



# DRILLING MORNING REPORT # 40 Trefoil-2

**09 Nov 2009** From: Bryan Houston / Paul Leathem

To: Phil Stratford

Well Data							
Country	Australia	MDBRT	2633.0m	Cur. Hole Size	8.500in	AFE Cost	US\$33,167,745
Field	Trefoil	TVDBRT	2633.0m	Last Casing OD	9.625in	AFE No.	Trefoil-2
Drill Co.	Maersk	Progress	100.0m	Shoe TVDBRT	2520.0m	Daily Cost	US\$611,990
Rig	Kan Tan IV	Days from spud	34.67	Shoe MDBRT	2520.0m	Cumul. Cost	US\$28,144,003
Wtr Dpth(MSL)	69.0m	Days on well	39.13	FIT/LOT:	11.00ppg /		
RT-ASL(MSL)	26.0m	Planned TD MD	3221.0m	Current Op @ 0600	RIH with 8	1/2" drilling BH/	A #26.
RT-ML	95.0m	Planned TD TVDRT	3221.0m	Planned Op	Slipped and cut drill line. Performed SCRs. Flushed C&K lines. Drilled ahead 8 1/2" new hole.		

## Summary of Period 0000 to 2400 Hrs

Re-log from 2610m to 2629m. Drilled to 2633m. MWD tools failed to return any signal. Circulated bottoms up. Pumped out of hole to shoe. Performed flow check and pumped slug. Continued to POOH to surface. Downloaded tools and radio active source and racked back in mast. Drill floor maintenance taking place. Installed bracket for Geoservice and MWD line. Performed mast inspection. Fixed oil leak on top drive. Checked dolly rollers. Cleaned discharge strainers on mud pumps. Repaired drillers Totco readout panel. Laid out MWD tools from the mast. Picked up and made up MWD tools from the deck and RIH. Downloaded and tested MWD tools. Installed radioactive sources. Continued to make up and RIH 8 1/2" BHA to 89m.

HSE Summary		•		
Events	Num. Events	Days Since	Descr.	Remarks
Last BOP Test	05 Nov 2009			
Abandon Drill	0	2 Days	Held abandon Drill	
Emergency Drill	0	5 Days	Full Emergency drill performed.	
Fire Drill	0	2 Days	Main deck - Fire in Control room	
Flash Reports	1	0 Days	Dropped object from RBS	At the time of the incident the drill crew was folding back the Raised Back-up System (RBS) when a roughneck observed a spring loaded button drop approximately 15 ft off the RBS to the drill floor. The button dropped to the red zone of the drill floor which was clear of personnel as per procedure. Joule Energy = 9 joules. Synergi No. 398109 Flash Report #49
Permit To Work	11	0 Days	Permits administerd.	
Pre-tour Meeting	2	0 Days	Shift change meetings	
Safety Meeting	9	0 Days	Prejob safety meetings	1x Drilling dept safety meeting 1 x 3rd party safety meeting
STOP Card	41	0 Days	Number of STOP Cards submitted	
Trip / Kick Drill	1	0 Days	Trip Drill. 36 sec	Held while POOH

FORMATION	
Name	Тор
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 09 Nov 2009

Phse	Cls (RC)	Ор	From	То	Hrs	Depth	Activity Description
P17	TP (TP)	G15	0000	0100	1.00	2629.0m	Re-logged from 2610m to 2629m due to the MWD and Geoservices geolograph cables in the mast getting tangled and parting during the making of the previous connection.
P17	TP (TP)	G15	0100	0200	1.00	2629.0m	Made up connection at 2629m. MWD tools failed to return any signal. Attempted to recycle pumps and performed mode switch to reset tools.
P17	Р	D2	0200	0230	0.50	2633.0m	Drilled from 2629m to 2633m while continuing to troubleshoot MWD problems. All attempts failed.





Phse	Cls (RC)	Ор	From	То	Hrs	Depth	Activity Description
P17	TP (TP)	F4	0230	0330	1.00	2633.0m	Circulated bottoms up to clean well and allowed Geoservices to gather samples.
P17	TP (TP)	D7	0330	0430	1.00	2633.0m	Pumped out of hole to shoe from 2633m to 2520m.
P17	TP (TP)	G14	0430	0500	0.50	2633.0m	Performed flow check and pumped slug.
P17	TP (TP)	G8	0500	0930	4.50	2633.0m	Continued to POOH from 2520m to 403m.
P17	TP (TP)	G8	0930	1230	3.00	2633.0m	Flowchecked and POOH BHA to surface. Downloaded radio active source and racked back in mast.
P17	TP (RE)	G11	1230	1730	5.00	2633.0m	Performed drill floor maintenance. Performed mast inspection. Fixed oil leak on top drive. Checked dolly rollers. Cleaned discharge strainers on the mud pumps. Repaired drillers Totco readout panel. Installed bracket for Geoservices and MWD line.
P17	TP (TP)	G7	1730	2000	2.50	2633.0m	Laid out MWD tools from the mast. Dull bit grade = 0-1-WT-G-X-I-No-DTF.
P17	TP (TP)	G7	2000	2200	2.00	2633.0m	Picked up and made up MWD tools form the deck and RIH to 31m (Bit #5RR).
P17	TP (TP)	G7	2200	2300	1.00	2633.0m	Downloaded and tested MWD Tools. Installed radioactive sources.
P17	TP (TP)	G8	2300	2400	1.00	2633.0m	Continued to make up and RIH 8 1/2" BHA # 26 from 31m to 89m.

## Operations For Period 0000 Hrs to 0600 Hrs on 10 Nov 2009

Phse	Cls (RC)	Ор	From	То	Hrs	Depth	Activity Description
P17	TP (TP)	G8	0000	0100	1.00	2633.0m	Continud to pick up BHA and RIH to 175m.
P17	TP (TP)	G15	0100	0130	0.50	2633.0m	Performed shallow test on MWD tools @ 600gpm/1020psi - ok.
P17	TP (TP)	G8	0130	0200	0.50	2633.0m	Continued to make up and RIH BHA from 175m to 288m.
P17	TP (TP)	G8	0200	0600	4.00	2633.0m	RIH 8 1/2" BHA #26 on 5" DP. Monitored well on trip tank. Stopped and filled every 25 stands from 288m - 2520m.

## **Operations For Period Hrs to Hrs on**

Phase Data to 2400hrs, 09 Nov 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)	176.5	15 Oct 2009	22 Oct 2009	495.00	20.625	2520.0m
Production Casing(1)(P13)	359	22 Oct 2009	06 Nov 2009	854.00	35.583	2520.0m
Liner Hole (1)(P17)	85	06 Nov 2009	09 Nov 2009	939.00	39.125	2633.0m

## **General Comments**

00:00 TO 24:00 Hrs ON 09 Nov 2009

WBM Data				Cost Toda	y US\$ 16592	2			
Mud Type:	KCI	API FL:	4.7cc/30min	CI:	41000mg/l	Solids(%vol):	3%	Viscosity	68sec/qt
•	POLYMER	Filter-Cake:	1/32nd"	K+C*1000:	9%	H2O:	93%	PV VP	11cp 26lb/100ft <sup>2</sup>
Sample-From:	2	HTHP-FL:	10.5cc/30min	Hard/Ca:	375mg/l	Oil(%):		Gels 10s	10
Time:	21:30 hrs	HTHP-cake:	2/32nd"	MBT:	11	Sand:	.3	Gels 10m	12
Weight:	9.40ppg	TITTII -Cake.	2/02110					Fann 003	9
_				PM:	0.3	pH:	9	Fann 006	11
Temp:				PF:	0.25	PHPA:	2ppb	Fann 100	25
								Fann 200	32
Comment		Note: Cost is in	n AUD					Fann 300	37
								Fann 600	48





Bit # 5 RR				Wear		I	01		D	L	В	G	O2	R
				Bitwear 0	Comm	ents:								
Size ("):	8.50in	IADC#	M223		zzles		Dri	lled	over las	t 24 hrs	Ca	alculated	over Ri	t Run
Mfr:	SMITH	WOB(avg)	IVIZZO	No.	Size		Progr			. 24 1113		Progress	OVE: D	0.0m
	PDC	RPM(avg)		6		32nd"	-		m Hrs			On Btm F	Iro	0.0h
Type: Serial No.:	TX2104	F.Rate		6	14/	32Hu	IADC					IADC Dril		0.0h
Bit Model	MI616	SPP					Total					Total Rev	'S	0
Depth In	2633.0m	HSI					ROP	(avg	1)	N/A	ROP(av	vg)		0.00 m/hr
Depth Out		TFA	0.902											
Bit Comment		Re Run Bit	# 5	1										
Bit # 5				Wear		I	01		D	L	В	G	02	R
				Bitwear 0		0	1		WT	G1	X	I	NO	DTF
Size ("):	8.50in	IADC#	M223		zzles	ents:	Dri	lled	over las	t 24 hrs	Ca	alculated	over Bi	t Run
Mfr:	SMITH	WOB(avg)	6.60klb	No.	Size	<b>;</b>	Progr			100.0m		Progress		100.0m
Type:	PDC	RPM(avg)	100				-		m Hrs	5.5h		On Btm H	Irs	5.5h
Serial No.:	TX2104	F.Rate	712gpm				IADC			0.0		IADC Dril		0.0h
Bit Model	MI 616	SPP	2500psi				Total					Total Rev		0.011
	2503.0m	HSI	2300psi							8.18 m/hr			5	_
Depth In			0.000				ROP	(avg	1)	0.10111/11	ROP(av	vg)		18.18 m/hr
Depth Out	2633.0m	TFA	0.000											
Bit Comment		6x14/32 jets	3.											
BHA # 26		_												
Weight(Wet)	50000.00klb	Length		288	3.4m	Torque	e(max)	)			D.C. (1)	) Ann Velo	city	0fpm
Wt Below Jar(Wet)	25000.00klb	String				Torque	e(Off.B	3tm)			D.C. (2)	) Ann Velo	city	0fpm
		Pick-Up				Torque	e(On.B	3tm)			H.W.D.	P. Ann Ve	locity	0fpm
		Slack-Off									D.P. Ar	n Velocity	′	0fpm
BHA Run Description		8 1/2 Drilling	g BHA											
BHA Run Comment														
E	quipment		Lenç	gth C	DD	I	D		Serial	#		Comm	nent	
Bit					3.50in		2.25in		2104					
NB Stab					6.88in		3.25in		0172					
Gamma-Ray DM sub					3.25in 3.63in		3.00in 2.88in		222505 25744					
MWD					3.25in		00III 3.25in		2683					
Sonic 6					7.38in		3.00in		2755-06					
Pulser					3.81in		.88in		2842					
MWD			1.8	31m 7	7.13in		.88in	922	223063B	6				
8-1/2" String Stab					3.38in		81in		0802					
6 3/4" DC					6.75in		2.88in	118						
6 3/4" DC 6 3/4" DC					6.75in 6.75in		2.88in 2.88in	176						
6 3/4" DC					5.75in		00111 2.88in	119						
6 3/4" DC					6.75in		88in	176						
6 3/4" DC					6.75in		.88in	118						
6 3/4" DC					3.75in		.88in	175	59					
6 3/4" DC					6.75in		.88in	176						
Jar					6.50in		88in		602018					
6 3/4" DC			9.4	17m 6	3.75in	2	.88in	119	90					





Equipment	Length	OD	ID	Serial #	Comment
6 3/4" DC	9.29m	6.75in	2.88in	1766	
6 3/4" DC	9.45m	6.75in	2.88in	1183	
HWDP	141.13m	5.00in	3.00in		

BHA # 25						
Weight(Wet)	50000.00klb	Length	287.6m	Torque(max)	18000ft-lbs	D.C. (1) Ann Velocity
Wt Below Jar(Wet)	25000.00klb	String	330.00klb	Torque(Off.Btm)	4500ft-lbs	D.C. (2) Ann Velocity
		Pick-Up	340.00klb	Torque(On.Btm)	9000ft-lbs	H.W.D.P. Ann Velocity
		Slack-Off	320.00klb			D.P. Ann Velocity

BHA Run Description 8 1/2 Drilling BHA

#### BHA Run Comment

	1 2	0.0		0 : 1 "	
Equipment	Length	OD	ID	Serial #	Comment
Bit	0.28m	8.50in	2.25in	TX2104	
NB Stab	1.78m	6.88in	3.25in	700172	
Gamma-Ray	7.03m	8.25in	3.00in	90222557	
DM sub	2.79m	6.63in	2.88in	194443	
MWD	8.45m	8.25in	3.25in	90219755n212	
Sonic 6	6.72m	7.38in	3.00in	90227156-06	
Pulser	3.05m	6.81in	2.88in	203846-hoc	
MWD	1.83m	7.13in	1.88in	90223655B6	
8-1/2" String Stab	1.70m	8.38in	2.81in	700802	
6 3/4" DC	9.32m	6.75in	2.88in	1185	
6 3/4" DC	9.45m	6.75in	2.88in	1764	
6 3/4" DC	9.44m	6.75in	2.88in	1180	
6 3/4" DC	9.26m	6.75in	2.88in	1191	
6 3/4" DC	9.47m	6.75in	2.88in	1761	
6 3/4" DC	9.20m	6.75in	2.88in	1188	
6 3/4" DC	9.45m	6.75in	2.88in	1759	
6 3/4" DC	9.38m	6.75in	2.88in	1760	
Jar	9.91m	6.50in	2.88in	17602018	
6 3/4" DC	9.47m	6.75in	2.88in	1190	
6 3/4" DC	9.29m	6.75in	2.88in	1766	
6 3/4" DC	9.45m	6.75in	2.88in	1183	
HWDP	141.13m	5.00in	3.00in		

Bulk	Stocks

Bulk Stocks					
Name	Unit	In	Used	Adjust	Balance
Rig Fuel	m3	0	10	0	508.0
Drill Water	m3	39	15	0	691.0
Pot Water	m3	0	23	0	223.0
Brine	m3	90	0	0	161.0
Barite	MT	0	22	0	145.0
Baradefoam-W300	can	0	0	0	9.0
Barolift	boxes	0	0	0	17.0
Bentonite	MT	0	0	0	81.2
Caustic Soda	pail	0	1	0	12.0
Lime	sx	0	0	0	4.0
Soda Ash	sx	0	0	0	34.0
Sodium Bicarbonate	25kg sx	0	0	0	38.0
Shaker Screen 50	Screens	0	0	0	8.0
Citric Acid	Sacks	0	0	0	80.0

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Pump Data - Last 24 Hrs					Slow Pump Data										
No	o. Type	Liner	MW	Eff (%)	SPM	SPP	Flow	Depth	SPM1	SPP1Flow1(gpm)	SPM2	SPP2 Flow2	SPM3	SPP3	Flow3





Pι	ımps																
Pu	Pump Data - Last 24 Hrs								Slow Pump Data								
		(in)	(sg)		(SPM)	(psi)	(gpm)	(m)	(SPM)	(psi)		(SPM)	(psi)	(gpm)	(SPM)	(psi)	(gpm)
1	Continental Emsco	6.50	1.12	97	71	2543	703	2520.0	30	310	252	40	340	336	50	550	420
2	Continental Emsco	6.50	1.12	97	73	2543	703	2520.0	30	330	252	40	440	336	50	530	420
3	Continental Emsco	6.50	1.12	97	85	1617	729	2520.0	30	300	252	40	350	336	50	440	420

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	15.15ppg /	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.
9.63	/ 11.00ppg	2520.00m / 2520.00m	No Cmt

Personnel On Board							
Company		Pax					
ADA		6					
Maersk		48					
GRN		2					
OMS		16					
Reach		1					
Geoservices		6					
Halliburton Cementers		2					
Halliburton (Baroid)		1					
Dril-Quip		1					
Fugro ROV		3					
Swaco		1					
Sperry Sun		3					
CORPRO		2					
Other Contractor		1					
	Total	93					

Mud Volumes, Mud Losses and Shale Shaker Data			Engineer : Mike Lawrance / James Munford					
Available	2250.0bbl	Losses	0.0bbl	Equipment	Description	Mesh Size	Comments	
Active	697.0bbl	Downhole		Shaker 1	Brandt VSM 300	20 top/50 bottom		
Mixing	0.0bbl	Surf+ Equip	0.0bbl	Shaker 2	Brandt VSM 300	20 top/50 bottom		
Hole	709.0bbl	Dumped		Shaker 3 Shaker 4	Brandt VSM 300 Brandt VSM 300	20 top/50 bottom 20 top/50 bottom		
Slug		De-Gasser				·		
Reserve	844.0bbl	De-Sander						
Kill		De-Silter						
		Centrifuge						







Weather on 09	Nov 2009							Rig Support	
Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Period	Anchors	Tension (klb)
10.0nm	3kn	25.0deg	1020.0mbar	17C°	0.0m	25.0deg	3s	1	183.0
Heave	Pitch	Roll	Rig Dir.	Ris. Tension	VDL	Weather Comments		2	188.0
0.0	0.0.1-	4.0.1	047.0-1	0.40000 001.11	440004.001.11			3	156.0
0.2m	0.8deg	1.2deg	317.0deg	240000.00klb	116684.00klb			4	188.0
Swell Height	Swell Dir.	Swell Period		Comments				5	205.0
1.5m	260.0deg	5s						6	190.0
	200.0009							7	181.0
								8	205.0

Vessel Name	Arrived (Date/Time)	Departed (Date/Time)	Status		Bulks		
Far Scimitar	1920 hrs 7/10/09		Rig standby	Item	Unit	Used	Quantity
				Rig Fuel	M3		610
				Potable Water	M3		525
				Drill Water	M3		530
					t		0
				Barite	t		0
				Bentonite	t		0
				Brine	M3		165

1030 - 1130 alongside offloading Brine to rig.

#1 Main engine out of service due to fly wheel problem.

Far Fosna	1135hrs 7 Nov 09	Melbourne	Item	Unit	Used	Quantity
			Rig Fuel	M3		440
			Pot Water	M3		508
			Drill Water	M3		600
			Bentonite	t		42
			Barite	t		0
				t		130
			Brine	M3		0

Helicopter Movement										
Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment						
1	Bristow Helicopters	0945 / 0954	10 / 10	Crew Change						