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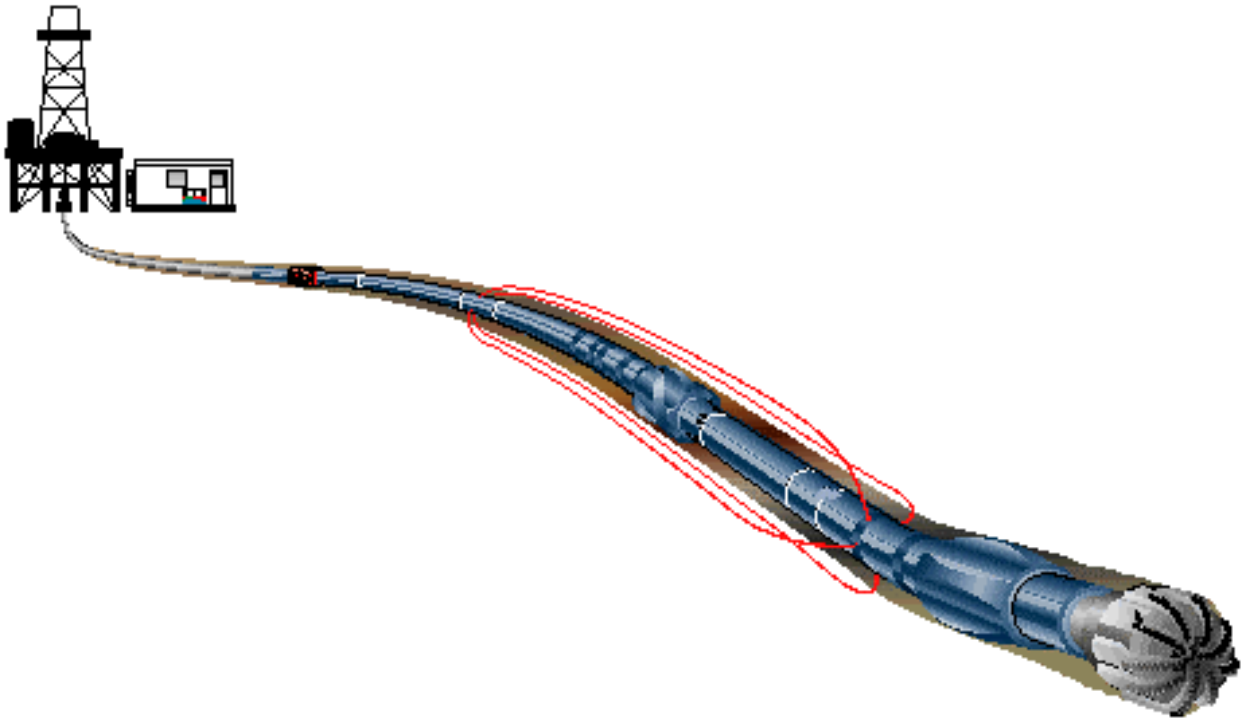
IDEAL

WOODSIDE
AUSTRALIAN ENERGY

Geographe North-1

MWD – LWD End of Well Report



End of Well Report for Geographe North-1

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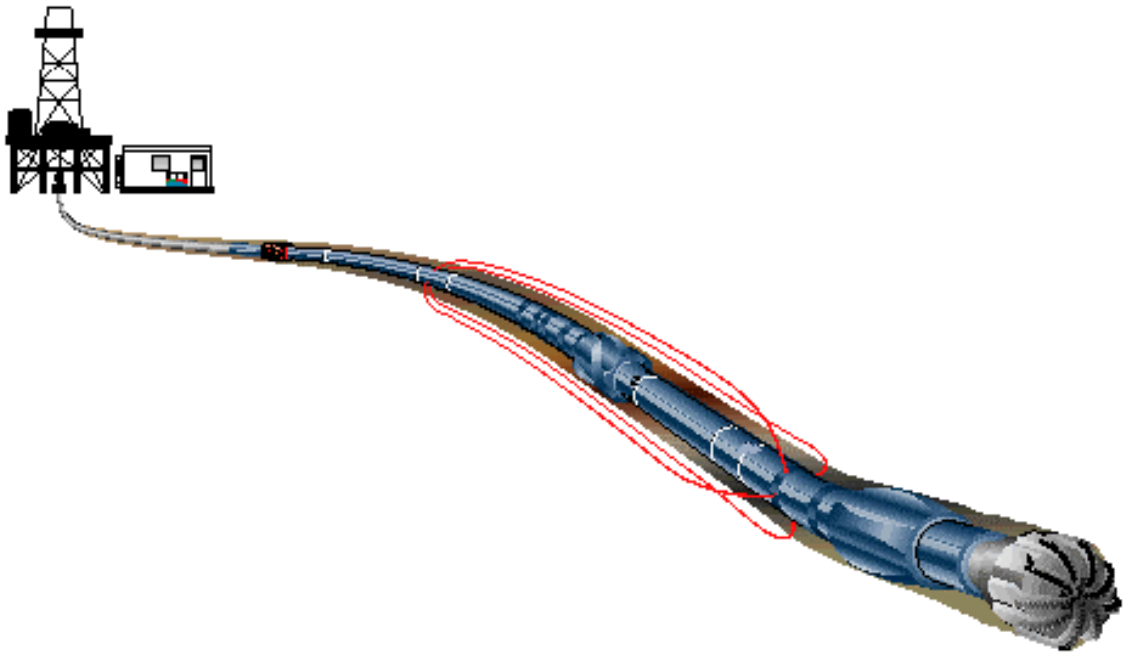
Logging Overview



Logging Overview

12 ¼" Section (Run 1 558 m to 1790 m):

Schlumberger Drilling and Measurements provided MWD and LWD services using the PowerPulse and CDR tools in the 12 ¼" section of Geographe North-1. The Powerpulse was installed with a MVC 4-axis shock/vibration unit that allowed the real-time monitoring of the downhole drilling conditions, the purpose being to provide a better understanding of the mechanics of the shocks occurring during the drilling and reaming operations. The Powerpulse contained an IWOB sensor that provided real-time downhole WOB and downhole torque measurements. The MVC data indicated that high to severe level lateral and torsional shocks were present whilst drilling through the Mepunga Sandstone. Drilling parameters were varied to try to reduce the shocks, however this had little success. Driling continued with careful monitoring of the shocks throughout the section. The shocks all but disappeared once through the Mepunga Sandstone.

The 12 1/4" section was drilled in one run, and logged utilizing CDR and PowerPulse. The following formation evaluation data was provided in real-time:

- CDR Phase Shift Resistivity at 1 depth of investigation
- CDR Attenuation Resistivity at 1 depth of investigation
- CDR Gamma Ray

The following recorded mode formation evaluation measurements were provided once the LWD tools were on surface and the memory data retrieved:

- CDR Phase Shift Resistivity at 1 depth of investigation
- CDR Attenuation Resistivity at 1 depth of investigation
- CDR Gamma Ray

Run	Hole Size (in.)	Service	Start Depth (m)	Stop Depth (m)
1	12 ¼	PowerPulse / MVC / CDR	558	1790
2	8 ½	PowerPulse / MVC / ARC	1790	2156

The MWD and LWD tools performed well throughout the run.

8 ½" Section (Run 1 1790 m to 2156 m):

Schlumberger Drilling and Measurements provided MWD and LWD services using the PowerPulse and ARC6 tools in the 8 ½" section of Geographe North-1. The Powerpulse was installed with a MVC 4-axis shock/vibration unit and an IWOB sensor. The MVC data indicated that low level shocks were present whilst drilling throughout the section, however they were not high enough to cause concern about damaging the PowerPulse or ARC6. The ARC6 was installed with an APWD (Annular Pressure While Drilling) sensor to monitor annular pressure and temperature during the drilling and reaming operations.

The 8 ½" section was drilled in one run, and logged utilizing ARC6 and PowerPulse. The following formation evaluation data was provided in real-time:

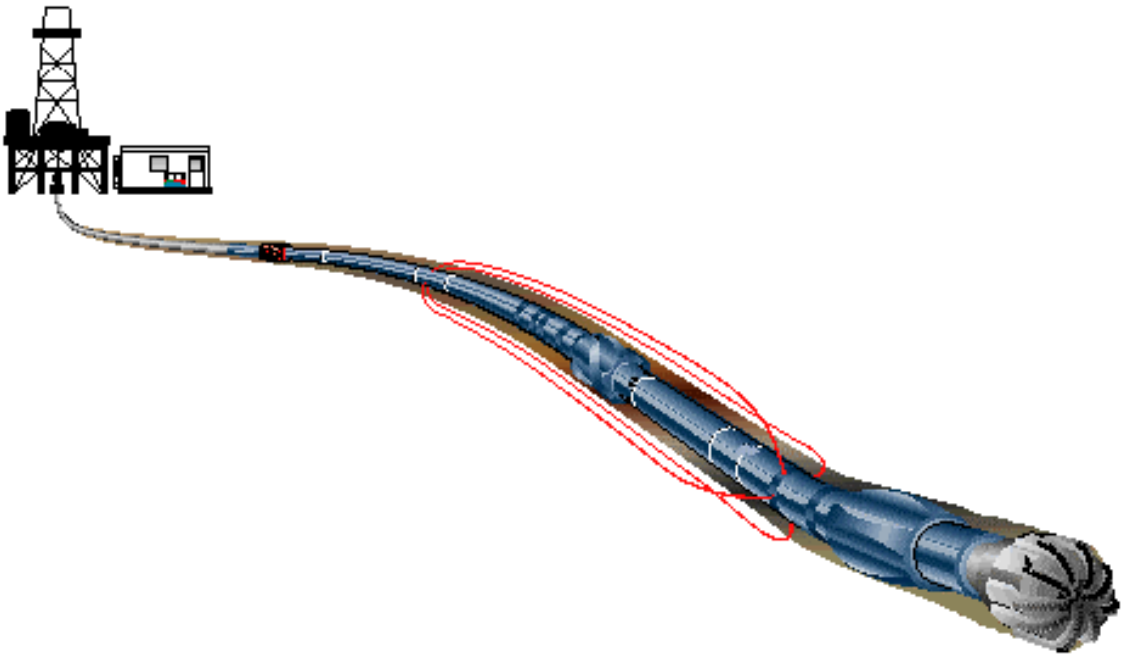
- ARC6 2MHz Phase Shift Resistivity at 5 depths of investigation
- ARC6 Gamma Ray
- ARC6 Annular Pressure and Temperature

The following recorded mode formation evaluation measurements were provided once the LWD tools were on surface and the memory data retrieved:

- ARC6 2MHz Phase Shift Resistivity at 5 depths of investigation
- ARC6 400KHz Phase Shift Resistivity at 5 depths of investigation
- ARC6 2MHz Attenuation Resistivity at 3 depths of investigation
- ARC6 Gamma Ray

The MWD and LWD tools performed well throughout the run. Shocks throughout the run were minimal, and of no consequence to the MWD and LWD tools.

General Information



General Information

Well Name:	Geographe North-1	
Rig:	Ocean Bounty	
Field:	Exploration / Permit VIC/P43	
Location:	Otway Basin, Offshore Victoria	
Country:	Australia	
Cell Members:	Antonino Abad	MWD / LWD Engineer
	Milan Saicic	MWD / LWD Engineer
Town Contact:	Ike Nitis	Location Manager - Australia
	Go Ching Lian	Field Service Manager
Company Representatives:	Dennis Bell	
	Murray Jackson	

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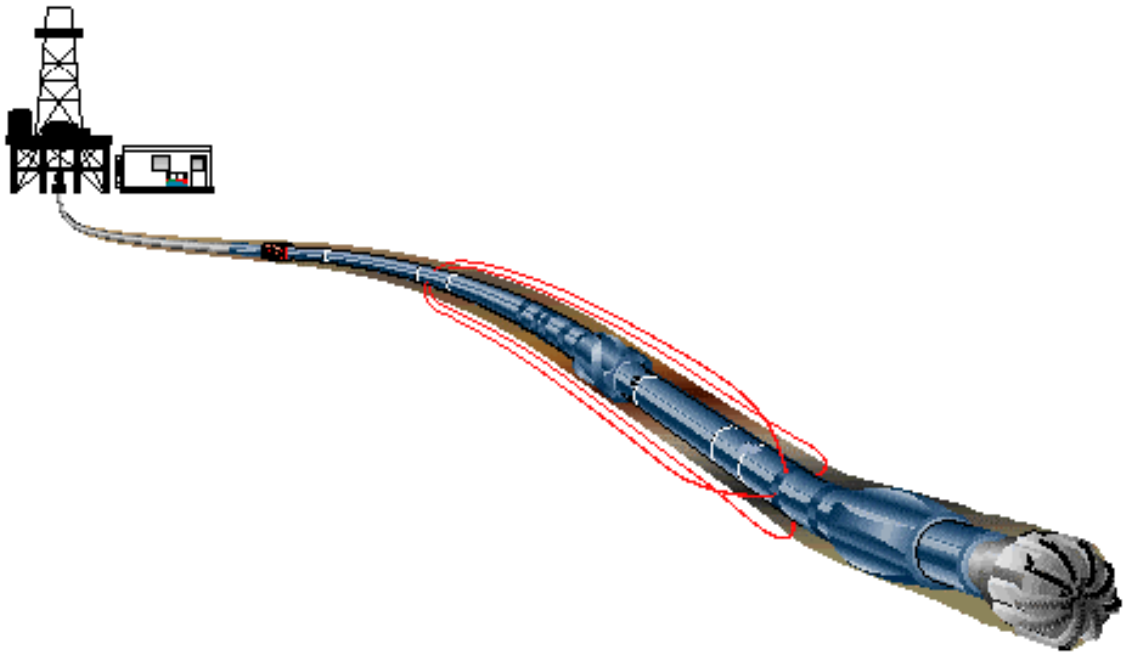
Geomagnetic and Survey Reference Criteria



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Geomagnetic and Survey Reference Criteria

Geomagnetic Data

Magnetic Model:	BGGM version 2000
Magnetic Date:	01-Oct-2001
Magnetic Field Strength:	1222.77 HCNT
Magnetic Declination:	11.034 degrees
Magnetic Dip:	-70.256 degrees

Survey Reference Criteria

Reference G:	1000.10 mgal
Reference H:	1222.77 HCNT
Reference Dip:	-70.256 degrees
G value Tolerance:	2.50 mgal
H value Tolerance:	6.00 HCNT
Dip Tolerance:	0.45 degrees

Survey Corrections Applied

Reference North:	Grid North
Magnetic Declination:	11.03 degrees
Grid Convergence:	-1.17 degrees
Total Azimuth Correction:	12.20 degrees
Vertical Section Azimuth:	0.00 degress

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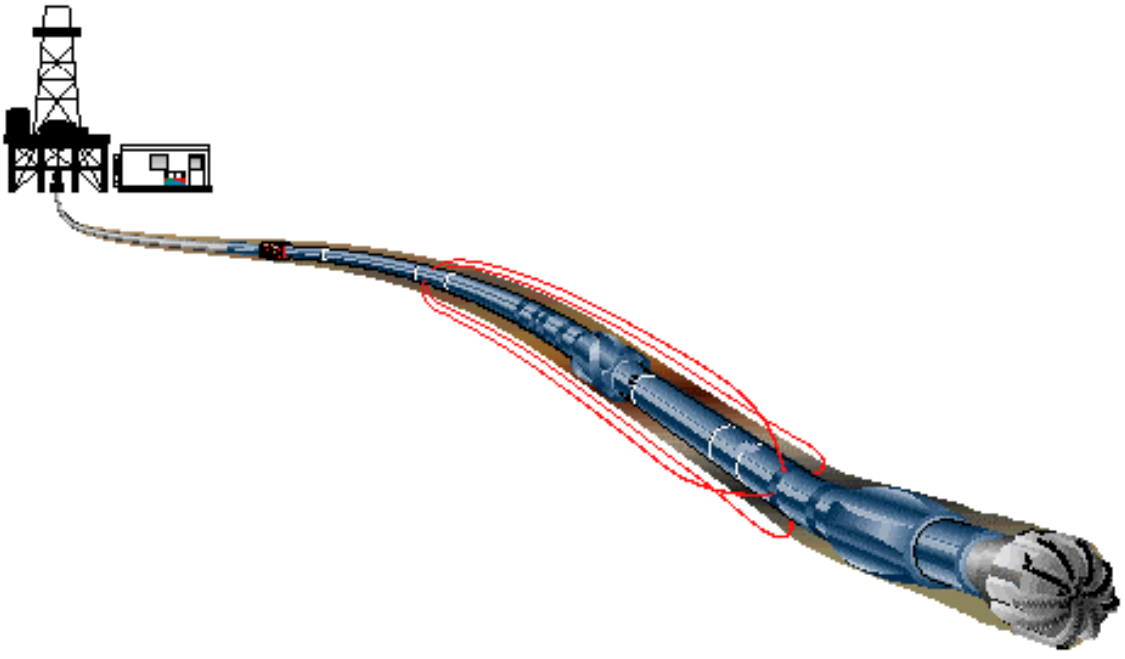
Survey Report



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Survey Report

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	2156.00	0.65	64.11	157.83	2155.65	20.86	20.86	-3.26	20.98	351.01	0.02	MWD	proj

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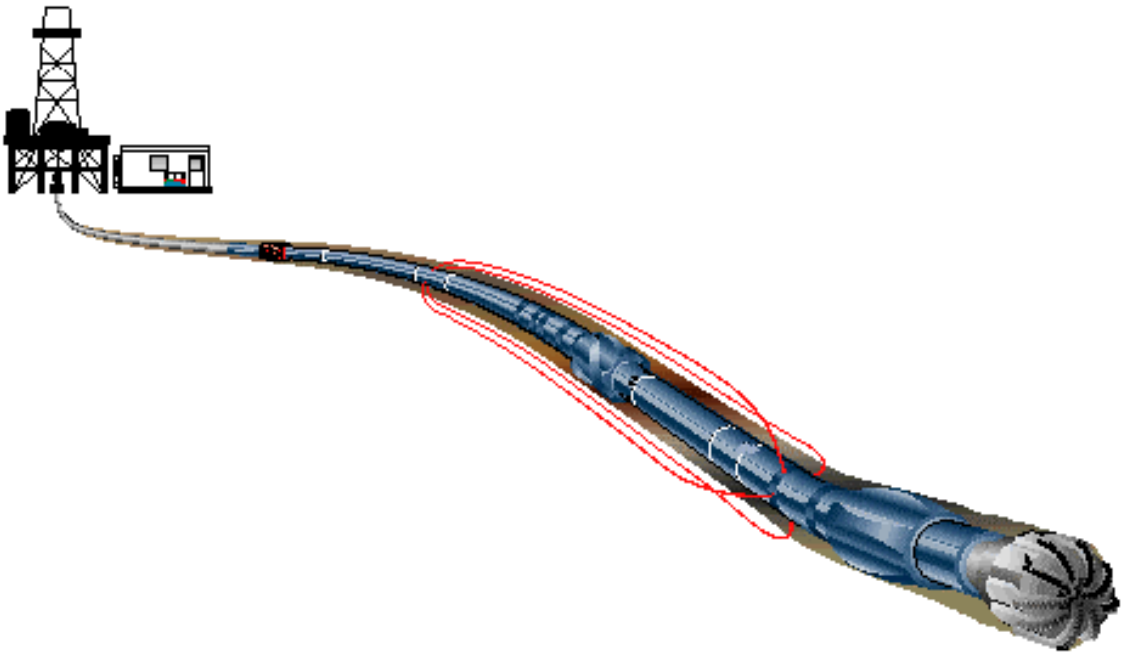
Motor Run Summary



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DOWN-HOLE MOTOR RUN REPORT

Ft, Mt

Motor Size : 9 5/8" **Serial No :** 03401 **Run No :** 1 **BHA No:** 3 **Mt**

Company	Woodside	**Well**	Geographe North	**Slot**	1	**Field**	Geographe North
		Location	Otway Basin	**Country**		Australia	
Operator	Diamond Offshore	**Rig**	Ocean Bounty	**Engineer**	K.Wilson	**Date**	1-Oct-01

Bit Size	Make	Type	IADC	Jets	Jets	Jets	Jets	TFA
12 1/4"	Smith	MA 985	-	7.12				0.773

IADC CUTTING STRUCTURE

Inner Row	Outer Row	Dull Char'	Location	Brg/Seals	Gauge	Others	Reason for Trip
2	4	BT	T	X	I	CT	TD

Motor Made By	Size	Model / Type	Rotor/Stator	Serial No	Hsg Stab OD	° Bent Hsg	° Bent Sub
Anadrill	9 5/8"	A962 GT	7:8	03401	12 1/8"	n/a	n/a

Type 1 = Straight; **2** = Steerable; **3** = Double Bend: **1**

Stator Ser Nº - **Rotor Ser Nº** - **IADC Drlg Cmt, W & R** 13.5

IADC Drlg Hrs 42.8 **IADC Circ Hrs** 8.3 **Total Motor Circ Hrs** 64.5

Purpose of Run Performance drill 12.25" section to casing depth

BHA

TCI Bit
A962 GT Motor
X/O
Roller Reamer
CDR
In Line Stab
Power Pulse
NMDC
Roller Reamer
6 x " DC
Jars
2 x " DC
X/O
15 x HWDP

Surveys						
	MD IN	582.9	Inclin	0.14	Azim	140.0
	MD OUT	1762.4	Inclin	1.84	Azim	358.0

Flow Rate GPM	Off Bttm PSI	On Bttm PSI	RPM	WOB Klbs
650	2400	2600	100	30

Mud Type	Alplex	**Mud Wt**	10.4	**Mud Grad'**	0.54	**Vis**	78
PV	25	**Filtrate**	3.7	**% Solids**	8.6	**Aniline Pt**	-
YP	25	**% Oil**	n/a	**% Sand**	1.25	**Circ Temp**	49 C

Depth In	565	**Depth Out**	1790	**Inter'l Drld**	1225
Date In	1-Oct-01	**Date Out**	4-Oct-01	**ROP**	28.7
Time In	19:30	**Time Out**		**Time BRT**	55.25 Hrs

FAILURE? No

Slide Mts -

Previous Hrs 0.0 **Cumulative Hrs** 64.5

Remarks / Failure Report.

1) Motor drained and checked at surface.

NB : Top Drive Rig

Did Motor Stall	
No	Yes
Slide	Rty
-	1

Bearing Play	
In	1mm
Out	
Condition	
Good	

Client Signature : _____ **Engineers Signature :** _____

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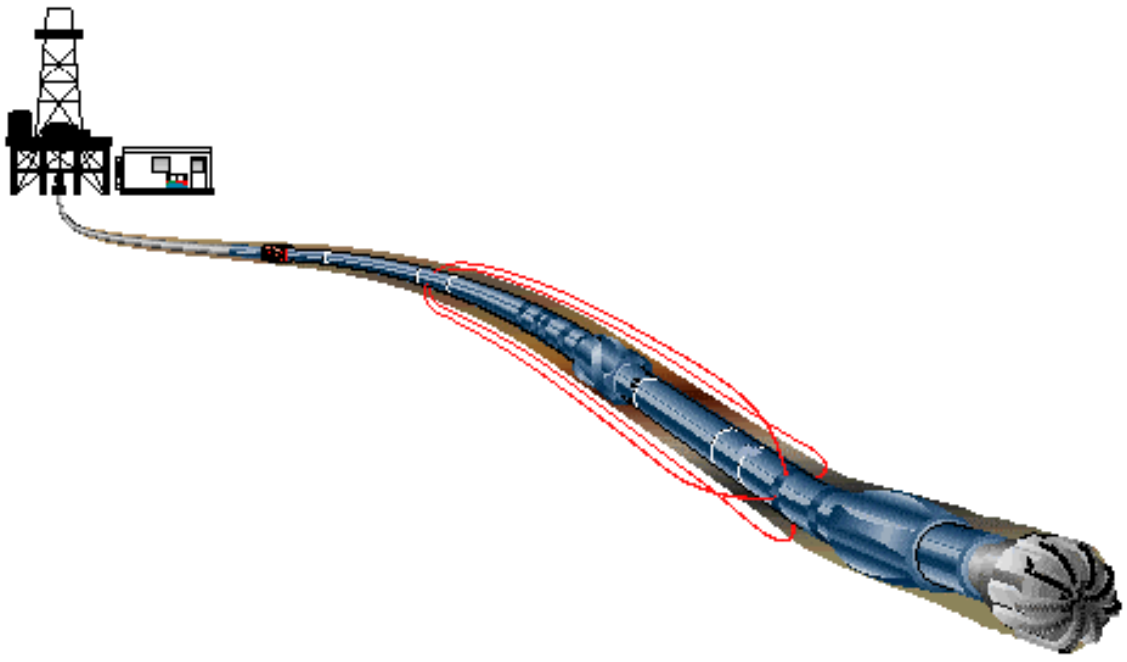
MWD / LWD Bit Run Summary



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MWD/LWD Bit Run Summary

Job Number:	Company Representative:	Date In:	Date out:	MWD Run No.:	LWD Run No.:	Rig Bit Run No.:	Cell Manager:
AWA-01-21	**D. Bell**	**01-Oct-01**	**05-Oct-01**	**1**	**1**	**2**	**A. Abad**

Company:	Hole Depth-From:	To:	Hole Size (in):	MWD Size:	Collar Type:
Woodside	**557 m**	**1790 m**	**12-1/4 in**	**8-1/4 in**	**High Flow**

Rig Name:	Initial Survey Depth:	Final Survey Depth:	Last Casing Size:	Last casing depth:	Jets/TFA:
Diamond Offshore Ocean Bounty	**583 m**	**1762 m**	**13-3/8 in**	**558m**	**7 x 12**

Well Name:	Inclination-From:	To:	Bit MFG/Model/IADC Code/Serial number:
Geographe North-1	**0.14 deg**	**1.84 deg**	**Smith/MA985/JS4096**

Location:	Azimuth-From:		Downhole Motor Type/Size/RS config/Jet:
Otway Basin	**140.0 deg**	**358.0 deg**	**A962M**

Frame Format: 2009.00	TVD-From:	To:	Bit Hours:	Drilling Hrs (btm):	Distance Drilled:
MWD (User def.)	**583 m**	**1762 m**	**42.80 hrs**	**42.80 hrs**	**1233m**

Bit-To-Survey:	Mag Dec / Grid Conv. / Tot.Corr	Flow Min (in mud):	Flow Max (in mud):	Circ. Hours:	RT Trans. Hrs:	RT Trans Distance:
25.8m	**11.03**	**420 gpm**	**1000 gpm**	**21.70 hrs**	**64.50 hrs**	**1233m**

Spud Date:	TF Correction (SPM):	Modulator Gap:	Telemetry:	Ream Hours:	LWD Ream Hrs:	LWD Ream Distance:
29/09/2001	**n/a**	**0.123 in**	**12 Hz / 3 bps / BPSK**	**0.00 hrs**	**0.00 hrs**	**0m**

RT to LAT:	Water Depth:	Pump Output/Type:	Bent Housing Angle:	Total Pump Hrs:	LWD Logging Hrs:	LWD Logging Distance:
25m	**82m**	**4.24**	**n/a**	**64.50 hrs**	**85.00 hrs**	**0m**

IADC	Teeth				Bearing	Gauge	Other Char	Reason Pulled	Bit Grading-Mel:	% Slide (dist):	% Rotate
Cutting	**Inner**	**Outer**	**Dull**	**Location**	**Seals**					**0%**	**100%**
Structure	**1**	**2**	**BT**	**T**	**X**	**I**	**CT**	**TD**	**n/a**	Time BRT:	Time ART:
										21:00	**10:00**

Surface and downhole software versions

Advisor	IDEAL	SPM	Sonic	CDN	ADN	CDR	RAB	PowerPulse	SLIM	Battery on time	Time BRT
n/a	**id6_1c_03**	**SPM 6.1C-03**	**n/a**	**n/a**	**n/a**	**5.0B08**	**n/a**	**6.1C**	**n/a**	**n/a**	**85 hrs 00 min**

MWD	Pumping Hours Start	Pumping Hours Cum	LWD	Pumping Hours Start	Pumping Hours Cum		Real Time Hrs	Real Time Fail	Real Time Ft/m	Recorded Time Hrs	Recorded Time Fail	Recorded Time Ft/M
MDC-26859-DC	**0.0**	**64.5**	**CDR-8134**	**0.0**	**64.5**	**CDR RES**	**64.5**	**No**	**1233**	**90.0**	**No**	**0.0m**
MMA-1154-BB	**0.0**	**64.5**	**CDEA-610**	**0.0**	**64.5**	**CDR GR**	**64.5**	**No**	**1233**	**90.0**	**No**	**1233 m**
MEC-1152-BB	**0.0**	**64.5**										
MEH-1152-BA	**0.0**	**64.5**	**ILS - 38096**	**0.0**	**64.5**							
MTA-1154-BC	**0.0**											
MVC-083-AA	**0.0**											
MWA-113-BA	**0.0**	**64.5**										
	0.0											
MSSB-78477-GB	**0.0**	**64.5**										

Read Out Port to bit distance.

Isonic	CDN	ADN	CDR	RAB	ARC6	PowerPulse	SLIM
n/a	**n/a**	**n/a**	**16.17m**	**n/a**	**n/a**	**23.42m**	**n/a**

Operating Conditions

Avg R0P:	Avg Wob (klbs):	Avg Flow (gpm):	Avg SPP (psi):	Avg RPM (rpm):	Avg Torq (kflbs):	Max Circ. Temp.:		LCM: n/a
81.2m/hr	**16 k.lbs**	**681 gpm**	**2229 psi**	**163 rpm**	**5 k.ft.lbs**	**63 deg C**		Type: **-**
Mud Type:	Final Mud Wt:	Final Vis. (sec/qt):	Sand %:	Solids %:	PV: / YP:	O/W Rat / Filtrate:	Chlor's: / Silicate:	
KCL Polymer	**1.28 sg**	**81.00 %**	**1.00 %**	**12.0 %**	**29 / 37**	**0/86 / 3.2**	**45000 / -**	Size: **-**
Bit/Sec:	Turbine Rotor:	Turbine Stator:	Update (GR):	Collar Size/Type:	IWOB Collar:	Jarring?	No of Jar Cycles:	
3.00	**600-1200 gpm**	**600-1200 gpm**	**10.0 sec**	**8 1/4in HF**	**Yes**	**No**	**n/a**	Conc: **-**
BHA Type:	Bit Type:	Float Sub?	Surface Screen:	BHA Vibration?	Surf.Vibration?	Noise Problems?	Surface Noise?	Downhole Noise?
Packed Rot.	**Insert**	**No**	**No**	**Yes**	**No**	**No**	**No**	**No**
Failure?	Downhole Failure?	Surface Failure?	Trip Due to Tool Failure?	Rig Time Lost Due To Failure?	Client Inconvenience?	Max MWD Shock: *shkrsk*	Total D/H Shock:	Max Shock Duration: *shock_l*
No	**No**	**No**	**No**	**No**	**No**	**Level 1**	**356**	**20 cps**

Summary:

Good MWD run. Experienced high shocks, in particular lateral and torsional, drilling through the Mepunga Sandstone as well as intermittant signal loss due to drop in flow rate as a result of mudlosses. Once mud losses were controled, flow rate was increased resulting in good MWD signal for the rest of the run.

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MWD/LWD Bit Run Summary

Date	Time	Depth	Comments
1-Oct	16:43	Surface	Initialize CDR8
	21:29		SHT, SPT1=22,SPT2=15.7, 98%,TRPM=2226
2-Oct	03:12	531m	Tag cement (float collar)
	11:00	573m	Performed Leak off test.
	12:16	573m	Commence drilling
	12:46	583m	Re-start Acquisition to correct depth log sensor offset.
	16:40	815m	Severe Torsional and Lateral vibrations
3-Oct	07:30	900m	Intermittant signal loss due to decrease flow as a result of loss of mud
	09:00	996m	Intermittant signal loss due to decrease flow as a result of loss of mud
	09:57	1041m	Total signal loss due to low flow as a result of mud loss
4-Oct	07:25	1790m	Reached section TD. Circulating cuttings out and pump hi vis mud.
	11:30	1786m	POOH-wiper trip
	20:30	516m	TDS
5-Oct	10:00		Tool ART.
	11:23		Dump CDR memory data.

MWD Run **1** LWD Run 1

BHA Description

Item	Length	OD"	ID"	Conn
PDC	0.36	12 1/4		6 5/8 R
GT 962 Motor	10.26	9 5/8		7 5/8 R
XO	0.45	9 9/16	2 .75	6 5/8 R
Roller Reamer	2.27	7 15/16	3 in	6 5/8 R
CDR 8	6.86	8 5/16		6 5/8 FH
ILS	1.46	8 3/8		6 5/8 FH
Powerpulse	8.40	8 1/4		6 5/8 FH
Totco Ring	0.00	-		
NMDC	8.97	8	2 .75	6 5/8 R
Roller Reamer	2.07	12 1/4	3 in	
8 x 8"DC	55.43	8 3/16	2 .75	
Jar	9.77	8		
2 x 8"DC	18.31	8	2. 875	
XO	1.10	8 1/8	2. 875	
15 x 5"HWDP	139.00	5		
Total Length	264.71			

BHA Weight	In air	In mud
Total	108klbs	
Below Jars	68 klbs	

Stabilizer Description	Distance blade mid pt to Bit	Blade type	Blade length	Blade width	Gauge in	Gauge out
ILS	n/a	IB	n/a	12-1/4 in	In	In

BHA Data
Predict BHA Tendency
Packed BHA.

Date	Field Engineer	Present Depth	Average ROP	Average SP Press.	Desurger Pressure	Turbine RPM @ GPM	Average rotary	Motor RPM	Shock Log CDR	Shock Log MWD	Shock Log Max	Shock Log TDH
2-Oct	A.A.	667	160			3359@997Gpm	90 rpm	100 rpm	1.0	0.0		137.0
2-Oct	M.S.	963	50			2109@638Gpm	97 rpm		1.0	1.0	2.0	260.0
3-Oct	A.A.	1392	50			1757@555Gpm	99 rpm		0.0	0.0	0.0	331.0

Time	Avg/Max DWOB	Avg/Max SWOB	Avg/Max DTOR	Avg/Max STOR	Fric	Drag Up/Down	Mud Weight	Mud Vis	Mud Resistivty @ Temp °C	Noise Margin	SPT1	SPT2
14:24	9 k.lbs	10 k.lbs	3 k.ft.lbs				1.15sg			97.0%	11.5 psi	8.5 psi
08:30	12 k.lbs	10 k.lbs	3 k.ft.lbs				1.15sg			96.0%	12.0 psi	8.7 psi
10:47	20 k.lbs	20 k.lbs	3 k.ft.lbs				1.25sg			98.0%	7.3 psi	6.2 psi

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MWD/LWD Bit Run Summary

Job Number:	Company Representative:	Date In:	Date out:	MWD Run No.:	LWD Run No.:	Rig Bit Run No.:	Cell Manager:
AWA-01-21	**D. Bell**	**07-Oct-01**	**09-Oct-01**	**2**	**2**	**3**	**A. Abad**

Company:	Hole Depth-From:	To:	Hole Size (in):	MWD Size:	Collar Type:
Woodside	**1790 m**	**2156 m**	**8-1/2 in**	**6-3/4 in**	**High Flow**

Rig Name:	Initial Survey Depth:	Final Survey Depth:	Last Casing Size:	Last casing depth:	Jets/TFA:
Diamond Offshore Ocean Bounty	**1762 m**	**2142 m**	**9-5/8 in**	**1784m**	**6x12**

Well Name:	Inclination-From:	To:	Bit MFG/Model/IADC Code/Serial number:
Geographe North-1	**1.84 deg**	**0.66 deg**	**SMITH/MA89PX/JS6303**

Location:	Azimuth-From:		Downhole Motor Type/Size/RS config/Jet:
Otway Basin	**140.0 deg**	**64.1 deg**	**n/a**

Frame Format:	TVD-From:	To:	Bit Hours:	Drilling Hrs (btm):	Distance Drilled:
MWD (User def.)	**1762 m**	**2142 m**	**11.30 hrs**	**11.30 hrs**	**366m**

Bit-To-Survey:	Mag Dec / Grid Conv. / Tot.Corr	Flow Min (in mud):	Flow Max (in mud):	Circ. Hours:	RT Trans. Hrs:	RT Trans Distance:
12.6m	**11.03**	**400 gpm**	**800 gpm**	**16.10 hrs**	**27.40 hrs**	**366m**

Spud Date:	TF Correction (SPM):	Modulator Gap:	Telemetry:	Ream Hours:	LWD Ream Hrs:	LWD Ream Distance:
29/09/2001	**n/a**	**0.085 in**	**12 Hz / 3 bps / BPSK**	**0.00 hrs**	**0.00 hrs**	**0m**

RT to LAT:	Water Depth:		Bent Housing Angle:	Total Pump Hrs:	LWD Logging Hrs:	LWD Logging Distance:
25m	**82m**	**4.24**	**n/a**	**27.40 hrs**	**48.00 hrs**	**366m**

IADC	Teeth				Bearing	Gauge	Other Char	Reason Pulled	Bit Grading-Mel:	% Slide (dist):	% Rotate (dist):
Cutting	**Inner**	**Outer**	**Dull**	**Location**	**Seals**					**0%**	**100%**
Structure	**1**	**2**	**BT**	**T**	**X**	**I**	**CT**	**TD**	**n/a**	Time BRT: **4:30**	Time ART: **0:00**

Surface and downhole software versions

Advisor	IDEAL	SPM	Sonic	CDN	ADN	ARC	RAB	PowerPulse	SLIM	Battery on time	Time BRT
n/a	**id6_1c_03**	**SPM 6.1C-03**	**n/a**	**n/a**	**n/a**	**6.4B01**	**n/a**	**6.1C00**	**n/a**	**n/a**	**43 hrs 30 min**

MWD	Pumping Hours Start	Pumping Hours Cum	LWD	Pumping Hours Start	Pumping Hours Cum		Real Time Hrs	Real Time Fail	Real Time Ft/m	Recorded Time Hrs	Recorded Time Fail	Recorded Time Ft/M
MDC-19707-AC	**0.0**	**27.4**	**ARC-117**	**0.0**	**27.4**	**ARC** RES	**27.4**	**No**	**366**	**43.0**	**No**	**366.0m**
MMA-307-BB	**0.0**	**27.4**				ARC GR	**27.4**	**No**	**366**	**43.0**	**No**	**366.0 m**
MEC-116-BA	**0.0**	**27.4**	**ILS-17445**	**0.0**	**27.4**							
MEH-116-BA	**0.0**	**27.4**										
MTA-507-BA	**0.0**	**27.4**										
MVC-096-AA	**0.0**	**27.4**										
MWA-739-AA	**0.0**	**27.4**										
DOTS-3953	**0.0**	**27.4**										
MSSB-78477-GB	**0.0**	**27.4**										

Read Out Port to bit distance.

Isonic	CDN	ADN	CDR	RAB	ARC6	PowerPulse	SLIM
n/a	**n/a**	**n/a**	**n/a**	**n/a**	**3.21**	**1.13m**	**n/a**

Operating Conditions

Avg R0P:	Avg Wob (klbs):	Avg Flow (gpm):	Avg SPP (psi):	Avg RPM (rpm):	Avg Torq (kflbs):	Max Circ. Temp.:		LCM: n/a
40.0m/hr	**20 k.lbs**	**700 gpm**	**2500 psi**	**120 rpm**	**4 k.ft.lbs**	**67 deg C**		Type: **-**

Mud Type:	Final Mud Wt:	Final Vis. (sec/qt):	Sand %:	Solids %:	PV:	YP:	O/W Rat	Filtrate:	Chlor's:	Silicate:	
KCL Polymer	**1.15 sg**	**52.00 %**	**0.60 %**	**7.5 %**	**22**	**11**	**0/89.5**	**4**	**42000**	**-**	Size: **-**

Bit/Sec:	Turbine Rotor:	Turbine Stator:	Update (GR):	Collar Size/Type:	IWOB Collar:	Jarring?	No of Jar Cycles:	
3.00	**400-800**	**400-800**	**10.0 sec**	**6.75**	**Yes**	**no**	**n/a**	Conc: **-**

BHA Type:	Bit Type:	Float Sub?	Surface Screen:	BHA Vibration?	Surf.Vibration?	Noise Problems?	Surface Noise?	Downhole Noise?
Rotary	**PDC**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Failure?	Downhole Failure?	Surface Failure?	Trip Due to Tool Failure?	Rig Time Lost Due To Failure?	Client Inconvenience?	Max MWD Shock: *shkrsk*	Total D/H Shock:	Max Shock Duration: *shock_l*
No	**No**	**No**	**No**	**No**	**No**	**Level 1**	**68**	**5 cps**

Summary:

Good run. Reached hole TD. Excellent real-time signal from the Powerpulse and ARC.

Schlumberger

MWD/LWD Bit Run Summary

Date	Time	Depth	Comments
7-Oct	02:30	Surface	Initialize ARC
	05:23		SHT. Okay. SPT1=20psi, SPT2=8psi @ 450 GPM, TRPM=2226
	11:15	1712m	Set Depth
	12:00	1738m	Top of cement. Start drilling plug.
	16:49	1790m	On bottom drilling. No signal due to low flow rate. 300 GPM
	16:58	1797m	Drllied 6 meters of formation for FIT.
	18:40	1797m	Racked back 5 stands, set up hang off assembly due to bad weather.
	19:12	1797m	Stoped ciculating.
	10:15	1700m	Circulate to condition mud
	23:50	1797m	Perform FIT
8-Oct	01:04	1797m	On bottom drilling
	16:06	2156m	Reached TD. Take final survey.
	17:30	2156m	POOH.
	19:51	POOH	Stop IDEAL Acquisition
9-Oct	00:00		ART
	00:15		Dumped CDR.

MWD Run **2** LWD Run 2

BHA Description

Item	Length	OD"	ID"	Conn
PDC	0.30	8 1/2		
DOG sub	1.09	8 1/2		
SS	0.37	6 3/4		
ARC675	5.36	6 3/4		
ILS	1.51	6 3/4		
XO	0.48	6 15/16		
Powerpulse	7.48	6 8/9		
XOS	0.48	6 13/16		
PBL	2.62	6 3/4		
NMDC	8.63	6 3/4		
Roller Reamer	1.62	8 1/2		
DC	9.28	6 7/16		
Roller Reamer	1.58	8 1/2		
DC x 12	111.98	6 1/2		
Jar	9.68	6 5/16		
DC x 2	18.74	6-1/2 in		
HWDP x 15	139.00	6-7/16 in		
Total Length	320.20			

BHA Weight	In air	In mud
Total		
Below Jars		

Stabilizer Description	Distance blade mid pt to Bit	Blade type	Blade length	Blade width	Gauge in	Gauge out

BHA Data
Predict BHA Tendency

Date	Field Engineer	Present Depth	Average ROP	Average SP Press.	Desurger Pressure	Turbine RPM @ GPM	Average rotary	Motor RPM	Shock Log ARC	Shock Log MWD	Shock Log Max	Shock Log TDH
8-Oct	MS	1891	33	16 psi	n/a	3337 @ 594	124 rpm	n/a	0.0	L	L	56.0
8-Oct	AA	1975	64		n/a	3984@760	109 rpm	n/a	0.0	0.0	0.0	68.0

Time	Avg/Max DWOB	Avg/Max SWOB	Avg/Max DTOR	Avg/Max STOR	Fric	Drag Up/Down	Mud Weight	Mud Vis	Mud Resistivty @ Temp °C	Noise Margin	SPT1	SPT2
06:00	15 k.lbs	14 k.lbs	3 k.ft.lbs	6 k.ft.lbs			1.15sg	63 sec		97.0%	8.9 psi	6.3 psi
09:35	30 k.lbs	25 k.lbs	4 k.ft.lbs	7 k.ft.lbs			1.15sg	63 sec		98.0%	11.0 psi	9.5 psi