

**DAILY GEOLOGICAL REPORT**DATE: 25 Dec 2011  
REPORT NO.: 37  
( associated DDR # 37 )**WELL: Surprise 1**

RIG	Hunt Rig #3	RIG TYPE	Land
COMPLETION TYPE		TARGET	Lower Stairway Sandstone
Depth at Midnight (MD)	2,587.0 m	SPUD DATE	
DAYS SINCE SPUD	0.00 ( Days on well: 36.29)	LAST CASING	7.000 in @ 2,426.00 m MD
PRESENT DEPTH MD	2,593.0 m	BACKGROUND GAS	10.00 Unit @ 2,585.0 m
24 Hr Progress	23.00 m	MAX GAS	58.00 Unit @ 2,580.0 m
AVERAGE ROP	4.00 m/h	ECD	
Operations Status @ 0600hrs	pulling out of hole	ESTIMATED PORE PRESSURE	
PROGNOSSED TD	3,928.0m MD 2,551.0m TVD		

**Well Details**

Latitude:	23.00° 42.00' 50.76" South	UTM(N/S):	7377073N m N	RT - MSL:	3.66 m RT GL
Longitude:	129.00° 59.00' 36.09" East	UTM(E/W):	601261E m E	GL Elevation:	545.0 m

**Operations Summary and General Remarks**

OPERATION SUMMARY:	drilled w MWD/motor to 2587m
LITHOLOGY SUMMARY:	Claystone to 2570m AHRT (Lower Stairway), Sandstone to current TD
HYDROCARBON SHOWS:	oil at surface after trip. Poor fluorescent shows. Continuous trace of oil droplets and strong petroliferous odour in mud at shakers whilst drilling, suggesting oil is being flushed from cuttings by mud action.
NEXT OPERATION:	Pull out for horizontal drilling assembly

**Lithology Summary**

Interval MDBRT (m) From To		Lithology	%	Description
2,562.00 - 2,571.00		Claystone	100	<b>Claystone</b> dark grey, lesser medium grey, hard, blocky to subfissile, minor irregular, rare splintery, non calcareous; trace to 10% medium to dark orange brown, probable cavings from above 2450m, note dispersed clay turned mud (brine) orange red while drilling fill just above 2564m, silty, micromicaceous, trace pyrite. trace dull yellow and occasional bri yel inpoint fluorescence as for previous interval.
2,571.00 - 2,592.00		Sandstone with minor Claystone	60-100%	<b>Sandstone</b> clear to white translucent, friable-hard, commonly loose grains , very fine to coarse, predominantly medium, subangular-subrounded, moderately well sorted, common silica cement as overgrowths, common dark brown intergranular carbonaceous matter, trace microcrystalline pyrite, fair to good inferred porosity. Oil show; dull yellow solid fluor, tr pipoint bright wh/yel fluor, immediate slow blooming -diffuse cut, moderately bright blu/wh residual ring and dull bl/wh film. Brown droplets oil observed in mud. Strong petroliferous odour at shakers.
		Claystone	0-40	medium -dark grey, red brown -grey brown, hard, blocky-splintery to subfissile, very silty, common disseminated microcrystalline pyrite. micromicaceous.

**Gas Readings**

Depth	Total Gas	BGG	C1	%C1	C2	%C2	C3	%C3	iC4	%iC4	nC4	%nC4	iC5	%iC5	nC5	%nC5	He	Hydrocarbons
(m)	(Units)	(Units)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(ppm)
2,560.00	91.000		0 - 8,350	55.00	0 - 3,453	22.00	- 1,524	10.00	0 - 265	2.00	0 - 726	5.00	0 - 331	2.00	0 - 503	4.00		
<b>Gas Type</b> Trip			<b>Comment-</b>															
2,580.00	58.000	6.00	- 434	15.00	- 342	11.00	- 483	16.00	- 287	14.00	- 606	16.00	- 331	13.00	- 503	15.00		
<b>Gas Type</b> Peak			<b>Comment-</b>															
2,590.00		18.00	0 - 768	41.00	0 - 229	12.00	0 - 303	16.00	0 - 89	6.00	0 - 224	12.00	0 - 100	6.00	0 - 146	7.00		

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(m)	(Units)	(Units)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(%)	(ppm)	(ppm)
<b>Gas Type</b>		Background	<b>Comment-</b> 0-18 units over interval															

**Oil Shows**

Depth 2,571.00m - 2,592.00m

Rating:	Good	White Light Stain:	It brown
Percentage:	100	White Light Cut:	nil
Lithology:	Sandstone	White Light Residue:	colourless
Speed:		UV Fluoresce:	dull yellow to pinpoint bri yellow
Intensity:		UV Cut Fluoresce:	imm slow mod bri blue/wh blmg-diff.
Description:	clear to white translucent, friable-hard, commonly loose grains , very fine to coarse, predominantly medium, subangular-subrounded, moderately well sorted, common silica cement as overgrowths, common dark brown intergranular carbonaceous matter, trace microcrystalline pyrite, fair to good inferred porosity.	UV Residue:	bright yellow ring, dull bl/wh film

**Prognosis and Preliminary Correlation**

Top	Actual Depth (3.66 m RT GL)			Prognosis	H/L	Pick Criteria	Remarks
	MD	TVD	TVD(GL)	MD			
Undiff Pertinjarra	778.46	778.46	774.80	758.46	20.0 L		
Parkes	1,294.46	1,294.46	1,290.80	1,302.46	8.0 H	Lith	Lithology change
Mereenie Fm	1,760.00	1,760.00	1,756.34	1,782.46	22.5 H	ROP	ROP and Lithology Change
Stokes	2,275.00	2,275.00	2,271.34	2,449.46	174.5 H	E-log	Lithology Change
Stairway FM	2,447.00	2,447.00	2,443.34	2,579.46	132.5 H	E-log	Lithology Change
Horn Valley Siltstone	2,561.00	2,561.00	2,557.34	2,654.46	93.5 H	E-log	Lithology Change

**Well Geologist**

Lindsay Cullen/Mike Harrison