

19 Oct 2009

 From: John Mcgarrity/ Peter Dane  
 To: Texas Richards

**DRILLING MORNING REPORT # 19**  
**Trefoil-2**

Well Data							
Country	Australia	MDBRT	2271.0m	Cur. Hole Size	12.250in	AFE Cost	US\$33,167,745
Field	Trefoil	TVDBRT	2271.0m	Last Casing OD	13.375in	AFE No.	Trefoil-2
Drill Co.	Maersk	Progress	27.0m	Shoe TVDBRT	930.0m	Daily Cost	US\$520,084
Rig	Kan Tan IV	Days from spud	13.67	Shoe MDBRT	930.0m	Cumul. Cost	US\$15,820,999
Wtr Dpth(MSL)	69.0m	Days on well	18.13	FIT/LOT:	/ 15.15ppg		
RT-ASL(MSL)	26.0m	Planned TD MD	3221.0m	Current Op @ 0600	Prepare to make up 9 5/8" casing hanger and setback same.		
RT-ML	95.0m	Planned TD TVDRT	3221.0m	Planned Op	Make up 12.25" BHA and RIH to 2271m. Drill 12.25" hole to section TD at 2510m.		

**Summary of Period 0000 to 2400 Hrs**

Drilled 12.25" hole from 2244m to 2271m.  
 Circulated hole clean.  
 POOH to 13 3/8" casing shoe. Flow checked well.  
 POOH with BHA to 72m.

**HSE Summary**

Events	Num. Events	Days Since	Descr.	Remarks
Abandon Drill	1	2 Days	Held abandon drill	
ER Exercises		2 Days	International Ship and Port Facility - Drill	
Fire Drill	1	7 Days	Main deck - Fire in rubbish container	
Permit To Work	16	0 Days	Permits administered	
Pre-tour Meeting	2	0 Days	Shift change meetings	
Safety Meeting	2	1 Day	Held 2 x General Safety Meeting	
STOP Card	32	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 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 14.20m/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	Replaced piston on 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.
P11	U	G8	0600	1200	6.00	2271.0m	POOH from 2271m to 2161m. Observed 30k consistent overpull from 2148m to 2137m. Continued POOH back reaming tight spots from 2137m to 1669m.

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	U	D6	1200	1930	7.50	2271.0m	Back reamed at 50 rpm, 350 gpm from 1669m to 13 3/8" shoe at 930m.
P11	P	P3	1930	2000	0.50	2271.0m	Flow checked - well static. Pumped 40 bbls of 10.0 ppg slug.
P11	P	G8	2000	2200	2.00	2271.0m	POOH from 930m to BHA at 252m.
P11	P	P3	2200	2230	0.50	2271.0m	Flow checked well for 15 minutes prior to pulling BHA through BOP.
P11	P	G6	2230	2400	1.50	2271.0m	POOH with BHA from 252m to 72m.

**Operations For Period 0000 Hrs to 0600 Hrs on 20 Oct 2009**

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P11	P	G6	0000	0100	1.00	2271.0m	POOH with BHA from 72m to surface.
P11	P	G6	0100	0130	0.50	2271.0m	Tested mud motor at 700 gpm, 500 psi. Good test.
P11	P	G6	0130	0230	1.00	2271.0m	Broke out bit for inspection. IADC bit grade 1-1-BT-N-X-I-CT-PP. Checked all 12 1/4" stabilisers - Ok. Racked back stand. Halliburton MWD downloaded tool.
P11	P	G11	0230	0330	1.00	2271.0m	Serviced TDS.
P11	P	G5	0330	0530	2.00	2271.0m	Made up Halliburton SSR cement head stand and installed FOSV. Attempted to rack back in derrick on starboard side, no success. Racked back same on Port side in derrick.
P11	P	G5	0530	0600	0.50	2271.0m	Held JSA. Prepared to make up 9 5/8" casing hanger assembly.

**Operations For Period Hrs to Hrs on**
**Phase Data to 2400hrs, 19 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)	116.5	15 Oct 2009	19 Oct 2009	435.00	18.125	2271.0m

**General Comments**

00:00 TO 24:00 Hrs ON 19 Oct 2009

**Operational Comments**

Ditch Magnets: 24 hour metal recovery - 400 grams. Total for section - 450.0 grams.

**WBM Data**
**Cost Today US\$ 28298**

Mud Type:	KCI POLYMER	API FL:	4.2cc/30min	Cl:	44000mg/l	Solids(%vol):	3%	Viscosity	56sec/qt
Sample-From:	4	Filter-Cake:	1/32nd"	K+C*1000:	9%	H2O:	94%	PV	16cp
Time:	2045	HTHP-FL:	9.9cc/30min	Hard/Ca:	320mg/l	Oil(%):		YP	28lb/100ft <sup>2</sup>
Weight:	9.20ppg	HTHP-cake:	2/32nd"	MBT:	15	Sand:		Gels 10s	11
Temp:	30C°			PM:	0.2	pH:	9	Gels 10m	15
				PF:	0.3	PHPA:	2ppb	Fann 003	10
								Fann 006	12
								Fann 100	28
								Fann 200	38
								Fann 300	44
								Fann 600	60
Comment	Note: Cost is in AUD								

Bit # 3	Wear	I	O1	D	L	B	G	O2	R
Bitwear Comments:									
Size ("):	12.25in	IADC#	M432	<b>Nozzles</b>		<b>Drilled over last 24 hrs</b>		<b>Calculated over Bit Run</b>	
Mfr:	REED	WOB(avg)	13.00klb	No.	Size	Progress	27.0m	Cumul. Progress	1336.0m
Type:	PDC	RPM(avg)	100	8	13/32nd"	On Bottom Hrs		Cumul. On Btm Hrs	45.1h
Serial No.:	222369	F.Rate	1000gpm			IADC Drill Hrs	2.0h	Cumul. IADC Drill Hrs	65.4h
Bit Model	RSX616M	SPP	2800psi			Total Revs	454000	Cumul. Total Revs	1373027
Depth In	935.0m	HSI				ROP(avg)	N/A	ROP(avg)	29.62 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.

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		

**Bulk Stocks**

Name	Unit	In	Used	Adjust	Balance
Rig Fuel	m3	0	29	0	370.0
Drill Water	m3	0	74	0	366.0
Pot Water	m3	17	43	0	199.0
Brine	m3	0	0	0	66.0
Barite	MT	0	0	0	91.0
Baradefoam-W300	can	0	2	0	0.0
Barolift	boxes	0	0	0	18.0
Bentonite	MT	0	0	0	48.2
Caustic Soda	pail	0	0	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	0	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 (psi)	Flow1 (gpm)	SPM2 (SPM)	SPP2 (psi)	Flow2 (gpm)	SPM3 (SPM)	SPP3 (psi)	Flow3 (gpm)
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.

Casing			
OD	LOT / FIT	Csg Shoe (MD/TVD)	Cementing
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	44
GRN	4
OMS	15
Geoservices	4
Halliburton Cementers	2
Halliburton Directional Drilling	1
Halliburton	3
Halliburton (Baroid)	2
Fugro ROV	3
Dril-Quip	2
Swaco	1
PCS	6
Others	3
<b>Total</b>	<b>96</b>

Mud Volumes, Mud Losses and Shale Shaker Data				Engineer : MikeLawrance / Kosta Georgiou			
Available	2815.3bbl	Losses	161.6bbl	Equipment	Description	Mesh Size	Comments
Active	188.0bbl	Downhole	161.6bbl	Shaker 1	Brandt VSM 300	20 top/80bottom	
Mixing	350.0bbl	Surf+ Equip		Shaker 1	Brandt VSM 300	20 top/80bottom	
Hole	1171.3bbl	Dumped		Shaker 2	Brandt VSM 300	20 top/80bottom	
Slug	30.0bbl	De-Gasser		Shaker 2	Brandt VSM 300	20 top/80bottom	
Reserve	1076.0bbl	De-Sander		Shaker 3	Brandt VSM 300	20 top/80bottom	
Kill		De-Silting Centrifuge		Shaker 3	Brandt VSM 300	20 top/80bottom	
				Shaker 4	Brandt VSM 300	20 top/80bottom	
				Shaker 4	Brandt VSM 300	20 top/80bottom	

Marine									
Weather on 19 Oct 2009							Rig Support		
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Period	Anchors	Tension (klb)
10.0nm	12kn	34.0deg	1020.0mbar	12C°	0.6m	34.0deg	3s	1	239.0
Rig Dir.	Ris. Tension	VDL	Swell Height	Swell Dir.	Swell Period	Weather Comments		2	125.0
317.0deg	240000.00klb	143262.00klb	0.9m	34.0deg	5s			3	135.0
Comments								4	208.0
								5	141.0
								6	121.0
								7	192.0
								8	193.0

Vessel Name	Arrived (Date/Time)	Departed (Date/Time)	Status	Bulks			
				Item	Unit	Used	Quantity
Far Scimitar	08:30 hrs 13/10/09	08:45 hrs 17/10/09	Enroute to rig.	Rig Fuel	M3		545
				Potable Water	M3		533
				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	Item	Unit	Used	Quantity
				Rig Fuel	M3		342
				Pot Water	M3		469
				Drill Water	M3		582

				Item	Unit	Used	Quantity
				Bentonite	t		42
				Barite	t		48
					t		130
				Brine	M3		130

Helicopter Movement				
Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
1	Bristow Helicopters	09:07 hrs / 09:20 hrs	9 / 9	Crew Change