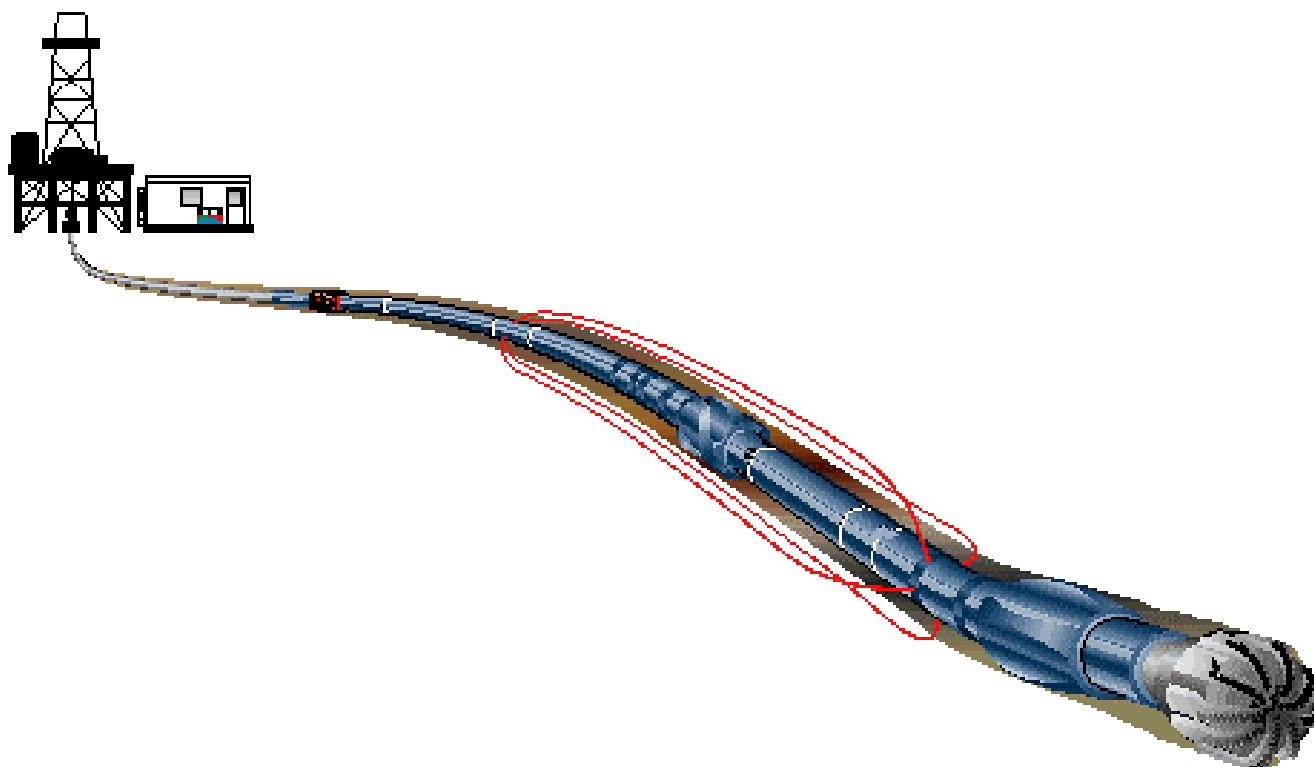




## Thylacine-1

### MWD – LWD End of Well Report

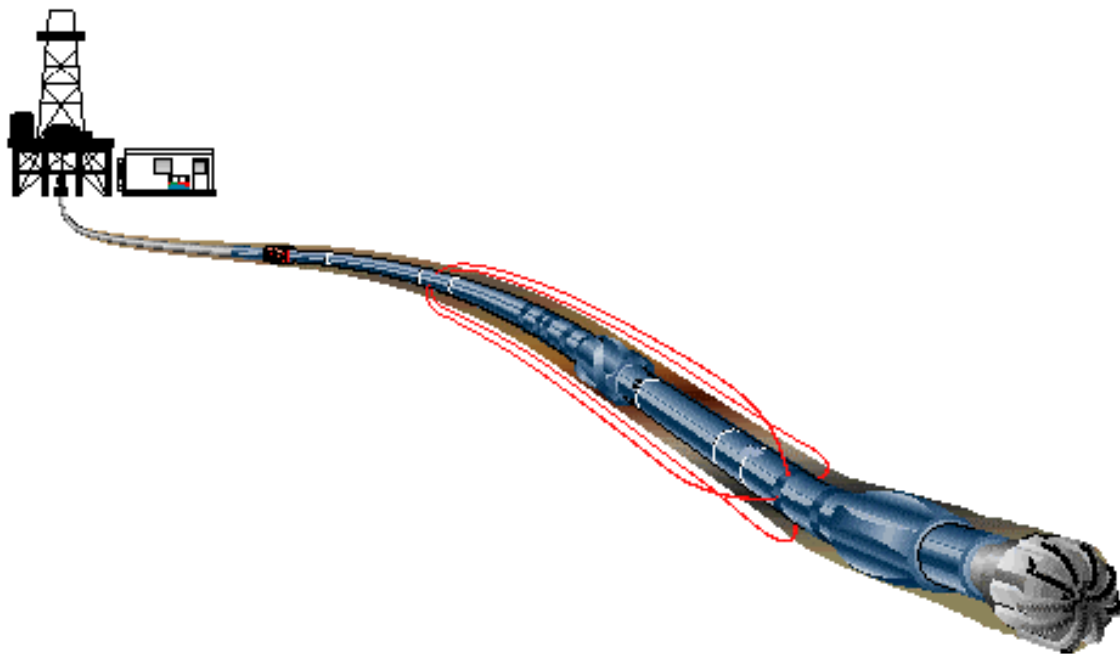


# End of Well Report for Thylacine-1

## Contents

- Logging Overview
- General Information
- Geomagnetic and Survey Reference Criteria
- Survey Report
- Motor Run Summary
- Bit Run Summary
- Failure Report

## Logging Overview



## Logging Overview

### 8 ½" Section (Run 1 to 2, 1850 m to 2719 m):

Schlumberger Drilling and Measurements provided MWD and LWD services using the PowerPulse and ARC6 tools in the 8 ½" section of Thylacine-1. Both of the PowerPulse tools were used during the section. The first 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 second PowerPulse was fitted with an IWOB sensor, this provided real-time downhole WOB and downhole torque measurements. The MVC data indicated that low level axial shocks were present throughout the section, but they were not deemed to be excessive, and therefore not to be of concern regarding damage to 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 three runs, and logged utilizing ARC6 and PowerPulse in two runs. the second run of the three being a cored section from 2165-2201m. The following formation evaluation data was provided in real-time:

- ☐ ARC6 2MHz Phase Shift Resistivity at 3 depths of investigation
- ☐ ARC6 Gamma Ray
- ☐ ARC6 Annular Pressure and Temperature

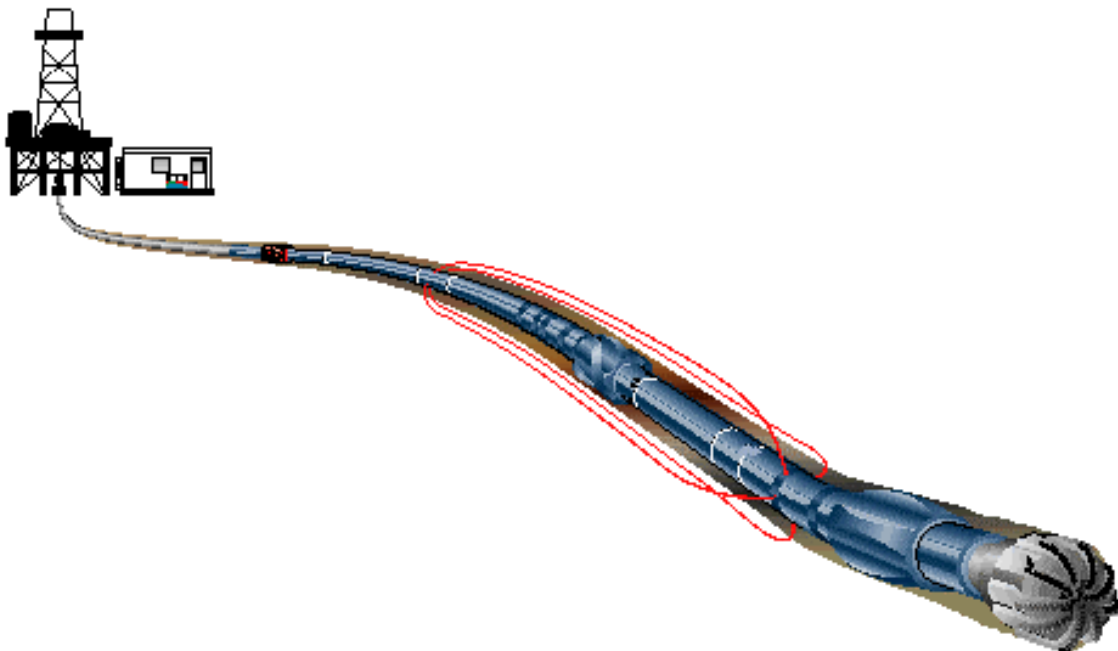
The following recorded mode formation evaluation measurements were provided once the LWD tools were on surface and the memory data retrieved:

- ☐ ARC6 2MHz Phase Shift Resistivity at 5 depths of investigation
- ☐ ARC6 2MHz Attenuation Resistivity at 3 depths of investigation
- ☐ ARC6 400kHz Phase Shift Resistivity at 5 depths of investigation
- ☐ ARC6 400kHz Attenuation Resistivity at 3 depths of investigation
- ☐ ARC6 Gamma Ray
- ☐ ARC6 Annular Pressure and Temperature

Run	Hole Size (in.)	Service	Start Depth (m)	Stop Depth (m)
1	8 ½	PowerPulse / MVC / ARC6	1850	2165
2	8 ½	PowerPulse / DWOB / ARC6	2165	2710

Depth tracking failure at start of the run 3, from 2165-2230m, resulted in poor quality real-time data. The problem with the Geograph was located and fixed and no further problems were encountered. The associated problem of an inaccurate depth/time file was resolved with the help of the BHI depth/time data. The data was successfully reconstructed, and the recorded-mode data over the interval was recovered. The MWD and LWD tools performed well throughout the run, and no problems were encountered. Shocks throughout the run were minimal, and of no consequence to the MWD and LWD tools.

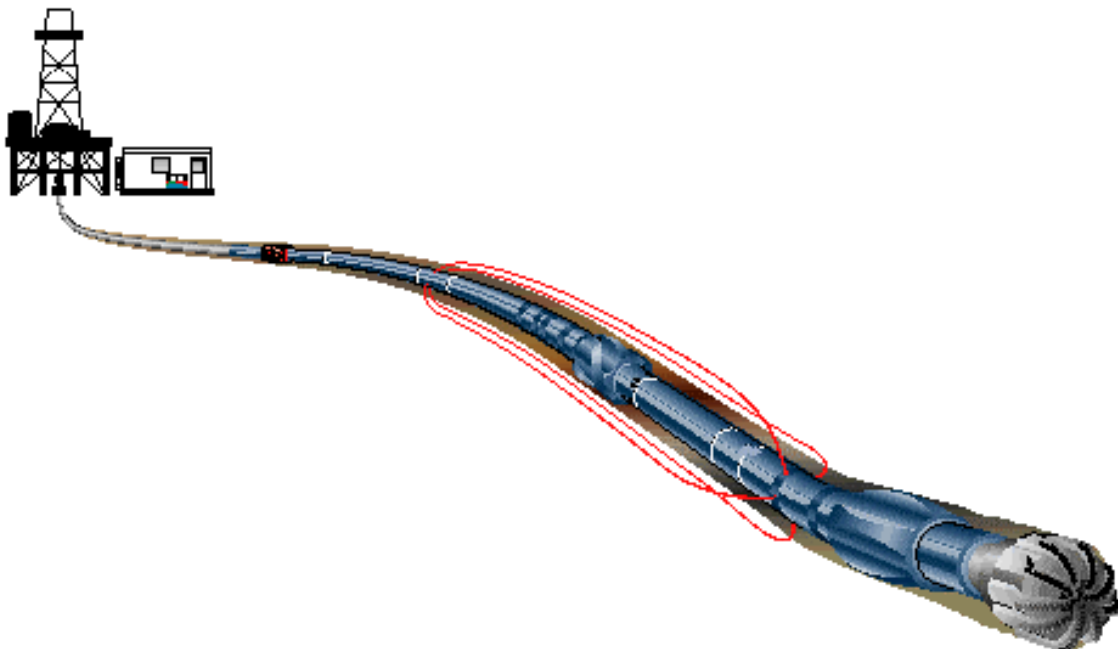
## General Information



## General Information

Well Name:	Thylacine-1	
Rig:	Diamond Offshore Ocean Bounty	
Field:	Exploration / Permit T/30P	
Location:	Otway Basin, Offshore Victoria	
Country:	Australia	
Cell Members:	Lee Muskett	LWD Engineer
	Anthony Strahan	LWD Engineer
Town Contacts:	Ike Nitis	Location Manager - Australia
	Patrick Dassens	Engineer In Charge - Victoria
Company Representatives:	Dennis Bell	

## Geomagnetic and Survey Reference Criteria



## Geomagnetic and Survey Reference Criteria

### Geomagnetic Data

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Magnetic Model:	BGGM version 2000
Magnetic Date:	10-May-2001
Magnetic Field Strength:	1224.35 HCNT
Magnetic Declination:	11.08 degrees
Magnetic Dip:	-70.40 degrees

### Survey Reference Criteria

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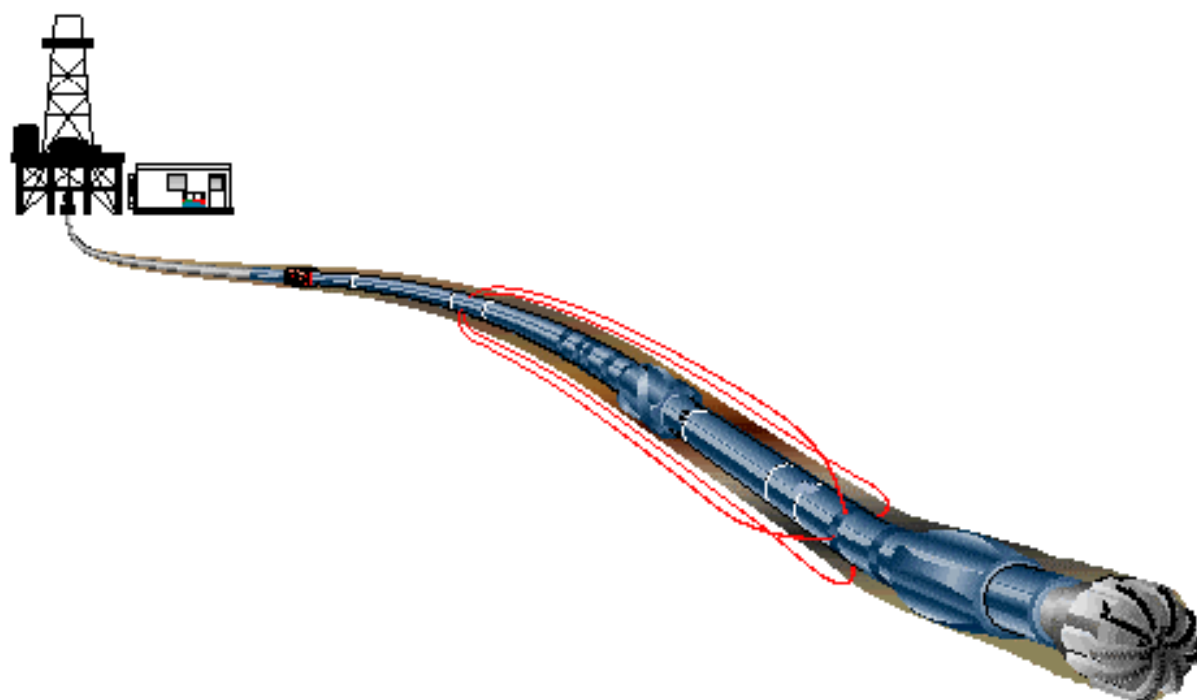
Reference G:	1000.12 mgal
Reference H:	1224.35 HCNT
Reference Dip:	-70.40 degrees
G value Tolerance:	2.50 mgal
H value Tolerance:	6.00 HCNT
Dip Tolerance:	0.45 degrees

### Survey Corrections Applied

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Magnetic Declination:	11.08 degrees
Grid Convergence:	1.2 degrees
Total Azimuth Correction:	9.88 degrees

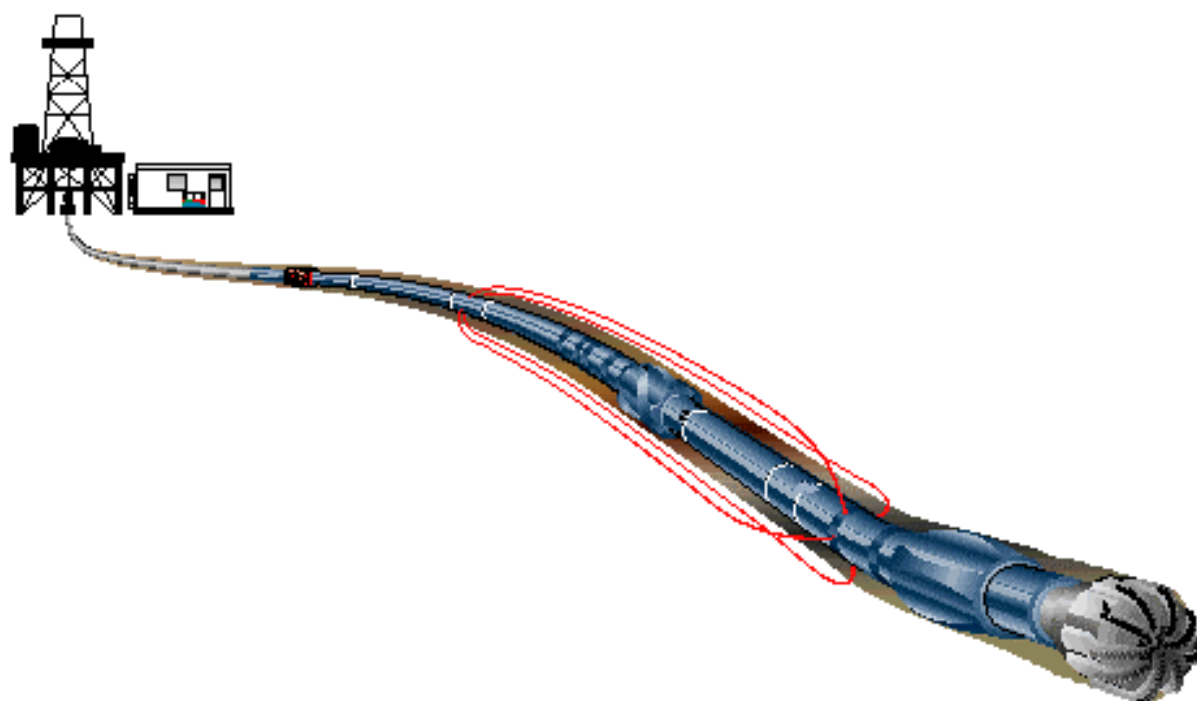
## Survey Report



# 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	0.00	0.00	0.00	0.00	0.00	-2.50	-2.50	6.30	6.78	111.64	0.00	TIP	-
2	44.00	0.50	184.05	44.00	44.00	-2.69	-2.69	6.29	6.84	113.18	0.11	EMS	-
3	76.00	0.94	188.10	32.00	76.00	-3.09	-3.09	6.24	6.96	116.35	0.14	EMS	-
4	104.00	0.46	145.02	28.00	103.99	-3.41	-3.41	6.27	7.14	118.53	0.24	EMS	-
5	132.00	0.87	102.96	28.00	131.99	-3.55	-3.55	6.54	7.44	118.48	0.22	EMS	-
6	162.00	0.69	81.11	30.00	161.99	-3.57	-3.57	6.94	7.81	117.23	0.11	EMS	-
7	190.00	0.89	169.39	28.00	189.99	-3.76	-3.76	7.15	8.08	117.74	0.40	EMS	-
8	217.00	0.71	280.86	27.00	216.99	-3.94	-3.94	7.02	8.05	119.26	0.49	EMS	-
9	244.00	0.79	174.59	27.00	243.99	-4.09	-4.09	6.88	8.00	120.73	0.44	EMS	-
10	271.00	0.75	177.81	27.00	270.98	-4.45	-4.45	6.90	8.21	122.82	0.02	EMS	-
11	298.00	0.92	175.72	27.00	297.98	-4.84	-4.84	6.93	8.45	124.97	0.06	EMS	-
12	327.00	0.99	178.06	29.00	326.98	-5.33	-5.33	6.95	8.76	127.46	0.03	EMS	-
13	356.00	1.05	177.33	29.00	355.97	-5.84	-5.84	6.97	9.10	129.96	0.02	EMS	-
14	385.00	1.09	179.22	29.00	384.97	-6.38	-6.38	6.99	9.46	132.41	0.02	EMS	-
15	415.00	0.98	167.44	30.00	414.96	-6.92	-6.92	7.05	9.88	134.47	0.08	EMS	-
16	444.00	0.87	182.37	29.00	443.96	-7.38	-7.38	7.09	10.24	136.14	0.09	EMS	-
17	473.00	0.99	184.78	29.00	472.95	-7.85	-7.85	7.06	10.56	138.03	0.04	EMS	-
18	502.00	0.99	134.86	29.00	501.95	-8.28	-8.28	7.22	10.98	138.91	0.29	EMS	-
19	531.00	0.84	250.56	29.00	530.95	-8.52	-8.52	7.20	11.16	139.83	0.53	EMS	-
20	560.00	0.67	325.84	29.00	559.95	-8.46	-8.46	6.90	10.91	140.78	0.32	EMS	-
21	589.00	0.80	318.39	29.00	588.94	-8.16	-8.16	6.67	10.54	140.74	0.06	EMS	-
22	617.00	0.91	323.74	28.00	616.94	-7.84	-7.84	6.41	10.13	140.72	0.05	EMS	-
23	646.00	1.00	319.58	29.00	645.94	-7.46	-7.46	6.11	9.64	140.68	0.04	EMS	-
24	675.00	1.07	323.51	29.00	674.93	-7.05	-7.05	5.78	9.12	140.63	0.03	EMS	-
25	704.00	0.98	313.42	29.00	703.93	-6.66	-6.66	5.44	8.60	140.75	0.07	EMS	-
26	733.00	0.93	313.01	29.00	732.92	-6.33	-6.33	5.09	8.12	141.19	0.02	EMS	-
27	752.00	0.89	310.74	19.00	751.92	-6.13	-6.13	4.87	7.83	141.55	0.03	EMS	-
28	781.00	0.82	277.05	29.00	780.92	-5.96	-5.96	4.49	7.46	142.99	0.17	EMS	-
29	812.00	0.62	256.03	31.00	811.92	-5.97	-5.97	4.11	7.25	145.47	0.11	EMS	-
30	843.00	0.82	261.69	31.00	842.91	-6.04	-6.04	3.72	7.10	148.35	0.07	EMS	-
31	874.00	0.63	227.91	31.00	873.91	-6.19	-6.19	3.38	7.05	151.37	0.15	EMS	-
32	905.00	0.49	276.90	31.00	904.91	-6.29	-6.29	3.12	7.02	153.60	0.16	EMS	-
33	936.00	0.55	254.16	31.00	935.91	-6.31	-6.31	2.85	6.92	155.73	0.07	EMS	-
34	967.00	0.59	253.41	31.00	966.91	-6.40	-6.40	2.55	6.89	158.27	0.01	EMS	-
35	998.00	0.53	260.69	31.00	997.91	-6.47	-6.47	2.26	6.85	160.77	0.03	EMS	-
36	1029.00	0.66	224.81	31.00	1028.90	-6.62	-6.62	1.99	6.91	163.28	0.12	EMS	-
37	1060.00	0.63	259.62	31.00	1059.90	-6.77	-6.77	1.69	6.98	165.95	0.12	EMS	-
38	1091.00	1.16	280.21	31.00	1090.90	-6.75	-6.75	1.22	6.86	169.77	0.20	EMS	-
39	1122.00	1.43	291.05	31.00	1121.89	-6.55	-6.55	0.55	6.58	175.22	0.12	EMS	-
40	1153.00	1.71	172.79	31.00	1152.88	-6.87	-6.87	0.25	6.88	177.96	0.87	EMS	-
41	1184.00	0.81	292.56	31.00	1183.88	-7.25	-7.25	0.10	7.25	179.20	0.72	EMS	-
42	1215.00	0.85	272.56	31.00	1214.88	-7.15	-7.15	-0.33	7.16	182.65	0.09	EMS	-
43	1246.00	0.88	281.83	31.00	1245.87	-7.10	-7.10	-0.79	7.14	186.38	0.05	EMS	-
44	1277.00	0.91	283.50	31.00	1276.87	-6.99	-6.99	-1.27	7.10	190.27	0.01	EMS	-
45	1308.00	0.78	289.48	31.00	1307.87	-6.86	-6.86	-1.70	7.07	193.95	0.05	EMS	-
46	1339.00	0.84	303.25	31.00	1338.86	-6.67	-6.67	-2.09	6.99	197.43	0.07	EMS	-
47	1370.00	0.89	301.40	31.00	1369.86	-6.42	-6.42	-2.49	6.88	201.20	0.02	EMS	-
48	1401.00	0.84	303.67	31.00	1400.86	-6.16	-6.16	-2.88	6.81	205.07	0.02	EMS	-
49	1432.00	0.93	306.14	31.00	1431.85	-5.89	-5.89	-3.28	6.74	209.08	0.03	EMS	-
50	1463.00	0.94	323.43	31.00	1462.85	-5.54	-5.54	-3.63	6.62	213.25	0.09	EMS	-
51	1494.00	1.13	303.89	31.00	1493.84	-5.16	-5.16	-4.04	6.55	218.01	0.13	EMS	-
52	1525.00	1.18	302.57	31.00	1524.84	-4.82	-4.82	-4.56	6.64	223.40	0.02	EMS	-
53	1556.00	0.72	334.98	31.00	1555.83	-4.47	-4.47	-4.91	6.64	227.67	0.22	EMS	-
54	1587.00	0.73	346.84	31.00	1586.83	-4.10	-4.10	-5.04	6.50	230.83	0.05	EMS	-
55	1618.00	1.07	326.99	31.00	1617.83	-3.67	-3.67	-5.24	6.40	235.00	0.15	EMS	-
56	1649.00	0.80	349.84	31.00	1648.82	-3.21	-3.21	-5.44	6.31	239.41	0.15	EMS	-
57	1680.00	0.91	349.60	31.00	1679.82	-2.76	-2.76	-5.52	6.17	243.44	0.04	EMS	-
58	1711.00	1.03	355.10	31.00	1710.81	-2.24	-2.24	-5.59	6.02	248.17	0.05	EMS	-
59	1742.00	0.90	357.57	31.00	1741.81	-1.72	-1.72	-5.60	5.85	252.93	0.06	EMS	-
60	1773.00	1.17	5.03	31.00	1772.80	-1.16	-1.16	-5.55	5.67	258.21	0.09	EMS	-
61	1804.00	1.63	12.01	31.00	1803.80	-0.41	-0.41	-5.43	5.45	265.65	0.16	EMS	-
62	1835.00	1.88	11.25	31.00	1834.78	0.52	0.52	-5.24	5.27	275.63	0.08	EMS	-
63	1888.38	2.09	27.56	53.38	1888.13	2.24	2.24	-4.62	5.13	295.85	0.11	MWD	6-axis
64	1973.18	2.40	17.34	84.80	1972.86	5.30	5.30	-3.38	6.29	327.52	0.06	MWD	6-axis
65	2059.60	2.97	20.52	86.42	2059.19	9.13	9.13	-2.05	9.36	347.33	0.07	MWD	6-axis
66	2145.69	2.46	21.36	86.09	2145.18	12.94	12.94	-0.60	12.95	357.36	0.06	MWD	6-axis
67	2233.45	2.18	23.26	87.76	2232.87	16.23	16.23	0.75	16.24	2.64	0.03	MWD	6-axis
68	2318.15	1.83	30.40	84.70	2317.52	18.87	18.87	2.07	18.99	6.25	0.05	MWD	6-axis
69	2390.75	1.50	32.45	72.60	2390.09	20.67	20.67	3.16	20.91	8.70	0.05	MWD	6-axis
70	2447.71	1.48	41.38	56.96	2447.03	21.85	21.85	4.05	22.23	10.50	0.04	MWD	6-axis
71	2710.00	1.48	41.38	262.29	2709.23	26.94	26.94	8.53	28.26	17.57	0.00	MWD	PROJ

## Motor Run Summary





## DOWN-HOLE MOTOR RUN REPORT

Ft, Mt

Motor Size : 9 5/8"

Serial No : 03400

Run No : 1

BHA No: 3

Mt

Company	Woodside	Well	Thylacine-1	Slot	1	Field	Otway Basin
Operator	Diamond Offshore	Rig	Ocean Bounty	Engineer	Joe Musial	Date	8-May-01
		Location	Bass Strait	Country	Australia		

Bit Size	Make	Type	IADC	Jets	Jets	Jets	Jets	TFA
12 1/4"	Hughes	BD535		7 x 12				#VALUE!
IADC CUTTING STRUCTURE								
Inner Row	Outer Row	Dull Char'	Location	Brq/Seals	Gauge	Others	Reason for Trip	

Motor Made By	Size	Model / Type	Rotor/Stator	Serial No	Hsq Stab OD	° Bent Hsq	° Bent Sub	
Anadrill	9 5/8"	A962 GT	7:8	3400	12 1/8"	n/a	n/a	
Type	1 = Straight; 2 = Steerable; 3 = Double Bend		Stator Ser N°	3462	Rotor Ser N°	2107	IADC Drlg Cmt. W & R	2.3
1			IADC Drlg Hrs	n/a	IADC Circ Hrs	n/a	Total Motor Circ Hrs	44.6

Purpose of Run	Performance drill 12.14" section to casing depth
----------------	--

<b>BHA</b> PDC Bit A962 Motor Float Sub / XO Roller Reamer Monel Roller Reamer 8 x 8" DC's 1 x 8" Drilling Jars 2 x 8" DC's XO 15 x HWDP	Surveys	MD IN	N/A	Inclin	-	Azim	-
		MD OUT	N/A	Inclin	-	Azim	-
	Flow Rate	Off Bttm PSI	On Bttm PSI	RPM	WOB		
	GPM				Klbs		
	750-900	2900	3150	40-130	15-27		
	Mud Type	Aquadrill Plus	Mud Wt	11.2	Mud Grad'	0.5824	Vis
PV	31	Filtrate	2.8	% Solids	12.0	Aniline Pt	-
YP	43	% Oil	n/a	% Sand	0.25	Circ Temp	49 C
Depth In	752m	Depth Out	1855m	Inter'l Drld	1103m		
Date In	8-May-01	Date Out	11-May-01	ROP	35.4m/hr		
Time In	23:13	Time Out	3:00	Time BRT	-	Hrs	

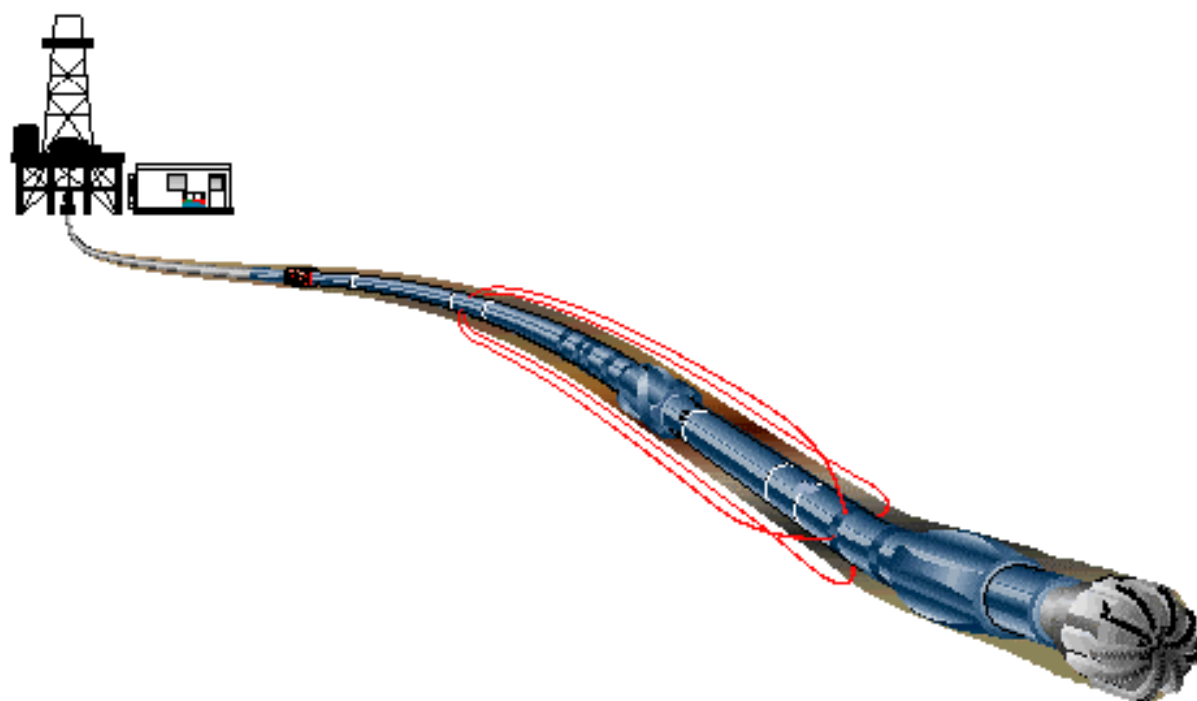
FAILURE?	No	Slide Mts	-	Previous Hrs	0.0	Cumulative Hrs	0.0
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Remarks / Failure Report.	Did Motor Stall	Bearing Play
1) Motor drained and checked at surface.	No Yes	In 1mm
	Slide Rty	Out 2mm
NB : Top Drive Rig	- 2	Condition
		Good

Client Signature :

Engineers Signature :

## Bit Run Summary



## MWD/LWD BIT RUN SUMMARY

TA-1027-F

PAGE 1 OF 2

JOB NUMBER <b>ASQ-01</b>	COMPANY REP. <b>D.Bell</b>	DATE IN <b>13-May-01</b>	DATE OUT <b>15-May-01</b>	MWD RUN NO. <b>1</b>	LWD RUN NO. <b>1</b>	RIG BIT RUN NO. <b>3</b>	CELL MGR. <b>A.Strahan</b>												
COMPANY <b>Woodside Energy Limited</b>		HOLE DEPTH - FROM <b>1855</b>		TO <b>2165</b>		COLLAR SIZE M10 <b>6 3/4"</b>   ARC <b>6 3/4"</b>   ADN <b>-</b>													
RIG NAME <b>Diamond Offshore Ocean Bounty</b>		DRIFT - FROM <b>2.09</b>		TO <b>2.46</b>		LAST CASING SIZE <b>9 5/8"</b>   DEPTH <b>1849.5m</b>													
WELL NAME <b>Thylacine-1</b>		AZIMUTH - FROM <b>27.6</b>		TO <b>21.4</b>		BIT MFG/MODEL/IADC CODE <b>Hughes / MCH08 / 1905297</b>													
LOCATION <b>Otway Basin Permit No. T/30P</b>		HOLE SIZE <b>8.5"</b>		WATER DEPTH/AIR GAP <b>101.4/25.0 m</b>		DOWNHOLE MOTOR TYPE/SIZE/SN <b>n/a</b>													
FRAME FORMAT <b>Rot.MVC/ARC/APWD</b>	MAG DEC/GRID CONV: <b>11.08 / 1.2</b>	T/F ARC <b>n/a</b>	T/F ANGLE <b>n/a</b>	BENT HOUSING ANGLE <b>n/a</b>		PUMPING HOURS <b>23.9</b>	FT/M DRILLED <b>310</b>												
BIT-TO-SURVEY <b>12.83</b>	MODULATOR GAP <b>0.08</b>	BENT SUB ANGLE <b>n/a</b>		TRANS FAIL <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		RT TRANS HOURS <b>23.9</b>	RT TRANS FT/M <b>310</b>												
BIT TO SLICK PIN <b>10.48</b>	BIT TO MD RES/GR/APWD <b>3.75/3.83/3.14</b>	TUR RPM/FLOW MIN <b>4726</b>   <b>630</b>		TUR RPM/FLOW MAX <b>4765</b>   <b>645</b>		LWD REAM HOURS <b>0.0</b>	LWD REAM FT/M <b>0.0</b>												
.83 CONE LOCK <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO GAUGE		PUMP OUTPUT/TYP <b>4.3gal.</b>   <b>TRI</b>		JETS/TFA <b>4x16 / 0.785 in<sup>2</sup></b>		LWD DRILL HOURS <b>17.6</b>	LWD DRILL FT/M <b>310</b>												
IADC CUTTING STRUCTURE		LOCATION <b>A</b>	B BRNG/SEALS <b>X</b>	G GAUGE 1/16" <b>In</b>		REMARKS <b>O.C. 2xCT</b>	REAS. PULLED <b>CP</b>												
I.R. <b>1</b>   O.R. <b>1</b>   D.C. <b>WT</b>		SOFTWARE VERSION		LWD BRT HRS. <b>42.5</b>															
ADV <b>-</b>	SPM <b>id6.1c_03</b>	IDEAL <b>id6.1c_03</b>	M-10 <b>6.1B</b>	ARC <b>6.3B</b>	ADN <b>-</b>	ISON <b>-</b>													
MWD		PUMP HOURS		LWD		PUMP HOURS		REALTIME		RECORDED									
CODE	PFX	SN	START	CUM	CODE	PFX	SN	START	CUM	HRS	FAIL	FT/M	HRS	FAIL	FT/M				
MDC	AB	066	0	24	ARC6		087	0	24	ARC GR	24	N	310	45	N	310			
MMA	BB	412	0	24						ARC RES	24	N	310	45	N	310			
MEC	BB	612	0	24	APWD		198145	0	24	ARC APWD	24	N	310	45	N	310			
MTA	BB	570	0	24						DWOB									
				24						DTOR									
MVC	AA	098	0	24						MWD D&I	24	N	310	45	N	310			
				24						MVC	24	N	310	45	N	310			
MEXD		206	0	24															
										CDR GR	0	N	0	0	N	0			
										CDR RES	0	N	0	0	N	0			
										NEUT									
										DENS									
										DSS		DLS	DRS	ARC	ADN				
										DSW		DLW	DRW	DTS	DTW	GST			
										READ - OUT - PORT TO BIT									
										M-10	10.48	ARC	4.97	ADN	-				
										CHECK SHOT TYPE:									
										DEPTH:		INCL:		AZI:					
OPERATING CONDITIONS																LCM			
AVG ROP <b>17.6 m</b>		AVG RPM <b>120</b>		AVG PP <b>3850</b>		AVG GPM <b>640</b>		END VIS <b>73 sec</b>		END MUD WT. <b>1.26 sg</b>		END MUD RES. <b>0.084</b>		MUD ADDITIVES		LCM			
BIT/SEC / FREQ <b>6.0/24 Hz</b>		MAX CIRC TEMP <b>74</b>		AVG WOB <b>10</b>		AVG TORQ <b>4</b>		MAX MWD SHK <b>Level 1</b>		MAX SHK DUR. <b>-</b>		TDH SHOCK <b>48</b>		<input type="checkbox"/> LCM <input type="checkbox"/> HEMATITE <input type="checkbox"/> TYPE: <input type="checkbox"/> BEADS <input type="checkbox"/> GILSONITE <input type="checkbox"/> SIZE: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> BARITE <input type="checkbox"/> CONC: lb/bbl					
MUD <input type="checkbox"/> F-H2O <input type="checkbox"/> L-LIG <input type="checkbox"/> O-OIL% <input type="checkbox"/> S-SALT H2O		MUD CLEAN <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SAND % <b>1.5</b>		SOLID % <b>11.5</b>		BHA <input type="checkbox"/> B-BUILD <input type="checkbox"/> M-MOTOR <input type="checkbox"/> S-STEERABLE		BHA TYPE <input type="checkbox"/> H-PACKED HOLE MILL <input type="checkbox"/> P-PENDULUM <input type="checkbox"/> X-LOGGING									
TURBINE CONFIGURATION <b>400 - 800</b>		JAMMING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TOOL JAMMING TIME: 0 MINS.		SYNC TIME <b>-</b>		BIT <input type="checkbox"/> D-DIAMOND <input type="checkbox"/> P-PDC <input type="checkbox"/> A-PDC-A <input type="checkbox"/> MOD <input type="checkbox"/> IMPULSE <input type="checkbox"/> M3		BIT TYPE <input type="checkbox"/> I-INSERT <input type="checkbox"/> M-MILL TOOTH <input type="checkbox"/> X- <input type="checkbox"/> TYPE <input type="checkbox"/> S-SINUSOIDAL <input type="checkbox"/> M10									
COLLAR <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> SURFACE <input type="checkbox"/> NONE <input type="checkbox"/> OTHER <input type="checkbox"/> DOWNHOLE		PRES INC AT FAILURE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FLOAT SUB <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		LOST RIG TIME DUE TO MWD <b>-</b> HRS.		SURFACE SYSTEM FAILURE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TRIP TERMINATION DUE DIRECTLY TO MWD <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		CLIENT INCONVENIENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SURFACE VIBRATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		BHA VIBRATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SURFACE SCREEN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

## SUMMARY

Good signal from the MWD for real-time logging data, minimal shocks recorded and good quality recorded mode logging data. Plugged by intermittent and sudden signal

losses while on bottom drilling due to surface noise (mud pumps). When this occurred the situation was easily resolved, pickup off bottom, cycle pumps and the signal

returned. The problem disappeared during the last 3 hours of the run, however, the company man request that we pickup the backup MWD tool for run 2.

DATE	TIME	DEPTH	COMMENTS						BHA DESCRIPTION				
13-May-01	15:59	Surface	ARC initilised. Config. GR/2MHz/400KHz 5secs.						ITEM	LENGTH	OD	ID	CONN
			342 memory Fill hours.						PDC Bit	0.29	8.5	-	4 1/2 Reg
	17:00	Surface	Makeup BHA.						DOG Sub	0.18	8.5	2.25	4 1/2 Reg
	18:15	Surface	SHT at 500gpm.						Bit Sub	0.92	6.5	Float	4 1/2 IF
14-May-01	00:30	1821m	Drill out float and shoe.						X/O	0.35	6.75	3.5	4 1/2 IF
	04:20	1855m	Drilling new formation.						ARC6	5.48	6.75	3.5	5 1/2 FH
	06:30	1859m	Circulate hole clean, conduct FIT.						ILS	1.48	6.75	3.5	5 1/2 FH
	07:09	1859m	Drilling new formation.						X/O	0.46	6.75	3.5	5 1/2 FH
	10:30	1880m	Rm=0.084, Rmf=0.0724, Rmo=0.1286 at 28degC.						MWD	7.49	6.75	3.5	5 1/2 FH
	11:00	1891m	MWD demod. (SPT1&2 signal strength 2.5 & 1psi)						XO	0.49	6.75	3.5	4 1/2 IF
			unable to decode on SPM due to massive uphole						Roll.Reamer	1.82	6.75	3.5	4 1/2 IF
			harmonics. The effects were instant, but easily						PBL Sub	2.47	6.75	3.5	4 1/2 IF
			fixed by picking up off bottom, cycle pumps.						6 1/2 DC	9.36	6.75	3.5	4 1/2 IF
			Flowrate was 675gpm. Status word on MWD						Stab.	1.62	6.75	3.5	4 1/2 IF
			and ARC both zero. Drill ahead with 640gpm.						12x6 1/2 DC	112.05	6.75	3.5	4 1/2 IF
			Lost 2m of RT data. SPT 1&2 signal strength						Jars	9.67	6.75	3.5	4 1/2 IF
			while drilling prior to demod . problems						2x6 1/2 DC	18.75	6.5	2 13/16	4 1/2 IF
			is much stronger, on average 8psi and 3psi for						15xHWDP	136.78	6.5	2 13/16	4 1/2 IF
			SPT1&2 respectively.										
	12:00	1910m	Situation happened several more times, but										
			immediately cycled pumps and regained signal										
			quality before continuing ahead. Cause unknown										
			but suspect pumps/lines problem at surface.										
	22:10	2030m	Continue to pickup and cycle pumps due to										
			problems with demodulation. Occurences of										
			problem at 14:30, 16:30, 17:00, 17:30, 20:00, 20:30,										
			21:00, 21:30, 22:10, 23:19, 1:20, 2:20, 3:16, 4:30.										
			Flowrate steady between 630-665gpm.										
15-May-01	05:10	2131m	Sudden improvement in signal quality. This was										
			associated with reduction in pump harmonics										
			after a connection. No more demod. Problems.										
	07:10	2165m	Reached coring point. Circulate bottoms up										
			and POOH.										
	13:20	Surface	Download ARC data while in RT, place magnet										
			in ROP and rack back in derrick.										
									TOTAL				
									LENGTH	309.66			
STABILIZER DESCRIPTION		DISTANCE	BLADE	BLADE	BLADE	GAUGE	GAUGE	GAUGE	BHA DATA				
		MID PT. TO BIT	TYPE	LENGTH	WIDTH	LENGTH	IN	OUT	PREDICTED BHA TENDENCY				
DATE	FIELD ENGR	PRESENT DEPTH	AVERAGE ROP (M/HR)	AVERAGE S.P. PRS. (PSI)	DESURGER CHG. (PSI)		TUR RPM AT GPM		AVERAGE ROTARY (RPM)	SHOCK LOG			
					#1	#2				CY-1	TCY-1	MAX SHOCK	TDH
14-May-01	LM	1864	8.1	2643	1000	1000	-	407	80	-	-	-	10
14-May-01	AS	1920	12	3805	1000	1000	4765	645	125	-	-	-	21
14-May-01	LM	2042	43	3947	1000	1000	4765	639	118	-	-	-	38
15-May-01	LM	2088	24	3818	1000	1000	4726	630	123	-	-	-	48
FINAL													
TIME	AVG/MAX DWOB (K lbs)	AVG/MAX SWOB (K lbs)	AVG/MAX DTOR (K lbs)	AVG/MAX STOR (K lbs)	FRIC	DRAG UP/ DOWN	MUD WEIGHT (SG)	MUD VIS (SEC)	Rm OHM/M @ TEMP	SIGNAL STRENGTH (MV) (PSI)		NOISE MARGIN	
07:50	-	10	-	4	-	-	1.26	-	n/a	-		-	
13:45	-	8	-	4	-	-	1.25	62	n/a	8		85	
23:00	-	18	-	4	-	-	1.26	-	n/a	6.2		80	
02:41	-	12	-	3	-	-	1.26	-	n/a	6.7		80	
FINAL													

## MWD/LWD BIT RUN SUMMARY

TA-1027-F

PAGE 1 OF 2

JOB NUMBER <b>ASQ-01</b>	COMPANY REP. <b>D.Bell</b>	DATE IN <b>16-May-01</b>	DATE OUT <b>19-May-01</b>	MWD RUN NO. <b>2</b>	LWD RUN NO. <b>2</b>	RIG BIT RUN NO. <b>5</b>	CELL MGR. <b>A.Strahan</b>																								
COMPANY <b>Woodside Energy Limited</b>		HOLE DEPTH - FROM <b>2201</b>		TO <b>2710</b>		COLLAR SIZE M10 <b>6 3/4"</b>   ARC <b>6 3/4"</b>   ADN <b>-</b>																									
RIG NAME <b>Diamond Offshore Ocean Bounty</b>		DRIFT - FROM <b>2.46</b>		TO <b>1.48</b>		LAST CASING SIZE <b>9 5/8"</b>   DEPTH <b>1849.5m</b>																									
WELL NAME <b>Thylacine-1</b>		AZIMUTH - FROM <b>21.4</b>		TO <b>41.4</b>		BIT MFG/MODEL/IADC CODE <b>Hughes / MCH08 / 1905297</b>																									
LOCATION <b>Otway Basin Permit No. T/30P</b>		HOLE SIZE <b>8.5"</b>		WATER DEPTH/AIR GAP <b>101.4/25.0 m</b>		DOWNHOLE MOTOR TYPE/SIZE/SN <b>n/a</b>																									
FRAME FORMAT <b>Rot.IWOB/ARC/APWD</b>	MAG DEC/GRID CONV: <b>11.08 / 1.2</b>	T/F ARC <b>n/a</b>	T/F ANGLE <b>n/a</b>	BENT HOUSING ANGLE <b>n/a</b>		PUMPING HOURS <b>45.5</b>	FT/M DRILLED <b>509</b>																								
BIT-TO-SURVEY <b>12.82</b>		MODULATOR GAP <b>0.08</b>		BENT SUB ANGLE <b>n/a</b>		TRANS FAIL <input type="checkbox"/> yes <input checked="" type="checkbox"/> no																									
RT TRANS HOURS <b>45.5</b>		RT TRANS FT/M <b>565</b>		LWD REAM HOURS <b>2.6</b>		LWD REAM FT/M <b>56</b>																									
BIT TO SLICK PIN <b>10.47</b>		BIT TO MD RES/GR/APWD <b>3.74/3.82/3.13</b>		TUR RPM/FLOW MIN <b>3101</b>   <b>580</b>		TUR RPM/FLOW MAX <b>3242</b>   <b>600</b>																									
.83 CONE LOCK TEETH <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		GAUGE <b>4.3gal.</b>		PUMP OUTPUT/TYPE <b>TRI</b>		JETS/TFA <b>4x12 / 0.442 in<sup>2</sup></b>																									
IADC CUTTING STRUCTURE I.R. <b>2</b>   O.R. <b>2</b>   D.C. <b>WT</b>		LOCATION <b>A</b>		B BRNG/SEALS <b>X</b>		G GAUGE 1/16" <b>1/16</b>																									
REMARKS <b>No</b>		REAS. PULLED <b>TD</b>		BOT HRS <b>25.0</b>		LWD BRT HRS. <b>68.8</b>																									
SOFTWARE VERSION ADV <b>-</b>   SPM <b>id6.1c_03</b>   IDEAL <b>id6.1c_03</b>   M-10 <b>6.1B</b>   ARC <b>6.3B</b>   ADN <b>-</b>   ISON <b>-</b>																															
MWD		PUMP HOURS		LWD		PUMP HOURS		REALTIME		RECORDED																					
CODE	PFX	SN	START	CUM	CODE	PFX	SN	START	CUM	HRS	FAIL	FT/M	HRS	FAIL	FT/M																
MDC	AC	Y752	0	46	ARC6		087	24	70	ARC GR	46	N	565	71	N	565															
										ARC RES	46	N	565	71	N	565															
MEC		435	0	46	APWD		198145	24	70	ARC APWD	46	N	565	71	N	565															
				46						DWOB	46	N	565	71	N	565															
MGD			0	46						DTOR	46	N	565	71	N	565															
				46						MWD D&I	46	N	565	71	N	565															
MEXD				46						MVC	24	N	310	45	N	310															
			0	46						MWD D&I	24	N	310	45	N	310															
										CDR GR	0	N	0	0	N	0															
										CDR RES	0	N	0	0	N	0															
										NEUT																					
										DENS																					
										DSS		DLS		DRS		ARC															
										DSW		DLW		DRW		DTS															
														DTW		GST															
READ - OUT - PORT TO BIT																															
										M-10	10.47	ARC	4.96	ADN	-																
CHECK SHOT TYPE:																															
										DEPTH:		INCL:		AZI:																	
OPERATING CONDITIONS																LCM															
AVG ROP <b>19.1 m</b>		AVG RPM <b>120</b>		AVG PP <b>4000</b>		AVG GPM <b>600</b>		END VIS <b>72 sec</b>		END MUD WT. <b>1.33 sg</b>		END MUD RES. <b>0.102</b>		MUD ADDITIVES		LCM															
BIT/SEC / FREQ <b>6.0/24 Hz</b>		MAX CIRC TEMP <b>81</b>		AVG WOB <b>18</b>		AVG TORQ <b>6</b>		MAX MWD SHK <b>Level 1</b>		MAX SHK DUR. <b>-</b>		TDH SHOCK <b>75</b>		LCM BEADS <b>NONE</b>		HEMATITE TYPE: <b>-</b>															
MUD TYPE <b>K-KCL</b>		F-H2O <b>M-LIM</b>		O-OIL% <b>P-POLYMER</b>		S-SALT H2O <b>X-HYDENS</b>		MUD CLEAN <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SAND % <b>0.0</b>		SOLID % <b>15.0</b>		BHA TYPE <b>-</b>		B-BUILD <b>H-PACKED HOLE MILL</b>															
TURBINE CONFIGURATION <b>400 - 800</b>		JAMMING <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TOOL JAMMING TIME: <b>0</b> MINS.		SYNC TIME <b>-</b>		BIT TYPE <b>D-DIAMOND</b>		P-PDC <b>-</b>		A-PDC-A <b>X-</b>		MOD TYPE <b>-</b>		IMPULSE <b>-</b>															
COLLAR <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> SURFACE <input type="checkbox"/> DOWNHOLE		NOISE PROBLEMS <input type="checkbox"/> NONE		PRES INC AT FAILURE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FLOAT SUB <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		LOST RIG TIME DUE TO MWD <b>0</b> HRS.		SURFACE SYSTEM FAILURE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TRIP TERMINATION DUE DIRECTLY TO MWD <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		CLIENT INCONVENIENCE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SURFACE VIBRATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO															
																BHA VIBRATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO															
																SURFACE SCREEN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO															

## SUMMARY

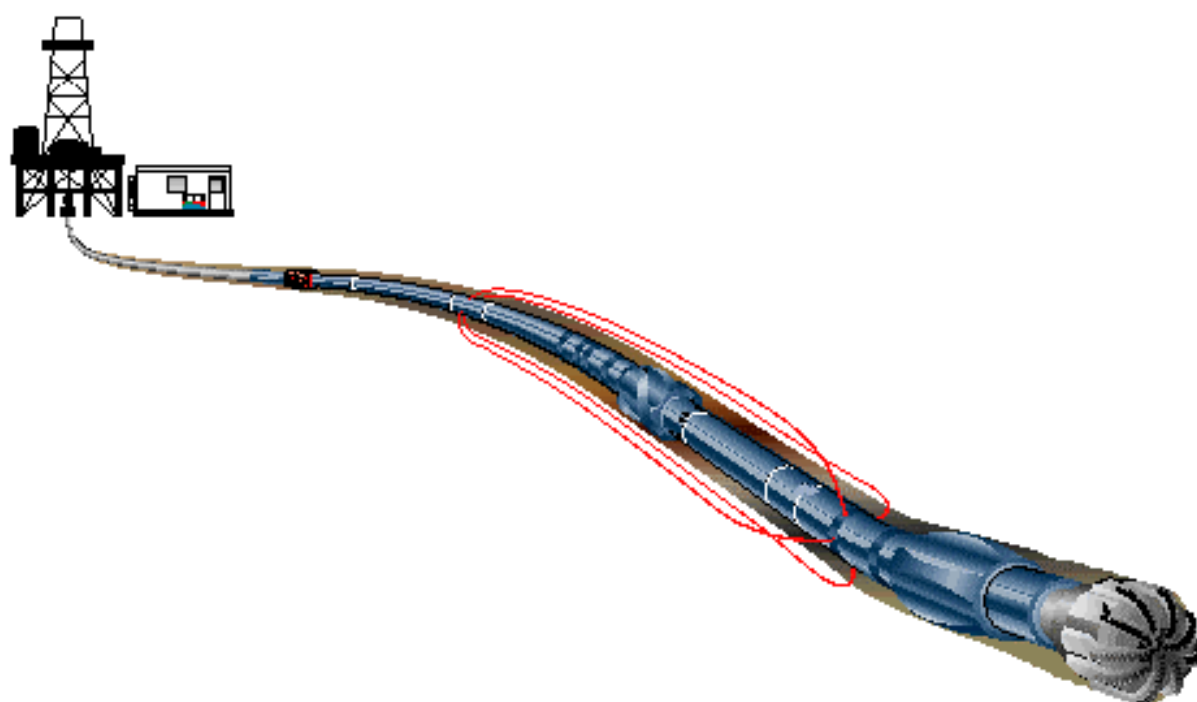
Good signal from MWD for real-time logging data, minimal shocks recorded and good quality recorded mode logging data.

Depth tracking failure at the start of run (during reaming section and the start of drilling).

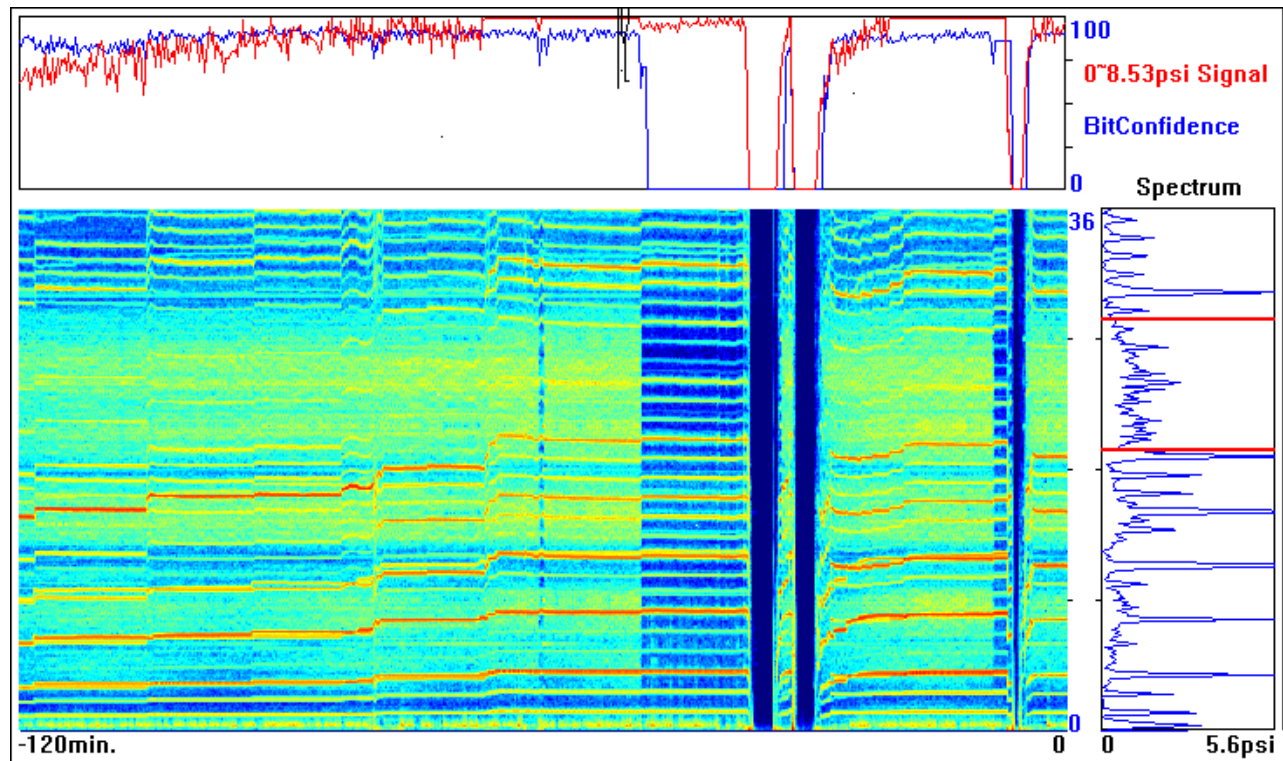
JOB NO.	MWD RUN NO.	LWD RUN NO.
ASQ-01	2	2

DATE	TIME	DEPTH	COMMENTS						BHA DESCRIPTION				
16-May-01	14:50	Surface	ARC initilised. Config. GR/2MHz/400KHz 5 secs.						ITEM	LENGTH	OD	ID	CONN
			342 memory Fill hours.						PDC Bit	0.28	8.5	-	4 1/2 Reg
	15:00	Surface	Layout MWD #066.						DOG Sub	0.18	8.5	2.25	4 1/2 Reg
	15:30	Surface	Make up BHA with MWD #Y752.						Bit Sub	0.92	6.5	Float	4 1/2 IF
	16:00	Surface	SHT at 500gpm OK - RIH.						X/O	0.35	6.75	3.5	4 1/2 IF
	21:05	2145m	Ream down to acquire LWD data over the cored						ARC6	5.48	6.75	3.5	5 1/2 FH
			section at 80-100 m/hr. Depth tracking OK, but						ILS	1.48	6.75	3.5	5 1/2 FH
			getting unmanagable ( gain of 2-3m per stand).						X/O	0.49	6.75	3.5	5 1/2 FH
17-May-01	00:15	2201m	On bottom drilling. Unable to track depth, start						MWD	7.48	6.75	3.5	5 1/2 FH
			troubleshooting cables, PSAM, surface						XO	0.48	6.75	3.5	4 1/2 IF
			software. Rig heave very large.						Roll.Reamer	1.82	6.75	3.5	4 1/2 IF
	02:30	2220m	Depth tracking worse, troubleshoot Geolograph.						PBL Sub	2.47	6.75	3.5	4 1/2 IF
	03:19	2230m	Geolograph fixed, reset depth at connection.						6 1/2 DC	9.36	6.75	3.5	4 1/2 IF
	11:00	2246m	Problems with rig heave, rig moving up to 5m,						Stab.	1.62	6.75	3.5	4 1/2 IF
			surveys very difficult due to heave.						12x6 1/2 DC	112.05	6.75	3.5	4 1/2 IF
	15:00	2390m	Having to make connection one single off						Jars	9.67	6.75	3.5	4 1/2 IF
			bottom (layout bottom single off each stand						2x6 1/2 DC	18.75	6.5	2 13/16	4 1/2 IF
			after it is drilled down) due to rig heave. Make						15xHWDP	136.78	6.5	2 13/16	4 1/2 IF
			connection with next stand in derrick, but										
			effectively drilling doubles.										
	18:00	2430m	Rm=0.110, Rmf=0.0832, Rmc=0.294 at 24degC.										
18-May-01	01:00	2520m	Reverted back to making connections as per										
			normal - rig heave subsiding.										
	01:35	2530m	Pump3 online. Data quality dropped from										
			90-100% to 60-70%, some corrected frames										
			and data spikes.										
	12:00	2540m	Rm=0.102, Rmf=0.086, Rmc=0.267 at 24degC.										
	19:40	2710m	TD. Unable to take survey due to pump noise.										
			Tried several times with different stroke rates										
			and using only one pump but unsuccessful										
			every time. SPM only able to lock onto logging										
			frame after 1-2min., but survey and utility frame										
			passed by this time. The situation at each										
			connection has been the same since pump3										
			brought back online.										
19-May-01	05:15	2710m	Tight hole during trip out - having to backream.										
			RIH to TD for wiper trip, circulate, POOH.										
	12:45	Surface	Download ARC memory data while in RT.						TOTAL				
			Layout tools.						LENGTH	309.66			
STABILIZER DESCRIPTION		DISTANCE	BLADE	BLADE	BLADE	GAUGE	GAUGE	GAUGE	BHA DATA				
		MID PT. TO BIT	TYPE	LENGTH	WIDTH	LENGTH	IN	OUT	PREDICTED BHA TENDENCY				
DATE	FIELD ENGR	PRESENT DEPTH	AVERAGE ROP (M/HR)	AVERAGE S.P. PRS. (PSI)	DESURGER CHG. (PSI)		TUR RPM AT GPM		AVERAGE ROTARY (RPM)	SHOCK LOG			
					#1	#2				CY-1	TCY-1	MAX SHOCK	TDH
17-May-01	LM	2353	27	3859	1000	1000	3242	600	120	-	-	-	25
17-May-01	AS	2450	10	4000	1000	1000	3203	600	122	-	-	-	-
18-May-01	LM	2561	22	4050	1000	1000	3183	600	110	-	-	-	75
18-May-01	LM	2606	15	4020	1000	1000	3164	580	100	-	-	-	75
18-May-01	AS	2670	5	3900	1000	1000	3101	580	110				75
FINAL													
TIME	AVG/MAX DWOB (K lbs)	AVG/MAX SWOB (K lbs)	AVG/MAX DTOR (K lbs)	AVG/MAX STOR (K lbs)	FRIC	DRAW UP/ DOWN	MUD WEIGHT (SG)	MUD VIS (SEC)	Rm OHM/M @ TEMP	SIGNAL STRENGTH (MV) (PSI)	NOISE MARGIN		
11:55	25	17	5	3	-	-	1.32	-	-	6.1	95		
17:15	13	15	4	5	-	-	1.32	72	0.110@24.1	4.5	96		
04:30	14	22	5	5	-	-	1.32	70	-	5.2	65		
08:20	18	24	7	4	-	-	1.32	70	-	5.2	65		
14:45	15	22	6	4	-	-	1.32	72	0.102@24.2	4.4	80		
FINAL													

## Failure Reports

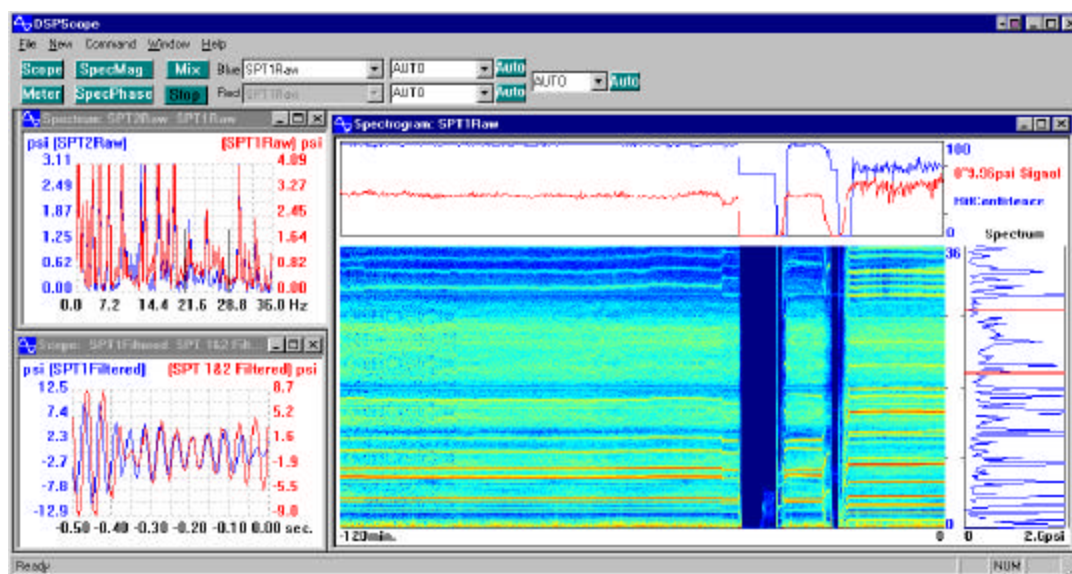


		<b>FAILURE REPORT</b>	
<b>Schlumberger</b>		<b>Anadrill</b>	
<b>FR No. : 1</b>			
<b>Company :</b>	Woodside Energy Ltd.	<b>Rig :</b>	Ocean Bounty
<b>Well :</b>	Thycaline 1	<b>District :</b>	ASQ
<b>Cell Mgr. :</b>	A.Strahan	<b>Service :</b>	MWD & ARC/APWD
		<b>Run No. :</b>	1
<b>EQUIPMENT &amp; SERIAL No. :</b> Powerpulse MEC 612-BB, Dhsftware 6.1B08, Ideal 6.1C-03			
<b>FAILURE DESCRIPTION &amp; SYMPTOMS (Include software version if applicable)</b>			
<p>Telemetry Mode: 24Hz / 6bps / BPSK</p> <p>While drilling formation the demodulation screen displayed a series of "zero's" for the d-points within the rotary frame, this was then followed by zero demodulation. However, DSPScope continued to show a signal being transmitted from the tool, and the SPT's also indicated this to be true. The SPM was unable to gain "sync", this resulted in pulling off bottom and cycling the pumps.</p> <p>Immediately prior to the failure the flow rate was approx. 690 gpm, mud weight 1.26 sg, and SPT1 was demodulating at approx. 12 psi. However, the flow rate had been increased considerably to accommodate the required drilling parameters, and this was reflected by an increase in both the TRPM and signal strength. At the time of failure the TRPM remained constant and therefore removed the possibility of a washout above the MWD tool, however, the signal strength deteriorated down to approx. 3 psi. The cross-correlation plots indicate pump noise, and the pump harmonics did encroach into the bandwidth at the time of failure and in general there was considerable noise across the entire range of frequencies. Additionally, on more than one occasion the subsequent failures coincided with a loss of pressure on the rig floor.</p>			
<b>Failure Group :</b>	<b>Failure Category :</b>	<b>Completed by :</b>	<b>Date :</b>
		Lee Muskett	14-5-01
<b>REMEDIAL ACTION ATTEMPTED ON LOCATION</b>			
<p>Initially forced retraining of the Equalizer Control was applied, but this failed to regain the sync. Therefore, the driller was instructed to pull off bottom and circulate the pumps, this instantly rectified the problem and the signal strength returned to normal. Additionally, the bandwidth was reduced to filter any pump harmonics that may develop on the lower side of the bandwidth, and the pressure of the Pulsation Dampeners was re-checked. Flow rates were also limited to 640 gpm. Periodically for the next 18 hours the same scenario would occur several times, each time it was corrected by cycling the pumps.</p> <p>At the end of the well Pump3 was given a service. It was found the pulsation dampener couldn't hold pre-charge (750psi) and had to be replaced.</p>			
		<b>Completed by :</b>	<b>Date :</b>
		Lee Muskett	14-5-01
<b>FAILURE ANALYSIS (For completion during R&amp;M repair)</b>			
<p>Incoming System Test performed upon receiving this tool: total pumping time=38.5 hours, total shocks=390 above 25G. No jamming recorded (physical or electrical) inside tool's Repair &amp; Maintenance memory</p> <p>Tool tested and is fully functional with no problems found.</p>			
<b>Failure Category :</b>		<b>Completed by :</b>	<b>Date :</b>
		Anthony Iemma	25-5-01
<b>ACTION FOLLOW UP (For completion by FSM / DTM)</b>			
<p>MWD worked OK throughout the run. Engineers recorded the pressure trace from the tool during the run showing that outside factors were influencing signal quality. Tests performed by technicians in the shop confirmed that tool is functioning OK. Tool's memory did not record any problems: only small number of shocks was present, no jamming recorded throughout the run, either physical obstruction e.g. cement chunks or electrical problem. This would have been recorded in the tool's memory as an anti-jamming operation when the tool attempts to restart. None of it was present, indicating that tool was operating OK throughout the run. Total operating time (tool operates only when pumps are on) agrees with the total circulating time recorded by Schlumberger and checked with mudloggers. This confirms that the tool was operational throughout the whole run without being off for more than the normal time during connections.</p> <p>Engineers to ensure that all surface rig equipment, mainly pumps and pump bladders are checked and operational and problems associated with nonconformity with this requirement communicated to Client and drilling contractor.</p>			
		<b>Completed by :</b>	<b>Date :</b>
		H. Spoljaric	29-5-01
<b>Always Distribute with BRS and/or BHA Summary :</b>		<b>CHECK LIST:</b>	
CELL File (Fax to town)		Anadrill Management notified ?	Y
R&M (R&M Diagnosis -> Maintenance file)		Equipment marked RONG ?	<input type="checkbox"/>
R&M (R&M Diagnosis -> CELL)		Full function test after repair ?	<input type="checkbox"/>
FSM (Action plan -> UNIT)		History card filled in ?	<input type="checkbox"/>
<b>NOTE :</b> Failure reports must also be sent in with failed equipment.		This FR returned to CELL ?	Y
		Any calibration data to attach ?	<input type="checkbox"/>



MWD #1  
NOISE PROBLEMS AFFECTING SIGNAL QUALITY

MWD#2  
NOISE PROBLEMS AFTER PUMP#3 WAS BROUGHT ONLINE TOWARDS END OF RUN



		<b>FAILURE REPORT</b>	
<b>Schlumberger</b>		<b>Anadrill</b>	

<b>FR No. : 2</b>			
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<b>Company :</b>	Woodside Energy Ltd.	<b>Rig :</b>	Ocean Bounty	<b>Failure date :</b>	16/17-5-2001
<b>Well :</b>	Thycaline 1	<b>District :</b>	ASQ	<b>Job No. :</b>	ASQ-01
<b>Cell Mgr. :</b>	A.Strahan	<b>Service :</b>	MWD & ARC/APWD	<b>Run No. :</b>	2
<b>EQUIPMENT &amp; SERIAL No. :</b> Geolograph					
<b>FAILURE DESCRIPTION &amp; SYMPTOMS (Include software version if applicable)</b>					
<p>Coring of the Upper Waare Formation was undertaken between 2165m and 2201m MD. BHA for the next run was then picked up and RIH, with the LWD tool being utilized to ream down through the cored section, and then to continue drilling/logging to TD. The failure of the Geolograph resulted in the loss of accurate RT data, and possibly RM data, between 2162m and 2227m (65m).</p> <p>The Geolograph was attached to the Top Drive, prior to the commencement of reaming. For the first 2 singles reamed the depth was checked and found to be tracking well, only 0.39m ahead of the drillers pipe tally. However, from this point onwards the depth, which was checked at each single, progressively became worse, tracking faster than the pipe tally (gaining depth). In addition to tracking fast, the problem was made seemingly more complex by the fact that the Geolograph would indicate stand lengths of 15-20m's instead of approx. 29m.</p>					
<b>Failure Group :</b>		<b>Failure Category :</b>		<b>Completed by :</b> Lee Muskett	
				<b>Date :</b> 17-5-01	
<b>REMEDIAL ACTION ATTEMPTED ON LOCATION</b>					
<p>The Geolograph wire was checked and its operation was found to be smooth and seemingly in good working order. The high winds were a concern, but similar conditions had previously been encountered and the unit had operated without any problems. Ideal was closed down and re-booted for the reason to check if the calibration file had become corrupted, but this had no effect, and the rest of the system continued to work fine. The depth continued to increase at an accelerated rate. The encoder emulator was attached to the UCS cable at the Geolograph; this worked without any problems and therefore eliminated both Ideal, PSAM and the UCS cabling from the problem. The Geolograph covers were removed and the encoder removed from revolving shaft that physically connects the pulley system to the encoder. The shaft that protrudes from the encoder was then rotated three times (3ft) and the distance noted on Ideal, this proved to be accurate and therefore eliminated the encoder from the problem. It was noted that the grub screw that connects the two shafts together was loose, and therefore that the two may well be moving independently of each other. The screw was re-fitted with loctite, and the Geolograph re-assembled. This proved to be the only problem, and depth was tracked accurately from that point onwards.</p>					
				<b>Completed by :</b> Lee Muskett	
				<b>Date :</b> 17-5-01	
<b>FAILURE ANALYSIS (For completion during R&amp;M repair)</b>					
N/A					
		<b>Failure Category :</b>		<b>Completed by :</b>	
				<b>Date :</b>	
<b>ACTION FOLLOW UP (For completion by FSM / DTM)</b>					
<p>This was a one-off incident. Engineers to ensure pre-job checks are performed including verifying proper operation of sensors. With this particular sensor, checks to include visual inspection to grab screw and applying fresh loctite to it as necessary, checking the wire line, air motor and its operation, motor's lubricant fluid levels, hoses and cables and most importantly, backup sensor and other critical parts (motor, line, air regulator) always to be available on site.</p>					
				<b>Completed by :</b> H.Spoljaric	
				<b>Date :</b> 25-5-01	
<b>Always Distribute with BRS and/or BHA Summary :</b>			<b>CHECK LIST:</b>		
CELL File (Fax to town)			Anadrill Management notified ? <input type="checkbox"/>		
R&M (R&M Diagnosis ➡⬆ Maintenance file)			Equipment marked RONG ? <input type="checkbox"/>		
R&M (R&M Diagnosis ➡⬆ CELL)			Full function test after repair ? <input type="checkbox"/>		
FSM (Action plan ➡⬆ UNIT)			History card filled in ? <input type="checkbox"/>		
			This FR returned to CELL ? <input type="checkbox"/>		
			Any calibration data to attach ? <input type="checkbox"/>		
<b>NOTE :</b> Failure reports must also be sent in with failed equipment.					