

Woodside Energy Limited

Geographe North-1 8 1/2 in. Hole

Permit VIC/P43

Ocean Bounty State: Victoria

<div>Rig: Ocean Bounty Field: Permit VIC/P43 Location: Otway Basin Well: Geographe North-1 Company: Woodside Energy Limited</div>						<div><div>Schlumberger</div><div>VISION Resistivity 1:500 Measured Depth Recorded Mode</div></div>							
Depth logged: 1,784 m To 2,152 m						Mag decl: 11.034		Other services:					
Date logged: 07-Oct-01 To 09-Oct-01						Mag dip: -70.256		Directional Surveys					
Bore hole record						Casing record							
Hole size	from	to	Size	Density	from	to							
12.25 in	565 m	1,790 m	13.375 in	61 lb/ft	165 m	558 m							
8.5 in	1,790 m	2,156 m	9.625 in	61 lb/ft	558 m	1784 m							
Type	Mud record from	to	Min	Max	Borehole deviation record from	to							
Aquadrill	1,790 m	2,156 m	0.5 deg	1.94 deg	1,790 m	2,156 m							
Surface equipment							Software record						
Unit	TWIS - EA	IDEAL Wis	6.1c_03										
Depth system	Geograph	SPM	6.1c_03										
		LWD	6.4										
		MWD	6.1										
<div>IDEAL services from Anadrill</div>													





DISCLAIMER

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OTHER SERVICES FOR RUN2 Directional Surveys Drilling Mechanics (DWOB, DTORQ, 4-axis vibration monitoring) Annular Pressure While Drilling (APWD)	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 2 ARC GR is corrected for bit size and mud weight. ARC Resistivity is borehole compensated but not environmentally corrected. Rotary Drilled from 1790 – 2156 m Depth logged; 1791 – 2151 m 07–Oct–01 18:40 hrs – Geolograph cable was disconnected by the driller during bad	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

10.46 hrs - Geograph cable was disconnected by the driller during bad weather prior to racking back 5 stands. Lost data inside the casing. All data from the start of new hole was recovered.

EQUIPMENT DESCRIPTION		
RUN2	RUN	RUN

DOWNHOLE EQ		
6.75 in. Pow		16.5
SN: 19		
	D&I	12.6
XOS		9.1
In-line		8.6
ARC5-		7.1

A vertical number line is shown with tick marks at 1, 2, 3, and 5. The number 4 is not explicitly labeled but is indicated by a point between 3 and 5.

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DOWNHOLE EQ

6.75 in. Pow

16.5

SN: 19

D&I

12.6

XOS

9.11

In-line

8.63

ARC5-

7.12

7.12

SN: 1	R-O P	4.98
	T5	4.87
	T3	4.57
	T1	4.26
	Gamma	3.83
	Receiv	3.76
	T2	3.60
	T4	3.30
	ARC AP	3.14

1.76

XOS		1.39
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Bit-PD		0.00	0.30
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MAXIMUM STRING DI

ALL LENGTHS I

Bit Run Summary

Run number		2								
Bit size		in. 8.5								
Bit start depth		m 1790 m								
Bit end depth		m 2156 m								
Top interval logged		m 1790 m								
Bottom interval logged		m 2152 m								
Begin log: time		05:23 hrs								
Begin log: date		07-Oct-01								
End log: time		20:30 hrs								
End log: date		08-Oct-01								
Mud data										
Depth		m 2156								
Type		Aquadrill								
Mud weight		sg 1.15								
Solids		%vol 7								
Chlorides		mg/l 43000								
Rm		ohm.m@degC 0.084@24								
Rmf		ohm.m@degC 0.072@24								
Rmc		ohm.m@degC 0.120@24								
Potassium		mg/l 37000								
Environmental data										
GR										

Environmental data

GR											
Mud weight	sg	1.15									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size		n/a									
Mud weight		n/a									
Temperature		n/a									
Mud salinity		n/a									
Formation salinity		n/a									
Recording rate 1	SEC	10 sec	GR								
Recording rate 2	SEC	10 sec	RES								
Filtering GR		3 point									
Filtering density		n/a									
Filtering Neutron		n/a									
Company representative		D. Bell	M. Bilek	G. Westie							
Anadrill personnel		A. Abad	M. Saicic								

IDEAL Version: ID6_1C_10
IDF

ARC5_675 id6_1c_10 MWD_10 id6_1c_10

Format: ARC_Dual_Freq_Res Vertical Scale: 1:500 Graphics File Created: 11-Oct-2001 07:02

Parameters

DLIS Name	Description	Value
AAPS	ARC5 Attenuation and Phase-Shift source	1_UPHOLE
APICG	ARC5 Gamma Ray Gain Factor	1.147
ATRN	ARC5 Tool Run Number	GEOGRAPHE8_5 in sect
ATSN	ARC5 Tool Serial Number	117
BS_RM	Bit Size (RM)	8.500 in
DO	Depth Offset	0.0 m
KPER	ARC5:Potassium Concentration	37500.0
MST_RM	Mud Sample temperature (RM)	24.000 degC
MW_RM	Mud Weight (RM)	1.150 g/cm3
RMS_RM	Resistivity of Mud Sample (RM)	0.102 ohm.m
VERS_ARC	ARC5 Down hole software version Number	6.400
WRK	ARC5: Way to Report Potassium Concentration	POTASSIUM_BY_WEIGHT_%

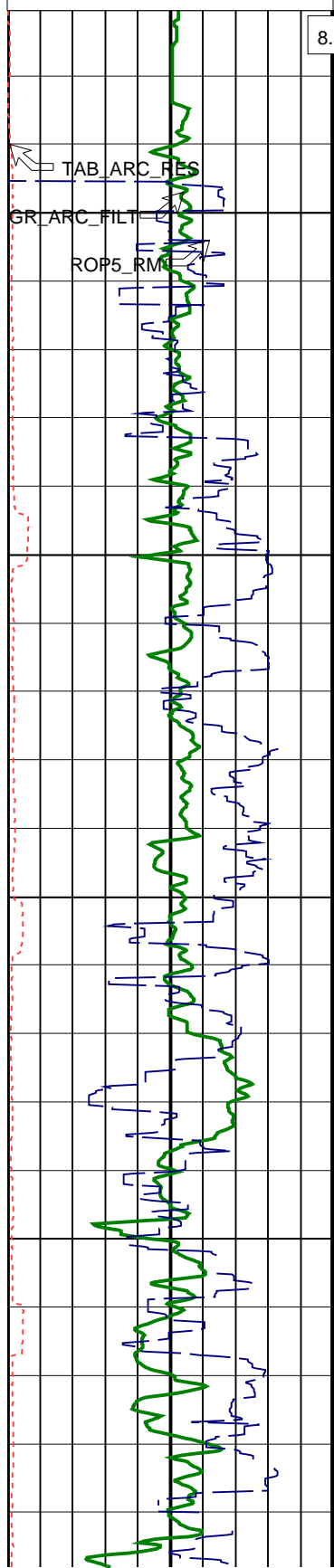
PIP SUMMARY

- ARC Gamma Ray Samples
- ARC Resistivity Samples

<div>ARC Calibrated, Filtered Gamma Ray (GR_ARC_FILT)</div> <div>0 (GAPI) 200</div> <div>Rate of Penetration, Averaged over Last 5ft (ROP5_RM)</div> <div>500 (M/HR) 0</div>	ARC Non-BHCorr Phase-Shift Resistivity 40-in. at 2 MHz (P40H_UNC)			ARC Non-BHCorr Phase-Shift Resistivity 40-in. at 400 KHz (P40L_UNC)					
	0.2 (OHMM) 2000			0.2 (OHMM) 2000					
	ARC Non-BHCorr Phase-Shift Resistivity 34-in. at 2 MHz (P34H_UNC)			ARC Non-BHCorr Phase-Shift Resistivity 34-in. at 400 KHz (P34L_UNC)					
	0.2 (OHMM) 2000			0.2 (OHMM) 2000					
	ARC Non-BHCorr Phase-Shift Resistivity 28-in. at 2 MHz (P28H_UNC)			ARC Non-BHCorr Attenuation Resistivity 40-in. at 2 MHz (A40H_UNC)			ARC Non-BHCorr Phase-Shift Resistivity 28-in. at 400 KHz (P28L_UNC)		
	0.2 (OHMM) 2000			0.2 (OHMM) 2000			0.2 (OHMM) 2000		
ARC Non-BHCorr Phase-Shift Resistivity 22-in. at 2 MHz (P22H_UNC)			ARC Non-BHCorr Attenuation Resistivity 34-in. at 2 MHz (A34H_UNC)			ARC Non-BHCorr Phase-Shift Resistivity 22-in. at 400 KHz (P22L_UNC)			
0.2 (OHMM) 2000			0.2 (OHMM) 2000			0.2 (OHMM) 2000			

500 (M/HR) 0

ARC Resistivity Time After Bit (TAB_ARC_RES) (HR) 0 10



(P22H_UNC) (OHMM) 2000

(A34H_UNC) (OHMM) 2000

(P22L_UNC) (OHMM) 2000

ARC Non-BHCorr Phase-Shift Resistivity 16-in. at 2 MHz (P16H_UNC) 2000

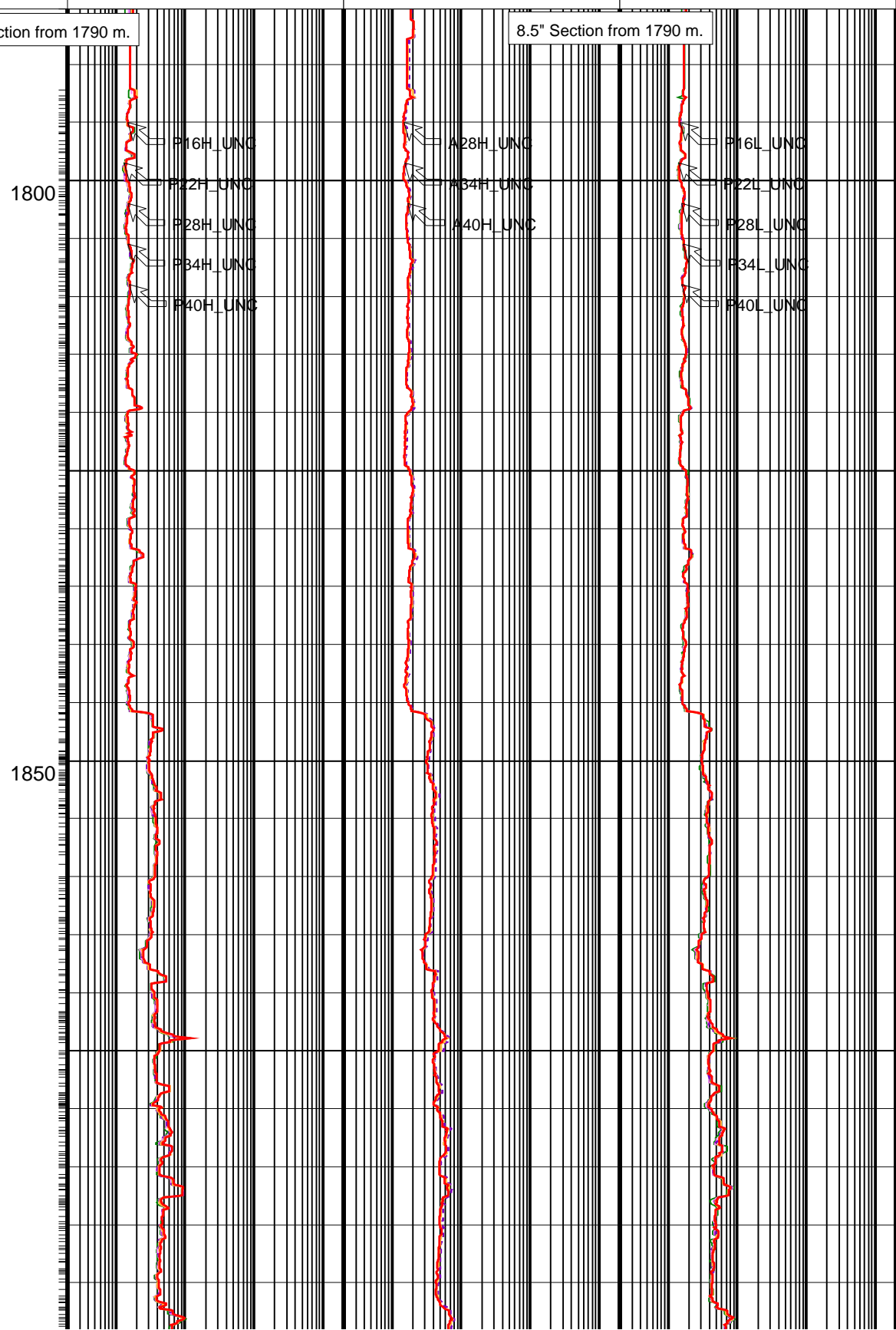
ARC Non-BHCorr Attenuation Resistivity 28-in. at 2 MHz (A28H_UNC) 2000

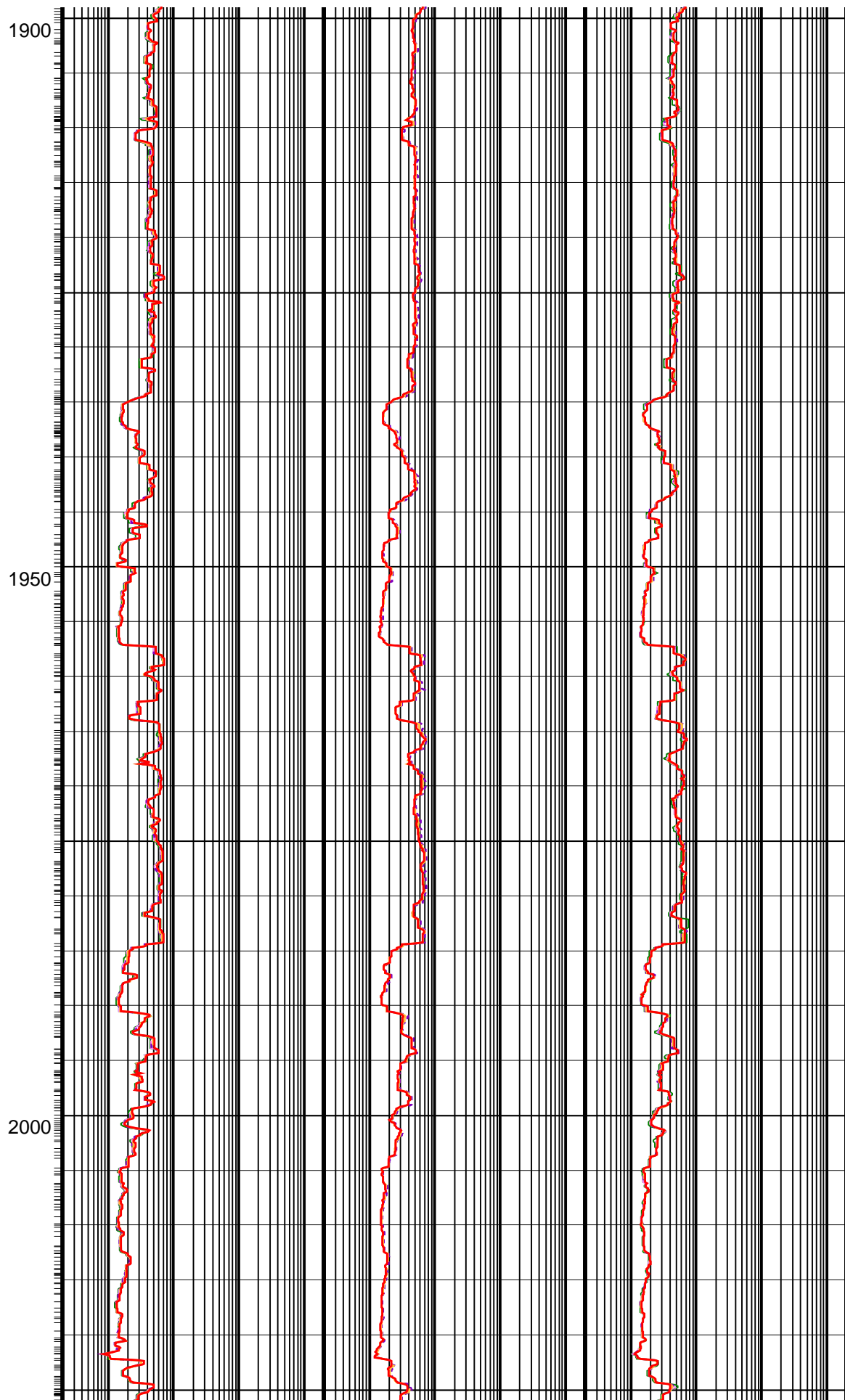
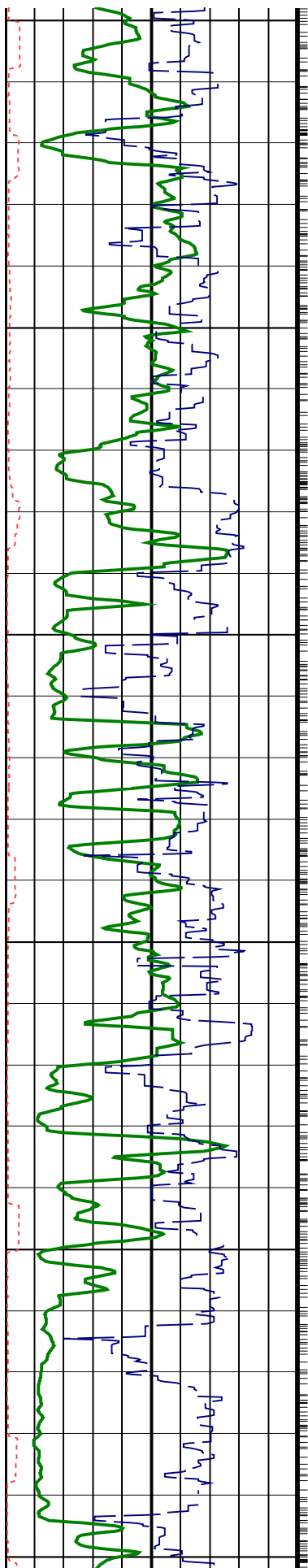
ARC Non-BHCorr Phase-Shift Resistivity 16-in. at 400 KHz (P16L_UNC) 2000

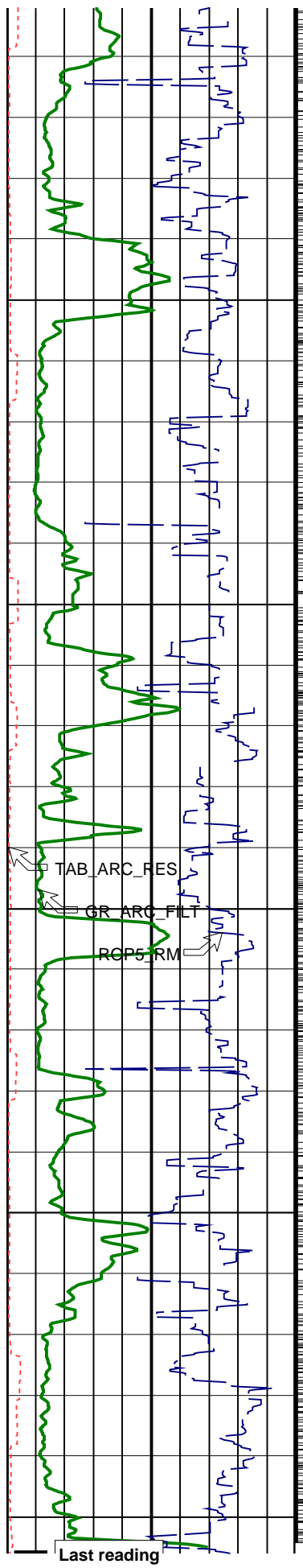
(P22H_UNC) (OHMM) 2000

(A34H_UNC) (OHMM) 2000

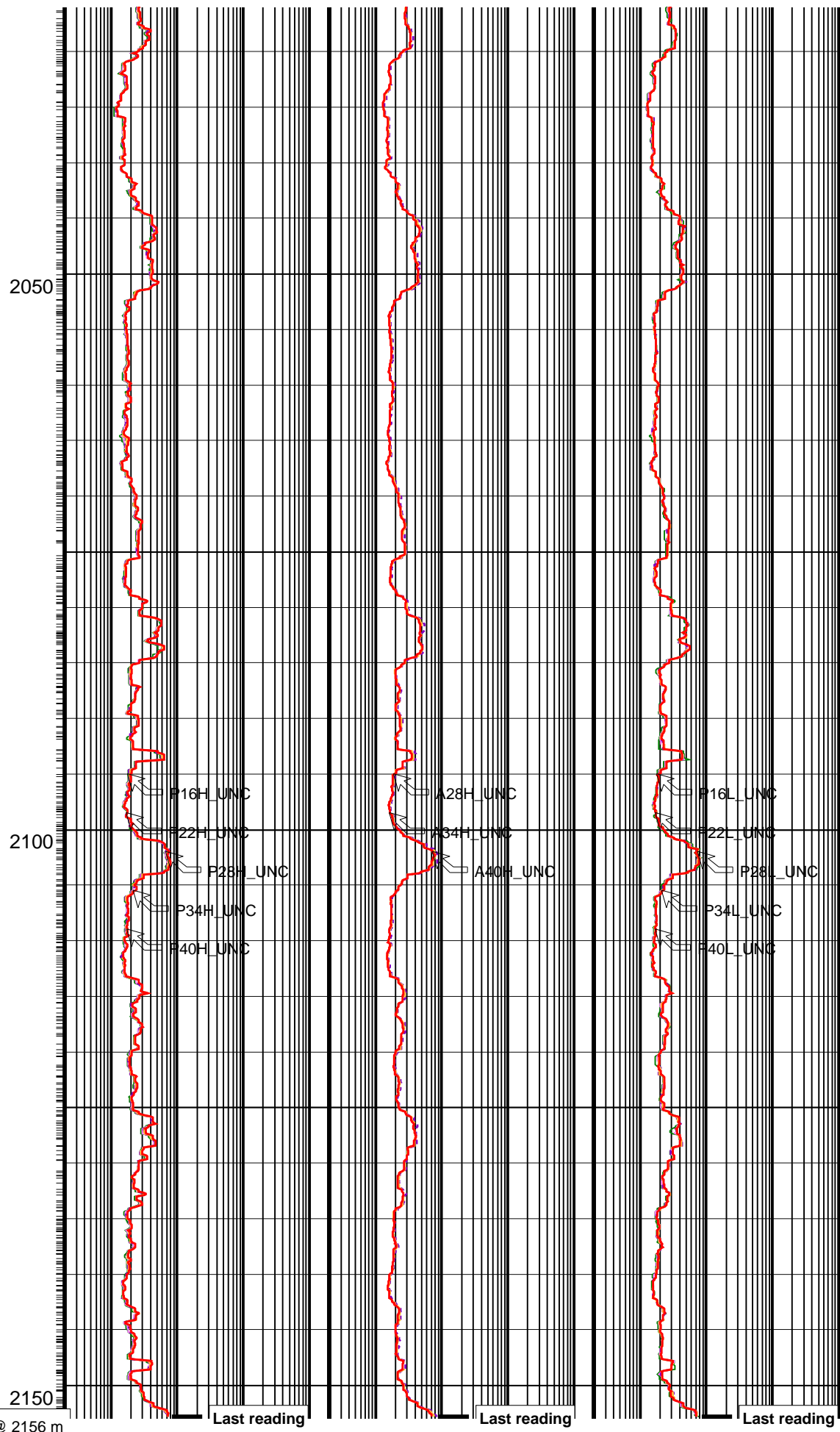
(P22L_UNC) (OHMM) 2000







TD @ 2156 m



		ANADRILL		
		SCHLUMBERGER		
		Survey report	8-Oct-2001 21:45:01	Page 1 of 2

Client.....:	Woodside Energy Ltd.	Spud date.....:	29 Sep 01
Field.....:	Permit VIC/P43	Last survey date.....:	08-Oct-01
		Total accepted surveys...:	17
Well.....:	Geograph North-1	MD of first survey.....:	561.00 m
API number.....:		MD of last survey.....:	2142.68 m
Engineer.....:	A.Abad, M.Saicic		
Rig.....:	Ocean Bounty		
STATE.....:	Victoria		

----- Survey calculation methods-----	----- Geomagnetic data -----
Method for positions.....: Minimum curvature	Magnetic model.....: BGGM version 2000
Method for DLS.....: Mason & Taylor	Magnetic date.....: 01-Oct-2001
	Magnetic field strength..: 1222.77 HCNT
----- Depth reference -----	Magnetic dec (+E/W-).....: 11.03 degrees
Permanent datum.....: L.A.T.	Magnetic dip.....: -70.26 degrees
Depth reference.....: Driller's Depth	
GL above permanent.....: 107.00 m	----- MWD survey Reference Criteria -----
KB above permanent.....: 82.00 m	Reference G.....: 1000.10 mGal
DF above permanent.....: 25.00 m	Reference H.....: 1222.77 HCNT
	Reference Dip.....: -70.26 degrees
----- Vertical section origin-----	Tolerance of G.....: (+/-) 2.50 mGal
Latitude (+N/S-).....: 0.00 m	Tolerance of H.....: (+/-) 6.00 HCNT
Departure (+E/W-).....: 0.00 m	Tolerance of Dip.....: (+/-) 0.45 degrees
----- Platform reference point-----	----- Corrections -----
Latitude (+N/S-).....: 0.00 m	Magnetic dec (+E/W-).....: 11.03 degrees
Departure (+E/W-).....: 0.00 m	Grid convergence (+E/W-)..: -1.17 degrees
	Total az corr (+E/W-)....: 12.20 degrees
	(Total az corr = magnetic dec - grid conv)
Azimuth from rotary table to target: 0.00 degrees	Sag applied (Y/N).....: No degree: 0.00

[(c)2001 Anadrill IDEAL ID6_1C_03]
ANADRILL SCHLUMBERGER Survey Report

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Seq	Measured	Incl	Azimuth	Course	TVD	Vertical	Displ	Displ	Total	At	DLS	Srvy	Tool
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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)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool qual type
1	561.00	0.50	0.00	0.00	561.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	-
2	582.93	0.14	140.00	21.93	582.93	0.08	0.08	0.02	0.08	12.91	0.28	MWD	6-axis
3	787.44	0.24	327.54	204.51	787.44	0.25	0.25	-0.05	0.25	348.01	0.02	MWD	6-axis
4	1045.27	1.06	176.39	257.83	1045.26	-1.68	-1.68	-0.19	1.69	186.51	0.05	MWD	6-axis
5	1134.01	1.32	323.02	88.74	1133.99	-1.68	-1.68	-0.75	1.84	204.17	0.26	MWD	6-axis
6	1221.07	1.31	340.49	87.06	1221.03	0.06	0.06	-1.69	1.69	271.93	0.05	MWD	6-axis
7	1308.98	1.44	340.75	87.91	1308.91	2.05	2.05	-2.39	3.15	310.58	0.01	MWD	6-axis
8	1395.89	1.46	335.28	86.91	1395.79	4.08	4.08	-3.21	5.20	321.80	0.02	MWD	6-axis
9	1510.17	1.39	334.24	114.28	1510.04	6.65	6.65	-4.42	7.99	326.38	0.01	MWD	6-axis
10	1568.32	1.65	336.38	58.15	1568.17	8.06	8.06	-5.07	9.52	327.84	0.05	MWD	6-axis
11	1656.23	1.91	353.24	87.91	1656.04	10.67	10.67	-5.75	12.12	331.70	0.07	MWD	6-axis
12	1713.58	1.95	1.23	57.35	1713.35	12.60	12.60	-5.84	13.88	335.13	0.05	MWD	6-axis
13	1762.43	1.84	357.96	48.85	1762.18	14.21	14.21	-5.85	15.37	337.63	0.03	MWD	6-axis
14	1810.16	1.94	4.62	47.73	1809.88	15.78	15.78	-5.81	16.82	339.79	0.05	MWD	6-axis
15	1984.85	0.73	44.27	174.69	1984.52	19.53	19.53	-4.79	20.11	346.20	0.08	MWD	6-axis
16	2142.68	0.66	64.11	157.83	2142.34	20.64	20.64	-3.28	20.90	350.98	0.02	MWD	6-axis
17	2170.70	0.65	64.11	157.83	2170.01	20.86	20.86	-3.26	20.98	351.01	0.02	projection	

[(c)2001 Anadrill IDEAL ID6_1C_03]

Company: Woodside Energy Limited

Well: Geographe North-1 8 1/2 in. Hole

Field: Permit VIC/P43

Rig: Ocean Bounty

State: Victoria

IDEAL services from Anadrill

VISION Resistivity
1:500 Measured Depth
Recorded Mode

Schlumberger