

18 Oct 2009

 From: John Mcgarrity/ Peter Dane
 To: Texas Richards

DRILLING MORNING REPORT # 18
Trefoil-2

Well Data							
Country	Australia	MDBRT	2244.0m	Cur. Hole Size	12.250in	AFE Cost	US\$33,167,745
Field	Trefoil	TVDBRT	2244.0m	Last Casing OD	13.375in	AFE No.	Trefoil-2
Drill Co.	Maersk	Progress	240.0m	Shoe TVDBRT	930.0m	Daily Cost	US\$580,035
Rig	Kan Tan IV	Days from spud	12.67	Shoe MDBRT	930.0m	Cumul. Cost	US\$15,300,915
Wtr Dpth(MSL)	69.0m	Days on well	17.13	FIT/LOT:	/ 15.15ppg		
RT-ASL(MSL)	26.0m	Planned TD MD	3221.0m	Current Op @ 0600	POOH for bit change. Depth at 06:00 hrs 2271m.		
RT-ML	95.0m	Planned TD TVDRT	3221.0m	Planned Op	Bit change. RIH and drill ahead to 2510m.		

Summary of Period 0000 to 2400 Hrs

Drilled 12.25" hole from 2004m to 2244m

HSE Summary

Events	Num. Events	Days Since	Descr.	Remarks
Abandon Drill	1	1 Day	Held abandon drill	
BOP Drill	2	0 Days	Picked off bottom and flow checked. Prepared for shut in.	
ER Exercises		1 Day	International Ship and Port Facility - Drill	
Fire Drill	1	6 Days	Main deck - Fire in rubbish container	
Permit To Work	19	0 Days	Permits administered	
Pre-tour Meeting	2	0 Days	Shift change meetings	
Safety Meeting	2	0 Days	Held 2 x General Safety Meeting	
STOP Card	38	0 Days	Number of STOP Cards submitted	

FORMATION

Name	Top
Upper Angahook	1162.00m
Angahook Volcanics Equiv	1331.00m
Lower Angahook	1569.00m
Demons Bluff	1850.00m
Eastern View Coal Measures	2105.00m

Operations For Period 0000 Hrs to 2400 Hrs on 18 Oct 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	D2	0000	0530	5.50	2104.0m	Drilled 12.25" hole from 2004m to 2104m. Average Parameters: ROP 16.60m/hr, RPM 100, WOB - 5-25k, flow rate 1000 gpm, SPP 2750 psi, Torque 8-14Klbs/ft.
P11	P	P3	0530	0600	0.50	2104.0m	Drilling motor stalled out. Flow checked well. 10bbls pit gain in active. Spaced out and checked for flow. Well static.
P11	P	D2	0600	0900	3.00	2130.0m	Drilled 12.25" hole from 2104m to 2130m. Average Parameters: ROP 8.70m/hr, RPM 100, WOB - 5-25k, flow rate 1000 gpm, SPP 2750 psi, Torque 8-14Klbs/ft.
P11	TP (RE)	G11	0900	1200	3.00	2130.0m	Saver sub backed out on top of stand #65 during connection. Laid out top single and attempted to make up new saver sub. Not possible due to problems with PH85 pipe handler. Laid out single. Made up circulating head and rigged up surface lines. Investigated problems and repaired PH85 pipe handler while circulating and rotating string.
P11	TP (RE)	G11	1200	1300	1.00	2130.0m	Installed new saver sub.
P11	P	D2	1300	1800	5.00	2166.0m	Drilled 12.25" hole from 2130m to 2166m. Average Parameters: ROP 7.20m/hr, RPM 100, WOB - 5-20k, flow rate 1000 gpm, SPP 2780 psi, Torque 3-9Klbs/ft.
P11	P	P3	1800	1830	0.50	2166.0m	Flow checked well 5 bbls pit gain in active. Spaced out and checked for flow.

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	D2	1830	2400	5.50	2244.0m	Well static. Drilled 12.25" hole from 2166m to 2244m. Average Parameters: ROP 14.20m/hr, RPM 100, WOB - 5-17k, flow rate 1000 gpm, SPP 2780 psi, Torque 3-8Klbs/ft.

Operations For Period 0000 Hrs to 0600 Hrs on 19 Oct 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	D2	0000	0030	0.50	2246.0m	Drilled 12.25" hole from 2244m to 2246m. Average Parameters: ROP 14.20. m/hr, RPM 100, WOB - 5-17k, flow rate 1000 gpm, SPP 2780 psi, Torque 3-8Klbs/ft.
P11	TP (RE)	G11	0030	0130	1.00	2246.0m	Pop off went off on mud pump #2. Reset same.
P11	TP (RE)	G11	0130	0230	1.00	2246.0m	Piston not operating pump #1. Continued circulating with pump #3, whilst replacing pop off on pump #2 and piston on pump #1.
P11	P	D2	0230	0400	1.50	2271.0m	Drilled 12.25" hole from 2246m to 2271m. Average Parameters: ROP 16.60m/hr, RPM 100, WOB - 5-17k, flow rate 1000 gpm, SPP 2740 psi, Torque 3-8Klbs/ft.
P11	P	P1	0400	0430	0.50	2271.0m	Observed loss of 300 psi differential pressure, whilst adding premix to mud system. Closed standpipe valve and pressure tested all 3 mud pumps. Attempted to re-establish drilling parameters, no differential pressure observed on bottom.
P11	P	F4	0430	0600	1.50	2271.0m	Circulated hole clean.

Operations For Period Hrs to Hrs on
Phase Data to 2400hrs, 18 Oct 2009

Phase	Phase Hrs	Start On	Finish On	Cumul. Hrs	Cumul. Days	Max Depth
Mob/Demob(P1)	69.5	21 Sep 2009	04 Oct 2009	69.50	2.896	0.0m
Conductor Hole(P2)	46.5	04 Oct 2009	06 Oct 2009	116.00	4.833	155.0m
Conductor Casing(P3)	37	06 Oct 2009	08 Oct 2009	153.00	6.375	155.0m
Surface Hole(P4)	68	08 Oct 2009	11 Oct 2009	221.00	9.208	935.0m
Surface Casing(P5)	36	11 Oct 2009	12 Oct 2009	257.00	10.708	935.0m
BOPs/Risers(P6)	61.5	12 Oct 2009	15 Oct 2009	318.50	13.271	935.0m
Production Hole (1)(P11)	92.5	15 Oct 2009	18 Oct 2009	411.00	17.125	2244.0m

General Comments

00:00 TO 24:00 Hrs ON 18 Oct 2009

Operational Comments

Ditch Magnets: 24 hour metal recovery - 0 grams. Total for section - 50.0 grams.

WBM Data
Cost Today US\$ 2216

Mud Type:	KCl POLYMER	API FL:	4.8cc/30min	Cl:	40000mg/l	Solids(%vol):	3%	Viscosity	52sec/qt
Sample-From:	4	Filter-Cake:	1/32nd"	K+C*1000:	8%	H2O:	94%	PV	14cp
Time:	2150	HTHP-FL:	9.0cc/30min	Hard/Ca:	320mg/l	Oil(%):		YP	28lb/100ft²
Weight:	9.10ppg	HTHP-cake:	2/32nd"	MBT:	15	Sand:		Gels 10s	10
Temp:	43C°			PM:	0.6	pH:	9	Gels 10m	13
				PF:	0.4	PHPA:	2ppb	Fann 003	9
								Fann 006	11
								Fann 100	25
								Fann 200	34
								Fann 300	42
								Fann 600	56
Comment	Note: Cost is in AUD								

Bit # 3

Wear	I	O1	D	L	B	G	O2	R
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Bitwear Comments:

Size ("):	12.25in	IADC#	M432	Nozzles		Drilled over last 24 hrs		Calculated over Bit Run	
Mfr:	REED	WOB(avg)	13.00klb	No.	Size	Progress	240.0m	Cumul. Progress	1309.0m
Type:	PDC	RPM(avg)	100	8	13/32nd"	On Bottom Hrs	19.5h	Cumul. On Btm Hrs	45.1h
Serial No.:	222369	F.Rate	1000gpm			IADC Drill Hrs	19.0h	Cumul. IADC Drill Hrs	63.4h
Bit Model	RSX616M	SPP	2800psi			Total Revs	454000	Cumul. Total Revs	919027
Depth In	935.0m	HSI				ROP(avg)	12.31 m/hr	ROP(avg)	29.02 m/hr
Depth Out		TFA	1.037						

Bit Comment

BHA # 3							
Weight(Wet)	68340.00klb	Length	252.7m	Torque(max)	10000ft-lbs	D.C. (1) Ann Velocity	299fpm
Wt Below Jar(Wet)	36205.00klb	String	360000.00klb	Torque(Off.Btm)	6000ft-lbs	D.C. (2) Ann Velocity	0fpm
		Pick-Up	350000.00klb	Torque(On.Btm)	4000ft-lbs	H.W.D.P. Ann Velocity	196fpm
		Slack-Off	360000.00klb			D.P. Ann Velocity	196fpm

BHA Run Description

BHA Run Comment	Hours on drilling jars = 103.5 hrs.
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Equipment	Length	OD	ID	Serial #	Comment
Bit	0.30m	12.25in		222369	8x13 Jets
Mud Motor	9.22m	9.63in		963448	Ported float installed
String Stab	1.86m	12.25in	3.00in	701049	
LWD Tools	12.08m	8.00in			
NM Drill Collar	4.80m	8.00in		246906	
String Stab	1.88m	12.25in	3.00in	231931	
Drill Collar	84.74m	8.25in	2.88in		
Drilling Jars	9.68m	8.00in		17621339	
Drill Collar	18.63m	8.25in	2.88in		
X/Over Sub	1.09m	6.75in			
HWDP	141.54m	5.00in	3.00in		

Survey

MD (m)	Incl (deg)	Azim (deg)	TVD (m)	Vsec (deg)	N/S (m)	E/W (m)	DLS (deg/30m)	Tool Type
2050.74	0.6		2050.50	28.3	28.3	0.0	0.0	MWD
2080.19	0.6		2079.95	28.6	28.6	0.0	0.0	MWD
2102.20	0.7		2101.96	28.9	28.9	0.0	0.5	MWD
2138.04	0.7		2137.80	29.3	29.3	0.0	0.0	MWD
2195.19	0.6		2194.94	30.0	30.0	0.0	0.2	MWD

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Rig Fuel	m3	0	20	0	399.0
Drill Water	m3	0	0	0	440.0
Pot Water	m3	18	20	0	225.0
Brine	m3	0	7	0	66.0
Barite	MT	0	0	0	91.0
Baradefoam-W300	can	0	5	0	2.0
Barolift	boxes	0	0	0	18.0
Bentonite	MT	0	0	0	48.2
Caustic Soda	pail	0	19	0	7.0
Lime	sx	0	0	0	54.0
Soda Ash	sx	0	0	0	47.0
Shaker Screen 110	box	0	0	0	24.0
Shaker Screen 140	box	0	6	0	34.0
Shaker Screen 175	box	0	0	0	24.0
Shaker Screen 50	box	0	0	0	-8.0
Shaker Screen 210	box	0	0	0	24.0
Sodium Bicarbonate	25kg sx	0	0	0	39.0
Rig Fuel	m3	0	0	0	561.0
Drill Water	m3	0	0	0	266.0
Potable Water	m3	0	0	0	208.0

Pumps

Pump Data - Last 24 Hrs								Slow Pump Data									
No.	Type	Liner (in)	MW (sg)	Eff (%)	SPM (SPM)	SPP (psi)	Flow (gpm)	Depth (m)	SPM1 (SPM)	SPP1	Flow1(gpm)	SPM2 (SPM)	SPP2 (psi)	Flow2 (gpm)	SPM3 (SPM)	SPP3 (psi)	Flow3 (gpm)

Pumps																	
Pump Data - Last 24 Hrs								Slow Pump Data									
1	Continental Emsco	6.50	1.09	97	80	1000	330	1581.0	30	150	150	40	200	200	50	260	250
2	Continental Emsco	6.50	1.09	97	80	1000	330	1581.0	30	200	160	40	190	200	50	240	250
3	Continental Emsco	6.50	1.09	97	80	1000	330	1581.0	30	200	150	40	250	200	50	300	260

Casing			
OD	LOT / FIT	Csg Shoe (MD/TVD)	Cementing
30 "	/	153.00m / 153.00m	30" Cement Job: Pumped 50 bbls spacer ahead. Mixed 260 bbls of 15.8ppg (53 MT) class G cement with 155 bbls of seawater. Displaced with 72.4 bbls of seawater.
13.38	/	930.00m / 930.00m	13 3/8" Cement Job: Pumped 50 bbls of spacer ahead. Mixed 436 bbls (35 MT) of 11.5 ppg lead cement with 368 bbls of mix water. Mixed 67 bbls (14 MT) of 15.8 ppg tail cement with 40 bbls of mix water. Displaced with 412 bbls of seawater.
13.38	/	930.00m / 930.00m	

Personnel On Board	
Company	Pax
ADA	6
Maersk	43
GRN	1
OMS	17
Geoservices	6
Halliburton Cementers	2
Haliburton Directional Drilling	1
Halliburton	3
Halliburton (Baroid)	2
Fugro ROV	3
Dril-Quip	2
Swaco	1
PCS	6
Others	3
Total	96

Mud Volumes, Mud Losses and Shale Shaker Data				Engineer : MikeLawrance / Kosta Georgiou				
Available	Losses	Equipment	Description	Mesh Size	Comments			
2817.0bbl	173.0bbl	Shaker 1	Brandt VSM 300	20 top/50bottom				
214.0bbl	Downhole	Shaker 2	Brandt VSM 300	20 top/50bottom				
200.0bbl	Surf+ Equip	Shaker 3	Brandt VSM 300	20 top/50bottom				
1053.0bbl	Dumped	Shaker 4	Brandt VSM 300	20 top/50bottom				
53.0bbl	De-Gasser							
1297.0bbl	De-Sander							
Kill	De-Silting Centrifuge	25.0bbl						

Marine									
Weather on 18 Oct 2009							Rig Support		
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Period	Anchors	Tension (klb)
10.0nm	12kn	263.0deg	1025.0mbar	9C°	1.2m	263.0deg	3s	1	267.0
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Period	Weather Comments		2	126.0
317.0deg	240000.00klb	103636.00klb	1.5m	263.0deg	5s			3	135.0
Comments								4	201.0
								5	134.0
								6	121.0
								7	182.0
								8	195.0
Vessel Name	Arrived (Date/Time)	Departed	Status		Bulks				

(Date/Time)				Item	Unit	Used	Quantity
Far Scimitar	08:30 hrs 13/10/09	08:45 hrs 17/10/09	Alongside south wharf.	Rig Fuel	M3		557
				Potable Water	M3		540
				Drill Water	M3		196
					t		55
				Barite	t		0
				Bentonite	t		0
				Brine	M3		165
Far Fosna	06:00 hrs 17/10/09		Standby Rig	Rig Fuel	M3		353
				Pot Water	M3		472
				Drill Water	M3		582
				Bentonite	t		42
				Barite	t		48
					t		130
				Brine	M3		130