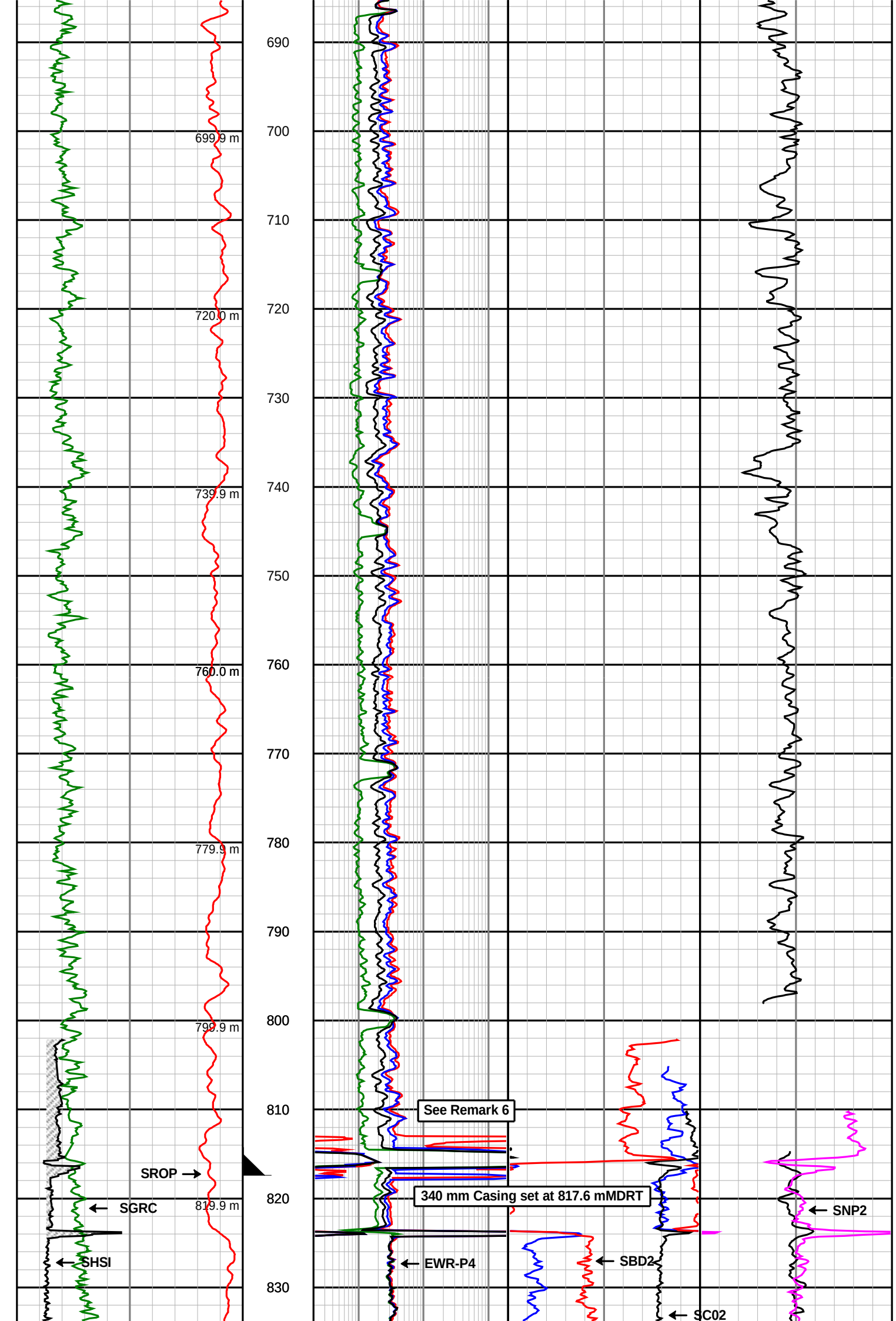
610
620
630
640
650
660
670
680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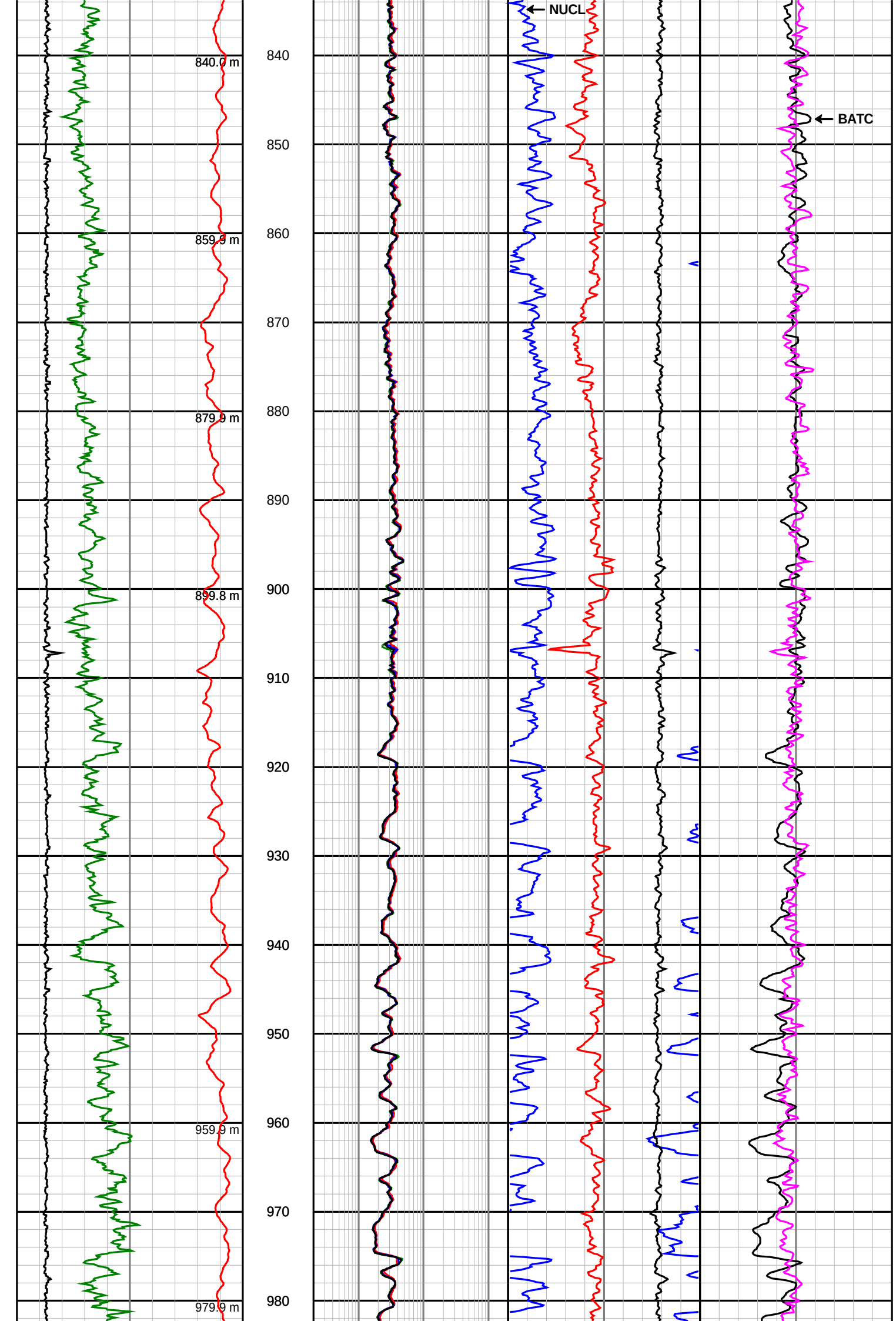
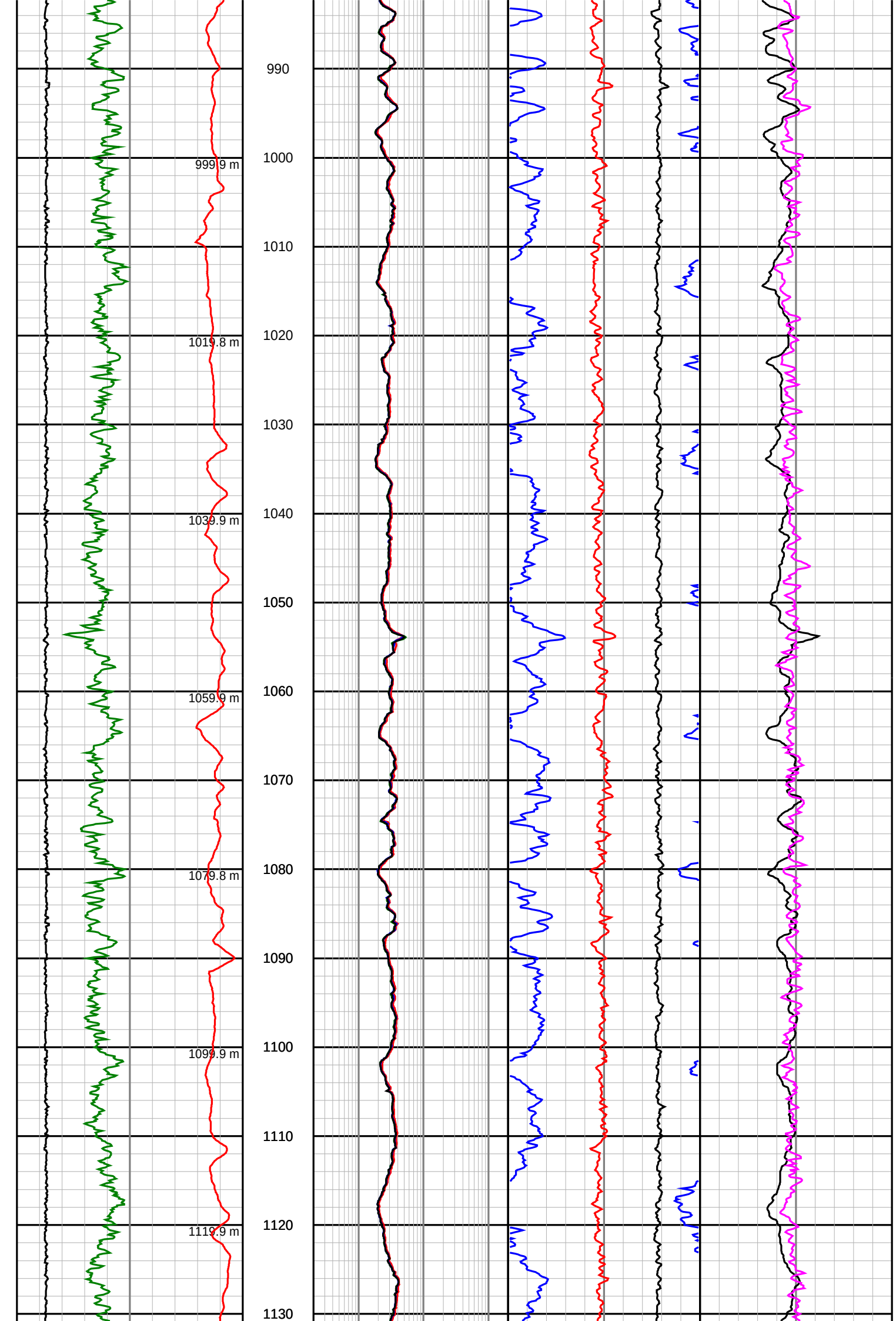
700
710
720
730
740
750
760
770
780
790
800
810
820
830
699.9 m
720.0 m
739.9 m
760.0 m
779.9 m
799.9 m
819.9 m
SROP
SGRC
SHSI
See Remark 6
340 mm Casing set at 817.6 mMDRT
EWR-P4
SBD2
SC02
SNP2


NUCL
BATC
840.0 m
859.9 m
879.9 m
899.8 m
959.9 m
979.9 m
840
850
860
870
880
890
900
910
920
930
940
950
960
970
980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1000
999.9 m
1010
1019.8 m
1020
1030
1039.9 m
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1050
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1070
1079.8 m
1080
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1099.9 m
1100
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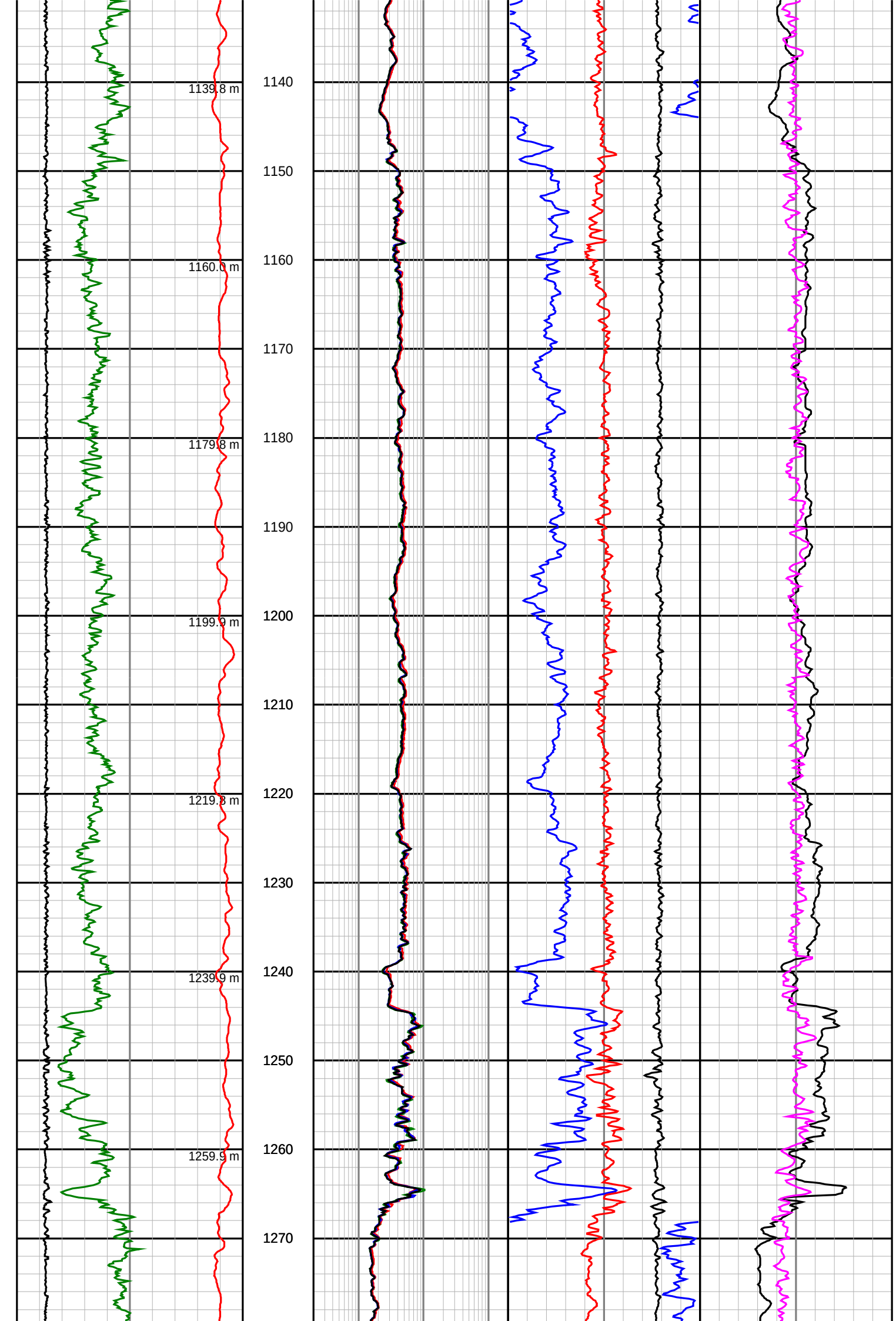
1119.9 m
1120
1130


1139.8 m
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1179.8 m
1199.9 m
1219.8 m
1239.9 m
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1160
1170
1180
1190
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1220
1230
1240
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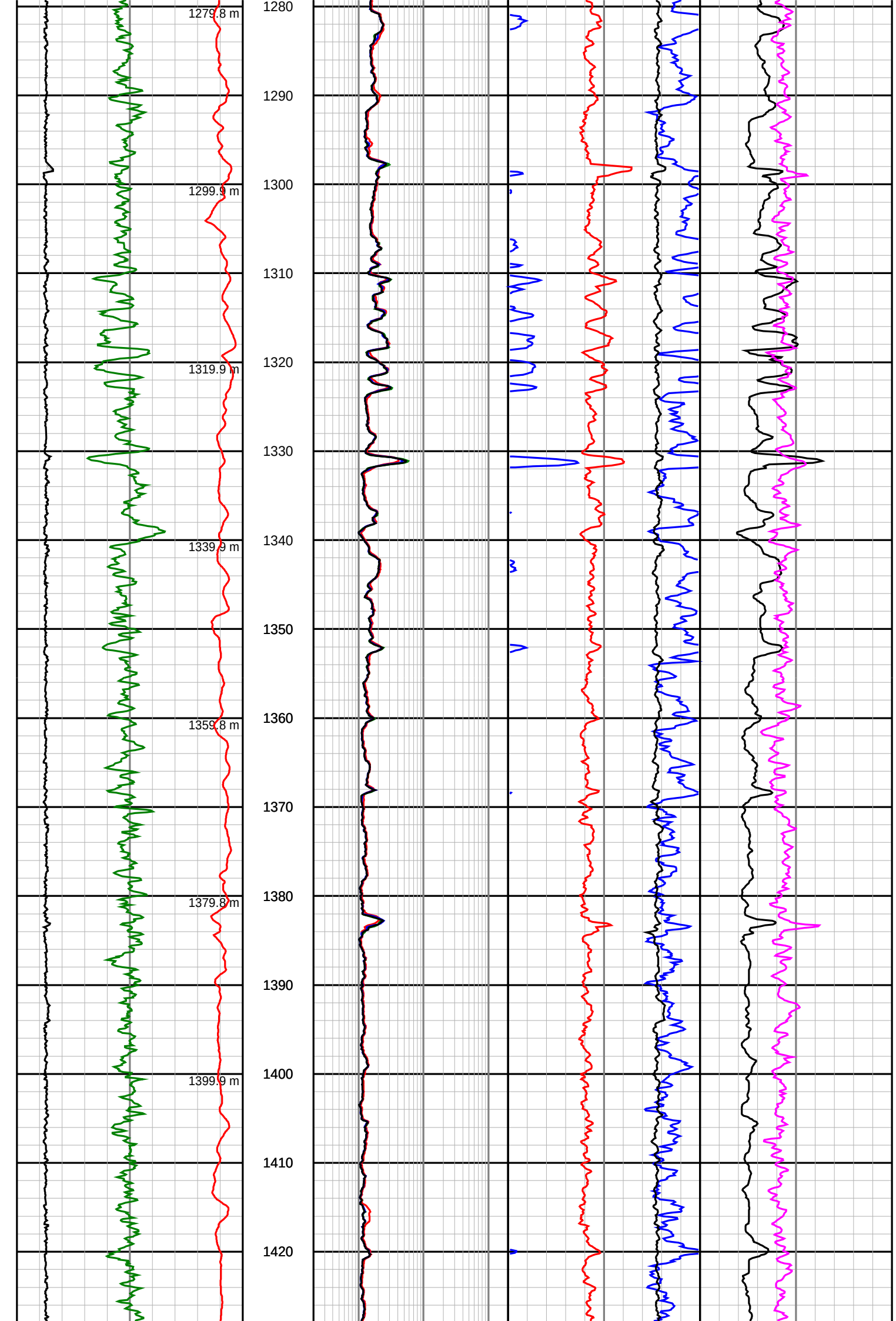
1260
1270


1279.8 m
1299.9 m
1319.9 m
1339.9 m
1359.8 m
1379.8 m
1399.9 m
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1290
1300
1310
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1370
1380
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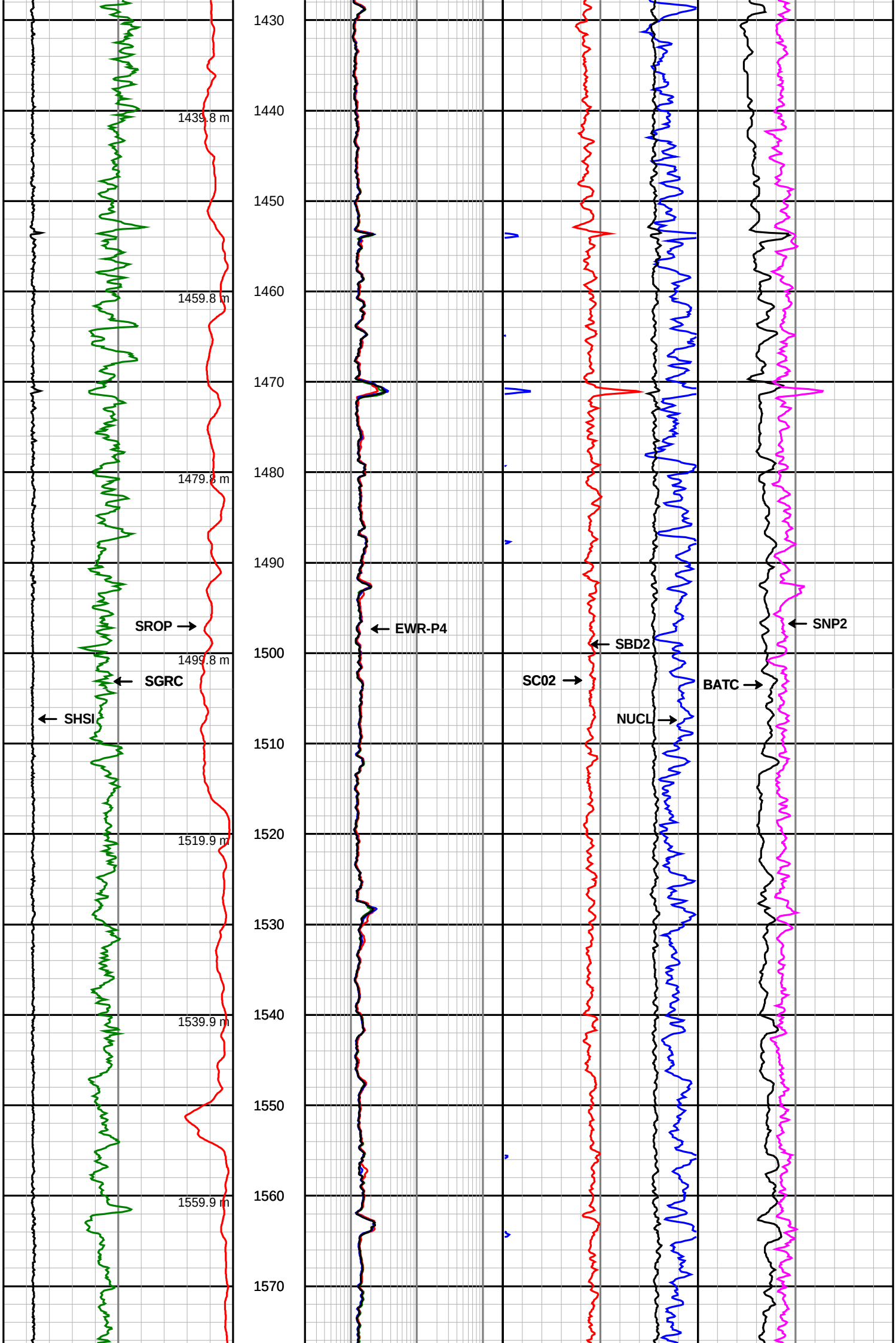
1400
1410
1420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1440
1439.8 m
1450
1460
1459.8 m
1470
1480
1479.8 m
1490
1500
1499.8 m
1510
1520
1519.9 m
1530
1540
1539.9 m
1550
1560
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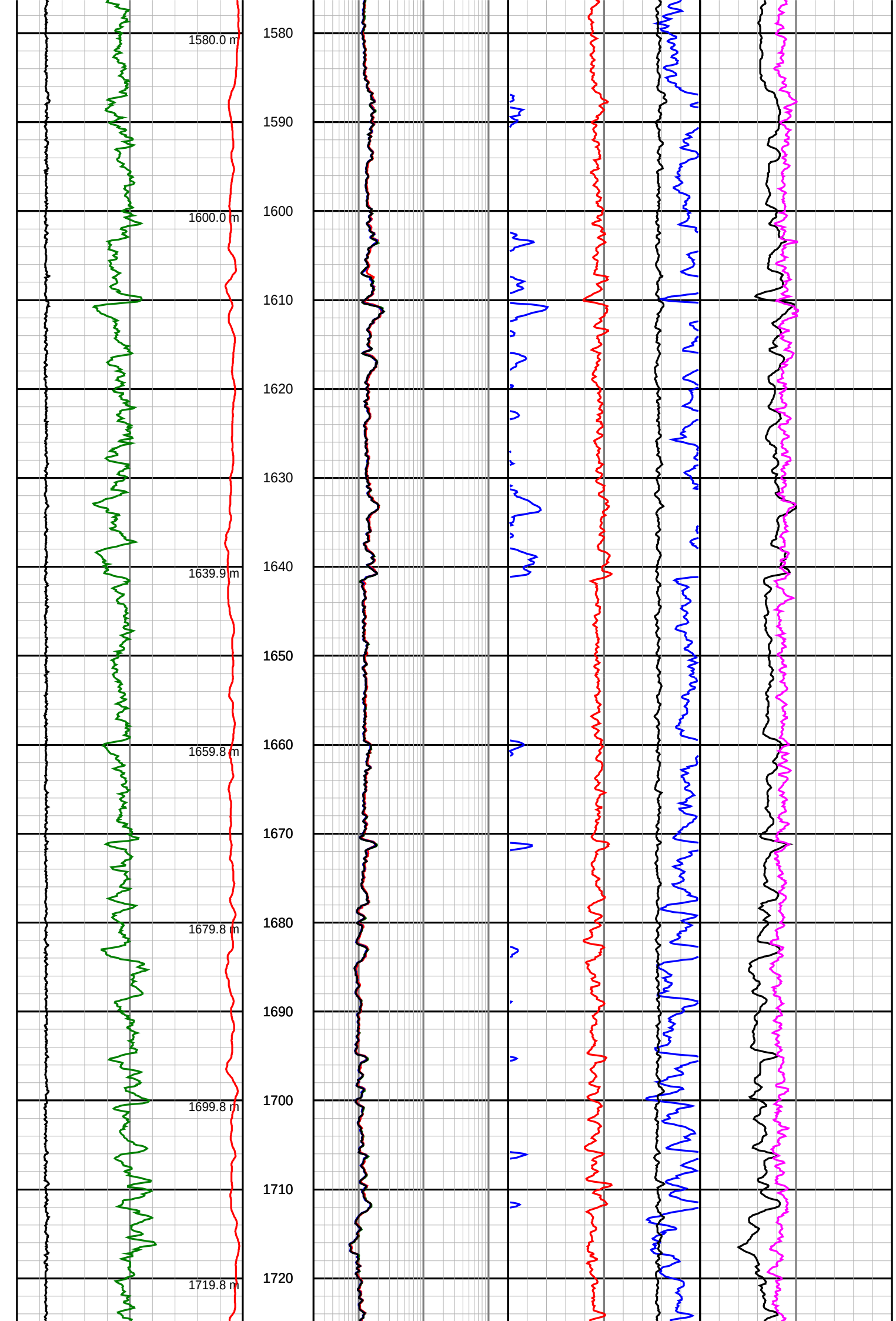
1570
SROP
SGRC
SHSI
EWR-P4
SBD2
SC02
NUCL
BATC
SNP2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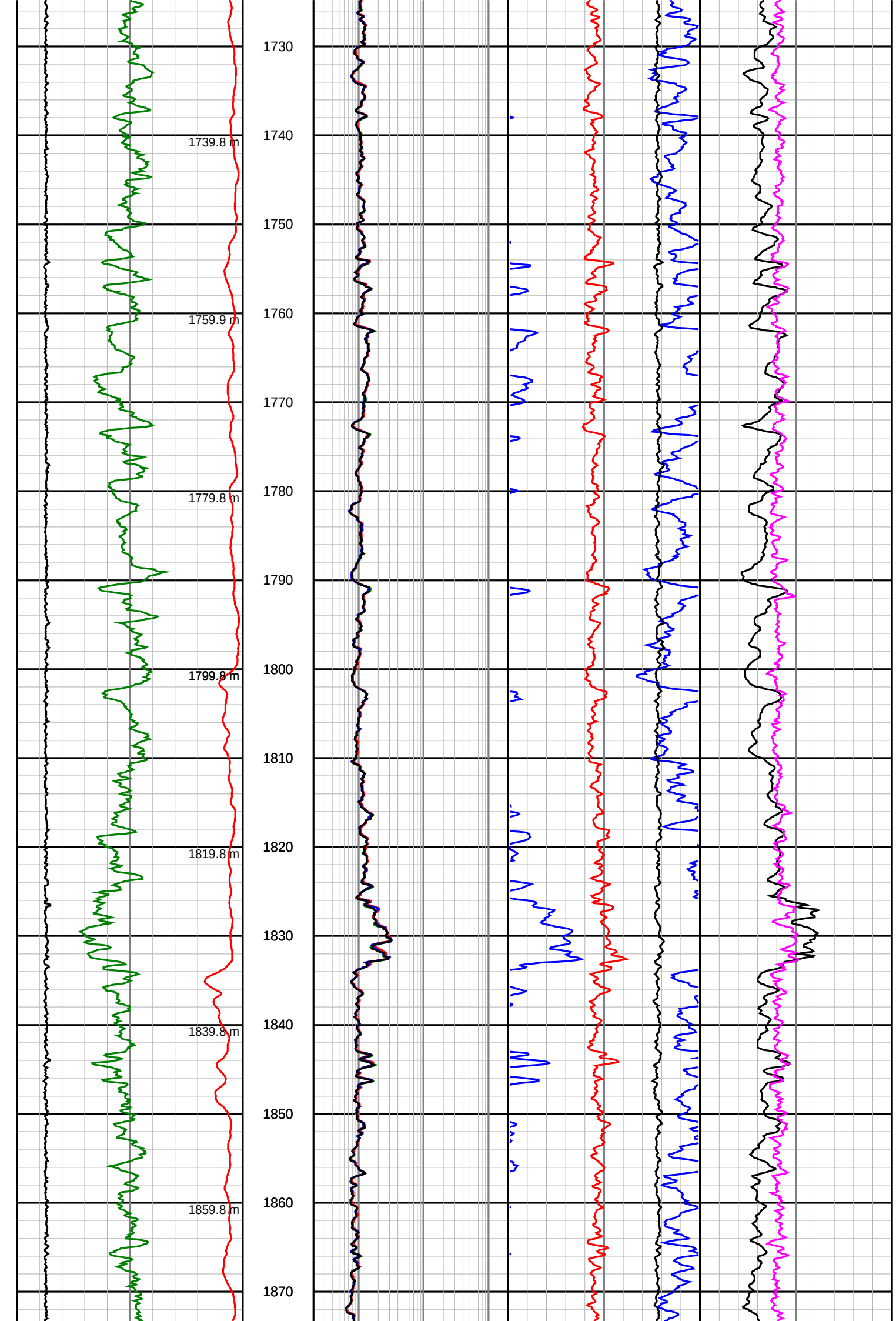
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1859.8 m
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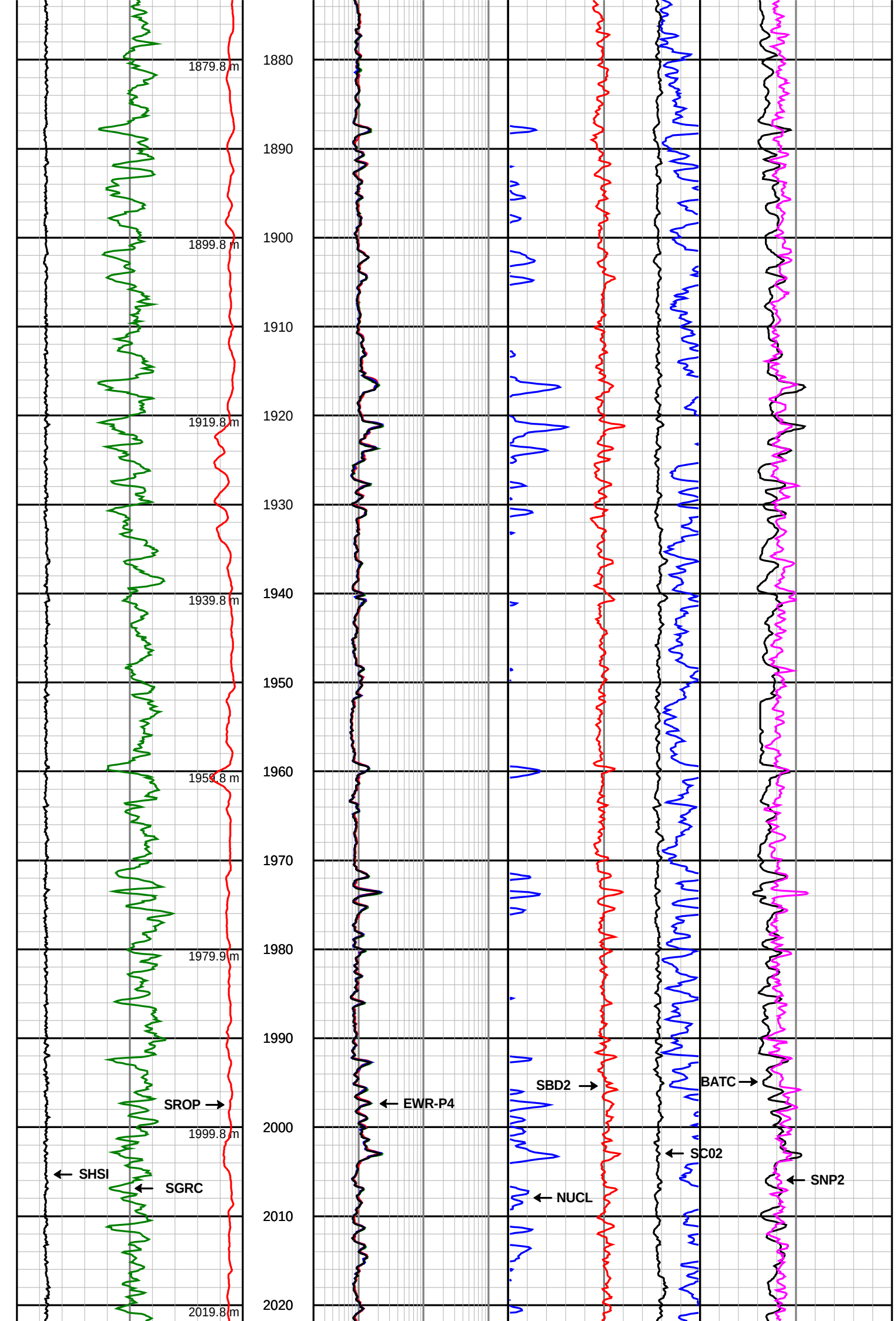
1870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1899.8 m
1919.8 m
1939.8 m
1959.8 m
1979.9 m
1999.8 m
2019.8 m
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1900
1910
1920
1930
1940
1950
1960
1970
1980
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2010
2020
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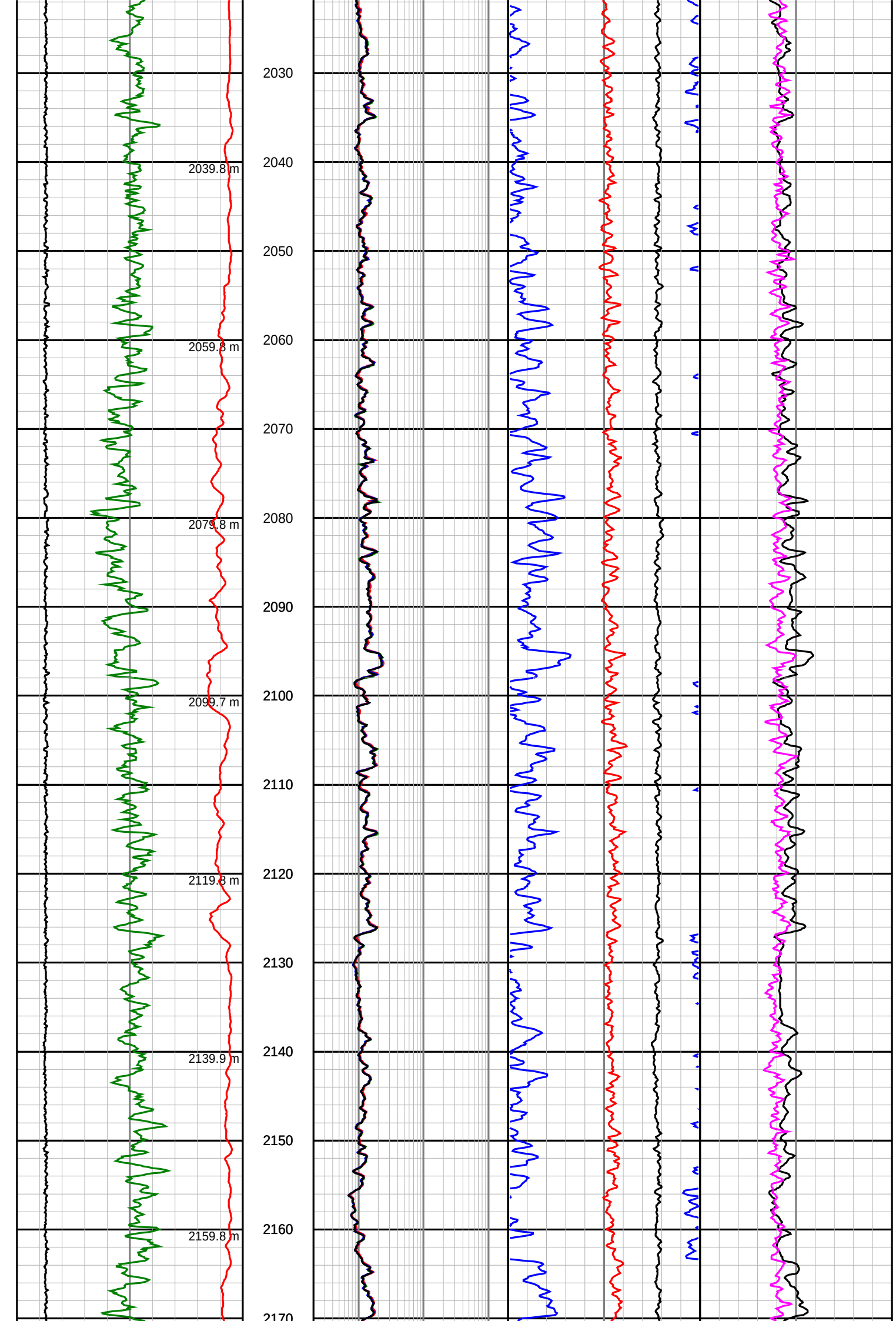
SBD2
NUCL
SC02
BATC
SNP2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2039.8 m
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2090
2099.7 m
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2110
2119.8 m
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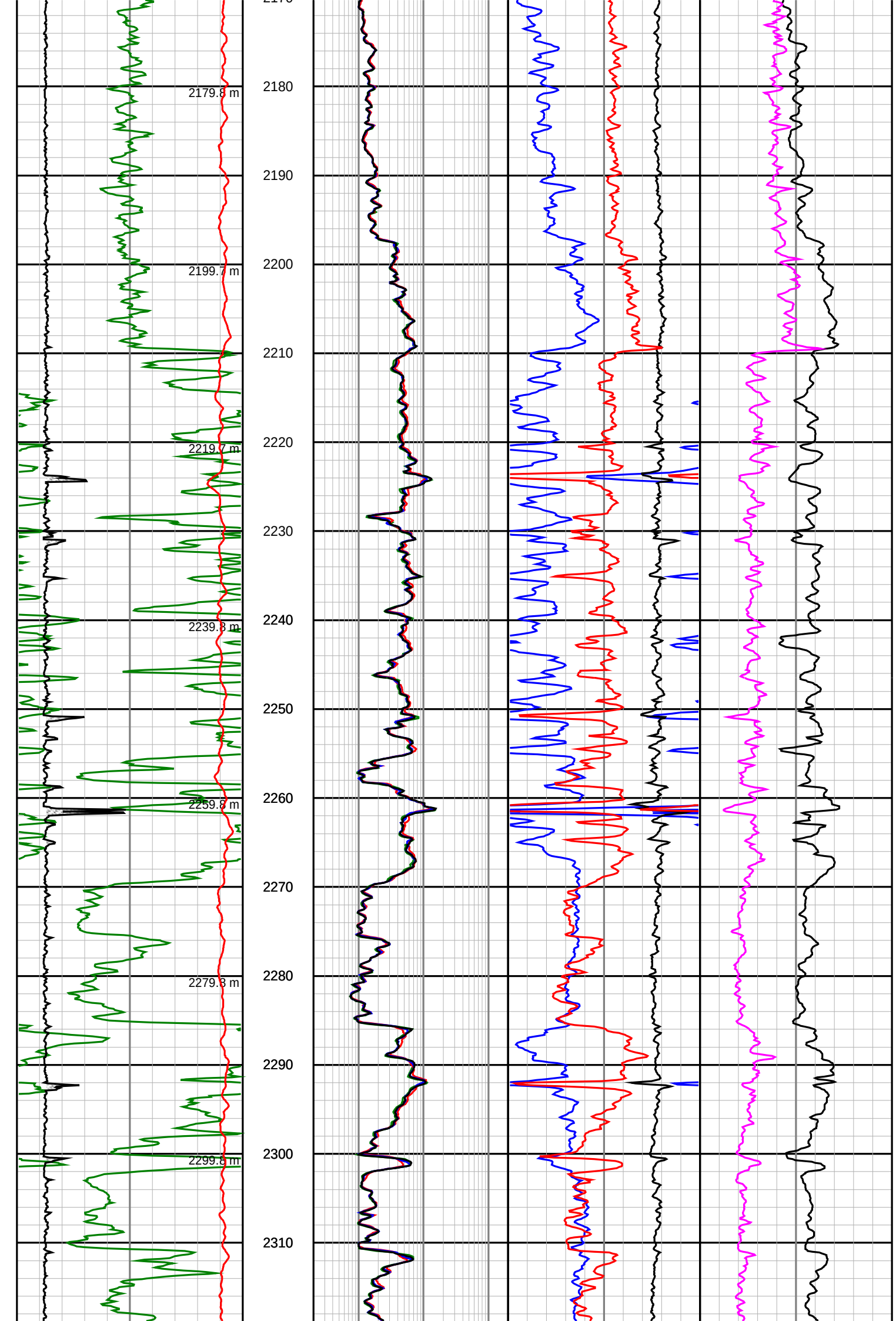
2150
2159.8 m
2160
2170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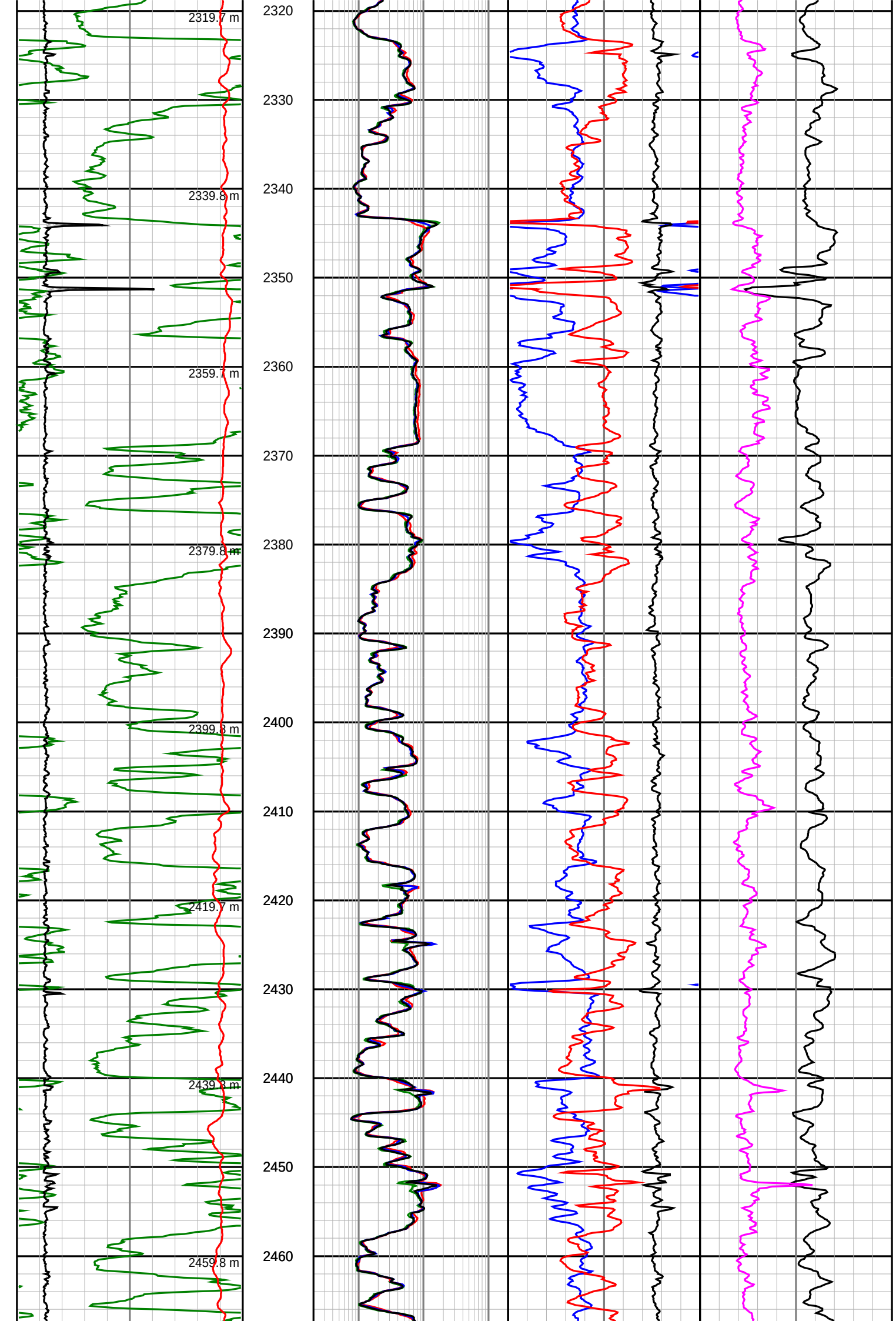
2310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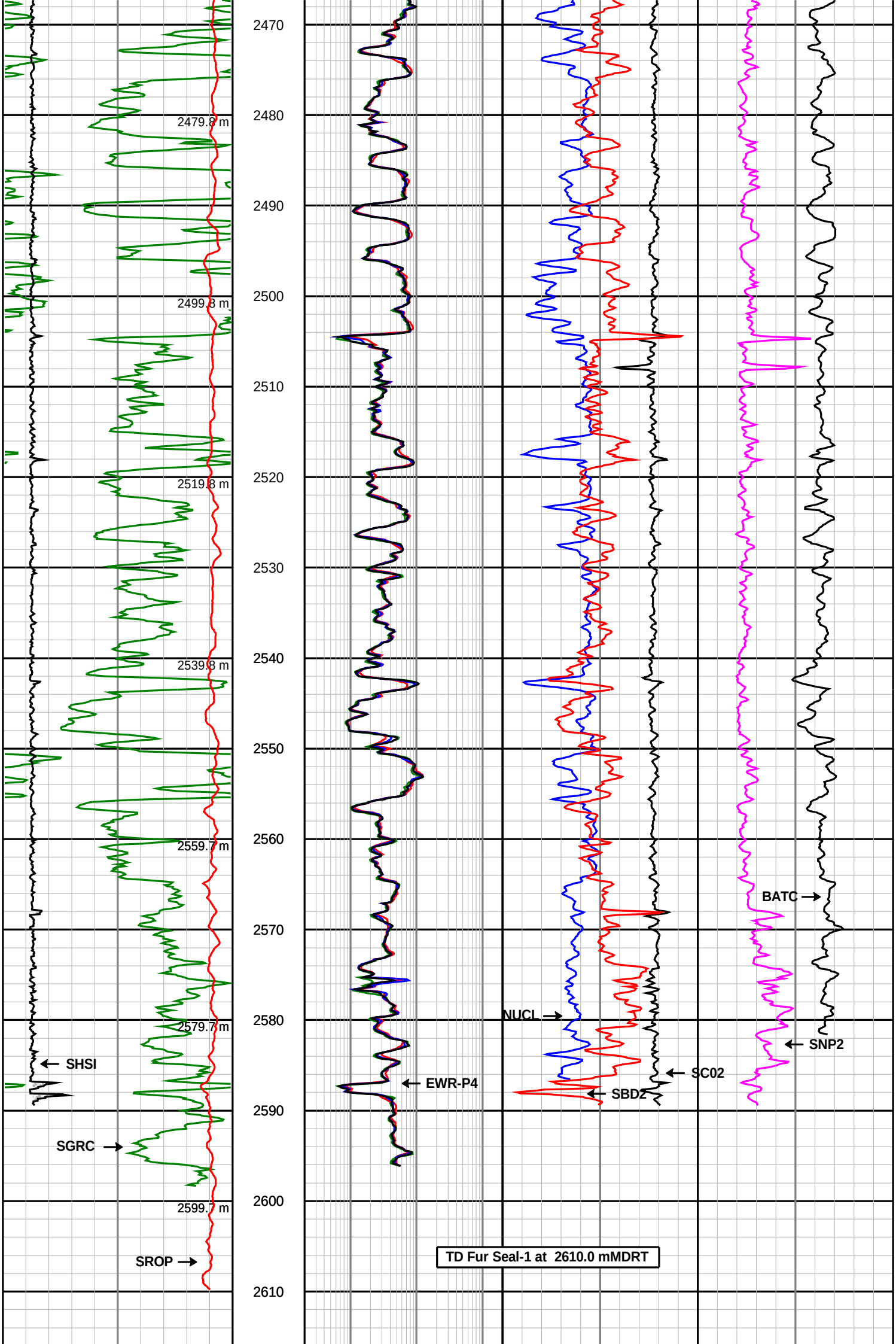
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2580
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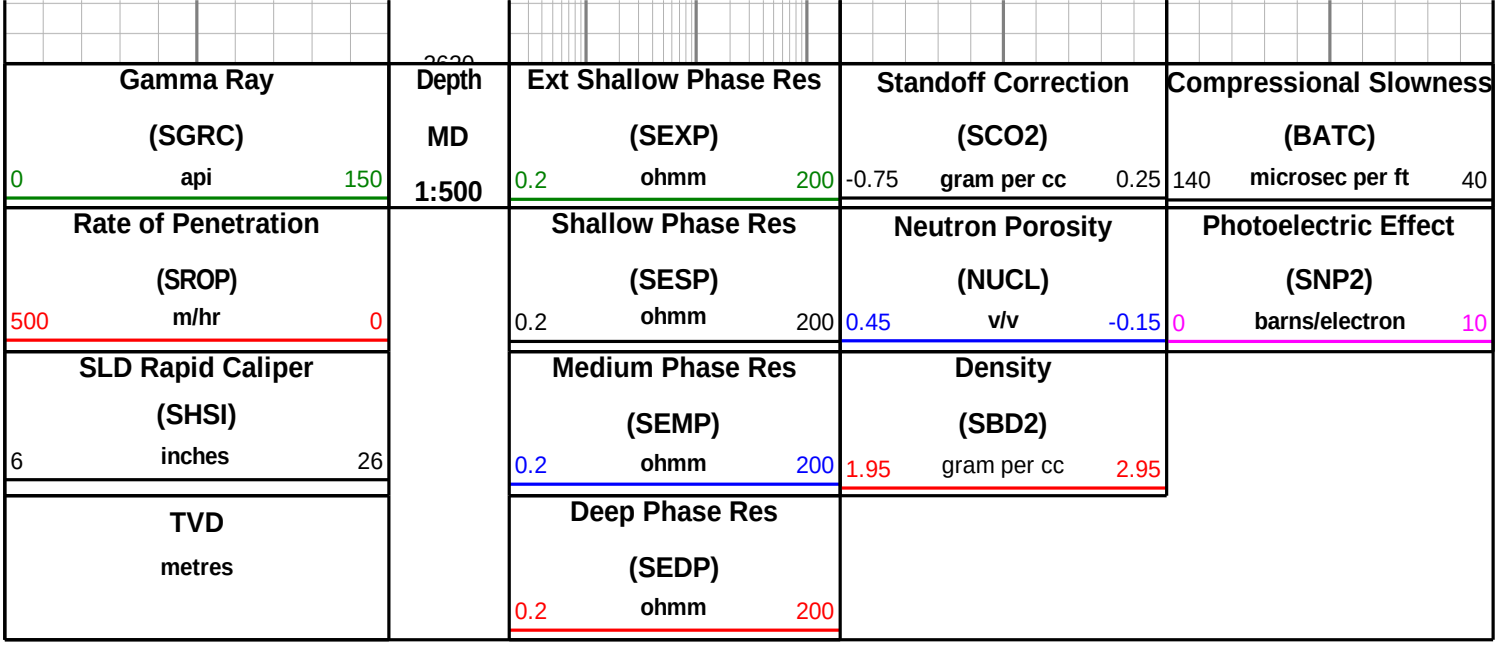
2499.8 m
2519.8 m
2539.8 m
2559.7 m
2579.7 m
2599.7 m
SHSI
SGRC
SROP
EWR-P4
NUCL
SBDZ
SC02
BATC
SNP2
TD Fur Seal-1 at 2610.0 mMDRT



INSITE

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Apache Energy Ltd
Fur Seal-1
Exploration
Victoria
Australia
AU-FE-0003890148
Final Survey projected to TD. RT to AHD = 21.5m.

Measured Depth (metres)	*Inclination (degrees)*	*Direction (degrees)*	*Vertical Depth (metres)*	*Latitude (metres)*	*Departure (metres)*	*Vertical Section (metres)*	*Dogleg (deg/30m)*
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
147.580	0.20	177.10	147.580	0.260 S	0.013 E	-0.260	0.04
202.770	0.44	176.34	202.769	0.569 S	0.032 E	-0.569	0.13
230.700	0.60	175.42	230.698	0.821 S	0.050 E	-0.821	0.17
259.170	0.44	182.26	259.166	1.079 S	0.058 E	-1.079	0.17
316.460	0.19	202.22	316.456	1.388 S	0.014 E	-1.388	0.14
431.050	0.42	169.27	431.044	1.977 S	0.022 E	-1.977	0.08
574.280	0.77	174.99	574.266	3.457 S	0.205 E	-3.457	0.07
631.930	0.59	187.00	631.912	4.138 S	0.203 E	-4.138	0.12
747.010	1.16	234.79	746.979	5.397 S	0.820 W	-5.397	0.23
804.240	1.36	261.58	804.196	5.830 S	1.963 W	-5.830	0.32
825.390	1.41	257.87	825.340	5.921 S	2.465 W	-5.921	0.15
854.170	1.08	262.66	854.113	6.030 S	3.081 W	-6.030	0.36
882.940	1.07	265.44	882.878	6.086 S	3.618 W	-6.086	0.05
911.810	1.19	271.36	911.742	6.100 S	4.189 W	-6.100	0.17
940.400	1.16	271.02	940.326	6.088 S	4.775 W	-6.088	0.04
969.000	1.14	275.16	968.921	6.057 S	5.347 W	-6.057	0.09
997.650	1.07	274.19	997.565	6.012 S	5.898 W	-6.012	0.09
1026.350	1.05	269.72	1026.260	5.994 S	6.426 W	-5.994	0.09
1054.970	0.93	273.03	1054.876	5.983 S	6.920 W	-5.983	0.14
1083.560	0.88	279.71	1083.463	5.934 S	7.368 W	-5.934	0.12
1112.050	0.86	280.50	1111.949	5.858 S	7.794 W	-5.858	0.02
1140.780	0.80	280.28	1140.676	5.782 S	8.205 W	-5.782	0.06
1169.420	0.69	281.95	1169.314	5.711 S	8.571 W	-5.711	0.12
1198.140	0.81	286.36	1198.031	5.618 S	8.934 W	-5.618	0.14
1255.860	1.01	305.38	1255.744	5.211 S	9.736 W	-5.211	0.19
1284.620	0.87	311.34	1284.500	4.921 S	10.105 W	-4.921	0.18
1313.270	0.86	333.94	1313.147	4.585 S	10.362 W	-4.585	0.35
1341.990	0.67	334.23	1341.865	4.241 S	10.529 W	-4.241	0.21
1370.650	0.68	330.15	1370.523	3.942 S	10.687 W	-3.942	0.05

HALLIBURTON

Fur Seal-1

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
1427.720	0.77	326.65	1427.588	3.328 S	11.066 W	-3.328	0.05
1456.160	0.82	328.79	1456.025	2.995 S	11.277 W	-2.995	0.07
1484.950	0.85	336.79	1484.812	2.622 S	11.468 W	-2.622	0.12
1513.890	0.88	324.92	1513.749	2.244 S	11.680 W	-2.244	0.19
1542.830	0.86	327.87	1542.686	1.878 S	11.923 W	-1.878	0.05
1571.590	0.87	324.35	1571.442	1.517 S	12.166 W	-1.517	0.06
1599.700	0.77	338.40	1599.549	1.166 S	12.360 W	-1.166	0.24
1657.300	0.97	353.39	1657.143	0.322 S	12.559 W	-0.322	0.15
1686.010	0.88	355.80	1685.849	0.138 N	12.603 W	0.138	0.10
1715.080	0.89	6.11	1714.916	0.585 N	12.596 W	0.585	0.16
1743.680	0.78	6.96	1743.513	1.000 N	12.548 W	1.000	0.12
1772.080	0.50	6.19	1771.911	1.316 N	12.511 W	1.316	0.29
1800.650	0.48	16.78	1800.480	1.554 N	12.464 W	1.554	0.10
1829.260	0.58	38.40	1829.089	1.782 N	12.339 W	1.782	0.23
1858.090	0.50	34.50	1857.917	2.000 N	12.178 W	2.000	0.09
1887.200	0.56	59.17	1887.026	2.177 N	11.984 W	2.177	0.24
1916.070	0.69	58.49	1915.894	2.340 N	11.715 W	2.340	0.14
1944.740	0.66	50.11	1944.562	2.536 N	11.442 W	2.536	0.11
1973.020	0.75	60.07	1972.840	2.732 N	11.157 W	2.732	0.16
2001.540	0.62	65.93	2001.358	2.888 N	10.854 W	2.888	0.15
2030.200	0.47	54.96	2030.017	3.020 N	10.615 W	3.020	0.19
2058.700	0.51	43.07	2058.516	3.179 N	10.433 W	3.179	0.11
2087.390	0.51	81.71	2087.205	3.290 N	10.221 W	3.290	0.35
2116.440	0.55	117.19	2116.254	3.244 N	9.970 W	3.244	0.34
2144.780	0.56	102.11	2144.592	3.153 N	9.713 W	3.153	0.16
2231.210	0.95	136.21	2231.015	2.547 N	8.802 W	2.547	0.20
2317.050	0.95	103.22	2316.844	1.871 N	7.619 W	1.871	0.19
2402.730	0.93	77.31	2402.513	1.861 N	6.254 W	1.861	0.15
2431.360	1.07	70.01	2431.139	2.003 N	5.778 W	2.003	0.20
2460.090	1.06	56.97	2459.864	2.239 N	5.303 W	2.239	0.25
2488.890	1.28	60.60	2488.658	2.543 N	4.799 W	2.543	0.24
2517.630	1.41	56.39	2517.390	2.896 N	4.225 W	2.896	0.17
2610.000	1.41	56.39	2609.732	4.153 N	2.333 W	4.153	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.79 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

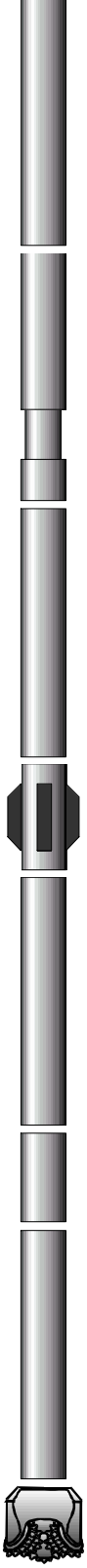
HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.000 METRES
IS 4.764 METRES ALONG 330.68 DEGREES (GRID)

MWD RUN 100 - BHA

	Component Length (m)	Cumulative Length (m)
		267.89
HWDP	138.100	
		129.79
Cross Over Sub	1.100	

MWD RUN 100 - MWD

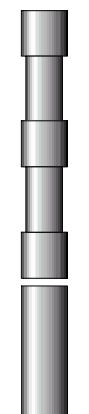
	Sensor Measure Point Distance To Bit (m)
Sonic	



	Component Length (m)	Cumulative Length (m)
Drill Collar	17.470	128.69
Drilling Jars	9.050	111.22
Drill Collar	70.480	102.17
Integral Blade Stabilizer	2.150	31.69
MWD	19.610	29.54
Cross Over Sub	.970	9.93
9-5/8" SperryDrill Lobe 3/4 - 4M, DI	8.540	8.96
PDC	.420	0.42

	Sensor Measure Point Distance To Bit (m)
Pulser	
Processor	
Directional	18.360
Processor	
Gamma Ray	14.980
Resistivity	11.950

MWD RUN 200 - BHA



	Component Length (m)	Cumulative Length (m)
HWDP	110.550	259.78
Drill Collar		149.23

MWD RUN 200 - MWD

	Sensor Measure Point Distance To Bit (m)
Pulser	
Processor	

18.620

130.61

Drilling Jars

9.680

120.93

Drill Collar

83.680

37.25

MWD

26.920

10.33

Integral Blade Stabilizer

1.530

8.80

Float Sub

.880

7.92

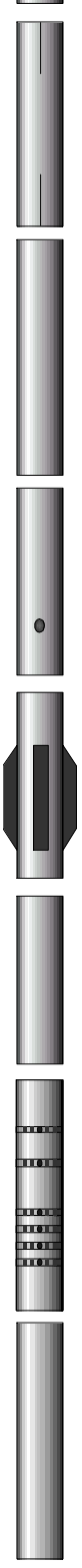
9-5/8" SperryDrill Lobe 3/4 - 4M$_3$DI

7.700

0.22

PDC

.220



Directional

32.730

Sonic

Neutron

Density

20.400

Processor

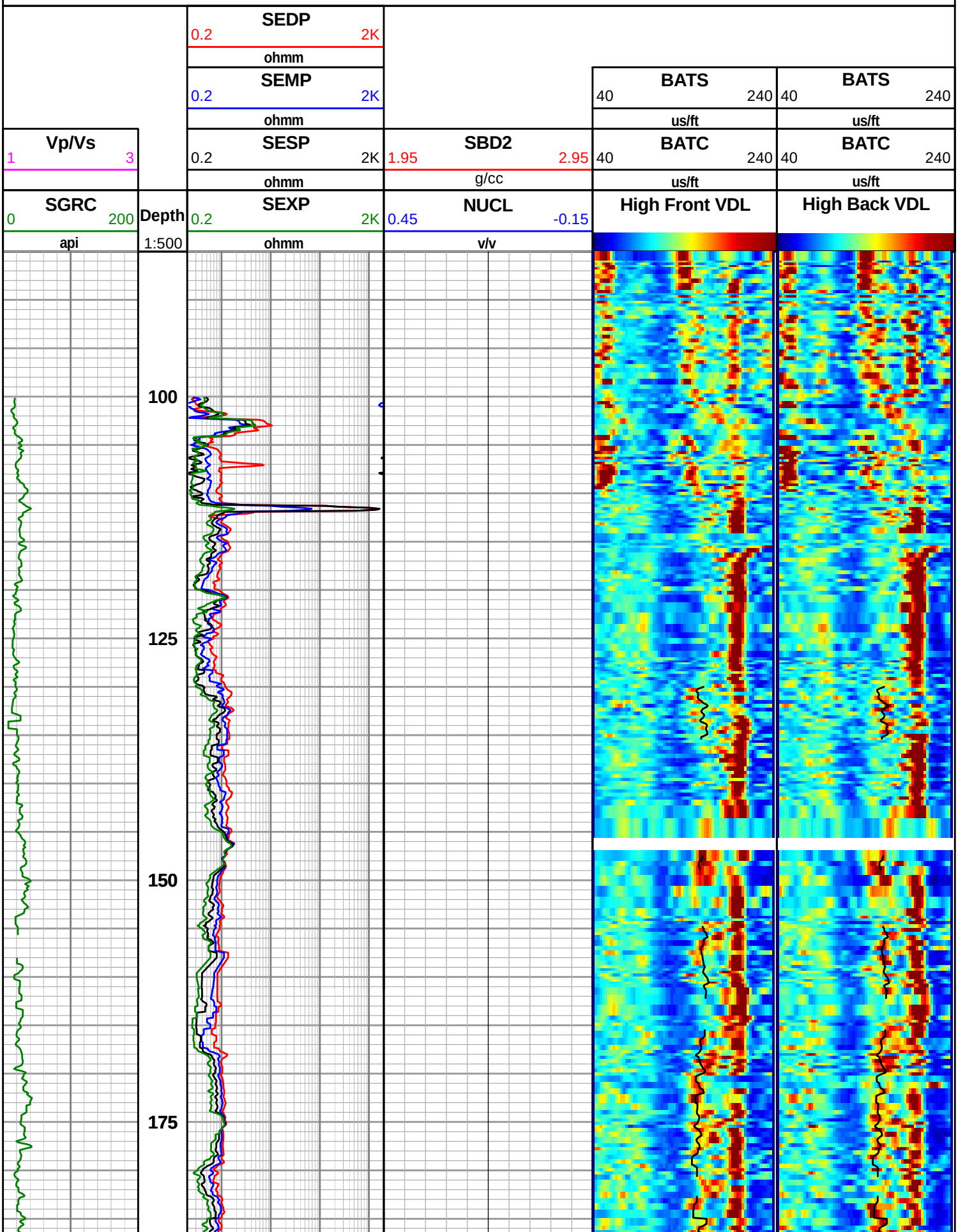
Resistivity

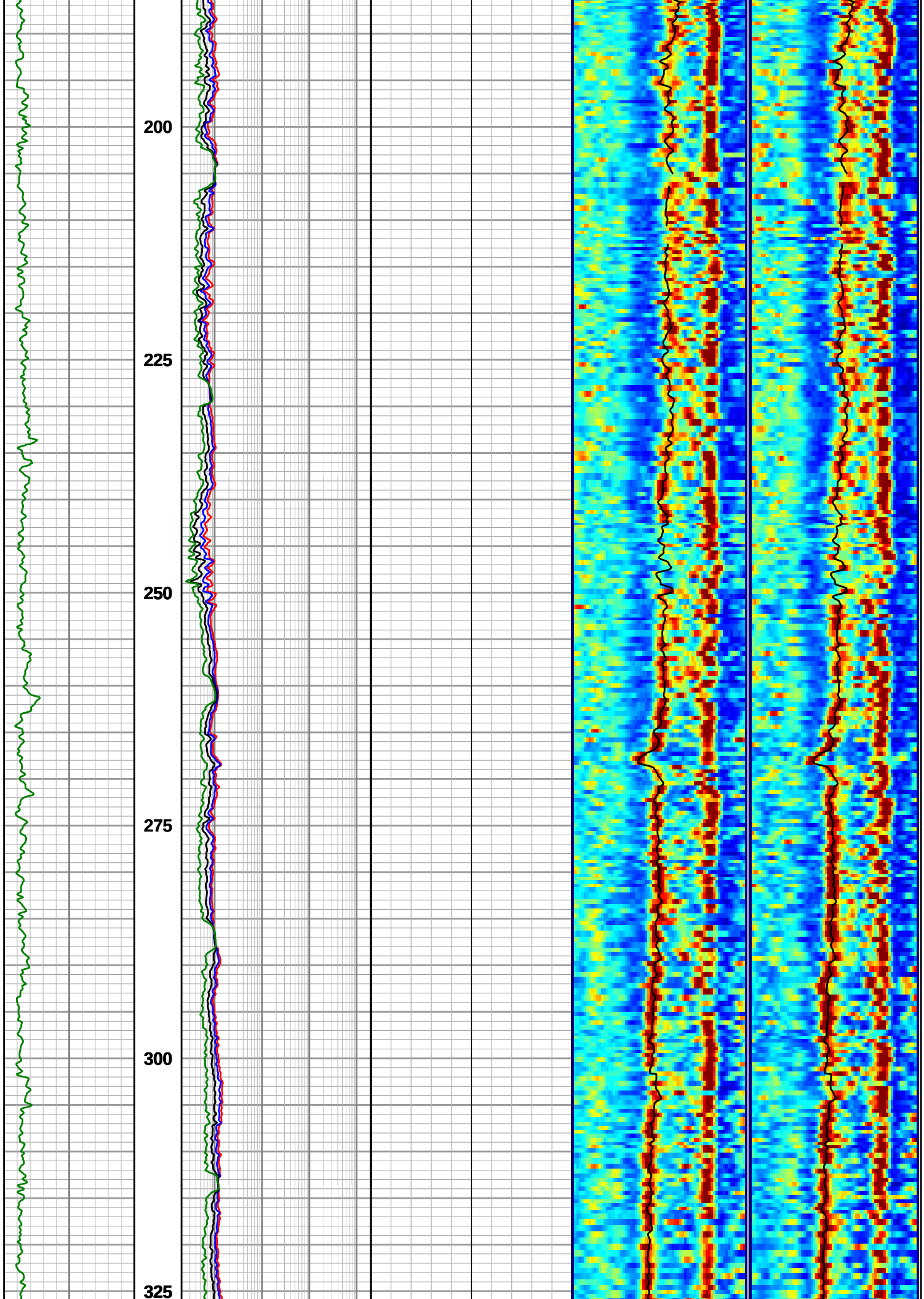
13.720

Gamma Ray

11.510

Fur Seal-1 BAT QC Log

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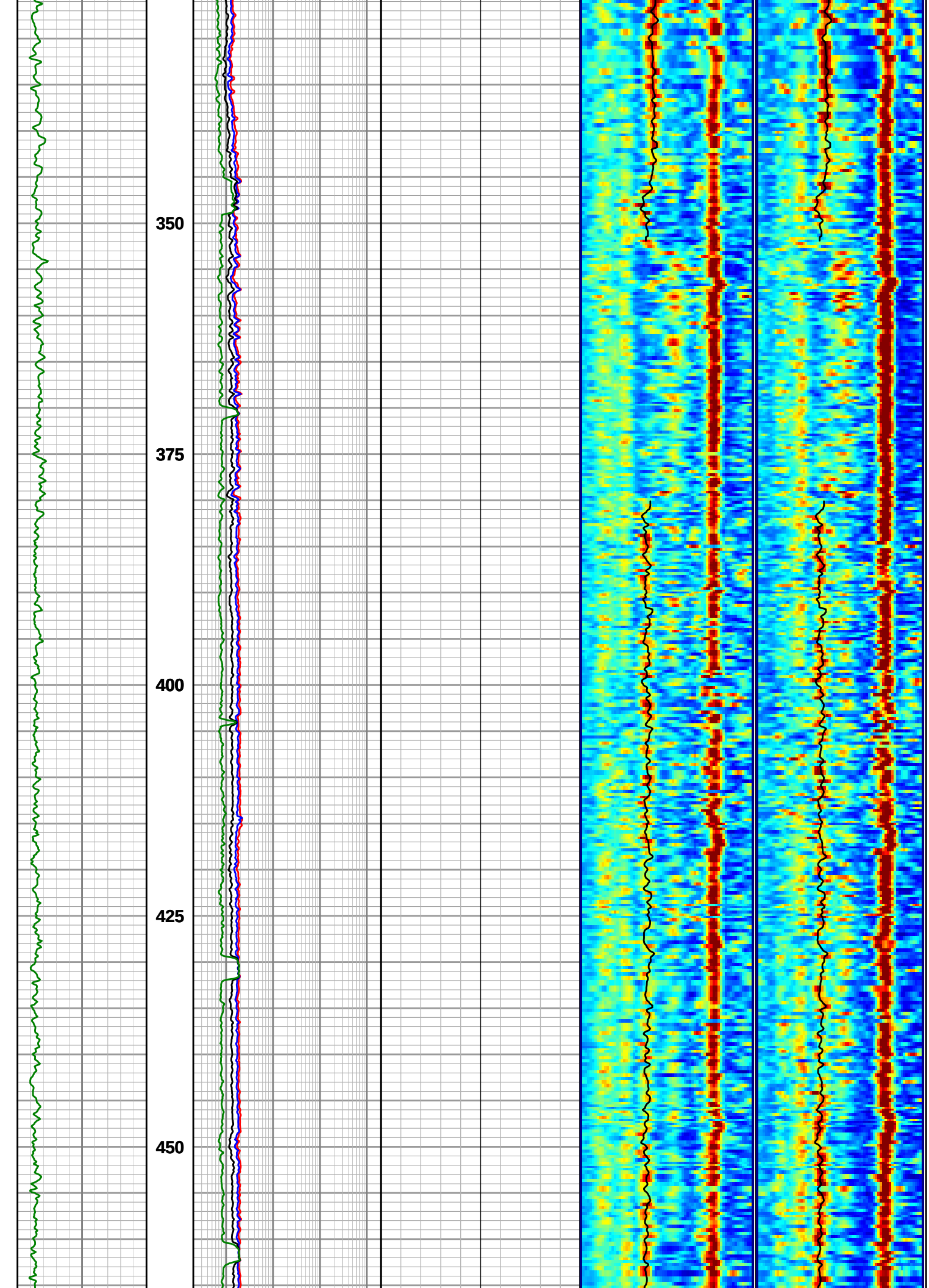
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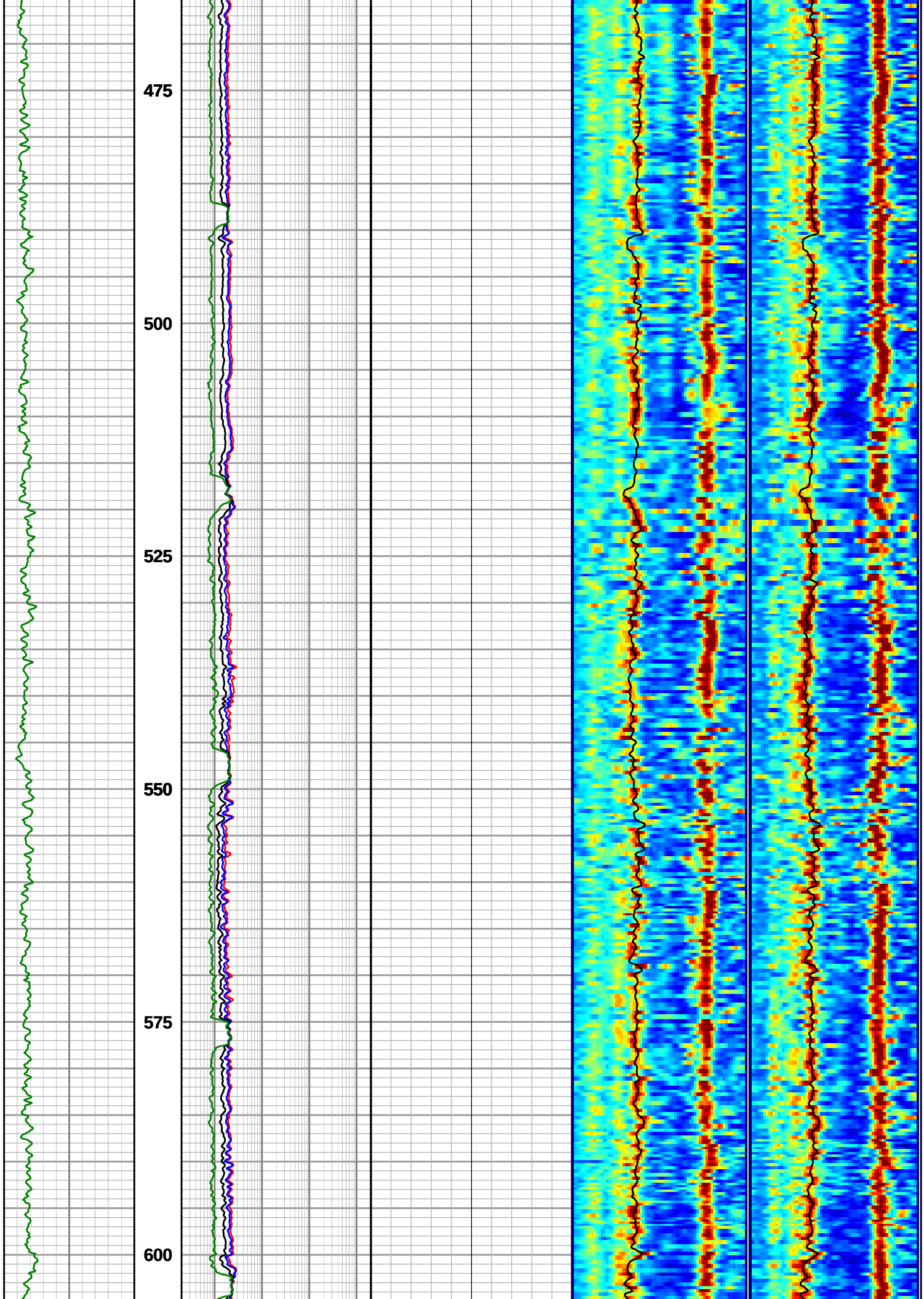
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575
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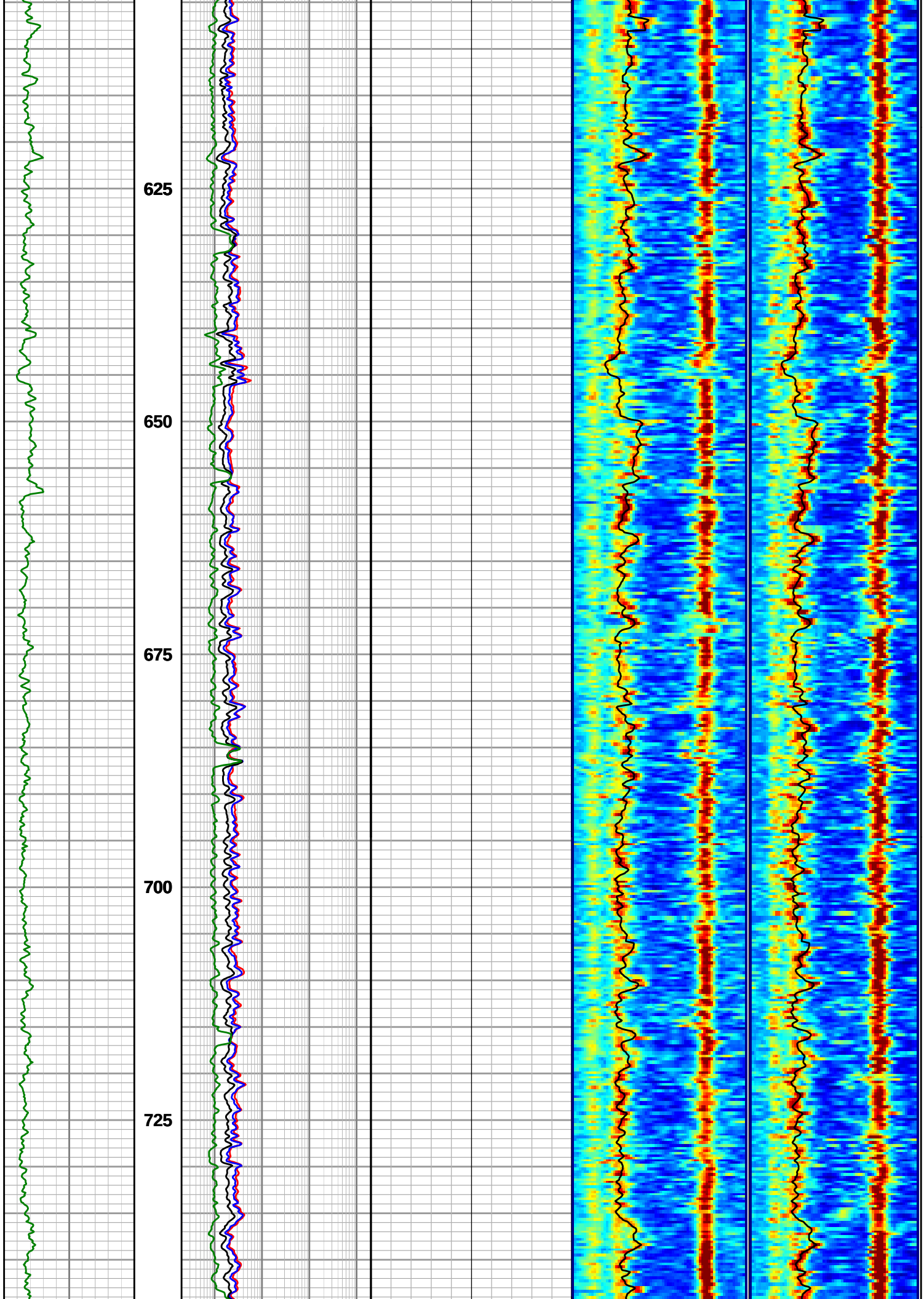
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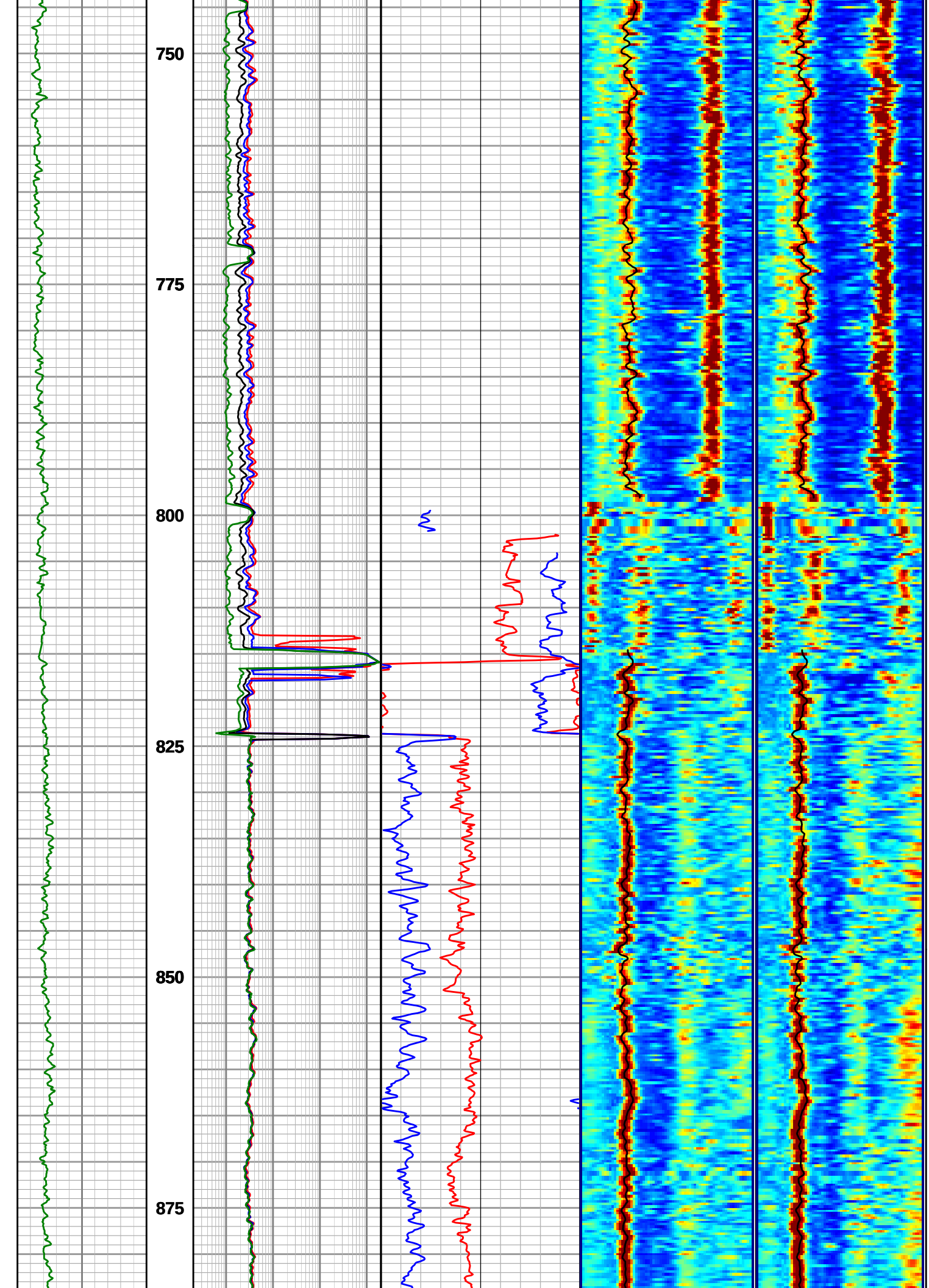
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825
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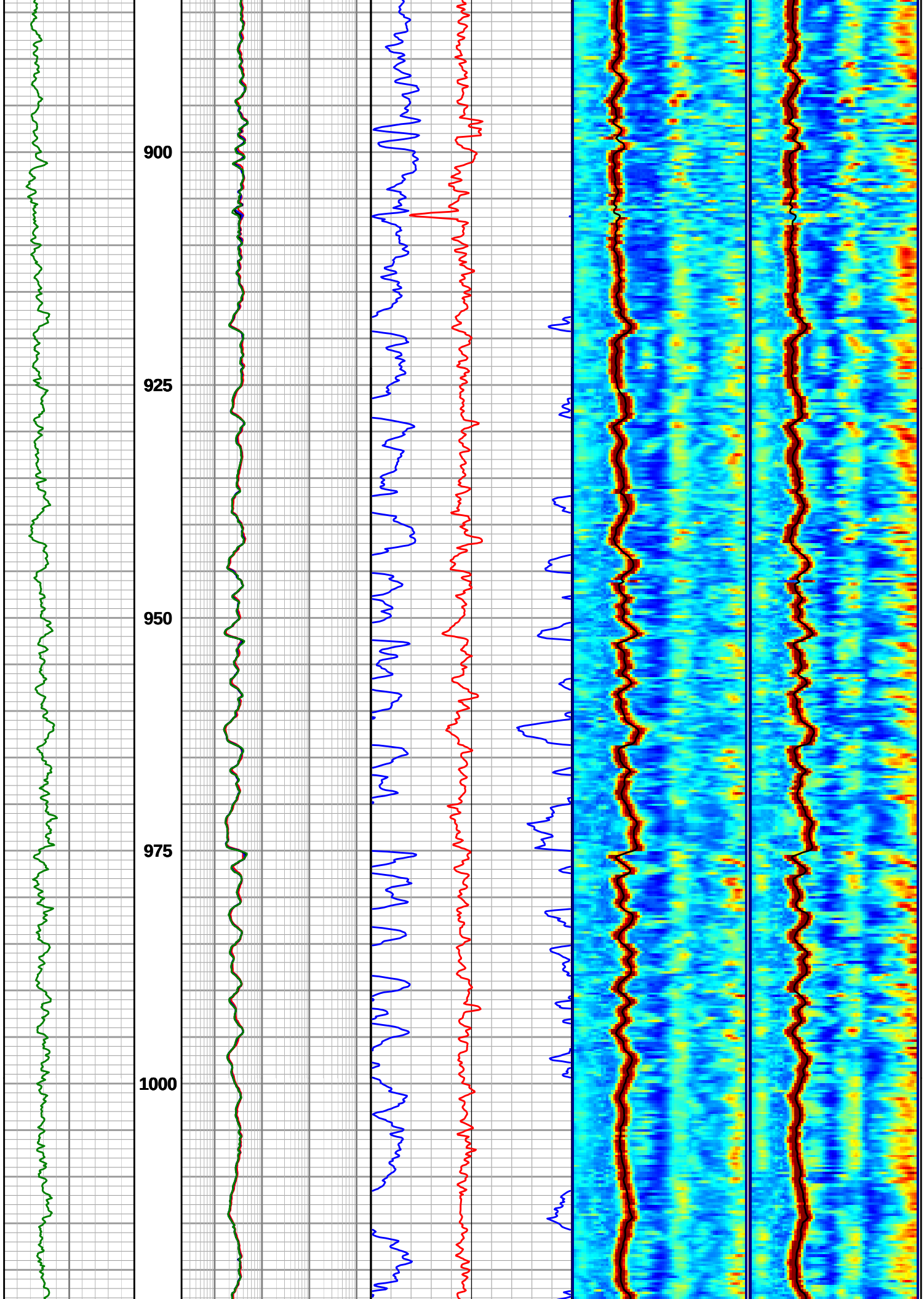
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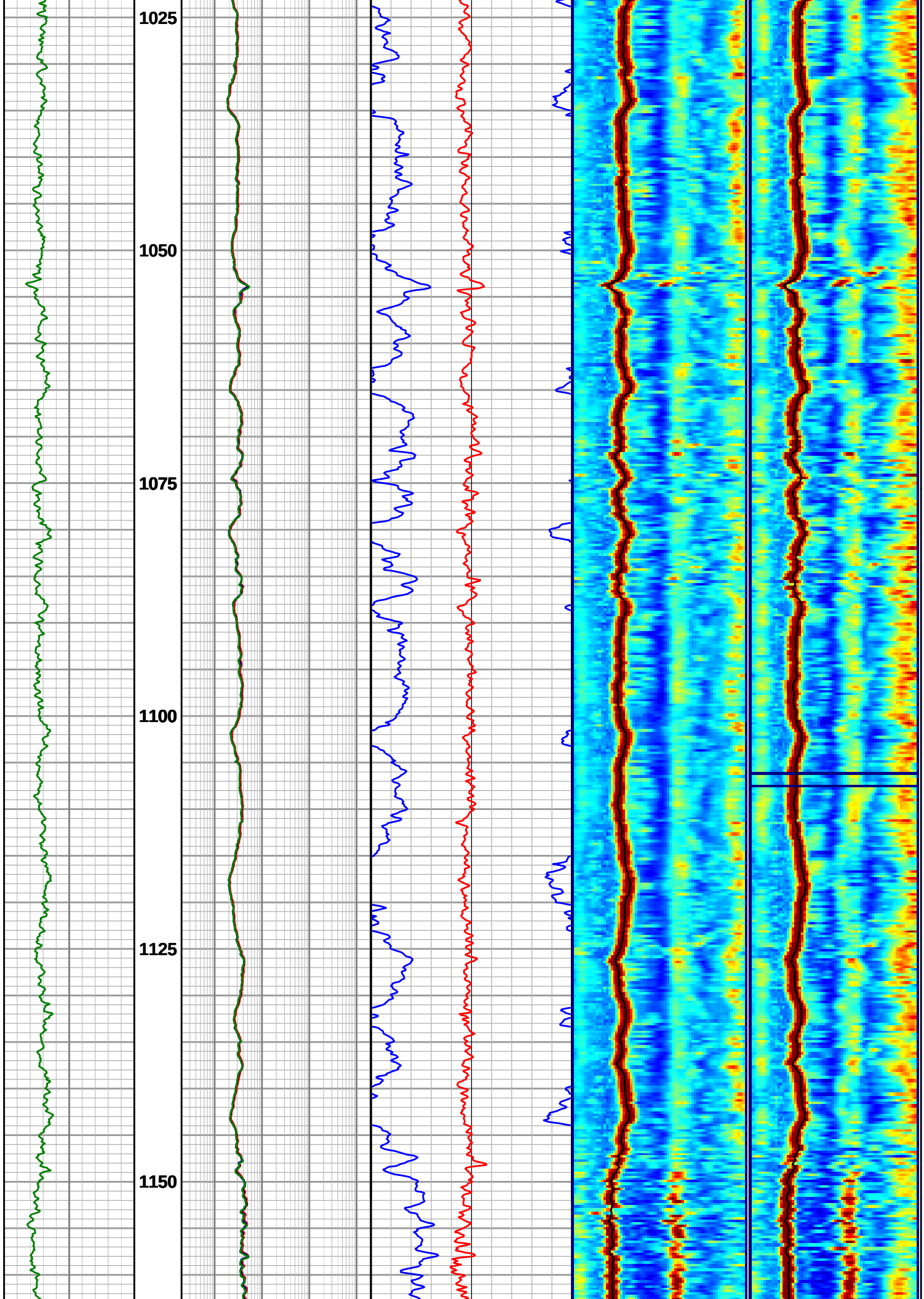
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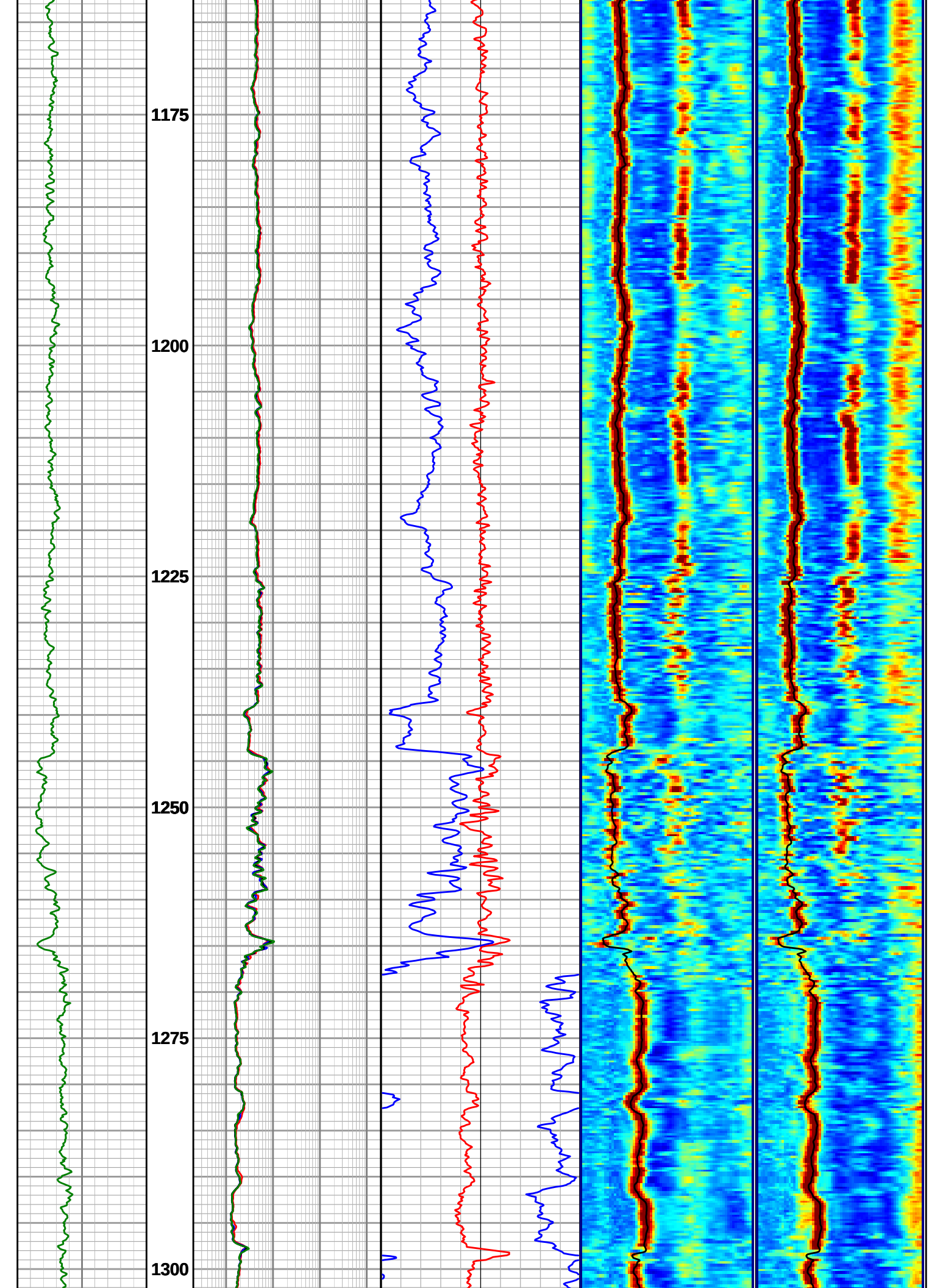
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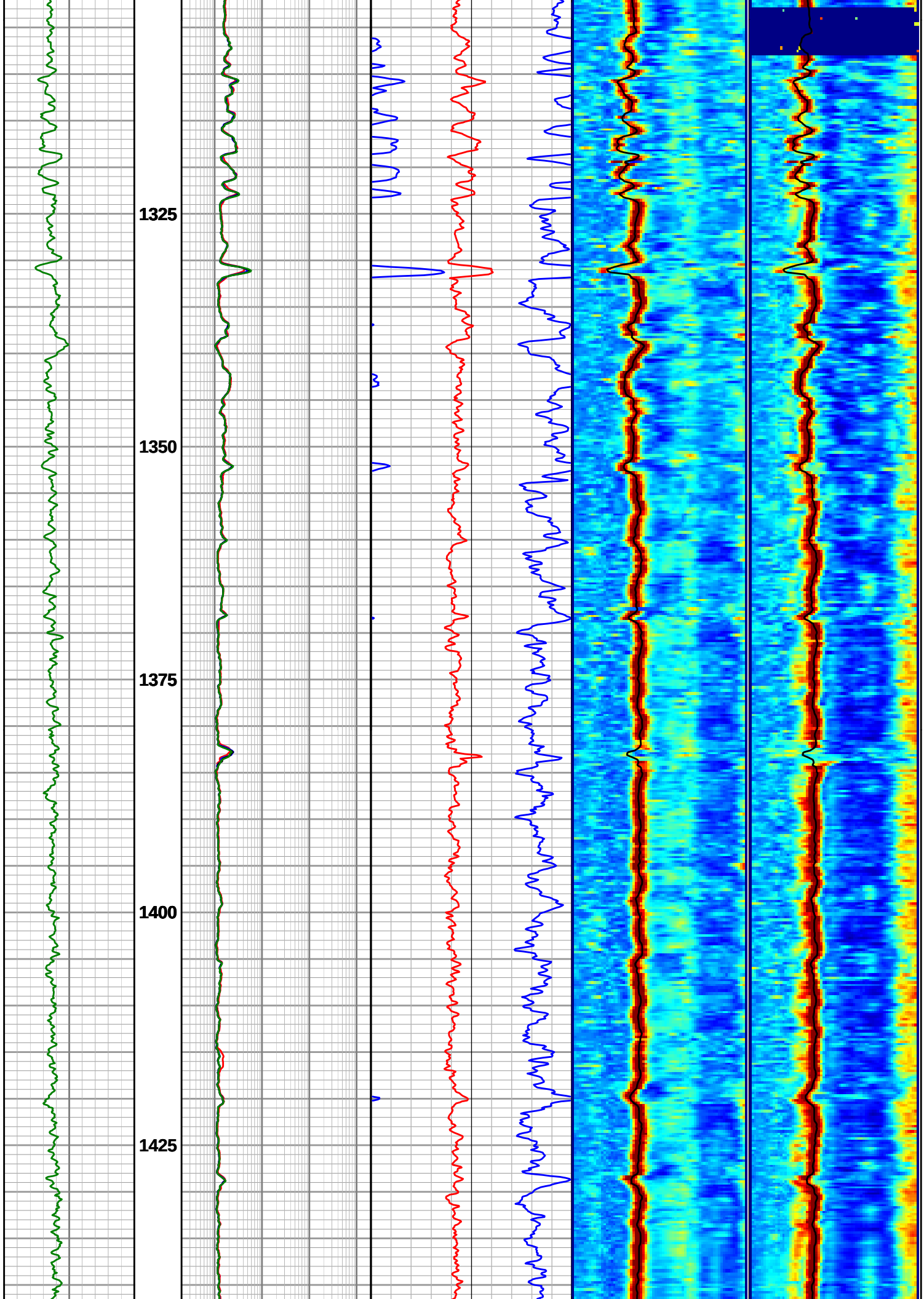
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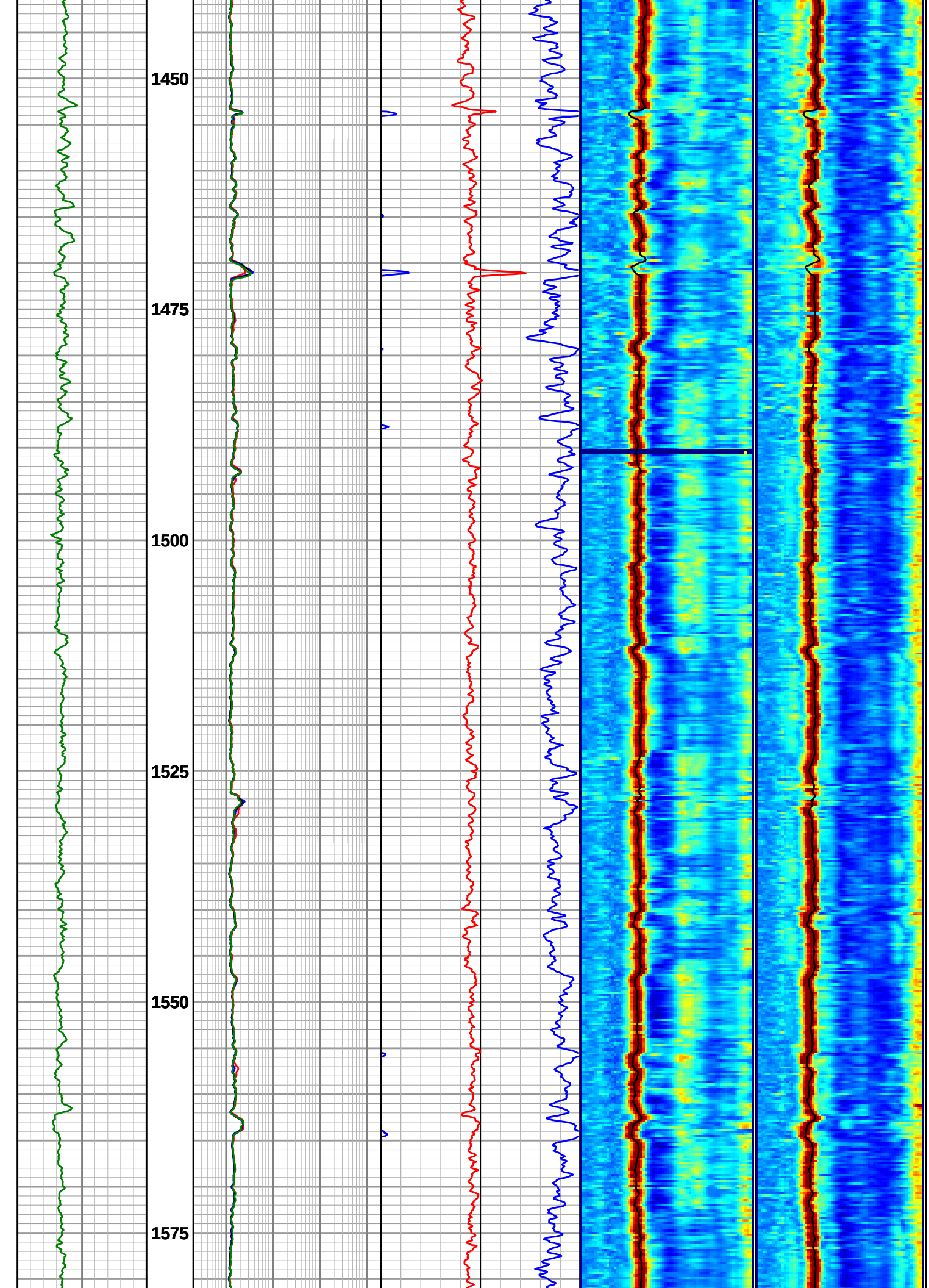
1425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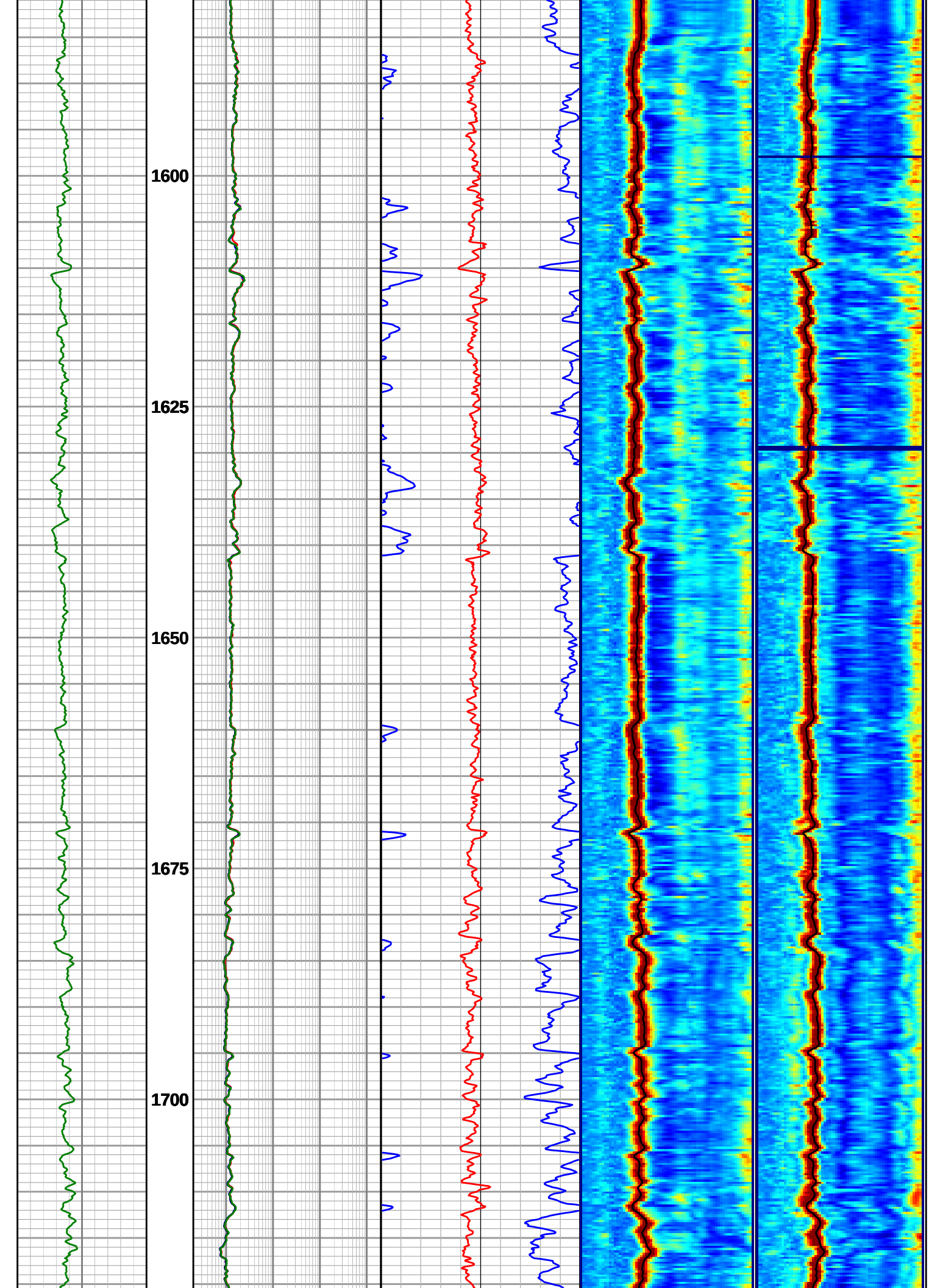
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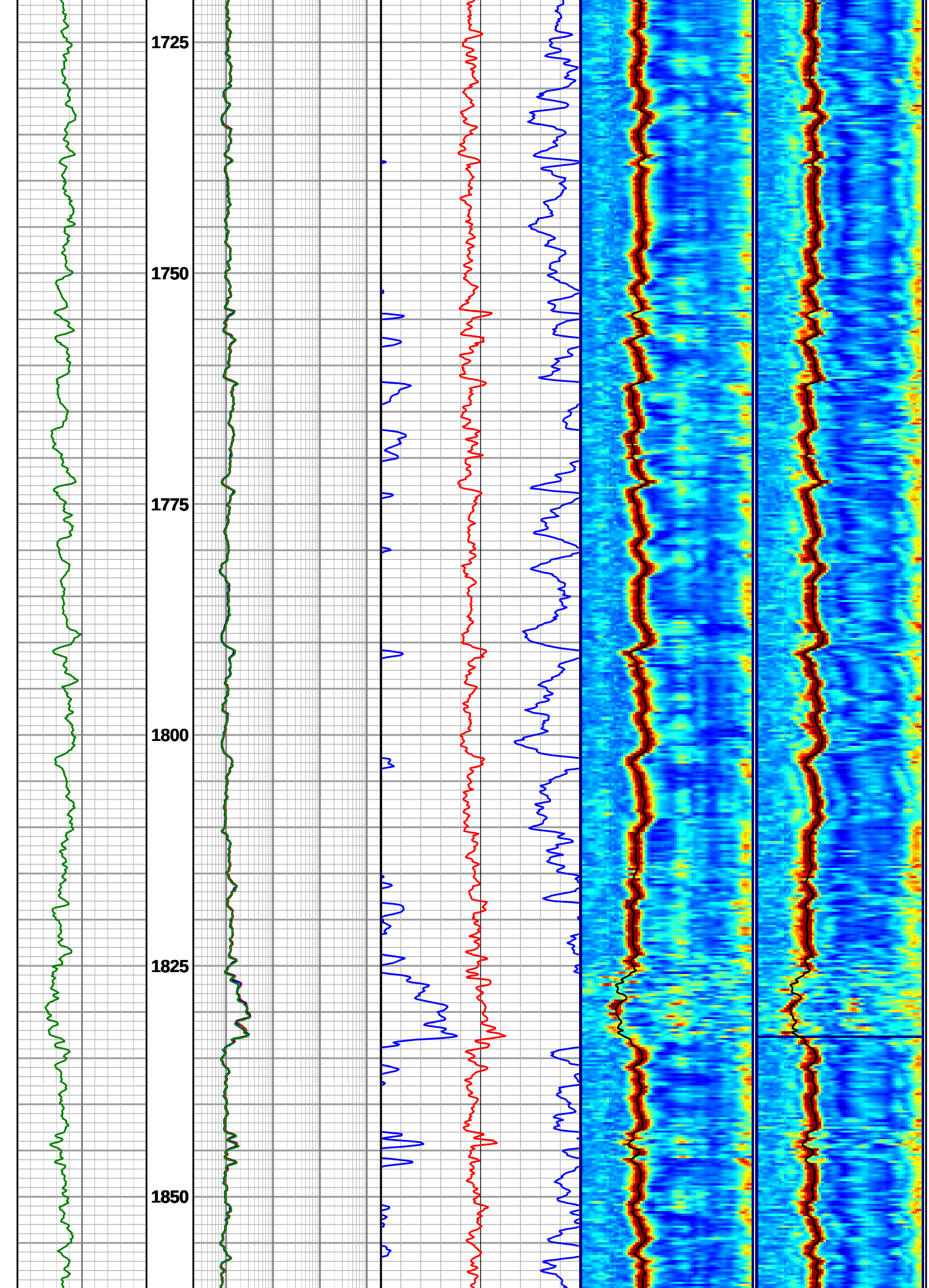
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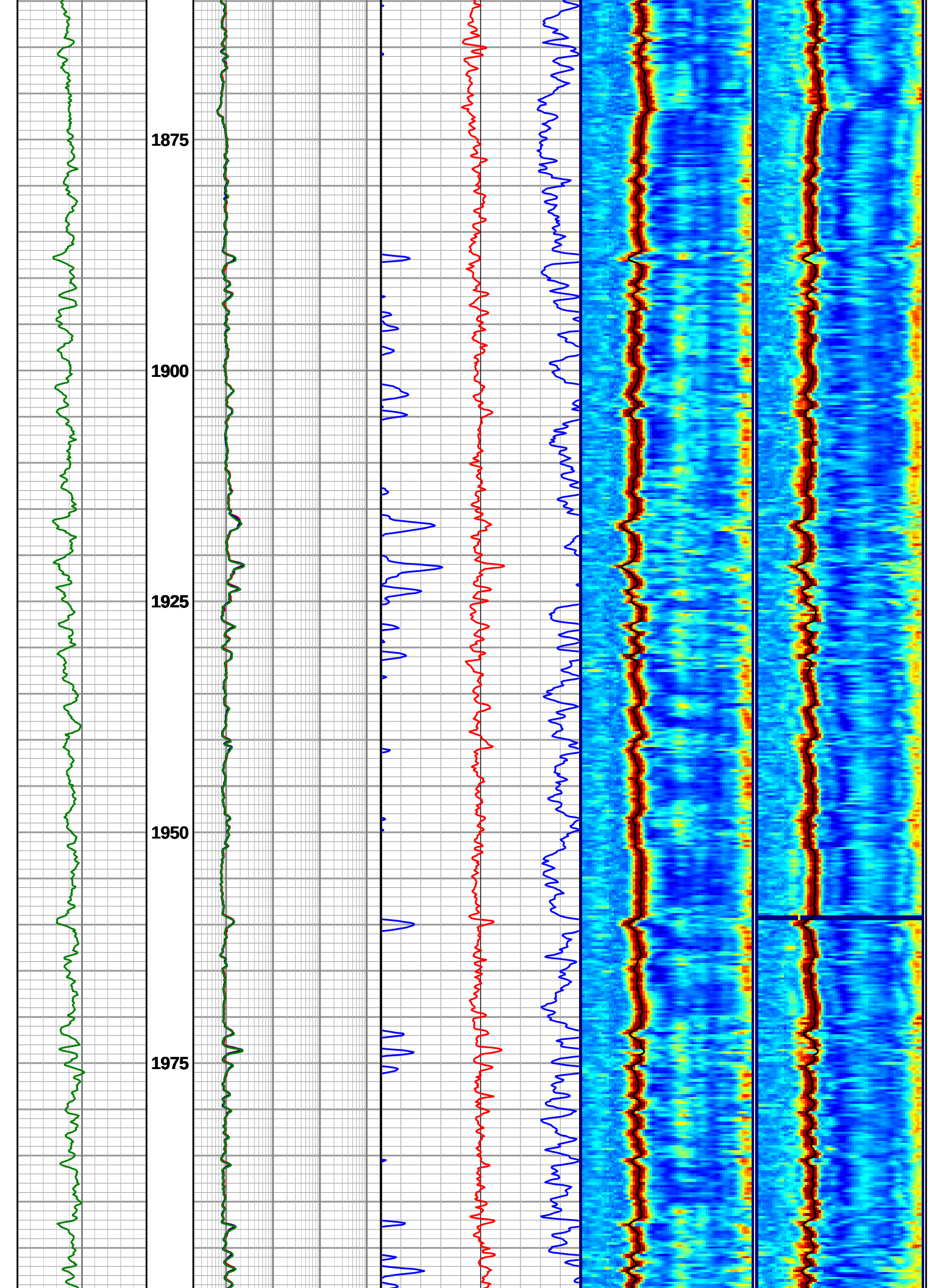
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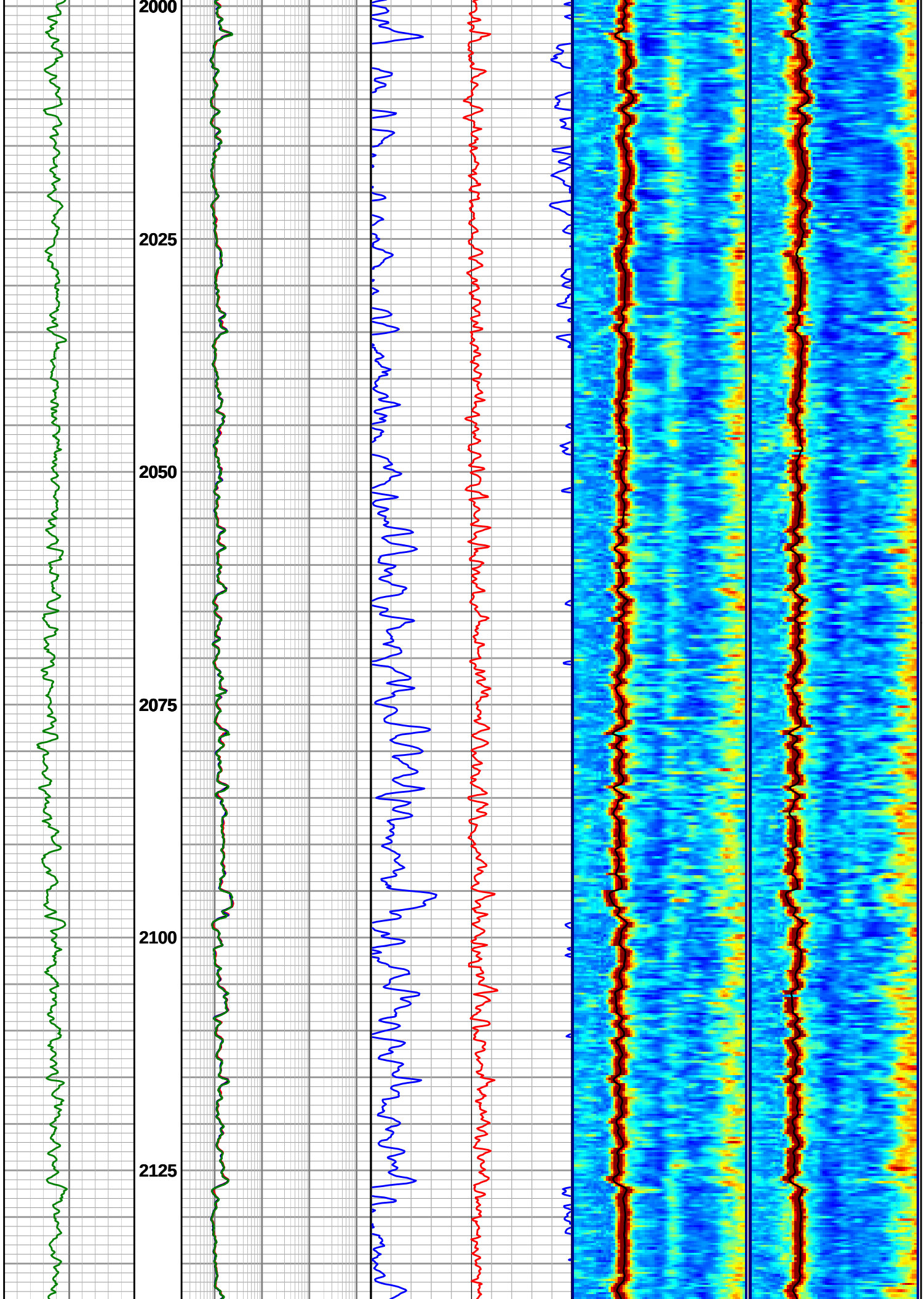
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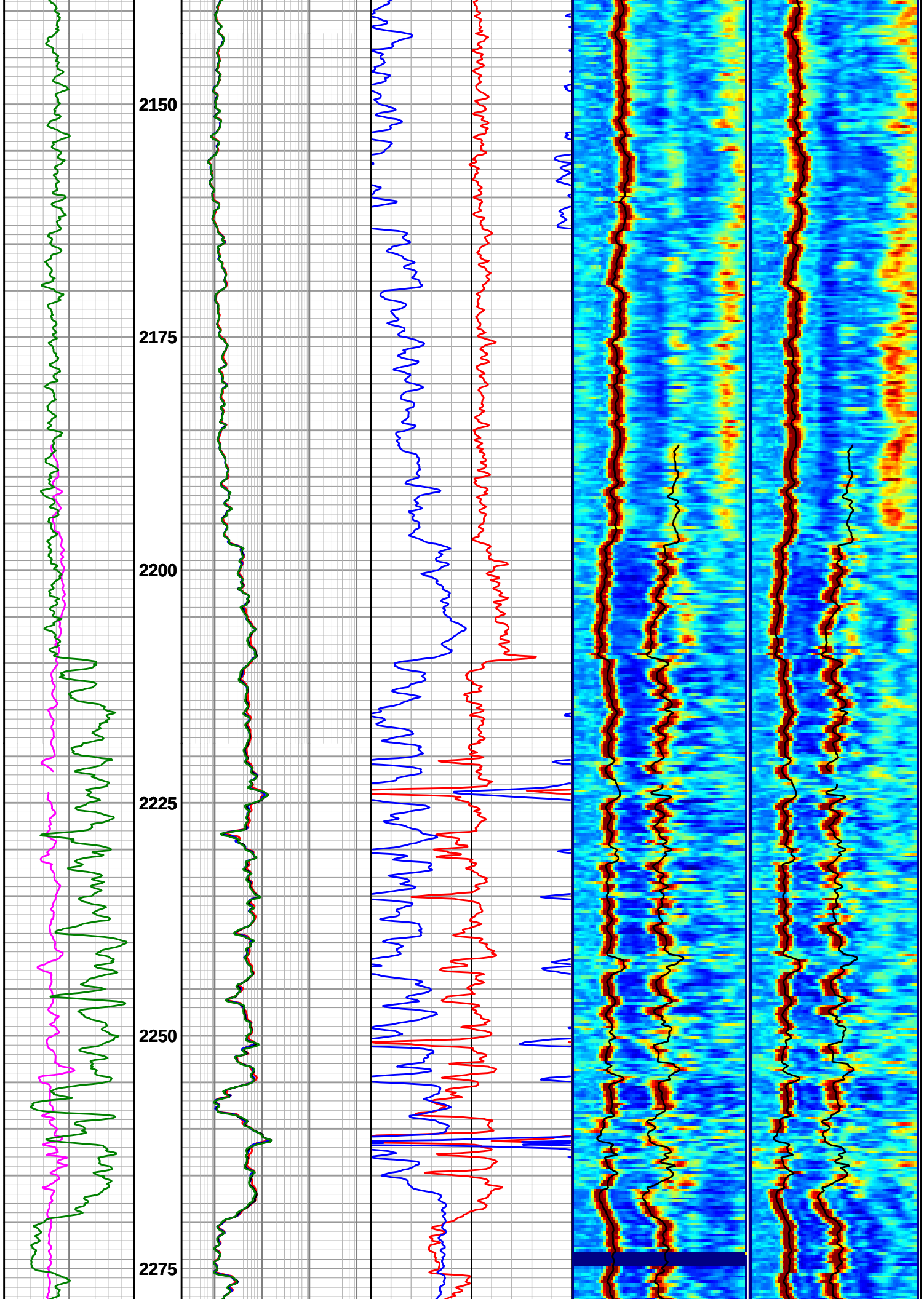
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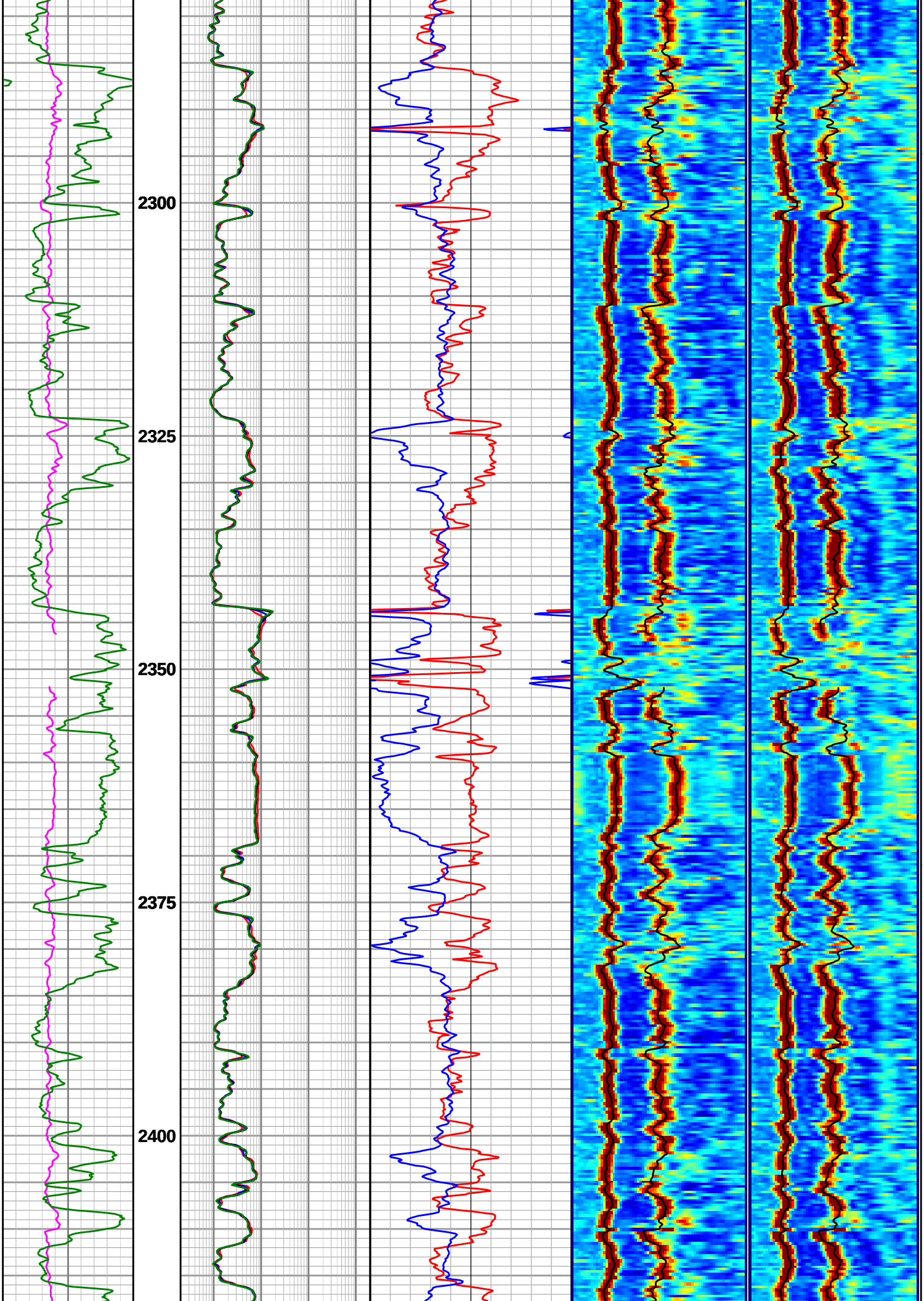
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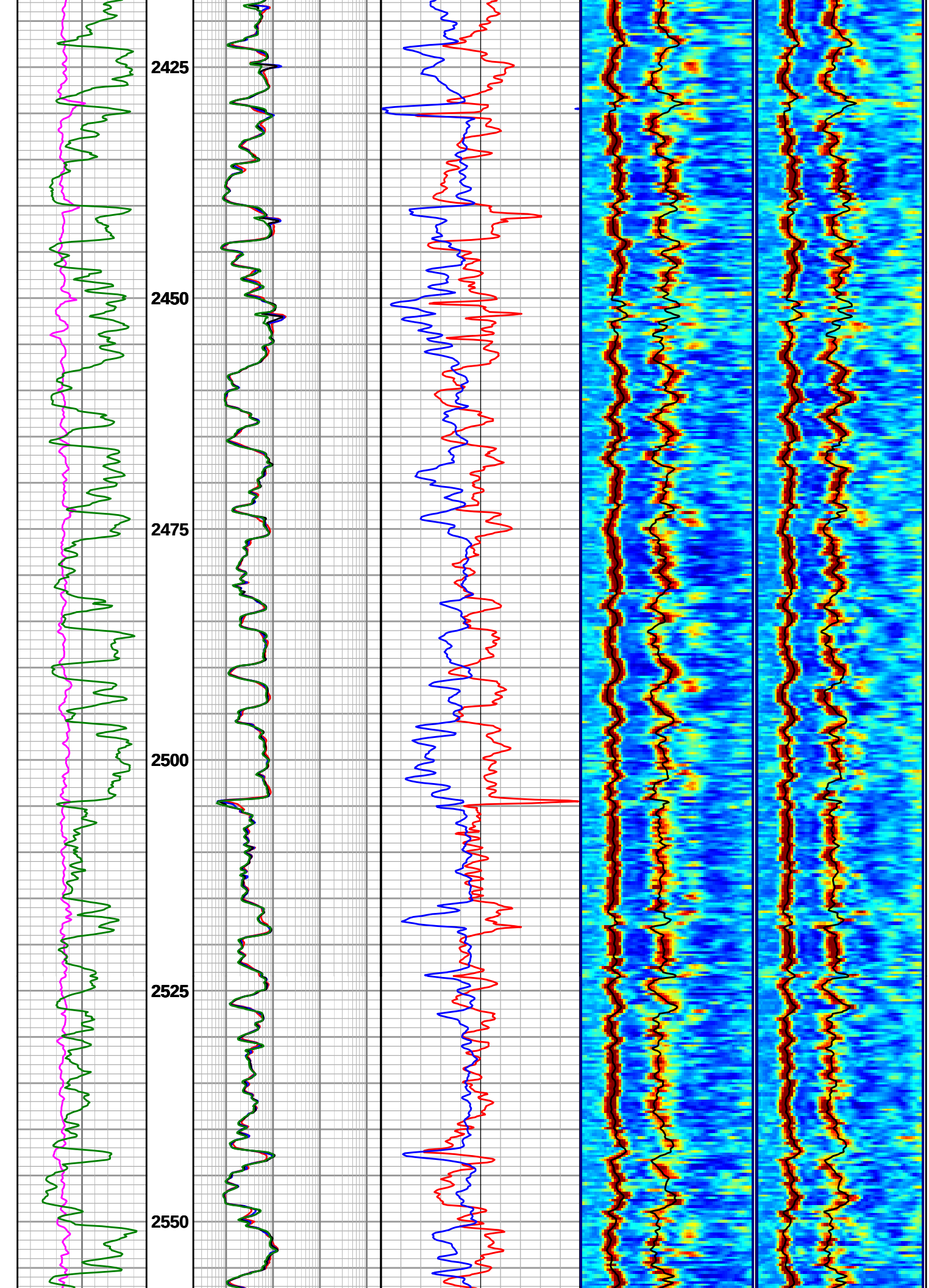
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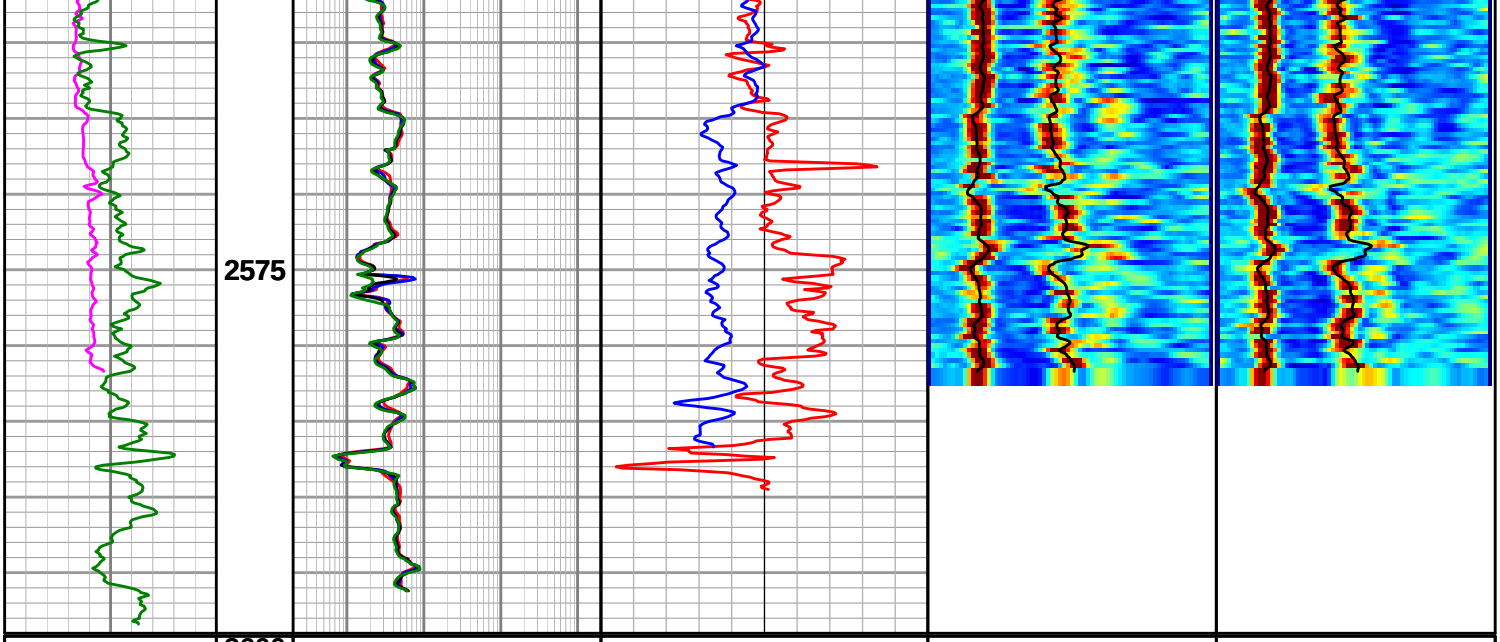


SGRC		SEXP	NUCL	High Front VDL	High Back VDL
0 200	2600 Depth	0.2 2K	0.45 -0.15		
api	1:500	ohmm	v/v		

Vp/Vs	SESP	SBD2	BATC	BATC
1 3	0.2 2K	1.95 2.95	40 240	40 240
	ohmm	g/cc	us/ft	us/ft

	SEMP		BATS	BATS
	0.2 2K		40 240	40 240
	ohmm		us/ft	us/ft

	SEDP			
	0.2 2K			
	ohmm			

Sperry Drilling Services

1 : 1000

INSITE

MWD

DGR Dual Gamma Ray
DDS Drill String Dynamics

Company : Apache Energy Ltd
Rig : Ocean Patriot
Well : Fur Seal-1
Field : Exploration
Country : Australia
DOE Number :

LOCATION
Latitude : 38° 7' 47.91" South
Longitude : 148° 9' 8.44" East
UTM Easting = 600,995.50 m
UTM Northing = 5,779,136.70 m

Other Services

Country : Australia
Field : Exploration
Location : Lat: 38° 7' 47.91" South
Long: 148° 9' 8.44" East
Well : Fur Seal-1
Company : Apache Energy Ltd
Rig : Ocean Patriot

Permanent Datum : AHD
Log Measured From : Drill Floor 21.50 m Above Permanent Datum
Drilling Measured From : Drill Floor

Elevation : 0.00 m

Elev.
KB
DF 21.50 m
GL
WD 56.62 m

MD LOG

Unit No. : 182
Job No. : AU-FE-0003890148

Depth Logged : 112.00 m To 2,610.00 m
Date Logged : 25-Oct-05 To 01-Nov-05
Total Depth MD : 2,610.00 m TVD: 2,609.73 m
Spud Date : 24-Oct-05

Plot Type : Final
Plot Date : 08-Nov-05

Run No.	Borehole Record (MD) Size	From	To	Casing Record (MD) Size	Weight	From	To	Borehole Record (MD) Size	From	To
2	311.000 mm	111.70 m	824.00 m	762.000 mm	307.00 kg/m	80.10 m	111.00 m			
3	216.000 mm	824.00 m	2,610.00 m	340.000 mm	101.20 kg/m	80.10 m	817.60 m			

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	26-Oct-05	01-Nov-05			
Rig Bit Number	2	3			
Bit Size (mm)	311	216			
Tool Nominal OD (mm)	203	171			
Log Start Depth (MD, m)	111.7	824.0			
Log End Depth (MD, m)	824.0	2,610.0			
Drill or Wipe	Drilling	Drilling			
Drill/Wipe Start Date and Time	25-Oct-05 04:40	28-Oct-05 05:10			
Drill/Wipe End Date and Time	25-Oct-05 23:59	01-Nov-05 01:45			
Min Inc (deg) @ Depth (MD, m)	0.19 @ 316.46	0.47 @ 2,030.20			
Max Inc (deg) @ Depth (MD, m)	1.36 @ 804.24	1.41 @ 2,517.63			
Bit TFA(in2) / Bit Type	1.74 / Security FS2563	1.11 / Smith S73VPX			
Flow Rate (gpm)	1,060	600			
Max AV (mpm) / CV (mpm) @ MWD	N/A / N/A	181.5 / 137.2			
Fluid Type	Seawater/PHG	KCl/PHPA			
Density (sg) / Viscosity (spqt)	1.1 / N/A	1.2 / 67.0			
Filtrate CL (ppm)	N/A	47,000			
pH / Fluid Loss (mptm)	N/A / N/A	8.9 / 4.8			
PV (cp) / YP (lhf2)	N/A / N/A	26 / 18.50			
% Solids / % Sand	N/A / N/A	14 / 0.6			
% Oil / Oil:Water Ratio	N/A / N/A	0 / N/A			
Rm @ Measured Temp (degC)	N/A @ N/A	0.11 @ 24.0			
Rmf @ Measured Temp (degC)	N/A @ N/A	0.09 @ 22.0			
Rmc @ Measured Temp (degC)	N/A @ N/A	0.25 @ 24.0			
Max Tool Temp (degC) / Source	25.0 / EWR-P4	78.0 / EWR-P4			
Rm @ Max Tool Temp (degC)	N/A @ 25.0	0.05 @ 78.0			
Lead MWD Engineer	A. Oraekwuotu	A.Oraekwuotu/A.Rule			
Customer Representative	J. Herriot	J. Herriot			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	68.18	68.18			
Sub Serial Number	198838	195232			
Insert Serial Number	074608	209729			
Logging String Serial Number	90086009H1GVR8	90086708H1RGV6			
Date and Time Initialized	25-Oct-05 03:08	28-Oct-05 12:54			
Date and Time Read	26-Oct-05 05:54:00	01-Jan-70 00:00			

Directional Sensor Information

Tool Type	PM	PM			
Distance From Bit (m)	18.36	32.73			
Software Version	N/A	N/A			
Sub Serial Number	124777	178482			
Sonde Serial Number	022873	126995			
Sensor ID Number	022873	126995			
Survey String Serial Number	90086411M8	90082559			
Toolface Offset (deg)	N/A	N/A			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (m)	14.98	11.51			
Recorded Sample Period (sec)	10	10			
Software Version	N/A	N/A			
Sub Serial Number	210651	64636			
Insert/Sonde Serial Number	184694	53520			

Drillstring Dynamics Sensor Information

Tool Type	DDS	DDS			
Distance From Bit (m)	0	0			
Recorded Sample Period (sec)	12	8			
Software Version	0.37	0.50			
Sub Serial Number	210651	064636			
Insert Serial Number	184694	53520			
Sensor ID Number	1004	126			

REMARKS

1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.

2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.

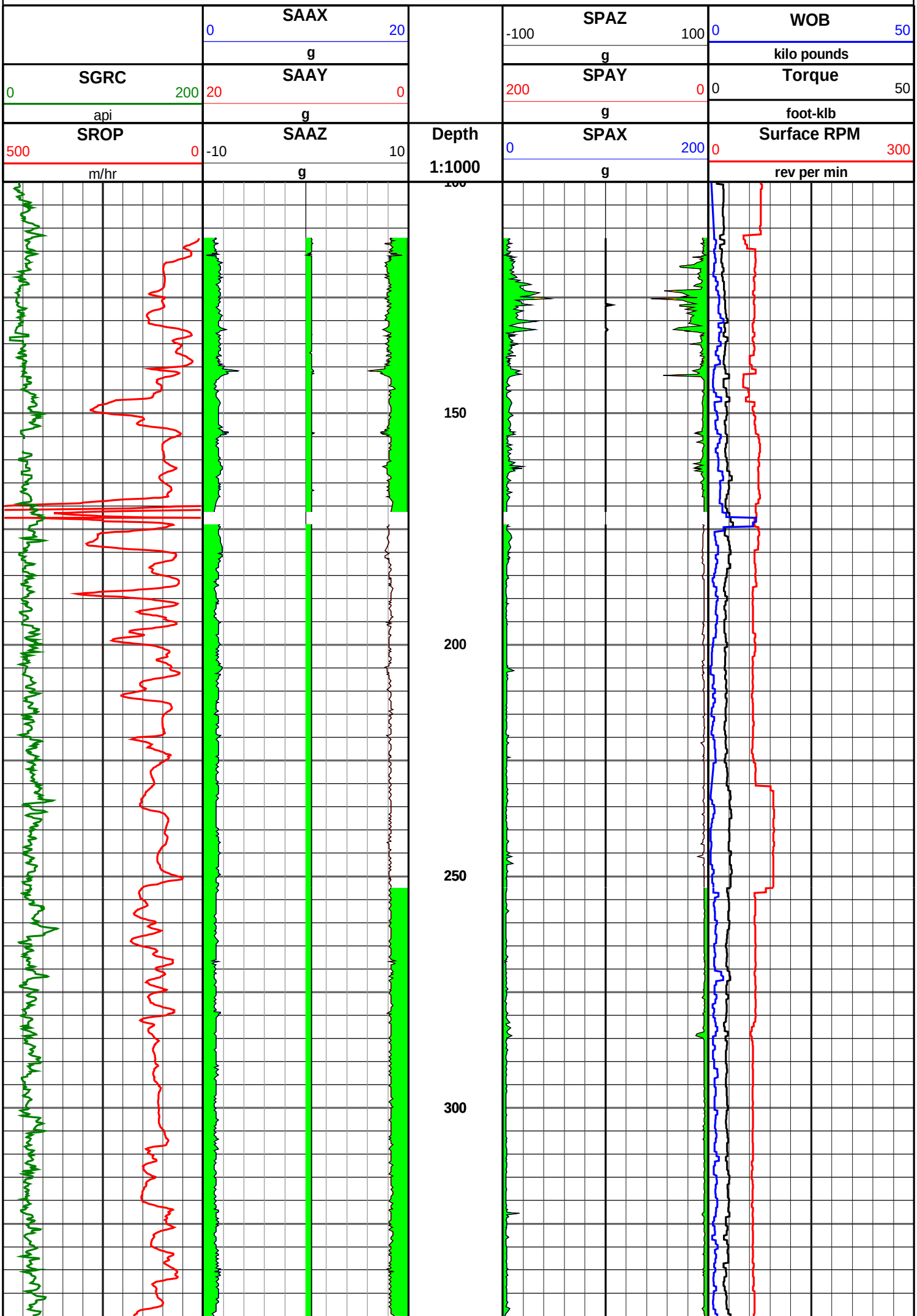
3. Curve mnemonics are :

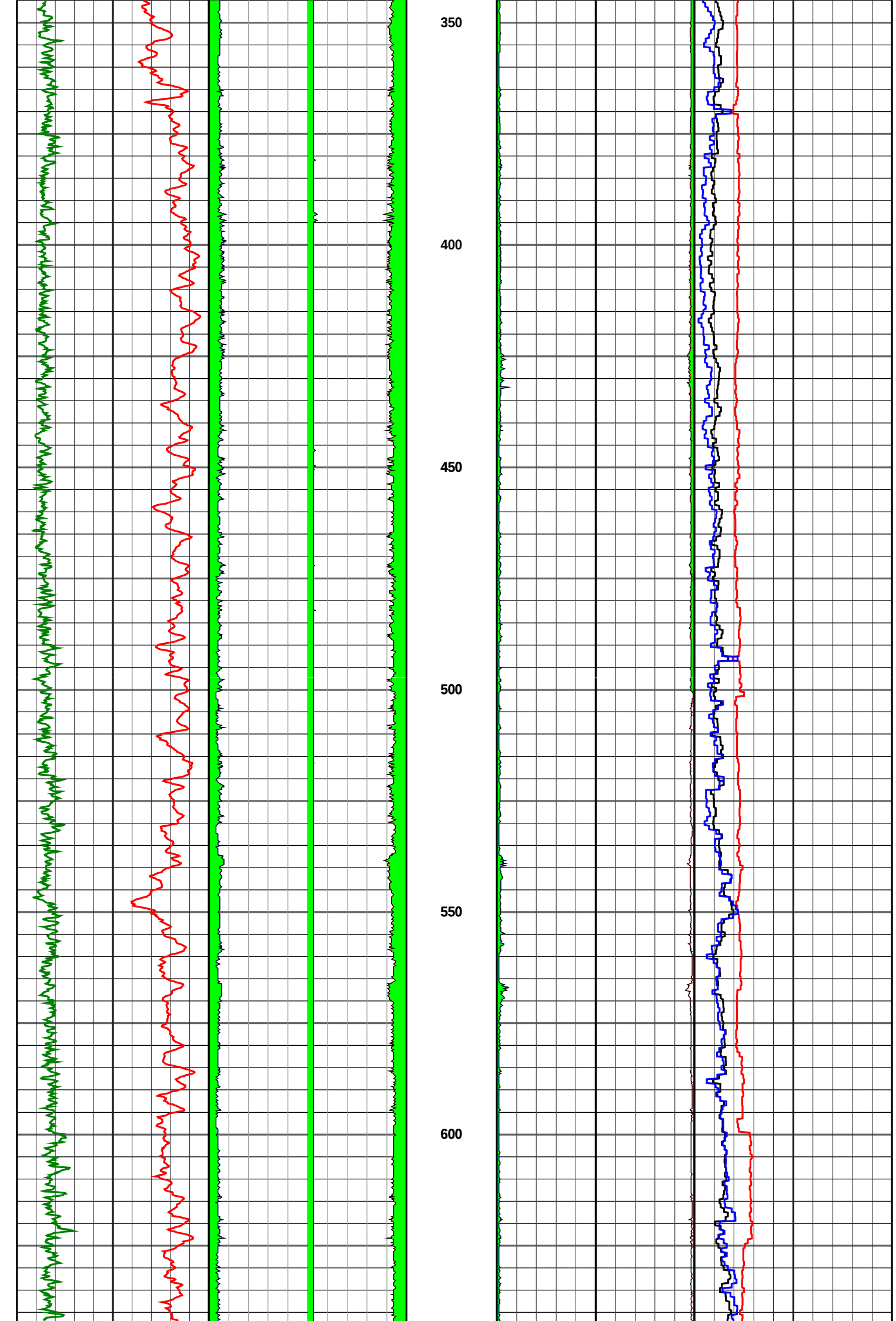
SROP - Smoothed Rate of Penetration, m/hr (Sperry)
SGRC - Smoothed Gamma Ray Combined, api (Sperry)
SAAX - Smoothed Average X-Axis Accelerometer, g's (Sperry)
SAAY - Smoothed Average Y-Axis Accelerometer, g's (Sperry)
SAAZ - Smoothed Average Z-Axis Accelerometer, g's (Sperry)
SPAX - Smoothed Peak X-Axis Accelerometer, g's (Sperry)
SPAY - Smoothed Peak Y-Axis Accelerometer, g's (Sperry)
SPAZ - Smoothed Peak Z-Axis Accelerometer, g's (Sperry)
WOB - Weight on Bit, klb (GeoServices)
RPM - Surface Drillstring Revolutions per minute, rpm (GeoServices)
TORQUE - Surface Torque, ft-klbs (GeoServices)

WARRANTY

HALLIBURTON ENERGY SERVICES (HES) WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HES CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HES MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT

WILL HES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HES.

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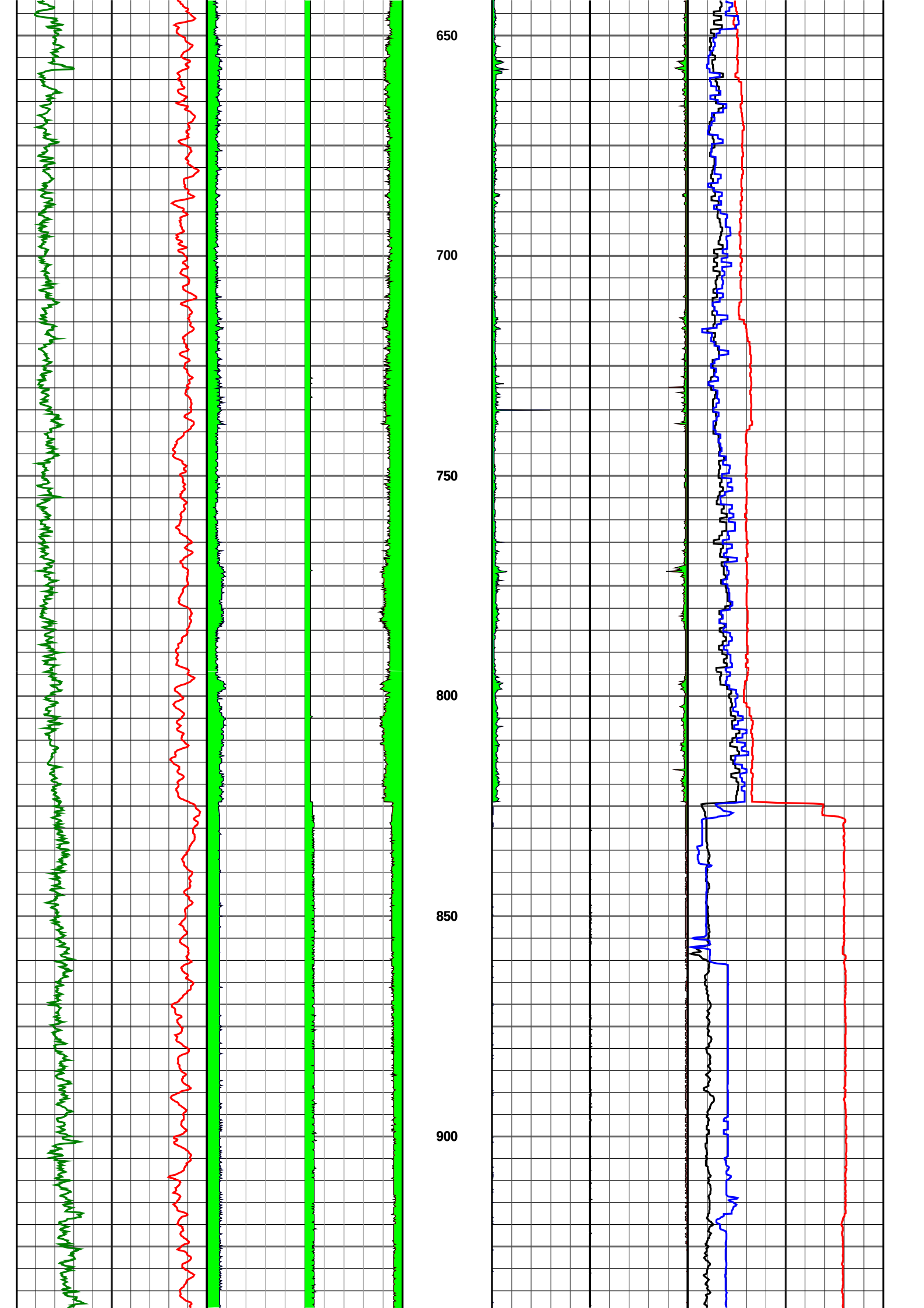
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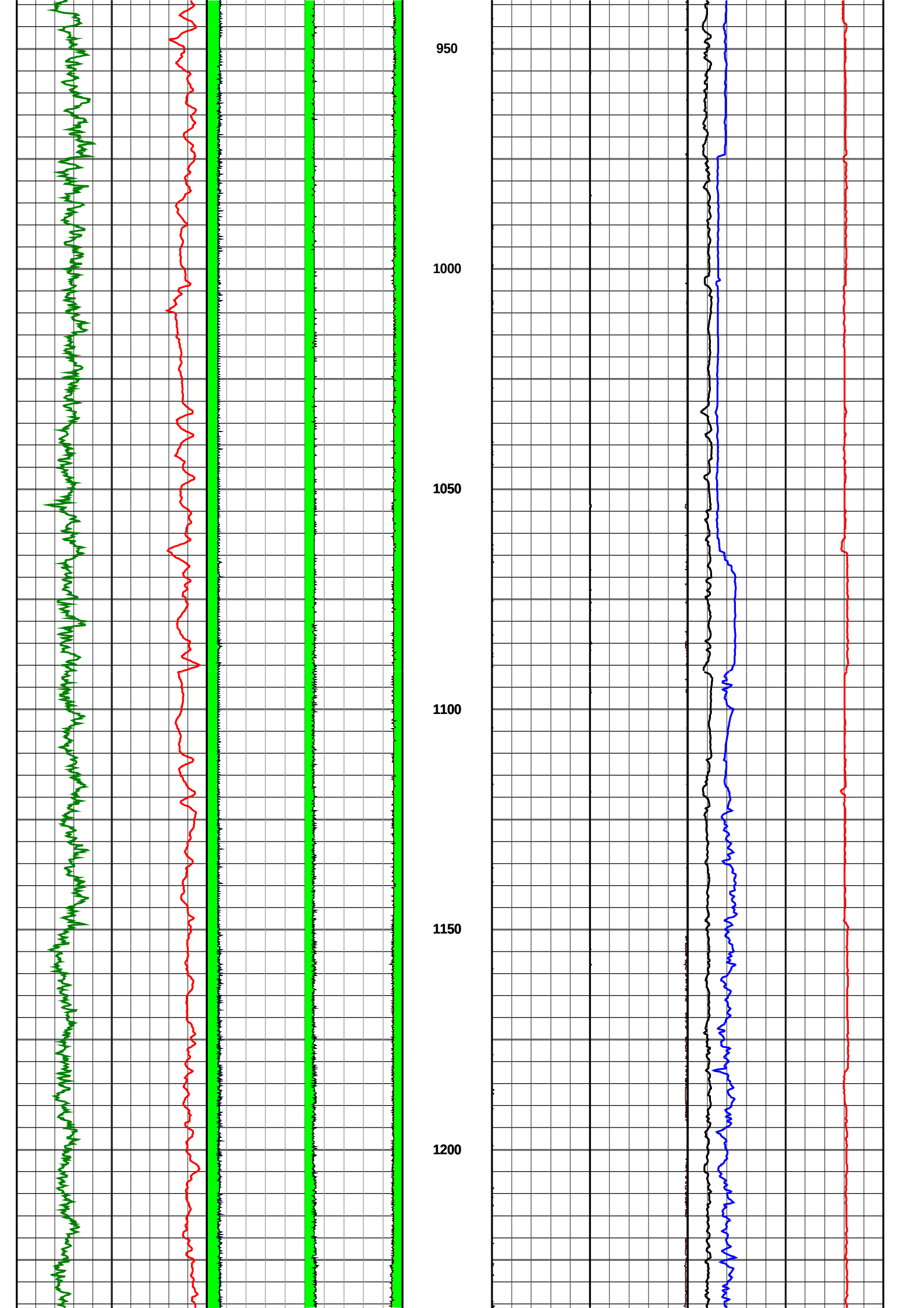
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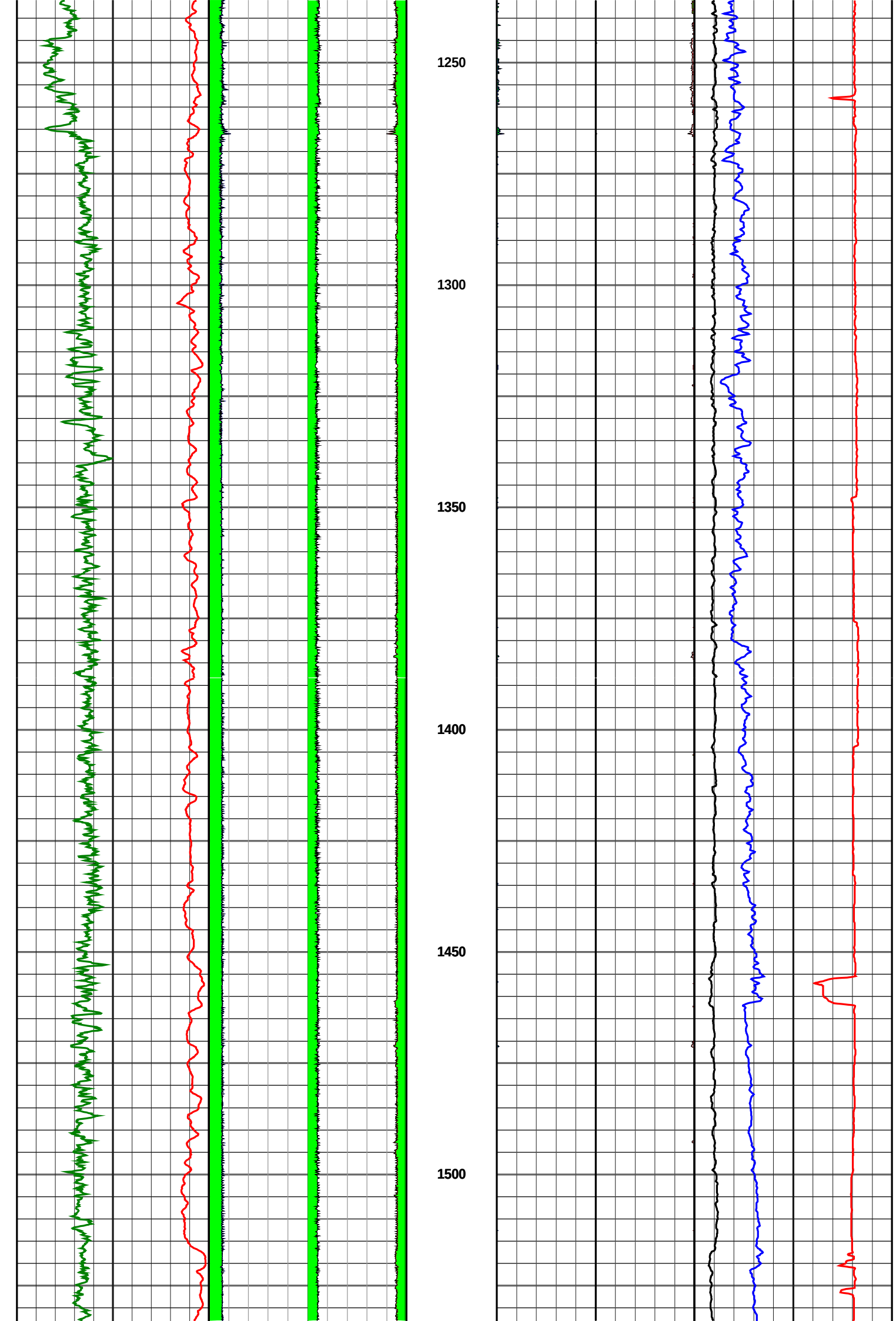
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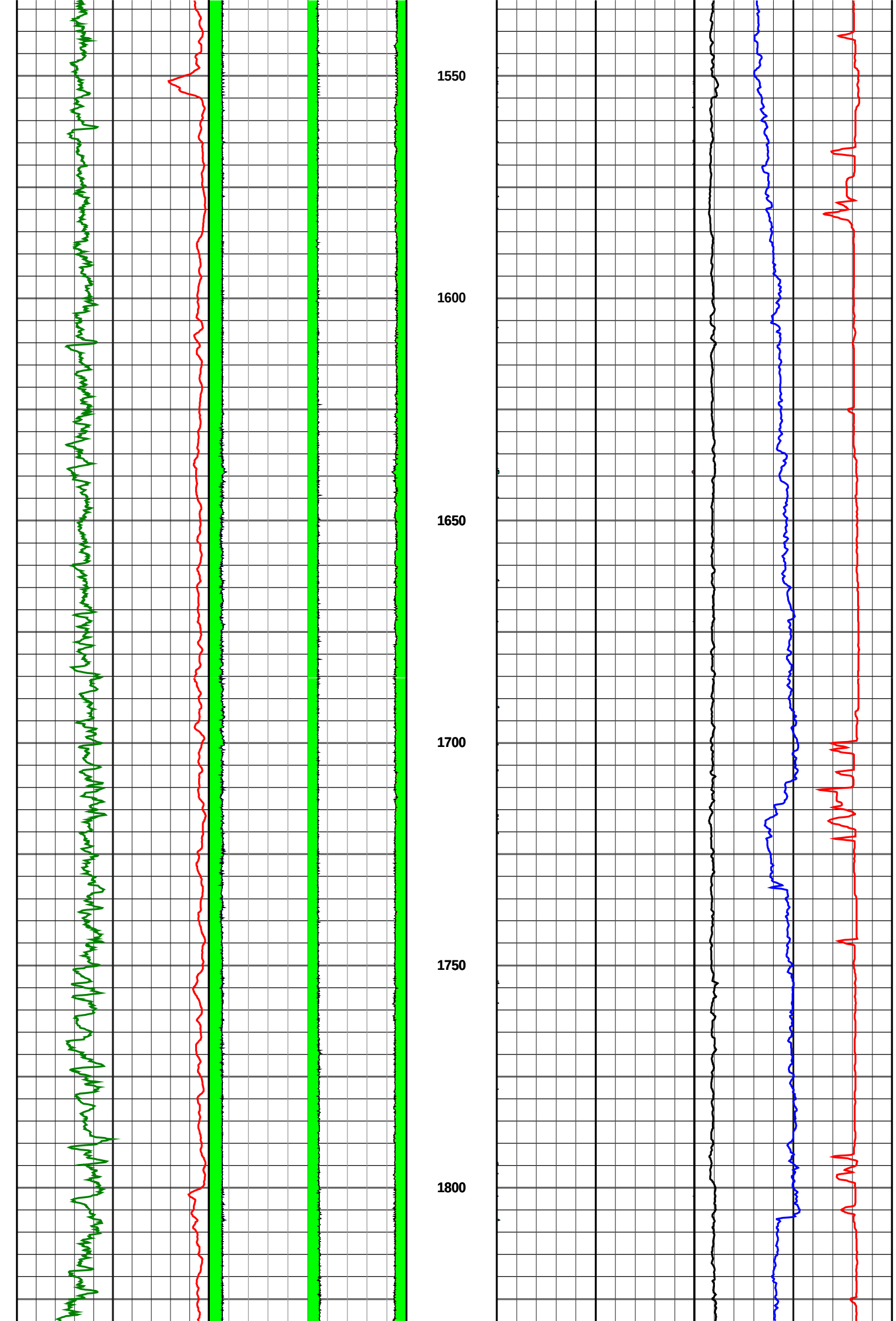
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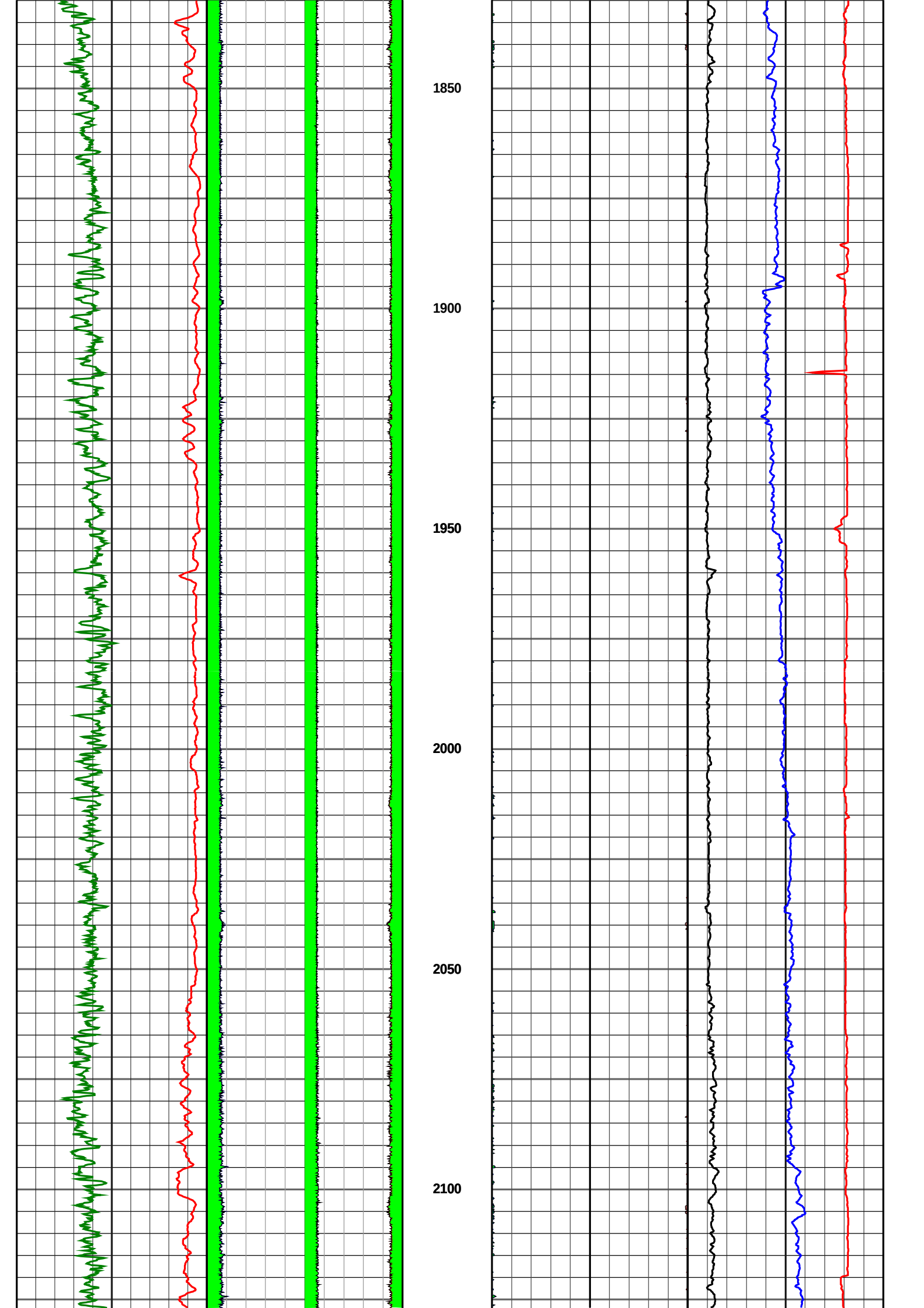
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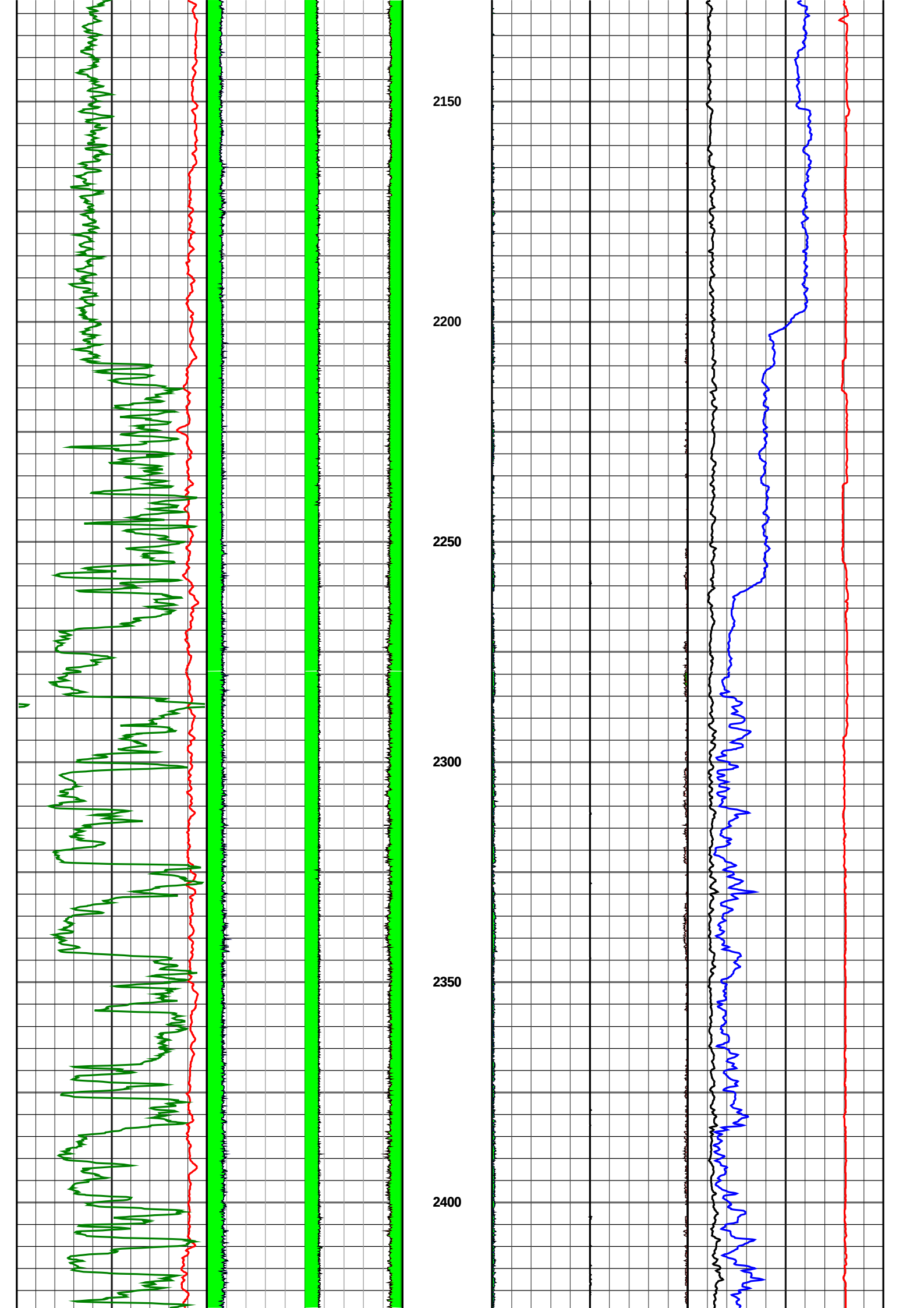
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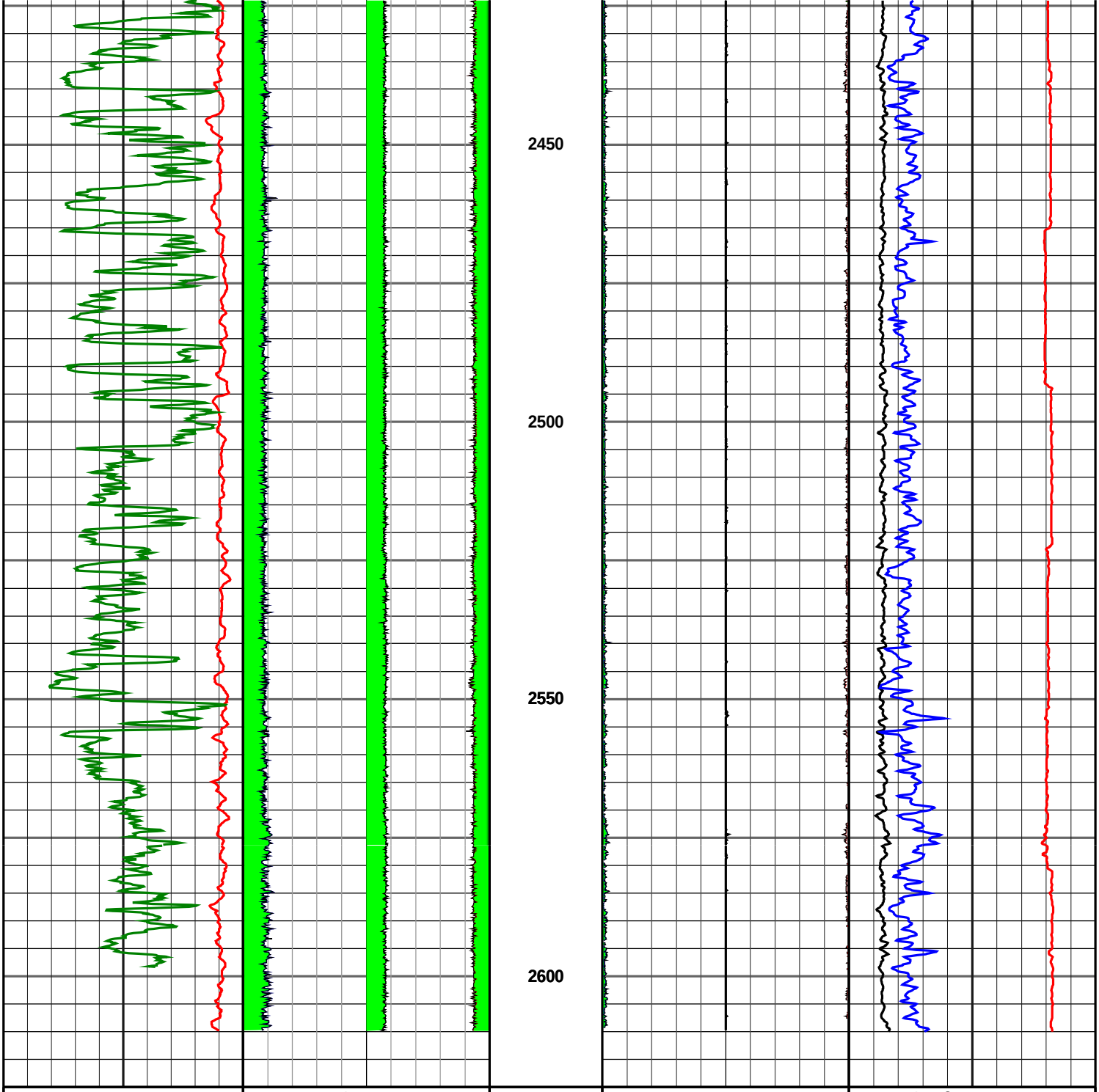


SROP	SAAZ	Depth	SPAX	Surface RPM
500 0	-10 10		0 200	0 300
m/hr	g	1:1000	g	rev per min
SGRC	**SAAY**		**SPAY**	**Torque**
0 200	20 0		200 0	0 50
api	g		g	foot-klb
	SAAX		**SPAZ**	**WOB**
	0 20		-100 100	0 50
	g		g	kilo pounds

INSITE

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Apache Energy Ltd
Fur Seal-1
Exploration
Victoria

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
147.580	0.20	177.10	147.580	0.260 S	0.013 E	-0.260	0.04
202.770	0.44	176.34	202.769	0.569 S	0.032 E	-0.569	0.13
230.700	0.60	175.42	230.698	0.821 S	0.050 E	-0.821	0.17
259.170	0.44	182.26	259.166	1.079 S	0.058 E	-1.079	0.17
316.460	0.19	202.22	316.456	1.388 S	0.014 E	-1.388	0.14
431.050	0.42	169.27	431.044	1.977 S	0.022 E	-1.977	0.08
574.280	0.77	174.99	574.266	3.457 S	0.205 E	-3.457	0.07
631.930	0.59	187.00	631.912	4.138 S	0.203 E	-4.138	0.12
747.010	1.16	234.79	746.979	5.397 S	0.820 W	-5.397	0.23
804.240	1.36	261.58	804.196	5.830 S	1.963 W	-5.830	0.32
825.390	1.41	257.87	825.340	5.921 S	2.465 W	-5.921	0.15
854.170	1.08	262.66	854.113	6.030 S	3.081 W	-6.030	0.36
882.940	1.07	265.44	882.878	6.086 S	3.618 W	-6.086	0.05
911.810	1.19	271.36	911.742	6.100 S	4.189 W	-6.100	0.17
940.400	1.16	271.02	940.326	6.088 S	4.775 W	-6.088	0.04
969.000	1.14	275.16	968.921	6.057 S	5.347 W	-6.057	0.09
997.650	1.07	274.19	997.565	6.012 S	5.898 W	-6.012	0.09
1026.350	1.05	269.72	1026.260	5.994 S	6.426 W	-5.994	0.09
1054.970	0.93	273.03	1054.876	5.983 S	6.920 W	-5.983	0.14
1083.560	0.88	279.71	1083.463	5.934 S	7.368 W	-5.934	0.12
1112.050	0.86	280.50	1111.949	5.858 S	7.794 W	-5.858	0.02
1140.780	0.80	280.28	1140.676	5.782 S	8.205 W	-5.782	0.06
1169.420	0.69	281.95	1169.314	5.711 S	8.571 W	-5.711	0.12
1198.140	0.81	286.36	1198.031	5.618 S	8.934 W	-5.618	0.14
1255.860	1.01	305.38	1255.744	5.211 S	9.736 W	-5.211	0.19
1284.620	0.87	311.34	1284.500	4.921 S	10.105 W	-4.921	0.18
1313.270	0.86	333.94	1313.147	4.585 S	10.362 W	-4.585	0.35
1341.990	0.67	334.23	1341.865	4.241 S	10.529 W	-4.241	0.21
1370.650	0.68	330.15	1370.523	3.942 S	10.687 W	-3.942	0.05
1427.720	0.77	326.65	1427.588	3.328 S	11.066 W	-3.328	0.05
1456.160	0.82	328.79	1456.025	2.995 S	11.277 W	-2.995	0.07
1484.950	0.85	336.79	1484.812	2.622 S	11.468 W	-2.622	0.12
1513.890	0.88	324.92	1513.749	2.244 S	11.680 W	-2.244	0.19
1542.830	0.86	327.87	1542.686	1.878 S	11.923 W	-1.878	0.05
1571.590	0.87	324.35	1571.442	1.517 S	12.166 W	-1.517	0.06
1599.700	0.77	338.40	1599.549	1.166 S	12.360 W	-1.166	0.24
1657.300	0.97	353.39	1657.143	0.322 S	12.559 W	-0.322	0.15
1686.010	0.88	355.80	1685.849	0.138 N	12.603 W	0.138	0.10
1715.080	0.89	6.11	1714.916	0.585 N	12.596 W	0.585	0.16
1743.680	0.78	6.96	1743.513	1.000 N	12.548 W	1.000	0.12
1772.080	0.50	6.19	1771.911	1.316 N	12.511 W	1.316	0.29
1800.650	0.48	16.78	1800.480	1.554 N	12.464 W	1.554	0.10
1829.260	0.58	38.40	1829.089	1.782 N	12.339 W	1.782	0.23
1858.090	0.50	34.50	1857.917	2.000 N	12.178 W	2.000	0.09
1887.200	0.56	59.17	1887.026	2.177 N	11.984 W	2.177	0.24
1916.070	0.69	58.49	1915.894	2.340 N	11.715 W	2.340	0.14
1944.740	0.66	50.11	1944.562	2.536 N	11.442 W	2.536	0.11
1973.020	0.75	60.07	1972.840	2.732 N	11.157 W	2.732	0.16
2001.540	0.62	65.93	2001.358	2.888 N	10.854 W	2.888	0.15
2030.200	0.47	54.96	2030.017	3.020 N	10.615 W	3.020	0.19
2058.700	0.51	43.07	2058.516	3.179 N	10.433 W	3.179	0.11
2087.390	0.51	81.71	2087.205	3.290 N	10.221 W	3.290	0.35
2116.440	0.55	117.19	2116.254	3.244 N	9.970 W	3.244	0.34
2144.780	0.56	102.11	2144.592	3.153 N	9.713 W	3.153	0.16
2231.210	0.95	136.21	2231.015	2.547 N	8.802 W	2.547	0.20
2317.050	0.95	103.22	2316.844	1.871 N	7.619 W	1.871	0.19
2402.730	0.93	77.31	2402.513	1.861 N	6.254 W	1.861	0.15
2431.360	1.07	70.01	2431.139	2.003 N	5.778 W	2.003	0.20
2460.090	1.06	56.97	2459.864	2.239 N	5.303 W	2.239	0.25
2488.890	1.28	60.60	2488.658	2.543 N	4.799 W	2.543	0.24
2517.630	1.41	56.39	2517.390	2.896 N	4.225 W	2.896	0.17
2610.000	1.41	56.39	2609.732	4.153 N	2.333 W	4.153	0.00

HALLIBURTON

Fur Seal-1

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.79 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

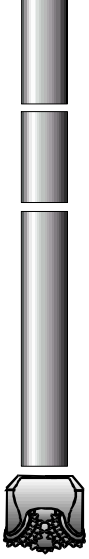
HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.000 METRES
IS 4.764 METRES ALONG 330.68 DEGREES (GRID)

MWD RUN 100 - BHA

	Component Length (m)	Cumulative Length (m)
		267.89
HWDP	138.100	
		129.79
Cross Over Sub	1.100	
		128.69
Drill Collar	17.470	
		111.22
Drilling Jars	9.050	
		102.17
Drill Collar	70.480	
		31.69
Integral Blade Stabilizer	2.150	
		29.54
MWD	19.610	

MWD RUN 100 - MWD

	Sensor Measure Point Distance To Bit (m)
Sonic	
Pulser	
Processor	
Directional	18.360
Processor	



Cross Over Sub

.970

9.93

8.96

9-5/8" SperryDrill Lobe 3/4 - 4M, DI

8.540

PDC

.420

0.42

Gamma Ray

14.980

Resistivity

11.950

MWD RUN 200 - BHA

	Component Length (m)	Cumulative Length (m)
HWDP	110.550	259.78
Drill Collar	18.620	149.23
Drilling Jars	9.680	130.61
Drill Collar	83.680	120.93
MWD	26.920	37.25
Integral Blade Stabilizer	1.530	10.33

MWD RUN 200 - MWD

Sensor Measure Point Distance To Bit (m)

Pulser

Processor

Directional

32.730

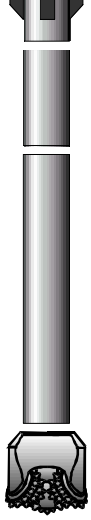
Sonic

Neutron

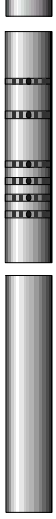
Density

20.400

Processor



Float Sub	.880	8.80
		7.92
9-5/8" SperryDrill Lobe 3/4 - 4M, Dl	7.700	
PDC	.220	0.22



Resistivity		13.720
Gamma Ray		11.510

Sperry Drilling Services

MWD

DDS Drillstring Dynamics

Company	: Apache Energy Ltd
Rig	: Ocean Patriot
Well	: Fur Seal-1
Field	: Exploration
Country	: Australia
DOE Number	:

LOCATION

Latitude	: 38° 7' 47.91" South
Longitude	: 148° 9' 8.44" East
UTM Easting =	600,995.50 m
UTM Northing =	5,779,136.70 m

Other Services

Country	: Australia
Field	: Exploration
Location	: Lat: 38° 7' 47.91" South Long: 148° 9' 8.44" East
Well	: Fur Seal-1
Company	: Apache Energy Ltd
Rig	: Ocean Patriot

Permanent Datum	: AHD	Elevation :	0.00 m	
Log Measured From	: Drill Floor	21.50 m	Above Permanent Datum	
Drilling Measured From	: Drill Floor			

TIME LOG

Unit No.	: 182	Job No.	:	AU-FE-0003890148
Plot Type	: Final			
Plot Date	: 08-Nov-05			

Elev.	KB					
	DF	21.50 m				
	GL					
	WD	56.62 m				

Depth Logged	: 111.70 m	2,610.00 m				
Date Logged	: 25-Oct-05	To 01-Nov-05				
Total Depth MD	: 2,610.00 m	TVD: 2,609.73 m				
Spud Date	: 24-Oct-05					

Run No.	Borehole Record (MD) Size	From	To
2	311.000 mm	111.70 m	824.00 m
3	216.000 mm	824.00 m	2,610.00 m

Run No.	Casing Record (MD) Size	Weight	From	To
	762.000 mm	307.00 kg/m	80.10 m	111.00 m
	340.000 mm	101.20 kg/m	80.10 m	817.60 m

Run No.	Borehole Record (MD) Size	From	To

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	26-Oct-05	01-Nov-05			
Rig Bit Number	2	3			
Bit Size (mm)	311	216			
Tool Nominal OD (mm)	203	171			
Log Start Depth (MD, m)	111.7	824.0			
Log End Depth (MD, m)	824.0	2,610.0			
Drill or Wipe	Drilling	Drilling			
Drill/Wipe Start Date and Time	25-Oct-05 04:40	28-Oct-05 05:10			
Drill/Wipe End Date and Time	25-Oct-05 23:59	01-Nov-05 01:45			
Min Inc (deg) @ Depth (MD, m)	0.19 @ 316.46	0.47 @ 2,030.20			
Max Inc (deg) @ Depth (MD, m)	1.36 @ 804.24	1.41 @ 2,517.63			
Bit TFA(in2) / Bit Type	1.740 / Security FS2563	1.11 / Smith S73VPX			
Flow Rate (gpm)	1,060	600			
Max AV (mpm) / CV (mpm) @ MWD	N/A / N/A	181.5 / 137.2			
Fluid Type	Seawater/PHG	KCl/PHPA			
Density (sg) / Viscosity (spqt)	1.1 / N/A	1.2 / 67.0			
Filtrate CL (ppm)	N/A	47,000			
pH / Fluid Loss (mptm)	N/A / N/A	8.9 / 4.8			
PV (cp) / YP (lhf2)	N/A / N/A	26 / 18.5			
% Solids / % Sand	N/A / N/A	14 / 0.6			
% Oil / Oil:Water Ratio	N/A / N/A	N/A / 0:91			
Rm @ Measured Temp (degC)	N/A @ N/A	0.11 @ 24.0			
Rmf @ Measured Temp (degC)	N/A @ N/A	0.09 @ 22.0			
Rmc @ Measured Temp (degC)	N/A @ N/A	0.25 @ 24.0			
Max Tool Temp (degC) / Source	25.0 / EWR-P4	78.0 / EWR-P4			
Rm @ Max Tool Temp (degC)	N/A @ 25.0	0.05 @ 78.0			
Lead MWD Engineer	A. Oraekwuotu	A. Oraekwuotu/A.Rule			
Customer Representative	J. Herriot	J. Herriot			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	68.18	68.18			
Sub Serial Number	198838	195232			
Insert Serial Number	074608	209729			
Logging String Serial Number	90086009H1GVR8	90086708H1RGV6			
Date and Time Initialized	25-Oct-05 03:08	28-Oct-05 12:54			
Date and Time Read	26-Oct-05 05:54:00	01-Nov-05 14:23:00			

Directional Sensor Information

Tool Type	PM	PM			
Distance From Bit (m)	18.36	32.73			
Software Version	N/A	N/A			
Sub Serial Number	124777	178482			
Sonde Serial Number	022873	126995			
Sensor ID Number	022873	126995			
Survey String Serial Number	90086411M8	90082559			
Toolface Offset (deg)	N/A	N/A			

Drillstring Dynamics Sensor Information

Tool Type	DDS	DDS			
Distance From Bit (m)	0	0			
Recorded Sample Period (sec)	12	8			
Software Version	0.37	0.50			
Sub Serial Number	210651	064636			
Insert Serial Number	184694	53520			
Sensor ID Number	1004	126			

REMARKS

1. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.

2. AV/CV is calculated at the MWD collar using the Power Law for water based muds and is in m/min.

3. Curve mnemonics are :

SAAX - Smoothed Average X-Axis Accelerometer, g's (Sperry)
SAAY - Smoothed Average Y-Axis Accelerometer, g's (Sperry)
SAAZ - Smoothed Average Z-Axis Accelerometer, g's (Sperry)
SPAX - Smoothed Peak X-Axis Accelerometer, g's (Sperry)
SPAY - Smoothed Peak Y-Axis Accelerometer, g's (Sperry)
SPAZ - Smoothed Peak Z-Axis Accelerometer, g's (Sperry)
WOB - Weight on Bit, klb (GeoServices)
RPM - Surface Drillstring Revolutions per minute, rpm (GeoServices)
TORQUE - Surface Torque, ft-klbs (GeoServices)

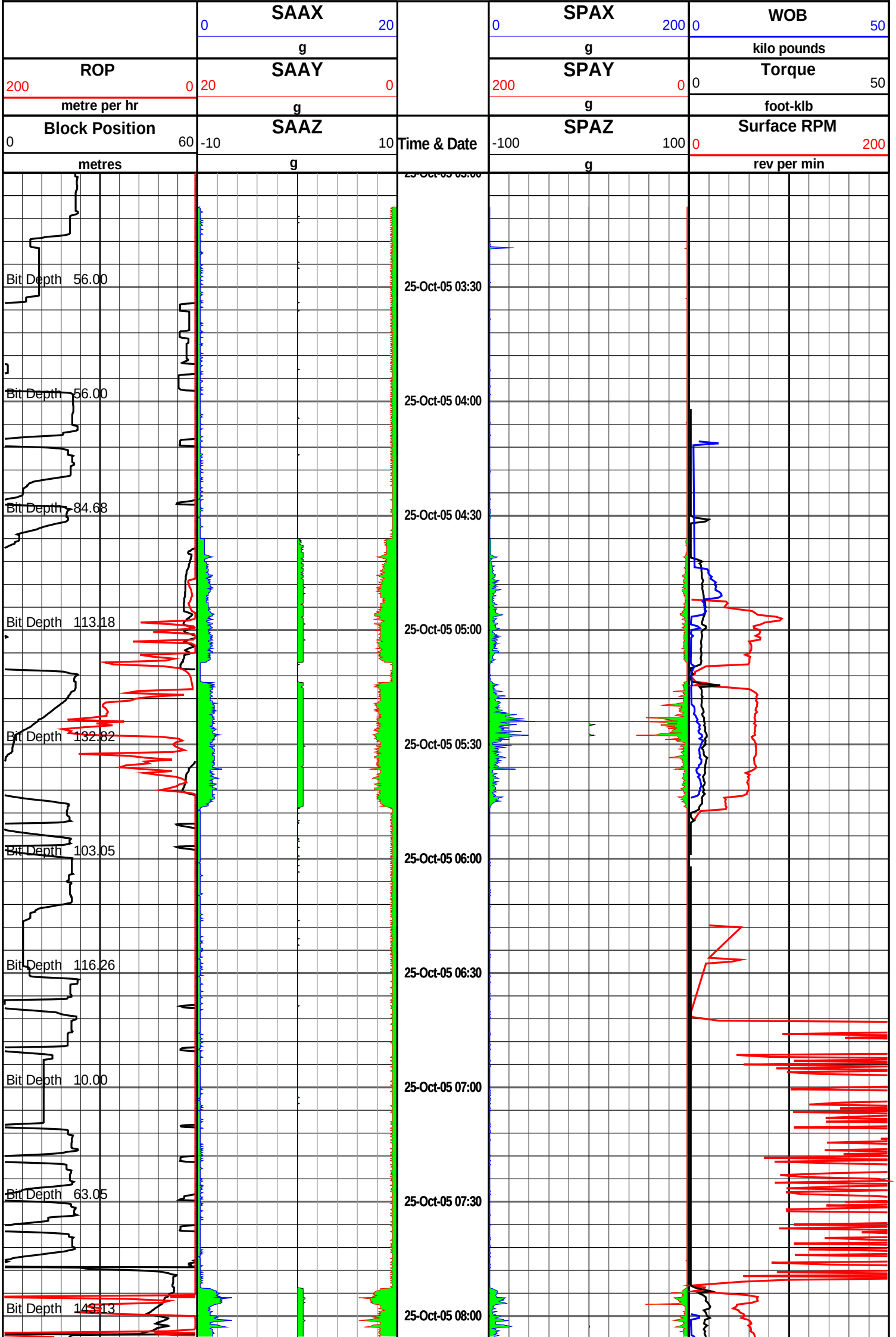
WARRANTY

HALLIBURTON ENERGY SERVICES (HES) WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HES CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HES MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HES.

Run 100 : 311 mm Hole Section

Drilled from 111.7 to 824.0 mMDRT

03:00 hrs 25th October - 03:30 hrs 26th October 2005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0
20
g
SPAX
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200
g
WOB
0
50
kilo pounds
ROP
200
0
metre per hr
SAAY
20
0
g
SPAY
200
0
g
Torque
0
50
foot-klb
Block Position
0
60
metres
SAAZ
-10
10
g
Time & Date
SPAZ
-100
100
g
Surface RPM
0
200
rev per min
Bit Depth 56.00
Bit Depth 56.00
Bit Depth 84.68
Bit Depth 113.18
Bit Depth 132.82
Bit Depth 103.05
Bit Depth 116.26
Bit Depth 10.00
Bit Depth 63.05
Bit Depth 143.13
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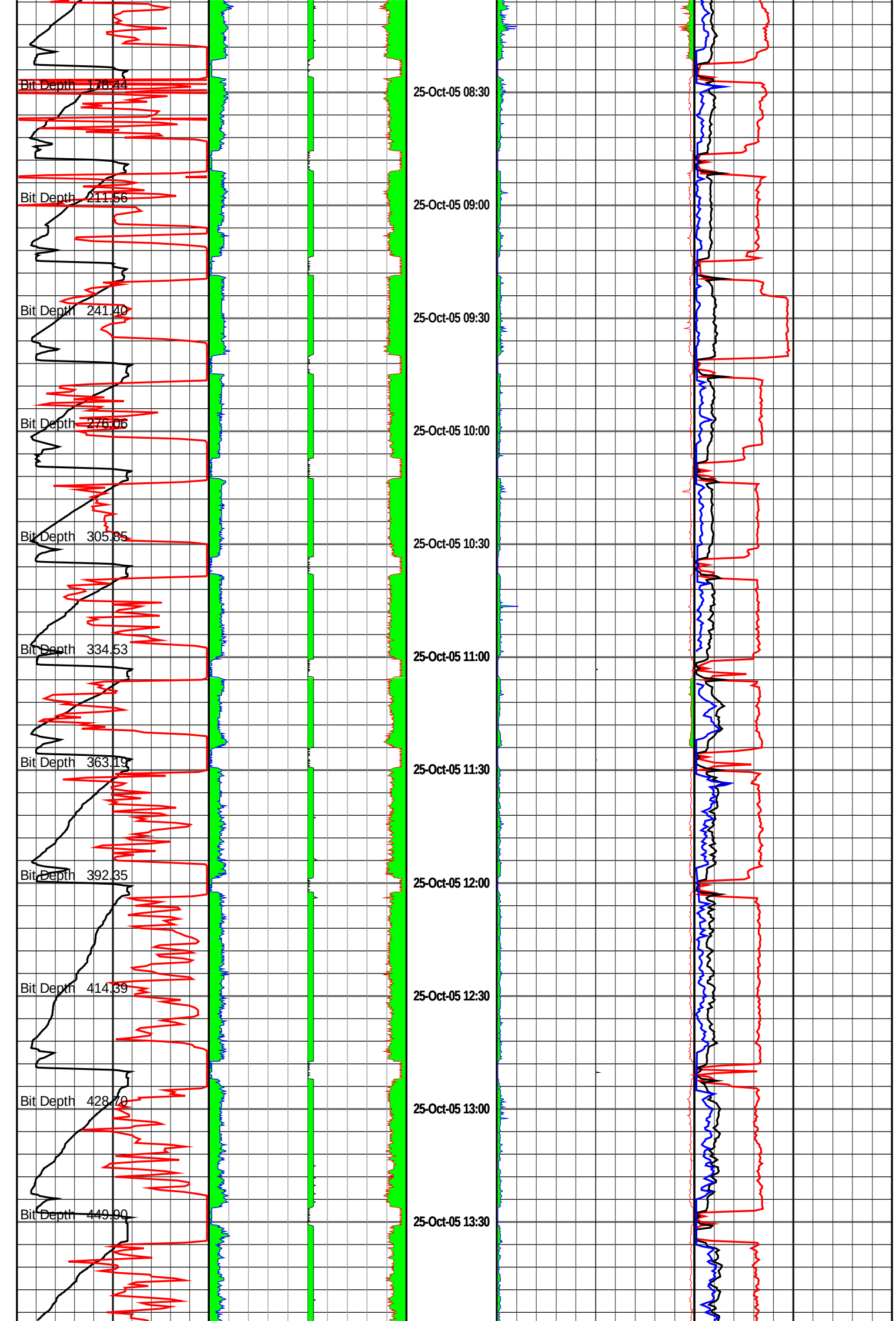
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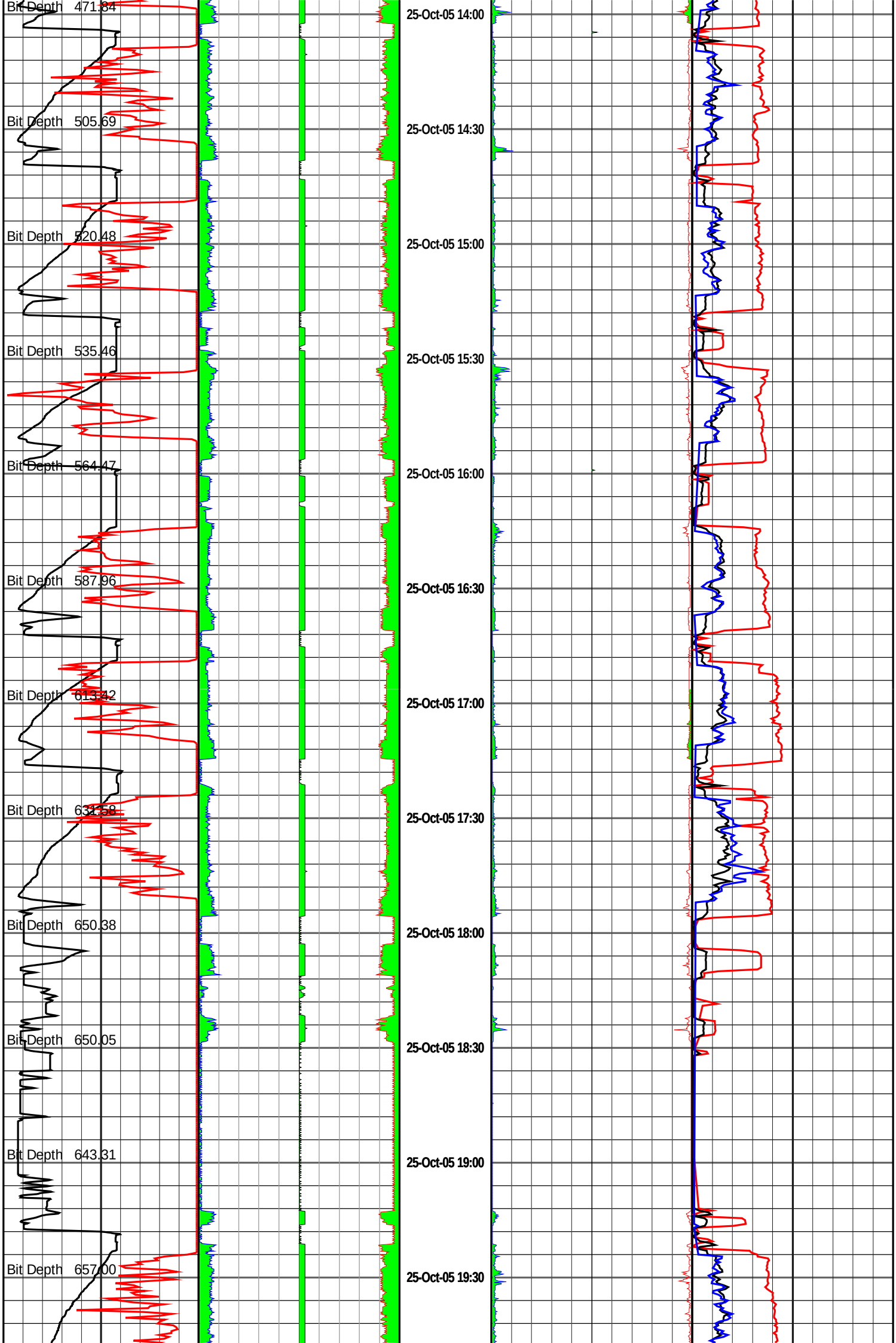
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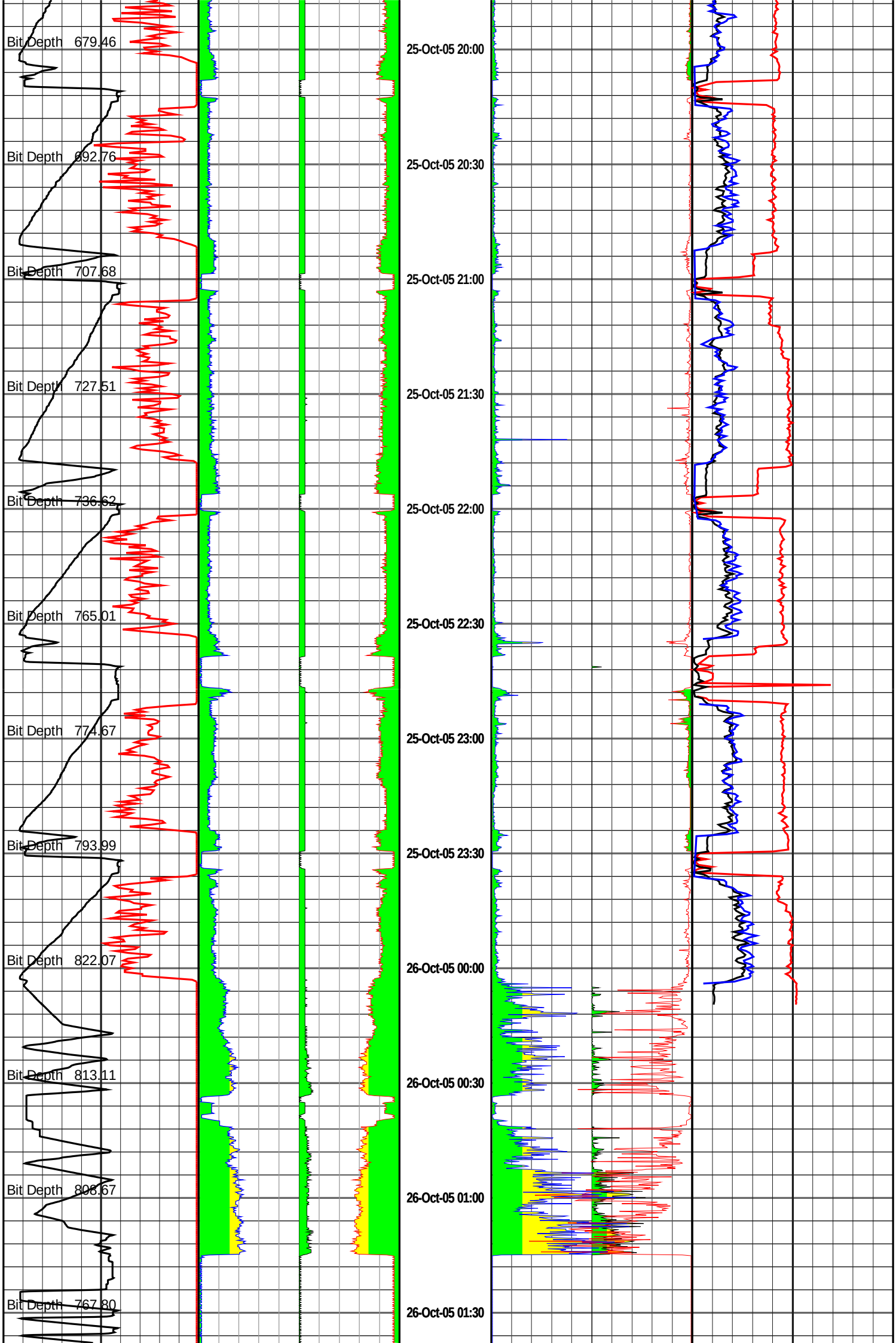
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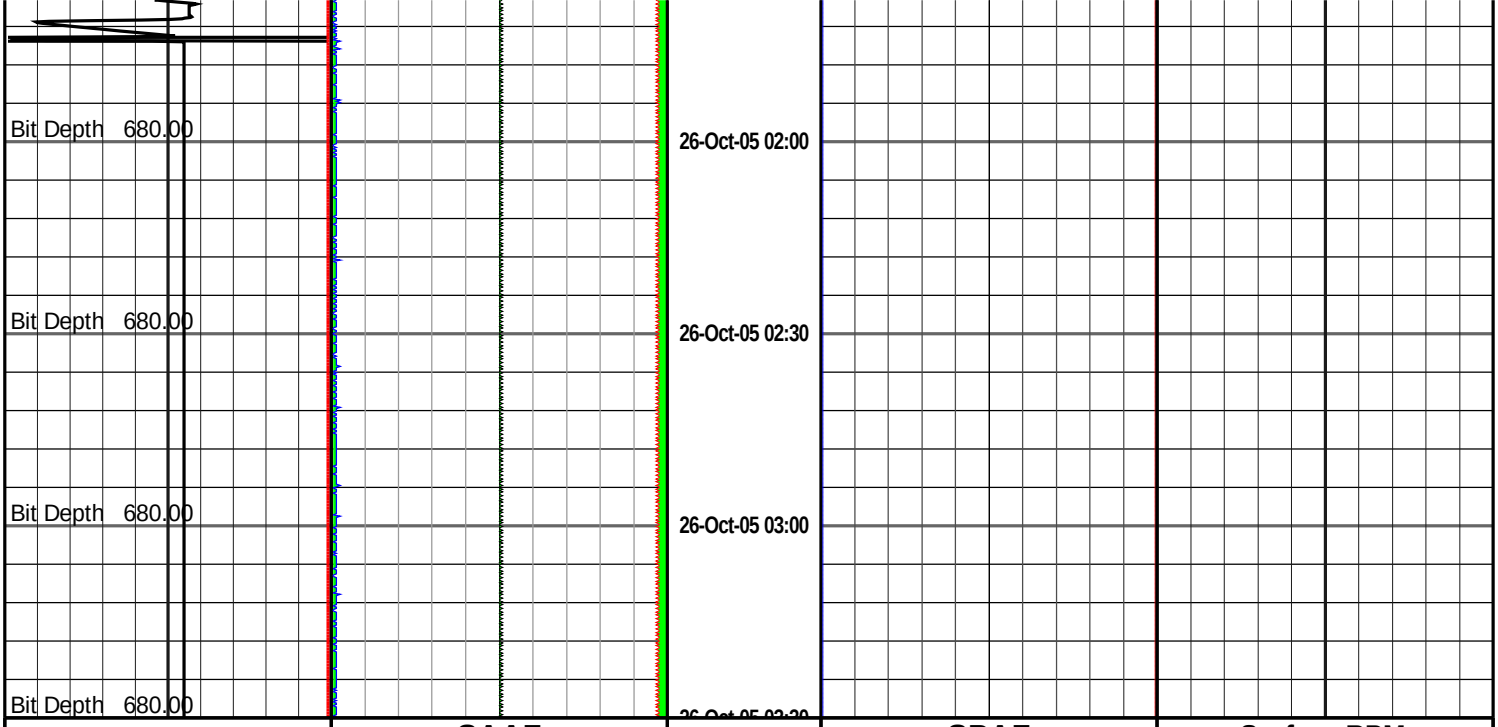


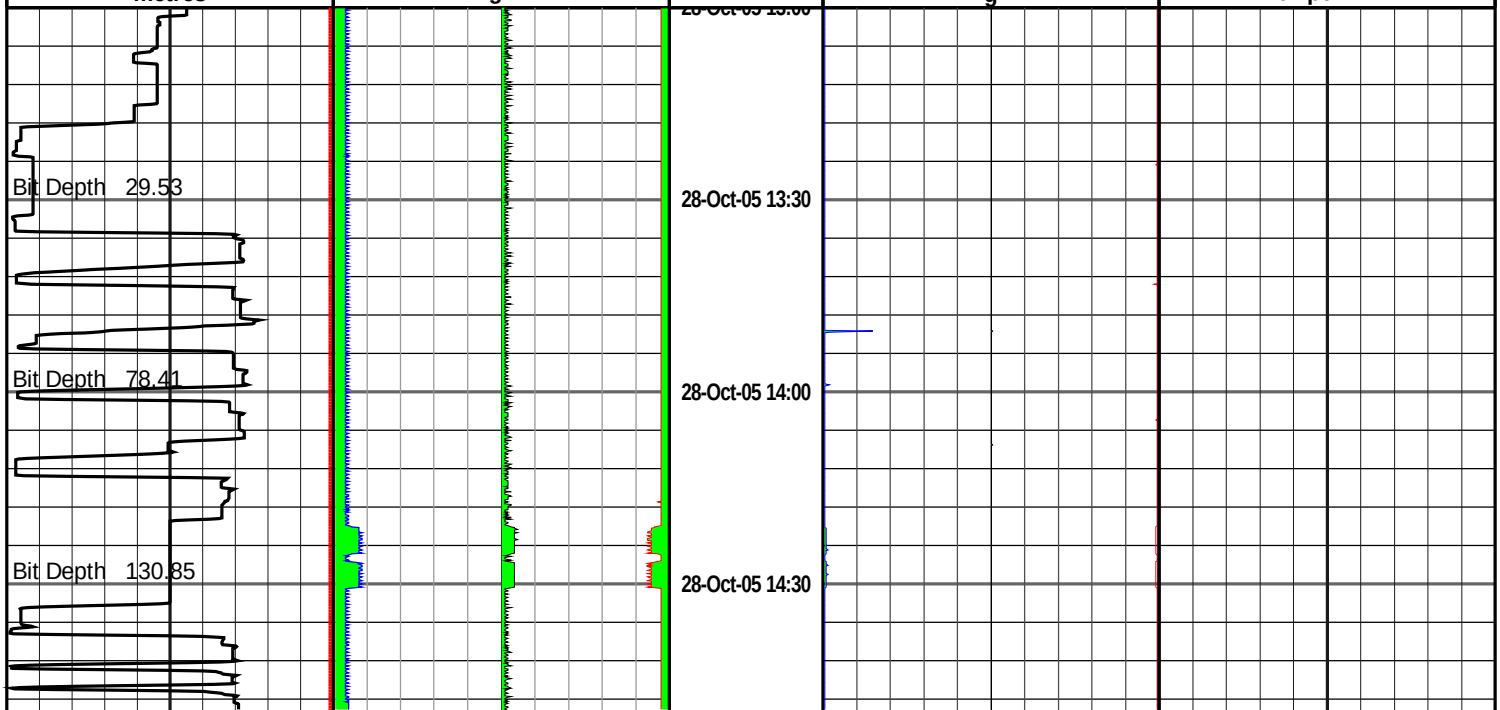
Block Position	SAAZ	Time & Date	SPAZ	Surface RPM
0 60	-10 10		-100 100	0 200
metres	g		g	rev per min
ROP	**SAAY**		**SPAY**	**Torque**
200 0	20 0		200 0	0 50
metre per hr	g		g	foot-klb
	SAAX		**SPAX**	**WOB**
	0 20		0 200	0 50
	g		g	kilo pounds

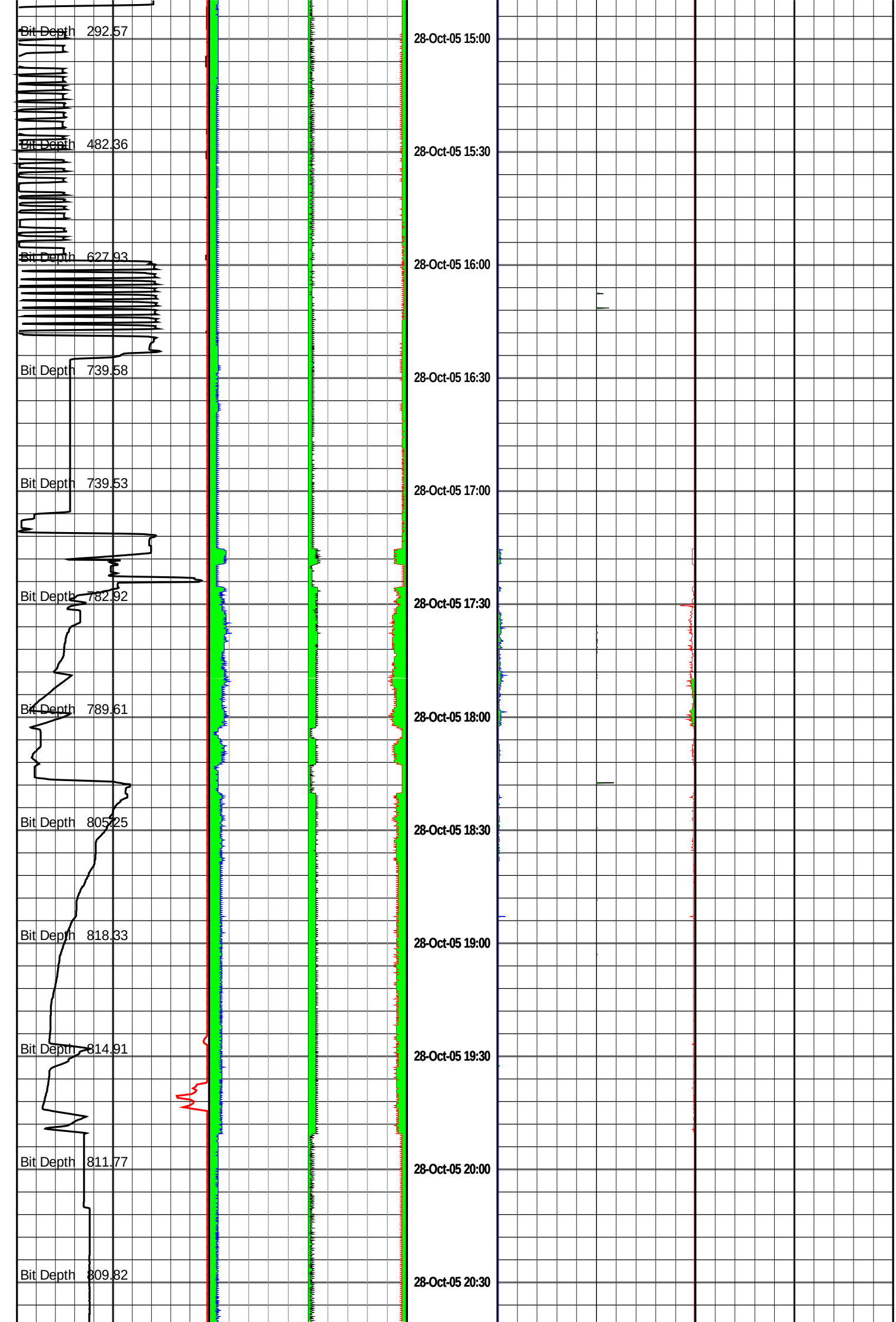
Run 200 : 216 mm Hole Section

Drilled from 824.0 to 2610.0 mMDRT

13:00 hrs 28th October - 14:00 hrs 1st November 2005

	SAAX		SPAX	WOB
	0 20		0 200	0 50
	g		g	kilo pounds
ROP	**SAAY**		**SPAY**	**Torque**
200 0	20 0		200 0	0 50
metre per hr	g		g	foot-klb
Block Position	**SAAZ**	**Time & Date**	**SPAZ**	**Surface RPM**
0 60	-10 10		-100 100	0 250
metres	g		g	rev per min

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Bit Depth 818.33
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Bit Depth 811.77
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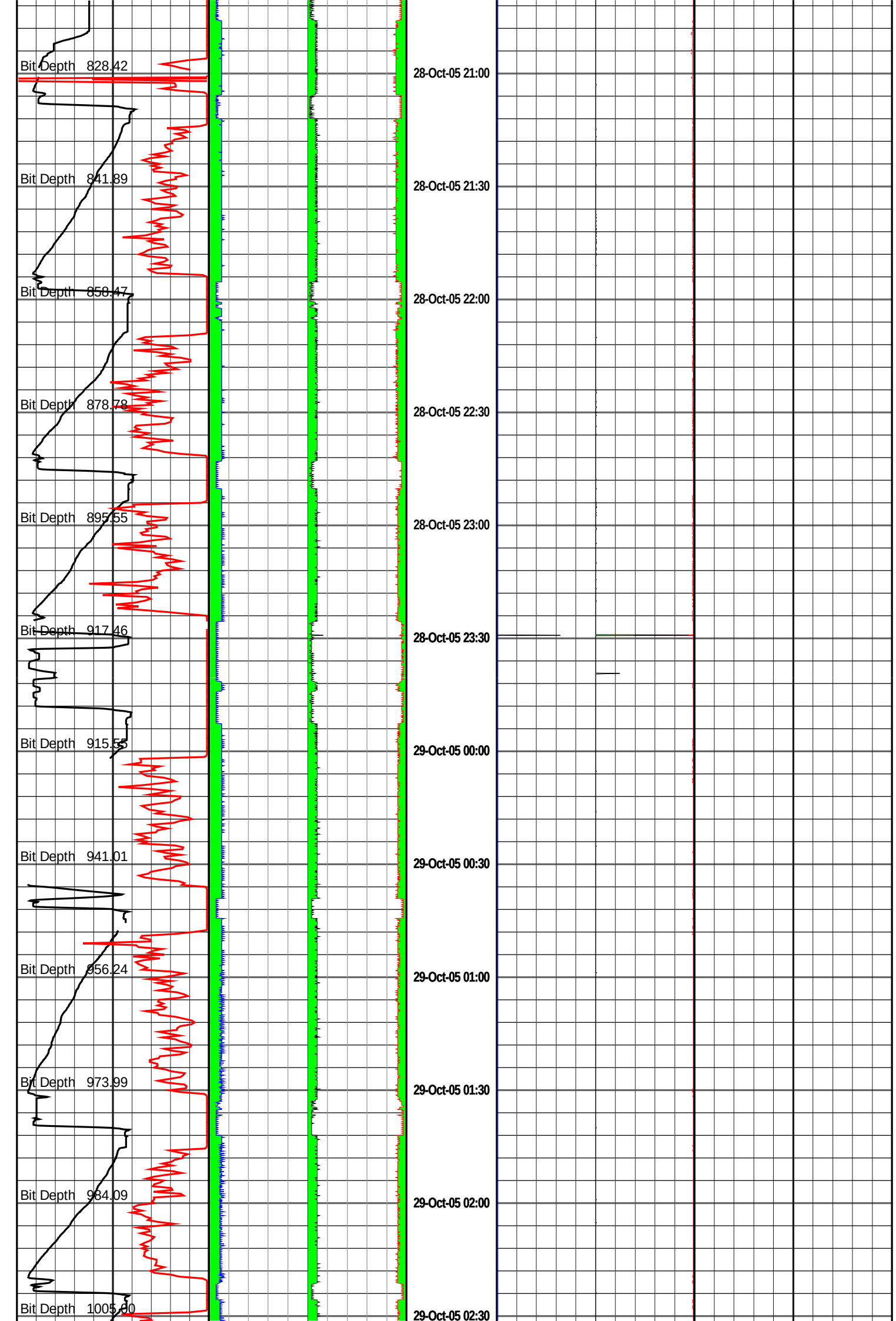
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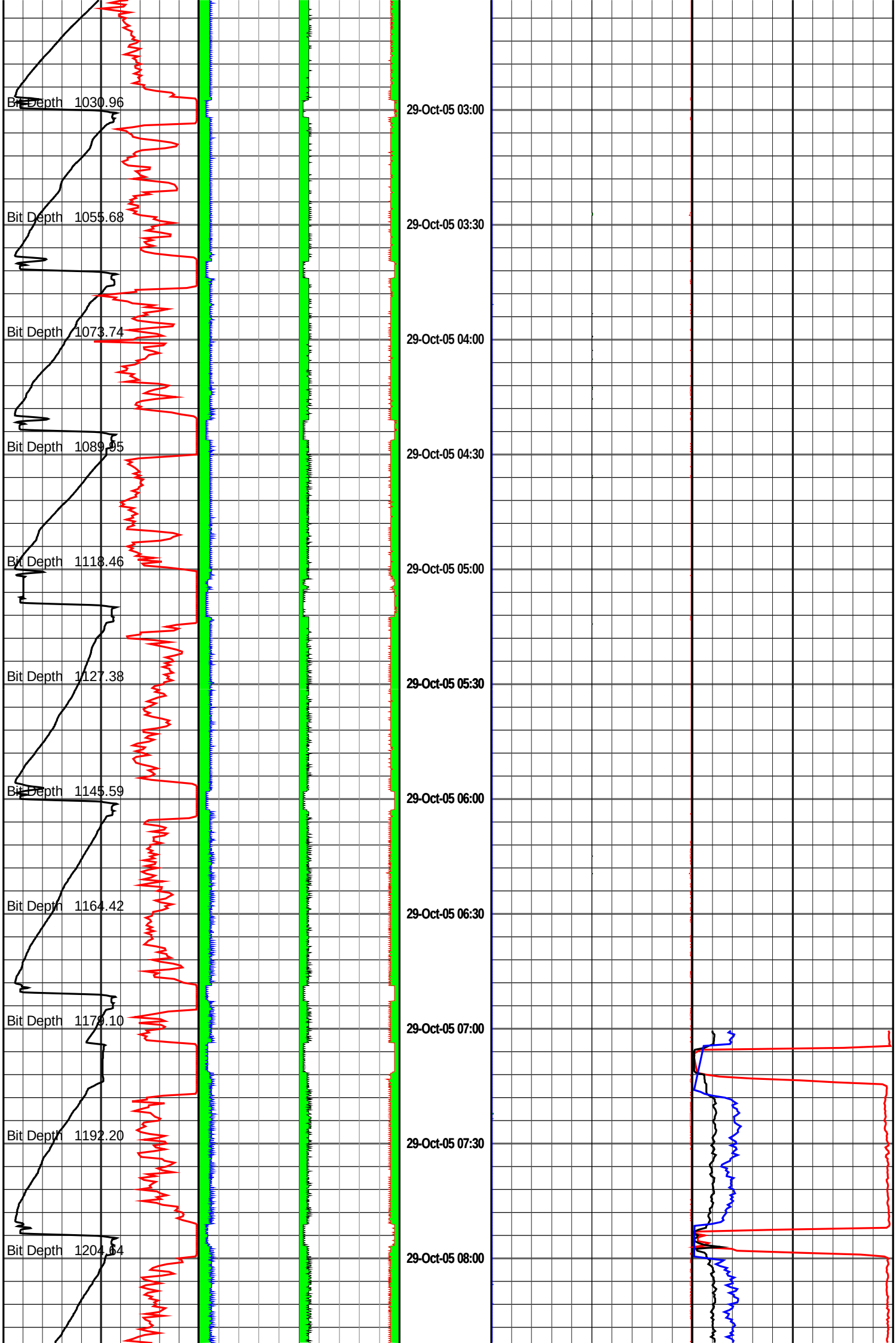
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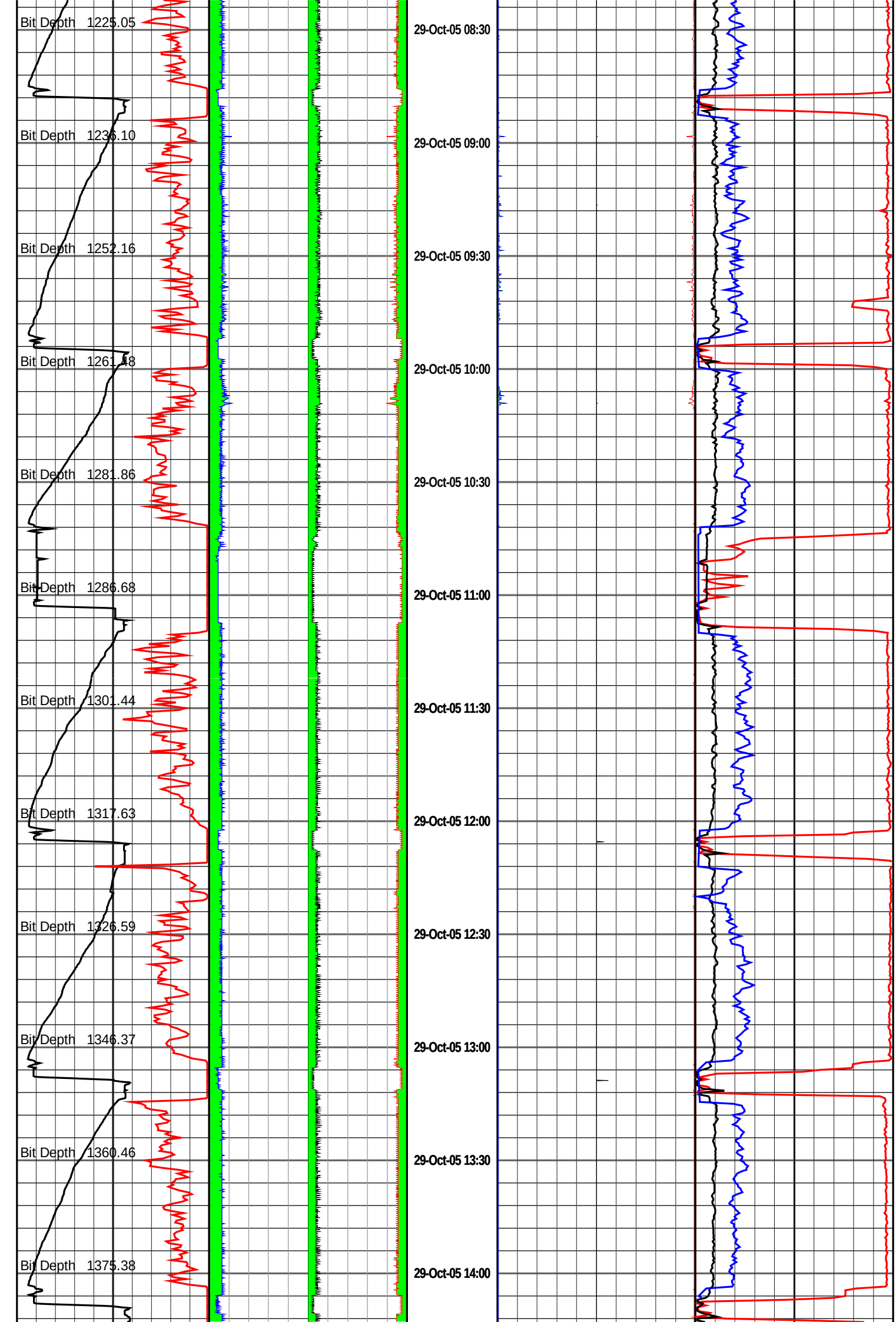
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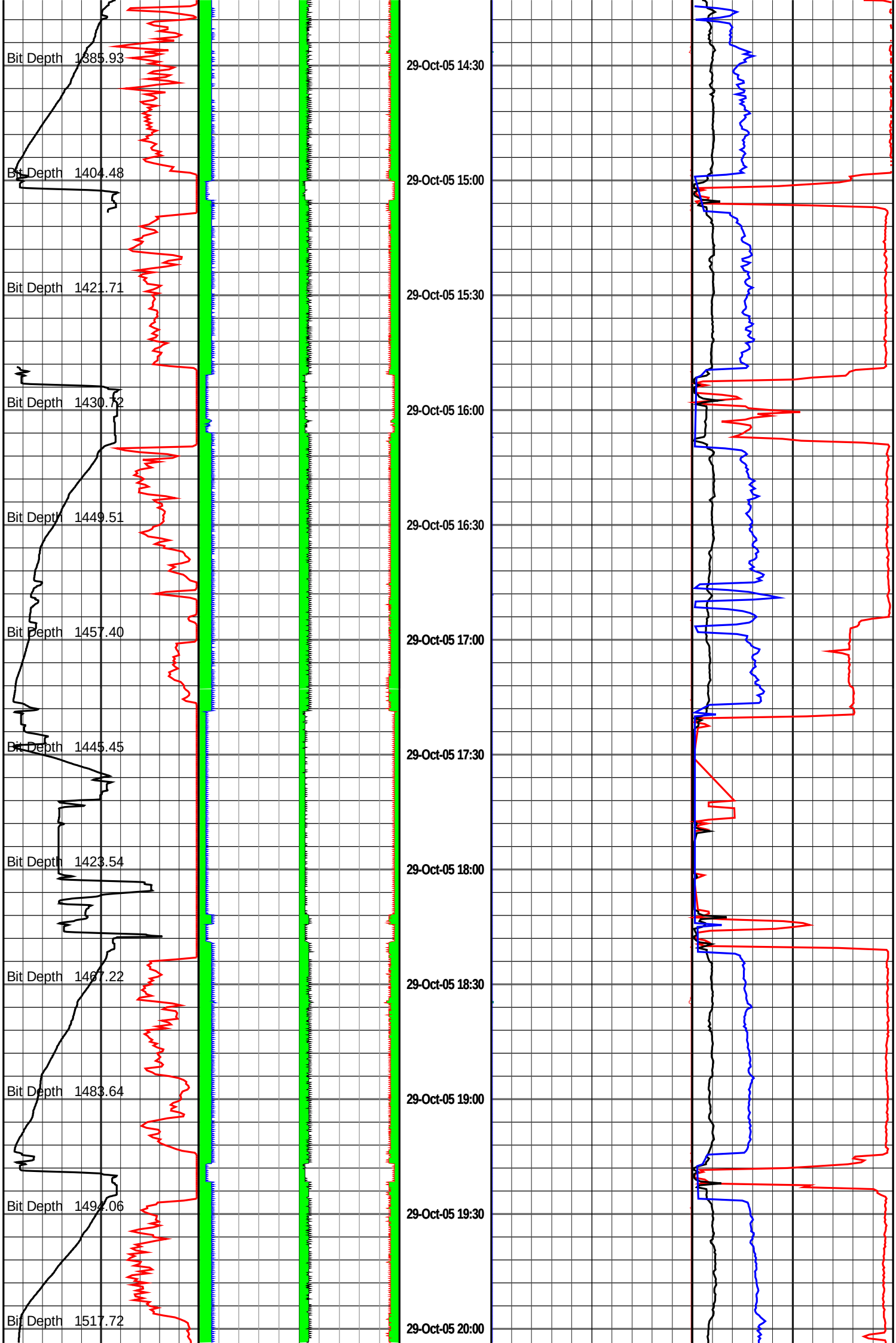
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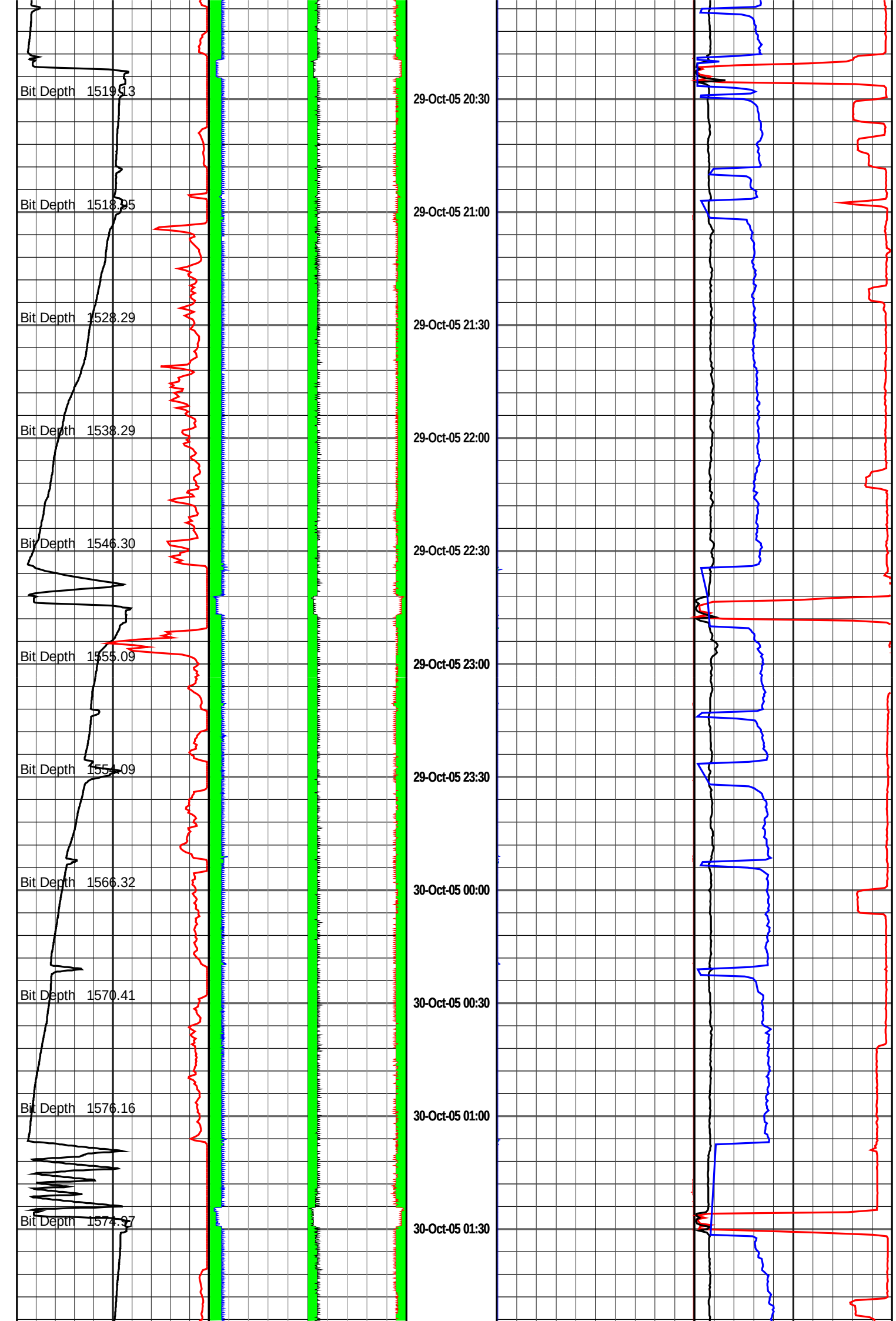
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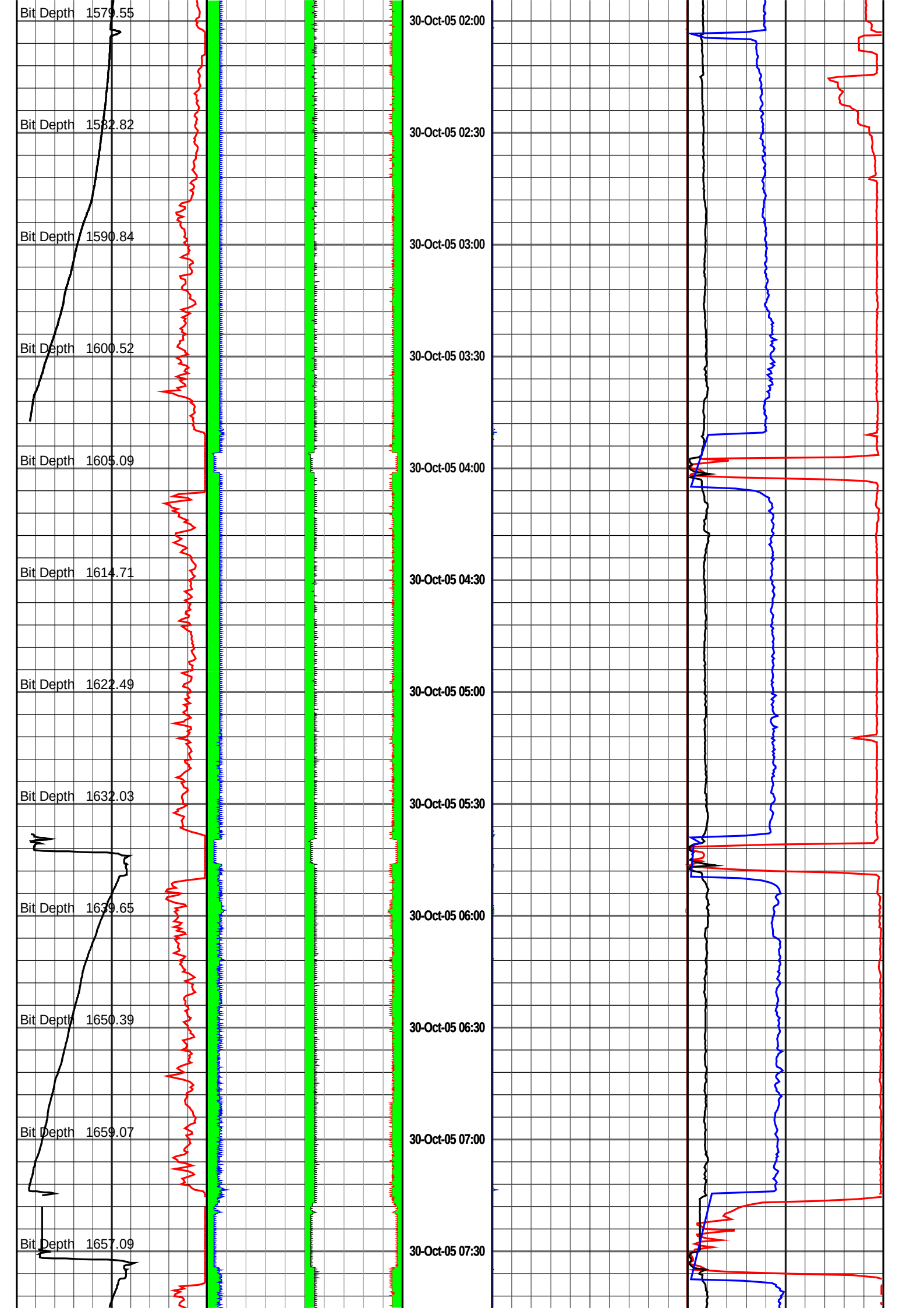
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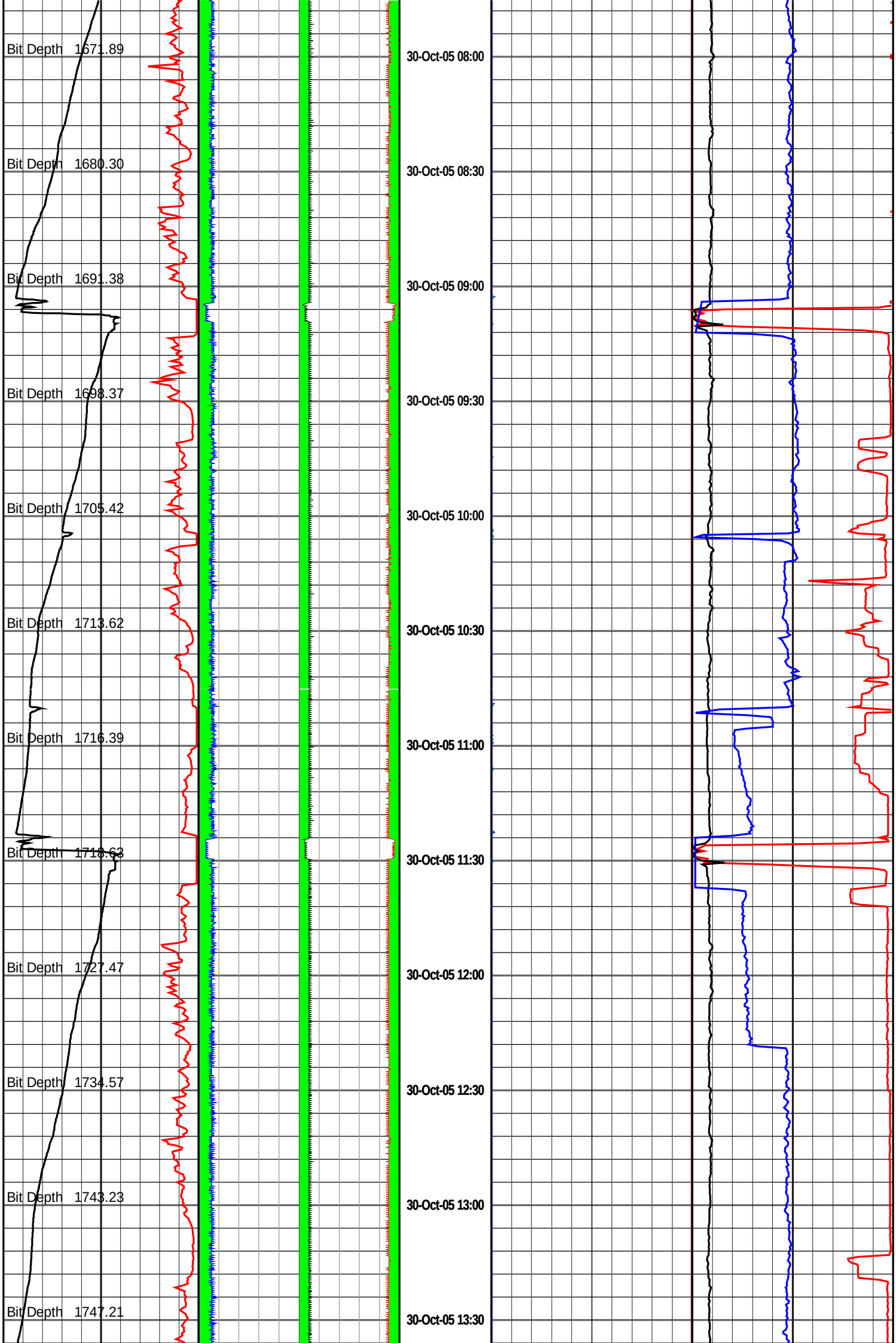
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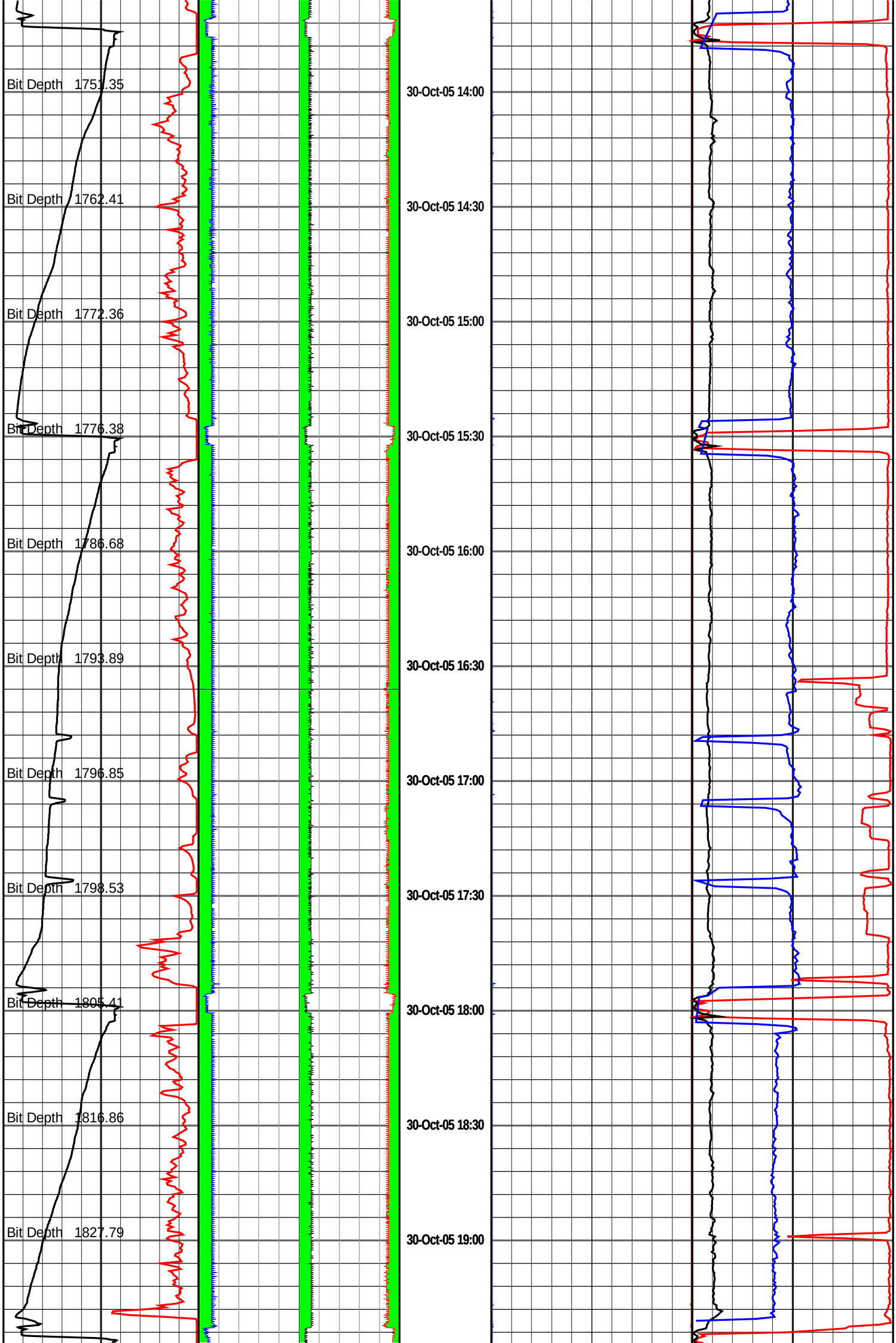
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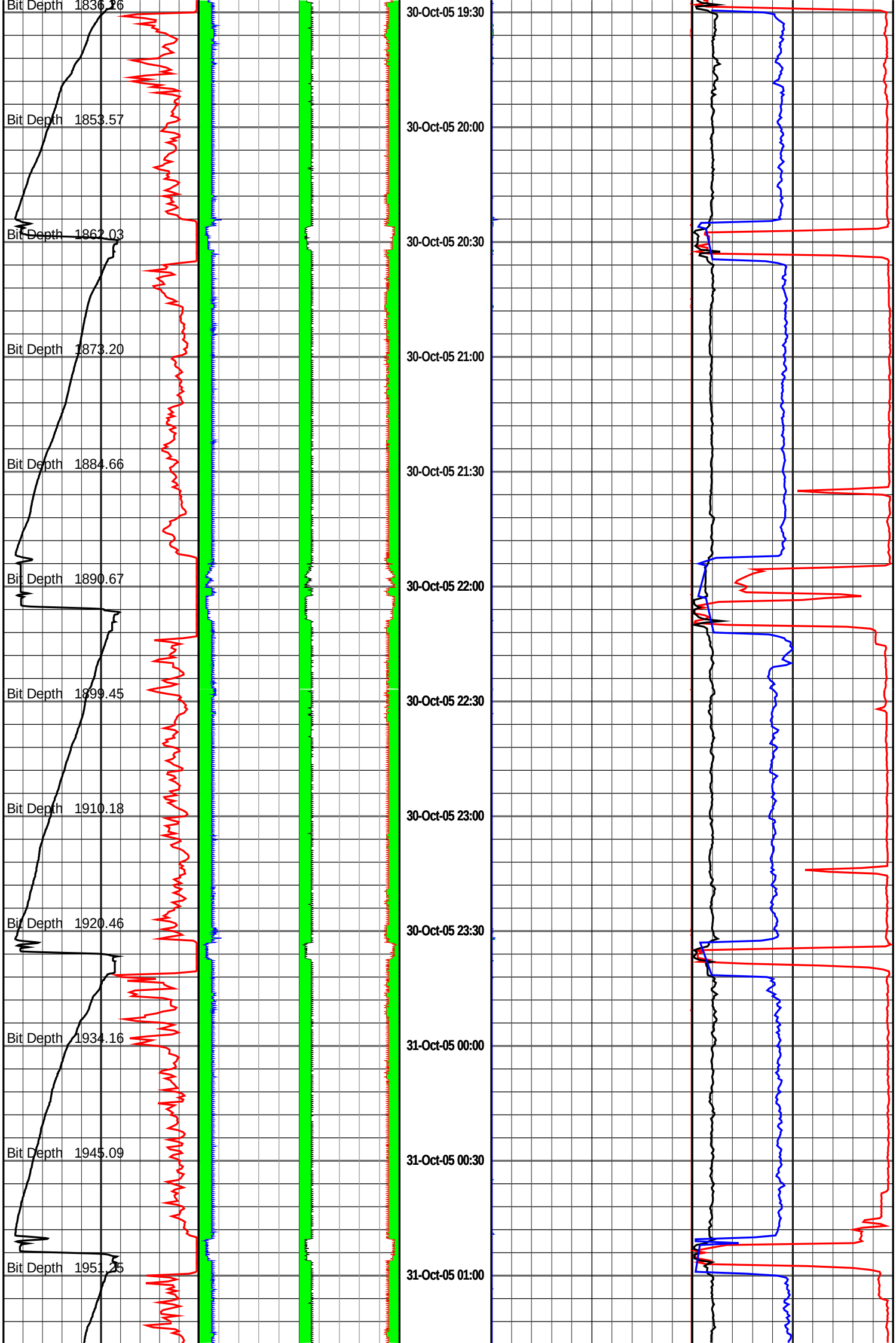
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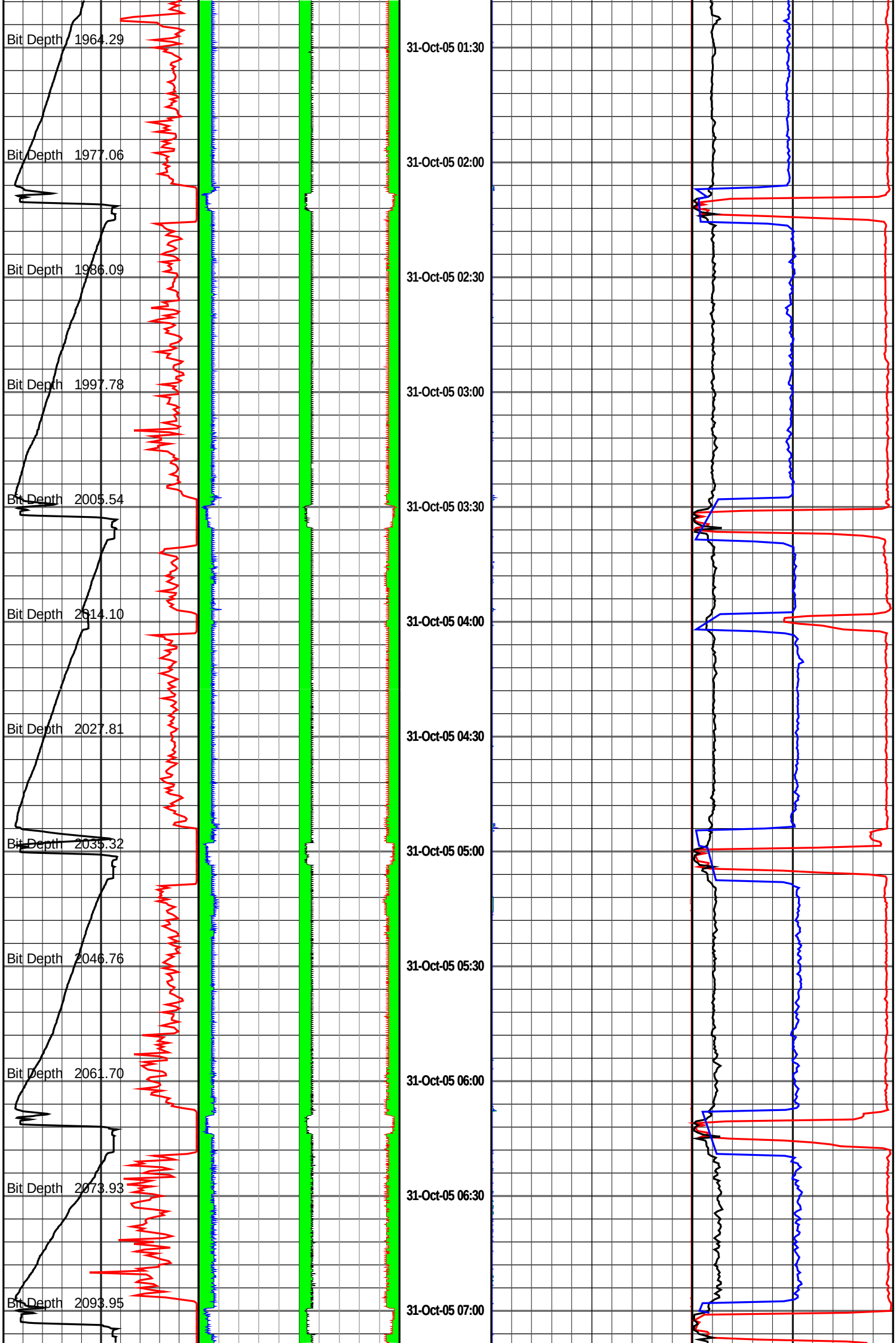
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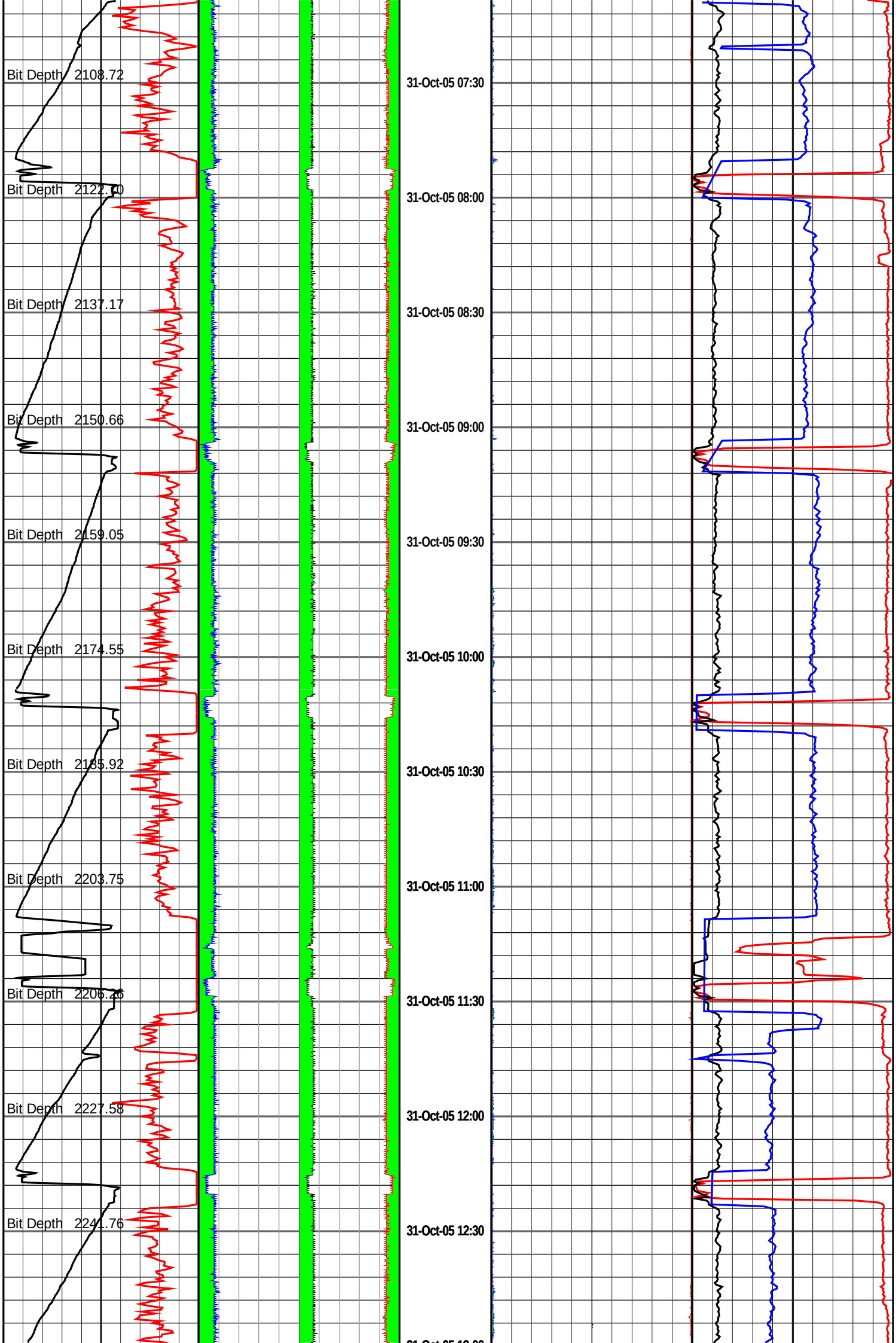
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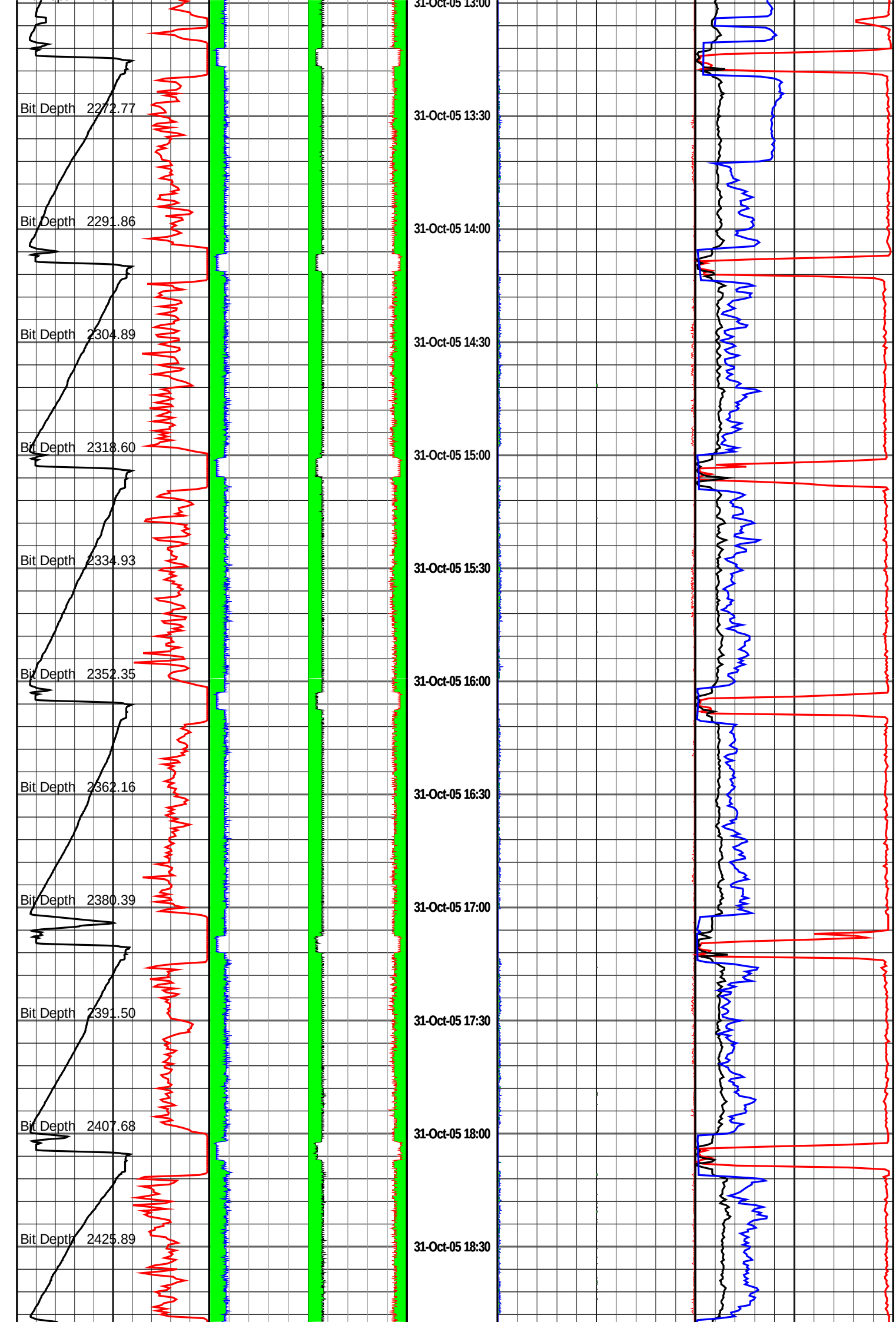
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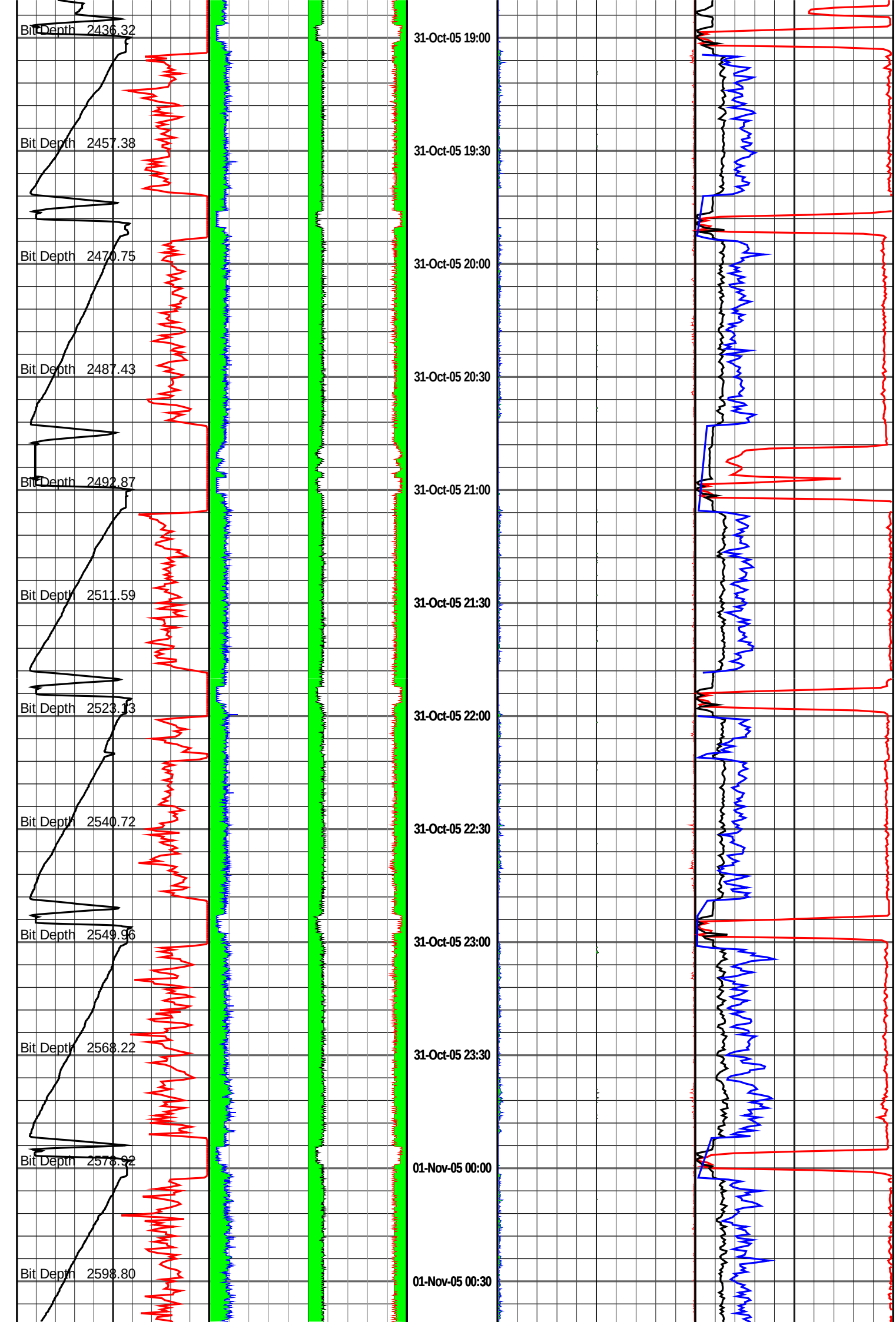
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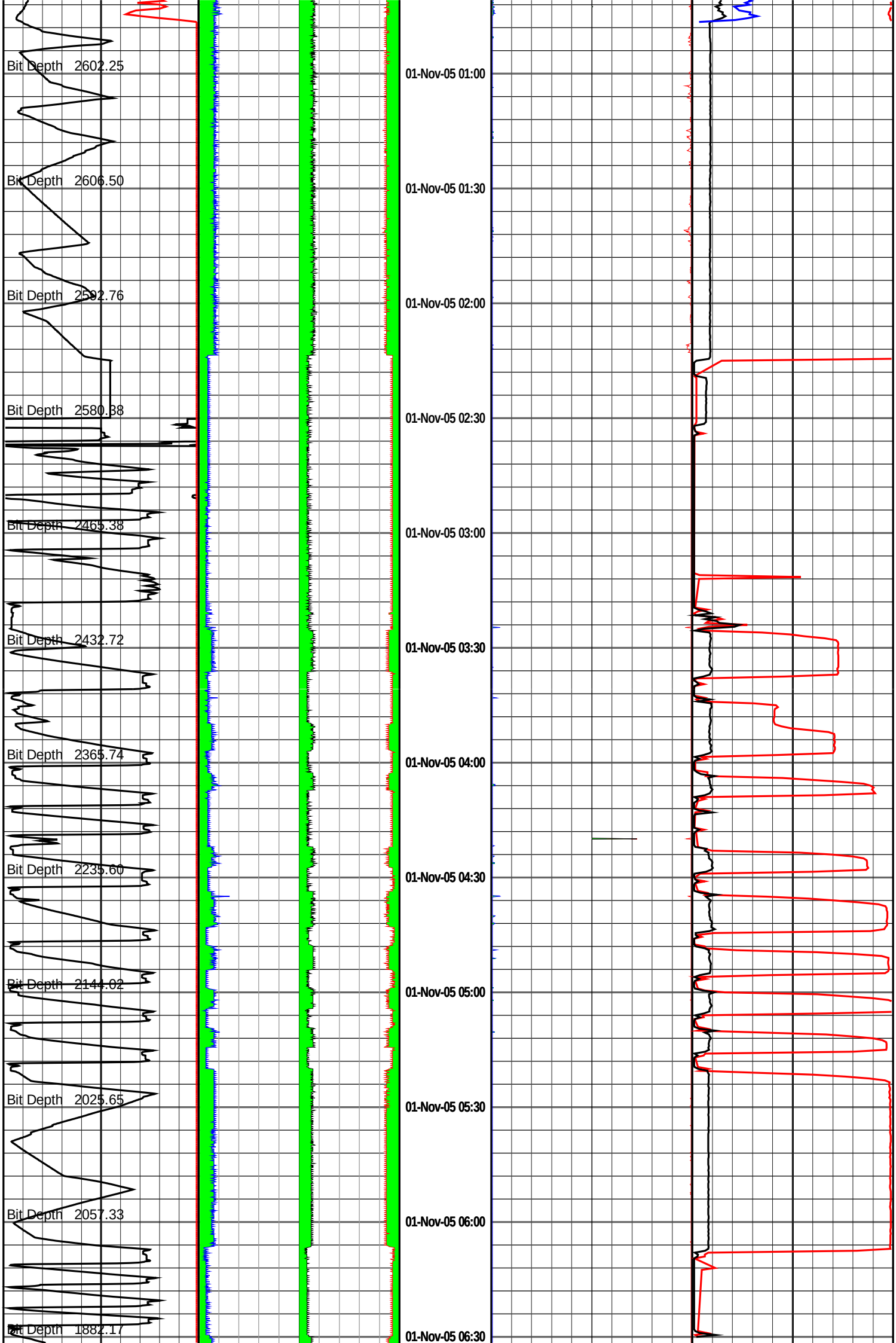
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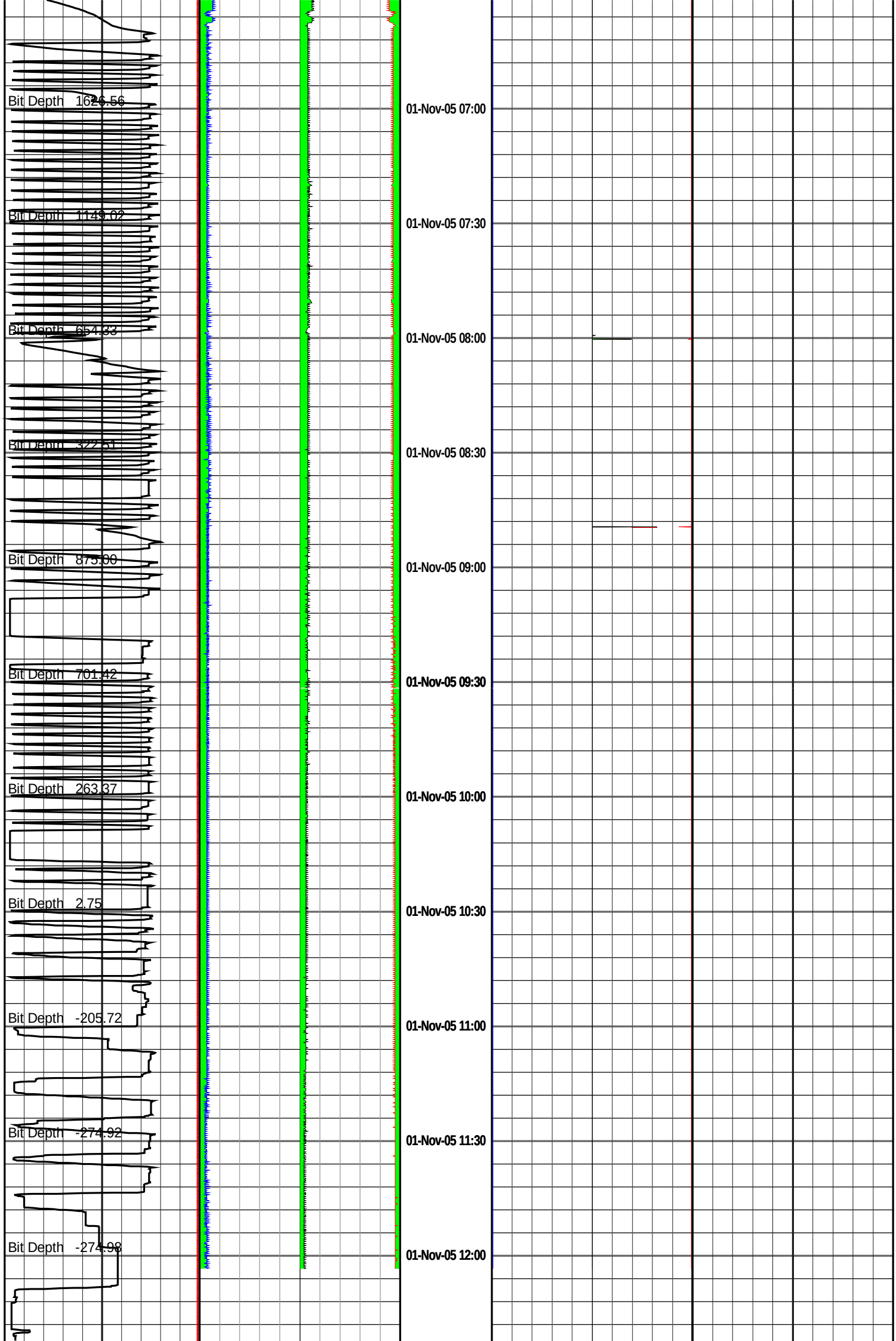
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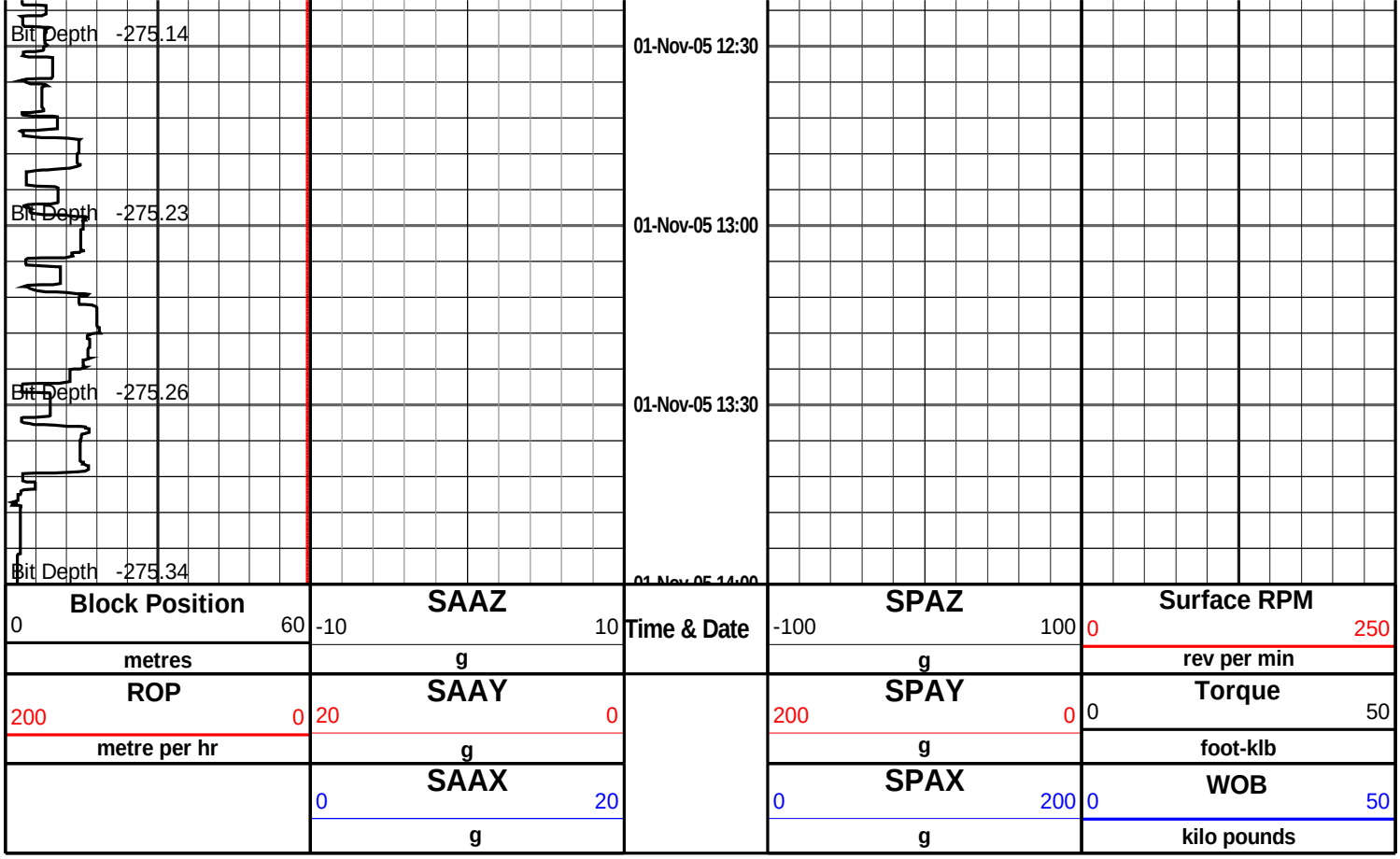
Bit Depth -274.92
Bit Depth -274.98
01-Nov-05 07:00
01-Nov-05 07:30
01-Nov-05 08:00
01-Nov-05 08:30
01-Nov-05 09:00
01-Nov-05 09:30
01-Nov-05 10:00
01-Nov-05 10:30
01-Nov-05 11:00
01-Nov-05 11:30
01-Nov-05 12:00



INSITE

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Apache Energy Ltd
Fur Seal-1
Exploration
Victoria
Australia
AU-FE-0003890148
Final Survey projected to TD. RT to AHD = 21.5m.

Measured Depth (metres)	*Inclination (degrees)*	*Direction (degrees)*	*Vertical Depth (metres)*	*Latitude (metres)*	*Departure (metres)*	*Vertical Section (metres)*	*Dogleg (deg/30m)*
0.000	0.00	0.00	0.000	0.000 N	0.000 E	0.000	TIE-IN
147.580	0.20	177.10	147.580	0.260 S	0.013 E	-0.260	0.04
202.770	0.44	176.34	202.769	0.569 S	0.032 E	-0.569	0.13
230.700	0.60	175.42	230.698	0.821 S	0.050 E	-0.821	0.17
259.170	0.44	182.26	259.166	1.079 S	0.058 E	-1.079	0.17
316.460	0.19	202.22	316.456	1.388 S	0.014 E	-1.388	0.14
431.050	0.42	169.27	431.044	1.977 S	0.022 E	-1.977	0.08
574.280	0.77	174.99	574.266	3.457 S	0.205 E	-3.457	0.07
631.930	0.59	187.00	631.912	4.138 S	0.203 E	-4.138	0.12
747.010	1.16	234.79	746.979	5.397 S	0.820 W	-5.397	0.23
804.240	1.36	261.58	804.196	5.830 S	1.963 W	-5.830	0.32
825.390	1.41	257.87	825.340	5.921 S	2.465 W	-5.921	0.15
854.170	1.08	262.66	854.113	6.030 S	3.081 W	-6.030	0.36
882.940	1.07	265.44	882.878	6.086 S	3.618 W	-6.086	0.05
911.810	1.19	271.36	911.742	6.100 S	4.189 W	-6.100	0.17
940.400	1.16	271.02	940.326	6.088 S	4.775 W	-6.088	0.04
969.000	1.14	275.16	968.921	6.057 S	5.347 W	-6.057	0.09
997.650	1.07	274.19	997.565	6.012 S	5.898 W	-6.012	0.09
1026.350	1.05	269.72	1026.260	5.994 S	6.426 W	-5.994	0.09
1054.970	0.93	273.03	1054.876	5.983 S	6.920 W	-5.983	0.14

HALLIBURTON

Fur Seal-1

Measured Depth (metres)	Inclination (degrees)	Direction (degrees)	Vertical Depth (metres)	Latitude (metres)	Departure (metres)	Vertical Section (metres)	Dogleg (deg/30m)
1083.560	0.88	279.71	1083.463	5.934 S	7.368 W	-5.934	0.12
1112.050	0.86	280.50	1111.949	5.858 S	7.794 W	-5.858	0.02
1140.780	0.80	280.28	1140.676	5.782 S	8.205 W	-5.782	0.06
1169.420	0.69	281.95	1169.314	5.711 S	8.571 W	-5.711	0.12
1198.140	0.81	286.36	1198.031	5.618 S	8.934 W	-5.618	0.14
1255.860	1.01	305.38	1255.744	5.211 S	9.736 W	-5.211	0.19
1284.620	0.87	311.34	1284.500	4.921 S	10.105 W	-4.921	0.18
1313.270	0.86	333.94	1313.147	4.585 S	10.362 W	-4.585	0.35
1341.990	0.67	334.23	1341.865	4.241 S	10.529 W	-4.241	0.21
1370.650	0.68	330.15	1370.523	3.942 S	10.687 W	-3.942	0.05
1427.720	0.77	326.65	1427.588	3.328 S	11.066 W	-3.328	0.05
1456.160	0.82	328.79	1456.025	2.995 S	11.277 W	-2.995	0.07
1484.950	0.85	336.79	1484.812	2.622 S	11.468 W	-2.622	0.12
1513.890	0.88	324.92	1513.749	2.244 S	11.680 W	-2.244	0.19
1542.830	0.86	327.87	1542.686	1.878 S	11.923 W	-1.878	0.05
1571.590	0.87	324.35	1571.442	1.517 S	12.166 W	-1.517	0.06
1599.700	0.77	338.40	1599.549	1.166 S	12.360 W	-1.166	0.24
1657.300	0.97	353.39	1657.143	0.322 S	12.559 W	-0.322	0.15
1686.010	0.88	355.80	1685.849	0.138 N	12.603 W	0.138	0.10
1715.080	0.89	6.11	1714.916	0.585 N	12.596 W	0.585	0.16
1743.680	0.78	6.96	1743.513	1.000 N	12.548 W	1.000	0.12
1772.080	0.50	6.19	1771.911	1.316 N	12.511 W	1.316	0.29
1800.650	0.48	16.78	1800.480	1.554 N	12.464 W	1.554	0.10
1829.260	0.58	38.40	1829.089	1.782 N	12.339 W	1.782	0.23
1858.090	0.50	34.50	1857.917	2.000 N	12.178 W	2.000	0.09
1887.200	0.56	59.17	1887.026	2.177 N	11.984 W	2.177	0.24
1916.070	0.69	58.49	1915.894	2.340 N	11.715 W	2.340	0.14
1944.740	0.66	50.11	1944.562	2.536 N	11.442 W	2.536	0.11
1973.020	0.75	60.07	1972.840	2.732 N	11.157 W	2.732	0.16
2001.540	0.62	65.93	2001.358	2.888 N	10.854 W	2.888	0.15
2030.200	0.47	54.96	2030.017	3.020 N	10.615 W	3.020	0.19
2058.700	0.51	43.07	2058.516	3.179 N	10.433 W	3.179	0.11
2087.390	0.51	81.71	2087.205	3.290 N	10.221 W	3.290	0.35
2116.440	0.55	117.19	2116.254	3.244 N	9.970 W	3.244	0.34
2144.780	0.56	102.11	2144.592	3.153 N	9.713 W	3.153	0.16
2231.210	0.95	136.21	2231.015	2.547 N	8.802 W	2.547	0.20
2317.050	0.95	103.22	2316.844	1.871 N	7.619 W	1.871	0.19
2402.730	0.93	77.31	2402.513	1.861 N	6.254 W	1.861	0.15
2431.360	1.07	70.01	2431.139	2.003 N	5.778 W	2.003	0.20
2460.090	1.06	56.97	2459.864	2.239 N	5.303 W	2.239	0.25
2488.890	1.28	60.60	2488.658	2.543 N	4.799 W	2.543	0.24
2517.630	1.41	56.39	2517.390	2.896 N	4.225 W	2.896	0.17
2610.000	1.41	56.39	2609.732	4.153 N	2.333 W	4.153	0.00

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.00 DEGREES (GRID)
A TOTAL CORRECTION OF 13.79 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 2610.000 METRES
IS 4.764 METRES ALONG 330.68 DEGREES (GRID)

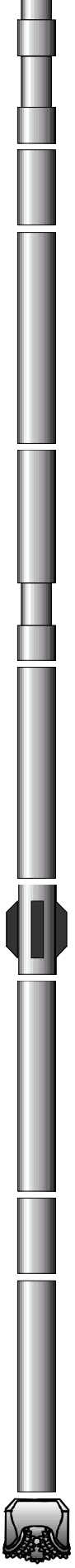
MWD RUN 100 - BHA

MWD RUN 100 - MWD

Date Printed:08 November 2005

	Component Length (m)	Cumulative Length (m)
		267.89

Sensor Measure Point Distance To Bit (m)

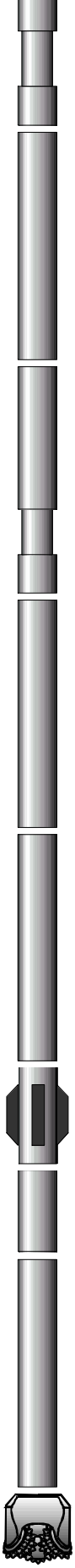


	Component Length (m)	Cumulative Length (m)
HWDP	138.100	259.78
Cross Over Sub	1.100	129.79
Drill Collar	17.470	128.69
Drilling Jars	9.050	111.22
Drill Collar	70.480	102.17
Integral Blade Stabilizer	2.150	31.69
MWD	19.610	29.54
Cross Over Sub	.970	9.93
9-5/8" SperryDrill Lobe 3/4 - 4M, DI	8.540	8.96
PDC	.420	0.42

MWD RUN 200 - BHA

	Sensor Measure Point Distance To Bit (m)
Sonic	18.360
Pulser	
Processor	
Directional	
Processor	
Gamma Ray	14.980
Resistivity	11.950

MWD RUN 200 - MWD



110.550

149.23

Drill Collar

18.620

130.61

Drilling Jars

9.680

120.93

Drill Collar

83.680

37.25

MWD

26.920

10.33

Integral Blade Stabilizer

1.530

8.80

Float Sub

.880

7.92

9-5/8" SperryDrill Lobe 3/4 - 4M, Dl

7.700

0.22

PDC

.220

Processor

Directional

32.730

Sonic

Neutron

Density

20.400

Processor

Resistivity

13.720

Gamma Ray

11.510

Fur Seal 1

FINAL WELL REPORT

Prepared by

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B.	Formation Evaluation Log	Scale 1:500
C.	Drilling Data Log	Scale 1:1000
D.	Gas Ratio Log	Scale 1:500
E.	Pressure Evaluation Log	Scale 1:2500

1.0 WELL DATA SUMMARY

(All depths are measured depths from rotary table (MDRT) unless otherwise specified.)

Well Name	: Fur Seal 1
Basin	: Gippsland
Permit	: Vic/P-54
Operator	: Apache Energy Ltd
Drilling Rig	: Ocean Patriot
Well Classification	: Exploration - Vertical
Surface Location	
Latitude	: 38° 07' 47.91" S
Longitude	: 148° 09' 08.44" E
Easting	: 600 995.5
Northing	: 5 779 136.7
Depth Reference	: AHD
Water Depth	: 56.62 m
Rotary Table	: 21.5 m
Rotary Table to Seabed	: 78.12 m
Casing Data	: (1) 762/508 mm (30"/20") conductor at 78.1 m. : (2) 340 mm (13.375") casing shoe at 817.6 m.
Hole Size	: (1) 660 mm (26") + 914 mm (36") hole opener from 78.1m to 111.7m. : (2) 406 mm (16.0") hole from 111.7 m to 824 m. : (3) 216 mm (8½") hole from 824 m to 2610 m.
Mud Type	: (1) Seawater / Pre-Hydrated Gel Sweeps : (2) Seawater / Pre-Hydrated Gel Sweeps : (3) KCL / PHPA / Glycol
Offset Wells	: Sweetlips-1, Emperor-1, Moonfish-1, Remora-1 Grayling-1A, Sunfish-1, Longtom-2.
Proposed Total Depth	: 2634 mRT MD (2634.0m TVD RT)
Actual Total Depth	: 2610 mRT MD (2609.7m TVD RT)
Subsea Vertical Depth	: 2588 m TVDSS
Date arrived on Location	: 23rd October 2005
Date Rig Released	: 05th November 2005
Date Spudded	: 24th October 2005 @ 03:30 hours.
Date TD Reached	: 1st November 2005 @ 01:45 hours.
Well Status	: Plugged and Abandoned.

2.0 GENERAL INFORMATION

2.1 Executive Summary

The Fur Seal 1 well was drilled to determine the hydrocarbon potential of the well.

The Fur Seal structure was located approximately 30 km from the nearest landfall in the Gippsland Basin, South-eastern Victoria. The surface location was in 56.6 m of water. Fur Seal 1 was close to the location of several previously drilled exploration wells including Sunfish 1 (~6.7 km East), Remora 1 (~4.3 km Southeast), Moonfish (~11.2 km West), Sweetlips 1 (10.9 km Northwest) and ~14 km to the Snapper field operated by Esso / BHPB joint venture. The Diamond Offshore semi-submersible rig, 'Ocean Patriot', drilled the well.

Fur Seal 1 was an exploration well designed to test a combined stratigraphical/structural trap in the Southwest part of VIC/P-54.

Fur Seal 1 was drilled in three phases: a 914mm (36") phase, a 406mm (16") phase and a 216mm (8½"). The well was spudded on the 24th October 2005 at 03:30 hours using a 660mm (26") bit in conjunction with a 914mm (36") hole opener.

The 914mm (36") phase was drilled in 2.2 on bottom hours with an open hole total depth of 111.6 m. The 762mm (30") conductor was then run and cemented with the Casing Shoe set at 78.1 m. No problems were encountered during this phase.

The 406mm (16") phase was drilled in 10.6 hrs with an open hole total depth of 824 m and the 340mm ($13^3/_8$") casing, run and cemented Casing Shoe set at 817.6 m. No problems were encountered during this phase.

Following the casing cement job the BOP stack was run and set on marine riser and a full pressure test was performed on the stack.

Drilling resumed in the 216mm (8.5") phase from 824 m to 827 m. The well was displaced to 1.2 sg (10 ppg) mud and a formation integrity test was performed, EMW = 1.7 sg. Drilling then proceeded in the 216mm (8.5") phase from 827 m to 2610 m. TD at 2610 mMDRT was reached at 01:45 hours on the 1st November 2005. No problems were encountered during this phase.

The wireline tools were then rigged up and a VSP log was run. The cement plugs were then run and set to abandon the well. The BOPs were pulled and the anchors raised, with the rig released on the 5th November 2005.

Geoservices provided a full mudlogging service from spud to TD during this well. This service included 'Reserval' gas monitoring.

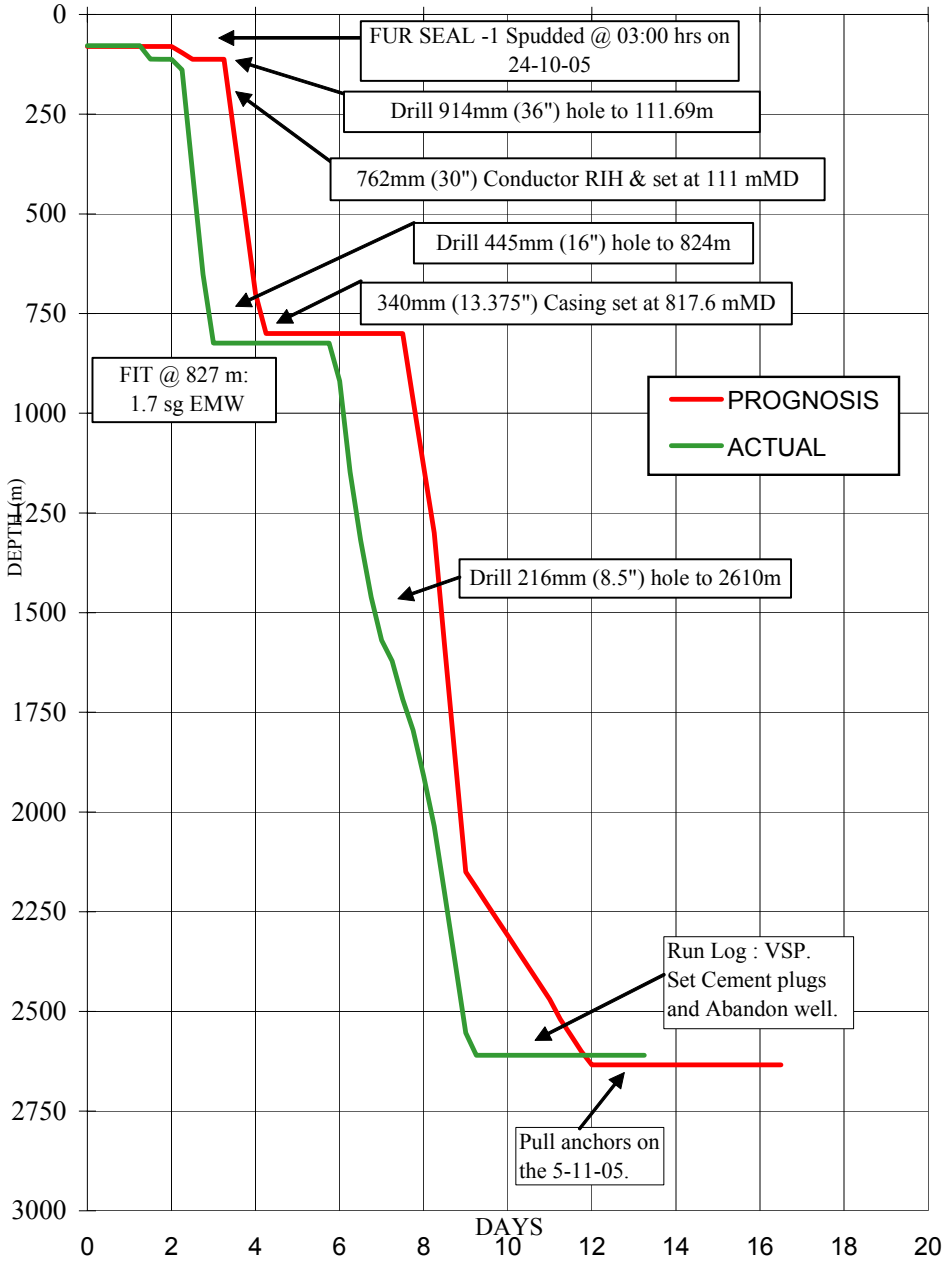
2.2 Geoservices Personnel

ALS Engineers	: Adderley, David : Mc Gilveray, Paul : Dunn, Alan
Mudloggers	: Tang, David : Elliott, Noel

2.3 Contractor Information

Drilling	: Diamond Offshore
Rig name	: Ocean Patriot
Rig type	: Semi-Submersible
Mudlogging	: Overseas Oilfield Services S.A.
Mud engineering	: M.I. Swaco
MWD	: Halliburton, Sperry Sun
Wireline logging	: Schlumberger, Anadrill
Cementing	: Dowel Schlumberger
Well head completion	: Cameron
ROV	: Fugro
Casing	: Weatherford
Work boats	: Far Grip, Wrangler
Helicopters	: Bristows
Catering	: E.S.S.

2.4 Days versus Depth Progress Chart



Revision	Date	Issued by	Approved by	Remarks
1	April 2006	Geoservices Unit 170	Operations Manager	

2.5 Sample Collection Summary

Three sets of washed and dried samples and one set of samplex trays were collected during Fur Seal 1, from 824 m to TD at 2610 m.

Sample intervals: 830 m to 2050 m, 20 m
2050 m to 2200 m, 10 m
2200 m to 2610 m, 5 m

Sample distribution was as follows:

Recipient	Washed and Dried 200 g	Samplex Trays (box)
Apache Energy	1	1
AGSO	1	
Victorian DPI	1	

Mud samples: 916m, 2220 m, 2610 m.

Filtrate samples: 2220 m.

3.0 GEOLOGICAL INFORMATION

3.1 Lithology and Show Summary

From spud to 824 m returns were to the sea floor.

824 m –840 m:

Drilling Parameters:
WOB: 2.1-14.0 klbs MF: 511–605 gpm
RPM: 97-100 SPP: 1118-2000 psi
TRQ: 3.1-12.0 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	Min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Argillaceous Calcilutite	Medium grey to light grey, rarely pale brown to yellowish brown, soft to firm, amorphous to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micro-pyrite, trace pyrite nodules, trace forams and assorted fossil fragments. Minor cement contamination.	40	81.5	3.2		0.15	1478	10	3	4	1	1
					839.0	0.29	2859	20	8	7	3	2

840 m – 920 m :

Drilling Parameters:
WOB: 0-12.5 klbs MF: 596-607 gpm
RPM: 100 SPP: 1575-2015 psi
TRQ: 0-6.4 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	Min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Argillaceous Calcilutite	Light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micro-pyrite, trace pyrite nodules, trace forams and assorted fossil fragments.	47	142	6.1		0.44	4305	31	7	11	1	2
					874.0	0.59	5893	44	11	18	4	6
Calcarenite (0-10%)	Light brown to yellowish brown, firm to moderately hard, occasionally brittle, massive to blocky, moderately argillaceous with trace fine quartz silt, trace micro-pyrite, trace pyrite nodules, trace assorted fossil fragments.											
Calcisiltite (0-10%)	Light brown-grey to pale yellowish brown, firm to moderately hard, amorphous to locally sub-blocky, moderately argillaceous, trace micro-pyrite, trace black lithic specks.											

920 m – 980 m

Drilling Parameters:
WOB: 7.0-9.7 klbs MF: 599-603 gpm
RPM: 95-100 SPP: 1527-2015 psi
TRQ: 3.4-6.2 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Marl : (20-100%)	Greenish grey to light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micro-pyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.	48.7	123.1	14.5		0.44	4288	30	7	11	Tr	Tr
					922.0	0.53	5146	39	10	15	Tr	Tr
Argillaceous Calcilutite : (0-80%)	Light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micro-pyrite, trace pyrite nodules, trace forams and assorted fossil fragments.											
Calcisiltite : (0-20%)	Light brown-grey to pale yellowish brown, firm to moderately hard, amorphous to locally sub-blocky, moderately argillaceous, trace micro-pyrite, trace black lithic specks.											

980 m - 1132 m :

Drilling Parameters:
WOB: 6.8-12.1 klbs MF: 582-603 gpm
RPM: 95-100 SPP: 1527-2098 psi
TRQ: 2.9-6.3 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Marl : (100%)	Greenish grey to light olive grey, soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micro-pyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.	57.4	86.4	19.6		0.6	5847	43	15	20	2	4
					1019.0	0.85	8367	63	24	28	7	8

1132 m – 1360 m :

Drilling Parameters:
WOB: 6-15 klbs MF: 596-610 gpm
RPM: 55-100 SPP: 1842-2557 psi
TRQ: 4-6 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Marl : (100-80 %)	Greenish grey to light olive grey, soft to dispersive, rarely firm to locally sub-blocky, trace fine quartz silt, trace micro-pyrite, trace black lithic specks, trace pyrite nodules, trace forams and assorted fossil fragments.	37.5	91.5	10.5		0.47	4478	39	13	16	2	4
					1141.5	1.03	10055	2259	29	37	24	17
Calcilutite : (0-20 %)	Light grey to white, rarely pale brown to yellowish brown, occasionally light olive grey, very soft to dispersive, rarely firm to locally sub-blocky, dominantly argillaceous with trace fine quartz silt, trace micro-pyrite, trace pyrite nodules, trace forams and assorted fossil fragments.											

Revision	Date	Issued by	Approved by	Remarks
1	April 2006	Geoservices Unit 170	Operations Manager	

1360 m – 1400 m

Drilling Parameters:
WOB: 8.7-14.2 klbs MF: 600 gpm
RPM: 100-110 SPP: 2194-2471 psi
TRQ: 3.8-5.3 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Marl : (60-70%)	Medium light grey to medium grey, trace very fine pyrite in part, trace carbonaceous specks, trace micro-fossils including forams and echinoids, soft, sub-blocky.	40.0	90.0	14.0		0.32	2990	24	13	6	2	5
					1360.5	0.43	3908	33	18	14	5	11
Calcareous Claystone : (30-40%)	Medium light grey to medium grey, trace forams and micro-fossils, trace glauconite, trace carbonaceous specks, soft, sub-blocky.											

1400.0 – 1820.0

Drilling Parameters:
WOB: 10.9-26 klbs MF: 596-606 gpm
RPM: 90-100 SPP: 1855-2749 psi
TRQ: 3.2-5.6 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Calcareous Claystone: (100%)	Light grey to medium grey, common forams and micro-fossils, trace micro-pyrite, trace glauconite and rare hard brittle shelly material, trace carbonaceous specks, soft to firm, sub-blocky-blocky.	18.7	102.6	2.4		0.25	2207	21	12	11	3	11
					1460.5	0.53	4866	47	26	27	8	22

1820.0 - 1880.0 m

Drilling Parameters:
WOB: 19.3-23.5 klbs MF: 580-603 gpm
RPM: 238-248 SPP: 2506-2790 psi
TRQ: 4.1-6.7 klb*ft

Lithology	Lithology description	ROP m/hr			Depth m.	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	C5 ppm
		ave.	max.	min.								
Calcareous Claystone: (100%)	Light grey to medium grey, commonly calcareous, becoming less calcareous and lighter in colour with depth, commonly homogenous, trace very fine disseminated pyrite, very rare micro-fossils, soft to rarely firm, sub-blocky to amorphous.	27.2	94.2	11.8		0.30	2566	30	20	18	6	12
					1842	0.48	4082	50	32	29	8	22
Calcisiltite : (Trace)	Predominantly off white to very light grey, occasionally very pale grey-brown, trace calcareous silt grains, grading to Calcareous Claystone in part, trace carbonaceous specks, very soft to moderately firm, amorphous.											

1880.0 – 2020.0 m

Drilling Parameters:
WOB: 18.7-30 klbs MF: 582-604 gpm
RPM: 90-105 SPP: 2616-3200 psi
TRQ: 3.9-7.6 klb*ft

Lithology	Lithology description	ROP m/hr			Depth m.	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	C5 ppm
		ave.	max.	min.								
Claystone : (100%)	Light medium grey - medium grey, soft - rarely firm, sub-blocky, commonly amorphous, trace very fine disseminated pyrite, very rare micro-fossils, commonly homogenous, becoming less calcareous and lighter in colour with depth.	28.0	89.3	10.0		0.3	2384	48	30	32	13	35
					2094	0.44	3983	97	56	65	28	88

2020.0 – 2198.0 m

Drilling Parameters:
WOB: 24.6-30 klbs MF: 592-603 gpm
RPM: 80-100 SPP: 2779-3155 psi
TRQ: 4.1-7.6 klb*ft

Lithology	Lithology description	ROP m/hr			Depth m.	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	C5 ppm
		ave.	max.	min.								
Calcareous Claystone : (100%)	Light grey - medium light grey, rare medium grey, soft to occasionally firm, sub blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, rare glauconite.	32.3	81.4	11.4		0.34	2737	64	34	43	17	48
					2094	0.44	3983	97	56	65	28	88

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1	April 2006	Geoservices Unit 170	Operations Manager	

2198.0 – 2210.0 m

Drilling Parameters:
WOB: 20.7-28.5 klbs MF: 597-601 gpm
RPM: 85-95 SPP: 2918-3104 psi
TRQ: 5.5-6.8 klb*ft

Lithology	Lithology description	ROP m/hr			Depth m.	Total Gas %	C1 ppm	C2 ppm	C3 ppm	iC4 ppm	nC4 ppm	C5 ppm
		ave.	max.	min.								
Siltstone : (0-1%)	Brownish grey, very soft to firm, sub-blocky to amorphous, micro micaceous, carbonaceous specks and flakes, very argillaceous.	30	46.1	20.8		0.36	2302	90	41	35	16	51
					2290	0.49	4465	238	88	51	21	66
Sandstone : (0-1%)	Clear to off-white, fine to medium, moderately sorted, rounded to angular, moderate to poor sphericity, common argillaceous matrix, trace glauconite, poor to fair inferred porosity, no fluorescence.											
Calcareous Claystone : (98-100%)	Light grey - medium light grey, rare medium grey, soft to occasionally firm, sub-blocky, trace disseminated pyrite, trace dark carbonaceous and pyritic patches, glauconite and small glauconite nodules.											

2210.0 – 2240.0 m

Drilling Parameters:
WOB: 18.1-21.8 klbs MF: 597-600 gpm
RPM: 85-95 SPP: 2924-3152 psi
TRQ: 5.4-7.2 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Siltstone : (60-80%)	Brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.	42.8	84.9	25.5		1.03	8700	532	185	84	32	56
					2221.5	1.48	12828	769	245	114	40	66
					2228.0	1.22	10300	618	211	89	39	74
Carbonaceous Siltstone : (Trace)	Brownish black to black, firm, brittle in part, silty, gradational to Coal in part.											
Calcareous Claystone : (20-40%)	Light grey, off white, very soft to firm, sub blocky to amorphous in part, glauconitic in part.											
Sandstone : (Trace)	Very light grey, soft aggregates, very fine to fine grained, well sorted, rounded, 60% argillaceous matrix, matrix supported. No fluorescence.											
Sandstone : (Trace)	Clear to off white, medium to coarse and loose, poorly sorted, sub rounded to very angular, commonly fractured grains, moderate to poor sphericity, fair inferred porosity. No fluorescence.											

2240.0 – 2270.0 m

Drilling Parameters:
WOB: 11-20.9 klbs MF: 587-604 gpm
RPM: 85-100 SPP: 2554-3141 psi
TRQ: 4.8-7 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Claystone : (60-80%)	Very light grey, light greyish brown, very soft to rarely firm, calcareous, rare glauconite, trace very fine sand grains.	37.5	63.1	15.5		1.16	9736	617	231	85	41	42
					2259.0	1.79	15235	924	348	122	59	53
Siltstone: (10-40%)	Brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part.											
Sandstone : (0-10%)	Clear, loose, medium to coarse, moderately sorted, sub angular to rounded, moderate sphericity, fair to good inferred porosity. No fluorescence.											

2270.0 – 2344.0 m

Drilling Parameters:
WOB: 6.4-17.3 klbs MF: 593-604 gpm
RPM: 90-100 SPP: 2743-3094 psi
TRQ: 5-7.4 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Kaolinitic Sandstone : (0-95%)	White to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub-angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity, no fluorescence.	37	63.2	17.1		0.69	5869	286	114	44	26	25
					2340	1.15	9686	588	252	73	59	48
Sandstone : (0-90%)	Clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, moderate sphericity, high sphericity in fine component, common white argillaceous matrix washing out in part, occasionally matrix supported in fine aggregates, poor - fair inferred porosity. no fluorescence.											
Siltstone : (5-40%)	Brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.											

2344.0 – 2370.0 m

Drilling Parameters:
WOB: 7-13.4 klbs MF: 595-601 gpm
RPM: 95-100 SPP: 2752-2997 psi
TRQ: 4.9-6.7 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Siltstone : (90-100%)	Brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.	32.5	67.3	18.2		1.27	10569	745	354	90	81	43
					2348.0	1.72	14714	928	385	106	84	47
					2361.5	1.38	11674	903	441	99	98	51
Kaolinitic Sandstone : (0-10%)	White to rarely clear, dominantly very soft aggregates to loose grains, fine - coarse, poorly sorted, locally well sorted, sub -angular to rounded, moderate to high sphericity, abundant white kaolinitic matrix to 95%, gradational to white Claystone, poor - fair inferred porosity. No fluorescence.											

2370.0 – 2565.0 m

Drilling Parameters:
WOB: 5.8-19.6 klbs MF: 595-602 gpm
RPM: 80-100 SPP: 2756-3254 psi
TRQ: 5-8.8 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Argillaceous Sandstone : (30-90%)	Clear to white, very light grey, loose to very soft aggregates, fine to coarse, poorly sorted, occasionally well sorted in fine aggregates, sub angular to sub rounded, common off-white argillaceous matrix washing out in part, poor - fair inferred porosity. No Fluorescence.	39	88.1	14.6		0.78	6443	402	189	52	51	36
					2374.5	1.28	10396	756	367	100	95	52
					2448.0	1.23	10816	739	343	86	87	43
Siltstone : (0-70%)	Brownish grey, very soft to rarely firm, sub-blocky, rarely sub-fissile, carbonaceous specks and laminae, grading to Carbonaceous Siltstone in part, trace lithic fragments and pyrite.											
Carbonaceous Siltstone : (0-10%)	Light grey to speckled black/white, soft to firm, sub-blocky to blocky, common platy carbonaceous specks, rare carbonaceous laminae, rare to common disseminated pyrite, grading into Siltstone.											
Coal : (0-Trace)	Black to dark brown, sub-blocky to platy, firm to brittle, hackly fracture, shiny lustre to dull matt colour.											

2565.0 – 2610.0 m

Drilling Parameters:
WOB: 7.9-18.7 klbs MF: 595-604 gpm
RPM: 80-105 SPP: 2776-3204 psi
TRQ: 5-8 klb*ft

Lithology	Lithology description	ROP m/hr			Depth	Total	C1	C2	C3	iC4	nC4	C5
		ave.	max.	min.	m.	Gas %	ppm	ppm	ppm	ppm	ppm	ppm
Claystone : (70-90%)	Light olive grey to grey, soft to firm, rare silty grains, mildly calcareous in part, trace micro-mica, trace micro-pyrite, trace carbonaceous laminae.	37.5	105.7	17.1		0.74	6243	321	129	35	32	31
					2584.5	1.24	11071	610	227	55	47	37
Argillaceous Sandstone : (0-10%)	White to light grey, fine to medium grained, sub-angular to sub-rounded, moderately sorted, trace calcite cement, trace nodular and disseminated pyrite, local aggregates weakly cemented, moderate inferred porosity. No shows. (probably cavings)											
Coal : (0-Trace)	Brownish black, mainly shiny lustre, platy to blocky, firm to brittle, slightly argillaceous in part.											
Silty Claystone: (10-30%)	Light brownish grey to light olive grey, occasionally white, soft to amorphous, trace carbonaceous specks, trace micro-micaceous, rare very fine sand, trace pyrite, grading into Claystone.											

3.6 Gas Ratio Interpretation – Introduction

Gas composition and total gas in mud were measured using the Geoservices Reserval (A combined total gas detector and chromatograph coupled with a GZG degasser). As a backup gas detection system a Geoservices FID Chromatograph Panel (FCP) and FID Gas Panel (FGP) were in operation, in tandem with a GZ11 degasser motor. Both gas systems use the FID technique of measuring ions released when hydrocarbons are burnt in a hydrogen flame.

Gas is extracted from the mud prior to it reaching the shale shakers by the degassers, which are essentially an agitator inside a chamber through which the mud continually passes. The GZG degasser is specially designed to degas a constant volume of mud regardless of pump rates and has the advantage of being placed within the flowline, limiting any early emissions of gas from the mud as it is circulated through the rig. The GZ11 degasser is located on the header box in the shaker room where it is reliant on stable mud circulation and shaker operation. The gas is then drawn back to the unit through tubing to the gas analysis equipment. Independent sensors in the unit also measure H2S and CO2.

The composition of the gas in mud from the formation is significant in determining the geochemical origin and value of a show. There are several methods that can be used to determine whether the hydrocarbon gas in mud comes from a potential gas or oil zone. Amongst these methods are the Triangle Diagram (also known as the gas composition diagram), Pixler Diagram (also known as the gas ratios method) and the gas Wetness/Balance/Character plots.

3.3 Explanation of Gas Composition Diagrams

The Triangle or Gas Composition Diagram is used to graphically represent the hydrocarbon distribution in the gas and to determine whether it corresponds to a gas or oil reservoir. The triangular diagram is obtained by tracing lines on three scales at 120° to each other, corresponding respectively to the ratios of ethane, propane and normal butane to the total gas. The scales are arranged in such a way that if the apex of the triangle is upward, the diagram represents the analysis of gas from a gas zone, while if the apex points downwards, the diagram represents the analysis of gas from an oil zone. A large triangle diagram represents dry gas or low GOR oil, while small triangles represent wet gases or high GOR oils. The centre of the triangle should fall inside the area delineated by the dotted line, which encircles compositions that are regarded as 'normal'. If the triangle area is outside this area the gas indicates that the reservoir is not exploitable and that the heavier hydrocarbon composition is 'abnormal' i.e. hydrocarbons that are chemically altered or gases with special compositions which are not associated with oil.

The Gas Ratio Analysis Diagram is a plot of the ratio of C1 to the other gas elements. The magnitude of the methane to ethane ratio determines if the reservoir contains gas or oil or if it is non-productive. The following conclusions are possible:

Ratio C1/C2:	< 2	non-productive zone
	2 - 15	oil present
	15 - 65	gas present
	> 65	non-productive zone

The slope of the line of the ratio plot of C1/C2, C1/C3, C1/C4 and C1/C5 indicates whether the reservoir will produce hydrocarbons or hydrocarbons and water. Positive line slopes

indicate production; negative line slopes indicate water-bearing formations. When using the Gas Ratio Diagram, the following points should be borne in mind:

1. Productive dry gas zones may show only C1, but abnormally high shows of C1 are usually indicative of saltwater zones.
2. If the ratio C1/C2 is low in the oil section and the ratio C1/C4 is high in the gas section, the zone is probably non-productive.
3. If any ratio (C1/C5 excepted in an oil based mud) is lower than the preceding ratio then the zone is probably non-productive.
4. The ratios may not be definitive for zones of low permeability.
5. Steep gas ratio plots may be indicative of tight zones.

3.4 Explanation of Wetness/Balance/Character Curves

Another method for evaluating gas zones plots against depth three ratios: hydrocarbon Wetness (W_h), hydrocarbon Balance (B_h) and hydrocarbon Character (C_h), where:

$$W_h = \frac{(C2 + C3 + C4 + C5)}{(C1+C2+C3+C4+C5)} \times 100\ (\%)$$

$$B_h = \frac{(C1 + C2)}{(C3 + C4 + C5)}$$

$$C_h = \frac{(C4 + C5)}{C3}$$

Wetness (W_h) is the primary zone indicator and provides a measure of the relative proportion of heavier gases in the overall gas show as follows:

$W_h < 0.5$	Light non-associated gas with low productivity potential or only geo-pressured methane.
$0.5 < W_h < 17.5$	Potentially productive gas with gas density increasing with W_h.
$17.5 < W_h < 40.0$	Potentially productive oil with gravity decreasing as W_h increases.
$W_h > 40.0$	Heavy or residual oil with low productivity potential.

As reservoir hydrocarbons become denser in the transition from gas to oil, Balance (B_h) and Wetness (W_h) values move closer together and eventually intersect. The zone guidelines for B_h combine with those for W_h to improve reliability of show evaluation as follows:

$W_h < 0.5$ and $B_h > 100$	Very light, dry gas that is almost certainly non-productive.
$0.5 < W_h < 17.5$ and $W_h < B_h < 100$	Productive gas with gas increasing in wetness and density as the two curves converge.
$0.5 < W_h < 17.5$ and $B_h < W_h$	Productive gas condensate or a high gravity gas/oil ratio.
$17.5 < W_h < 40$ and $B_h < W_h$	Productive oil with oil gravity decreasing - density increasing as the curves diverge.
$17.5 < W_h < 40$ and $B_h > W_h$	Non-productive residual oil.

Character (C_h) values serve to resolve ambiguities between oil or gas indications by defining the following:

$0.5 < W_h < 17.5$ and $B_h < W_h$ and $C_h < 0.5$ — Productive wet gas or condensate.

$0.5 < W_h < 17.5$ and $B_h < W_h$ and $C_h > 0.5$ — Productive high gravity and/or high GOR oil.

It is important to note that in the conclusion to each of the interpretive tools, the terms 'productive' and 'non-productive' are used in a geochemical sense. Ultimate production of a zone is dependent upon reservoir thickness and extent as well as other physical and economic factors that are not taken into account when analysing gas compositions. The methods discussed here are intended to assist the interpretive skills of the geologist or log analyst. Please refer to the Gas Ratio Log enclosure.

3.5 Gas Composition Discussion

Gas monitoring commenced using the Geoservices Reserval from the beginning of the 216mm (8.5") phase at 824 m after top hole casing was run, through to the well's total depth of 2610 m.

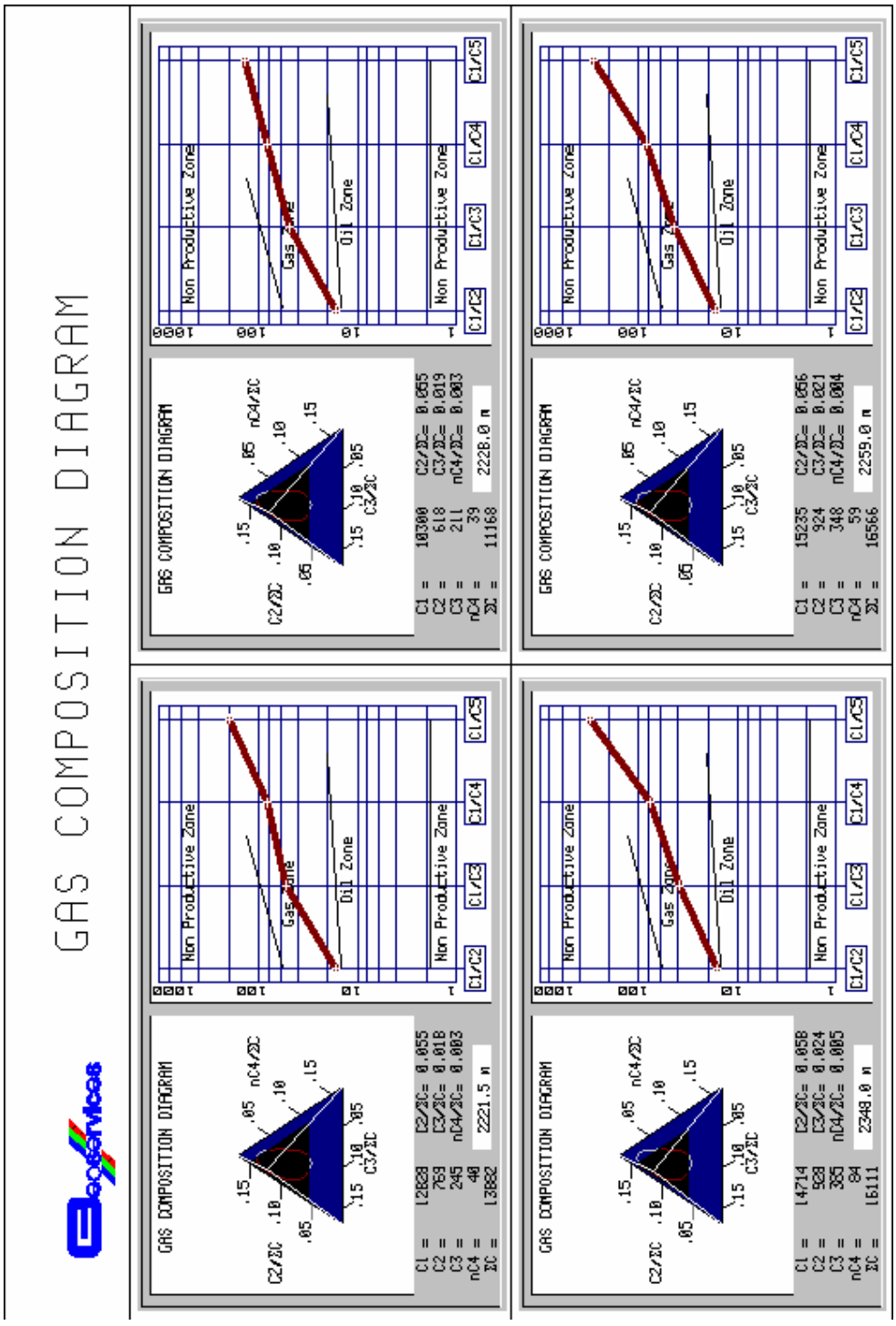
No significant gas was encountered while drilling through the calcareous sediments of the Gippsland Limestone in the 16" or 8.5" hole section. The gas throughout the 8.5" section was uniformly dry, consisting of mainly C1 (methane), with traces of C2 (ethane), C3 (propane), C4 (butane), and C5 (pentane) gas.

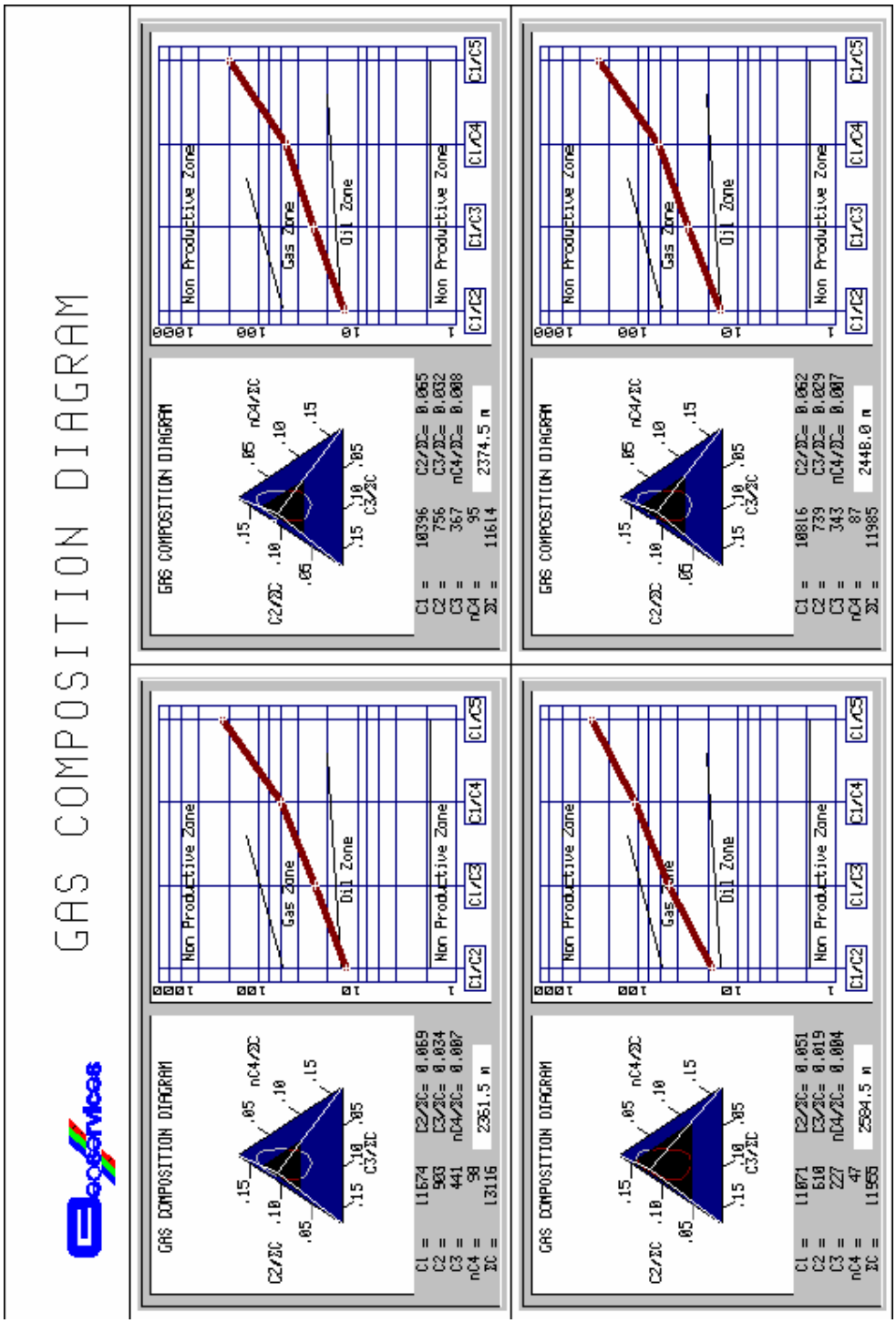
Background gas levels ranged from 0.3 % to 0.5 % from 824 m to 2200 m, background gas remained around 0.5 % down to TD at 2610 m. Gas peaks over 1% concentration were encountered, with the maximum gas level recorded being 1.79% at 2259.5 m depth and these were mostly associated with thin layers of Coal or Sandstone lithology, plus higher ROP. The mud weight was varied only slightly during this interval, ranging from 1.22 SG (10.2 ppg) to 1.24 SG (10.3 ppg) when drilling was terminated at 2610 mMDRT.

It is interesting to note that according to the hydrocarbon Wetness, Balance and Character ratio indicators, each of the gas peaks in the reservoir zone corresponds to a very light dry gas (essentially geo-pressured methane) that is almost certainly non-productive (i.e. where $W_h < 0.5$, and $B_h > 100$).

No H2S or CO2 was recorded during drilling of this well.

3.6 Gas Ratio Diagrams





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1	April 2006	Geoservices Unit 170	Operations Manager	

4.0 PRESSURE ANALYSIS

4.1 Introduction

There are several techniques available which when used in the appropriate overpressured environment, can often predict an approaching overpressured zone while drilling. Each technique may give slightly different results according to geological and drilling conditions. Geoservices currently uses the following parameters to indicate overpressured regions while drilling:

D Exponent: This is a normalized rate of penetration that takes into account mud weight, bit wear and hydraulics. It can be reliably used in Shale and clean Claystone; and as an indicator in Siltstone, silty Shale and calcareous Claystone. A normal trend line is established through normally pressured shale points, representing a normal compaction trend, and any leftward deviation of subsequent shale points from this trend, representing relative under-compaction, indicates overpressure (plotted relative to depth) or increased porosity due to changes in the lithology.

Temperature: By plotting mud flowline temperature against depth a temperature gradient can be established. Theory states that a zone of low heat flow or "thermal shadow" occurs prior to the overpressured zone, which in turn is followed, by a complementary zone of abnormally high heat flow in the overpressured zone (due to its higher water content). However, the data has to be interpreted cautiously as additions of water to the active system/shakers can lower the mud temperature and mud chemicals added to the active system can cause exothermic/endothermic reactions. Bit and wiper trips cause decreases in temperature on surface.

Cuttings: Small, splintery cuttings can be used as an indicator of overpressured regions. Long propeller shaped cuttings may be an indicator of overpressure or may be the result of hydration of reactive or swelling clays.

Over-pull / Torque / Fill: Over-pull when making a connection or tripping can be an indicator that the hole is collapsing into the well bore, either due to clay hydration or a formation pressure that is greater than the mud weight. Similarly, excessive fill on a trip or after a connection can also indicate that the well bore is collapsing in. High torque can also be an indicator of well bore collapse, although it can also be due to formation type, bearing failure or simply the annulus becoming clogged up by cuttings due to insufficient hole cleaning in large diameter holes.

Gas *Connection gas*: During circulation the down-hole pressure exerted by the mud, weight increases due to friction losses in the annulus. This is calculated as an ECD - or equivalent circulating density. Thus, when the pumps are stopped for a connection the down-hole pressure exerted by the mud decreases by an amount equivalent to the difference between the ECD and mud weight. If the mud weight is close to or actually underbalanced, then gas may be fed-in to the well bore during the few minutes the pumps are turned off and register as a gas peak one lag time after the connection. The magnitude of this peak is determined by such factors as permeability, gas content of the formation, the amount of swabbing as well as the relative pore pressure / mud weight.

Background gas: Background gas is not as good an indicator of formation pressure as connection gas since several factors can influence it unrelated to abnormal pressure.

Increases in porosity and permeability, gas saturation, coal content of formation, etc., can cause the background to increase in addition to an underbalanced situation. Another point is that the formation pressure would have to exceed the ECD (not just the mud weight as in connection gas), in order for the formation gas to feed-in to the well bore.

Trip gas: Analogous in some ways to connection gas, trip gas is the gas registered at surface after circulating bottoms up after a round trip. However, trip gas magnitude is influenced by various other factors such as amount of swabbing and time since last circulation. The presence of trip gas is not necessarily indicative of an underbalanced situation, but the value above background can be used comparatively with other trip peaks.

4.2 Pressure Summary

Formation pressures were monitored throughout this well by recording a range of indicators, varying from direct observations of background gas and cuttings, to drilling characteristics such as torque and drag when pulling off bottom. Incorrect hole fill when tripping and mud properties such as flowline temperature were also taken into consideration. The Geoservices D'Exponent package was also used as a tool in the determination of abnormal formation pressures.

D'exponent:
Coefficients used for this well, results plotted in Geoservices Pressure Log.
From 81 m to 2610 m

a coefficient	=	0.0002084
b coefficient	=	-0.1244643
b offset	=	-0.0200000

The D'exponent plot increased in a generally steady linear direction. The plot of the trend gave no indication of abnormally pressured zones. The first argillaceous section was from 1400 m down to 2210 m in which the trend was set, the sandstones that were encountered below 2210 m showed very little deviation from the normal trend line.
The plot's results are affected to some degree by the control drilling which was performed from 2260 m down to 2500 m.

Gas: This well was drilled with a 1.22 sg (10.2 ppg) over balanced mud system and as a result connection gas was rarely observed. The few small gas peaks observed were of levels less than 2% concentration and these were liberated from the rock of the Kingfish / Moonfish / Volador and Strzelecki formations.

Torque & Drag: No abnormal torque or drag was observed during the drilling or tripping operations, which took place on the Fur Seal-1 well. Minor over-pull was recorded while pulling back from 2610 m to 2200 m, and at 1300 m.

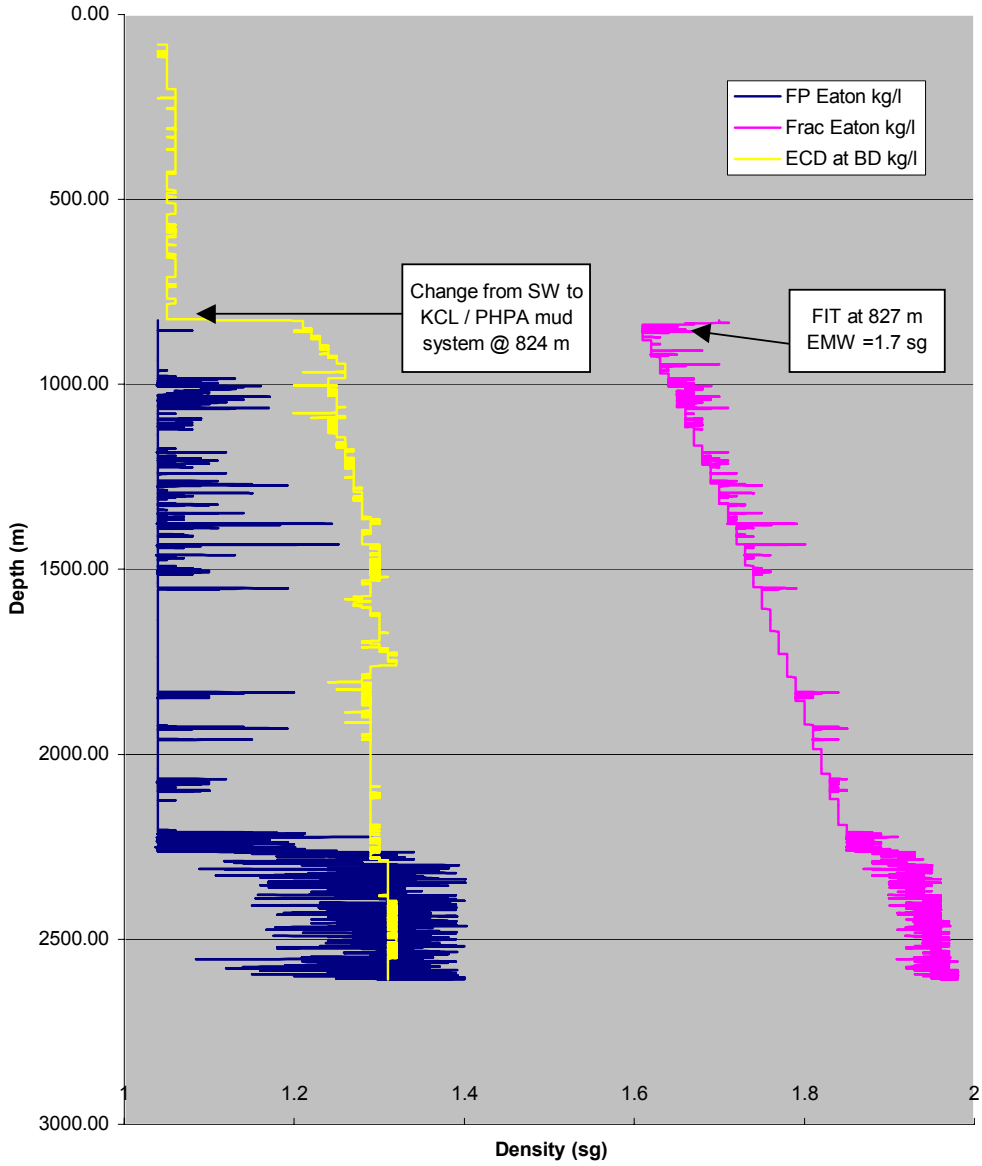
Flowline Temperature: The flowline temperature increased generally in a linear trend over the length of the well. It went from a low of 44.9 °C at the beginning of the 8.5" section to 60.1 °C when drilling was terminated at 2610 m. A minor drop in the temperature may be associated with a change in formation, or possible presence of formation water.

Cuttings: There were no unusually sharp splintery cavings or large cuttings with concave cross section observed at the shakers that may have indicated an abnormally pressured zone in this well.

The majority of indicators pointed to a normally pressured environment from surface to TD while drilling Fur Seal-1.

4.3 Formation Pressure Plot

FUR SEAL - 1


0.00
500.00
1000.00
1500.00
2000.00
2500.00
3000.00
Depth (m)
1
1.2
1.4
1.6
1.8
2
Density (sg)
FP Eaton kg/l
Frac Eaton kg/l
ECD at BD kg/l
Change from SW to KCL / PHPA mud system @ 824 m
FIT at 827 m EMW =1.7 sg

5.0 DRILLING INFORMATION

5.1 Mud Record

From spud to the end of the 406mm (16") hole phase at 824 m the well was drilled riser less with returns to the seafloor. This section was drilled with seawater and Hi-Vis Gel sweeps.

The 216mm (8.5") hole was drilled from 824 m to TD at 2610 m with returns to surface, this section was drilled using a KCL / PHPA mud system.

Properties of this mud are also listed below.

Depth m	MW	FV sec/qt	PV cps	YP lb/100'	Gels Lb/100'	WL cm/ 30"	Solids %	Sand %	Chlorides mg/L	Cake /32"
824	1.20	54	10	8	4/6	5.6	7	-	26000	1
819	1.22	49	12	10	5/7	6	8	0.2	27000	1
1236	1.21	62	14	15	9/14/18	5.2	9	0.5	34000	1
1541	1.20	55	14	13	6/13/19	5.6	9	0.6	34000	1
1662	1.22	54	16	16	8/12/19	5.6	10	0.25	47000	1
1854	1.22	61	22	17.5	8/16/22	4.4	10	0.2	47000	1
2095	1.22	62	22	19	9/21/27	4.8	11	0.75	45000	1
2470	1.22	67	26	18.5	9/19/27	4.8	14	0.6	47000	1
2610	1.23	71	25	19	9/21/27	4.2	13	0.25	50000	1

5.2 Bit Record

Bit #	Size (in)	Make	Type	Jets	TFA In^2	In (m)	Out (m)	Run (m)	Hrs	WOB klbs	RPM	TORQ kft*lbs	SPP psi	Flow gpm	Grading
1	26 – 36 HO	Reed	Y11C	2 x 24 1 x 18	1.574	80.1	111.7	31.6	2.2	0-1	65-75	1.6-4.6	770-933	980-1009	0-0-NO-A-I-NO-TD
2	16	Security	FS2563	7 x 18	1.574	111.7	824	712.3	10.6	0-15	65-100	5.6-10.7	480-3350	490-1100	0-0-NO-A-I-NO-TD
3	8½	Smith	S73VPX	3 x 15 3 x 16	1.106	824	2610	1786	60.5	0-25	90-110	1-12	1100-3000	590-606	1-0-ER-N-X-I-WT-TD

5.3 Hydraulic Listing

Depth (m)	Mud Weight (ppg)	ECD (ppg.)	Flow Rate (gpm)	Total Pressure Loss (psi)	Pressure Loss Across Bit (psi)	Mud Velocity Through bit (m/sec)	Bit Hydraulic Power (hp)	Mud Impact at Bit (lbf)	Total Hydraulic Power (hp)	Ratio (Bit Pwr/Total Pwr) (%)
824	1.22	1.25	605	1856	274	53	97	543.2	657	14.8
1541	1.24	1.32	600	2211	283.1	53	100.2	561.3	783	12.8
1800	1.23	1.32	600	2455	275.1	53	97.4	551.1	869	11.2
2520	1.24	1.32	600	2900	277.3	53	98.2	555.6	1027	9.6
2610	1.22	1.31	600	3003	272.8	53	96.6	546.6	1063	9.1

5.4 Drilling Phase Summary

5.4.1 914mm (36") Hole Section

Date	: 24th October 2005
Measured depth	: 80.1 m – 111.7 m
TVDSS LAT	: 80.1 m – 111.7 m
Number of bits used	: 1
Mud type	: Seawater, with gel sweeps

Fur Seal 1 was spudded at 03:30 hours, on the 24th October 2005. A 914mm (36") BHA was made up, consisting of a 660mm (26") Reed Y11C bit, and a 914mm (36") hole opener. Sea floor sediments were tagged at 80.1 m and 914mm hole was drilled without incident to a depth of 111.7 m. Gel sweeps were then pumped around the well prior to displacing to a gel mud before pulling out of hole and rigging up to run the 762mm (30") conductor. This bit drilled 31.6 m of new formation in 2.2 hours, at an average ROP of 14.4 m/hr. The bit was graded 0-0-NO-A-I-NO-TD.

The 762mm (30") conductor was run and cemented on bottom at a depth of 111.0 m as per programme.

5.4.2 406mm (16.0") Hole Section

Dates	: 25th October 2005
Measured depth	: 111.7 m – 824.0 m
TVDSS LAT	: 111.7 m – 824.0 m
Number of bits used	: 1
Mud type	: Seawater with gel sweeps

The 406mm (16") hole phase was drilled using a Security FS2563 bit with 7 x 18 jets. This bit was run in the hole and drilled out the cement and conductor shoe, new hole was drilled ahead from 111.7 m down to 824 m, which was T.D. for this phase. This section was drilled with seawater and gel sweeps, at T.D. the hole was displaced to pre-hydrated gel mud. A wiper trip was then performed up to the casing shoe. This bit drilled a total of 712.4 m in 10.6 on bottom hours at an average ROP of 67.2 m/hr. This bit was graded 0-0-NO-A-E-I-NO-TD.

There were no hole problems encountered during the drilling of this section. 340mm ($13^3/_8$") casing was run at this point and cemented in at 817.6 m. Following this the BOP stack was moved into position in the moon pool area and then was run to the sea floor on the marine riser and latched to the well head.

After the BOP stack was pressure tested successfully, the 16" BHA was then laid down.

5.4.3 216mm (8.5") Hole Section

Dates	: 28-10-05 to 01-11-05
Measured depth	: 824 m - 2610 m
TVDSS LAT	: 824 m - 2609.7 m
Number of bits used	: 1
Mud type	: KCL-PHPA

The 216mm (8.5") phase was drilled to a depth of 2610 m, T.D. for the well.

A Smith S73VPX bit was run in the hole with MWD tools and a motor. The cement and casing shoe were drilled out and the hole displaced to 1.2 sg (10 ppg) KCl/PHPA drilling mud, 3 metres of formation was drilled to 827 m. An F.I.T. was performed resulting in an EMW of 1.7 SG (14.0 ppg). No problems or losses were encountered whist drilling this section. Loss circulation material was added to the mud system (graphite) whilst drilling the target zones. This bit drilled a total of 1786 m in 60.5 on bottom hours at an average ROP of 29.5 m/hr, though the reservoir was control drilled from 2260 m to 2500 m. This bit was graded 1-0-ER-N-X-I-WT-TD.
Mud weight ranged from 1.22 to 1.25 sg (10.2-10.4 ppg). The final survey recorded 1.41° bearing 56.39°. TD was reached at 01:45 hours on 1st of November 2005.

FUR SEAL 1

Apache ENERGY — Geoservices

Field : GIPPSLAND	AHD - RT (m) : 21.5	Rig : OCEAN PATRIOT	Open Hole:		Cased Hole:		Engineers : D.ADDERLEY
Permit: VIC/P-54	Seabed - AHD (m) : 56.62	Spud date : 24-10-05	914 mm	111.7 m	762 mm	111.0 m	P.McGILVERAY
State : VICTORIA	Seabed - RT (m) : 78.12	TD date : 01-11-05	406 mm	824.0 m	340 mm	817.6 m	A.DUNN
Country : AUSTRALIA	Lat. : 38 07 47.91 S	Total depth :	216 mm	2610.0 m			2609.7 m
Scale : 1/ 500	Long. : 148 09 08.44E	Final status :					2610.0 m

LITHOLOGY

- Conglomerate
- Coarse Sandstone
- Med Sandstone
- Fine Sandstone
- VF Sandstone
- Claystone
- Carb. Siltstone
- Calc. Siltstone
- Siltstone
- Limestone
- Dolomite
- Coal
- Calcilutite
- Calcisiltite
- Calcarenite
- Volcanic
- Metamorphic
- Cement

ACCESSORIES

- Pyrite
- Siderite
- Glauconite
- Feldspar
- Mica
- Ferrous
- Chert
- Calcareous
- Dolomitic
- Carbonaceous
- Lithoclast
- Breccia
- Foraminifera
- Corals
- Inoceramus
- Bryozoa
- Plant remains
- Fossils

DRILLING DATA

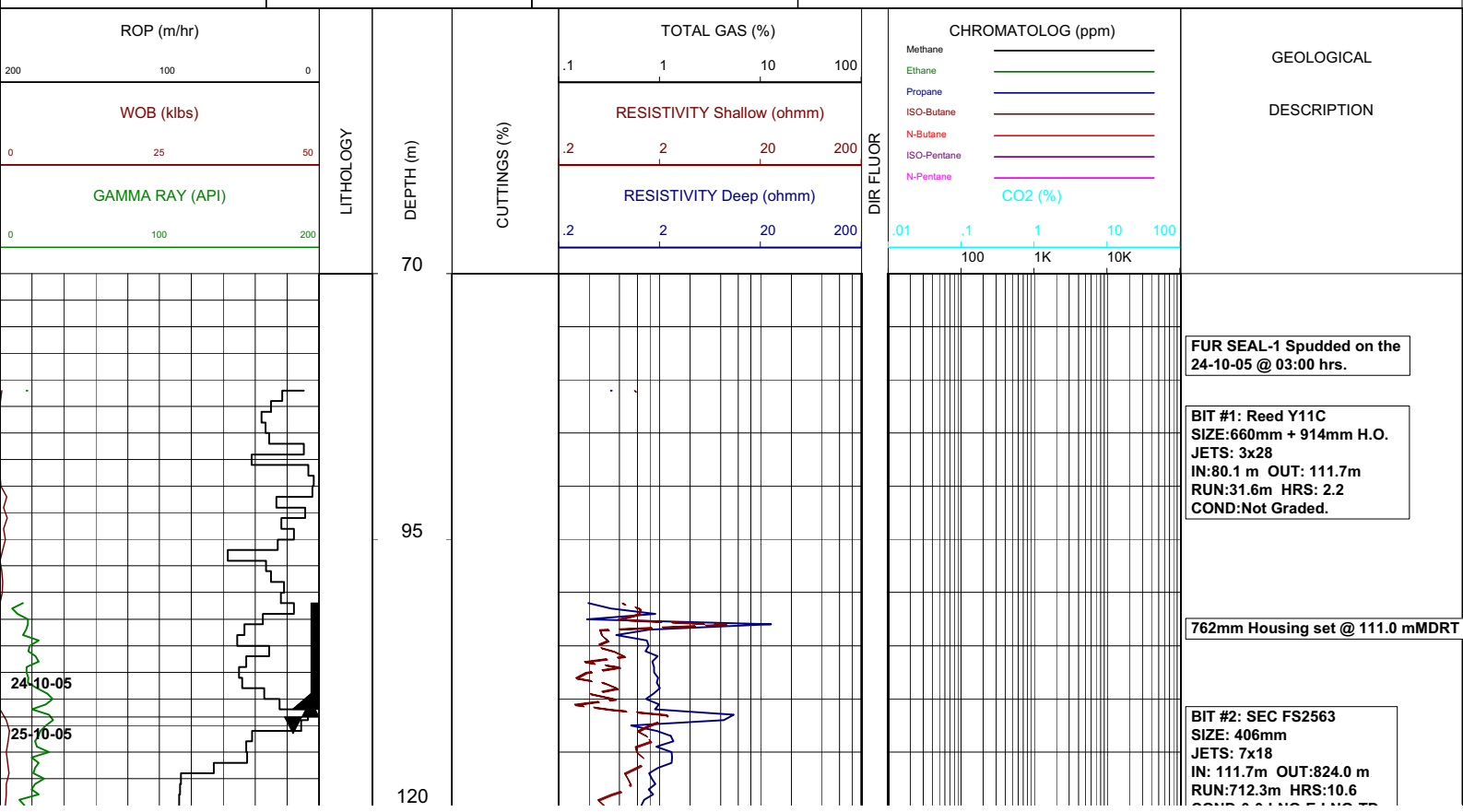
- Casing Shoe
- Bit Trip
- Wiper Trip
- Core
- DST
- Deviation Survey

MUD DATA

MW	-	Mud Weight (lb/gal)
FV	-	Funnel Viscosity (s/qt)
PV	-	Plastic Viscosity (cps)
YP	-	Yield Point (lb/100ftsq)
Gel	-	Gel Strength (10sec)
WL	-	Water Loss (cc/30min)
pH	-	Acidity / Alkalinity
Ck	-	Cake (32nd/inch)
Sol	-	Solids (% vol)
Cl	-	Chlorides (mg/l)

ABBREVIATIONS

BOPD	-	Barrels of Oil Per Day	OG	-	Over Gauge
BWPD	-	Barrels of Water Per Day	OH	-	Open Hole
CG	-	Connection Gas	OTS	-	Oil To Surface
CO	-	Circulate Out	Q	-	Flow Rate
COND	-	Condensate	REC	-	Recovery
c/c	-	Crush Cut	Rmf	-	Resistivity mud filtrate
DST	-	Drill Stem Test	ROP	-	Rate Of Penetration
FLOW	-	Flow Rate (gal/min)	RPM	-	Revolutions Per Minute
GCM	-	Gas Cut Mud	RTSTM	-	Rate Too Small To Measure
GCW	-	Gas Cut Water	Rw	-	Resistivity water
GTS	-	Gas To Surface	r/r	-	ring residue
INJ	-	Injection of Mist (bbls/hr)	SCFM	-	Standard Cubic Ft/Min (air)
LCM	-	Lost Circulation Material	SGCM	-	Slightly Gas Cut Mud
MMCFD	-	Million Cubic Feet / Day	SPM	-	Strokes Per Minute
NGTS	-	No Gas To Surface	SPP	-	Stand Pipe Pressure
NOTS	-	No Oil To Surface	SWC	-	Side-Wall Core
NR	-	No Returns	TG	-	Trip Gas
OCM	-	Oil Cut Mud	WOB	-	Weight On Bit



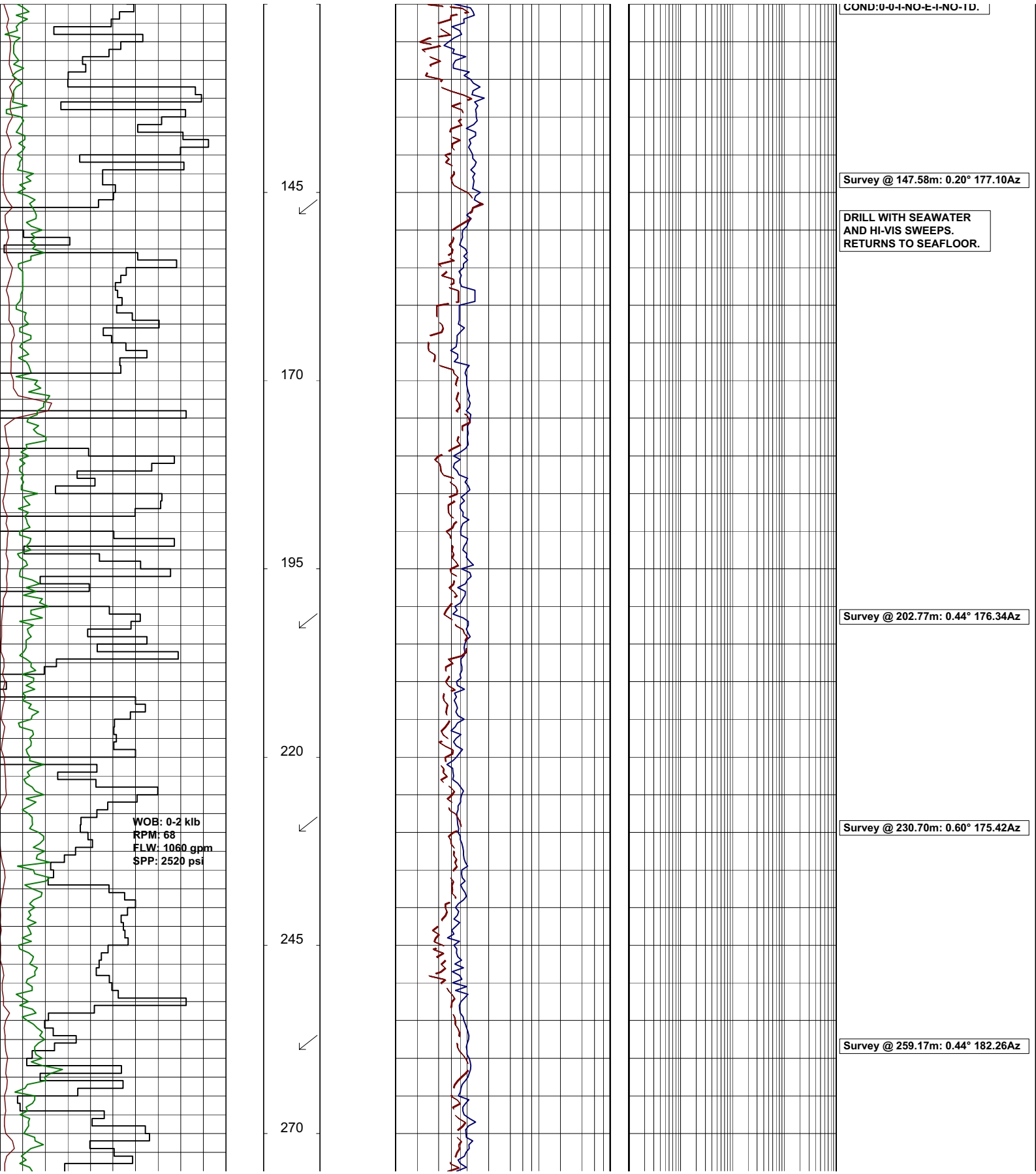
GEOLOGICAL DESCRIPTION

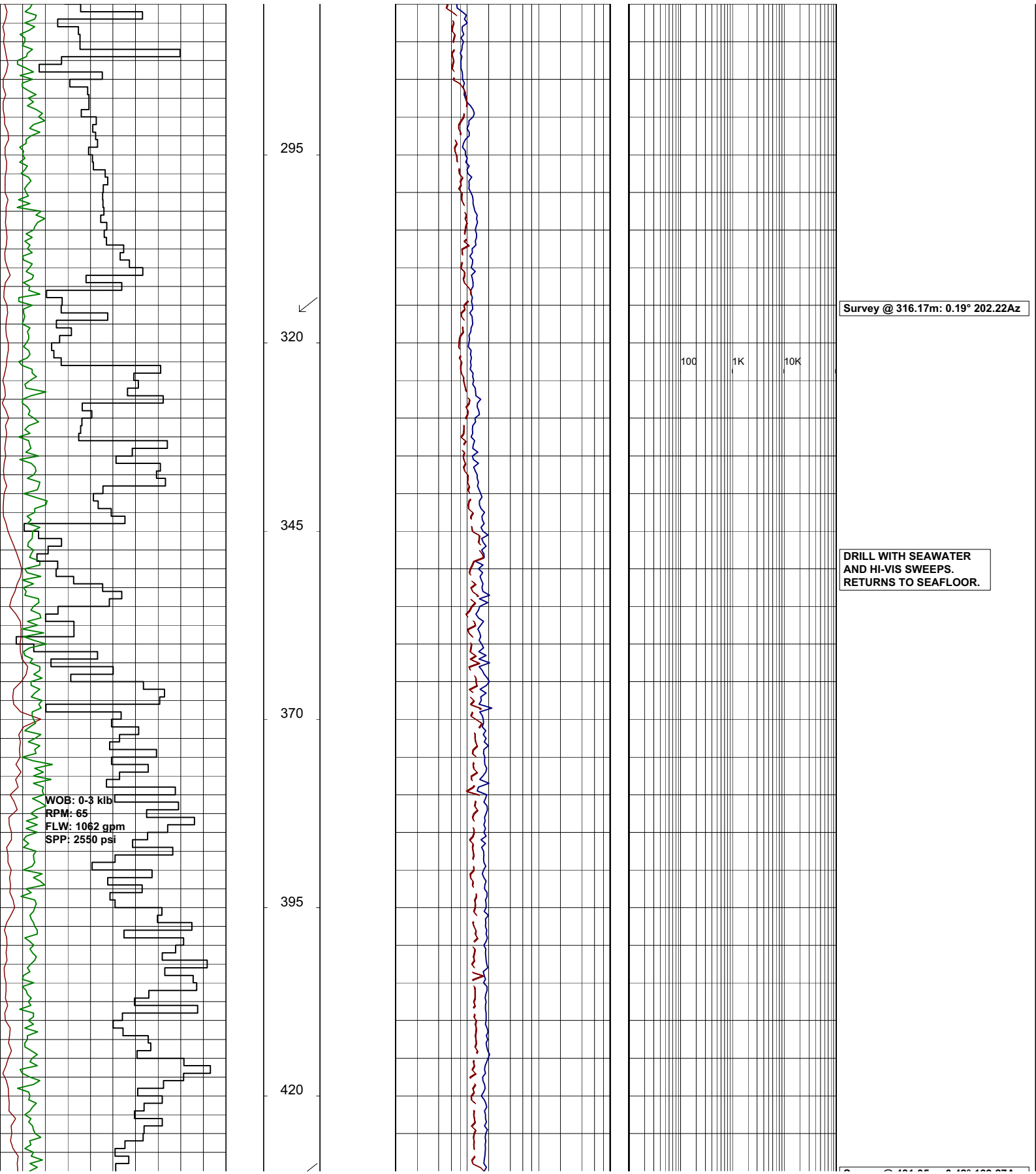
FUR SEAL-1 Spudded on the 24-10-05 @ 03:00 hrs.

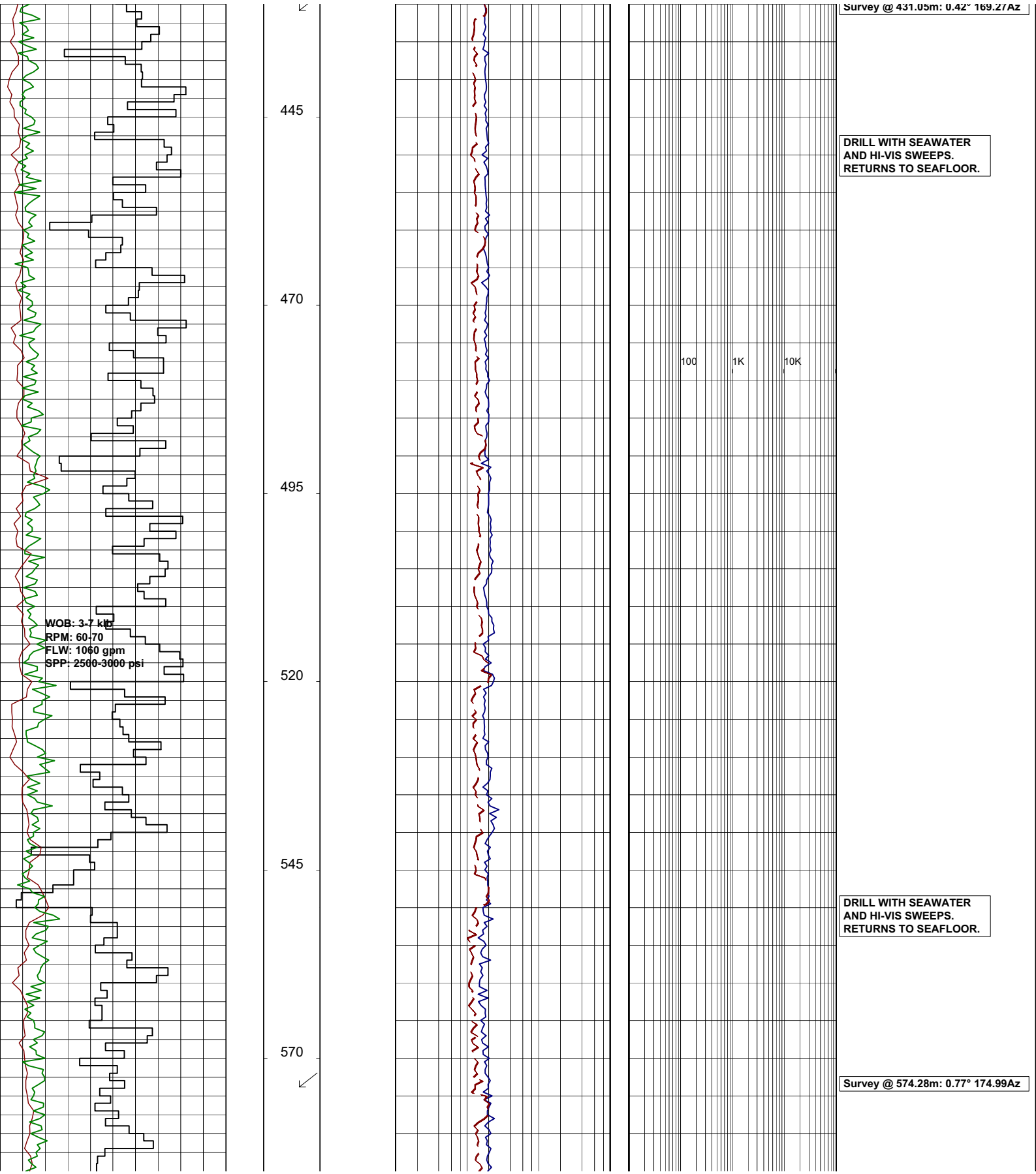
BIT #1: Reed Y11C
SIZE:660mm + 914mm H.O.
JETS: 3x28
IN:80.1 m OUT: 111.7m
RUN:31.6m HRS: 2.2
COND:Not Graded.

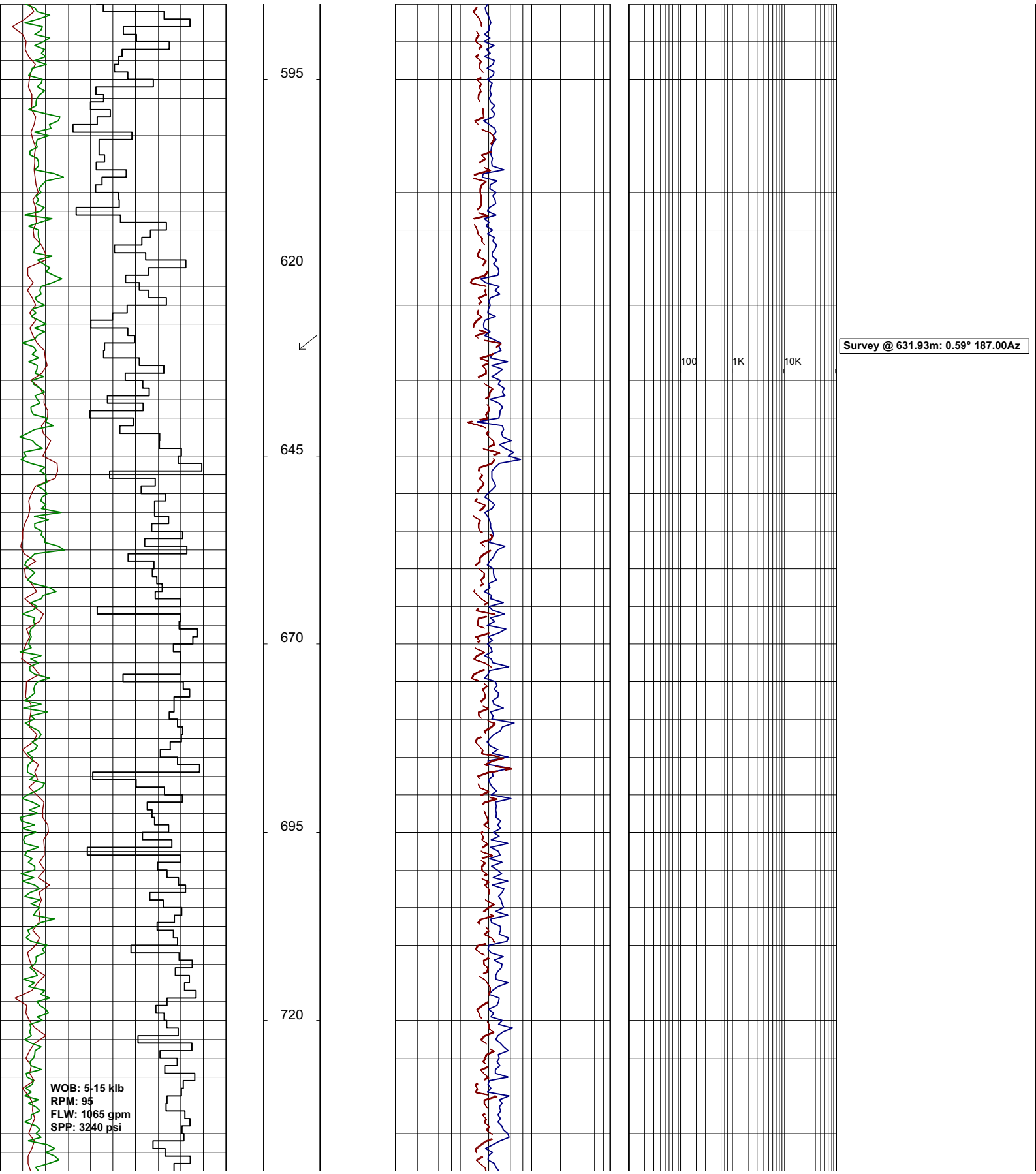
762mm Housing set @ 111.0 mMDRT

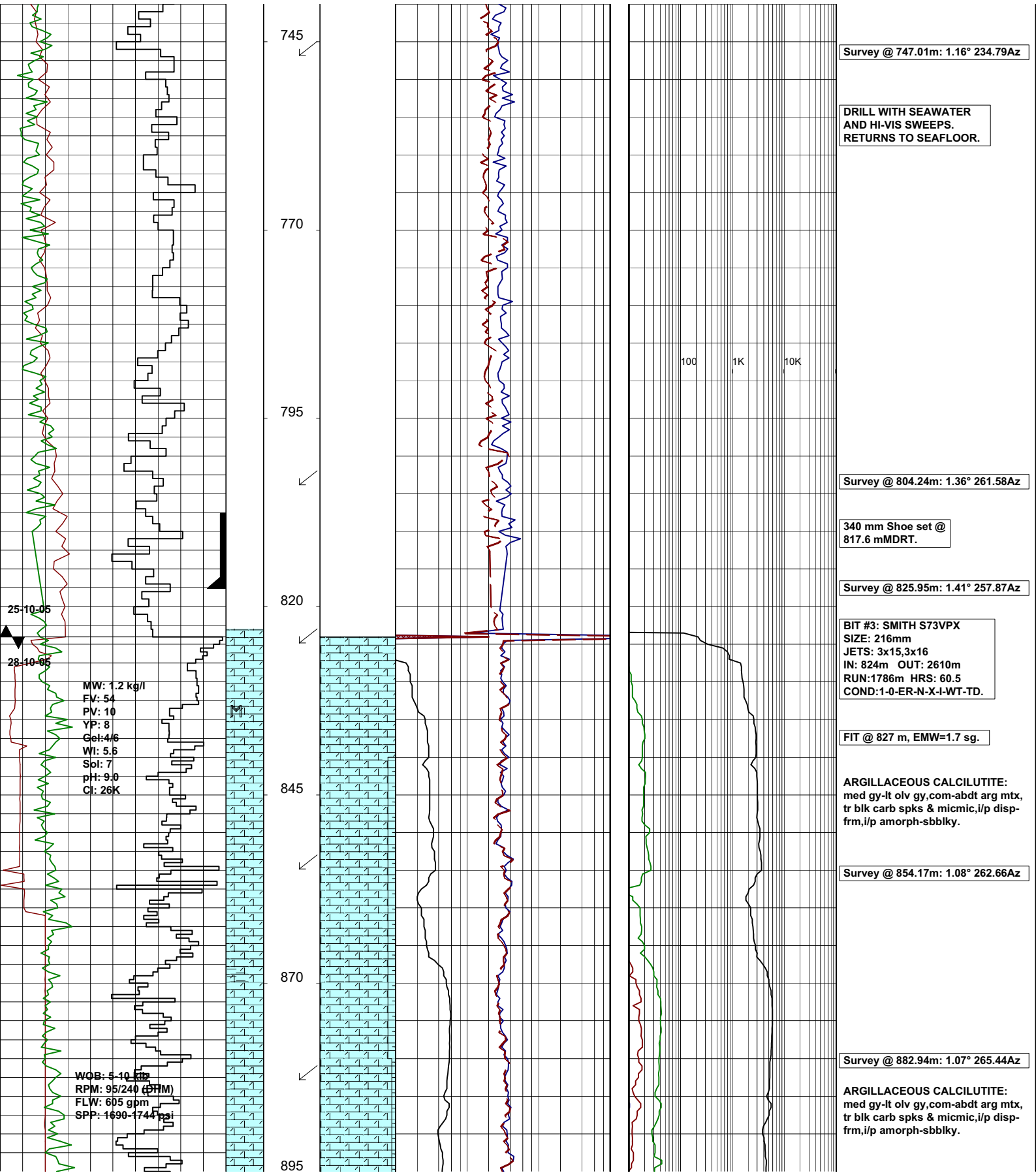
BIT #2: SEC FS2563
SIZE: 406mm
JETS: 7x18
IN: 111.7m OUT:824.0 m
RUN:712.3m HRS:10.6

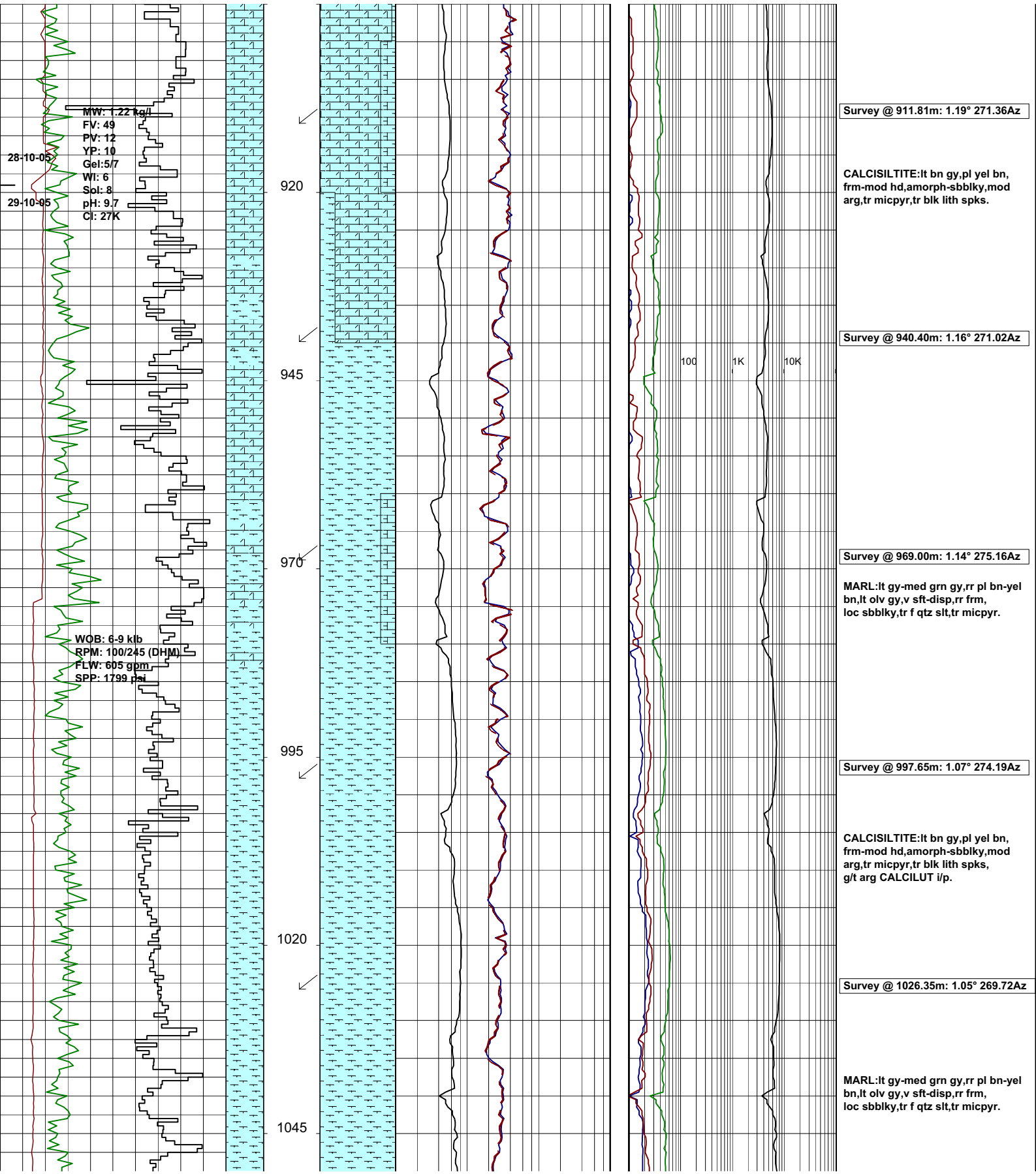

COND:0-0-I-NO-E-I-NO-TD.
145
Survey @ 147.58m: 0.20° 177.10Az
DRILL WITH SEAWATER
AND HI-VIS SWEEPS.
RETURNS TO SEAFLOOR.
170
195
Survey @ 202.77m: 0.44° 176.34Az
220
WOB: 0-2 klb
RPM: 68
FLW: 1060 gpm
SPP: 2520 psi
Survey @ 230.70m: 0.60° 175.42Az
245
Survey @ 259.17m: 0.44° 182.26Az
270

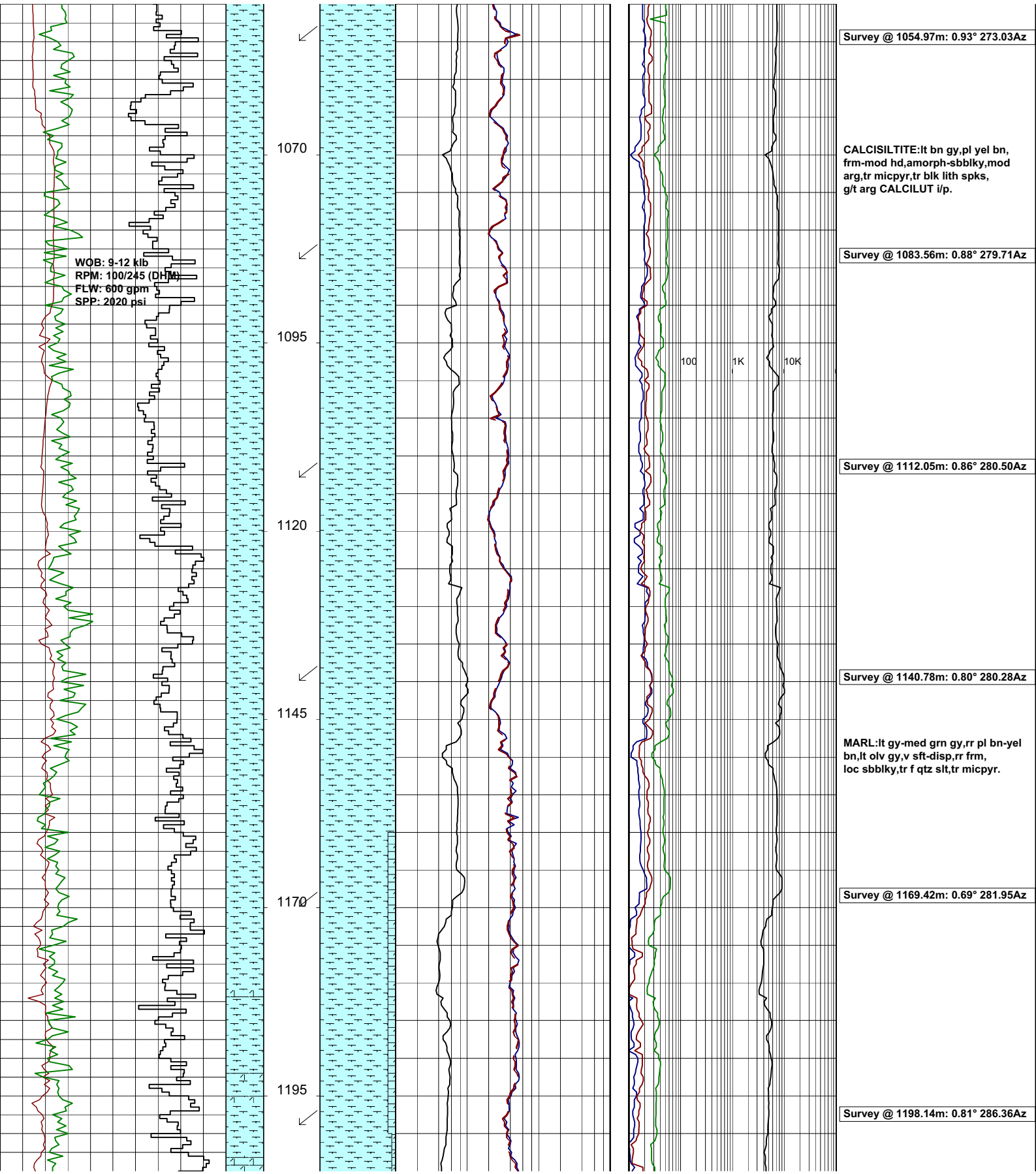

295
320
345
370
395
420
100
1K
10K
Survey @ 316.17m: 0.19° 202.22Az
DRILL WITH SEAWATER
AND HI-VIS SWEEPS.
RETURNS TO SEAFLOOR.
WOB: 0-3 klb
RPM: 65
FLW: 1062 gpm
SPP: 2550 psi

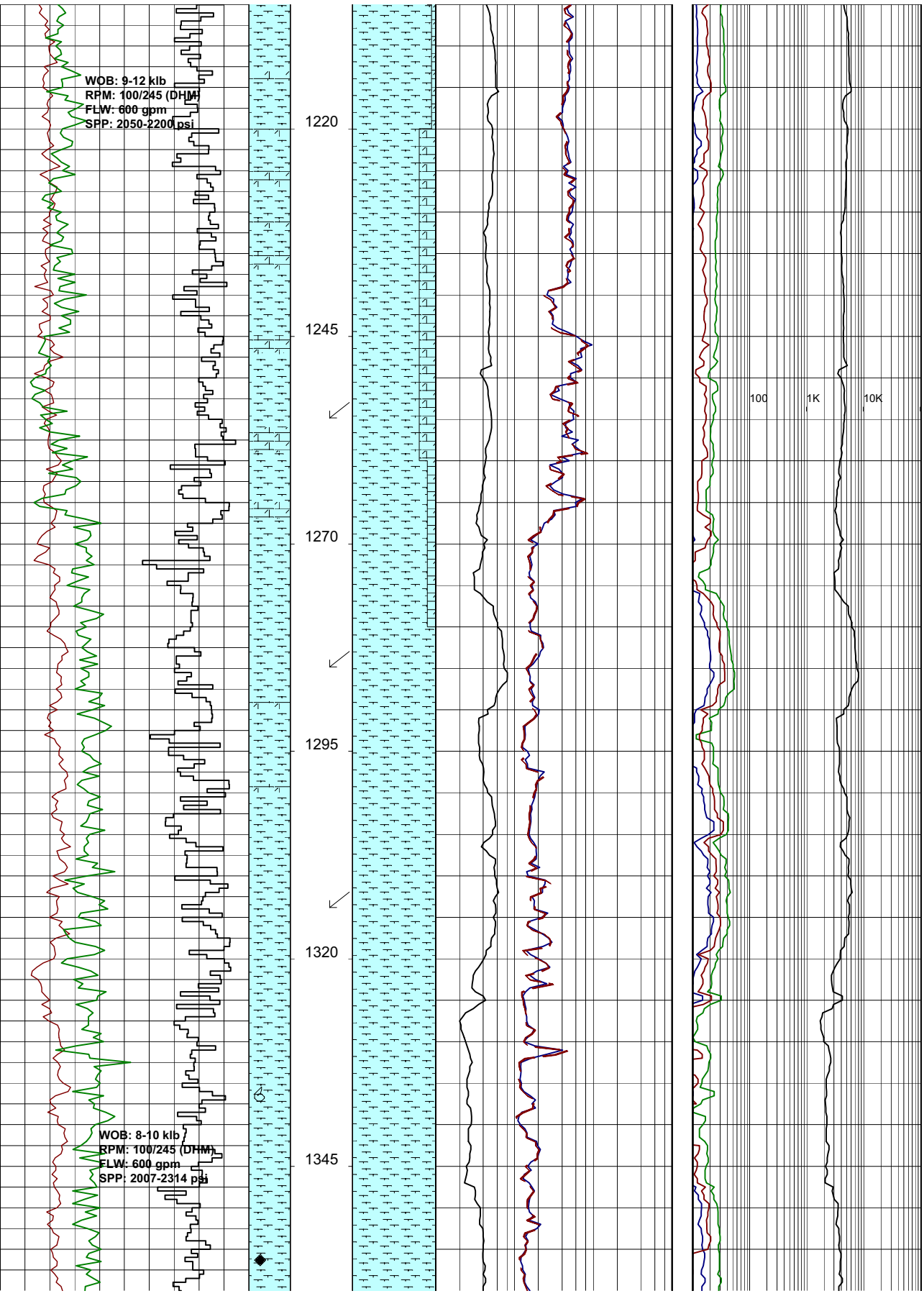

Survey @ 431.05m: 0.42° 169.27Az
445
470
495
520
545
570
100
1K
10K
WOB: 3-7 klb
RPM: 60-70
FLW: 1060 gpm
SPP: 2500-3000 psi
DRILL WITH SEAWATER
AND HI-VIS SWEEPS.
RETURNS TO SEAFLOOR.
DRILL WITH SEAWATER
AND HI-VIS SWEEPS.
RETURNS TO SEAFLOOR.
Survey @ 574.28m: 0.77° 174.99Az


595
620
645
670
695
720
100
1K
10K
Survey @ 631.93m: 0.59° 187.00Az
WOB: 5-15 klb
RPM: 95
FLW: 1065 gpm
SPP: 3240 psi


745
770
795
820
845
870
895
100
1K
10K
25-10-05
28-10-05
MW: 1.2 kg/l
FV: 54
PV: 10
YP: 8
Gel:4/6
WI: 5.6
Sol: 7
pH: 9.0
Cl: 26K
WOB: 5-10 klb
RPM: 95/240 (DHM)
FLW: 605 gpm
SPP: 1690-1744 psi
Survey @ 747.01m: 1.16° 234.79Az
DRILL WITH SEAWATER AND HI-VIS SWEEPS. RETURNS TO SEAFLOOR.
Survey @ 804.24m: 1.36° 261.58Az
340 mm Shoe set @ 817.6 mMDRT.
Survey @ 825.95m: 1.41° 257.87Az
BIT #3: SMITH S73VPX
SIZE: 216mm
JETS: 3x15,3x16
IN: 824m OUT: 2610m
RUN:1786m HRS: 60.5
COND:1-0-ER-N-X-I-WT-TD.
FIT @ 827 m, EMW=1.7 sg.
ARGILLACEOUS CALCILUTITE: med gy-lt olv gy,com-abdt arg mtx, tr blk carb spks & micmic,i/p disp-frm,i/p amorph-sbblky.
Survey @ 854.17m: 1.08° 262.66Az
Survey @ 882.94m: 1.07° 265.44Az
ARGILLACEOUS CALCILUTITE: med gy-lt olv gy,com-abdt arg mtx, tr blk carb spks & micmic,i/p disp-frm,i/p amorph-sbblky.


MW: 1.22 kg/l
FV: 49
PV: 12
YP: 10
Gel:5/7
WI: 6
Sol: 8
pH: 9.7
Cl: 27K
28-10-05
29-10-05
WOB: 6-9 klb
RPM: 100/245 (DHM)
FLW: 605 gpm
SPP: 1799 psi
920
945
970
995
1020
1045
100
1K
10K
Survey @ 911.81m: 1.19° 271.36Az
CALCISILTITE:lt bn gy,pl yel bn, frm-mod hd,amorph-sbblky,mod arg,tr micpyr,tr blk lith spks.
Survey @ 940.40m: 1.16° 271.02Az
Survey @ 969.00m: 1.14° 275.16Az
MARL:lt gy-med grn gy,rr pl bn-yel bn,lt olv gy,v sft-disp,rr frm, loc sbblky,tr f qtz slt,tr micpyr.
Survey @ 997.65m: 1.07° 274.19Az
CALCISILTITE:lt bn gy,pl yel bn, frm-mod hd,amorph-sbblky,mod arg,tr micpyr,tr blk lith spks, g/t arg CALCILUT i/p.
Survey @ 1026.35m: 1.05° 269.72Az
MARL:lt gy-med grn gy,rr pl bn-yel bn,lt olv gy,v sft-disp,rr frm, loc sbblky,tr f qtz slt,tr micpyr.


WOB: 9-12 klb
RPM: 100/245 (DHM)
FLW: 600 gpm
SPP: 2020 psi
1070
1095
1120
1145
1170
1195
100
1K
10K
Survey @ 1054.97m: 0.93° 273.03Az
CALCISILTITE:lt bn gy,pl yel bn, frm-mod hd,amorph-sbblky,mod arg,tr micpyr,tr blk lith spks, g/t arg CALCILUT i/p.
Survey @ 1083.56m: 0.88° 279.71Az
Survey @ 1112.05m: 0.86° 280.50Az
Survey @ 1140.78m: 0.80° 280.28Az
MARL:lt gy-med grn gy,rr pl bn-yel bn,lt olv gy,v sft-disp,rr frm, loc sbblky,tr f qtz slt,tr micpyr.
Survey @ 1169.42m: 0.69° 281.95Az
Survey @ 1198.14m: 0.81° 286.36Az



ARGILLACEOUS CALCILUTITE: med gy-lt olv gy,com-abdt arg mtx, tr blk carb spks & micmic,i/p disp-frm,i/p amorph-sbblky.

MARL:lt gy-med grn gy,rr pl bn-yel bn,lt olv gy,v sft-disp,rr frm, loc sbblky,tr f qtz slt,tr micpyr.

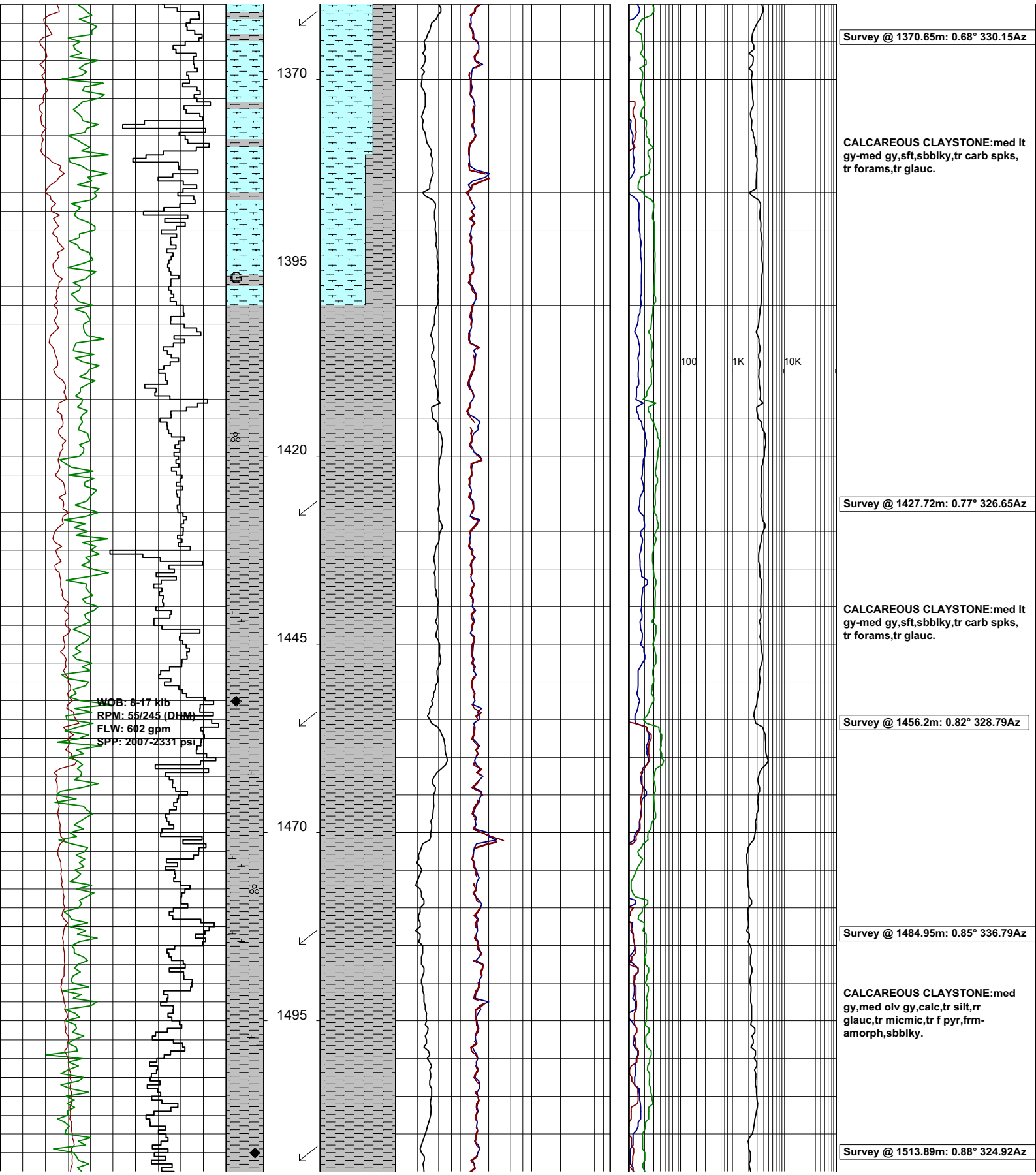
Survey @ 1255.86m: 1.01° 305.38Az

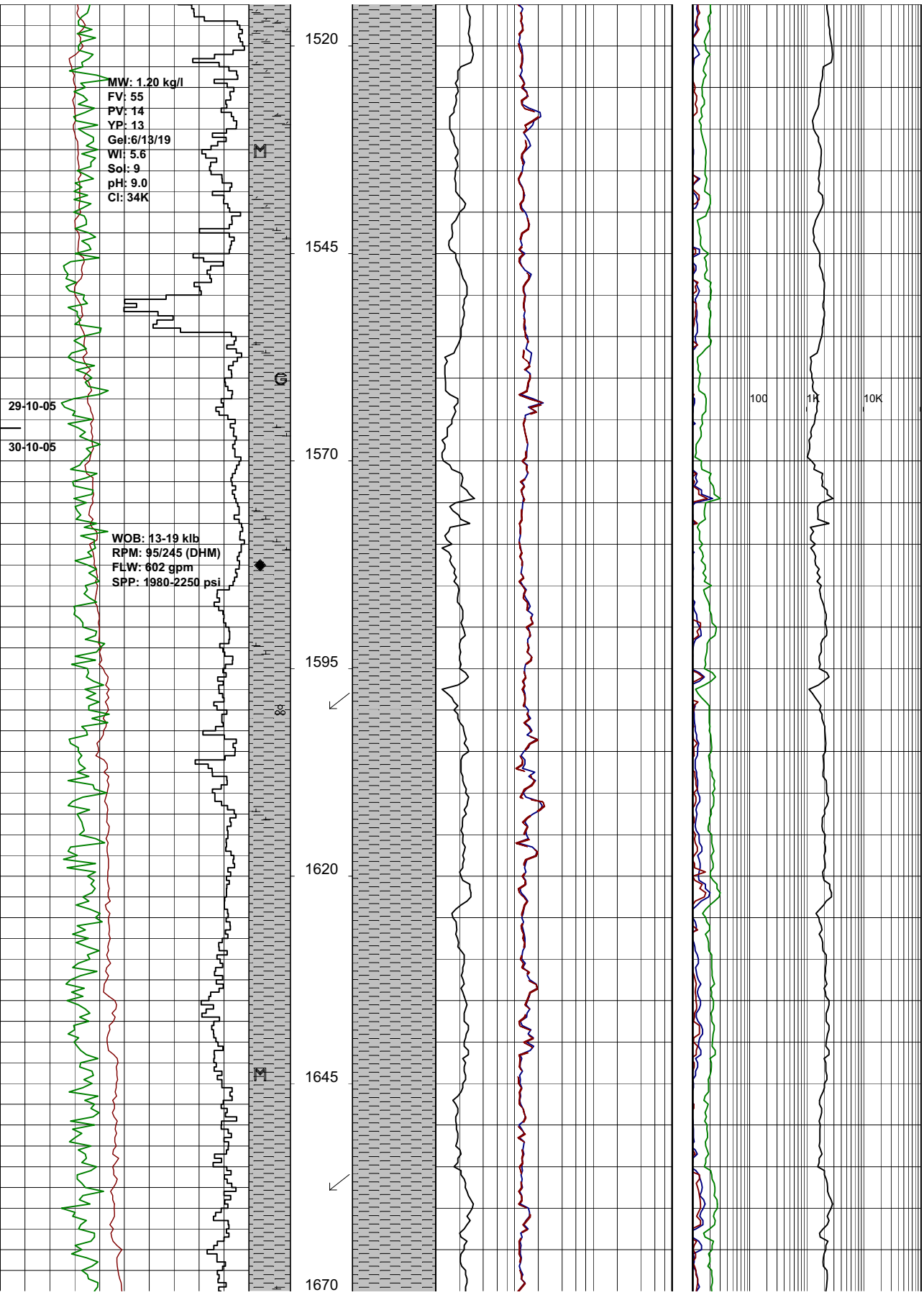
Survey @ 1284.62m: 0.87° 311.34Az

MARL:med olv gy-olv gy,tr sil slt disp i/p-frm,amorph-sbblky,tr mic mic,rr glauc,tr carb spks,mnr micpyr.

Survey @ 1313.27m: 0.86° 333.94Az

MARL:med olv gy-olv gy,tr sil slt disp i/p-frm,amorph-sbblky,tr mic mic,rr glauc,tr carb spks,mnr micpyr.


1370
1395
1420
1445
1470
1495
100
1K
10K
WOB: 8-17 klb
RPM: 55/245 (DHM)
FLW: 602 gpm
SPP: 2007-2331 psi
Survey @ 1370.65m: 0.68° 330.15Az
CALCAREOUS CLAYSTONE:med lt gy-med gy,sft,sbblky,tr carb spks, tr forams,tr glauc.
Survey @ 1427.72m: 0.77° 326.65Az
CALCAREOUS CLAYSTONE:med lt gy-med gy,sft,sbblky,tr carb spks, tr forams,tr glauc.
Survey @ 1456.2m: 0.82° 328.79Az
Survey @ 1484.95m: 0.85° 336.79Az
CALCAREOUS CLAYSTONE:med gy,med olv gy,calc,tr silt,rr glauc,tr micmic,tr f pyr,frm-amorph,sbblky.
Survey @ 1513.89m: 0.88° 324.92Az



CALCAREOUS CLAYSTONE:med olv gy,olv gy,lt brn gy,med lt gy,lt olv gy,com-abdt calc,loc dol,tr-loc mnr forams,tr nod pyr & micmic,rr-tr carb spks,rr glauc,i/p disp-frm,occ v hd,i/p amorph,sbblky,occ sbang frags(dol).

Filtrate @ 1541m: 0.10 Ohm @ 75°F

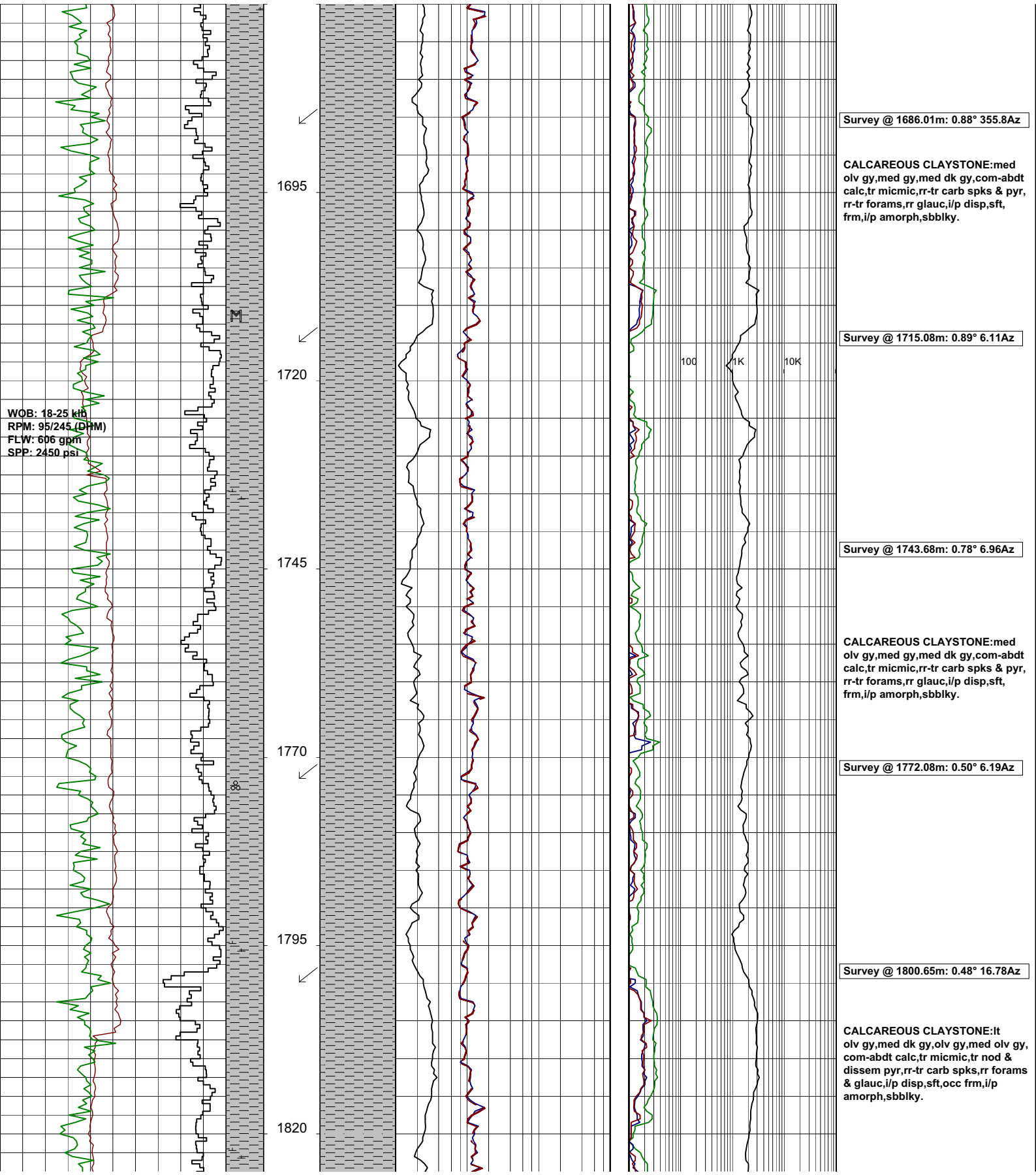
Survey @ 1542.83m: 0.86° 327.87Az

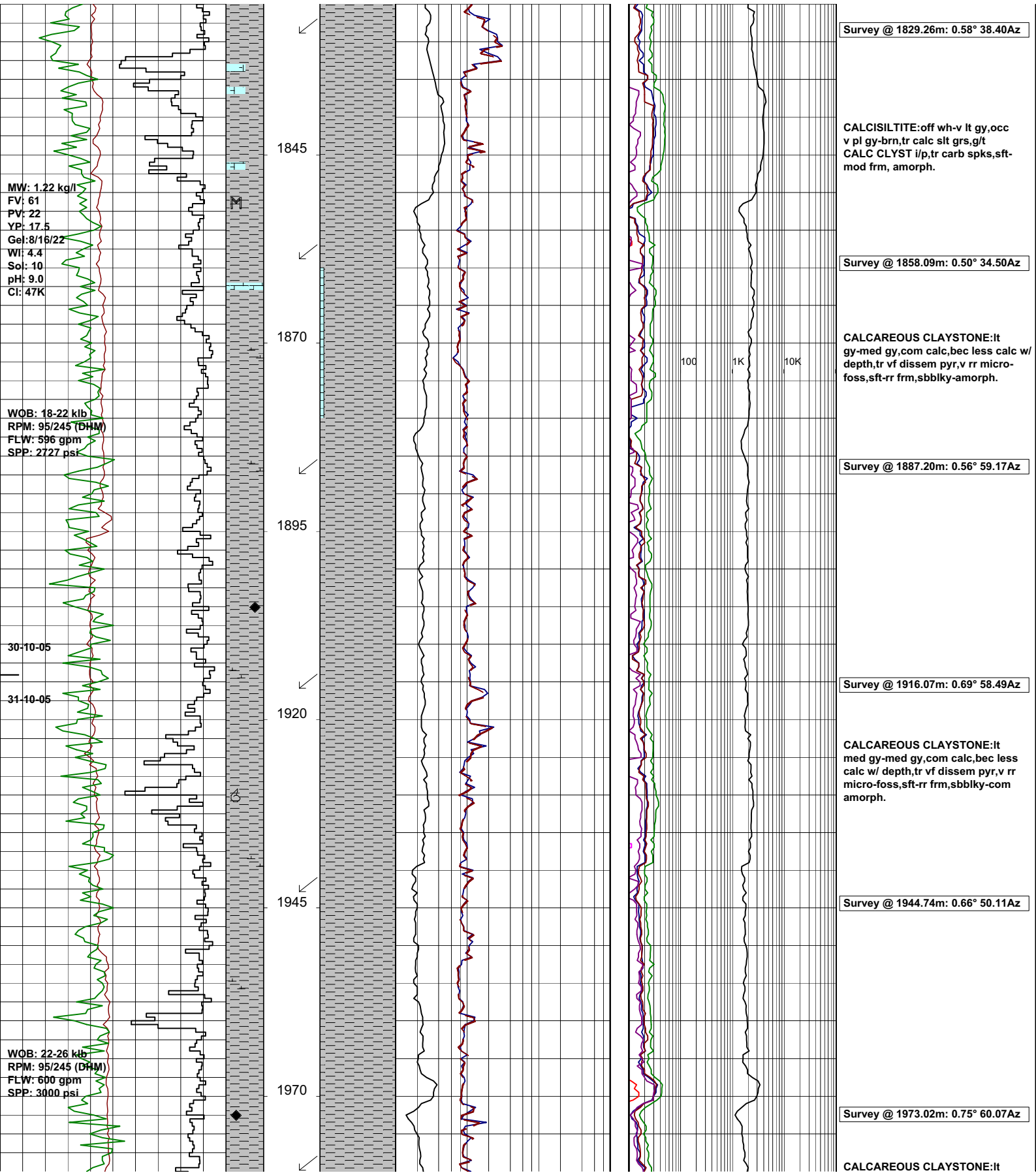
Survey @ 1571.59m: 0.87° 324.35Az

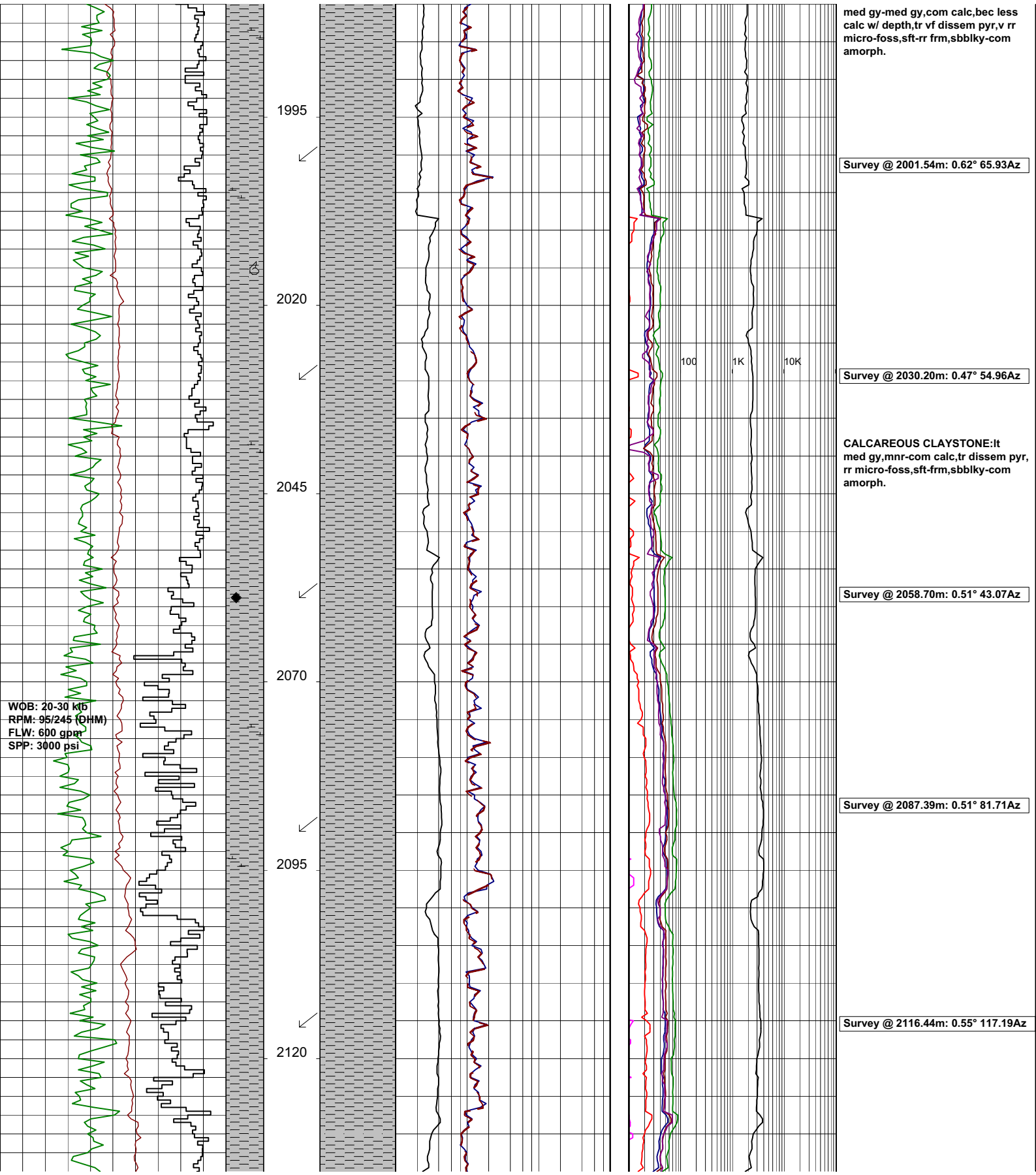
CALCAREOUS CLAYSTONE:lt gy-lt med gy,com calc,com forams & micro foss,tr micro pyr & glauc,tr carb spks,rr hd-brit shell mat, sft-frm,sbblky-blky.

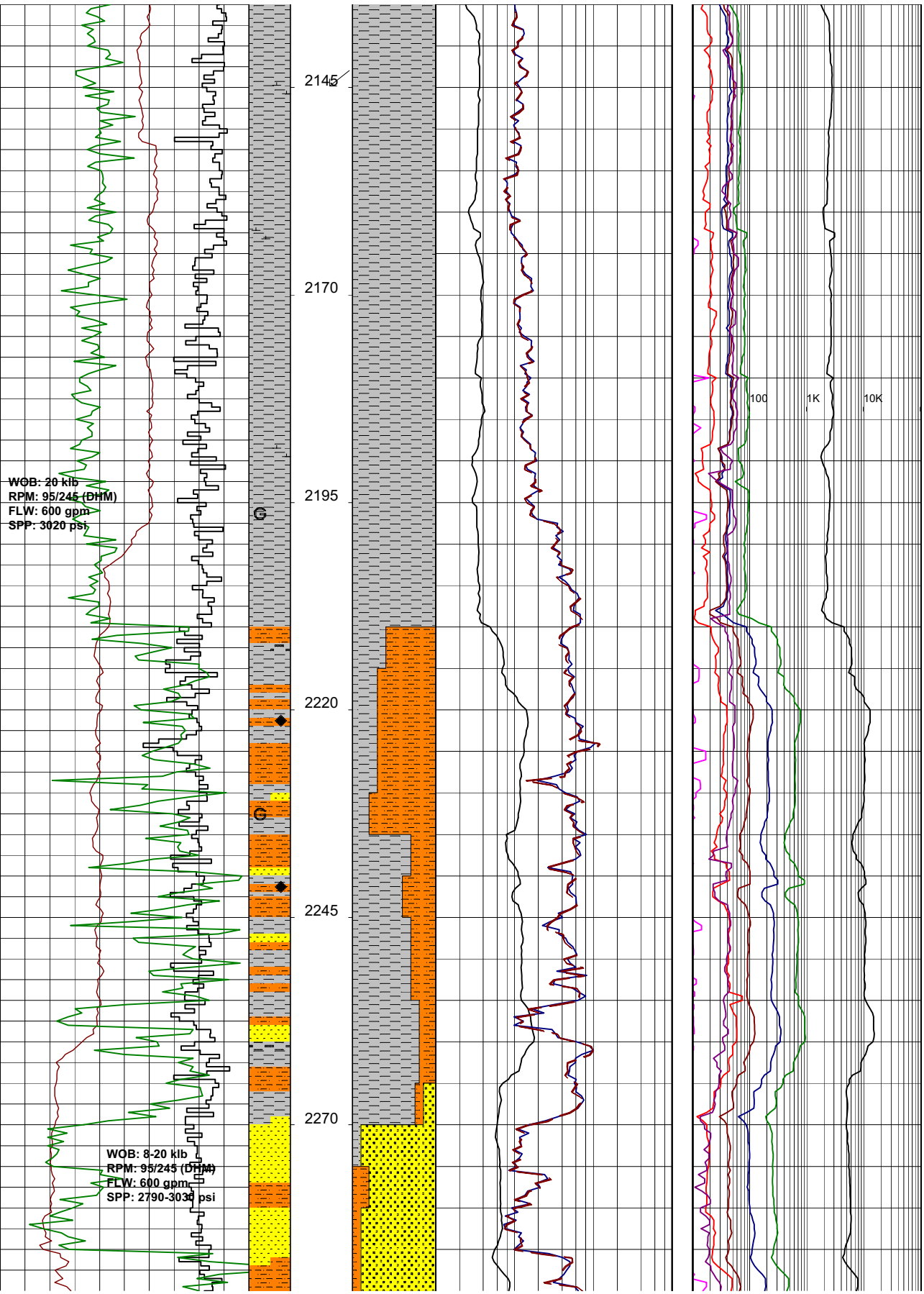
Survey @ 1599.70m: 0.77° 338.40Az

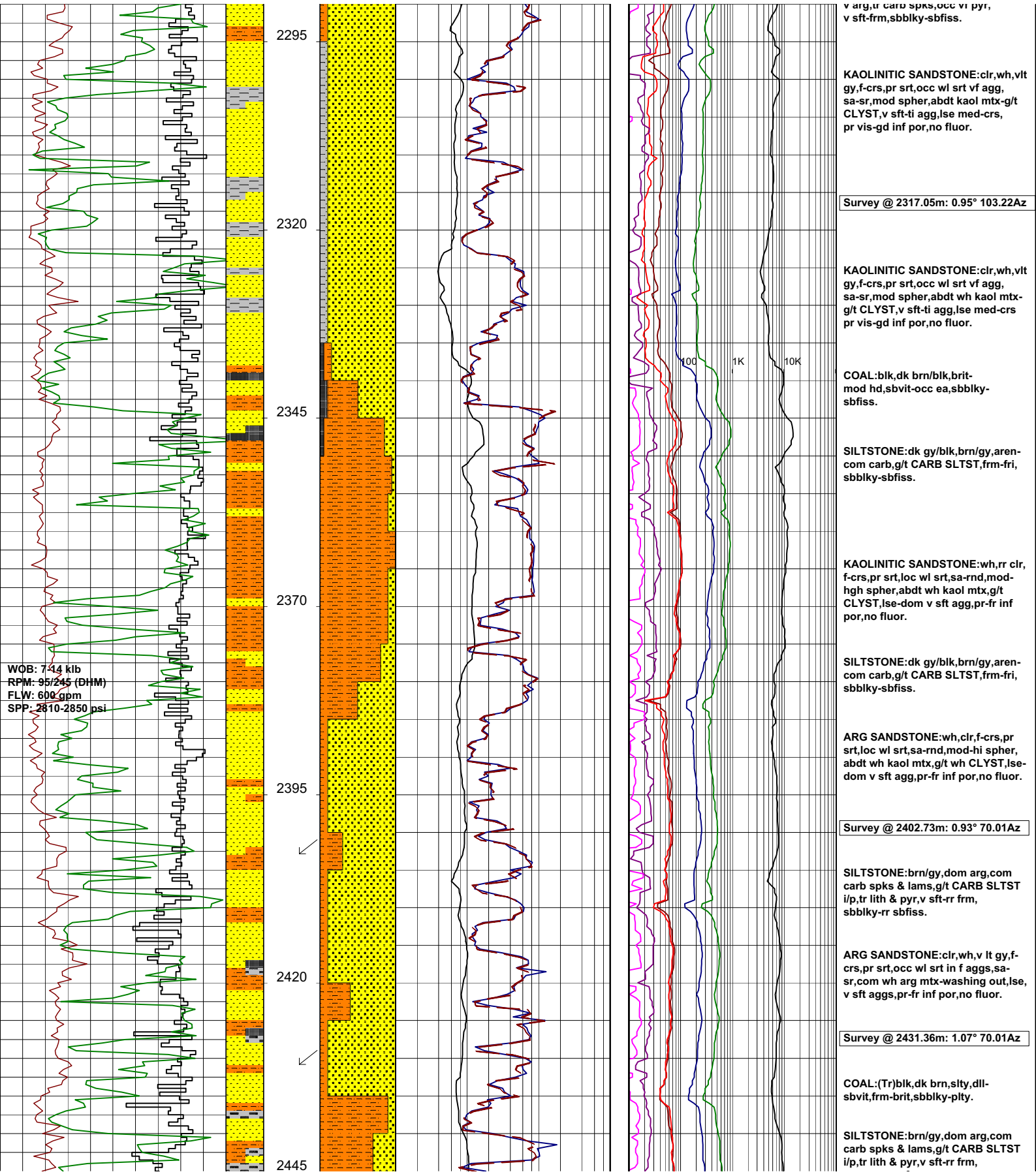
Survey @ 1657.3m: 0.97° 353.39Az


1695
1720
1745
1770
1795
1820
100
1K
10K
WOB: 18-25 klb
RPM: 95/245 (DHM)
FLW: 606 gpm
SPP: 2450 psi
Survey @ 1686.01m: 0.88° 355.8Az
CALCAREOUS CLAYSTONE:med olv gy,med gy,med dk gy,com-abdt calc,tr micmic,rr-tr carb spks & pyr, rr-tr forams,rr glauc,i/p disp,sft, frm,i/p amorph,sbblky.
Survey @ 1715.08m: 0.89° 6.11Az
Survey @ 1743.68m: 0.78° 6.96Az
CALCAREOUS CLAYSTONE:med olv gy,med gy,med dk gy,com-abdt calc,tr micmic,rr-tr carb spks & pyr, rr-tr forams,rr glauc,i/p disp,sft, frm,i/p amorph,sbblky.
Survey @ 1772.08m: 0.50° 6.19Az
Survey @ 1800.65m: 0.48° 16.78Az
CALCAREOUS CLAYSTONE:lt olv gy,med dk gy,olv gy,med olv gy, com-abdt calc,tr micmic,tr nod & dissem pyr,rr-tr carb spks,rr forams & glauc,i/p disp,sft,occ frm,i/p amorph,sbblky.


MW: 1.22 kg/l
FV: 61
PV: 22
YP: 17.5
Gel:8/16/22
WI: 4.4
Sol: 10
pH: 9.0
Cl: 47K
WOB: 18-22 klb
RPM: 95/245 (DHM)
FLW: 596 gpm
SPP: 2727 psi
30-10-05
31-10-05
WOB: 22-26 klb
RPM: 95/245 (DHM)
FLW: 600 gpm
SPP: 3000 psi
1845
1870
1895
1920
1945
1970
100
1K
10K
Survey @ 1829.26m: 0.58° 38.40Az
CALCISILTITE:off wh-v lt gy,occ v pl gy-brn,tr calc slt grs,g/t CALC CLYST i/p,tr carb spks,sft-mod frm, amorph.
Survey @ 1858.09m: 0.50° 34.50Az
CALCAREOUS CLAYSTONE:lt gy-med gy,com calc,bec less calc w/ depth,tr vf dissem pyr,v rr micro-foss,sft-rr frm,sbblky-amorph.
Survey @ 1887.20m: 0.56° 59.17Az
Survey @ 1916.07m: 0.69° 58.49Az
CALCAREOUS CLAYSTONE:lt med gy-med gy,com calc,bec less calc w/ depth,tr vf dissem pyr,v rr micro-foss,sft-rr frm,sbblky-com amorph.
Survey @ 1944.74m: 0.66° 50.11Az
Survey @ 1973.02m: 0.75° 60.07Az
CALCAREOUS CLAYSTONE:lt


1995
2020
2045
2070
2095
2120
100
1K
10K
WOB: 20-30 klb
RPM: 95/245 (DHM)
FLW: 600 gpm
SPP: 3000 psi
med gy-med gy,com calc,bec less calc w/ depth,tr vf dissem pyr,v rr micro-foss,sft-rr frm,sbblky-com amorph.
Survey @ 2001.54m: 0.62° 65.93Az
Survey @ 2030.20m: 0.47° 54.96Az
CALCAREOUS CLAYSTONE:lt med gy,mnr-com calc,tr dissem pyr, rr micro-foss,sft-frm,sbblky-com amorph.
Survey @ 2058.70m: 0.51° 43.07Az
Survey @ 2087.39m: 0.51° 81.71Az
Survey @ 2116.44m: 0.55° 117.19Az


2145
2170
2195
2220
2245
2270
100
1K
10K
WOB: 20 klb
RPM: 95/245 (DHM)
FLW: 600 gpm
SPP: 3020 psi
WOB: 8-20 klb
RPM: 95/245 (DHM)
FLW: 600 gpm
SPP: 2790-3030 psi
Survey @ 2144.78m: 0.56° 102.11Az
CALCAREOUS CLAYSTONE:lt olv gy,lt gy,med lt gy,med gy,mnr -com calc,tr micmic(some Fe rich), rr-tr carb spks/flks,rr-tr nod & dissem pyr,rr foss & glauc,i/p disp-frm,occ mod hd,i/p amorph,sbblky, occ blky & sbplty.
CALCAREOUS CLAYSTONE:wh-lt gy,calc,tr carb flk,occ sml glauc nod,tr pyr,v sft-frm, amorph-blky.
SILTSTONE:brn,brn/gy,brn/blk i/p,micmic,sft-frm,mod hd i/p, tr-com pyr nod,tr LMST,com carb flk,tr CARB SLTST g/t slty COAL i/p,sbblky-sbfiss i/p.
SANDSTONE(Tr): clr-off wh,f-med,rnd-ang,mod srt,com arg mtx,glauc i/p,pr vis por,no fluor.
CLAYSTONE:v lt gy,lt brn,calc, tr glauc,occ vf snd,sft,amorph.
SANDSTONE(Tr):v lt gy,mlky-clr vf,wl srt,60% arg mtx-mtx supptd tr glauc,tr med-crs ang-rnd lse grs, pr inf por,no fluor.
Control Drilling @ 50 m/hr.
SILTSTONE:brn/gy,dom arg,com carb spks & lams,g/t CARB SLTST i/p,v sft-rr frm,sbblky-rr sbfiss.
CLAYSTONE:v lt gy,lt gy/brn, calc,tr-rr glauc,tr vf qtz grs, v sft-rr frm,sbblky i/p.
SANDSTONE:clr,wh,v lt gy,f-crs,pr srt,occ wl srt vf aggs,sa-sr,mod spher,com wh kaol mtx,mtx supp i/p,dom lse,v sft-frm aggs, pr por,no fluor,g/t KAOL SST.
SILTSTONE:lt gy,brn/gy,aren-



v arg,tr carb spks,occ vf pyr, v sft-frm,sbblky-sbfiss.

KAOLINITIC SANDSTONE:clr,wh,vlt gy,f-crs,pr srt,occ wl srt vf agg, sa-sr,mod spher,abdt kaol mtx-g/t CLYST,v sft-ti agg,lse med-crs, pr vis-gd inf por,no fluor.

Survey @ 2317.05m: 0.95° 103.22Az

KAOLINITIC SANDSTONE:clr,wh,vlt gy,f-crs,pr srt,occ wl srt vf agg, sa-sr,mod spher,abdt wh kaol mtx-g/t CLYST,v sft-ti agg,lse med-crs pr vis-gd inf por,no fluor.

COAL:blk,dk brn/blk,brit-mod hd,sbvit-occ ea,sbblky-sbfiss.

SILTSTONE:dk gy/blk,brn/gy,aren-com carb,g/t CARB SLTST,frm-fri, sbblky-sbfiss.

KAOLINITIC SANDSTONE:wh,rr clr, f-crs,pr srt,loc wl srt,sa-rnd,mod-hgh spher,abdt wh kaol mtx,g/t CLYST,lse-dom v sft agg,pr-fr inf por,no fluor.

SILTSTONE:dk gy/blk,brn/gy,aren-com carb,g/t CARB SLTST,frm-fri, sbblky-sbfiss.

ARG SANDSTONE:wh,clr,f-crs,pr srt,loc wl srt,sa-rnd,mod-hi spher, abdt wh kaol mtx,g/t wh CLYST,lse-dom v sft agg,pr-fr inf por,no fluor.

Survey @ 2402.73m: 0.93° 70.01Az

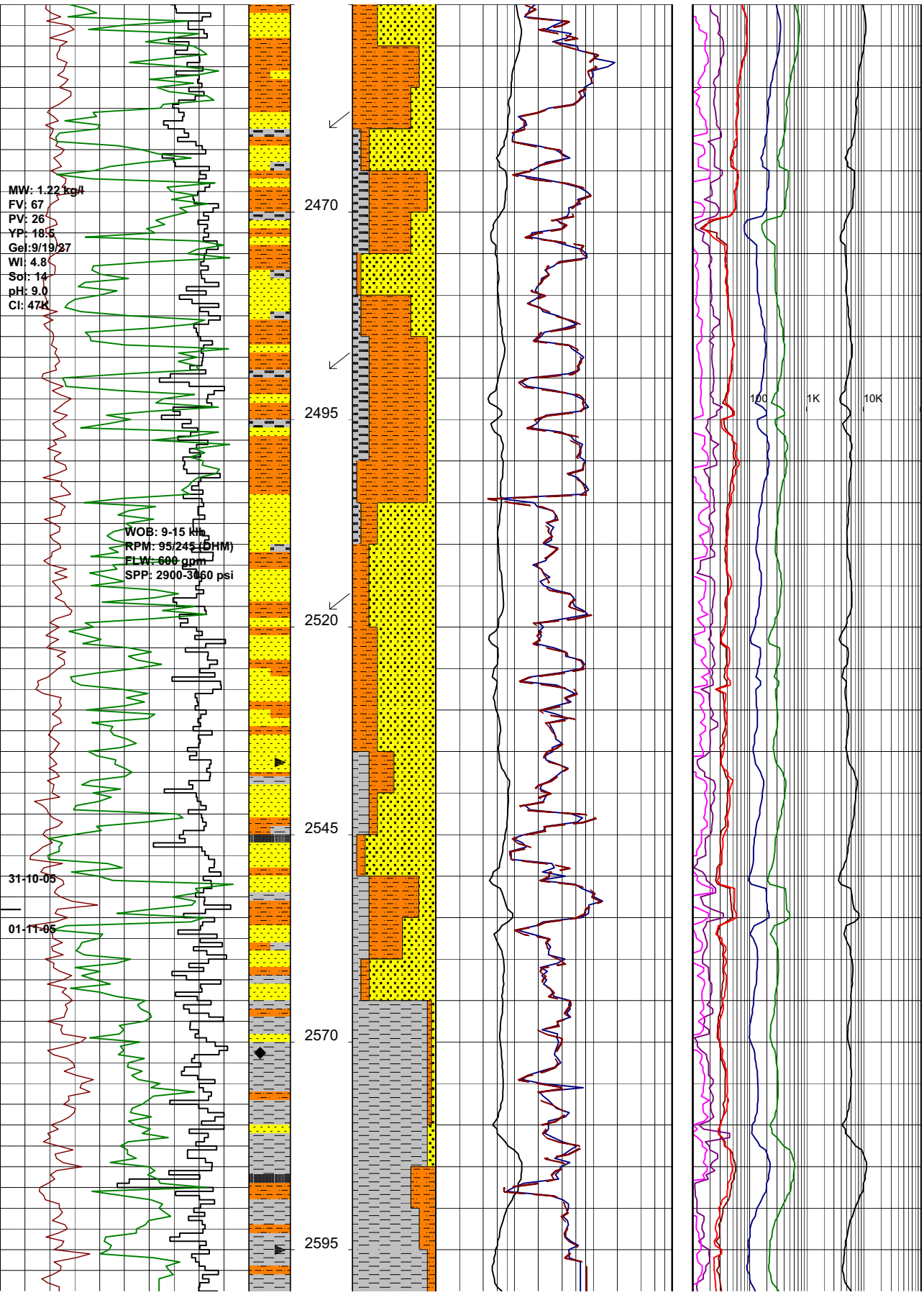
SILTSTONE:brn/gy,dom arg,com carb spks & lams,g/t CARB SLTST i/p,tr lith & pyr,v sft-rr frm, sbblky-rr sbfiss.

ARG SANDSTONE:clr,wh,v lt gy,f-crs,pr srt,occ wl srt in f aggs,sa-sr,com wh arg mtx-washing out,lse, v sft aggs,pr-fr inf por,no fluor.

Survey @ 2431.36m: 1.07° 70.01Az

COAL:(Tr)blk,dk brn,slty,dll-sbvit,frm-brit,sbblky-plty.

SILTSTONE:brn/gy,dom arg,com carb spks & lams,g/t CARB SLTST i/p,tr lith & pyr,v sft-rr frm,



sbblky-rr sbfiss.

ARG SANDSTONE:clr,wh,v lt gy,f-v crs,pr srt,occ fract grs i/p,abdt abdt wh arg mtx,com carb flks,rr glauc,lse-v sft aggs,pr-fr inf por, no fluor.

Survey @ 2460.09m: 1.06° 56.97Az

Filtrate @ 2470m: 0.09ohms @ 75°F

CARB SILTSTONE:blk/dk gy,dk brn blk,frm,sbblky-sbfiss.

ARG SANDSTONE:wh-lt gy,f-v crs, gran i/p,pr srt,sa-sr,ang i/p,com wh arg mtx-washing out i/p,gen lse-rr frm aggs,pr inf por,no fluor.

Survey @ 2488.89m: 1.28° 60.60Az

SILTSTONE:brn/gy,dom arg,com carb spks & lams,g/t CARB SLTST i/p,tr lith & pyr,v sft-rr frm, sbblky-rr sbfiss.

ARG SANDSTONE:wh-lt gy,f-v crs, gran i/p,pr srt,sa-sr,ang i/p,com wh arg mtx-washing out i/p,gen lse-rr frm aggs,pr inf por,no fluor.

Survey @ 2517.63m: 1.41° 56.39Az

SILTSTONE:brn/gy,dom arg,com carb spks & lams,g/t CARB SLTST i/p,tr lith & pyr,v sft-rr frm, sbblky-rr sbfiss.

COAL(Tr):blk-dk brn,slty,shiny-dll mat,sbvit,frm-brit,sbblky-plty.

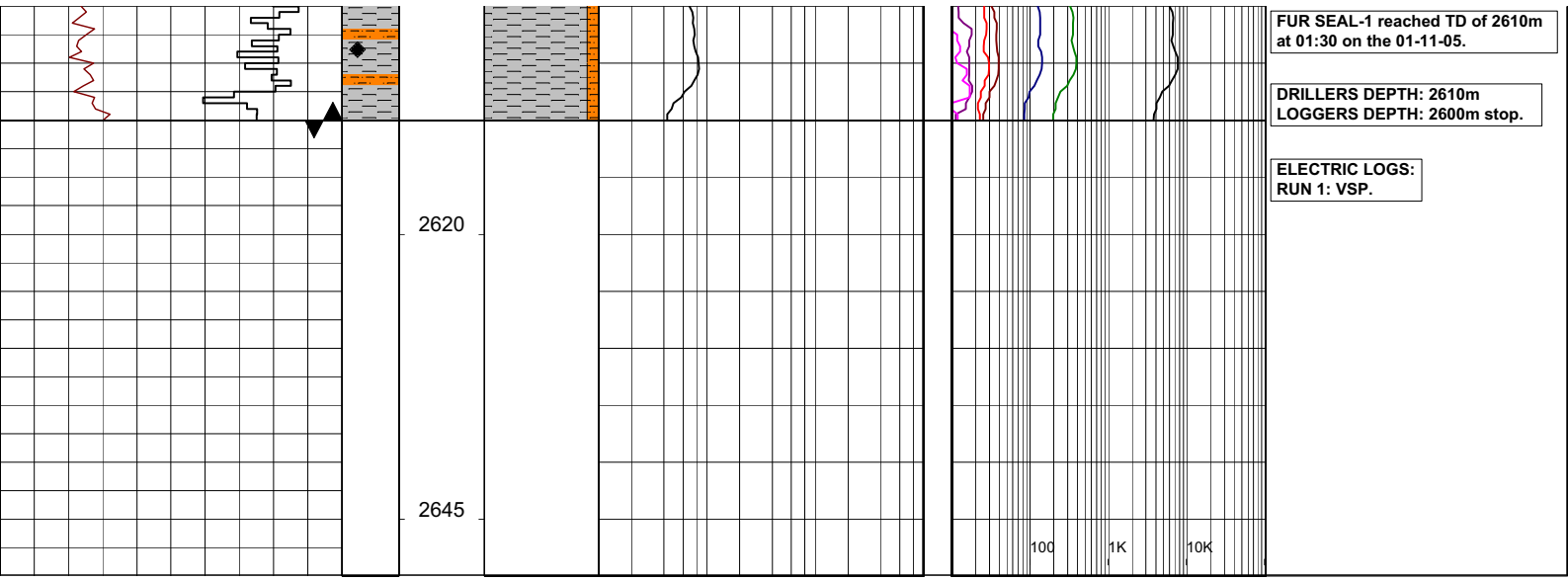
CLAYSTONE:lt olv gy-gy,rr slty i/p,mod calc i/p,tr micmic,tr carb lams,tr micro-pyr,sft-frm,sbblky.

ARG SANDSTONE:wh-lt gy,f-med, mod srt,sa-sr,tr wk calc cmt,tr nod & dissem pyr,gen lse-rr fri aggs,pr vis & mod inf por,no fluor.

CLAYSTONE:lt olv gy-gy,sft-frm, rr slty grns,mildly calc i/p,tr micmic,tr mic-pyr,tr carb lam.sft-amorph,sbblky i/p.

COAL(Tr):brnsh blk,sli arg i/p, dom shiny,sbvit,frm-brit,plty-blky.

CLAYSTONE:lt olv gy-gy,rr slty i/p,mod calc i/p,tr micmic,tr carb lams,tr micro-pyr,sft-frm,sbblky.



FUR SEAL-1 reached TD of 2610m at 01:30 on the 01-11-05.

DRILLERS DEPTH: 2610m
LOGGERS DEPTH: 2600m stop.

ELECTRIC LOGS:
RUN 1: VSP.

DRILLING DATA PLOT

SCALE : 1\ 1000

Operator : APACHE ENERGY LTD	**POSITION**	**CASING**	
Country : AUSTRALIA	Latitude : 38 07 47.91 S	762mm Shoe at (mMDRT): 111.0 m	Spud Date : 24-10-05
Field : GIPPSLAND	Longitude : 148 09 08.44E	340mm Shoe at (mMDRT): 817.6 m	Total Depth Date : 01-11-05
Permit : VIC/P-54			Total Depth (mRT) : 2610.0 m
Well Type : EXPLORATION	RT-AHD (m) : 21.5		T.V.D. (mSSAHD) : P & A
Rig Name : OCEAN PATRIOT	RT-Seabed (m) : 78.12		

ABBREVIATIONS

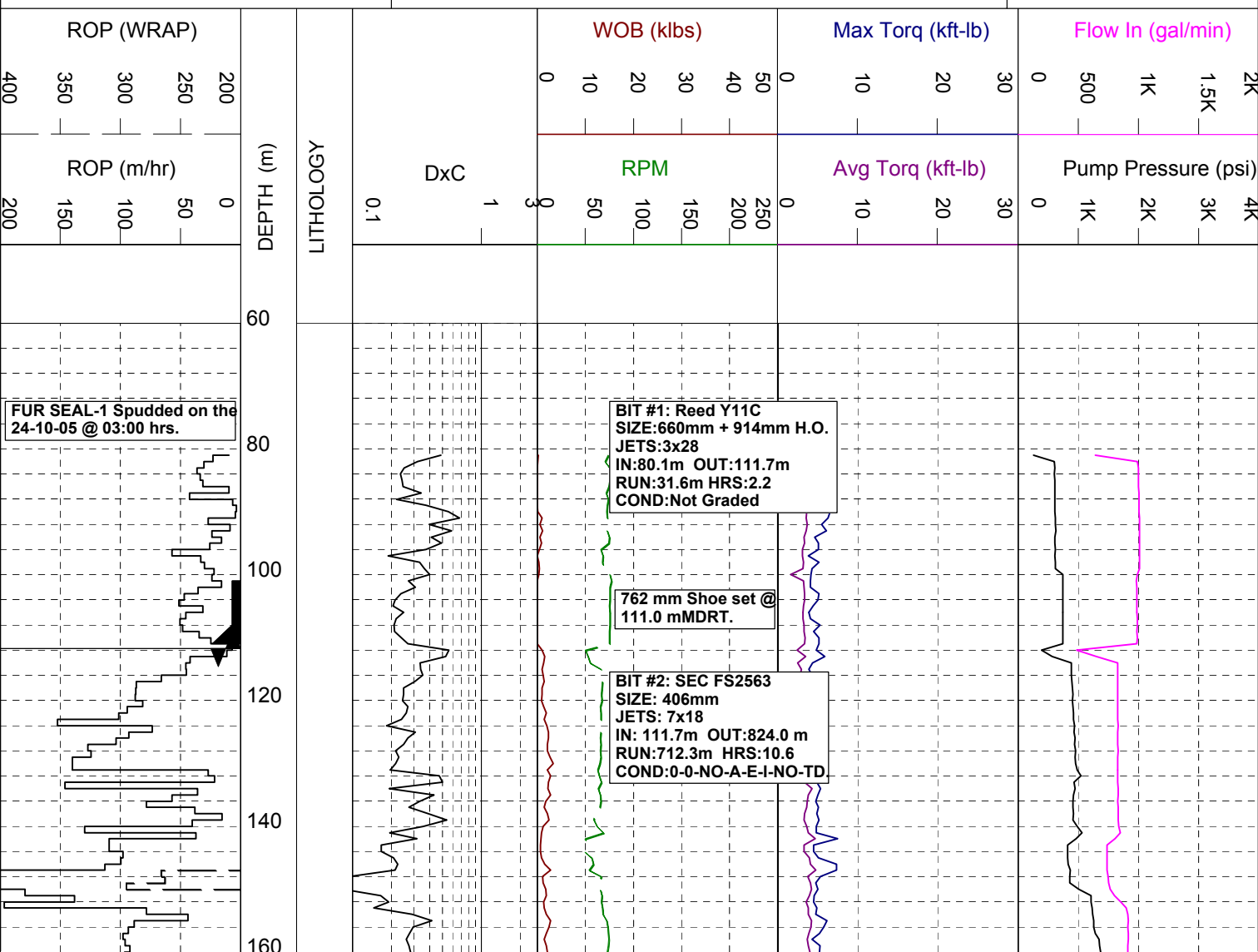
MW MUD WEIGHT	NB NEW BIT
FV FUNNEL VISCOSITY	RR RERUN BIT
PV PLASTIC VISCOSITY	CB CORE BIT
YP YIELD POINT	WOB WEIGHT ON BIT
FC FILTER CAKE	RPM REVS PER MINUTE
SOL SOLIDS	FLC FLOW CHECK
WL FILTRATE	CR CIRCULATE RETURNS
SD SAND-%	PR POOR RETURNS
S SALINITY-PPM	NR NO RETURNS
RM MUD RESISTIVITY	BG BACKROUND GAS
RMF MUD FILTRATE	TG TRIP GAS
C CARBIDE TEST	STG SHORT TRIP GAS
LAT LOGGED AFTER TRIP	CG CONNECTION GAS
DS DEVIATION SURVEY	SG SWAB GAS
	SVG SURVEY GAS

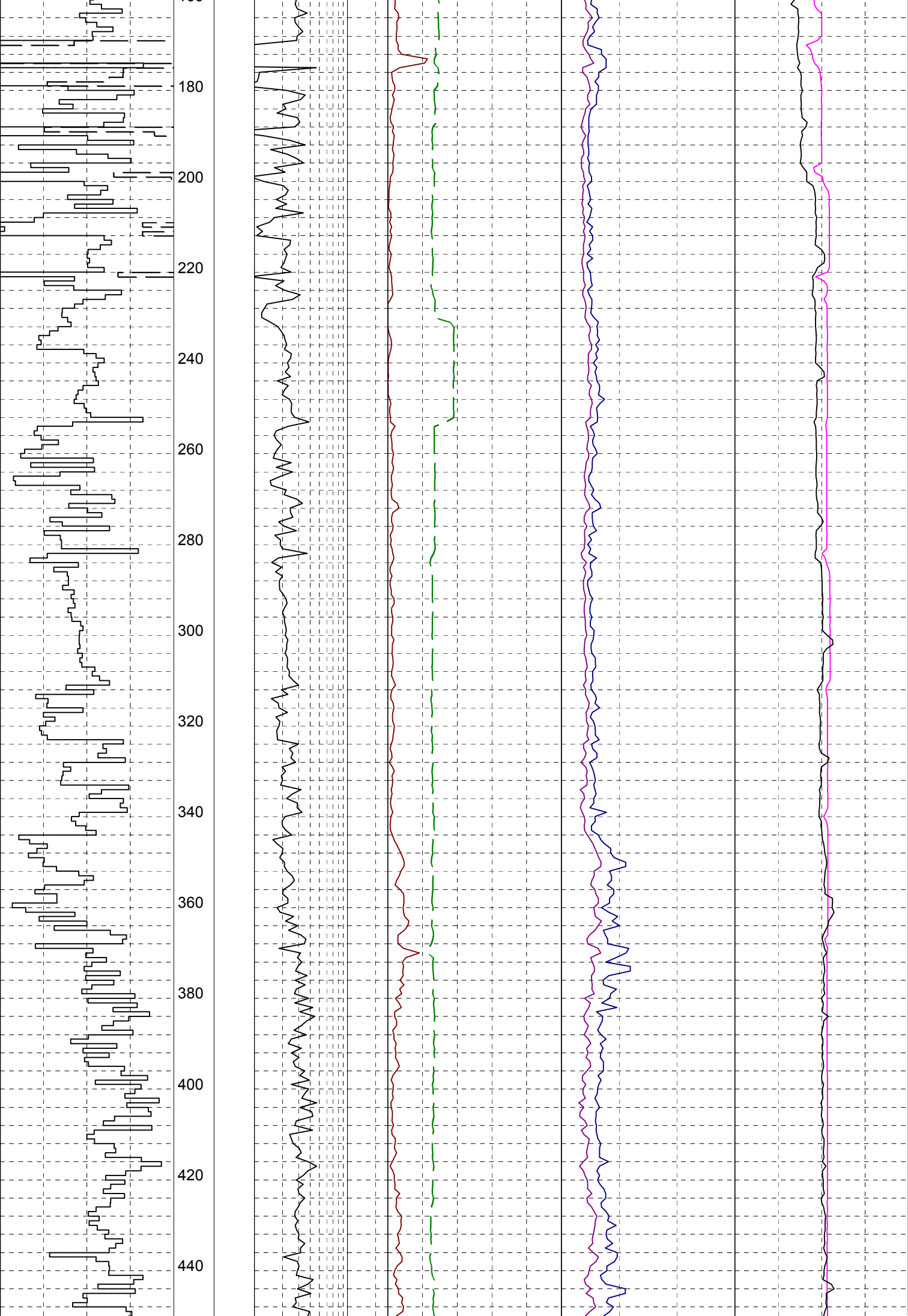
LITHOLOGY LEGEND

- Limestone
- Coal
- Claystone
- Calcilutite
- Med Sandstone
- Coarse Sandston
- Fine Sandstone
- VF Sandstone
- Conglomerate
- Dolomite
- Carb. Siltstone
- Calc. Siltstone
- Pyrite
- Siderite
- Glauconite
- Feldspar
- Mica
- Ferrous
- Chert
- Calcareous
- Dolomitic
- Carbonaceous
- Lithoclast
- Breccia

ENGINEERING LEGEND

- Deviation Surve
- Wiper Trip
- SWC (rec)
- SWC (unrec)
- Casing Shoe
- Bit Trip
- Core
- DST

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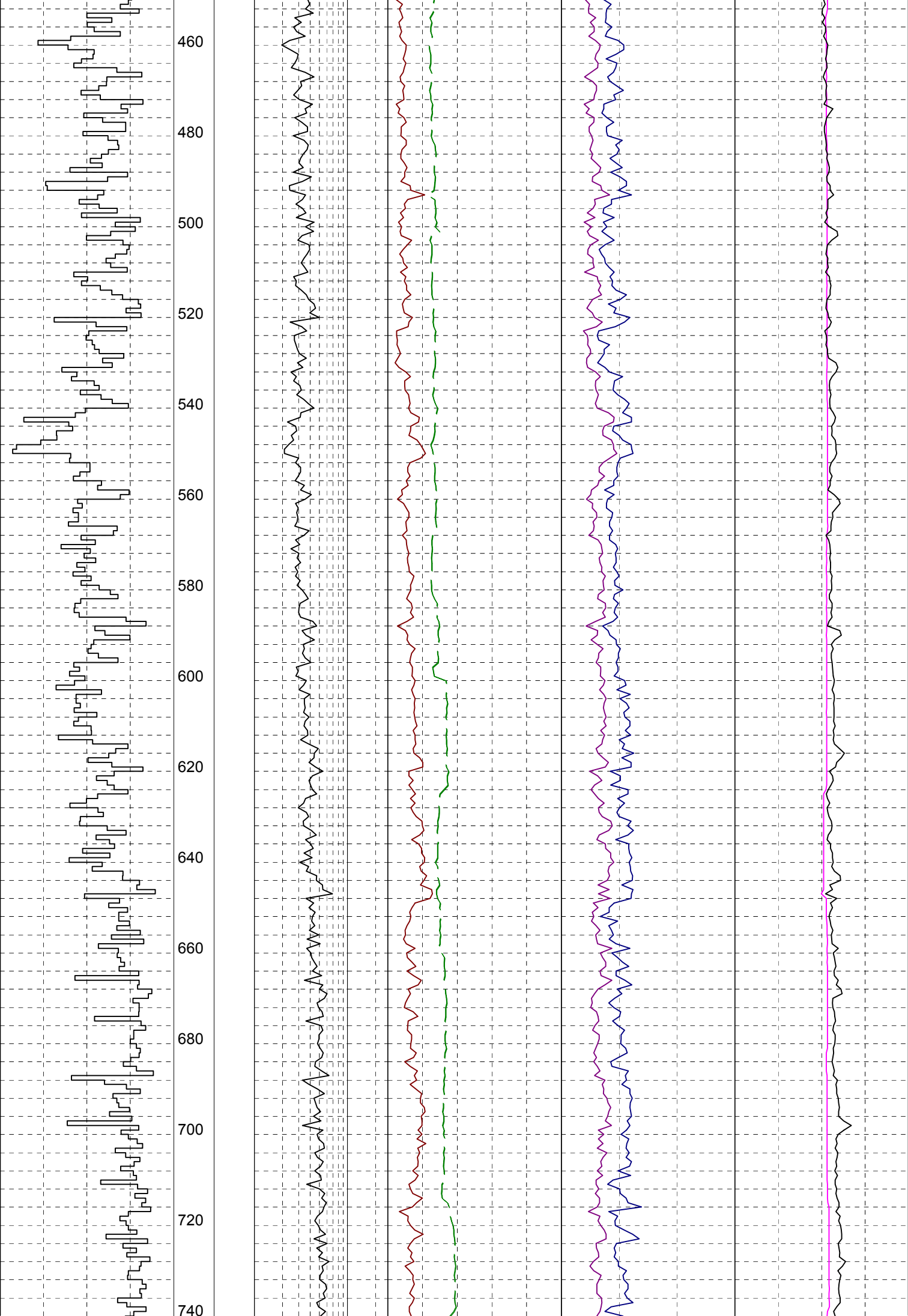
420
440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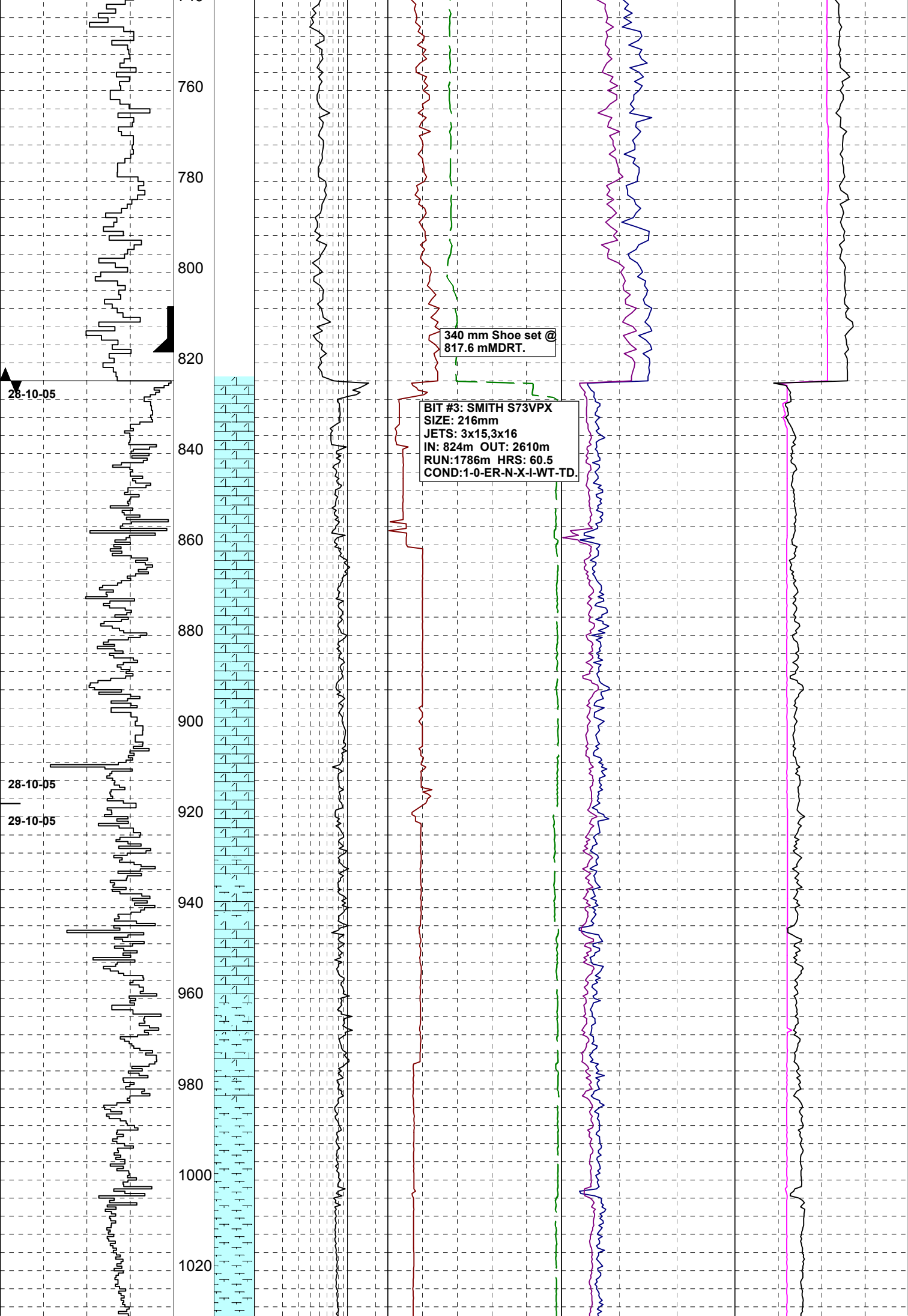
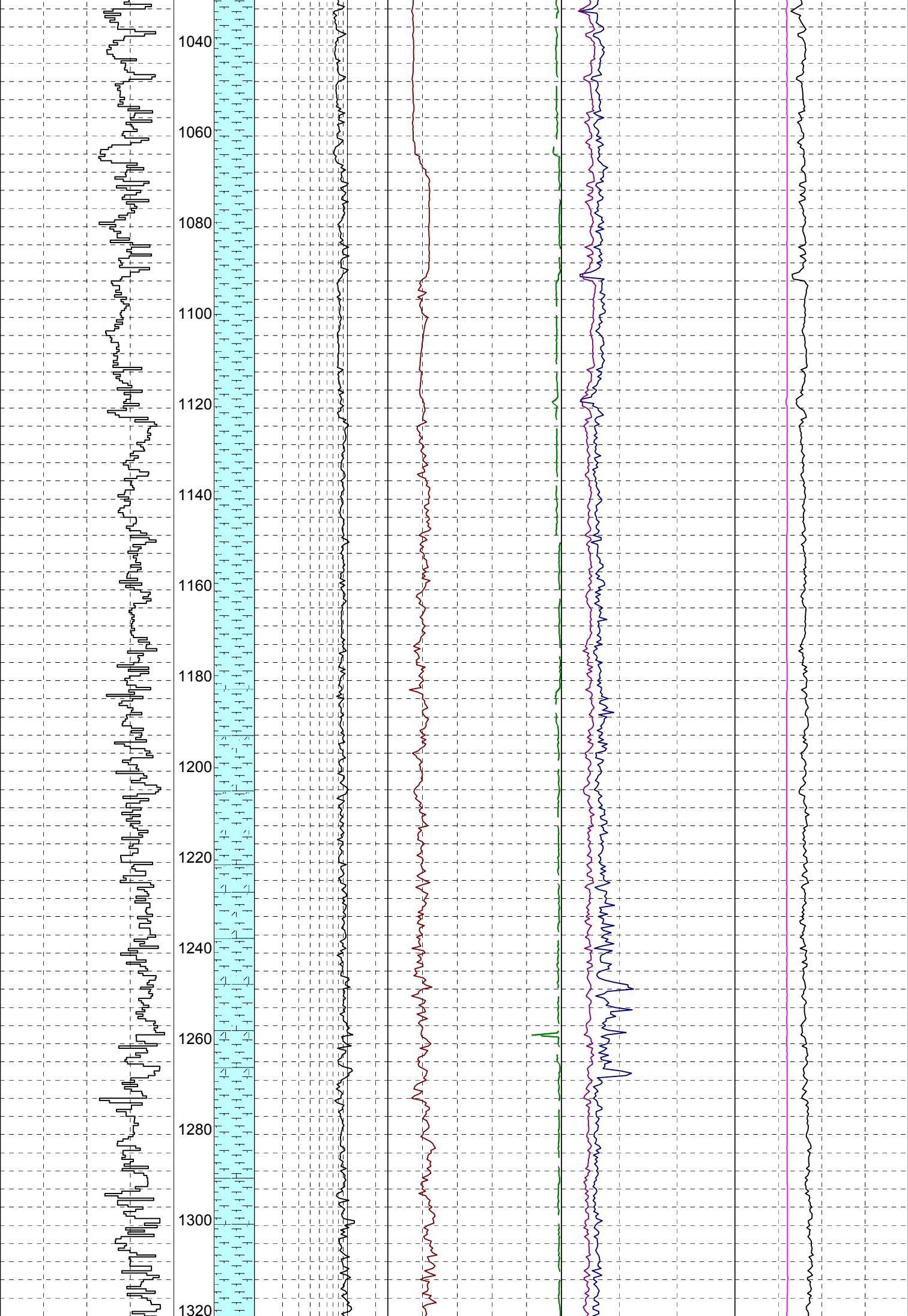
620
640
660
680
700
720
740


760
780
800
820
840
860
880
900
920
940
960
980
1000
1020
28-10-05
28-10-05
29-10-05
340 mm Shoe set @
817.6 mMDRT.
BIT #3: SMITH S73VPX
SIZE: 216mm
JETS: 3x15,3x16
IN: 824m OUT: 2610m
RUN:1786m HRS: 60.5
COND:1-0-ER-N-X-I-WT-TD.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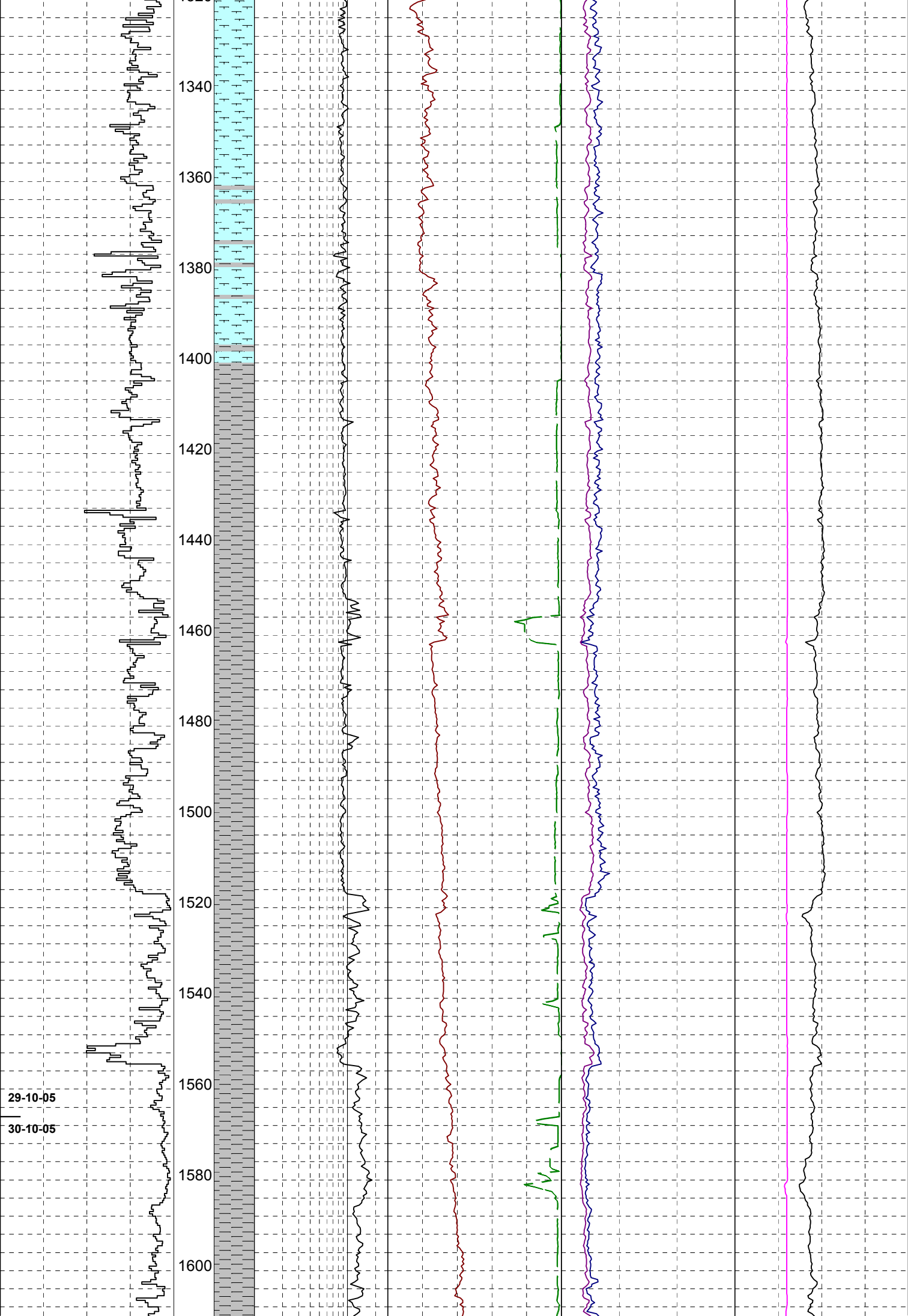
1280
1300
1320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1400
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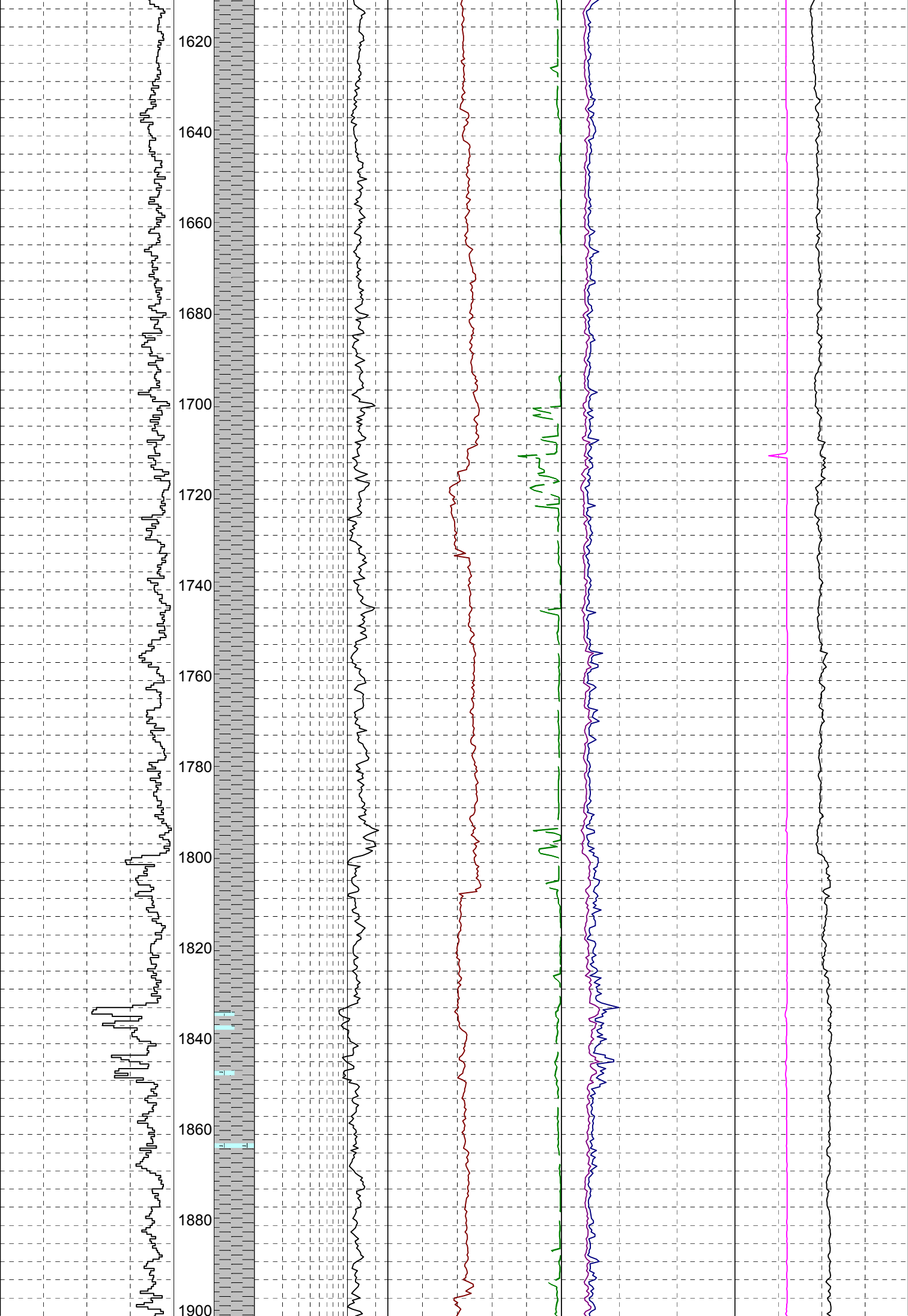
1460
1480
1500
1520
1540
1560
1580
1600
29-10-05
30-10-05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1800
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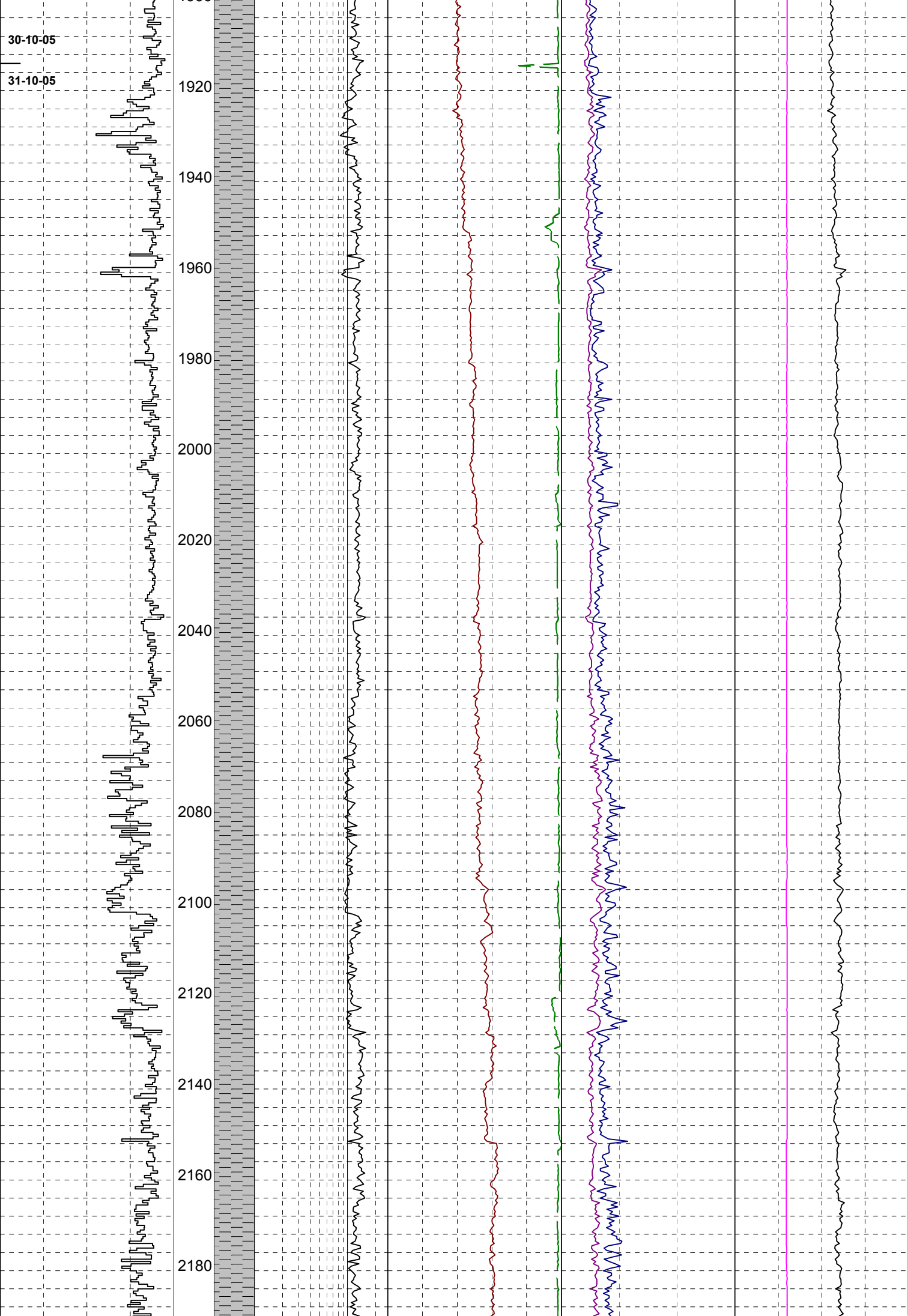
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31-10-05
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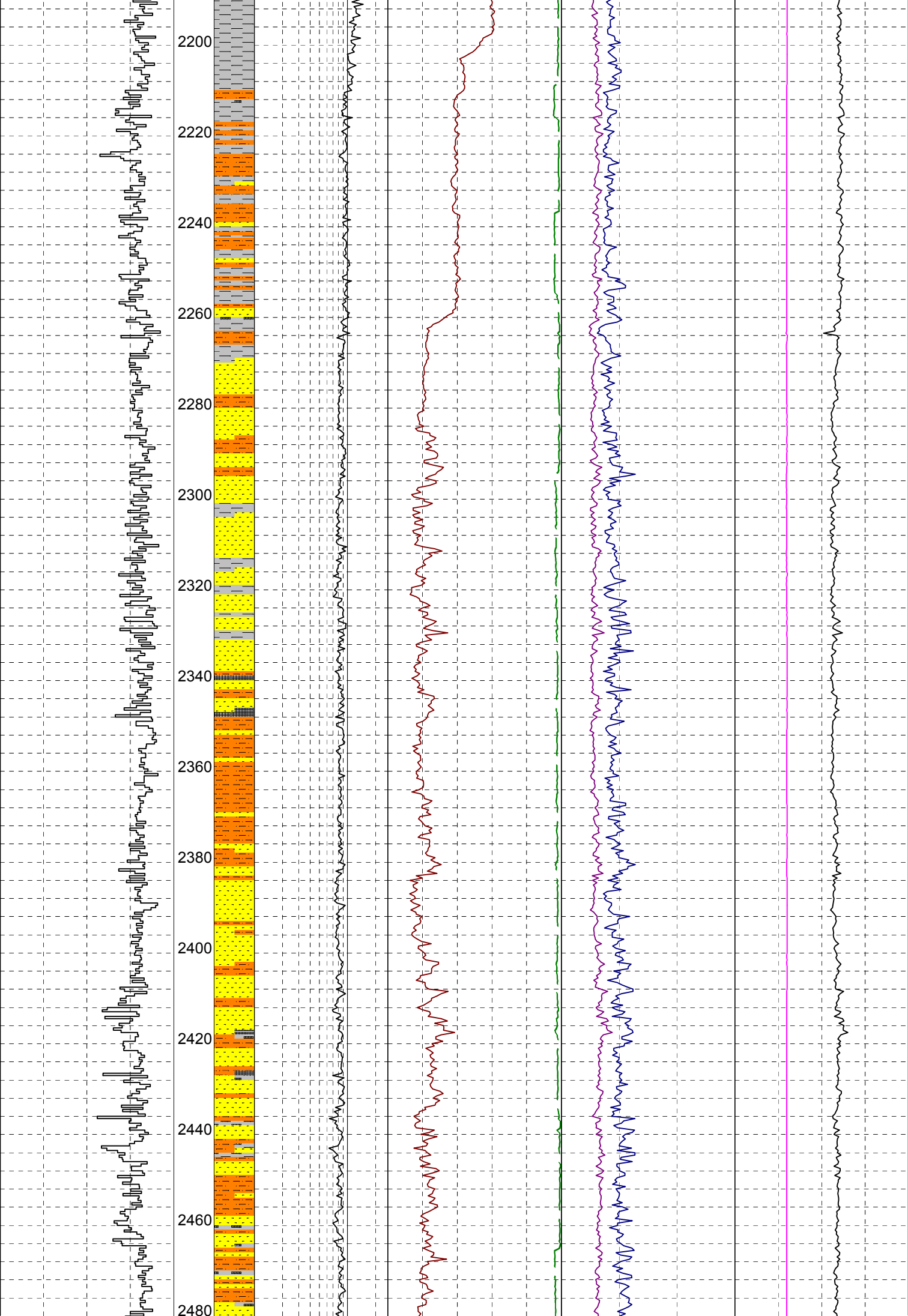
2180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2220
2240
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2280
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2340
2360
2380
2400
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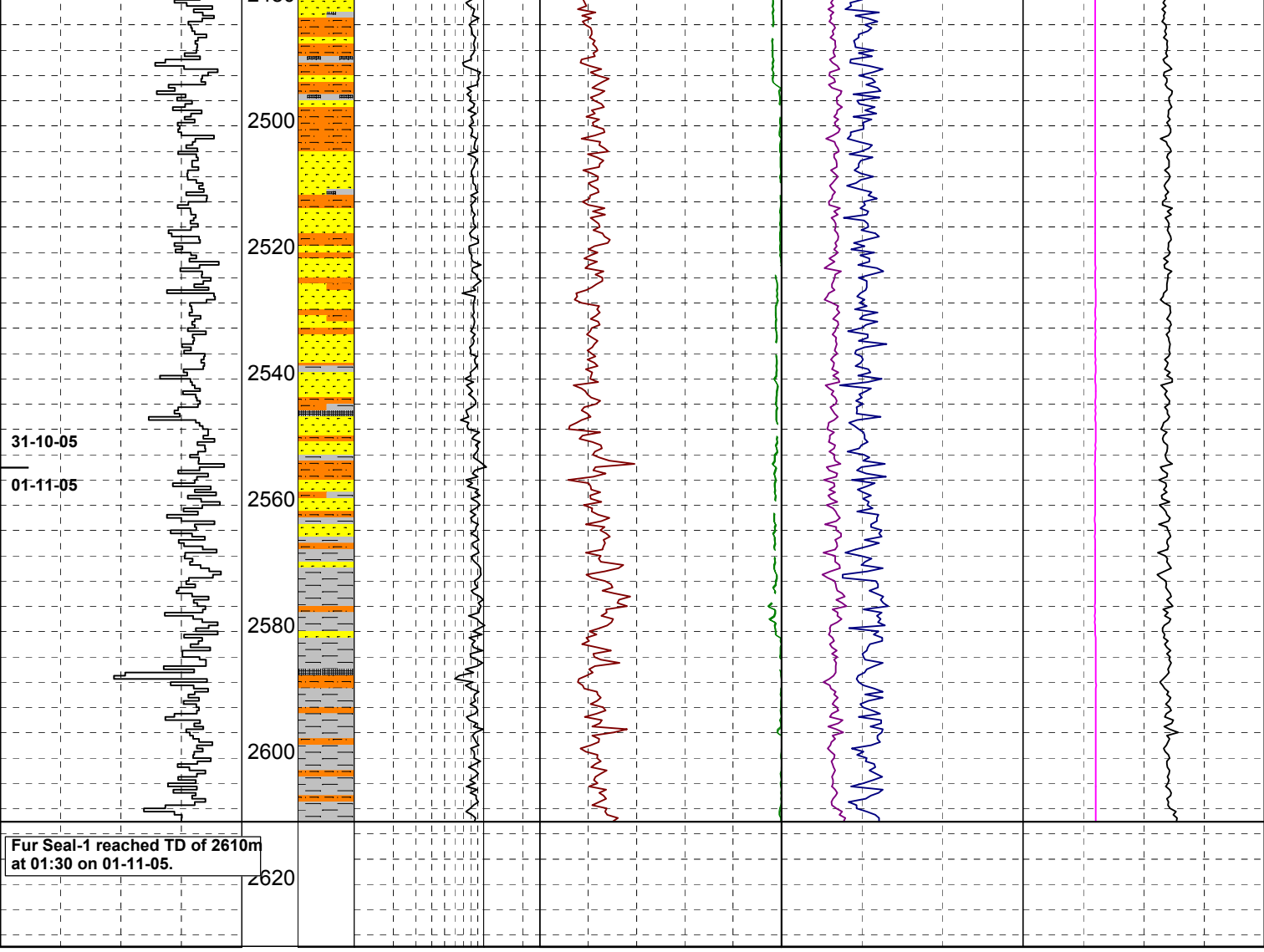
2440
2460
2480


2500
2520
2540
31-10-05
01-11-05
2560
2580
2600
Fur Seal-1 reached TD of 2610m
at 01:30 on 01-11-05.
2620

OVERPRESSURE LOG

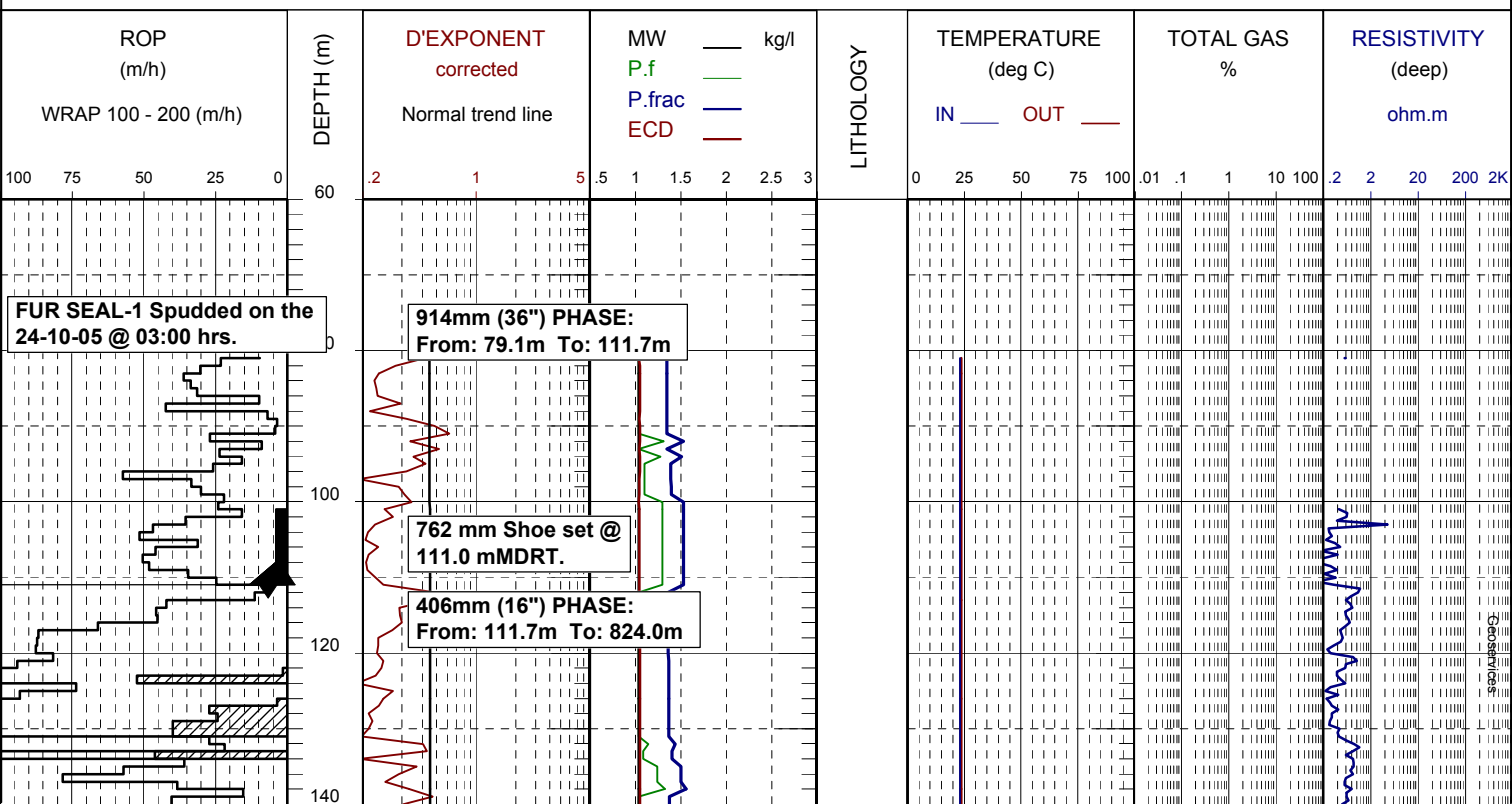
FROM (m): 2081 TO (m): 3961 SCALE : 1/ 1000

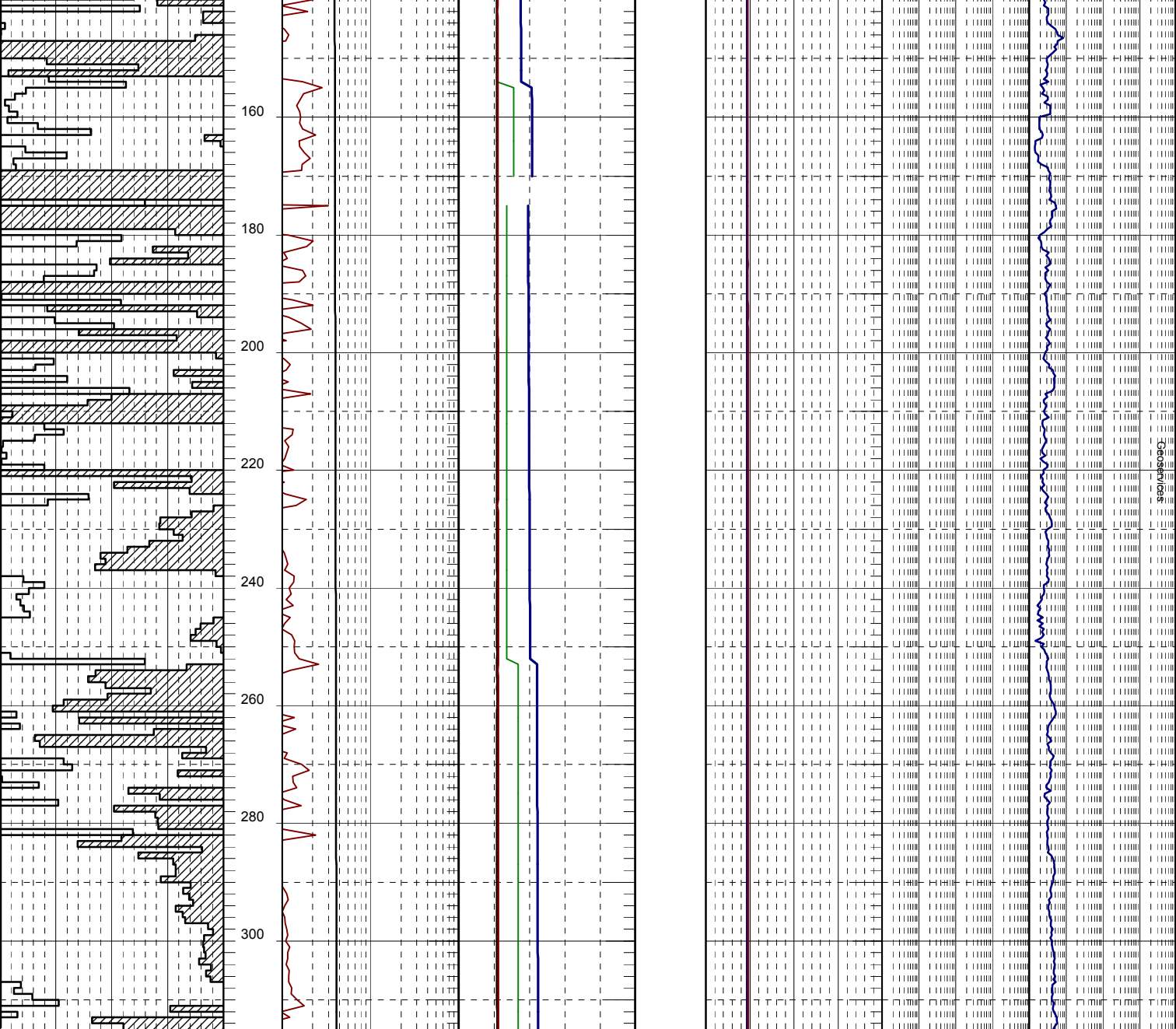
Well name : FUR SEAL 1
Company Name :Apache Energy LTD
Latitude : 38 07 47.91 S
Country : AUSTRALIA
Longitude : 148 09 08.44E
Rig Name : OCEAN PATRIOT
Rig Type : SEMI-SUB

RT-AHD (m): 21.5
Water depth (m): 56.62
Final TD- Drillers (m):
Final TVDSSAHD (m): P & A
Spud Date : 24-10-05
TD Date : 01-11-05

Computed method: Eaton
Trend slopes : a = 0.0001209 b = -0.2617145
Hydro. gradient : 1.04 kg/l
Overburden law : Soft

Limestone, Clay, Med Sandstone, Dolomite
Coal, Claystone, Marl, Carb. Siltstone

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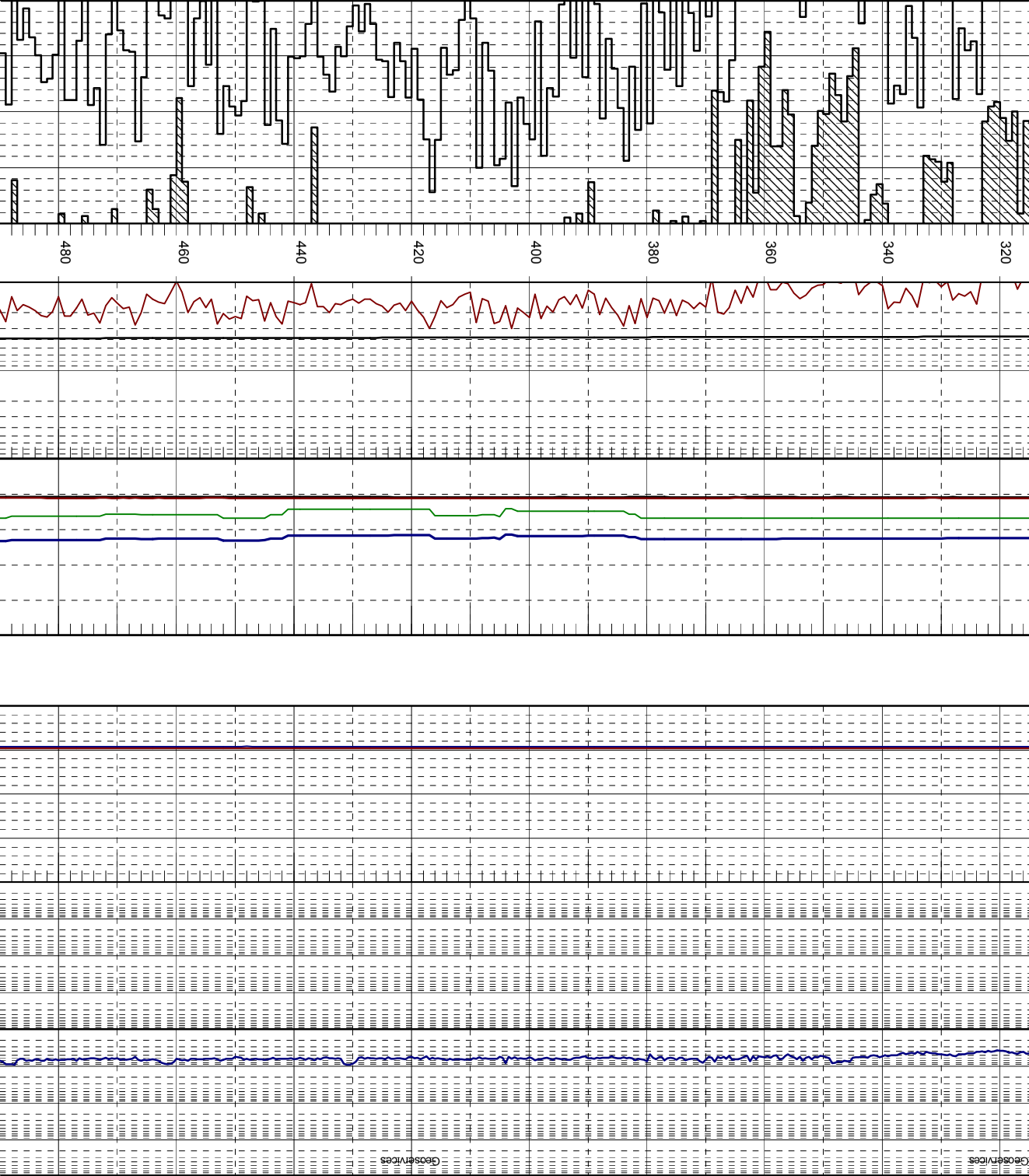
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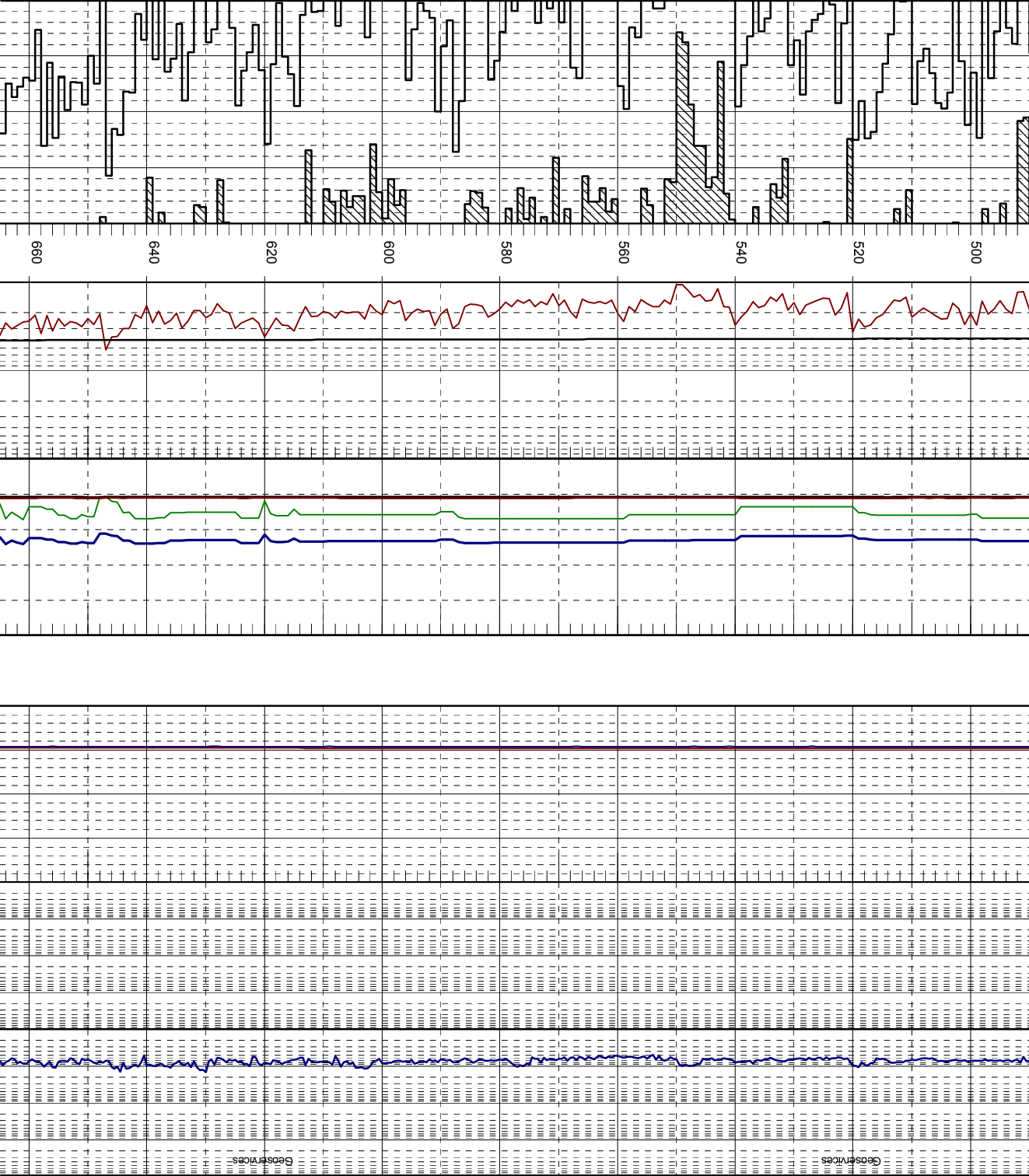
GeoServices



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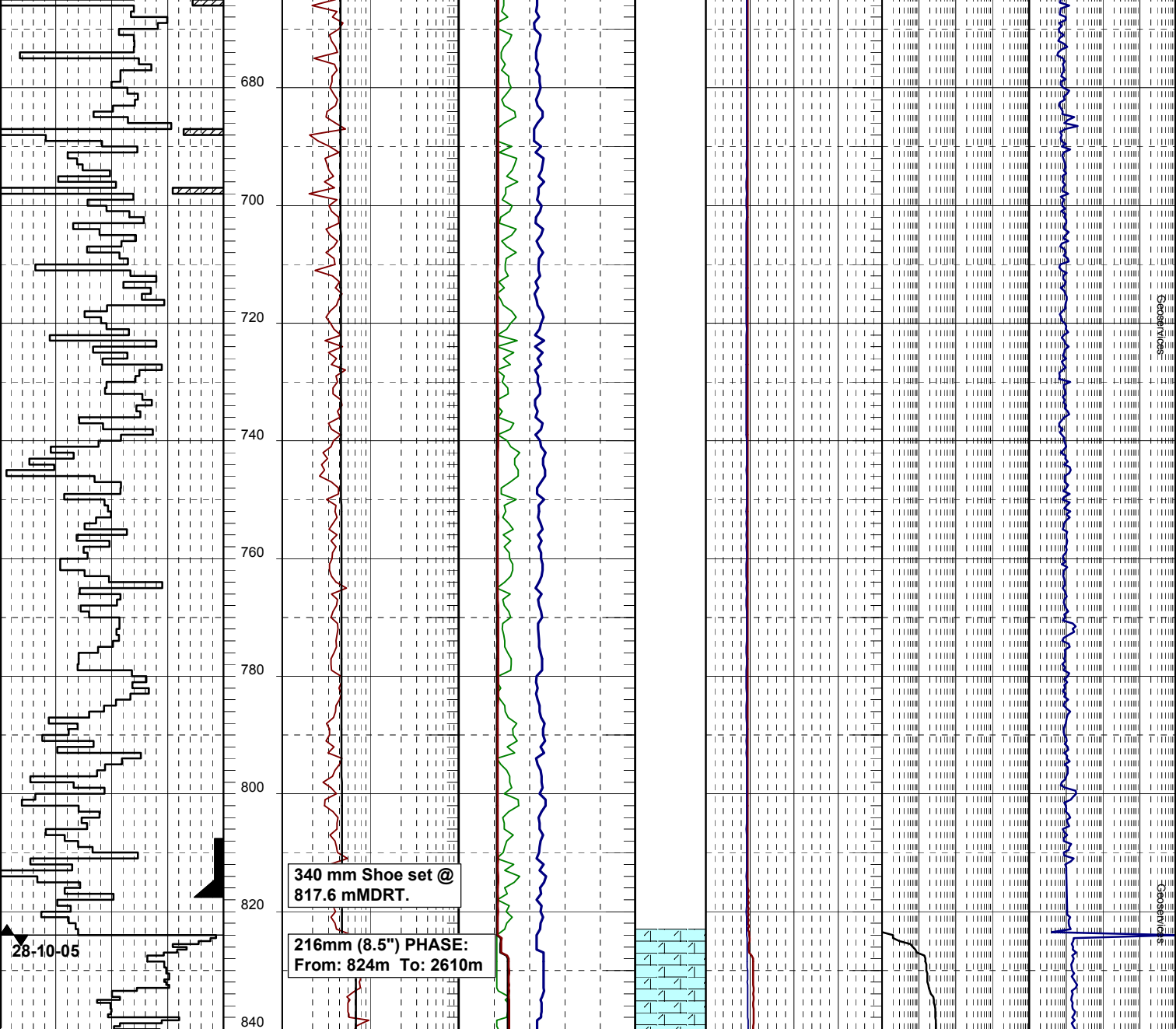
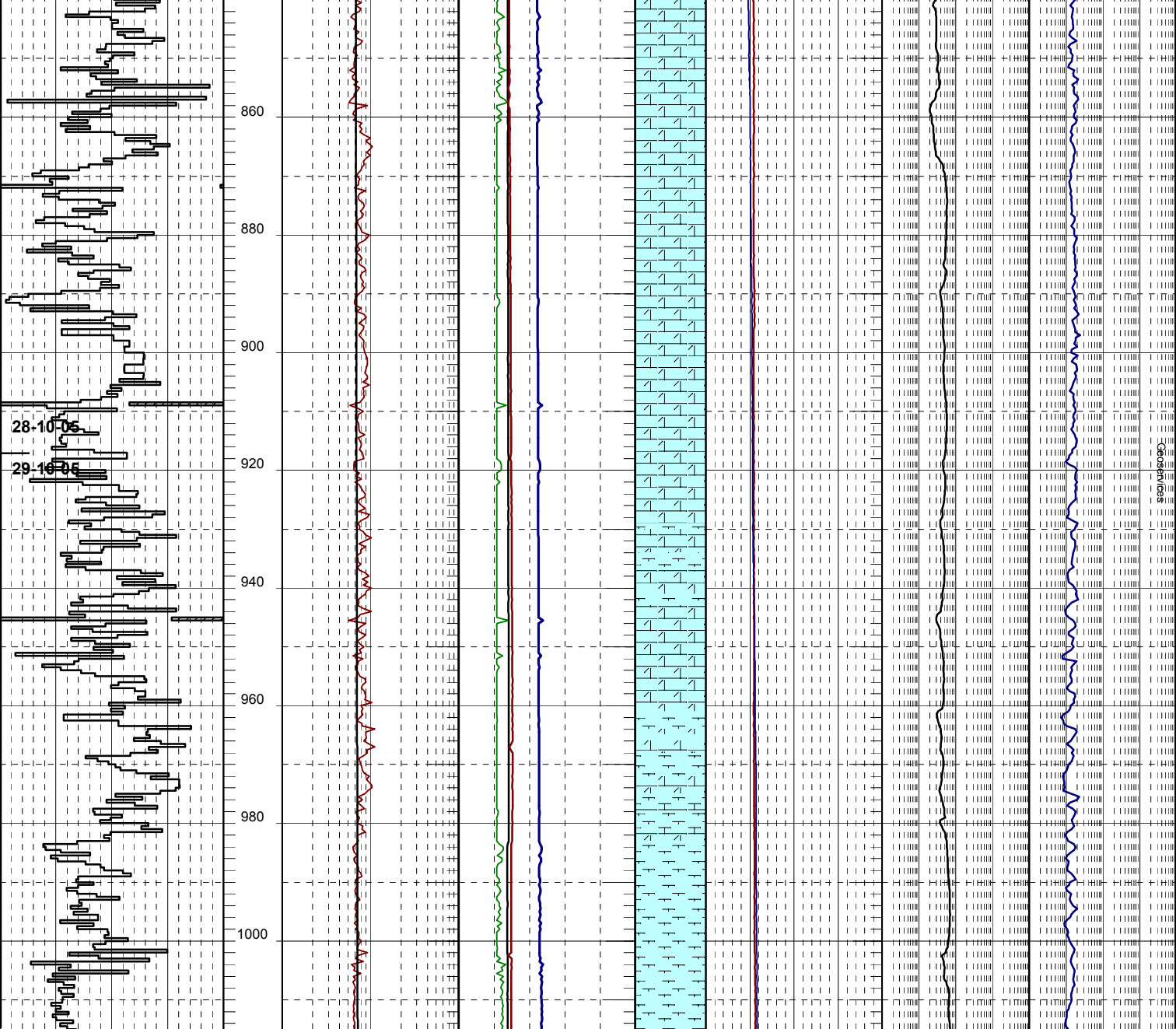

680
700
720
740
760
780
800
820
840
340 mm Shoe set @
817.6 mMDRT.
216mm (8.5") PHASE:
From: 824m To: 2610m
28-10-05
Geoservices
Geoservices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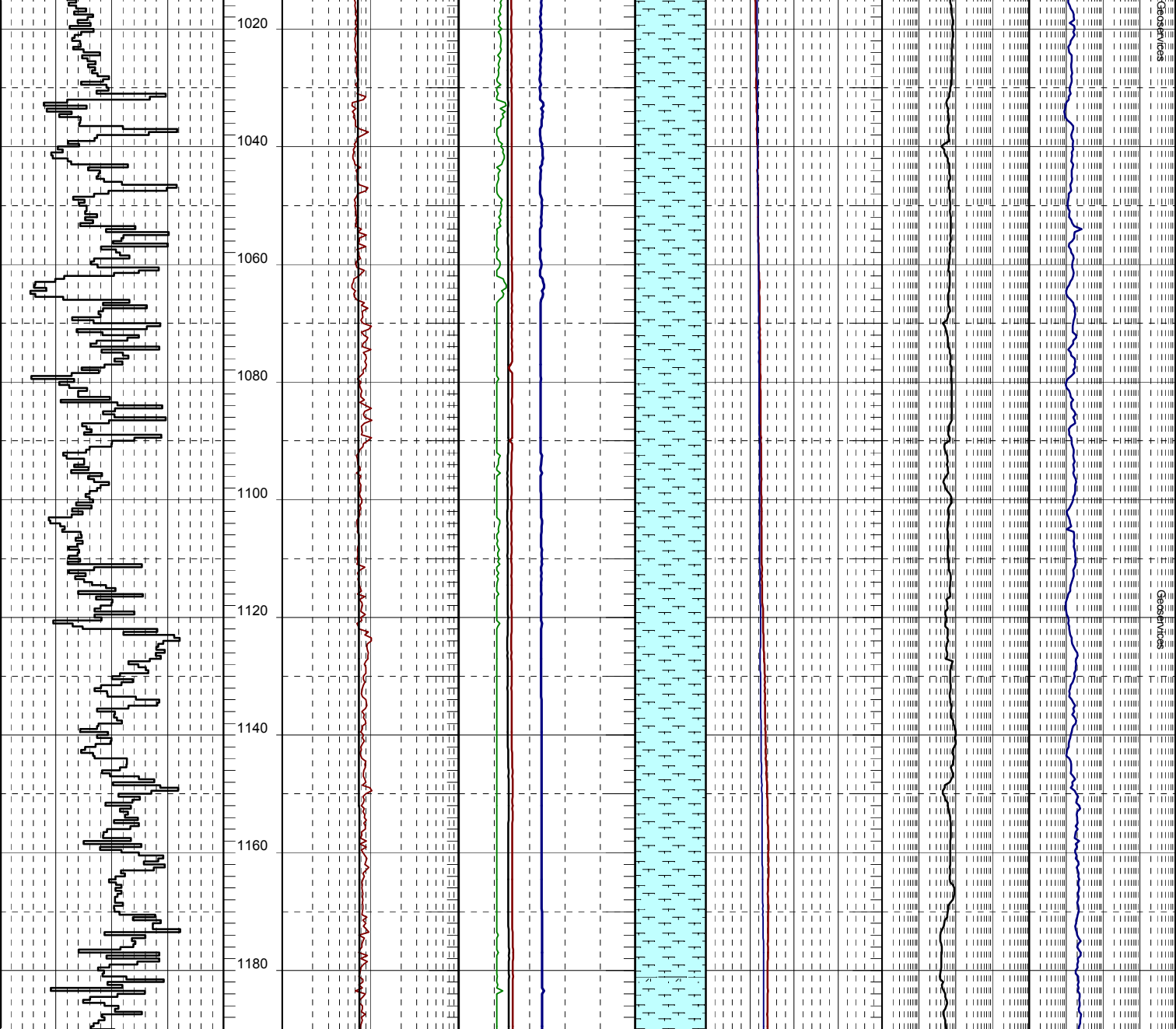
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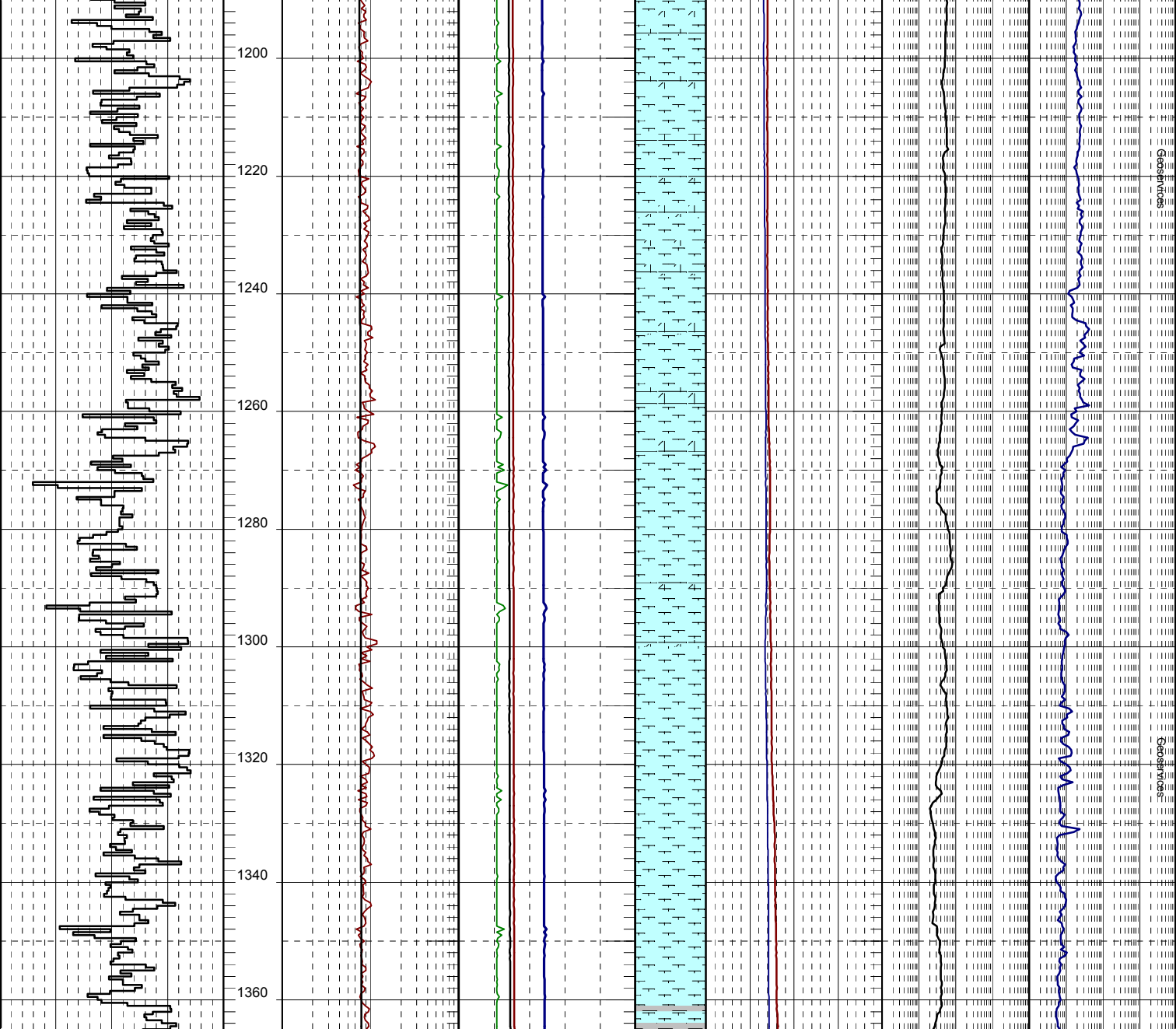
Geoservices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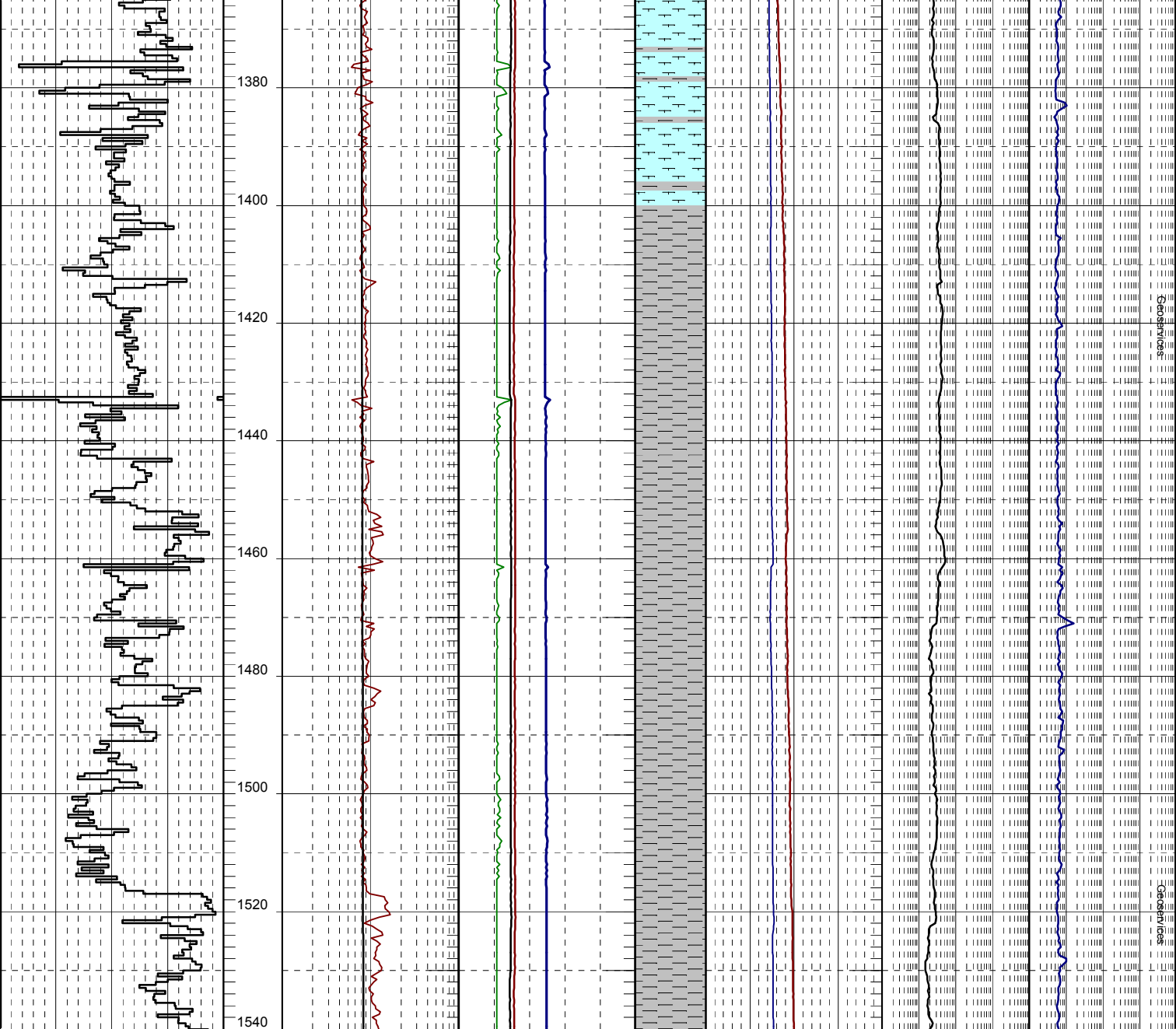
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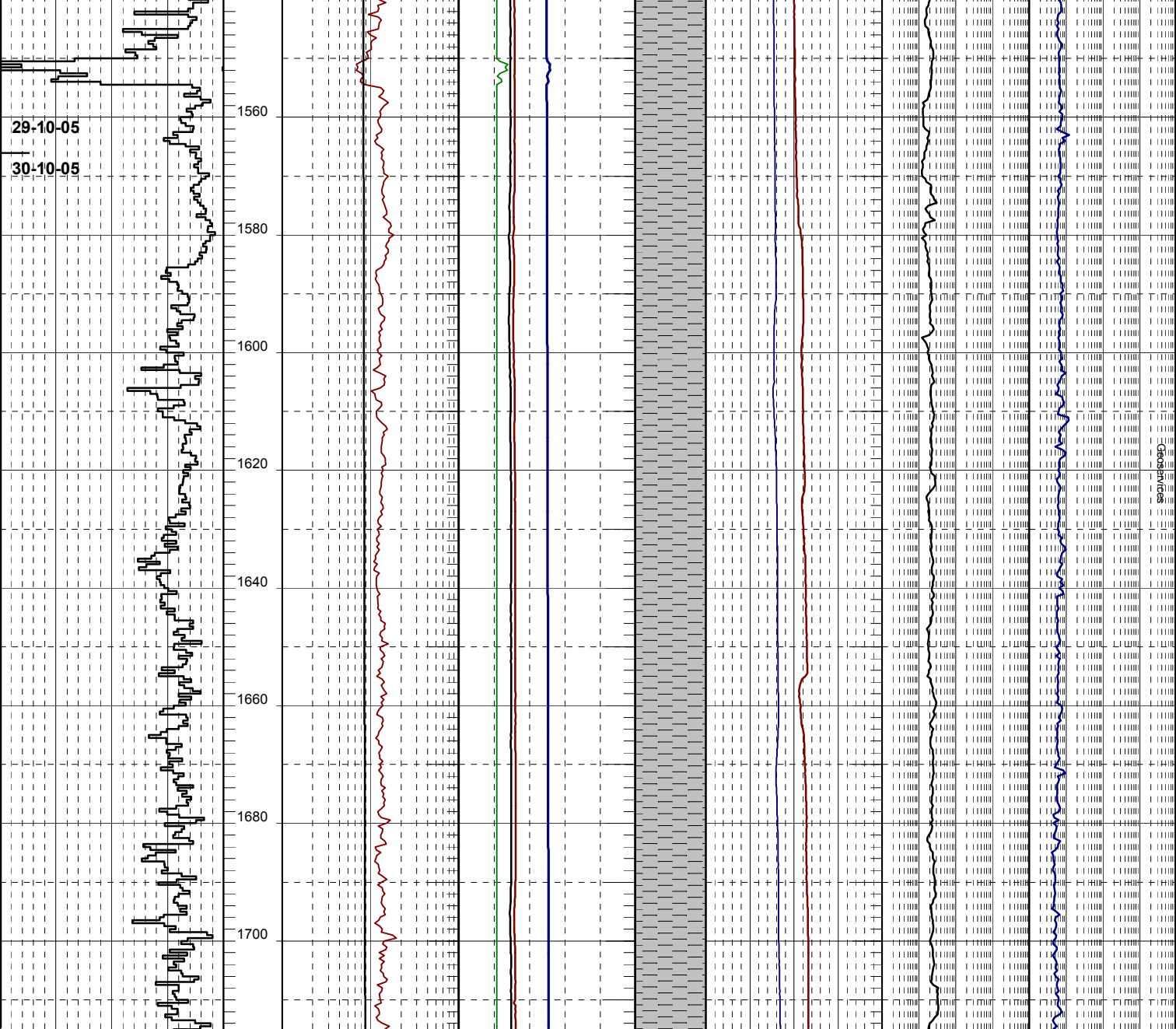
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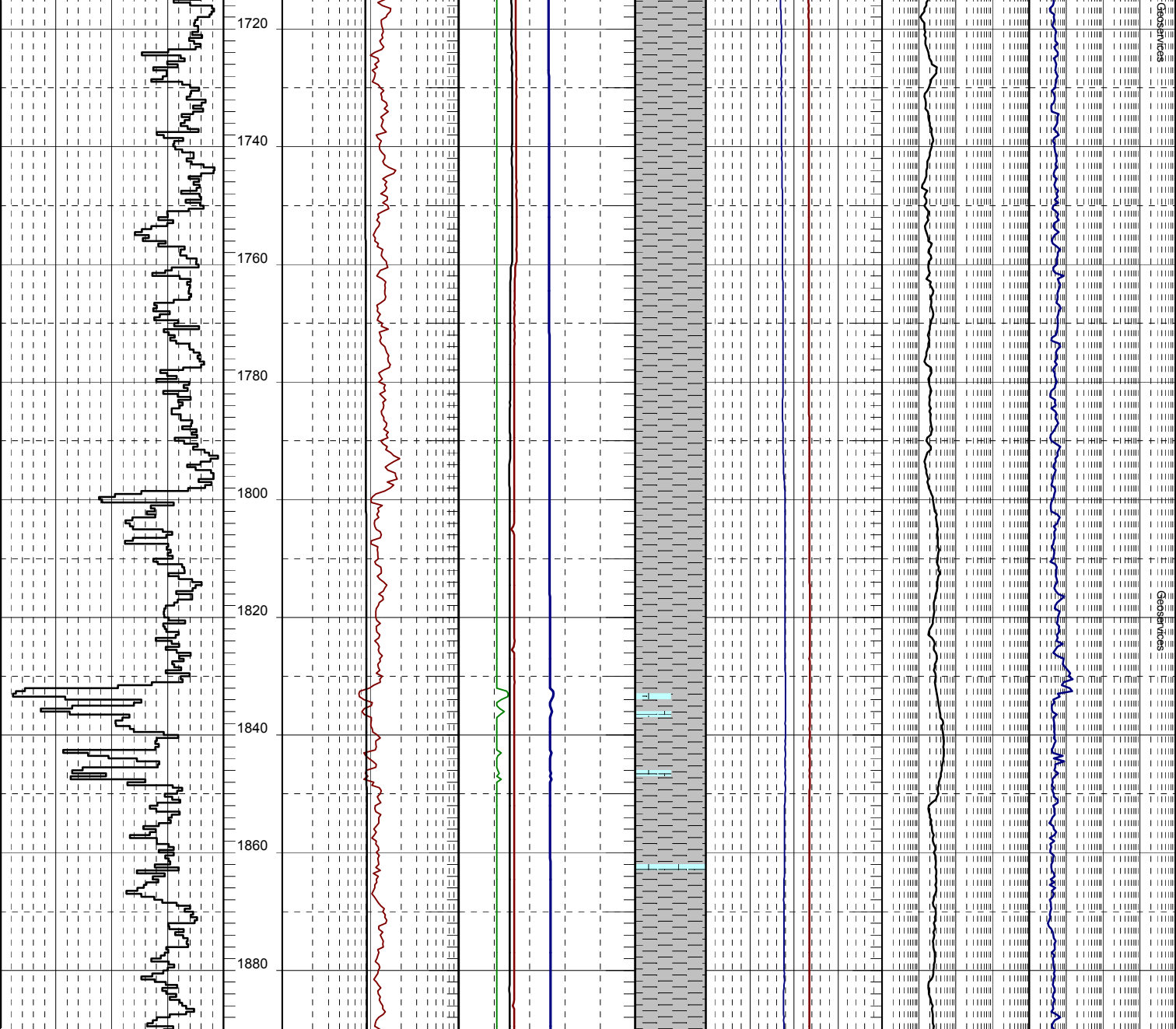
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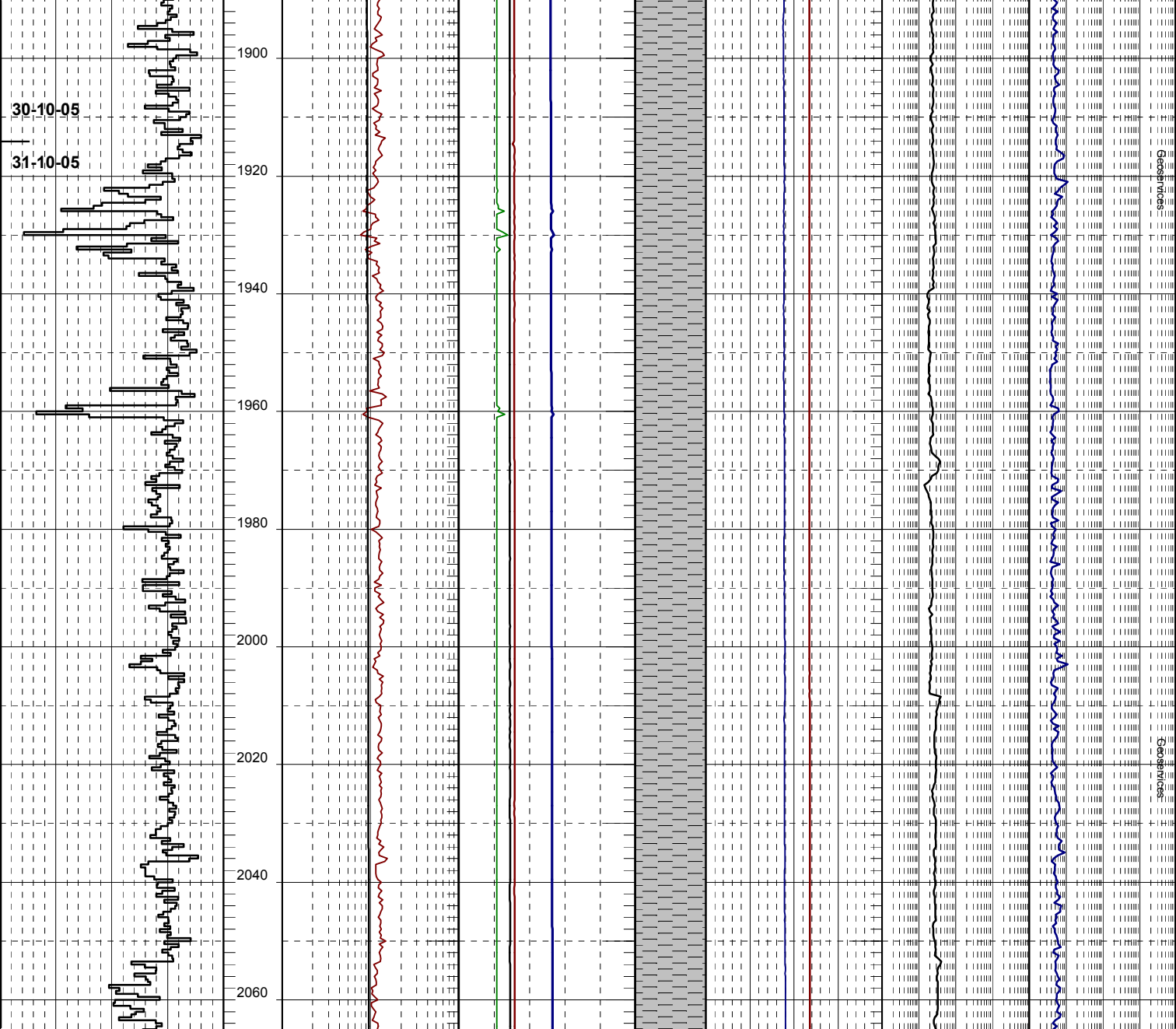
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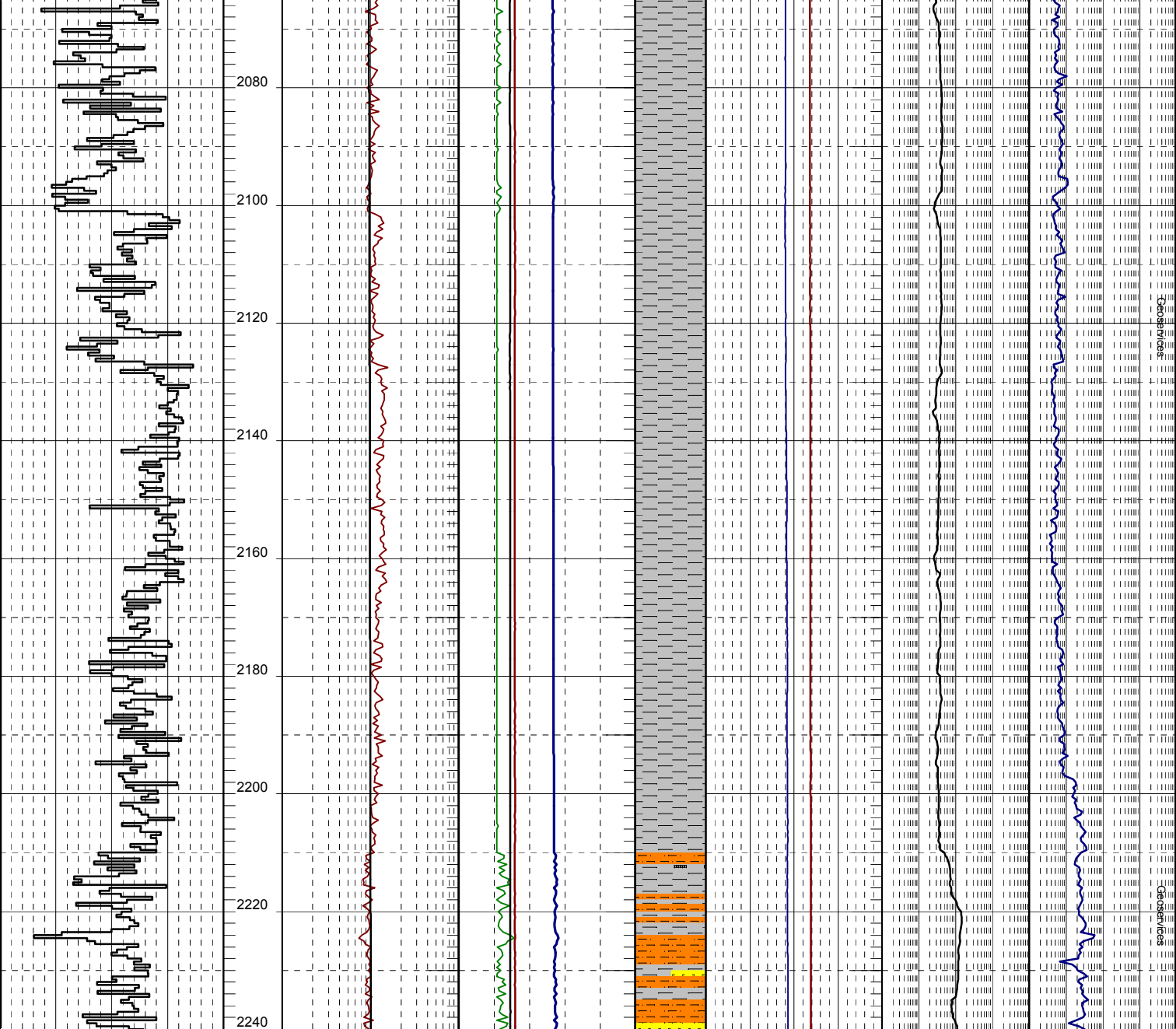
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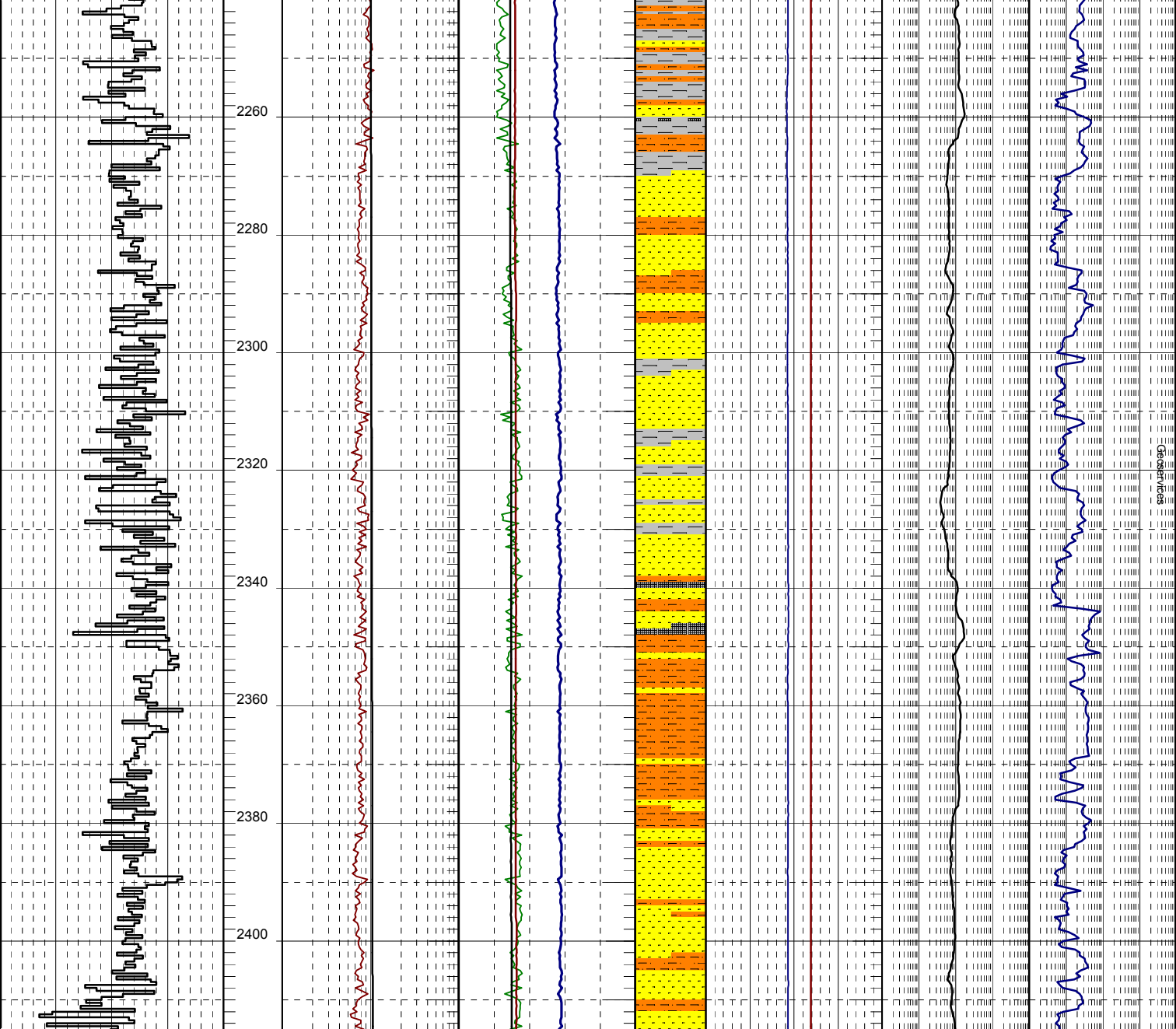
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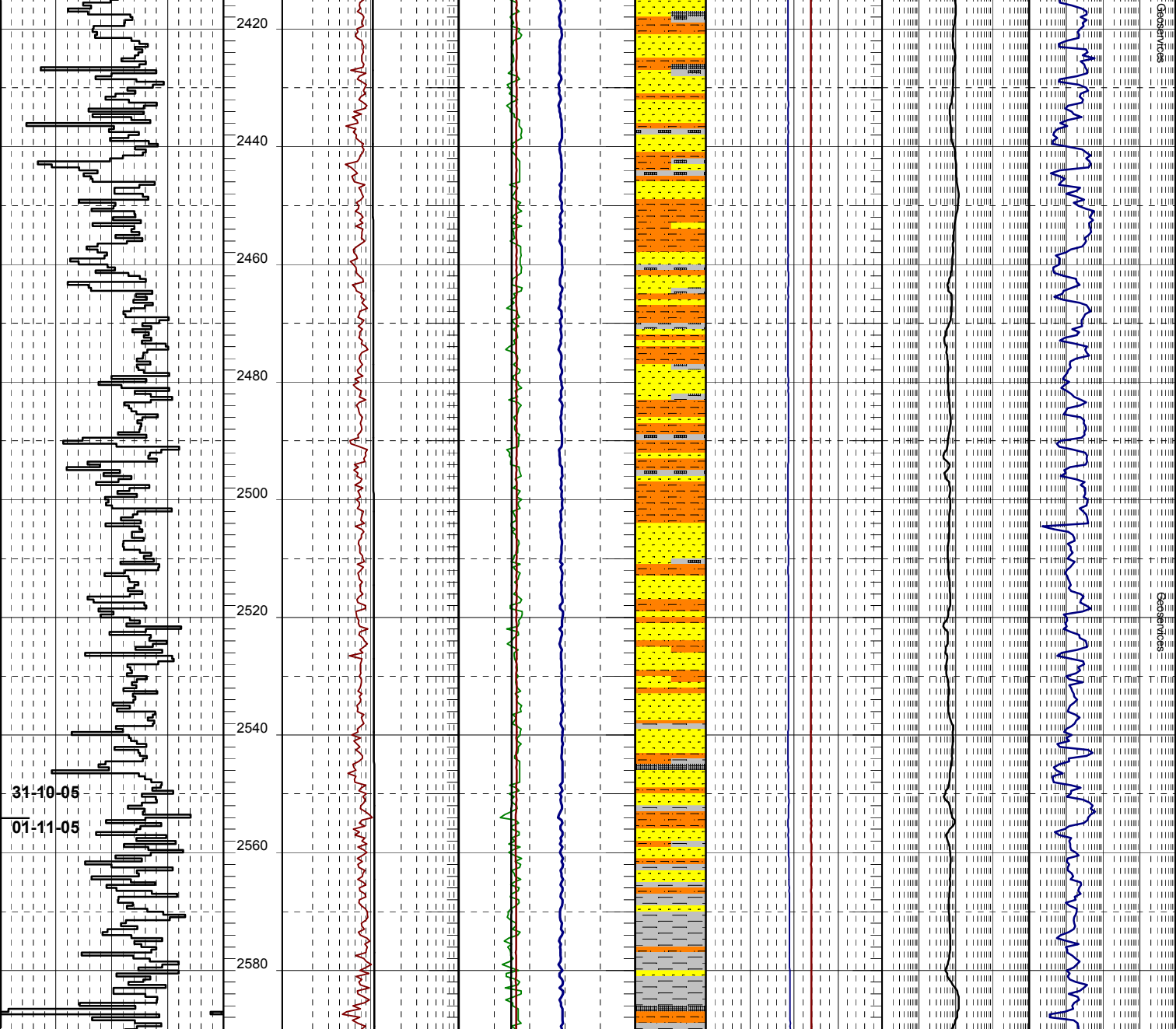
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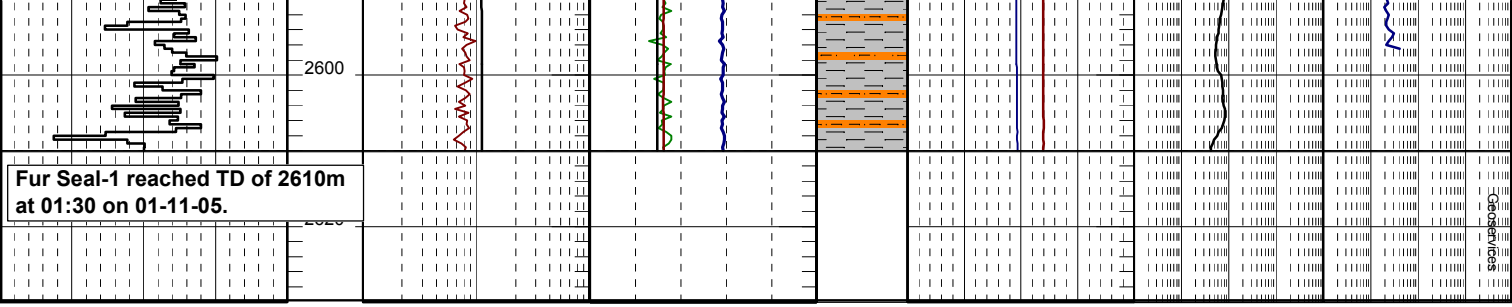

2600
Fur Seal-1 reached TD of 2610m
at 01:30 on 01-11-05.
Geoservices

GAS RATIOS LOG

WELL : FUR SEAL 1

FROM (m): 777 TO (m): 2575 SCALE: 1/ 500

GENERAL DATA

Client : APACHE ENERGY
Country : AUSTRALIA
Permit : VIC/P-54
Field : GIPPSLAND
Well Type : EXPLORATION
Rig Name : OCEAN PATRIOT

LOCATION DATA

Latitude : 38 07 47.91 S
Longitude : 148 09 08.44E

RT-AHD (m): 21.5
Water Depth (m): 56.62

CASING

762 mm Shoe (m): 111.0 m
340 mm Shoe (m): 817.6 m

FINAL WELL DATA

MD- Drillers depth (m):2610m
TVD- Subsea AHD (m): 2609.7 m
Date Well Spudded : 24-10-05
Date TD Reached : 01-11-05
Status : P & A

GAS RATIOS FORMULAE

GAS WETNESS RATIO (Wh)
GWR = (C2 + C3 + C4 + C5)/ (C1 + C2 + C3 + C4 + C5)*100

LIGHT TO HEAVY RATIO (Bh)
LHR = (C1 + C2)/(C3 + C4 + C5)

OIL CHARACTER QUALIFIER (Ch)
OCQ = (C4 + C5)/(C3)

LITHOLOGY LEGEND

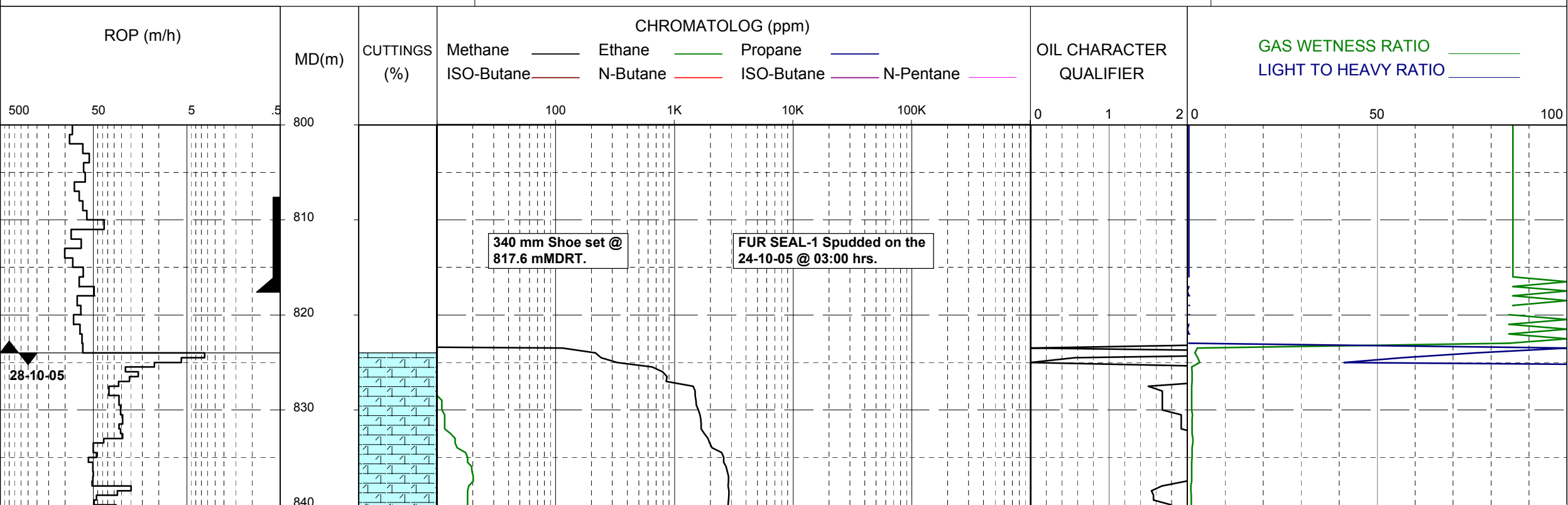
Limestone
Coal
Claystone
Calcilutite
Med Sandstone
Coarse Sandston
Fine Sandstone
VF Sandstone
Conglomerate
Dolomite
Carb. Siltstone
Calc. Siltstone
Pyrite
Siderite
Glauconite
Feldspar
Mica
Ferrous
Chert
Calcareous
Dolomitic
Carbonaceous
Lithoclast
Breccia

1 unit = 200 ppm methane equivalent in air

GEOSERVICES CREW

ALS ENGINEERS
D.ADDERLEY
P.McGILVERAY
A.DUNN

MUDLOGGERS



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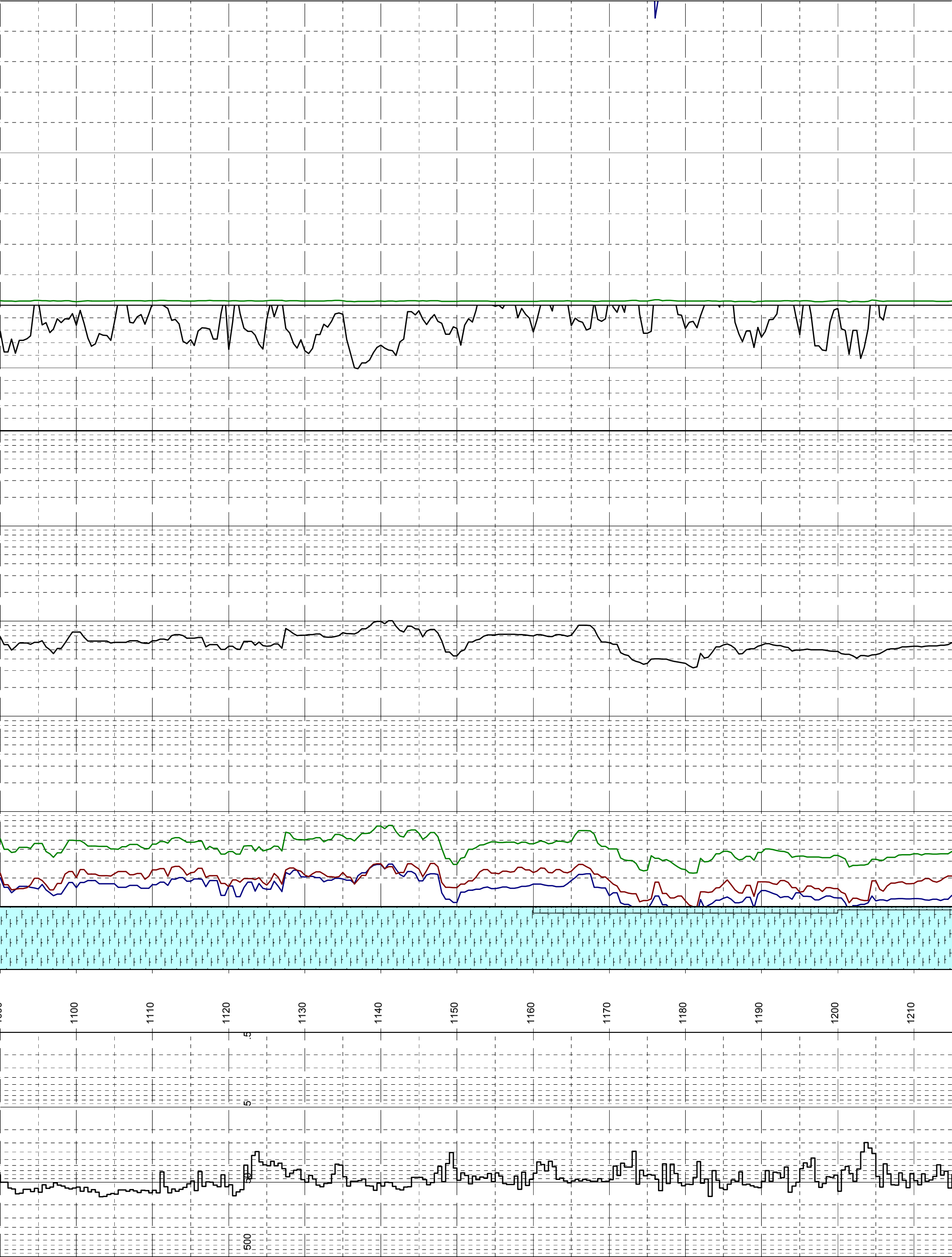
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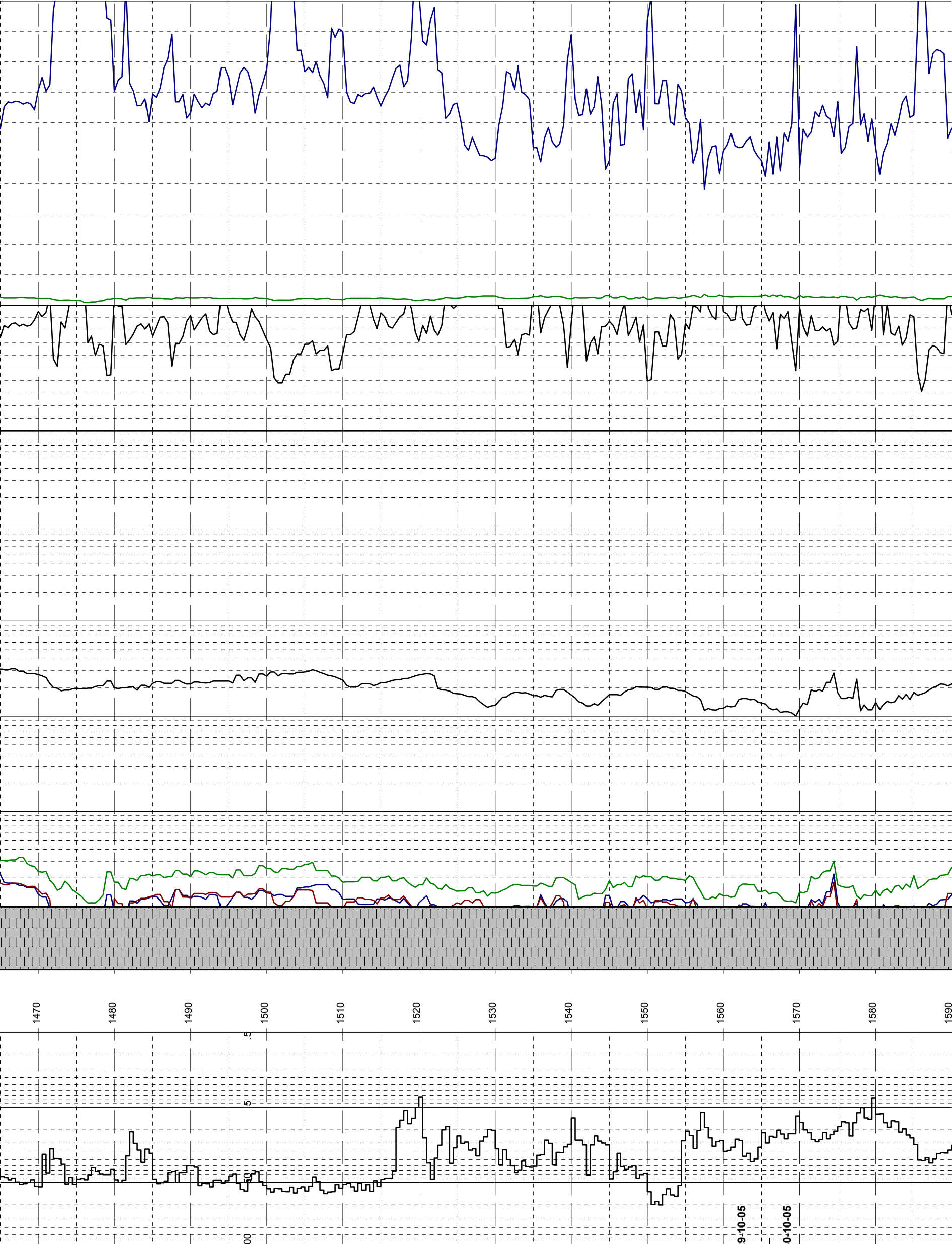
Mud Chemicals give off some false C4-C5 readings.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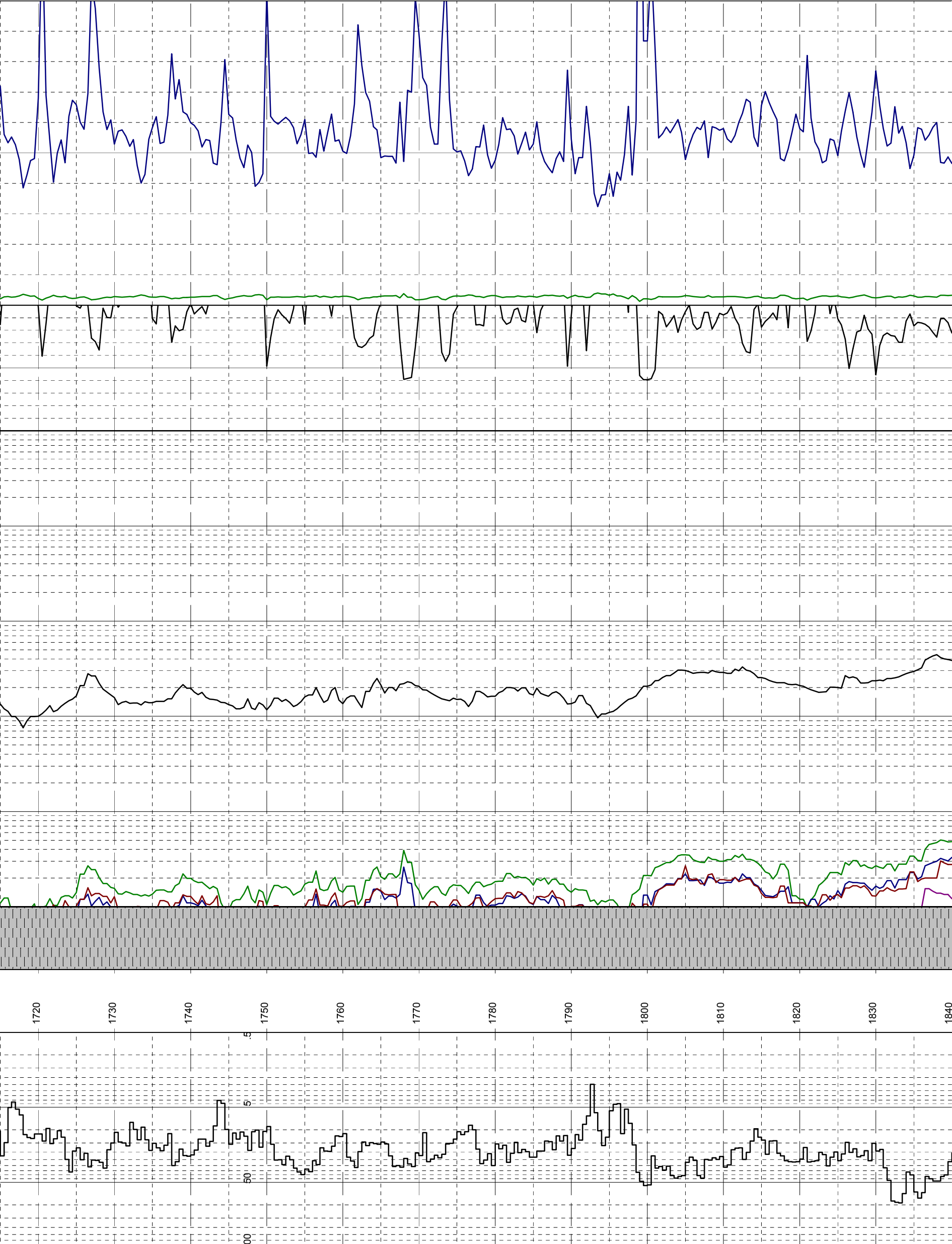
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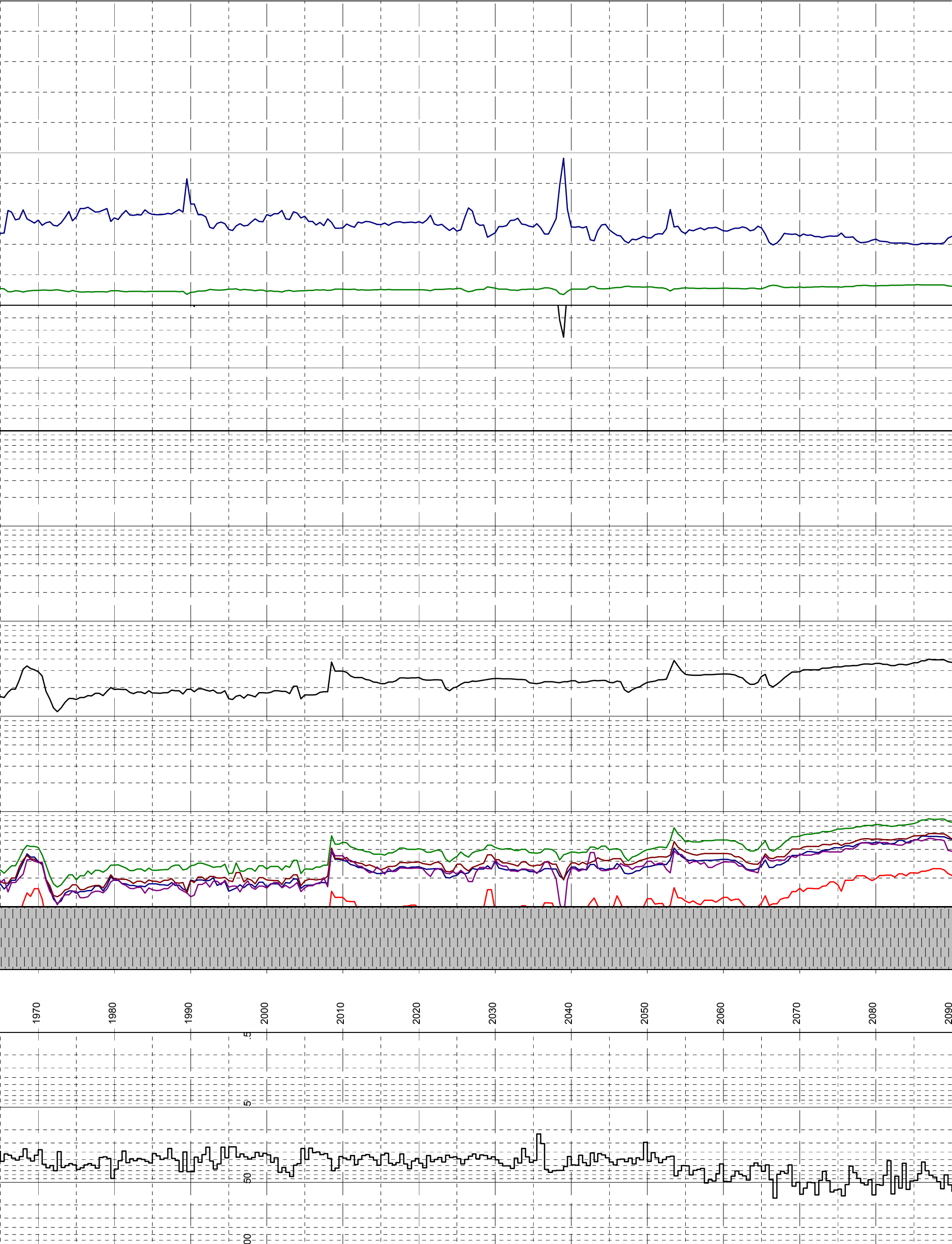
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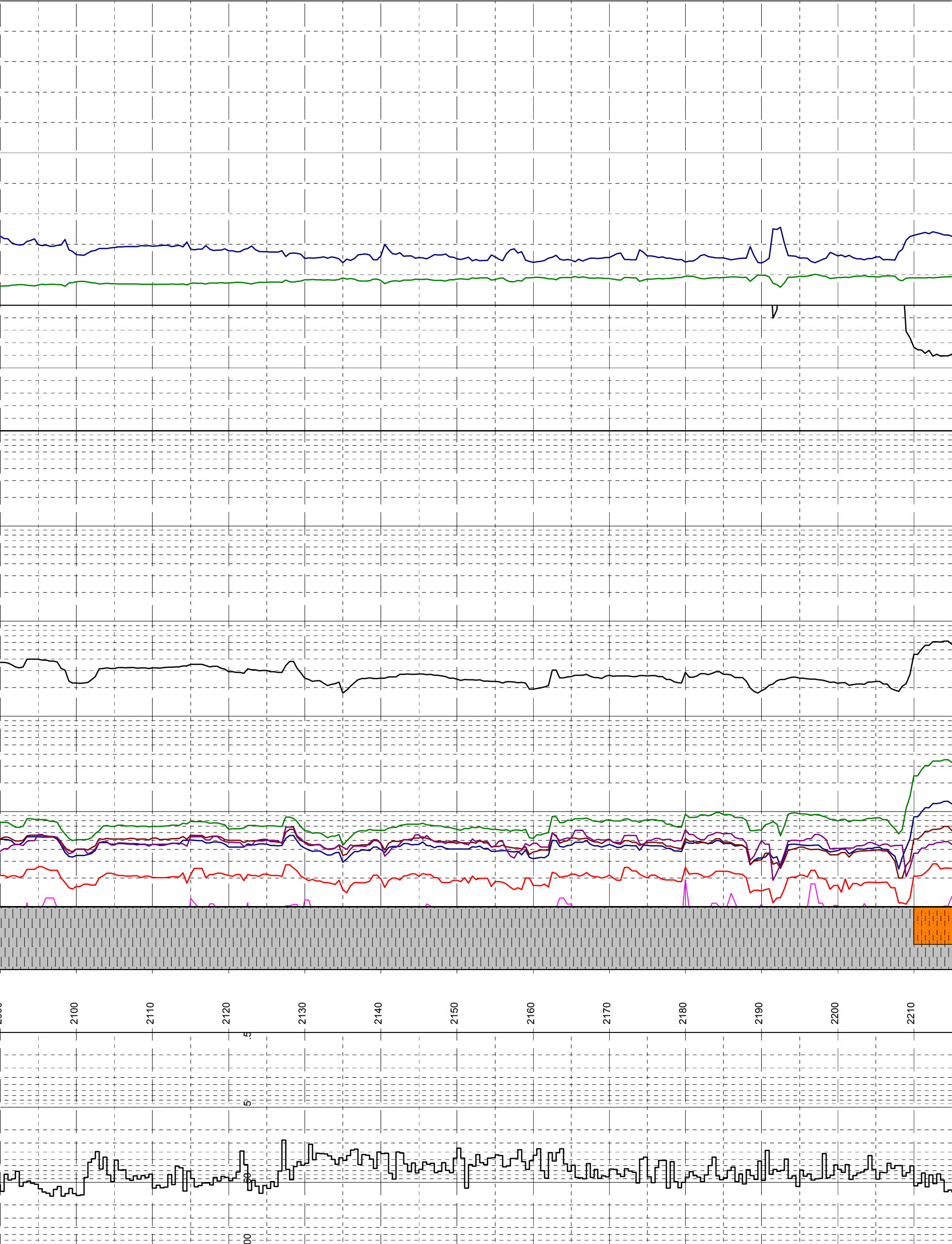
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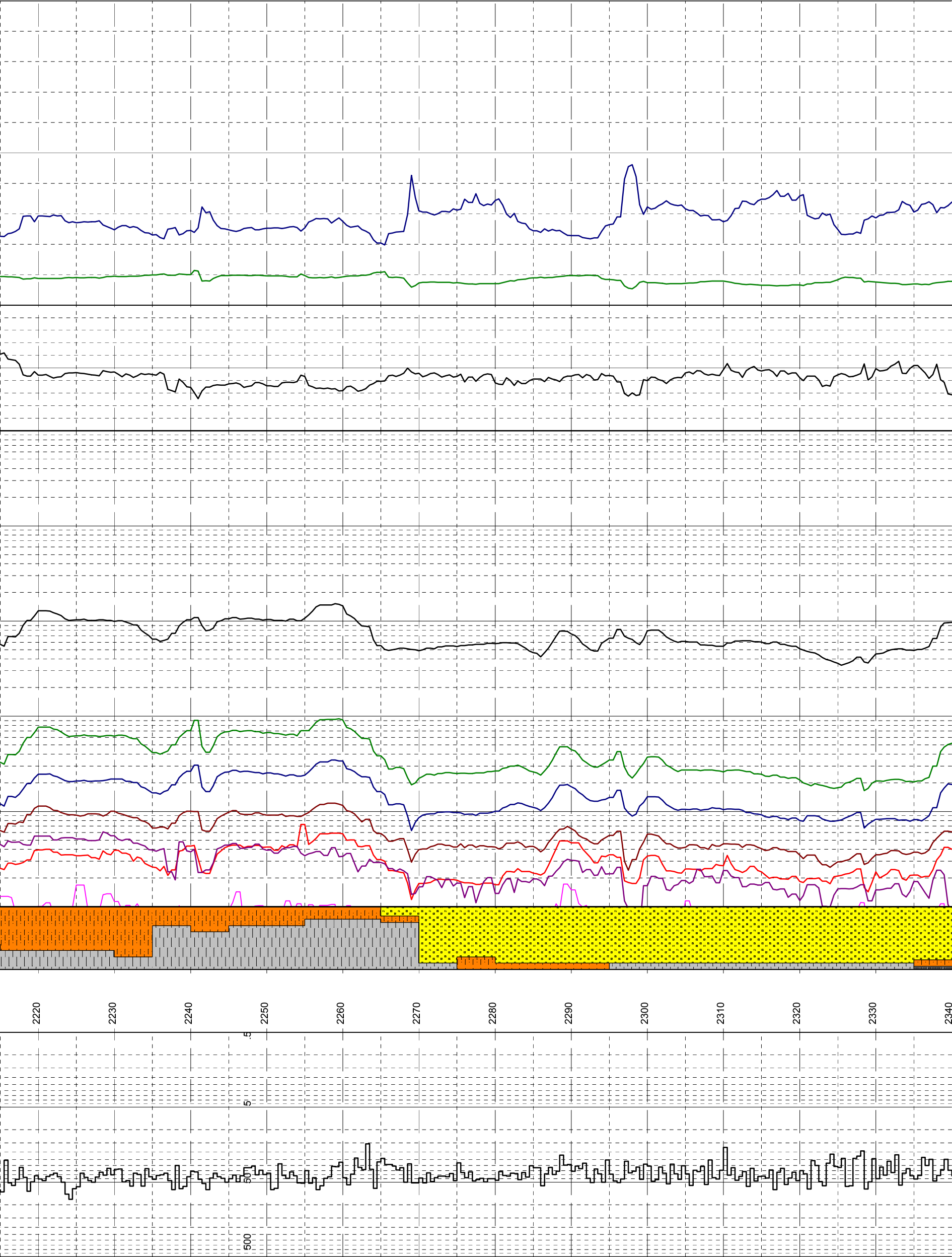
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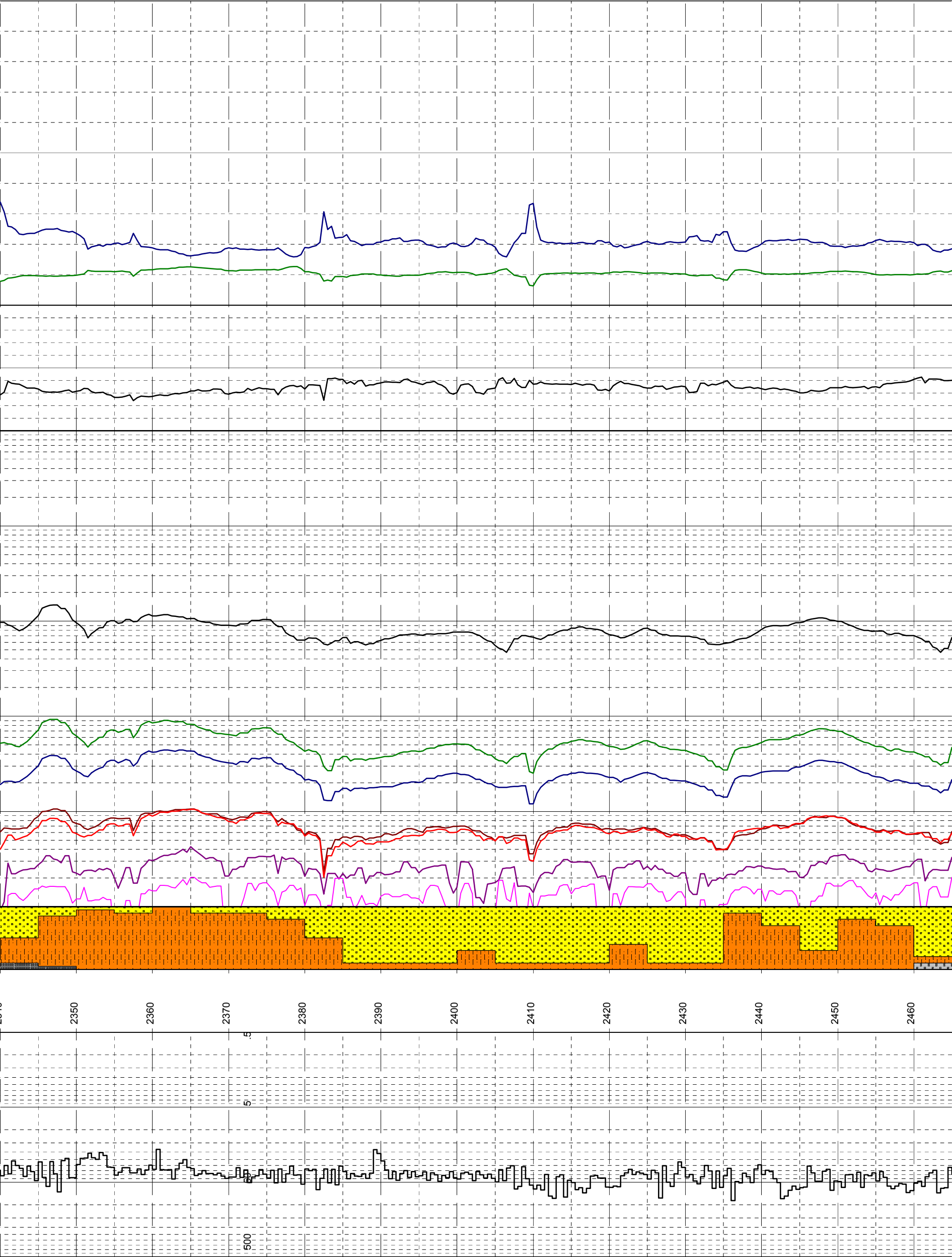
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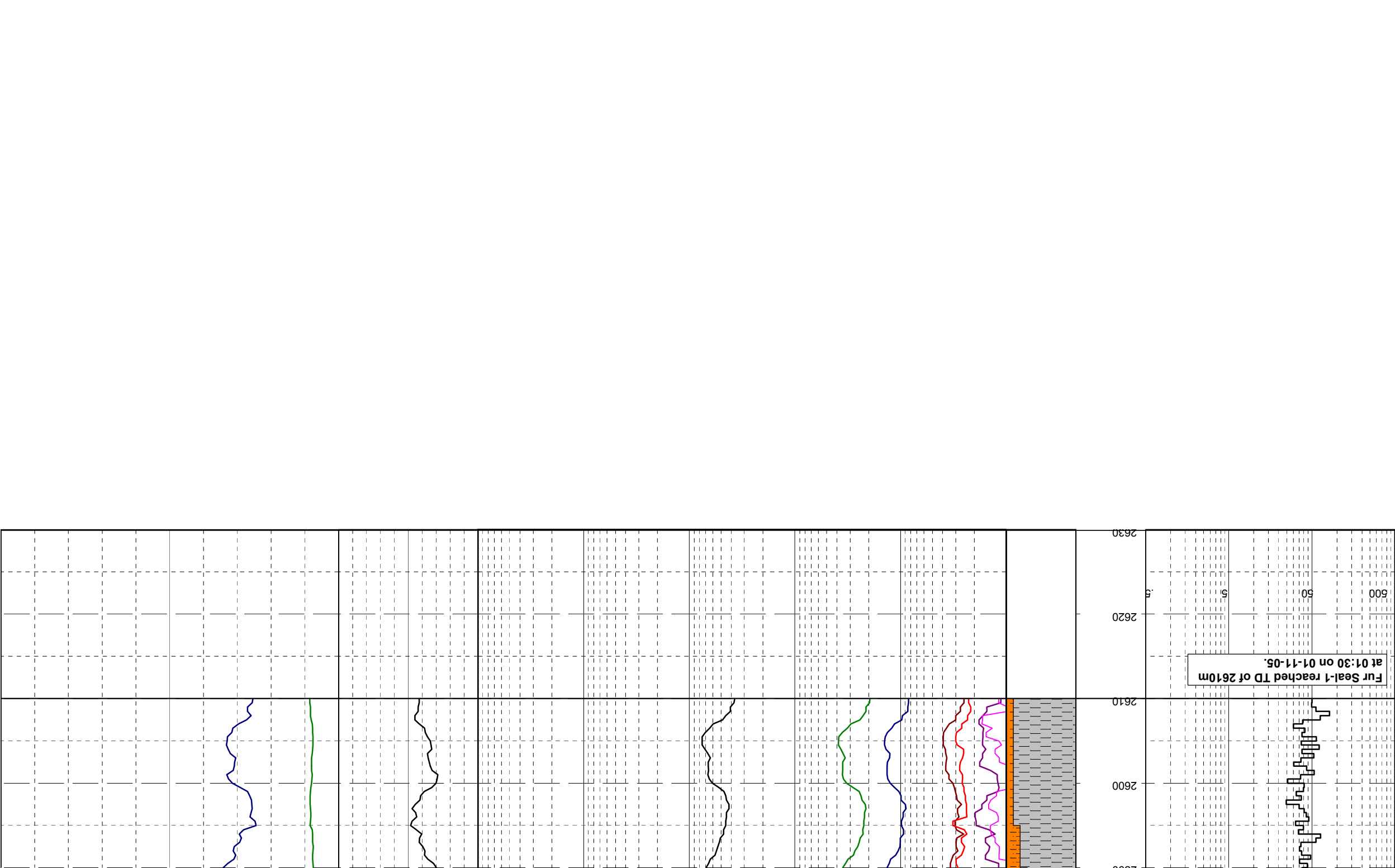
Fur Seal-1 reached TD of 2610m
at 01:30 on 01-11-05.
2630
2620
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Apache

WIRELINE LOGGING REPORT

GENERAL WELL DATA

Well Name :	Fur Seal -1	**Suite :**	1	**Rig :**	Ocean Patriot
Permit :	VIC/P-54	**Date 1st Log :**	31-Oct-2005	**GL Elevation :**	
Latitude :	038° 07' 47.910" South	**Date Last Log :**	01-Nov-2005	**Water Depth :**	58.6 (m)
Longitude :	148° 09' 08.440" East	**Depth Ref. :**	AHD	**Witnesses :**	R. Blackmore, M. Woodmansee
Easting (m) :	600,995.500 E	**Depth Ref. Elev. :**	21.5 (m)		
Northing (m) :	5,779,136.700 S	**Service Comp. :**	Schlumberger	**Engineers :**	N. Sabanegh, K. Sintoovongse
UTM Zone :	55				
Geo. Datum :	NAD83, GDA94				
Ellipsoid :	Geodetic Reference System 1980				

HOLE DATA

Hole Size :	8.500 (in)	**Seabed Temp :**		**Max Hole Dev :**	1.4 (°)
Driller's Depth :	2,610.0 (m)	**Surface Temp :**		**Max Dev Depth :**	826.0 (m)
Logger's Depth :	2,600.0 (m)	**Max BHT :**	109.0 (°C)		
Survey Type :	MWD				

Hole Problems : None

Comments :

CASING DATA

Casing String	Shoe Depth (mMDRT)	Shoe Depth (mTVDRT)	Casing OD (in)	Casing ID (in)	Weight (lbm/ft)	Hole Size (in)
762 x 508 mm	111.0	111.0	20.000	18.540	133.00	36.000
340 mm	817.6	817.6	13.375	12.347	68.00	16.000

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-Nov-2005	1-Nov-2005 3:1	1.50	KCL/PHPA	1.22	7.5	47000.0	0.00	0.059 @ 23.	0.072 @ 33.00 °	0.083 @ 26.00

WIRELINE RUN TEMPERATURE DATA

Date of Mud Check: 01-Nov-2005 **Date / Time Circ. Stopped:** 01-Nov-2005 3:15 **Circ. Time :** 1.50 (h)

Run #	Run Date	Tool String	Max BHT (°C)	Max BHT TVD Depth (m)	Date Time Logger on Bottom	Time Since Circ. Stopped (h)
1	01-Nov-2005	Dual CSAT checkshot	109.00	2576.0	01-Nov-2005 18:10	14.92

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	Dual CSAT checkshot	2600.0	200.0			Job completed without incident. Checkshots recorded every 100 m from TD to loss of signal.

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Schlumberger

Apache Northwest Pty Ltd

Fur Seal-1

WELL SEISMIC QUICK LOOK REPORT

Check Shot Survey

FIELD:	Exploration VIC/P-54
COUNTRY:	Australia
COORDINATES:	Latitude: 38 07' 47.91" S
:	Longitude: 148 09' 08.44" E
STATE:	Victoria
DATE OF SURVEY:	1-Nov-2005
SURVEY TYPE:	Rig Source Checkshot, Offshore, Airgun
REFERENCE NO:	DS 1105-01 LZ

Prepared by: L. Dahlhaus

Schlumberger Oilfield Australia Pty Ltd
Level 5, 256 St. Georges Terrace, Perth
WA 6000 Australia

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2 Data Acquisition 3
3 Well Seismic Edit 4
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A-1 Well Seismic Report 14

1 Introduction

A borehole seismic survey was recorded in the near vertical (max. 1.4 deg deviation) offshore exploration well Fur Seal-1 on 1st November 2005. This survey included rig source check shot measurements in 8.5"open hole as well as in 13.375" cased hole section. The data were acquired using a Dual Combinable Seismic Acquisition Tool (2x CSAT-B) downhole and a Dual Air gun cluster source deployed from the rig.

This initial Quick Look report comments on the quality of the acquired data and presents the final re-picked and corrected time-depth-velocity listing. Options for further processing of the data i.e. sonic calibration and synthetic seismogram generation are discussed.

2 Data Acquisition

The data were acquired in one logging run in both open and cased hole, using a two level three component Combinable Seismic Acquisition Tool (2x CSAT-B) fitted with GAC accelerometers.

A dual (2x 150 cu in) G-Gun Airgun parallel cluster was used as the source operating at 1800 psi using rig (Ocean Patriot) air. The guns were suspended in sea 5 m below a buoy at 64 m offset from the wellhead. A reference hydrophone was positioned at 5 m below the guns. Recording was made on the Schlumberger Maxis 500 Unit using DLIS format.

Good check shot levels were acquired from 2597 m MD DF to 182 m MD DF at app. 100m/15 m intervals. A minimum of 3 good shots was recorded for each level.

Elevation of DF	21.5 m above MSL
Elevation of GL	58.6 m below MSL
Well Deviation	max 1.4 deg
Energy Source	2x 150 cu in G-Guns (Parallel Cl)
Reference Sensor	Hydrophone
Source & Hyd. Offset	64 m
Source & Hyd. Azimuth	186 deg
Source / Hydrophone Depth	5 m / 10 m below AHD
Water Velocity	1524 m/s
Tool	CSAT-B (2 shuttles, 15 m Spacing)
Sensor Type	3-C GAC – Geophone Accelerometer

Table 1. Survey Parameters

3 Well Seismic Edit

The initial preparation of the data is called Well Seismic Edit and consists of:

- Load Data and Edit bad records & Sort Data
- Pick Reference Break times
- Median stack
- Geophone Transform
- Pick Break time on Stacked Data

Each shot of the raw GAC data was evaluated and edited to remove bad traces. The hydrophone data were also evaluated for signature changes and timing shifts. The good shots at each level were stacked, using a median stacking technique, to increase the signal to noise ratio of the data. For better comparison with geophone data, a transform to a 10 Hz/76% damped geophone is applied to the GAC data. This transform from acceleration to velocity is in the field approximated by integrating raw data. The following sections describe main aspects of the well seismic edit phase.

3.1 Data Quality

The quality of the downhole data is good. The source signature is stable indicating little pressure and gun depth variations as shown by the reference hydrophone data (Figure 2).

3.2 Transit Time Measurement

The measured transit time corresponds to the difference between arrivals recorded by surface and downhole sensors. The reference time (zero time) is the physical recording of the source signal by accelerometers on the gun or sensors positioned near the source. In this case, a hydrophone positioned 5 m below the gun was used as the reference. An inflection point tangent first break picking algorithm was used on both the hydrophone and the geophone data.

3.3 Stacking

After reordering and selecting the raw shots, a mean stack was performed on the three component data. In this method of stacking, at each sample time, the amplitudes of the input traces are read and the output is the mean amplitude value. The surface sensor (hydrophone) breaks are used as the zero time for stacking. The break time of each trace is recomputed after stacking. The X, Y and Z component stacks are presented in Figures 3, 4 and 5. Figure 6 shows the stacked Z component aligned with a –TT shift.

Initial VSP Processing

The three components of the check shot data were pre-processed using standard VSP processing techniques.

The following subsections describe the main aspects of the VSP processing chain:

- Survey Geometry / Datum corrections: S-R coordinates / Tide / MSL
- Bandpass Filter : Butterworth Zero Phase, 3-200Hz

3.4 Transit Time Correction to Datum

Seismic Reference Datum (SRD) is at AHD. A static shift of 6.6 ms was applied to the data to correct to SRD. This correction to SRD was calculated using a surface velocity of 1524 m/s. Survey geometry corrections for the lateral offset of the source position with respect to the downhole receiver in this well taking into account survey layout and well deviation have also been applied. Corrections for local tide variation were considered negligible due to the small tidal variation (less 1 m) during the survey.

3.5 Bandpass Filter

The effective bandwidth of the recorded data is evaluated by examining the amplitude spectrum of the stacked vertical component presented in Figure 1. A wide zero phase Butterworth Band pass filter was applied to the data limiting the bandwidth to 3-200 Hz .

3.6 Discussion of Results

The time-depth-velocity listing included in the appendix of this report has been prepared after re-picking the VSP data and application of corrections. Results show a good time-depth-velocity curve (Figure 7).

Analysis of the three component data shows that full VSP processing to derive an upgoing wavefield and corridor stack can not be successfully done as the trace spacing is too large and is irregular.

Our recommendation is to proceed with sonic calibration, synthetic seismogram generation and surface seismic to obtain a log to seismic tie.

FIGURES

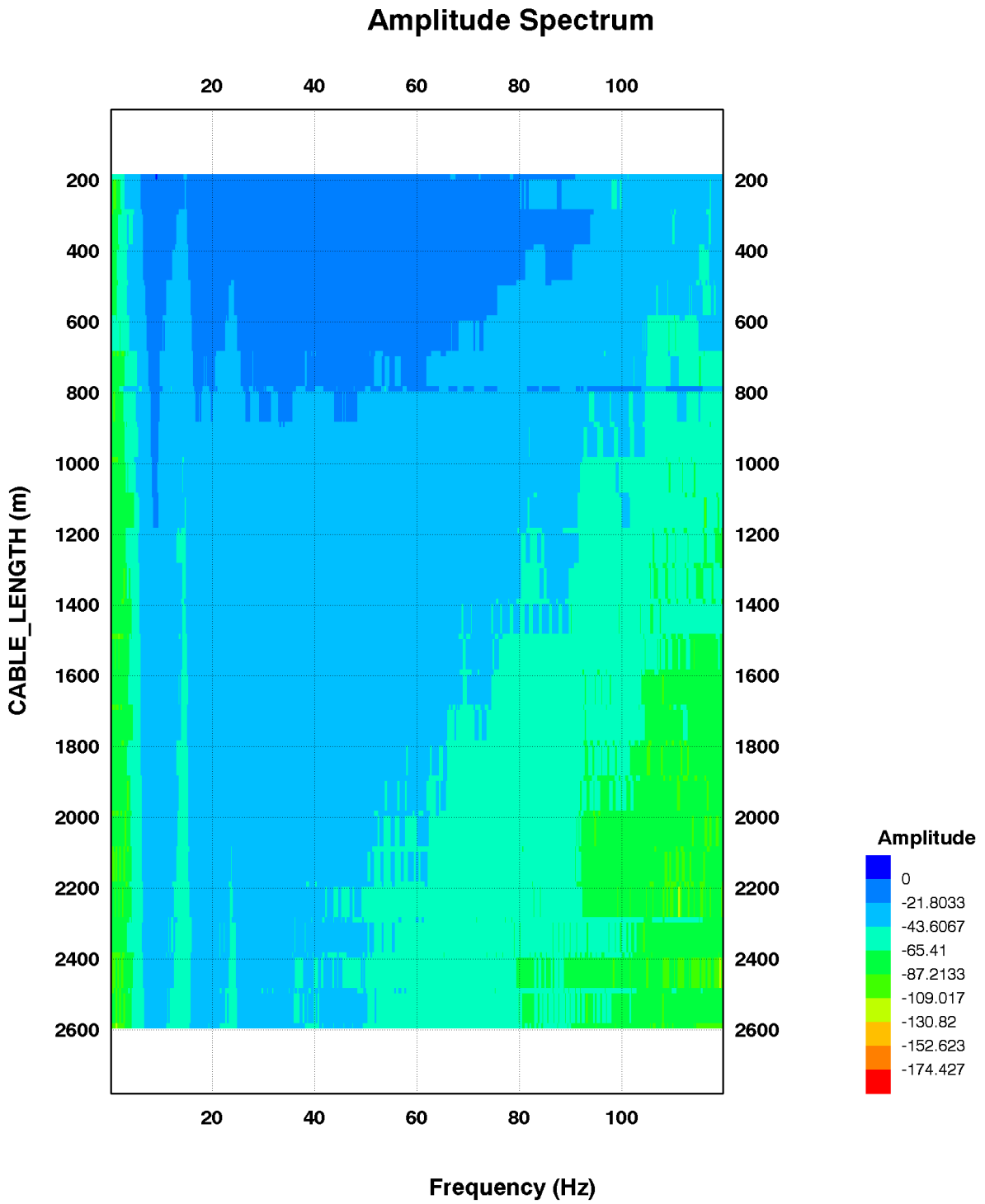

Figure 1. Amplitude Spectrum

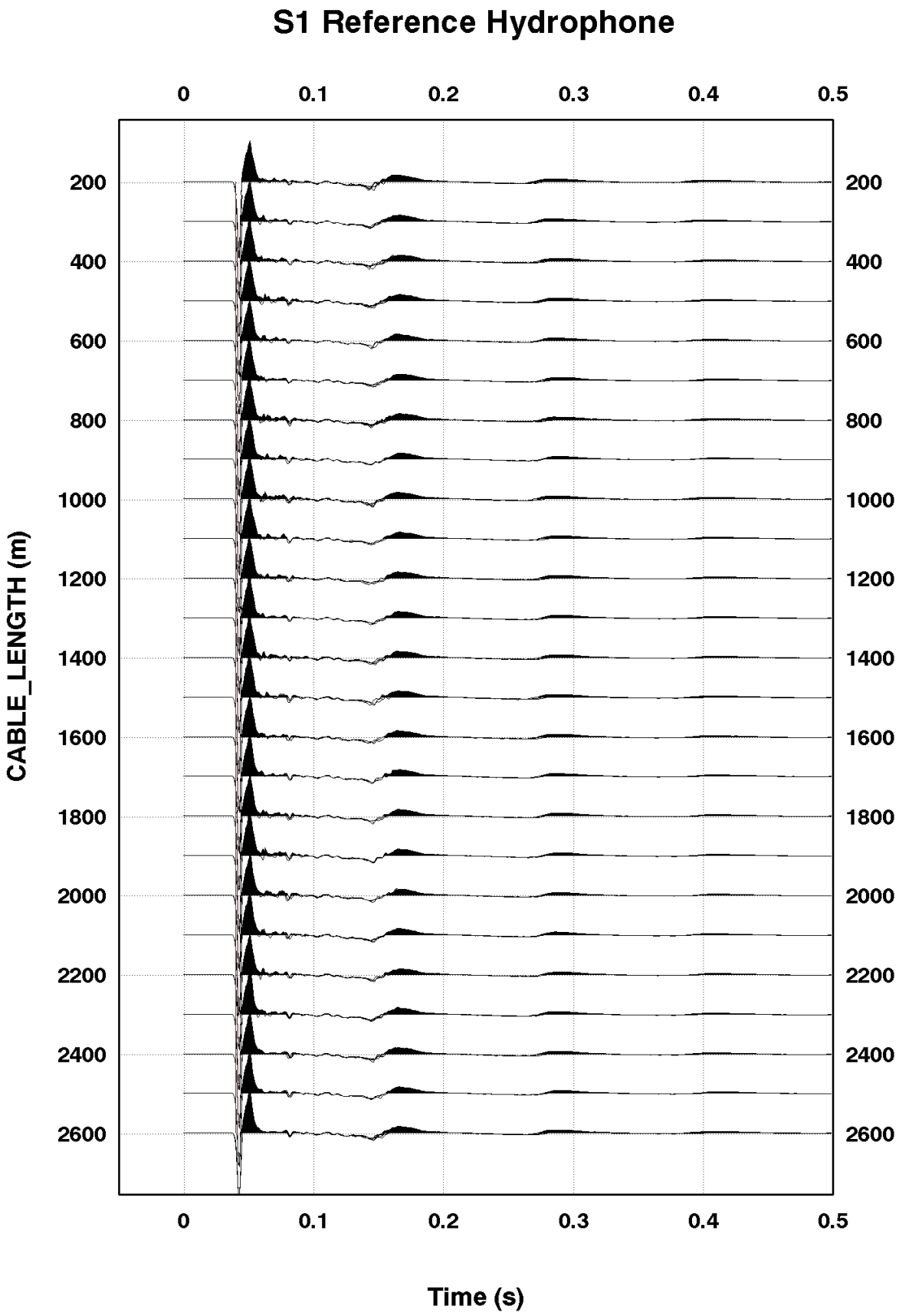

Figure 2. Reference Hydrophone

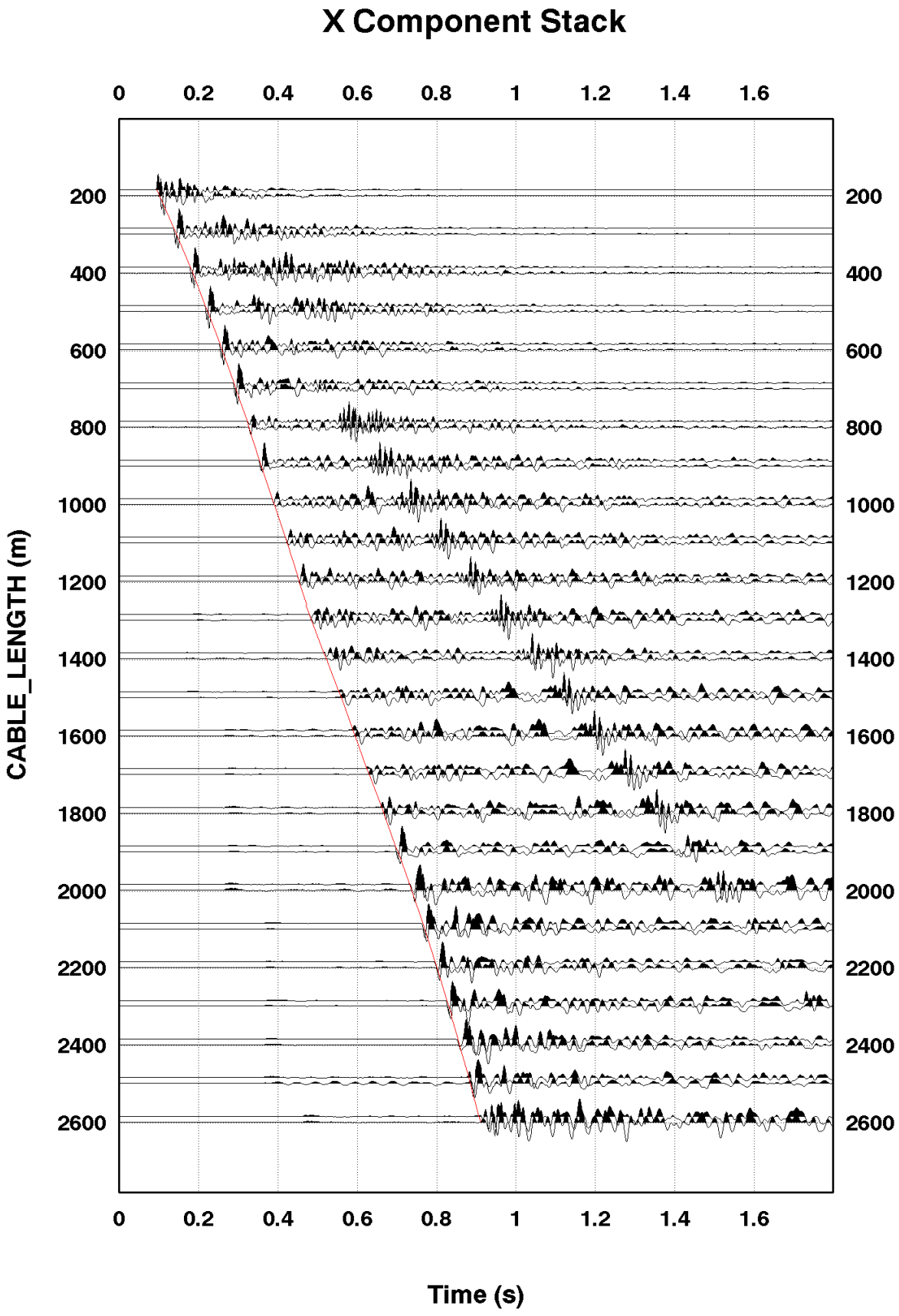

Figure 3. X Component Stack

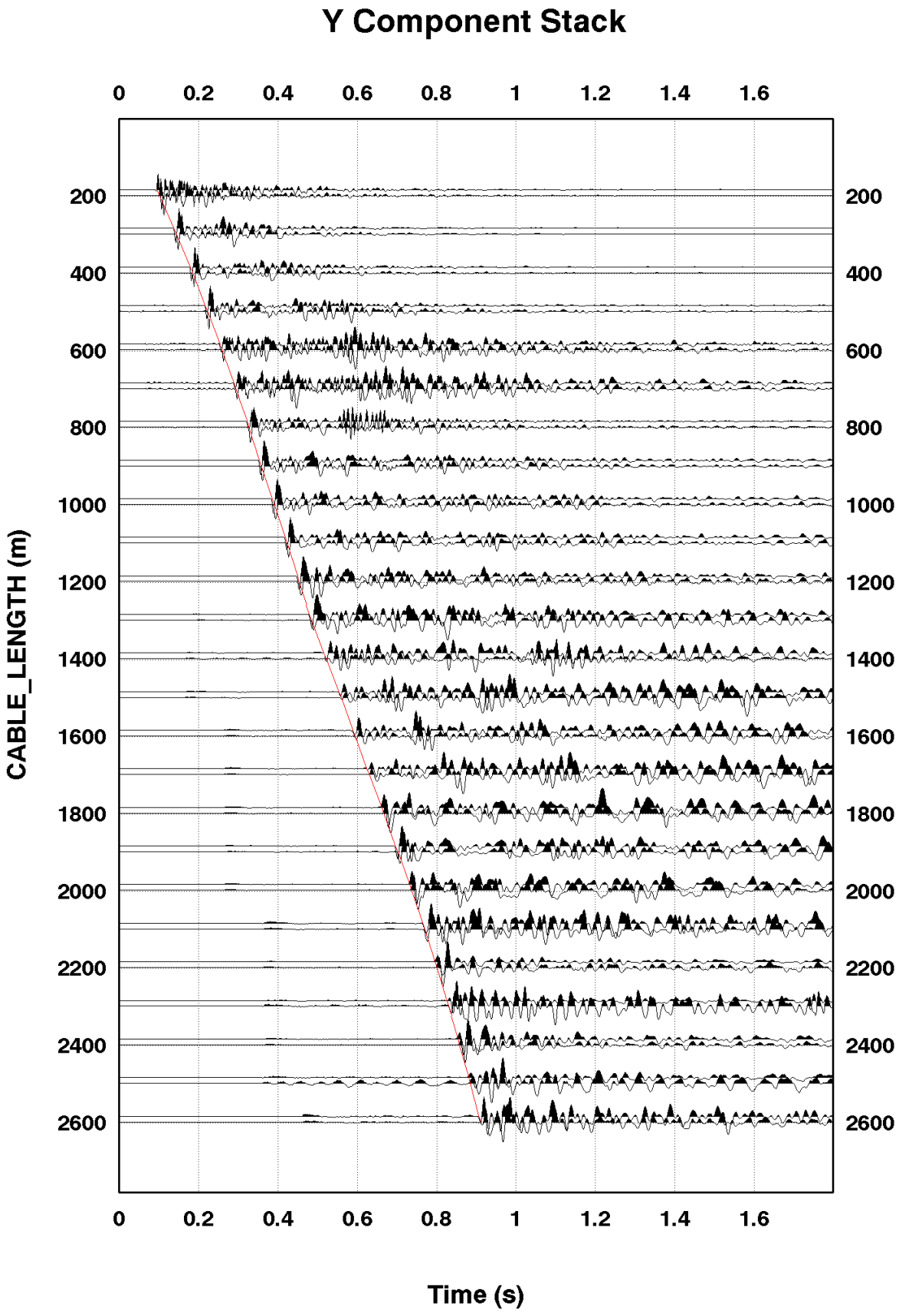

Figure 4. Y Component Stack

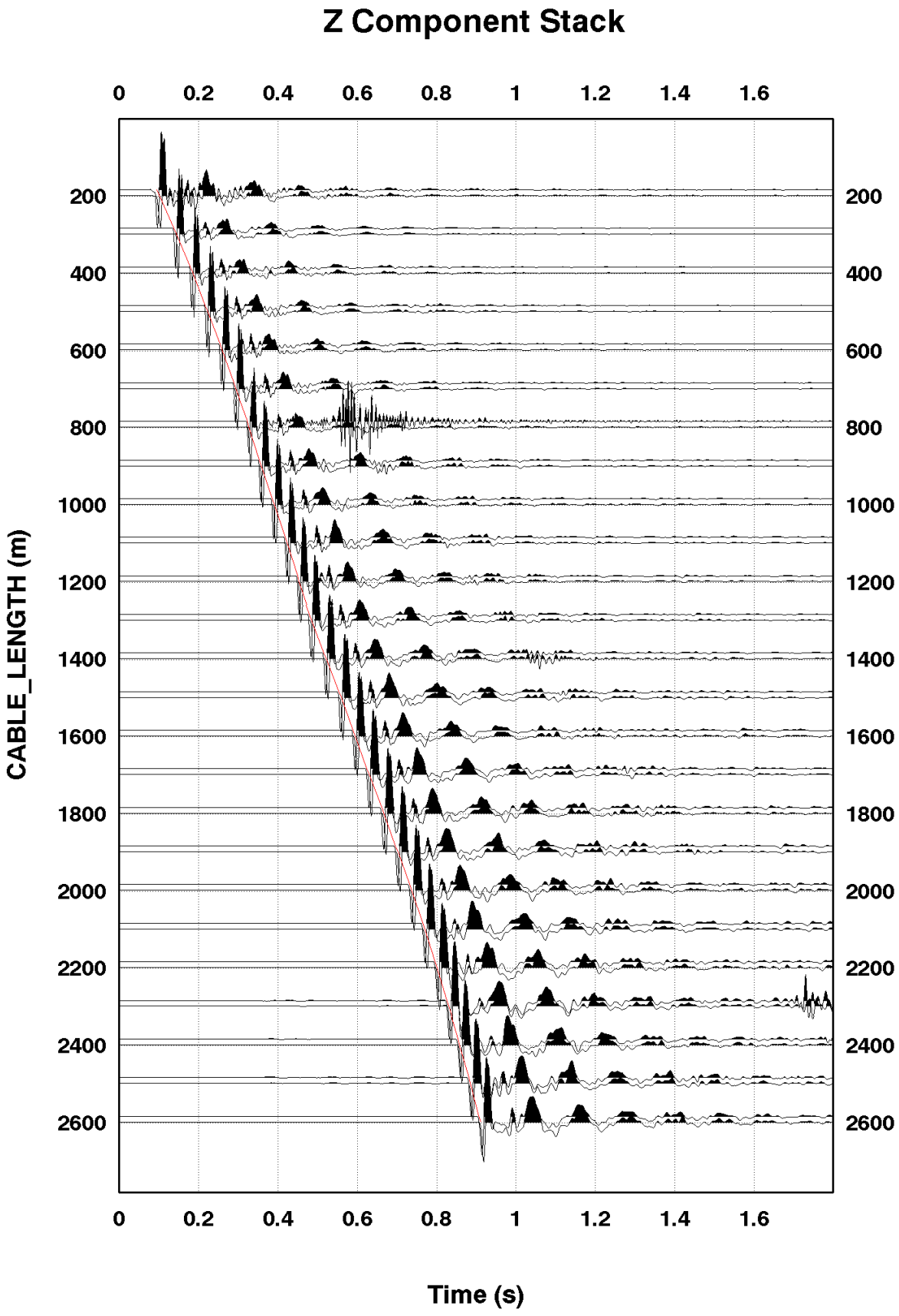

Figure 5. Z Component Stack

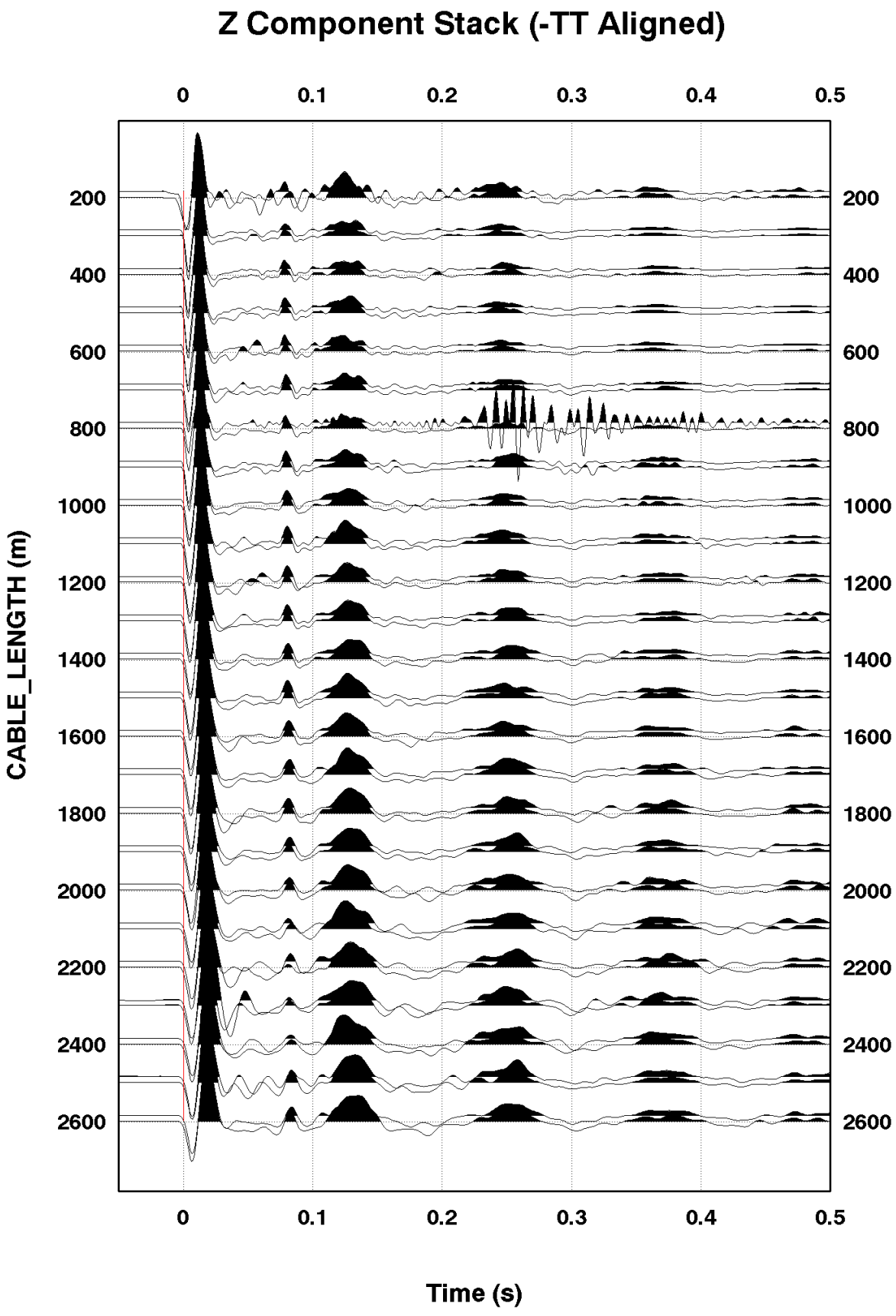

Figure 6. ZComponent Stack – Aligned (Shift -TT)

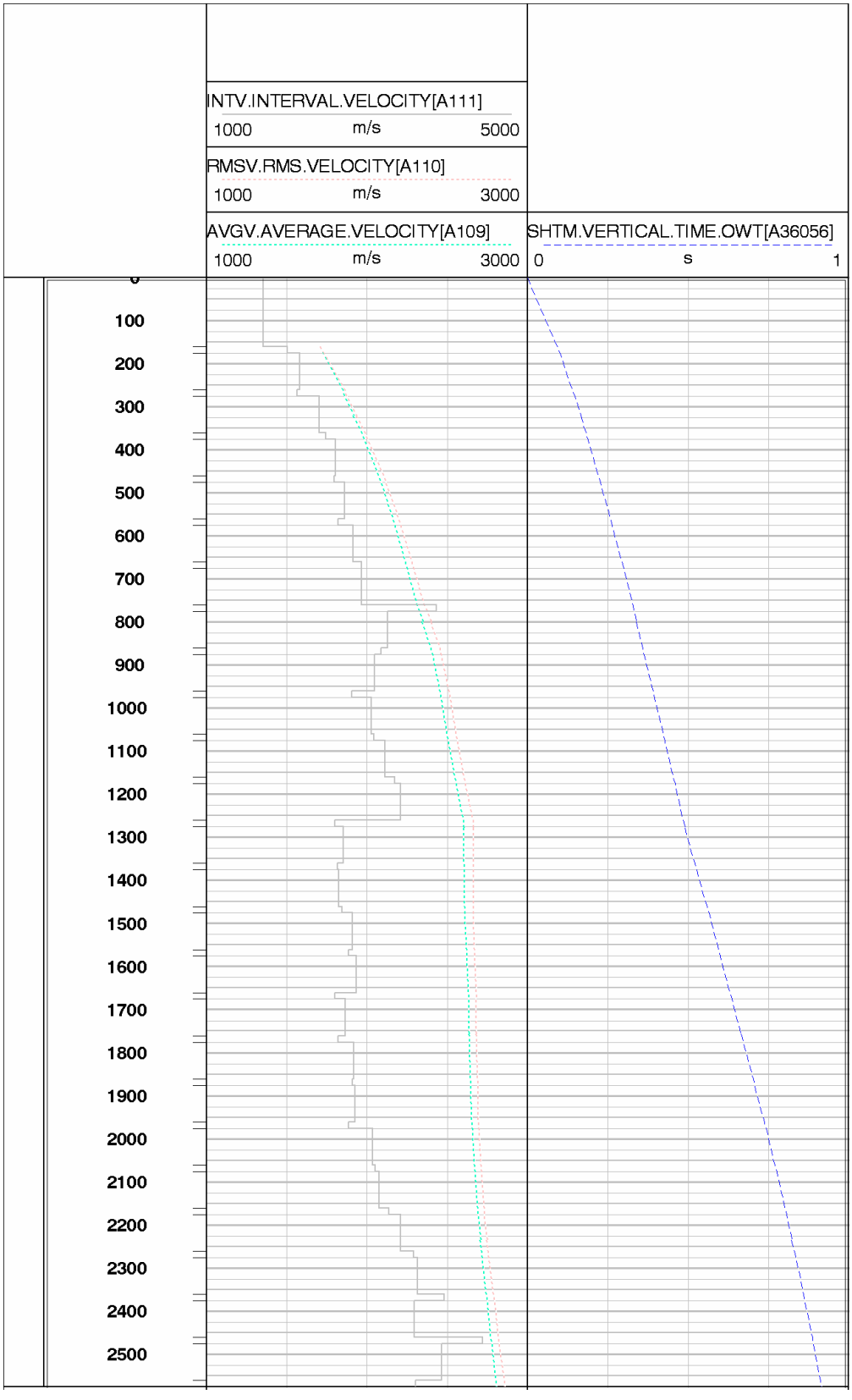

Figure 7. Velocity and Vertical Time vs Depth SRD

Attachment 1: Summary of Geophysical Listings

One geophysical data listing is appended to this report. It is included in the report and provided in electronic form. Following is a brief description of the format.

A1 Check Shot Data

1. Level number: the level number starting from the top level (includes any imposed shots).

2. Vertical depth form SRD: *dsrd*, the depth in meters from seismic reference datum.

3. Measured depth from DF: *dkb*, the depth in meters from DF.

4. Observed travel time HYD to GEO: *tim*0, the transit time picked form the stacked data by subtracting the surface sensor first break time from the downhole sensor first break time.

5. Vertical travel time SRD to GEO: *shtm*, is *timv* – vertical time, corrected for the vertical distance between source and datum.

6. Delta depth between shots: D*depth*, the vertical distance between each level.

7. Delta time between shots: D*time*, difference in vertical travel time (*shtm*) between each level.

8. Interval velocity between shots: average velocity between each level, D*depth*/D*time*

9. Average velocity SRD to GEO: average velocity from datum to the checkshot level, shtm/dsrd

Client and Well Information

Country	**Australia**
Logging Date	**1-Nov-2005**
Company	**Apache Northwest Pty Ltd**
Field	**VIC, Exploration**
Well	**Fur Seal-1**

Seismic Reference Datum : **AHD** Water Velocity : 1524 m/s

DF Elevation above SRD : 21.5 m

Time Picking on Geophone Transformed GAC Stacks

Check Shot Data

LEVEL NUMBER	VERTICAL DEPTH FROM SRD m	MEASURED DEPTH FROM DF m	OBSERVED TRAVEL TIME s	VERTICAL TRAVEL TIME SRD (OWT) s	DELTA DEPTH m	DELTA TIME s	ACOUSTIC INTERVAL VELOCITY m/s	ACOUSTIC AVERAGE VELOCITY m/s	ACOUSTIC RMS VELOCITY m/s
1	0.0			0.0000					
							1710		
2	160.5	182.0	0.0946	0.0939				1710	1710
					15.0	0.0075	2005		
3	175.5	197.0	0.1014	0.1013				1732	1733
					85.0	0.0393	2163		
4	260.5	282.0	0.1382	0.1406				1852	1863
					15.0	0.0070	2130		
5	275.5	297.0	0.1450	0.1477				1865	1877
					84.9	0.0353	2408		
6	360.4	381.9	0.1791	0.1829				1970	1990
					15.0	0.0060	2483		
7	375.4	396.9	0.1850	0.1890				1986	2008
					85.0	0.0326	2605		
8	460.4	481.9	0.2170	0.2216				2078	2107
					15.0	0.0058	2589		
9	475.4	496.9	0.2227	0.2274				2091	2120
					85.0	0.0312	2722		
10	560.4	581.9	0.2536	0.2586				2167	2202
					15.0	0.0057	2639		
11	575.4	596.9	0.2592	0.2643				2177	2212
					85.0	0.0300	2831		
12	660.4	681.9	0.2890	0.2943				2244	2283
					15.0	0.0051	2935		
13	675.4	696.9	0.2940	0.2994				2255	2296
					85.1	0.0290	2929		
14	760.5	782.0	0.3229	0.3285				2315	2358

LEVEL NUMBER	VERTICAL DEPTH FROM SRD m	MEASURED DEPTH FROM DF m	OBSERVED TRAVEL TIME s	VERTICAL TRAVEL TIME SRD (OWT) s	DELTA DEPTH m	DELTA TIME s	ACOUSTIC INTERVAL VELOCITY m/s	ACOUSTIC AVERAGE VELOCITY m/s	ACOUSTIC RMS VELOCITY m/s
					15.0	0.0039	3869		
15	775.5	797.0	0.3267	0.3324				2333	2382
					85.0	0.0261	3255		
16	860.4	882.0	0.3527	0.3585				2400	2456
					15.0	0.0047	3173		
17	875.4	897.0	0.3574	0.3632				2410	2466
					85.1	0.0275	3094		
18	960.5	982.1	0.3848	0.3907				2459	2516
					15.0	0.0053	2810		
19	975.5	997.1	0.3902	0.3960				2463	2520
					84.9	0.0278	3057		
20	1060.4	1082.0	0.4179	0.4238				2502	2559
					15.0	0.0049	3090		
21	1075.4	1097.0	0.4227	0.4286				2509	2565
					84.8	0.0263	3225		
22	1160.2	1181.8	0.4489	0.4549				2550	2608
					15.0	0.0045	3342		
23	1175.2	1196.8	0.4534	0.4594				2558	2616
					85.2	0.0249	3416		
24	1260.4	1282.0	0.4783	0.4844				2602	2663
					15.0	0.0058	2603		
25	1275.4	1297.0	0.4841	0.4901				2602	2662
					85.0	0.0314	2709		
26	1360.4	1382.0	0.5154	0.5215				2609	2665
					15.0	0.0057	2630		
27	1375.4	1397.0	0.5211	0.5272				2609	2665
					85.0	0.0321	2647		
28	1460.4	1482.0	0.5532	0.5593				2611	2664
					15.0	0.0056	2690		
29	1475.4	1497.0	0.5588	0.5649				2612	2664
					84.9	0.0301	2818		
30	1560.3	1581.9	0.5889	0.5950				2622	2672
					15.0	0.0054	2772		
31	1575.2	1596.9	0.5943	0.6004				2624	2673
					85.0	0.0296	2871		
32	1660.2	1681.9	0.6239	0.6300				2635	2683
					15.0	0.0058	2601		
33	1675.2	1696.9	0.6297	0.6358				2635	2682
					85.1	0.0312	2730		
34	1760.3	1782.0	0.6609	0.6670				2639	2684
					15.0	0.0057	2638		
35	1775.3	1797.0	0.6665	0.6726				2639	2684
					84.8	0.0299	2832		
36	1860.1	1881.8	0.6965	0.7026				2648	2690
					15.1	0.0054	2820		
37	1875.2	1896.9	0.7018	0.7079				2649	2691
					85.0	0.0298	2854		
38	1960.2	1981.9	0.7316	0.7377				2657	2698
					15.0	0.0054	2771		
39	1975.2	1996.9	0.7370	0.7431				2658	2699

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					85.0	0.0277	3067		
40	2060.2	2081.9	0.7647	0.7708				2673	2713
					15.0	0.0048	3100		
41	2075.2	2096.9	0.7695	0.7757				2675	2715
					85.1	0.0270	3152		
42	2160.3	2182.0	0.7965	0.8027				2691	2731
					15.0	0.0046	3274		
43	2175.3	2197.0	0.8011	0.8073				2695	2735
					84.9	0.0248	3423		
44	2260.2	2281.9	0.8258	0.8321				2716	2758
					15.0	0.0042	3581		
45	2275.2	2296.9	0.8300	0.8362				2721	2762
					85.0	0.0234	3632		
46	2360.2	2381.9	0.8534	0.8596				2746	2790
					15.0	0.0038	3963		
47	2375.2	2396.9	0.8572	0.8634				2751	2796
					85.0	0.0237	3587		
48	2460.2	2481.9	0.8809	0.8871				2773	2820
					15.0	0.0034	4438		
49	2475.2	2496.9	0.8843	0.8905				2780	2828
					85.1	0.0217	3926		
50	2560.2	2582.0	0.9059	0.9122				2807	2859
					15.0	0.0042	3609		
51	2575.2	2597.0	0.9101	0.9163				2810	2863

Well Name : FUR SEAL-1

Operator : APACHE

Interval : 1590m - 2630m **Palynological Data Chart : BASIC DATA**

Scale : 1:5000 **% Abundance histogram : Highest occurrence**

Chart date: 23 December 2005 **Roger Morgan**

FUR SEAL-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** (Samples in Discipline(s) : Paly)

Dinoflagellate Cysts | **FT**

% within discipline (40mm=100%) *1
In-Situ occurrences *2

Cordosphaeridium multispinosum
Dapsilidinium pastielsii
Hemicystodinium "robustum"
Impagidinium victorianum
Impletosphaeridium sp. 1
Lingulodinium machaerophorum
Operculodinium centrocarpum
Operculodinium spp.
Spiniferites ramosus
Tuberculodinium vancampoae
Cerebrocysta sp.
Systematophora placacantha
Apteodinium australiense
Eisenackia ornata
Hystrichokolpoma eisenackii
Lejeunia sp.
Nematosphaeropsis balcombiana
Tectatodinium spp.
Achomosphaera spp.
Oligosphaeridium sp.
Achomosphaera alcicornu
Chiropteridium aspinatum
Impagidinium sp.
Thalassiphora delicata
Achomosphaera ramulifera
Cyclopsiella vieta
Areoligera senonensis
Exochosphaeridium phragmites
Microforams .

AL | **ALBO** | **MP**

*1 *2

Crassosphaera concinna
Botryococcus spp.

Reworking - Permian

Spores And Pollen | **FU**

% within discipline (40mm=100%) *1
In-Situ occurrences *2

Acaciapollenites myriosporites
Cicatricosisporites australiensis
Cyatheacidites annulatus
Cyathidites australis
Cyathidites minor
Dictyophyllidites spp.
Dilwynites granulatus
Falcisporites similis
Gleicheniidites spp.
Haloragacidites harrisii
Laevigatosporites ovatus
Lygistepollenites florinii
Nothofagidites deminutus
Nothofagidites emarcidus
Polyoodlisporites usmensus
Proteacidites rectomarginis
Retitriletes austroclavatidites
Stereisporites antiquasporites
Triletes tuberculiformis
Gramineae spp.
Microcachryidites antarcticus
Nothofagidites flemingii
Vitreisporites pallidus
Cyathidites gigantis
Araucariacites australis
Nothofagidites falcatus
Phyllocladidites mawsonii
Spinozonocolpites prominatus
Tricolporites "estoutus"
Ceratosporites equalis
Lygistepollenites balmei
Myrtaceidites parvus
Proteacidites spp. (small)
Australopollis obscuris
Cyathidites splendens
Cycadopites follicularis
Osmundacidites wellmanii
Clavifera triplex
Corollina torosa
Nothofagidites endurus
Cameronozonosporites ohaiensis
Gambierina rudata
Microfoveolatisporis spp.
Peninsulapollis gillii
Podosporites microsaccatus
Tetracolporites verrucosus
Ornamentifera semitosa
Batienpollis sectilis
Tricolpites confessus
Tubulifloridites lilliei
Falcisporites grandis
Proteacidites spp. (large)
Aequitriradites verrucosus
Crybelosporites striatus
Dictyotosporites speciosus
Foraminisporis asymmetricus
Phimopollenites pannosus
Triporoletes radiatus
Triporoletes reticulatus
Aequitriradites spinulosus
Pilosisporites grandis
Dictyophyllidites mortoni
Ischyosporites punctatus
Fungae .

Samples (Samples in Discipline(s) : Paly)

Total Count | **% Category**

In-Situ occurrences
Total count: Total Count
In-Situ occurrences
Category %: % Category

FU
MP
AL
FT
DC
ALBO
SP

1600m
1610.00m CU
1650m
1700m
1750m
1800m
1840.00m CU
1860.00m CU
1900m
1920.00m CU
1950m
2000m
2050m
2100m
2120.00m CU
2150m
2160.00m CU
2190.00m CU
2200.00m CU
2210.00m CU
2220.00m CU
2230.00m CU
2250m
2270.00m CU
2300m
2300.00m CU
2330.00m CU
2350m
2350.00m CU
2370.00m CU
2400m
2410.00m CU
2450m
2500m
2500.00m CU
2550m
2550.00m CU
2570.00m CU
2590.00m CU
2600m
2600.00m CU
2610.00m CU