

DAILY GEOLOGICAL REPORT

Date:	16 November 2008	Rig:	Ocean Patriot
Report Number:	18	Bit Diameter:	216 mm
Report Period:	06:00 - 06:00 Hours	Last Casing:	340 mm Casing @ 1532.1 mMDRT
Spud Date:	05-Nov-2008 03:30 Hours	LOT:	1.34 sg EMW @ 1532.1 mMDRT
Days From Spud:	11.1	Mud Weight:	1.15 sg
Depth @ 0600 Hrs:	3814.0 mMDRT	ECD:	1.21 sg
	-3791.2 mTVDAHD	Mud Type:	KCL / Polymer
Lag Depth:	3814.0 mMDRT	Mud Chlorides:	540000.00 mg/L
Last Depth:	3436.0 mMDRT		
Progress:	378.0 m	Last Survey:	2938.52 mMDRT
Water Depth:	517.3 m	Deviation:	Inc. 1.23°
RT:	21.5 m		Az. 64.27°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled ahead 216mm hole from 3436.0 m to TD at 3814.0 mMDRT. Circulated hole clean and commenced pulling out of hole.

NEXT 24 HOURS: Pull out of hole. Rig up and run Wireline logs.

CURRENT OPERATION

@ 06:00 HRS (16-Nov-2008): Pulling out of the hole to run Wireline logs.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 3340.0 to 3515.0 mMDRT (-3317.3 to -3492.2 mTVDAHD)
ROP (Range): 5.0 to 114.0 m/h
Av. ROP: 55.0 m/h

Massive SANDSTONE with SILTSTONE interbeds and minor CLAYSTONE stringers towards the base

SANDSTONE (45 to 100%): Clear to translucent, abundant opaque, medium light grey to medium grey aggregates, fine to very coarse, dominantly medium to coarse, dominantly fine to medium with depth, abundant fine, rare to abundant very coarse, aggregates are fine, very poorly to moderately sorted, angular to rounded, dominantly sub-angular to sub-rounded, common angular and rounded, rare moderate siliceous cement, rare pyrite cement, abundant white argillaceous matrix (dispersive in part) and grading to ARGILLACEOUS SANDSTONE, minor brownish black silty matrix and grading to SILTY SANDSTONE, minor to abundant nodular pyrite, common lithics and carbonaceous specks, nil to trace chert, nil to trace mica flakes, trace glauconite or possible chlorite in aggregates, trace calcareous fragments, dominantly disaggregated, minor brittle to very hard aggregates, friable with depth, nil to dominantly poor visible porosity, fair visible porosity in part, good inferred porosity, no hydrocarbon fluorescence.

SILTSTONE (Nil to 50%): Dark grey to olive black becoming dominantly olive grey with depth, common medium dark grey, arenaceous and grading to SILTY SANDSTONE in part, minor argillaceous becoming dominantly argillaceous with depth and grading to SILTY CLAYSTONE, common carbonaceous laminations and specks, minor micromicaceous, trace lithics, trace fine quartz grains, trace nodular and disseminated pyrite, nil to trace mica flakes, soft to hard, dominantly firm, common soft, minor moderately hard to hard, sub-blocky, sub-fissile in part.

CLAYSTONE (Nil to 5%): Medium grey, minor olive grey, siliceous in part, silty in part and grading to SILTY CLAYSTONE, micromicaceous, brittle, fissile to splintery, firm and sub-blocky where silty.

INTERVAL: 3515.0 to 3580.0 mMDRT (-3492.2 to -3557.2 mTVDAHD)
ROP (Range): 8.0 to 82.0 m/h
Av. ROP: 36.0 m/h

SANDSTONE with interbedded CLAYSTONE and SILTSTONE

SANDSTONE (50 to 60%): Clear to translucent, common opaque, medium light grey to medium grey aggregates, very fine to very coarse, dominantly fine to medium, abundant very fine, minor coarse, rare very coarse, moderately sorted, aggregates are very fine to fine and well sorted, sub-angular to rounded, dominantly sub-angular to sub-rounded, common rounded, trace weak siliceous cement, minor to common pyrite cement, trace strong calcareous cement with fissile aggregates, common argillaceous cement/matrix, minor to abundant nodular pyrite, common lithics and carbonaceous specks, trace glauconite or possibly chlorite, trace mica flakes, trace quartz shards, dominantly disaggregated, abundant friable to brittle aggregates, poor visible and poor to fair inferred porosity, hydrocarbon fluorescence, mineral fluorescence.

SILTSTONE (10 to 30%): Dominantly olive grey, minor dark grey to olive black, argillaceous and grading to SILTY CLAYSTONE, minor arenaceous, rarely carbonaceous, common carbonaceous laminations and specks, minor micromicaceous, trace lithics, trace nodular and disseminated pyrite, nil to trace mica flakes, trace very fine glauconite, soft to brittle, dominantly firm to brittle, minor soft, sub-blocky.

CLAYSTONE (10 to 30%): Medium grey to olive grey, with depth becoming dominantly olive grey, silty in part and grading to SILTY CLAYSTONE, siliceous in part, nil to in part common micromicaceous, trace to minor carbonaceous laminae and material, trace lithics, trace disseminated and nodular pyrite, nil to trace very fine glauconite, weakly calcareous in part, soft to firm, brittle in part, sub-blocky to sub-fissile, minor fissile where siliceous.

INTERVAL: 3580.0 to 3750.0 mMDRT (-3557.2 to -3727.2 mTVDAHD)
ROP (Range): 4.0 to 78.0 m/h
Av. ROP: 38.0 m/h

Interbedded SANDSTONE and SILTSTONE with minor CLAYSTONE

SANDSTONE (30 to 85%): Clear to translucent, common opaque, medium light grey to medium grey aggregates, very fine to coarse, dominantly fine to medium, common very fine, rare coarse, well sorted, aggregates are very fine to fine and well sorted, sub-angular to rounded, dominantly sub-angular to sub-rounded, common rounded, trace weak to in part strong siliceous cement, trace pyrite cement, trace strong calcareous cement with fissile aggregates, common argillaceous cement/matrix, common silty matrix and grading to SILTY SANDSTONE, trace dispersive calcareous matrix, trace nodular pyrite, common lithics and carbonaceous specks, trace glauconite, dominantly disaggregated, abundant friable to hard aggregates, poor visible and fair inferred porosity, no hydrocarbon fluorescence.

SILTSTONE (15 to 60%): Dominantly olive black, minor olive grey, arenaceous and grading to SILTY SANDSTONE in part, argillaceous in part and grading to SILTY CLAYSTONE, common carbonaceous laminae and material, micromicaceous, common lithics, trace nodular and disseminated pyrite, trace very fine glauconite, common argillaceous matrix, soft to brittle, dominantly soft to firm, common brittle, sub-blocky.

CLAYSTONE (10 to 15%): Olive grey, olive black in part, silty and grading to SILTY CLAYSTONE, pyritic in part, common micromicaceous, minor carbonaceous laminae and material, common lithics, abundant disseminated pyrite, soft to firm, brittle in part, sub-blocky to sub-fissile.

INTERVAL: 3750.0 to 3814.0 mMDRT (-3727.2 to -3791.2 mTVDAHD)
ROP (Range): 2.0 to 65.0 m/h
Av. ROP: 32.0 m/h

Massive SANDSTONE with minor SILTSTONES and CLAYSTONE interbeds

SANDSTONE (74 to 84%) : Off white, translucent and frosted, very fine to very coarse, dominantly fine to medium, angular to sub-angular, poorly sorted, common strong siliceous cement, minor weak calcareous cement and locally common strong pyritic cement, common to abundant off white argillaceous matrix with common carbonaceous micro laminations where very fine to fine grained aggregates, abundant angular fractured very coarse shards with occasional fused grain boundaries, abundant nodular pyrite, occasional lithics and carbonaceous specks, trace rock flour and bit metamorphics, very poor visible porosity in hard to very hard fine grained aggregates, generally fair to good inferred porosity, no hydrocarbon fluorescence.

SILTSTONE (15 to 60%): Light to medium brown, medium brown, olive grey, pale grey, arenaceous and common grading to a very fine SILTY SANDSTONE, common arenaceous laminations, common micromicaceous, minor carbonaceous specks, moderately hard to hard, sub-blocky to sub-fissile.

CLAYSTONE (1 to 5%): light bluish green, siliceous, occasional very fine lithics, trace micromicaceous, moderately hard to hard, very hard in part, sub-fissile.

HYDROCARBON FLUORESCENCE

3515.0 to 3520.0 mMDRT (Trace) Dull yellowish green patchy fluorescence associated with calcareous cemented grains, nil cut and nil crush cut, nil ring residue.

3520.0 to 3525.0 mMDRT (5%) Dominantly dull to minor moderately bright yellowish green patchy fluorescence associated with calcareous cemented grains, very slow milky white diffuse cut, moderately thick bluish white ring residue.

3525.0 to 3555.0 mMDRT (5 to 10%) Dull to minor moderately bright yellowish green to pale orange patchy fluorescence associated with calcareous cemented grains, nil cut and nil crush cut, nil ring residue.

3555.0 to 3580.0 mMDRT (Trace to 5%) Dull yellowish green patchy fluorescence associated with calcareous cemented grains, nil cut and slow crush cut, moderately thick yellowish green ring to patchy film residue.

GAS SUMMARY

Background Gas							
INTERVAL (mMDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
3340.0 - 3515.0	0.06	353	44	20	3	7	5
3515.0 - 3580.0	0.03	215	28	11	2	4	0
3580.0 - 3750.0	0.04	313	27	10	1	2	0
3750.0 - 3814.0	0.03	257	18	7	0	1	0

SAMPLE QUALITY

Collected 20.0 m sample intervals from 3340.0 to 3440.0 mMDRT.

Collected 10.0 m sample intervals from 3440.0 to 3510.0 mMDRT.

Collected 5.0 m sample intervals from 3510.0 to 3560.0 mMDRT.

Collected 10.0 m sample intervals from 3560.0 to 3814.0 mMDRT.

MUDLOGGING EQUIPMENT / PERSONNEL

All systems operational bar ongoing chromatograph issue. This will be investigated during wireline logging phase. One and possibly two mudloggers departing rig on Monday to standby in Sale due to bed space issues.

MWD

Run #5, Bit Run #4: 216 mm LWD Tool offsets to bit:

Tool	Serial #	Distance to bit (m)
Direction and Inclination	PCDC MWD	6.82
Azimuthal Focused Res	AFR LWD	10.70
Gamma Ray	DGR LWD	13.43
Resistivity	EWR LWD	15.79
Pressure w/- Drilling	PWD LWD	20.69
Neutron Density	ALD LWD	25.64
Neutron Porosity	CNP LWD	28.25
BAT Sonic	BAT LWD	39.58
Acoustic Caliper	ACAL LWD	43.35

MWD/LWD tools failed while washing to bottom. Pulse detected at surface but no useable signal from tool string decoded. Cycled pumps (2-2-2 cycle) and attempted to mode switch HCIM - unsuccessful. The suspected problem is most likely a short in the toolstring, leading to high current arbitration of the lower bus, eventually shutting down all the sensors. Drilled ahead without LWD.

In terms of recorded data acquisition, the following is the most likely scenario:

BAT Sonic, ACAL, and ALD (Density) tools have their own batteries and memory boards, and will be unaffected by this problem. It is expected that recorded data will be retrieved from these tools.

It is unlikely that data from EWR-R4 resistivity tool will be retrieved, and there will be no recorded data available for the DGR (Gamma Ray), Neutron Porosity (CNP) and AFR (Azimuthal Resistivity) from 16:10hrs onwards. Survey data from the PCD-C will not be available, as the tool will not be able to determine pump status through the HCIM.

WIRELINE

Grand Slam tool and backup tested. RCI tool and backup tested. Waiting on RCOR tool VSP tool and specialist engineer arriving today. Petrotech engineer to arrive today also.

REMARKS

Drilled ahead new 216 mm (8 1/2") hole from 3436.0 to 3814.0 mMDRT. TD was called due to low ROP. Circulated hole clean and commenced pulling out of hole.

Dory-1 reached a total depth of 3814.0 mMDRT at 00:00 on the 16 November, 2008.

WELLSITE GEOLOGISTS

Greg Fawns / Adam Cruickshank