

Rig: **ISDL 453** State: **Victoria**

Rig: ISDL 453 Field: Tuna Location: Bass Strait Well: TNA A-10A ST Company: ESSO Australia Ltd Pty	GeoVISION* Resistivity 1:200 True Vertical Depth Recorded Mode Data						
	Location	Total depth: 2243.0 m			Elevation	K.B.	31.32 m
		Spud date: 5-Oct-2002				G.L.	-59.4 m
		Runs: 2 To 2				D.F.	31.32 m
		Permanent datum: Mean Sea Level			Elev.: 59.4 m		
		Log measured from: Drill Floor			31.32 m above Perm. datum		
	Depth reference: Driller's Depth						
	API serial no.		Y = 5,774,222.491 m N X = 624,224.990 m E		Longitude Latitude		
					E 148° 25' 5.413" S 38° 10' 16.394"		
	Depth logged: 1948.9 m To 2231.4 m		Mag decl: 13.166 deg.		Other services:		
Date logged: 15-Oct-02 To 16-Oct-02		Mag dip: -68.686 deg.		D & I, Directional Drilling			
Bore hole record			Casing record				
Hole size	from	to	Size	Density	from	to	
8 1/2 in.	661.1 m	2243.0 m	20 in.	285 lbm/m	0.0 m	155.0 m	
			13 3/8 in.	226 lbm/m	0.0 m	647.0 m	
			9 5/8 in.	154 lbm/m	617.0 m	661.1 m	
Mud record			Borehole deviation record				
Type	from	to	Min	Max	from	to	
KCl/PHPA/Glycol	661.1 m	2243.0 m	37.4 deg.	42.5 deg.	646.4 m	1015.5 m	
			42.5 deg.	60.9 deg.	1015.5 m	1218.5 m	
			60.9 deg.	68.7 deg.	1218.5 m	1796.9 m	
			54.1 deg.	68.7 deg.	1796.9 m	2243.0 m	
Surface equipment		Software record					
Unit	OLU-FB-924	IDEAL Wis	ID7_OC_02r				
Depth system	PDA-AB	SPM	HSPM7_OC_10a				
		LWD	See Toolsketch				
		MWD	See Toolsketch				

Bit Run Summary

[illegible]

Type		KCl/Phpa/Glycol									
Mud weight	lb/gal	10.25									
Solids	%	9.4									
Chlorides	mg/L	40,500									
Rm	ohm-m@°C	0.125@21.5									
Rmf	ohm-m@°C	0.231@22.0									
Rmc	ohm-m@°C	0.104@20.8									
Potassium	%	4									
Environmental data											
GR											
Mud weight	lb/gal	10.25									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size	in.	8.5									
Mud weight	lb/gal	10.25									
Temperature	°C	68.5									
Mud salinity	ppk	66.825									
Formation salinity											
Recording rate 1	SEC	10									
Recording rate 2	SEC	10									
Filtering GR		3 pt									
Filtering density		3 pt									
Filtering Neutron		3 pt									
Company representative	B. Steel	B. Woodward									
Anadrill personnel	L. Bon	J. Dolan	K. Handley								

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES FOR RUN2 D & I Directional Drilling	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 2 All data presented is from tool memory. GR corrected for mud weight, tool and bit size. GVR6* resistivity is corrected for the bit size, mud resistivity and borehole temperature. Bottom quadrant density is presented. Neutron porosity is calculated with a limestone matrix and is corrected for the bit size, borehole salinity, temperature and mud hydrogen index. Mud type is water-based KCl/PHPA/Glycol. Barite was present in the mud system.	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

GVR6* downhole software: 6.1B14
ADN6* downhole software: 6.2B08

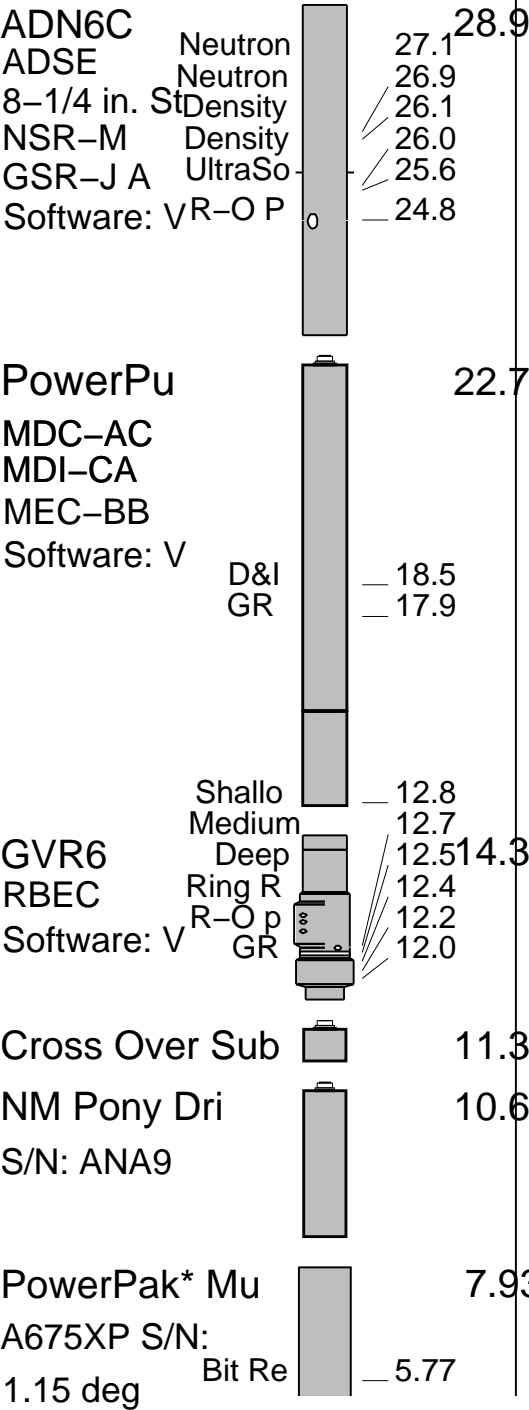
EQUIPMENT DESCRIPTION

RUN2


RUN

RUN

DOWNHOLE EQ



1.15 deg Bit Re 5.77



Security T 0.00 0.24

XS30D S/N:

MAXIMUM STRING DI

ALL LENGTHS I

True Vertical Depth Log

IDEAL Version: ID7_0C_02
IDF

RAB IDEAL Version: ID7_0C_02 MWD_10 IDEAL Version: ID7_0C_02
ADN IDEAL Version: ID7_0C_02

Format: TNA A-10A GeoVISION Resistivity Vertical Scale: 1:200 Graphics File Created: 18-Oct-2002 06:25

Parameters

DLIS Name	Description	Value
BDBHCA	RAB: Button Deep Borehole A Factor	0.004
BDBHCB	RAB: Button Deep Borehole B Factor	0.000
BHA_COEF_VER	RAB: BHA Coef Generator Version	62012.0
BITBHCA	RAB: Bit A Borehole Factor	0.058
BITBHCB	RAB: Bit B Borehole Factor	0.000
BIT_K_FACTOR	RAB: Bit K Factor	14.966
BMBHCA	RAB: Button Medium Borehole A Factor	0.023
BMBHCB	RAB: Button Medium Borehole B Factor	0.000
BSBHCA	RAB: Button Shallow Borehole A Factor	0.022
BSBHCB	RAB: Button Shallow Borehole B Factor	0.000
BS_RM	Bit Size (RM)	8.500 in
BUT_KIMP_A	RAB: Button Impedance Coeff A	0.000
BUT_KIMP_B	RAB: Button Impedance Coeff B	0.000
DBUTTON_K_FACTOR	RAB: Button Deep K factor	0.005
DHS_VERSION	RAB: DownHole Software Version	6.101
DO	Depth Offset	0.0 m
GRDC	Grid corr angle	-0.880 deg
MBUTTON_K_FACTOR	RAB: Button Medium K Factor	0.005
MST_RM	Mud Sample temperature (RM)	70.700 degF
MW_RM	Mud Weight (RM)	10.250 lbm/gal
OBM	RAB: Oil base Mud	NO
RABEC	RAB: Resistivity Env-Cor	YES
RAB_TEMP_SELECT	RAB Temperature Selection	MEAS
READOUT_PORT_MP	RAB: ROP to Bit Face Distance	12.280 m
RINGBHCA	RAB: Ring Borehole A Factor	0.159
RINGBHCB	RAB: Ring Borehole B Factor	0.000
RING_KIMP_A	RAB: Ring Impedance Coeff A	0.000
RING_KIMP_B	RAB: Ring Impedance Coeff B	0.000
RING_K_FACTOR	RAB: Ring K Factor	0.153
RMS_RM	Resistivity of Mud Sample (RM)	0.125 ohm.m
SBUTTON_K_FACTOR	RAB: Button Shallow K Factor	0.007
STAB	RAB: Run with Stabilizer	YES
TOOLTYPE	RAB: Azimuthal Tool	YES
TS_VERSION	RAB: ToolScope Software Version	6.101
VRAB6	Rab Tool type (ENP/PILOT)	RAB6_C_SERIES

PIP SUMMARY

┆ Gamma Ray Samples

┆ Ring Samples

Rate of Penetration, Averaged over Last

5ft (ROP5_RM)

200 (M/HR) 0

Ring Resistivity Time After Bit (TAB_

RAB_RING)

0 (HR) 10

RAB Gamma Ray (GR_RAB)

0 (GAPI) 200

RAB

Rotational

Speed

(RPM_RAB)

(RPM)

0 200

Ring Resistivity (RES_RING)

0.2 (OHMM) 2000

Shallow Button Resistivity (RES_BS)

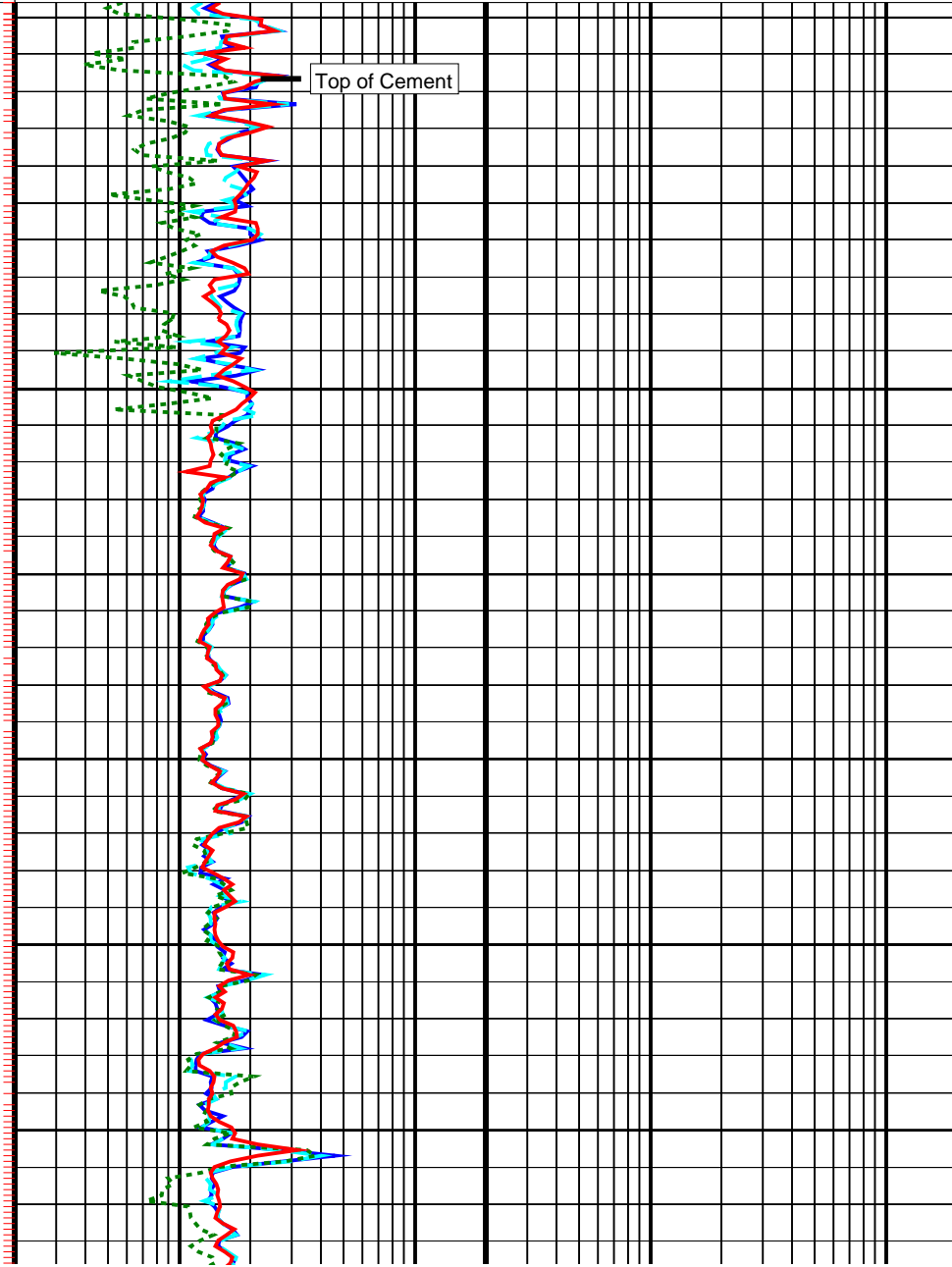
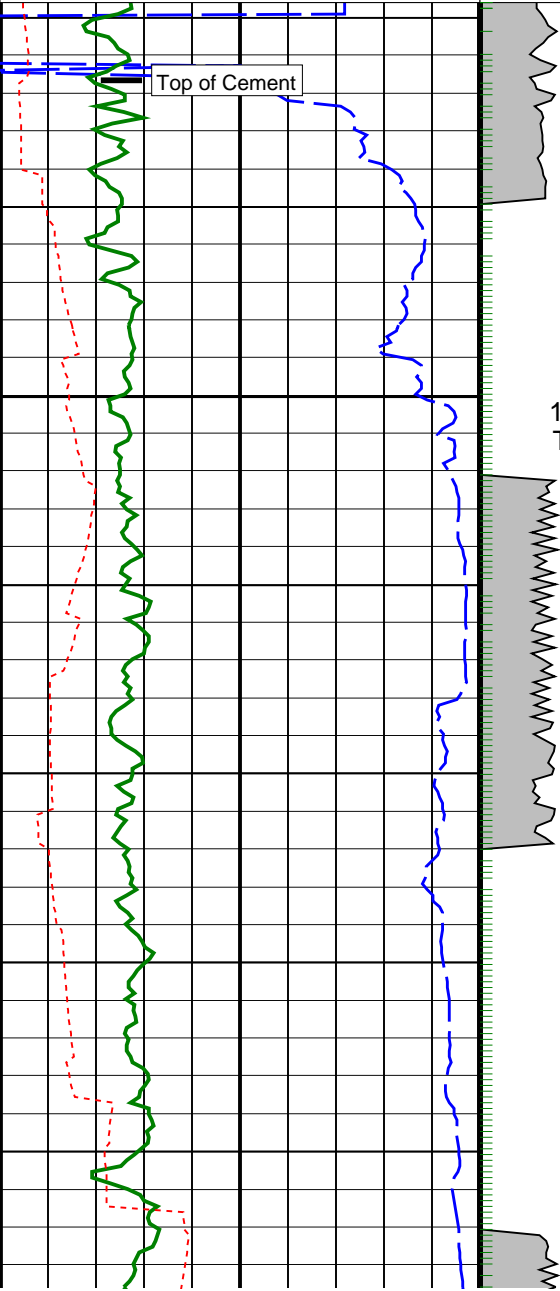
0.2 (OHMM) 2000

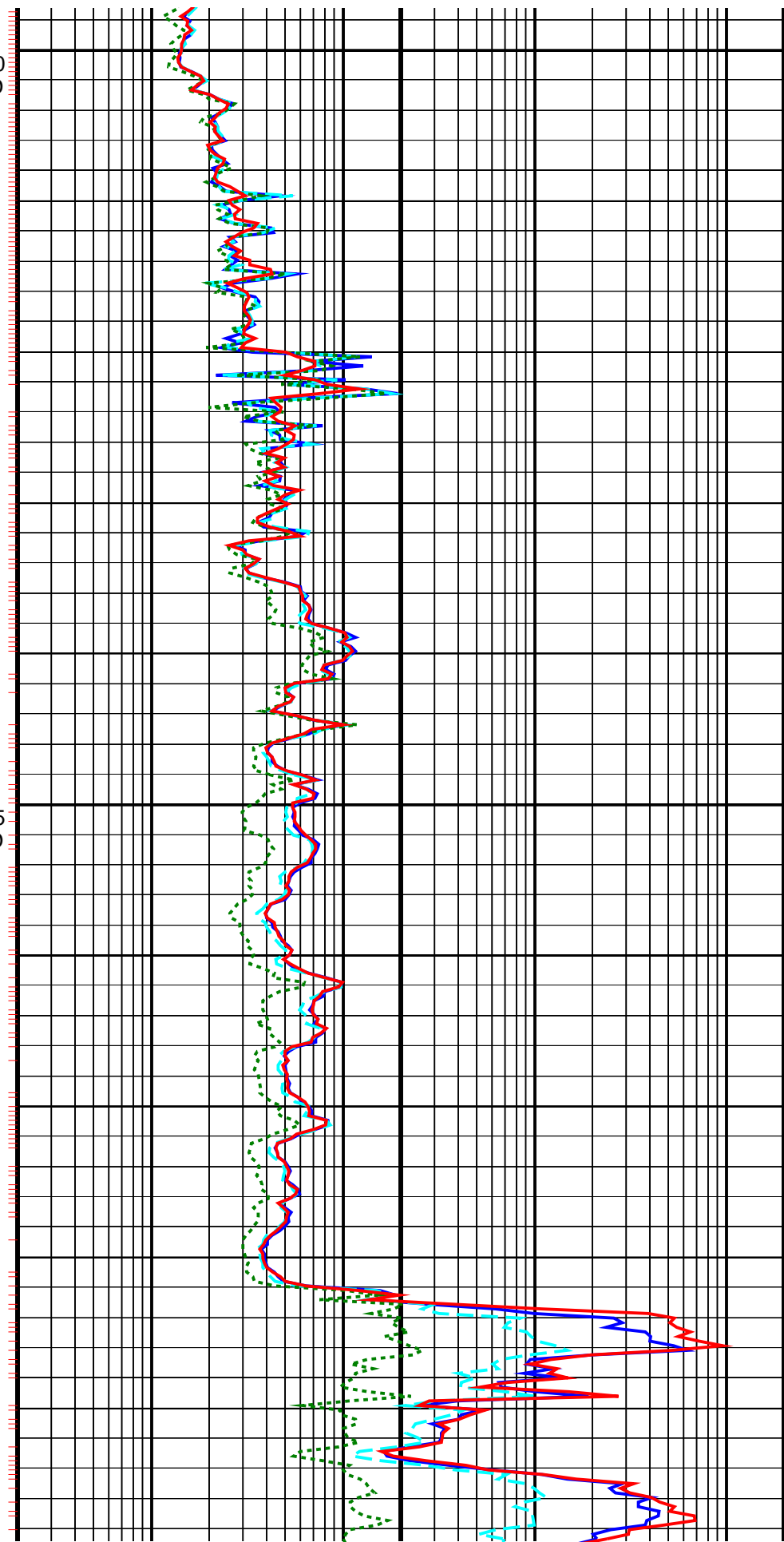
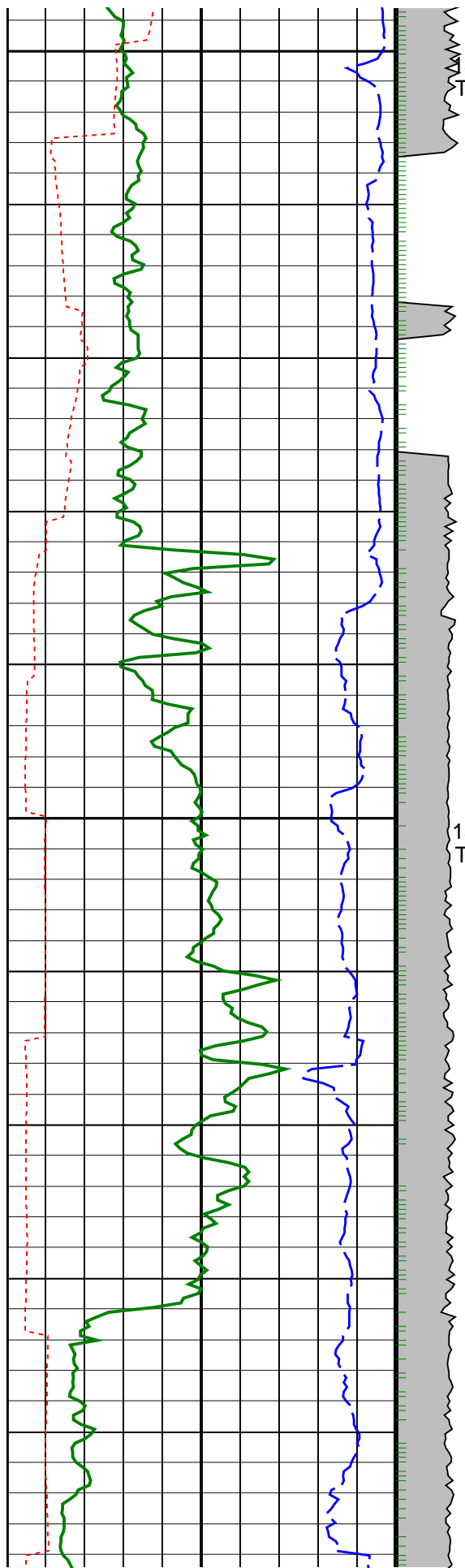
Medium Button Resistivity (RES_BM)

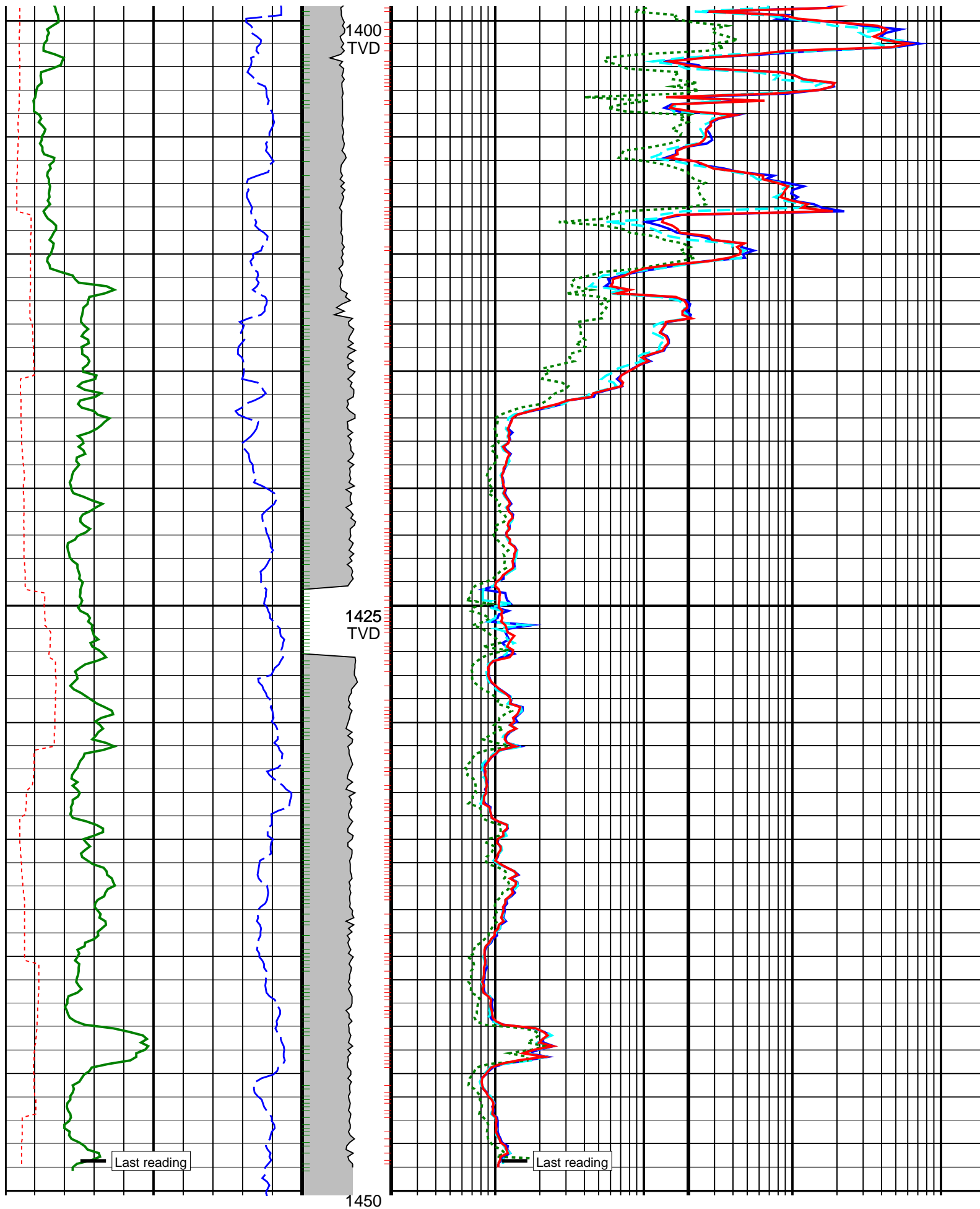
0.2 (OHMM) 2000

Deep Button Resistivity (RES_BD)

0.2 (OHMM) 2000







1400
TVD

1425
TVD

Last reading

Last reading

1450

										1450 TVD										
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<div> <div>PIP SUMMARY</div> <div> <div>+</div>Gamma Ray Samples <div>-</div>Ring Samples </div> </div>																				
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

<div> <div>True Vertical Depth Log</div> </div>																				
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















<div> <div> <div>6.75-in. Azimuthal Density Neutron / Equipment Identification</div> <div> <div> <div>Primary Equipment:</div> <div> <div>Tool Name and Serial Number</div> <div>Collar Type and Serial Number</div> <div>Chassis Type and Serial Number</div> <div>Stabilizer Type and Serial Number</div> <div>Neutron Logging Source</div> <div>Density Logging Source</div> <div>Stabilizer Size</div> <div>Calibration Status</div> </div> </div> <div> <div>ADN6C* S/N: 289</div> <div>ADDC - AA</div> <div>ADSE - EA</div> <div>Clamp-On Stabilizer</div> <div>NSB-M S/N: A161</div> <div>GSB-J S/N: A2125</div> <div>8.25 - in.</div> <div>Valid</div> </div> </div> </div> </div>																				
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

Master: 20-Aug-2002 12:00																				
6.75-in. Azimuthal Density Neutron Calibration																				
Density: Magnesium Block																				
Phase	LS window 3 - Mg CPS				Value	Phase	SS window 1 - Mg CPS				Value	Phase	SS window 3 - Mg CPS				Value			
Master	<div><div></div></div>				1286	Master	<div><div></div></div>				2974	Master	<div><div></div></div>				7375			
	250.0	4125	8000				700.0	9350	18000				2500	23750	45000					
	(Minimum)	(Nominal)	(Maximum)				(Minimum)	(Nominal)	(Maximum)				(Minimum)	(Nominal)	(Maximum)					

Master: 20-Aug-2002 12:00																				
6.75-in. Azimuthal Density Neutron Calibration																				
Density: Aluminum Block																				
Phase	LS window 3 - Al CPS				Value	Phase	SS window 1 - Al CPS				Value	Phase	SS window 3 - Al CPS				Value			
Master	<div><div></div></div>				199.3	Master	<div><div></div></div>				1579	Master	<div><div></div></div>				4746			
	50.00	725.0	1400				500.0	4250	8000				1500	15750	30000					
	(Minimum)	(Nominal)	(Maximum)				(Minimum)	(Nominal)	(Maximum)				(Minimum)	(Nominal)	(Maximum)					

Master: 20-Aug-2002 12:00														
6.75-in. Azimuthal Density Neutron Calibration														
Density: Background														
Phase	LS window 3 – Background		CPS	Value	Phase	SS window 1 – Background		CPS	Value	Phase	SS window 3 – Background		CPS	Value
Master				51.89	Master				125.3	Master				546.5
	15.00	82.50	150.0		40.00	220.0	400.0			150.0	825.0	1500		
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)		

Master: 20-Aug-2002 12:00											
6.75-in. Azimuthal Density Neutron Calibration											
Density: Water Block Check											
Phase	Long spacing water density			G/C3	Value	Phase	Short spacing water density			G/C3	Value
Master					1.034	Master					1.130
	1.015	1.030	1.045			1.095	1.120	1.145			
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			

Master: 20-Aug-2002 12:00											
6.75-in. Azimuthal Density Neutron Calibration											
Neutron: Water Tank											
Phase	Far 1 tube 1 gain			Value	Phase	Far 1 tube 1 offset CPS			Value		
Master				1.102	Master				-0.8340		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Far 1 tube 2 gain			Value	Phase	Far 1 tube 2 offset CPS			Value		
Master				1.048	Master				-0.9090		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Far 1 tube 3 gain			Value	Phase	Far 1 tube 3 offset CPS			Value		
Master				1.071	Master				-0.7690		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Far 2 tube 1 gain			Value	Phase	Far 2 tube 1 offset CPS			Value		
Master				1.107	Master				-0.7220		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Far 2 tube 2 gain			Value	Phase	Far 2 tube 2 offset CPS			Value		
Master				1.000	Master				-0.8370		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Far 2 tube 3 gain			Value	Phase	Far 2 tube 3 offset CPS			Value		
Master				1.108	Master				-0.7300		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-1.200 (Minimum)	-0.9000 (Nominal)	-0.6000 (Maximum)			
Phase	Near 1 tube 1 gain			Value	Phase	Near 1 tube 1 offset CPS			Value		
Master				1.088	Master				0		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)			
Phase	Near 2 tube 1 gain			Value	Phase	Near 2 tube 1 offset CPS			Value		
Master				1.062	Master				0		
	0.9000 (Minimum)	1.100 (Nominal)	1.300 (Maximum)			-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)			

Master: Calibration date not found											
6.75-in. Azimuthal Density Neutron Calibration											
Neutron: Water Block Check											
Phase	Far Neutron water porosity			V/V	Value	Phase	Near Neutron water porosity			V/V	Value
Master					1.000	Master					1.000
	0.9000	1.000	1.150			0.9000	1.000	1.150			
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			

(Minimum)

(Nominal)

(Maximum)

(Minimum)

(Nominal)

(Maximum)

6.75-in. Resistivity At-the-Bit / Equipment Identification

Primary Equipment:

Tool Name and Serial Number

GVR6* S/N: 160













Calibration Status

Valid

Master: 11-Sep-2002 12:00

6.75-in. Resistivity At-the-Bit Calibration

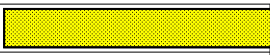
Resistivity: Fixture

Phase	Ring/T1 factor	Value	Phase	Ring/T2 factor	Value	Phase	M0/T1 factor	Value
Master		0.9975	Master		0.9991	Master		1.001
	0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)
		1.025 (Maximum)			1.025 (Maximum)			1.025 (Maximum)
Phase	M0/T2 factor	Value	Phase	M2/T1 factor	Value	Phase	M2/T2 factor	Value
Master		1.002	Master		0.9983	Master		0.9994
	0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)
		1.025 (Maximum)			1.025 (Maximum)			1.025 (Maximum)
Phase	BTN shallow/T1 factor	Value	Phase	BTN shallow/T2 factor	Value	Phase	BTN medium/T1 factor	Value
Master		1.006	Master		1.007	Master		1.002
	0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)
		1.025 (Maximum)			1.025 (Maximum)			1.025 (Maximum)
Phase	BTN medium/T2 factor	Value	Phase	BTN deep/T1 factor	Value	Phase	BTN deep/T2 factor	Value
Master		1.003	Master		1.012	Master		1.012
	0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)		0.9750 (Minimum)	1.000 (Nominal)
		1.025 (Maximum)			1.025 (Maximum)			1.025 (Maximum)

Master: 11-Sep-2002 12:00

6.75-in. Resistivity At-the-Bit Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor	Value
Master		0.8590
	0.7500 (Minimum)	1.000 (Nominal)
		1.250 (Maximum)

ANADRILL

SCHLUMBERGER

Survey report 16-Oct-2002 12:09:07 Page 1 of 3

Client.....: Esso Australia Ltd.
Field.....: TunaWell.....: TNA A-10A
API number.....:
Engineer.....: L. BonSpud date.....: 4-Oct-2002
Last survey date.....: 16-Oct-02
Total accepted surveys...: 57
MD of first survey.....: 646.50 m
MD of last survey.....: 2243.00 mRIG.....: ISDL 453
STATE.....: Victoria

----- Survey calculation methods-----

Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Geomagnetic data -----

Magnetic model.....: BGM version 2001
Magnetic date.....: 20-Sep-2002Magnetic field strength...: 1200.29 HCNT
----- Depth reference -----
Magnetic dec (+E/W-).....: 13.17 degrees

Magnetic field strength.: 1200.29 HCNT
 ----- Depth reference ----- Magnetic dec (+E/W-): 13.17 degrees
 Permanent datum.: Mean Sea Level Magnetic dip.: -68.69 degrees
 Depth reference.: Driller's Depth
 GL above permanent.: -59.40 m ----- MWD survey Reference Criteria -----
 KB above permanent.: 31.32 m Reference G.: 1000.02 mGal
 DF above permanent.: 31.32 m Reference H.: 1200.29 HCNT
 Reference Dip.: -68.69 degrees
 Tolerance of G.: (+/-) 2.50 mGal
 Tolerance of H.: (+/-) 6.00 HCNT
 Tolerance of Dip.: (+/-) 0.45 degrees

----- Platform reference point ----- Corrections -----
 Latitude (+N/S-): -3.05 m Magnetic dec (+E/W-): 13.17 degrees
 Departure (+E/W-): 0.11 m Grid convergence (+E/W-): -0.88 degrees
 Total az corr (+E/W-): 14.05 degrees
 Azimuth from rotary table to target: 332.28 degrees (Total az corr = magnetic dec - grid conv)
 Sag applied (Y/N): No degree: 0.00

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ANADRILL SCHLUMBERGER Survey Report

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Displ Total (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool qual
1	646.5	37.39	204.16	0	614.23	-101.72	-136.8	-35.75	138.47	194.65	0	TIP	-
2	661.2	37.68	204.31	14.7	625.89	-107.24	-144.96	-39.43	147.32	195.21	0.63	GYR	-
3	700.49	38.02	219.27	39.29	656.98	-119.38	-165.32	-52.05	170.44	197.48	7.11	MWD	6-axis
4	729	38.66	224.98	28.51	679.35	-125.46	-178.42	-63.91	186.69	199.71	3.85	MWD	6-axis
5	757.82	37.29	233.89	28.82	702.08	-129.42	-189.94	-77.34	202.3	202.15	5.97	MWD	6-axis
6	785.91	37.06	243.45	28.09	724.48	-130.48	-198.74	-91.8	216.2	204.79	6.27	MWD	6-axis
7	814.55	37.96	252.29	28.64	747.22	-128.78	-205.29	-107.92	229.28	207.73	5.8	MWD	6-axis
8	843.56	39.69	259.68	29.01	769.83	-124.45	-209.66	-125.54	241.82	210.91	5.19	MWD	6-axis
9	871.13	40.19	267.56	27.57	790.98	-118.02	-211.62	-143.1	253	214.07	5.62	MWD	6-axis
10	901.08	40.82	274.91	29.95	813.77	-108.61	-211.19	-162.52	264.15	217.58	4.9	MWD	6-axis
11	927.94	40.93	282.75	26.86	834.09	-98.15	-208.5	-179.86	273.13	220.78	5.82	MWD	6-axis
12	956.4	41.73	290.78	28.46	855.48	-85	-203.08	-197.82	281.4	224.25	5.74	MWD	6-axis
13	986.18	42.47	297.76	29.78	877.59	-69.28	-194.87	-216	288.96	227.94	4.85	MWD	6-axis
14	1015.52	42.54	305.13	29.34	899.23	-52.29	-184.55	-232.88	295.34	231.61	5.17	MWD	6-axis
15	1044.86	42.2	312.78	29.34	920.92	-34.16	-172.14	-248.24	300.45	235.26	5.37	MWD	6-axis
16	1073.87	45.34	320.38	29.01	941.88	-14.86	-157.56	-261.98	304.25	238.98	6.43	MWD	6-axis
17	1102.84	49.02	325.14	28.97	961.58	6.08	-140.64	-274.81	307.43	242.9	5.34	MWD	6-axis
18	1131.52	51.38	330.94	28.68	979.94	28.04	-121.95	-286.45	310.25	246.94	5.36	MWD	6-axis
19	1160.5	54.35	336.25	28.98	997.44	51.12	-101.26	-296.7	312.63	251.15	5.44	MWD	6-axis
20	1189.57	58.35	338.23	29.07	1013.55	75.22	-78.95	-306.05	315.43	255.53	4.54	MWD	6-axis
21	1218.51	60.94	341.52	28.94	1028.18	99.97	-55.51	-314.63	319.08	259.99	4.05	MWD	6-axis
22	1247.44	64.09	344.91	28.93	1041.53	125.15	-30.94	-322.03	323.34	264.51	4.59	MWD	6-axis
23	1276.26	68.16	347.68	28.82	1053.19	150.71	-5.34	-328.26	328.38	269.07	5.07	MWD	6-axis
24	1304.91	68.17	350.31	28.65	1063.85	176.18	20.76	-333.34	334.29	273.56	2.6	MWD	6-axis
25	1334.11	67.47	350.2	29.2	1074.88	201.9	47.41	-337.91	341.77	277.99	0.74	MWD	6-axis
26	1363.21	66.92	349.8	29.1	1086.15	227.45	73.83	-342.57	351.2	282.16	0.69	MWD	6-axis
27	1391.75	67.53	350.62	28.54	1097.2	252.49	99.76	-347.04	362.06	286.04	1.04	MWD	6-axis
28	1420.36	67.08	350.51	28.61	1108.24	277.55	125.8	-351.37	374.35	289.7	0.49	MWD	6-axis
29	1448.66	68.99	350.9	28.3	1118.83	302.45	151.7	-355.61	387.92	293.1	2.09	MWD	6-axis
30	1477.72	68.34	350.63	29.06	1129.4	328.12	178.41	-359.95	403.21	296.37	0.73	MWD	6-axis

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ANADRILL SCHLUMBERGER Survey Report

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Displ Total (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool qual
31	1506.45	67.61	350.84	28.73	1140.17	353.38	204.7	-364.24	419.42	299.33	0.8	MWD	6-axis
32	1535.61	68.97	350.83	29.16	1150.96	379.07	231.44	-368.56	436.92	302.13	1.42	MWD	6-axis
33	1565.41	68.26	350.58	29.8	1161.82	405.39	258.83	-373.04	455.87	304.75	0.76	MWD	6-axis
34	1594.42	67.8	350.83	29.01	1172.68	430.92	285.38	-377.38	475.07	307.1	0.54	MWD	6-axis
35	1623.51	67.52	350.94	29.09	1183.74	456.42	311.95	-381.65	494.93	309.26	0.31	MWD	6-axis
36	1652.59	68.41	350.68	29.08	1194.64	481.98	338.55	-385.95	515.5	311.26	0.97	MWD	6-axis
37	1681.35	68.05	350.92	28.76	1205.31	507.3	364.92	-390.22	536.43	313.08	0.45	MWD	6-axis
38	1710.58	67.88	350.84	29.23	1216.28	532.98	391.67	-394.52	558.15	314.79	0.19	MWD	6-axis
39	1739.39	67.67	350.96	28.81	1227.18	558.25	418.01	-398.73	579.97	316.35	0.25	MWD	6-axis
40	1767.87	67.3	351.21	28.48	1238.08	583.16	444	-402.81	601.83	317.78	0.47	MWD	6-axis
41	1796.96	68.71	351.25	29.09	1248.98	608.67	470.65	-406.92	624.56	319.15	1.48	MWD	6-axis
42	1825.58	67.9	351.27	28.62	1259.56	633.82	496.94	-410.96	647.28	320.41	0.86	MWD	6-axis

41	1796.96	68.71	351.25	29.09	1248.98	608.67	470.65	-406.92	624.56	319.15	1.48	MWD	6-axis
42	1825.58	67.9	351.27	28.62	1259.56	633.82	496.94	-410.96	647.28	320.41	0.86	MWD	6-axis
43	1854.31	67.69	350.38	28.73	1270.41	659.03	523.2	-415.21	670.39	321.56	0.9	MWD	6-axis
44	1883.82	67.24	350.44	29.51	1281.72	684.94	550.07	-419.75	694.42	322.65	0.47	MWD	6-axis
45	1912.74	68.05	348.78	28.92	1292.72	710.47	576.38	-424.57	718.39	323.62	1.83	MWD	6-axis
46	1941.53	67.75	348.8	28.79	1303.55	736.04	602.54	-429.76	742.65	324.5	0.32	MWD	6-axis
47	1970.81	67.57	348.94	29.28	1314.68	762	629.12	-434.98	767.43	325.34	0.23	MWD	6-axis
48	1999.66	67.07	349.15	28.85	1325.81	787.49	655.25	-440.04	791.89	326.12	0.57	MWD	6-axis
49	2034.43	62.98	349.79	34.77	1340.49	817.59	686.23	-445.8	820.94	326.99	3.62	MWD	6-axis
50	2063.19	57.85	350.62	28.76	1354.68	841.38	710.87	-450.06	844	327.66	5.49	MWD	6-axis
51	2092.26	54.07	349.1	29.07	1370.95	864.34	734.58	-454.3	866.36	328.27	4.18	MWD	6-axis
52	2121.17	54.36	349.19	28.91	1387.86	886.78	757.61	-458.71	888.32	328.81	0.32	MWD	6-axis
53	2150	55.5	349.25	28.83	1404.42	909.35	780.79	-463.13	910.49	329.33	1.21	MWD	6-axis
54	2179.27	56.64	349.55	29.27	1420.76	932.56	804.66	-467.59	933.35	329.84	1.22	MWD	6-axis
55	2208.3	56.7	349.39	29.03	1436.71	955.73	828.51	-472.02	956.24	330.33	0.15	MWD	6-axis
56	2224.38	57.39	349.38	16.08	1445.46	968.63	841.77	-474.51	969.01	330.59	1.31	MWD	6-axis
57	2243	57.75	349.37	18.62	1455.44	983.65	857.21	-477.41	983.91	330.89	0.59	MWD	-

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Company: **ESSO Australia Ltd Pty**

Schlumberger

Well: **TNA A-10A ST**

Field: **Tuna**

Rig: **ISDL 453**

State: **Victoria**

**GeoVISION* Resistivity
1:200 True Vertical Depth
Recorded Mode Data**