Company: **Esso Australia Ltd.**

Well: **WTN W33A**

Field: **Tuna**

Rig: **Pool Rig 453** State: **Victoria**

Rig: Pool Rig 453
Field: Tuna
Location: Bass Strait
Well: WTN W33A
Company: Esso Australia Ltd.

Schlumberger

VISION Density Neutron
1:500 Measured Depth
Recorded Mode Log

Location			Elevation		
	Total depth:	2460m		K.B.	Top Drive
	Spud date:	23−Apr−02		G.L.	−61.00m
	Runs:	1 To 1		D.F.	34.69m
	Permanent datum:	Mean Sea Level		Elev.:	0
	Log measured from:	Drill Floor		34.69m	above Perm. datum
	Depth reference:	Driller's Pipe Tally			

API serial no.	x=5771796.08m (North)	Longitude	Latitude
	y=621531.7m (East)	E 148° 23' 16.247	S 38° 11' 36.419

Depth logged:	1957m To 2460m	Mag decl:	13.156°	Other services:	
Date logged:	23−Apr−02 To 24−Apr−02	Mag dip:	−68.7°	Directional Drilling	

Bore hole record

Hole size	from	to
12 1/4	surface	1957 m
8 1/5	1957 m	2460 m

Casing record

Size	Density	from	to
20	84 ppf	0 m	157 m
9 5/8	47 ppf	0 m	1957 m

Mud record

Type	from	to
KCL/PHPA/Polymer	1957 m	2460 m

Borehole deviation record

Min	Max	from	to
59.82°	52.10°	1957 m	2460 m

Surface equipment		Software record	
Unit	OLU−FB−924	IDEAL Wis	ID6_1C_10r
Depth system	PDA	SPM	ID6_1C_10r
		LWD	See toolsketch
		MWD	See toolsketch

IDEAL
services from
Anadrill

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 RUN1
Directional Surveys

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER 1
8−1/2in Hole Section was logged from 2150 m to 2460 m MD.

Depth is referenced to the Driller's pipe tally.

All data presented is from tool memory.

GR is corrected for mud weight and bit size.
RAB6 Resistivity is corrected for the bit size, mud resistivity and borehole temperature.

mud resistivity and borehole temperature.

Bottom quadrant density is presented.
Neutron porosity is calculated with limestone matrix and is corrected for the bit size borehome salinity, temperature and mud hydrogen index (from mud weight, temperature and pressure)

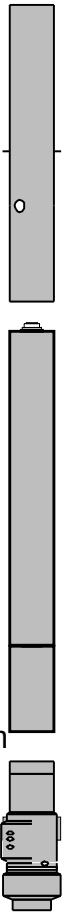
Mud type is water based KCI/PHPA.
Barite is present in the mud.

RAB6C Downhole Software 6C−V6.1
ADN6C Downhole Software 6.9B03

EQUIPMENT DESCRIPTION

RUN1	RUN	RUN

DOWNHOLE EQ



6 3/4 in. 31.2
ADSE
8 1/4 in.
NSR−M
GSR−J A
Soft: 6.9

Neutron 29.3
Neutron 29.2
Density 28.3
Density 28.2
UltraSo 27.8
R−O P 27.1

6 3/4 in. Pow 25.1
MDC Y92
MDI 116
MEC 115
Soft: 6.10

D&I 20.9
GR 20.3

Shallo 15.3
Medium 15.1
Deep 15.0

6 3/4 in. 16.7
s/n 12
Soft: 6C

Ring R 14.8
R−O p 14.6
GR 14.4

Saver S 13.7

NM Pony 13.0

NM Pony
s/n 66

13.0

NM Pony C
s/n H9

9.31

PowerPak Mu
A675XP s/n J
1.15 deg

7.90

Bit−PD

0.00

0.20

MAXIMUM STRING DI

ALL LENGTHS I

Bit Run Summary

Run number		1
Bit size	in.	8.5
Bit start depth	m	1956 m
Bit end depth	m	2460 m
Top interval logged	m	2150 m
Bottom interval logged	m	2460 m
Begin log: time		9:00
Begin log: date		23−Apr−02
End log: time		15:00
End log: date		24−Apr−02
Mud data		
Depth	m	2438
Type		KCL/PHPA
Mud weight	ppg	10.5
Solids	%vol	6.7
Chlorides	mg/l	54,500
Rm	Ohmm @degC	0.1007@23
Rmf	Ohmm @ degC	0.0789@23
Rmc	Ohmm @ degC	0.201@23
Potassium	% by vol	8.0
Environmental data		
GR		

Environmental data											
GR											
Mud weight	ppg	10.5									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size	in.	8.5									
Mud weight	ppg	10.5									
Temperature	degC	53									
Mud salinity	mg/l	54,500									
Formation salinity											
Recording rate GR/Res		10 s									
Recording rate Dens/Neut		10 s									
Filtering GR		3 pt									
Filtering density		3 pt									
Filtering Neutron		3 pt									
Company representative		T. Basit	B. Davies								
Anadrill personnel		J. Chong	T. Ford	J. Walta							

IDEAL Version: ID7_0C_02

IDEAL

RAB6−CA unofficial **MWD_10−A unofficial**
ADN−CA unofficial

Format: ADNDetailLog **Vertical Scale: 1:500** **Graphics File Created: 04−May−2002 20:01**

Parameters

DLIS Name	Description	Value	
	LWD RM: Generate techlog only?	**0**	
	LWD RM: Log direction	**DOWN**	
	LWD RM: Default directory	**D:\users\ideal\fm\Clients\ESSO\WTN−W33A\LWD001**	
	LWD RM: Flush depth streams?	**YES**	
	RAB: Button Sleeve Diameter	**RAB6: 8 1/8 IN**	
	LWD RM: Depth file name	**DEPTH**	
	RAB: Stabilizer Diameter	**RAB6: 8.25−8.5 IN**	
	LWD RM: Default file extension	**BIN_DB**	
ADN_CHASSIS_STR	**ADN Chassis Type String**	**Undefined**	
ADN_COLLAR_STR	**ADN Collar Type String**	**Undefined**	
ADN_STAB_STR	**ADN Stabilizer Type String**	**Undefined**	
AVE_ADN	**ADN/Array Channels: perform averaging(RM) :**	**YES**	
A_DHS	**ADN Down Hole Software Version String**	**Undefined**	
BHA_COEF_VER	**RAB: BHA Coef Generator Version**	**−999.25**	
BHT_RM	**Bottom Hole Temperature (RM)**	**225**	**DEGF**
BSAL_RM	**Mud Salinity (RM)**	**0**	**PPK**
BS_RM	**Bit Size (RM)**	**8.5**	**IN**
DEVI	**Well Section Deviation**	**0.1**	**DEG**
DHS_VERSION	**RAB: DownHole Software Version**	**−999.25**	
DTMUD	**Delta−T for Mud**	**645.177**	**US/M**
ENVCOR	**Neutron Quadrant Processing: Environmental Correction?**	**YES**	
IDQT	**Image Derived Quality Threshold**	**2**	
LITHO_TYPE_ADN	**Lithology (RM)**	**LIME**	
MST_RM	**Mud Sample temperature (RM)**	**75**	**DEGF**
MW_RM	**Mud Weight (RM)**	**10**	**LB/G**
OBM	**RAB: Oil base Mud**	**NO**	
OBMF_RM	**Oil Based Mud**	**NO**	
PP_RM	**ADN: Porosity Processing for each bank :**	**YES**	
RAB_TEMP_SELECT	**RAB Temperature Selection**	**MEASURED**	
READOUT_PORT_MP	**RAB: ROP to Bit Face Distance**	**14.69**	**M**
RHOF_RM	**Mud Filtrate Density (RM)**	**1**	**G/C3**
RHOM_RM	**Matrix density (RM)**	**2.71**	**G/C3**
RMS_RM	**Resistivity of Mud Sample (RM)**	**1**	**OHMM**
RWS_RM	**Resistivity of Connate Water (RM)**	**1**	**OHMM**
SHT_RM	**Surface Hole Temperature (RM)**	**75**	**DEGF**
SSIZ_ADN	**ADN Stabilizer Size**	**8**	**IN**
STAB	**RAB: Run with Stabilizer**	**YES**	
STOH	**ADN Density Top of Hole Sector (Left Boundary):**	**SECTOR_0**	
TD_RM	**Total Measured Depth (RM)**	**3048**	**M**
TFF_OFFSET_ADN	**ADN Time Frame File Time Offset**	**0**	**S**

TD_RM	Total Measured Depth (RM)	3048	M
TFF_OFFSET_ADN	ADN Time Frame File Time Offset	0	S
TOOLTYPE	RAB: Azimuthal Tool	YES	
TRPM_RM	Average Tool Rotational Speed	20	RPM
TSIZ_ADN	ADN Tool Size	6.75	IN
TS_VERSION	RAB: ToolScope Software Version	−999.25	
TWS_RM	Temperature of Connate Water (RM)	75	DEGF
USMIN_RM	ADN:Minimum Ultrasonic standoff (RM)	0.3	IN
VERS_ADN	ADN Downhole Software Version	−1	
VRAB6	Rab Tool type (ENP/PILOT)	RAB6_C_SERIES	

PIP SUMMARY

Neutron Samples

Density Samples

Gamma Ray Samples

Gas Area
From ADN/IDRH/DEPTH to TNPH

Thermal Neutron Porosity (TNPH)
45 (PU) −15

Bulk Density, Bottom (ROBB)
1.85 (G/C3) 2.85

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
200 (M/HR) 0

Image Derived Density (IDRO)
1.85 (G/C3) 2.85

RAB Gamma Ray (GR_RAB)
0 (GAPI) 200

Bulk Density, Up (ROBU)
1.85 (G/C3) 2.85

Density Time After Bit (TAB_DEN)
0 (HR) 10

Bulk Density, Right (ROBR)
1.85 (G/C3) 2.85

Vertical Hole Diameter (VERD)
6 (IN) 16

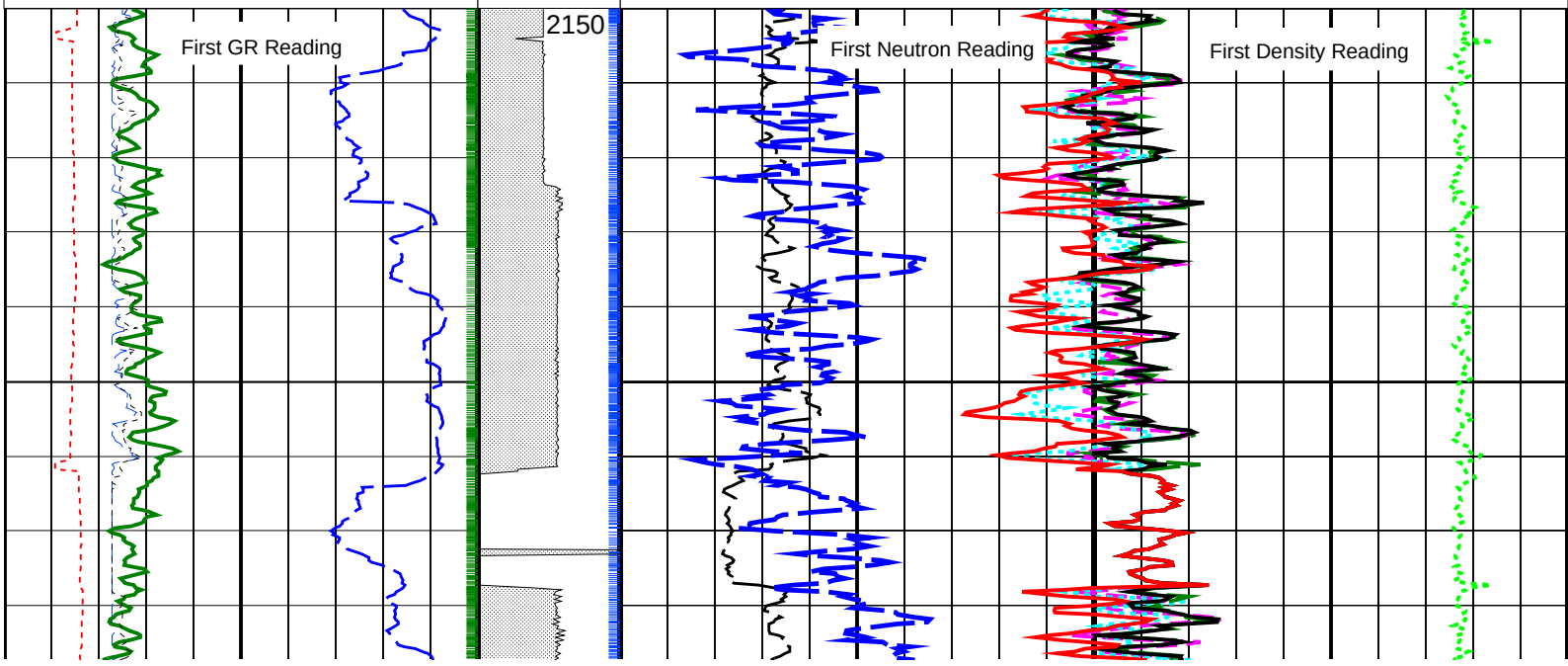
Photoelectric Factor (PEF)
0 (−−−− 20

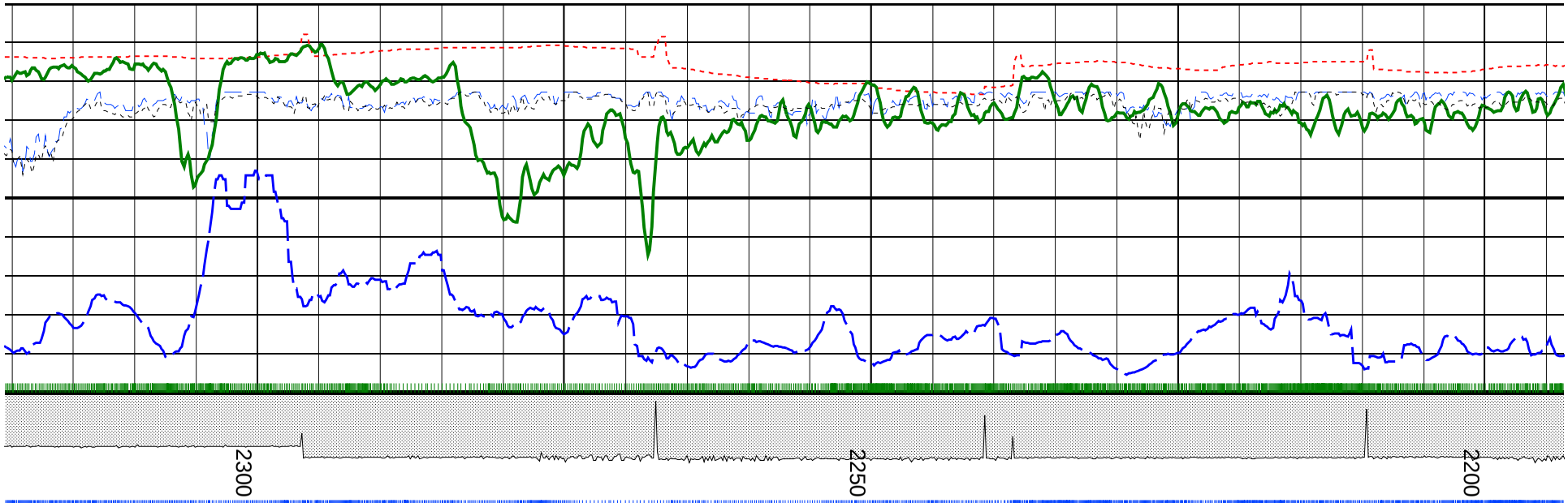
Image Derived Density Correction (IDDR)
−0.75 (G/C3) 0.25

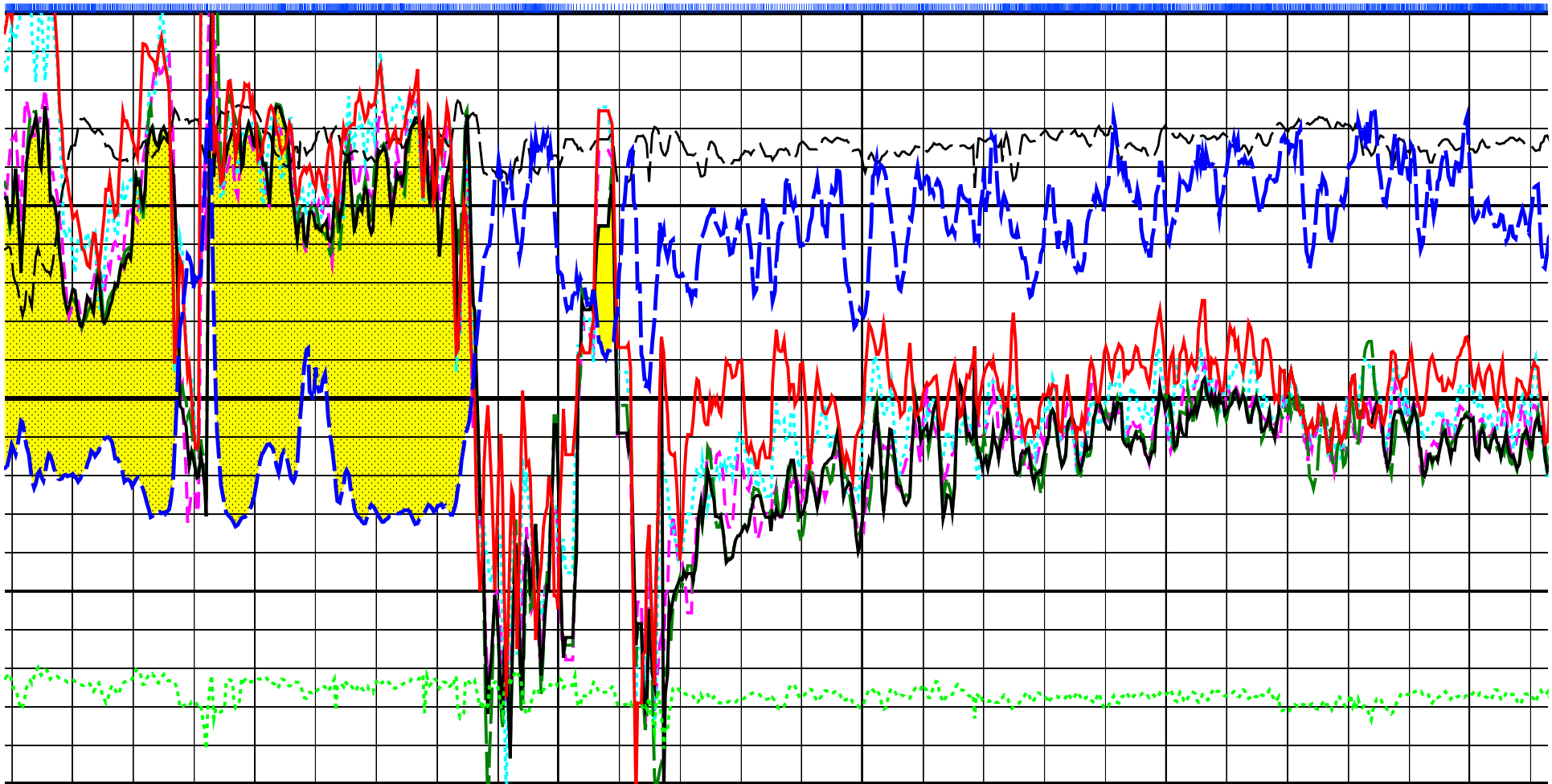
Horizontal Hole Diameter (HORD)
6 (IN) 16

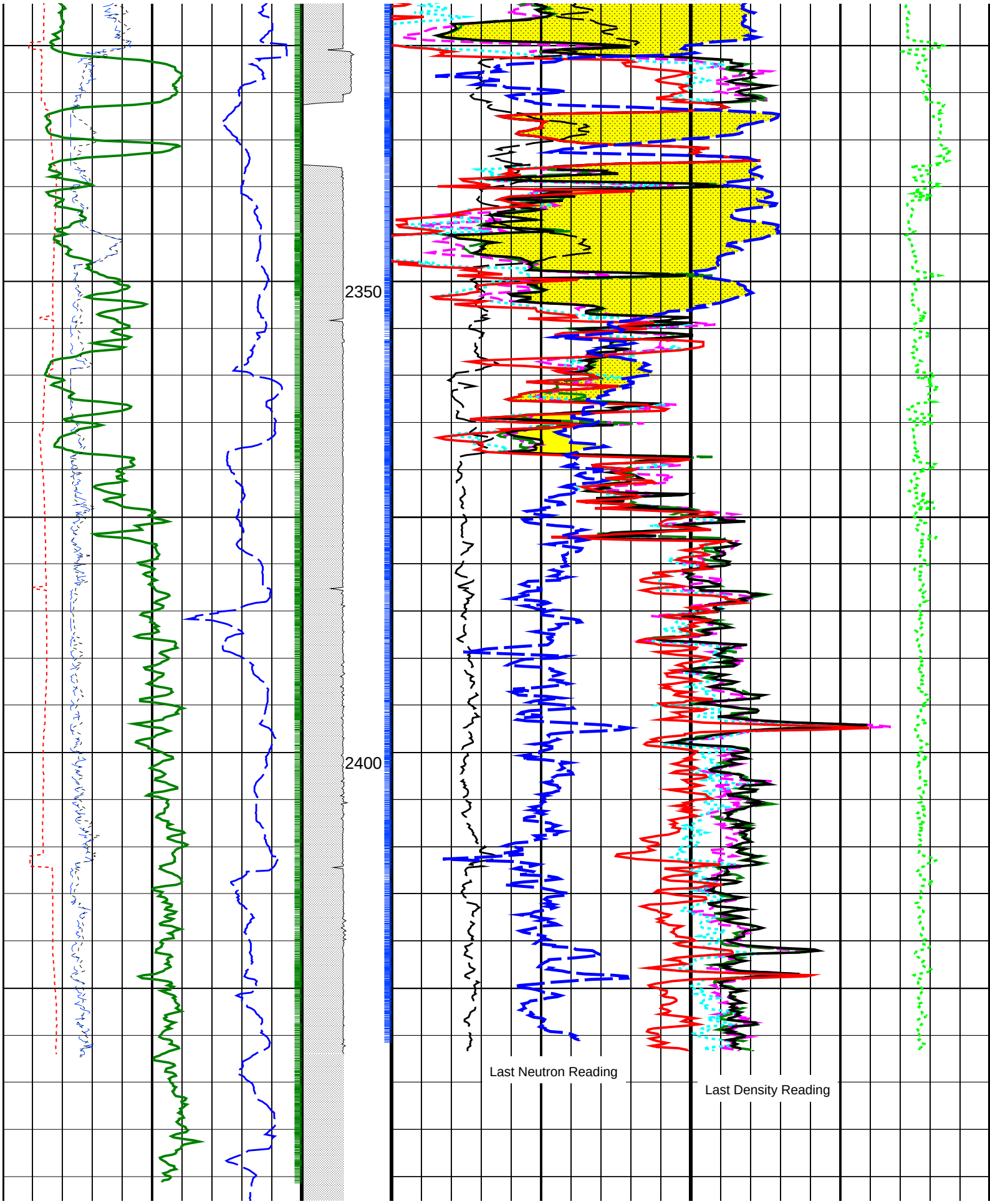
ADN Rotational Speed (RPM_ADN) (RPM)
0 200

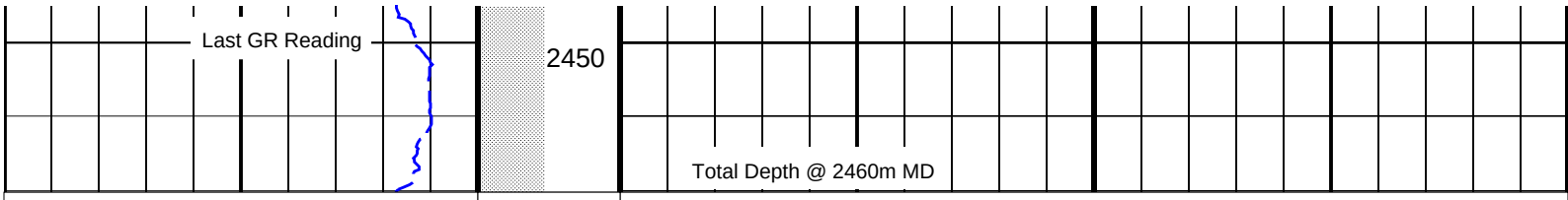
Bulk Density, Left (ROBL)
1.85 (G/C3) 2.85




2300
2250
2200




2350
2400
Last Neutron Reading
Last Density Reading



Horizontal Hole Diameter (HORD) 6 (IN) 16	ADN Rotational Speed (RPM_ADN) (RPM) 0 200	Bulk Density, Left (ROBL) 1.85 (G/C3) 2.85
Vertical Hole Diameter (VERD) 6 (IN) 16		Photoelectric Factor (PEF) 0 (---- 20
		Image Derived Density Correction (IDDR) −0.75 (G/C3) 0.25
Density Time After Bit (TAB_DEN) 0 (HR) 10		Bulk Density, Right (ROBR) 1.85 (G/C3) 2.85
RAB Gamma Ray (GR_RAB) 0 (GAPI) 200		Bulk Density, Up (ROBU) 1.85 (G/C3) 2.85
Rate of Penetration, Averaged over Last 5ft (ROP5_RM) 200 (M/HR) 0		Image Derived Density (IDRO) 1.85 (G/C3) 2.85
		Bulk Density, Bottom (ROBB) 1.85 (G/C3) 2.85
		Thermal Neutron Porosity (TNPH) 45 (PU) −15
		Gas Area From ADN/IDRH/DEPTH to TNPH

PIP SUMMARY

Neutron Samples

Density Samples

Gamma Ray Samples

IDEAL Version: ID7_0C_02

IDEAL

RAB6−CA	**unofficial**	**MWD_10−A**	**unofficial**
ADN−CA	**unofficial**		

6.75−in. Azimuthal Density Neutron / Equipment Identification

Primary Equipment:	
Tool Name and Serial Number	ADN6 − 014
Collar Type and Serial Number	ADDC − AA
Chassis Type and Serial Number	ADSE − EA
Stabilizer Type and Serial Number	Clamped On
Neutron Logging Source	NSR − M − A161
Density Logging Source	GSR − Z − A2125
Stabilizer Size	8.25 − in.
Calibration Status	Valid

Master: 21−Apr−2002 16:57

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		1323	Master		2920	Master		7699
	250.0 (Minimum) 4125 (Nominal) 8000 (Maximum)			700.0 (Minimum) 9350 (Nominal) 18000 (Maximum)			2500 (Minimum) 23750 (Nominal) 45000 (Maximum)	

Master: 21−Apr−2002 16:57

6.75−in. Azimuthal Density Neutron Calibration

Density: Aluminum Block

Phase	LS window 3 − Al CPS	Value
Master		201.5
	50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum)	

Phase	SS window 1 − Al CPS	Value
Master		1508
	500.0 (Minimum) 4250 (Nominal) 8000 (Maximum)	

Phase	SS window 3 − Al CPS	Value
Master		4850
	1500 (Minimum) 15750 (Nominal) 30000 (Maximum)	

Master: 21−Apr−2002 16:57

6.75−in. Azimuthal Density Neutron Calibration

Density: Background

Phase	LS window 3 − Background CPS	Value
Master		48.41
	15.00 (Minimum) 82.50 (Nominal) 150.0 (Maximum)	

Phase	SS window 1 − Background CPS	Value
Master		117.8
	40.00 (Minimum) 220.0 (Nominal) 400.0 (Maximum)	

Phase	SS window 3 − Background CPS	Value
Master		520.6
	150.0 (Minimum) 825.0 (Nominal) 1500 (Maximum)	

Master: 21−Apr−2002 16:57

6.75−in. Azimuthal Density Neutron Calibration

Density: Water Block Check

Phase	Long spacing water density G/C3	Value
Master		1.040
	1.016 (Minimum) 1.032 (Nominal) 1.047 (Maximum)	

Phase	Short spacing water density G/C3	Value
Master		1.139
	1.062 (Minimum) 1.107 (Nominal) 1.151 (Maximum)	

Master: Calibration date not found

6.75−in. Azimuthal Density Neutron Calibration

Neutron: Water Tank

Phase	Far 1 tube 1 gain	Value
Master		**1.145**
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 1 tube 1 offset CPS	Value
Master		**−0.7860**
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Far 1 tube 2 gain	Value
Master		1.073
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 1 tube 2 offset CPS	Value
Master		−0.7780
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Far 1 tube 3 gain	Value
Master		1.138
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 1 tube 3 offset CPS	Value
Master		−0.8870
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Far 2 tube 1 gain	Value
Master		1.137
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 2 tube 1 offset CPS	Value
Master		−0.6860
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Far 2 tube 2 gain	Value
Master		1.095
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 2 tube 2 offset CPS	Value
Master		−0.7400
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Far 2 tube 3 gain	Value
Master		1.167
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Far 2 tube 3 offset CPS	Value
Master	EXCEEDS LIMIT	−0.5990
	−1.200 (Minimum) −0.9000 (Nominal) −0.6000 (Maximum)	

Phase	Near 1 tube 1 gain	Value
Master		1.101
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Near 1 tube 1 offset CPS	Value
Master		0
	−50.00 (Minimum) 0 (Nominal) 50.00 (Maximum)	

Phase	Near 2 tube 1 gain	Value
Master		1.118
	0.9000 (Minimum) 1.100 (Nominal) 1.300 (Maximum)	

Phase	Near 2 tube 1 offset CPS	Value
Master		0
	−50.00 (Minimum) 0 (Nominal) 50.00 (Maximum)	

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(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 (Minimum)	1.000 (Nominal)	1.150 (Maximum)	0.9000 (Minimum)	1.000 (Nominal)	1.150 (Maximum)

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

Primary Equipment:

Tool Name and Serial Number	RAB6 − CA	127
Calibration Status	−	

Master: 12−Apr−2002 14:53

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	EXCEEDS LIMIT	0.9620	Master	EXCEEDS LIMIT	0.9670	Master		0.9990
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	M0/T2 factor	Value	Phase	M2/T1 factor	Value	Phase	M2/T2 factor	Value
Master		1.007	Master		0.9940	Master		0.9970
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN shallow/T1 factor	Value	Phase	BTN shallow/T2 factor	Value	Phase	BTN medium/T1 factor	Value
Master		1.020	Master	EXCEEDS LIMIT	1.028	Master		1.014
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN medium/T2 factor	Value	Phase	BTN deep/T1 factor	Value	Phase	BTN deep/T2 factor	Value
Master		1.023	Master		1.014	Master		1.021
0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)

Master: Calibration date not found

6.75−in. Resistivity At−the−Bit Calibration

Gamma Ray: Blanket

Phase	Gamma ray factor	Value
Master		0.8760
0.7500 (Minimum)	1.000 (Nominal)	1.250 (Maximum)

ANADRILL

SCHLUMBERGER

Survey report 24−Apr−2002 21:10:53 Page 1 of 2

Client.....: ESSO AUSTRALIA LTD
Field.....: TUNA

Well.....: WTN−W33A
API number.....:

Spud date.....: 23−Apr−02
Last survey date.....: 24−Apr−02

Well.....: WTN-W33A
API number.....:
Engineer.....: JC/TF/JW

COUNTY:.....: POOL RIG 453
VICTORIA.....:

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Depth reference -----
Permanent datum.....: RIG FLOOR
Depth reference.....:
GL above permanent.....: -61.00 m
KB above permanent.....: 34.69 m
DF above permanent.....: 34.69 m

----- Vertical section origin-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

----- Platform reference point-----
Latitude (+N/S-).....: -304.57 m
Departure (+E/W-).....: -304.57 m

Azimuth from rotary table to target: 352.03 degrees

Spud date.....: 23-Apr-02
Last survey date.....: 24-Apr-02
Total accepted surveys...: 19
MD of first survey.....: 1957.51 m
MD of last survey.....: 2460.00 m

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2001
Magnetic date.....: 20-Apr-2002
Magnetic field strength..: 1200.71 HCNT
Magnetic dec (+E/W-).....: 13.16 degrees
Magnetic dip.....: -68.71 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.02 mGal
Reference H.....: 1200.71 HCNT
Reference Dip.....: -68.71 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 13.16 degrees
Grid convergence (+E/W-).: -0.86 degrees
Total az corr (+E/W-)....: 14.02 degrees
(Total az corr = magnetic dec - grid conv)
Sag applied (Y/N).....: No degree: 0.00

[(c)2002 Anadrill IDEAL ID6_1C_10]

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool qual type
1	1957.51	59.83	355.70	0.00	1178.14	1382.83	1387.57	-62.45	1388.97	357.42	0.00	TIP	-
2	1996.55	57.23	346.48	39.04	1198.55	1416.06	1420.41	-67.56	1422.02	357.28	2.12	MWD	6-axis
3	2013.81	55.78	347.88	17.26	1208.08	1430.40	1434.45	-70.76	1436.19	357.18	1.08	MWD	6-axis
4	2043.39	55.72	344.56	29.58	1224.73	1454.72	1458.19	-76.58	1460.20	356.99	0.93	MWD	6-axis
5	2071.65	55.31	342.51	28.26	1240.73	1477.76	1480.53	-83.18	1482.86	356.78	0.62	MWD	6-axis
6	2100.42	54.31	339.51	28.77	1257.31	1500.83	1502.76	-90.83	1505.50	356.54	0.92	MWD	6-axis
7	2129.98	53.14	336.66	29.56	1274.80	1523.96	1524.86	-99.71	1528.12	356.26	0.87	MWD	6-axis
8	2158.76	52.62	336.39	28.78	1292.17	1546.07	1545.91	-108.86	1549.74	355.97	0.20	MWD	6-axis
9	2187.60	52.02	336.16	28.84	1309.80	1568.04	1566.81	-118.04	1571.25	355.69	0.22	MWD	6-axis
10	2216.23	53.57	337.03	28.63	1327.11	1590.02	1587.73	-127.09	1592.81	355.42	0.59	MWD	6-axis
11	**2245.01**	**53.13**	**336.69**	**28.78**	**1344.29**	**1612.30**	**1608.97**	**-136.17**	**1614.72**	**355.16**	**0.18**	**MWD**	**6-axis**
12	**2274.45**	**52.78**	**336.77**	**29.44**	**1362.03**	**1634.97**	**1630.55**	**-145.45**	**1637.03**	**354.90**	**0.12**	**MWD**	**6-axis**
13	2303.44	53.50	337.36	28.99	1379.42	1657.38	1651.91	-154.49	1659.12	354.66	0.30	MWD	6-axis
14	2332.31	53.54	337.73	28.87	1396.58	1679.85	1673.37	-163.36	1681.32	354.42	0.10	MWD	6-axis
15	2360.71	53.49	336.74	28.40	1413.47	1701.93	1694.42	-172.19	1703.15	354.20	0.28	MWD	6-axis
16	2389.60	53.68	335.85	28.89	1430.62	1724.31	1715.71	-181.54	1725.29	353.96	0.26	MWD	6-axis
17	2418.63	53.23	335.53	29.03	1447.90	1746.69	1736.96	-191.14	1747.45	353.72	0.18	MWD	6-axis
18	2438.02	52.65	335.37	19.39	1459.59	1761.52	1751.04	-197.57	1762.15	353.56	0.31	MWD	6-axis
19	2460.00	52.10	335.20	21.98	1473.01	1778.19	1766.85	-204.85	1778.69	353.39	0.26	Bit Projection	

Company: Esso Australia Ltd.

Well: WTN W33A
Field: Tuna
Rig: Pool Rig 453
State: Victoria

IDEAL services from **Anadrill**

VISION Density Neutron
1:500 Measured Depth
Recorded Mode Log

Schlumberger