14 Dec 2009

From: Michael Lanzer / Kevin Monkhouse
To: Texas Richards

DRILLING MORNING REPORT # 16
Rockhopper-1

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Date:	14 Dec 2009	**Well Site Representative:**	Michael Lanzer	**OIM:**	Stig Sundgaard
Report Number:	16	**Night Representative:**	Kevin Monkhouse	**Drilling Company:**	Maersk
Latitude (South):	39 ° 47 ' 34.18 "	**Longitude (East):**	145 ° 26 ' 21.46 "	**Geologist:**	Dennis Archer

Well Data

Country	Australia	MDBRT	1972.0m	Cur. Hole Size	12.250in	AFE Cost	US$27,409,709
Field	Rockhopper	TVDBRT	1972.0m	Last Casing OD	9.625in	AFE No.	Rockhopper-1
Drill Co.	Maersk	Progress	0.0m	Shoe TVDBRT	1965.0m	Daily Cost	US$659,367
Rig	Kan Tan IV	Days from spud	14.02	Shoe MDBRT	1965.0m	Cumul. Cost	US$12,931,012
Wtr Dpth(MSL)	74.3m	Days on well	15.96	FIT/LOT:	/ 17.50ppg	Last LTI Date	01 Nov 2009
RT-ASL(MSL)	26.0m	Planned TD MD	3486.5m			Days Since Last LTI	43
RT-ML	100.3m	Planned TD TVDRT	3166.4m	Current Op @ 0600	Laying out slip joint.		
Datum	GDA 94	Last BOP Test	08 Dec 2009	Planned Op	Recover LMRP to surface. Replace Upper Annular element and test same. Rig up and run LMRP.		

Summary of Period 0000 to 2400 Hrs

Halliburton mixed and pumped 47bbl of 15.8ppg G cement slurry. Released dart and sheared top plug with 2200psi. Halliburton displaced cement with 20bbl mud. Changed to rig pumps and continued to displace cement. Plug bumped with 500psi above FCP. Checked for back flow. Pressure tested casing to 4000psi for 10 mins. Set pack off in wellhead and pressure tested to 5000psi for 10mins against LPR. Released 9-5/8" casing running tool with 65klbs overpull. Laid out cement head. POOH laid out casing running tool. Made up wear bushing on running tool and RIH. Attempted to set wear bushing - misrun. POOH and made up jetting sub below running tool and wear bushing and RIH. Jetted BOP stack and wellhead area. Set wear bushing and POOH with running tool. Laid out same. RIH with jetting sub, jetted BOP pumping 90bbl Hi-Vis and displaced riser to seawater. POOH. Rigged up to pull LMRP.

HSE Summary

Events	Num. Events	Days Since	Descr.	Remarks
Last BOP Test	08 Dec 2009			
Abandon Drill	0	1 Day	Held abandon drill	
Emergency Drill	0	40 Days	Full emergency response drill performed between the rig, Origin and ADA	
Fire Drill	0	1 Day		
Permit To Work	12	0 Days	Permits administered	
Pre-tour Meeting	2	0 Days	Shift change meetings	
Safety Meeting	2	7 Days	General safety meetings	
Safety Meeting	7	0 Days	Safety Meetings	
STOP Card	36	0 Days	Number of STOP Cards submitted	

FORMATION

Name	Top
Torquay Group	100.30m
Upper Angahook	1140.80m
Angahook Volcanics Equiv	1284.80m
Lower Angahook	1538.50m
Demons Bluff Formation	1825.30m

Operations For Period 0000 Hrs to 2400 Hrs on 14 Dec 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P13	P	F3	0000	0030	0.50	1972.0m	Halliburton mixed and pumped 47bbl of 15.8ppg tail cement slurry. Used: 223sx class G cement, 28bbl of drill/mix water. Halliburton released dart and sheared the top plug after 3.6bbl with 2200 psi. Displacement - Halliburton displaced cement with a total of 20bbl of mud.
P13	P	F3	0030	0130	1.00	1972.0m	Lined up to rig pumps and continued to displace cement with mud. Bottom plug landed

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
							in float collar and held 500psi above circulating pressure. Circulating pressure 280psi. Pressure on bottom plug holding at 770psi. Increased pressure to burst lower plug diaphragm with 1500psi. Continued to displace cement. Plug bumped at 3608 strokes (theoretical 3652 strokes). Final circulating pressure 550psi at 2bbl/min. Pressured up to 1050psi to confirm bump.
P13	P	P1	0130	0230	1.00	1972.0m	Bled off pressure at cement unit and checked for back flow - floats holding. Pressure tested 9-5/8" casing to 4000psi for 10 mins - ok.
P13	P	G1	0230	0300	0.50	1972.0m	Removed control lines and cement hose from cement head.
P13	P	P1	0300	0400	1.00	1972.0m	Set down landing string weight of 15klbs on casing running tool. Energised seal assembly by turning 6 turns to right. Observed 10" drop in drillstring to indicate seal assembly set. Lined up to Halliburton cement unit down Kill line. Closed LPR and pressured tested seal assembly to intial 2500psi with final test pressure of 5000psi for 10 mins. Opened LPR. Released CHSRT running tool from casing hanger and seal assembly with 65klbs overpull. Set down 10klbs onto seal assembly. Closed LPR and confirmed seal assembly integrity with 5000psi for 3mins. Opened LPR.
P13	TP (DH)	F4	0400	0530	1.50	1972.0m	Picked up with 9-5/8" casing running tool. Running tool hanging up at LPR. Worked landing string to pass LPR. String worked free with circulation.
P13	P	G2	0530	0830	3.00	1972.0m	Racked back cement stand to clear BOP. Laid out cement head.
P13	P	G12	0830	1100	2.50	1972.0m	Made up wearbushing on wear bushing running tool and RIH. Attempted to set wearbushing in 18-3/4" wellhead. Unsuccessful. POOH
P13	P	G12	1100	1130	0.50	1972.0m	Made up jetting sub on 2 stands of HWDP below wear bushing running tool and wear bushing. RIH and jetted wellhead and BOPs. RIH and set wearbushing in 18-3/4" wellhead with 20klbs down weight. Released wear bushing running tool from wearbushing with 50klbs overpull. POOH and laid out running tool.
P13	P	G6	1130	2030	9.00	1972.0m	Laid out 12¼" BHA from mast. Laid out Sperry mud motor, Sperry RLL tools, 2 x 12¼" stabilsers, 8" jar and 8 x 8¼" DCs.
P13	TP (SS)	G8	2030	2100	0.50	1972.0m	Made up jetting sub and RIH to 96m.
P13	TP (SS)	F4	2100	2200	1.00	1972.0m	Pumped 90bbl Hi-Vis pill to flush BOPs. Displaced choke and kill and riser to seawater.
P13	TP (SS)	G8	2200	2230	0.50	1972.0m	POOH and laid out jetting sub.
P13	TP (SS)	G1	2230	2400	1.50	1972.0m	Held JSA. Rigged up riser handling equipment on drill floor and connected diverter handling tool to diverter.

Operations For Period 0000 Hrs to 0600 Hrs on 15 Dec 2009

Phse	Cls (RC)	Op	From	To	Hrs	Depth	Activity Description
P13	TP (SS)	G13	0000	0100	1.00	1972.0m	Laid out diverter.
P13	TP (SS)	G13	0100	0330	2.50	1972.0m	Made up landing joint to slip joint. Removed service hoses from slip joint. Collapsed slip joint inner barrel and bolted to slip joint outer barrel.
P13	TP (SS)	G13	0330	0400	0.50	1972.0m	Unlatched LMRP connector (unlatched at 03:35). Picked up LMRP clear of BOP guide posts. Slacked off on guidelines and winched rig 15m port forward (ROV completed inspection of LMRP connections and BOP).
P13	TP (SS)	G13	0400	0600	2.00	1972.0m	Removed MRT lines, choke & kill goosenecks from slip joint. Removed storm saddles from pod lines.

Operations For Period Hrs to Hrs on

Phase Data to 2400hrs, 14 Dec 2009

Phase	Phase Hrs	Start On	Finish On	Cumul. Hrs	Cumul. Days	Max Depth
Mob/Demob(P1)	23.5	29 Nov 2009	30 Nov 2009	23.50	0.979	0.0m
Conductor Hole(P2)	33.5	30 Nov 2009	01 Dec 2009	57.00	2.375	158.0m
Conductor Casing(P3)	19	01 Dec 2009	02 Dec 2009	76.00	3.167	158.0m
Surface Hole(P4)	63.5	02 Dec 2009	04 Dec 2009	139.50	5.813	966.0m
Surface Casing(P5)	33	04 Dec 2009	06 Dec 2009	172.50	7.188	966.0m
BOPs/Risers(P6)	59.5	06 Dec 2009	08 Dec 2009	232.00	9.667	966.0m
Production Hole (1)(P11)	94.5	08 Dec 2009	12 Dec 2009	326.50	13.604	1972.0m
Production Casing(1)(P13)	56.5	12 Dec 2009	14 Dec 2009	383.00	15.958	1972.0m

General Comments

00:00 TO 24:00 Hrs ON 14 Dec 2009

WBM Data

Cost Today US$ 1130

Mud Type	KCL/Polymer/PHPA	API FL:	5.2cc/30min	Cl:		Solids(%vol):	4%	Viscosity	70sec/qt
Sample-From:	PIT 2	Filter-Cake:	1/32nd"	K+C*1000:	8%	H2O:	93%	PV	11cp
Time:	2200	HTHP-FL:	11.5cc/30min	Hard/Ca:	240mg/l	Oil(%):		YP	27lb/100ft²
Weight:	9.65ppg	HTHP-cake:	2/32nd"	MBT:	8	Sand:		Gels 10s	10
Temp:	25C°			PM:	0.3	pH:	9	Gels 10m	15
				PF:	0.3	PHPA:	2ppb	Fann 003	8
								Fann 006	10
								Fann 100	24
								Fann 200	32
								Fann 300	38
								Fann 600	49

Comment: Note: Costs are in AUD

Bulk Stocks

Name	Unit	In	Used	Adjust	Balance
Rig Fuel	m3	0	2	0	464.0
Drill Water	m3	247	0	0	585.0
Pot Water	m3	44	27	0	244.0
Brine	m3	0	0	0	81.0
Cement class \'G\'	MT	0	0	0	67.5
Barite	MT	0	0	0	94.7
Bentonite	MT	0	0	0	20.0
Generic Mesh 24	Screens	0	0	0	12.0
Techmesh 84	Screens	0	0	0	8.0
Techmesh 110	Screens	0	0	0	24.0
Techmesh 140	Screens	0	0	0	16.0
Techmesh 175	Screens	0	0	0	7.0

Pumps

Pump Data - Last 24 Hrs

No.	Type	Liner (in)	MW (sg)	Eff (%)	SPM (SPM)	SPP (psi)	Flow (gpm)
1	Continental Emsco	6.50	1.14	97			
2	Continental Emsco	6.50	1.14	97			
3	Continental Emsco	6.50	1.14	97			

Slow Pump Data

Depth (m)	SPM1 (SPM)	SPP1 (psi)	Flow1(gpm)	SPM2 (SPM)	SPP2 (psi)	Flow2 (gpm)	SPM3 (SPM)	SPP3 (psi)	Flow3 (gpm)
	30		252	40		336	50		420
	30		252	40		336	50		420
	30		252	40		336	50		420

Casing

OD	LOT / FIT	Csg Shoe (MD/TVD)	Cementing
30 "	/	156.80m / 156.80m	265bbl 15.9ppg G cement slurry pumped. Used: 1271sx of G cement - 160bbls of mix water. Yield 1.17 ft3/sx Ratio 5.20gal/sx
13.38	17.50ppg /	961.00m / 961.00m	460bbl of 11.5 ppg lead cement slurry. (Used: 387bbl SW mix fluid, 858 sx class G cement. Yield, 18.96 gal/sk - 3.01 ft3/sk) 66.8bbl of 15.8 ppg tail cement slurry (Used: 39.5bbl fresh water mix, 323sx class G cement. Yield, 5.12 gal/sk - 1.16 ft3/sk)
9.63	/	1965.00m / 1965.00m	82 bbl of 12.5 ppg lead cement slurry. (Used: 63 bbl FW mix fluid, 215 sx class G cement. Yield, 12.28 gal/sk - 2.11 ft3/sk) 47 bbl of 15.8 ppg tail cement slurry (Used: 28 bbl fresh water mix, 223 sx class G cement. Yield, 5.18 gal/sk - 1.16 ft3/sk)

Personnel On Board

Company	Pax
ADA	4
Origin Energy	2
Maersk	42
GRN	4
OMS	17
Dril-Quip	1
Geoservices	6
Halliburton Cementers	2

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Personnel On Board

Halliburton (Baroid)	2
Sperry Sun	3
Fugro ROV	6
3rd Party	1
Haliburton Directional Drilling	2
Reach	1
MI Fluids	1
Total	94

Mud Volumes, Mud Losses and Shale Shaker Data

Engineer : Mike Lawrance / James Munford

Available	**2213.0bbl**
Active	800.0bbl
Mixing	
Hole	473.0bbl
Slug	
Reserve	890.0bbl
Kill	
PAD Mud	50.0bbl

Losses	**80.3bbl**
Downhole	
Surf+ Equip	80.3bbl
Dumped	
De-Gasser	
De-Sander	
De-Silter	
Centrifuge	
Pumped Sweep/Displace	

Equipment	Description	Mesh Size

Comments

Marine

Weather on 14 Dec 2009

Visibility	Wind Speed	Wind Dir.	Pressure	Air Temp.	Wave Height	Wave Dir.	Wave Period
10.0nm	8kn	72.0deg	1021.0mbar	13C°	1.0m	72.0deg	5s

Heave	Pitch	Roll	Rig Dir.	Ris. Tension	VDL	Weather Comments
1.0m	0.4deg	0.8deg	315.0deg	248.00klb	650.00klb	

Swell Height	Swell Dir.	Swell Period	Comments
1.0m	265.0deg	5s	

Rig Support

Anchors	Tension (klb)
1	178.0
2	228.0
3	180.0
4	227.0
5	230.0
6	207.0
7	228.0
8	217.0

Vessel Name	Arrived (Date/Time)	Departed (Date/Time)	Status
Far Scimitar	07:00 - 12/12/09		Stdby Kan Tan IV

Bulks

Item	Unit	Used	Quantity
Rig Fuel	M3		611
Potable Water	M3		107
Drill Water	M3		637
	t		0
Barite	t		0
Bentonite	t		0
Brine	M3		0
Mud	bbl		0

Vessel Name	Arrived (Date/Time)	Departed (Date/Time)	Status
Far Fosna	06:00 - 11/12/09		Stdby Kan Tan IV

Bulks

Item	Unit	Used	Quantity
Rig Fuel	M3		285
Pot Water	M3		280
Drill Water	M3		600
Bentonite	t		0
Barite	t		0
	t		0
Brine	M3		0
Mud	bbl		0

Helicopter Movement

Flight #	Company	Arr/Dep. Time	Pax In/Out	Comment
KT 01	Bristow Helicopters	09:04 / 09:18	11 / 11	
KT 02	Bristow Helicopters	12:24 / 12:37	4 / 7	