

DAILY GEOLOGICAL REPORT

Date:	05 January 2009	Rig:	Ocean Patriot
Report Number:	18	Bit Diameter:	216 mm
Report Period:	06:00 - 06:00 Hours	Last Casing:	244 mm @ 3243.9 mMDRT
Spud Date:	20-Dec-2008 17:30 Hours	FIT:	1.60 sg EMW @ 3252.0 mMDRT
Days From Spud:	15.5	Mud Weight:	1.14 sg
Depth @ 0600 Hrs:	3764.0 mMDRT	ECD:	1.29 sg
	-2827.5 mTVDAHD	Mud Type:	KCl Polymer
Lag Depth:	3755.0 mMDRT	Mud Chlorides:	56000 mg/L
Last Depth:	3576.0 mMDRT	Est. Pore Pressure:	N/A
Progress:	188.0 m	Last Survey:	3722.36 mMDRT
Water Depth:	504.9 m	Deviation:	Inc. 47.98°
RT:	21.5 m		Az. 194.51°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled 216 mm directional hole from 3576.0 m to 3764.0 mMDRT.

NEXT 24 HOURS: Continue drilling 216 mm directional hole from 3764.0 mMDRT to TD of approximately 5462.0 mMDRT.

CURRENT OPERATION

@ 06:00 HRS (05-Jan-2009): Drilling 216 mm directional hole at 3764.0 mMDRT.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 3545.0 to 3565.0 mMDRT (-2679.1 to -2692.7 mTVDAHD)
ROP (Range): 14.0 to 39.0 m/h
Av. ROP: 28.0 m/h

CALCAREOUS CLAYSTONE interbedded with minor SANDY SILTSTONE grading to SILTY SANDSTONE.

CALCAREOUS CLAYSTONE (25 to 80%): medium light grey to medium dark grey, light olive grey, increasing light greenish grey, moderately calcareous, very silty, trace micromicaceous, trace very fine glauconite, common very finely arenaceous grading to a SANDY SILTSTONE, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub-blocky, sub-fissile

SANDY SILTSTONE (15 to 40%): off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub-fissile to sub-blocky.

SILTY SANDSTONE (5 to 30%): clear to translucent, dominantly very fine to fine, well sorted, dominantly sub-rounded to rounded, abundant silty matrix occurring as soft to firm aggregates, trace very fine glauconite, trace loose, trace calcareous, poor visible porosity, no hydrocarbon fluorescence.

INTERVAL: 3565.0 to 3590.0 mMDRT (-2692.7 to -2709.7 mTVDAHD)
ROP (Range): 31.0 to 85.0 m/h
Av. ROP: 63.0 m/h

SILTSTONE and SANDY SILTSTONE interbedded with minor CALCAREOUS CLAYSTONE and SANDSTONE with a thin CLAYSTONE layer at the top of the interval.

SILTSTONE (30 to 55%) : greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace glauconite, firm, dominantly sub-fissile to sub-blocky.

SANDY SILTSTONE (10 to 40%): off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to SILTY SANDSTONE, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub-fissile to sub-blocky.

CALCAREOUS CLAYSTONE (5 to 25%): medium light grey to medium dark grey, light olive grey, increasing light greenish grey, moderately calcareous, very silty, trace micromicaceous, trace very fine glauconite, common very finely arenaceous grading to a **SANDY SILTSTONE**, trace carbonaceous specks, dominantly firm to moderately hard where medium dark grey, amorphous to sub-blocky, sub-fissile.

SANDSTONE (10 to 40%): clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace coarse, moderately sorted, dominantly sub-rounded to rounded, occasionally occurring as soft to firm aggregates with a with a very dispersive argillaceous matrix, trace to common very fine glauconite, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.

CLAYSTONE (Nil to 5%): moderate yellow to light olive brown, non-calcareous, soft, amorphous, dispersive.

INTERVAL: 3590.0 to 3645.0 mMDRT (-2709.7 to -2747.2 mTVDAHD)
ROP (Range): 6.0 to 58.0 m/h
Av. ROP: 22.0 m/h

Massive SILTSTONE with thin SANDY SILTSTONE and SANDSTONE beds.

SILTSTONE (60 to 90%): greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to **SANDY SILTSTONE**, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace glauconite, firm, dominantly sub-fissile to sub-blocky.

SANDSTONE (2 to 30%): clear to translucent, light olive grey to pale yellowish brown, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub-rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, trace to common very fine glauconite, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.

SANDY SILTSTONE (2 to 10%): off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to **SILTY SANDSTONE**, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub-fissile to sub-blocky.

INTERVAL: 3645.0 to 3735.0 mMDRT (-2747.2 to -2808.1 mTVDAHD)
ROP (Range): 3.0 to 98.0 m/h
Av. ROP: 18.0 m/h

Interbedded SILTSTONE with minor GLAUCONITIC SANDSTONE and SANDY SILTSTONE.

SILTSTONE (40 to 95%): greyish brown to dusky brown, dark olive grey, non calcareous, very arenaceous grading to very fine **SANDSTONE**, trace disseminated pyrite, trace to common pyrite nodules, trace to common micromicaceous, trace to common glauconite grading to **GLAUCONITIC SILTSTONE**, firm, dominantly sub-fissile to sub-blocky.

GLAUCONITIC SANDSTONE (2 to 45%): clear to translucent, light olive grey to pale greenish white, very fine to dominantly fine, trace medium and coarse, moderately sorted, dominantly sub-rounded to rounded, occasionally occurring as soft to firm aggregates with a very dispersive argillaceous matrix, common to abundant very fine glauconite and glauconite pellets, trace pyrite nodules, dominantly loose after washing, poor to fair visible porosity, no hydrocarbon fluorescence.

SANDY SILTSTONE (3 to 35%): off white to very light grey, light greenish grey, common very fine arenaceous grains grading in part to **SILTY SANDSTONE**, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub-fissile to sub-blocky.

INTERVAL: 3735.0 to 3755.0 mMDRT (-2808.1 to -2821.5 mTVDAHD)
ROP (Range): 3.0 to 29.0 m/h
Av. ROP: 9.0 m/h

GLAUCONITIC SANDSTONE interbedded with minor SILTSTONE grading to a GLAUCONITIC SILTSTONE.

GLAUCONITIC SANDSTONE (70 to 80%): clear to translucent, light greenish grey, dominantly very fine to fine, trace coarse grains, well sorted, dominantly sub-rounded to rounded, occurring as soft to firm aggregates with a dispersive light grey to dark greenish grey glauconitic/argillaceous matrix, common to abundant very fine to medium glauconite grains and pellets, occasionally loose after washing, poor visible porosity, no hydrocarbon fluorescence.

SILTSTONE 1 (10 to 20%): off white to light grey, light greenish grey, rare to minor very fine arenaceous grains, trace calcareous, trace very fine glauconite, trace micromicaceous, soft to dominantly firm, sub-fissile to sub-blocky.

SILTSTONE 2 (10%): olive grey to dark grey, greyish brown to dusky brown, non-calcareous, very

arenaceous grading to SANDY SILTSTONE, trace to common micromicaceous, trace nodular pyrite, common fine glauconite grains grading to GLAUCONITIC SILTSTONE, firm, dominantly sub-fissile to sub-blocky.

GAS SUMMARY

Background Gas							
INTERVAL (mMDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
3545.0 - 3565.0	0.02	147	1	0	0	0	0
3565.0 - 3590.0	0.03	277	1	1	0	0	0
3590.0 - 3645.0	0.02	171	1	1	0	0	0
3645.0 - 3735.0	0.01	65	0	0	0	0	0
3735.0 - 3755.0	0.01	57	1	1	0	0	0

SAMPLE QUALITY

5.0 metre bagged samples from 3545.0 m to 3755.0 mMDRT.

MUDLOGGING EQUIPMENT / PERSONNEL

All systems fully functional.

MWD

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

<u>Tool</u>	<u>Serial #</u>	<u>Distance to bit (m)</u>
Gamma Ray	EcoScope YC85	9.84
APWD	EcoScope YC85	10.00
Density	EcoScope YC85	11.04
Caliper	UltraSonic Caliper	11.46
Resistivity	EcoScope YC85	12.88
Neutron Porosity	EcoScope YC85	13.13
Direction and Inclination	TelescopeMWD VG67	20.16
GVR Resistivity	GVR 41872	26.45
Sonic	SonicVision 46324	32.71

REMARKS

The drilling of the 216 mm directional hole continued from 3576.0 m to 3764.0 mMDRT.

WELLSITE GEOLOGISTS

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