

DAILY GEOLOGICAL REPORT

Date:	12 September 2009	Rig:	Ocean Patriot
Report Number:	7	Bit Diameter:	12.25 in
Report Period:	06:00 - 06:00 Hours	Last Casing:	13 3/8 in @ 805.8 m MDRT
Spud Date:	05-Sep-2009 21:00 Hours	LOT:	12.35 ppg EMW @ 805.8 m MDRT
Days From Spud:	6.4	Mud Weight:	9.40 ppg
Depth @ 0600 Hrs:	1605.0 m MDRT	ECD:	9.70 ppg
	1605.0 m TVDRT	Mud Type:	KCL/Klastop/Polymer
	-1583.5 m TVDSS	Mud Chlorides:	50000.00 mg/L
Lag Depth:	1595.0 m MDRT	Est. Pore Pressure:	9.14 ppg
Last Depth:	816.0 m MDRT	DXC:	1.06
Progress:	789.0 m	Last Survey:	1530.18 m MDRT
Water Depth:	74.0 m	Deviation:	Inc. 0.55°
RT:	21.5 m		Az. 90.58°

OPERATIONS SUMMARY

24 HOUR SUMMARY: Drilled cement, float & shoe track along with 3.0 m of new formation from 816.0 to 819.0 m MDRT. Circulated hole clean, conducted leak off test with 9.0 ppg mud, leak achieved with 629.0 psi, equivalent mud weight calculated at 12.35 ppg. Drilled 12 1/4" hole from 819.0 to 1450.0 m MDRT, control drilled 12 1/4" hole from 1450.0 to 1605.0 m MDRT.

NEXT 24 HOURS: Drill 12 1/4" hole to total depth of 2078.0 m MDRT.

CURRENT OPERATION @ 06:00 HRS (12-Sep-2009): Control drilling 12 1/4" hole in the Upper Eastern View Group at 20 m/hr.

GEOLOGICAL SUMMARY

LITHOLOGY

INTERVAL: 816.0 to 970.0 m MDRT (-794.5 to -948.5 m TVDSS)
ROP (Range): 47.0 to 305.0 m/h
Av. ROP: 160.0 m/h

CALCARENITE with CALCAREOUS CLAYSTONE interbeds.

CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, common fossil fragments, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 970.0 to 1040.0 m MDRT (-948.5 to -1018.5 m TVDSS)
ROP (Range): 61.0 to 199.0 m/h
Av. ROP: 145.0 m/h

Interbedded CALCARENITE and CALCAREOUS CLAYSTONE with minor CALCAREOUS SILTSTONE.

CALCARENITE: light grey to white, light blue grey, abundant fossils (coral, byozoa, ammonoids), common very fine to fine grains of quartz, rare siderite, firm to moderately hard, sub-blocky to blocky.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace fossil fragments, firm to moderately hard, blocky.

CALCAREOUS SILTSTONE: medium to dark grey, medium olive grey, medium brown grey, argillaceous, grading to Arenaceous Claystone, trace to common fossil fragments, trace carbonaceous specks, trace glauconite, firm, sub-blocky to blocky.

INTERVAL: 1040.0 to 1090.0 m MDRT (-1018.5 to -1068.5 m TVDSS)
ROP (Range): 78.0 to 223.0 m/h
Av. ROP: 162.0 m/h

CALCAREOUS CLAYSTONE with minor interbedded CALCARENITE.

CALCAREOUS CLAYSTONE: light to medium grey, light brown to brown grey, light to medium olive grey, medium dark grey, trace carbonaceous specks and micro-laminations, trace very fine glauconite grains, trace to common fossil fragments, traces of disseminated and nodular pyrite, firm to moderately hard, sub-blocky to blocky.

CALCARENITE: light to medium grey, light blue grey to white, light brown grey, common very fine quartz grains, common fossil fragments, trace carbonaceous specks, trace pyrite, firm, sub-blocky to blocky.

INTERVAL: 1090.0 to 1250.0 m MDRT (-1068.5 to -1228.5 m TVDSS)
ROP (Range): 53.0 to 250.0 m/h
Av. ROP: 163.0 m/h

CLAYSTONE.

CLAYSTONE: light to medium grey, light brown to brown grey, medium olive grey, medium dark grey, calcareous, trace carbonaceous specks and micro-laminations, trace to abundant disseminated and nodular pyrite, trace very fine glauconite grains, trace fossil fragments, rare micro mica, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1250.0 to 1290.0 m MDRT (-1178.5 to -1268.5 m TVDSS)
ROP (Range): 42.0 to 203.0 m/h
Av. ROP: 141.0 m/h

SILTSTONE with minor CLAYSTONE interbeds.

SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.

CLAYSTONE: medium to dark grey, medium olive grey, medium brown grey, moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1290.0 to 1344.0 m MDRT (-1268.5 to -1322.5 m TVDSS)
ROP (Range): 27.0 to 124.0 m/h
Av. ROP: 63.0 m/h

SILTSTONE with SANDSTONE and CLAYSTONE interbeds.

SILTSTONE: light to medium brown, light to medium brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to weakly calcareous, trace to common micro mica & glauconite, trace disseminated pyrite, trace carbonaceous specks, soft to firm, sub-blocky to blocky.

SANDSTONE: light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no

fluorescence.

CLAYSTONE: medium to dark brown grey, medium olive grey, weak to moderately calcareous, trace to common nodular pyrite, common carbonaceous specks, trace micro mica and glauconite, firm to moderately hard, sub-blocky to blocky.

INTERVAL: 1344.0 to 1393.5 m MDRT (-1322.5 to -1372.0 m TVDSS)
ROP (Range): 24.0 to 145.0 m/h
Av. ROP: 77.0 m/h

SILTSTONE with minor SANDSTONE and LIMESTONE interbeds.

SILTSTONE: light to medium brown, medium to dark brown grey, common very fine sands grains, grading to a very fine Sandstone, nil to moderately calcareous, trace to common micro mica & glauconite, trace disseminated and nodular pyrite, rare to minor carbonaceous material, soft to firm, sub-blocky to blocky.

SANDSTONE: light brown to brown grey, clear to translucent, very fine grained, moderately sorted, sub-angular to sub-rounded, moderate siliceous cement, moderate to strong calcareous (dolomitic) cement, common to abundant argillaceous to silty matrix, in part grading to a Sandy Siltstone, trace carbonaceous specks and glauconite, trace siderite, friable to moderately hard, very poor inferred porosity, no fluorescence.

LIMESTONE: light brown to moderate brown, microcrystalline, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.

INTERVAL: 1393.5 to 1434.0 m MDRT (-1372.0 to -1412.5 m TVDSS)
ROP (Range): 9.0 to 61.0 m/h
Av. ROP: 36.0 m/h

CLAYSTONE with rare LIMESTONE laminations.

CLAYSTONE (1): dark grey, brownish grey to brownish black, non to slightly calcareous, carbonaceous, rare disseminated very fine pyrite, trace nodular pyrite, rare micro-mica, soft to firm, sub-blocky to sub-fissile.

CLAYSTONE (2): very light grey to light grey, light brownish grey, grading to SILTSTONE, non to moderate calcareous, soft to firm, sub-blocky to blocky.

LIMESTONE: light brown to moderate brown, trace bluish grey, predominantly microcrystalline, trace bioclastic, sandy in part, dolomitic in part, angular cuttings, moderate hard to hard.

INTERVAL: 1434.0 to 1473.0 m MDRT (-1412.5 to -1451.5 m TVDSS)
ROP (Range): 8.0 to 94.0 m/h
Av. ROP: 37.0 m/h

CLAYSTONE with rare LIMESTONE laminations.

CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micaceous, rare disseminated very fine pyrite, traces nodular pyrite, rare micro-mica, and soft to firm, sub-blocky to sub-fissile.

LIMESTONE: light brownish grey to brownish grey, trace white to very light grey, predominantly micritic, trace sparitic, argillaceous in part and grading to Marl, soft to moderate hard, platy to splintery.

INTERVAL: 1473.0 to 1494.0 m MDRT (-1451.5 to -1472.5 m TVDSS)
ROP (Range): 11.0 to 57.0 m/h
Av. ROP: 23.0 m/h

Interbedded CLAYSTONE and SANDSTONE.

CLAYSTONE: brownish grey to brownish black, non to slightly calcareous, carbonaceous, micaceous, rare disseminated very fine pyrite, traces nodular pyrite, rare micro-mica, and soft to firm, sub-

blocky to fissile.

SANDSTONE: translucent, transparent, minor light brownish grey to brownish grey aggregates, very fine to fine, moderate to well sorted aggregates with moderate to poor sorted loose, sub angular to sub rounded, weak to moderate siliceous cement, minor to abundant calcareous clay matrix, trace carbonaceous material, trace dark lithics, trace Fe staining on loose grains, loose to friable, poor visible porosity, good inferred porosity, no fluorescence.

INTERVAL: 1494.0 to 1512.0 m MDRT (-1472.5 to -1490.5 m TVDSS)
ROP (Range): 9.0 to 49.0 m/h
Av. ROP: 23.0 m/h

Interbedded CLAYSTONE and SANDSTONE.

CLAYSTONE: olive grey, brownish grey, yellowish grey, non to slightly calcareous, rare micro mica, rare very fine quartz, trace carbonaceous material, trace very fine disseminated pyrite, soft, amorphous to sub-blocky, grading to SILTSTONE.

GLAUCONITIC SANDSTONE: moderate to dark yellowish green, very fine, well sorted, sub rounded, siliceous cement, pervasive glauconitic staining, grading to glauconitic Siltstone, friable, tight to poor visible porosity, no fluorescence.

SANDSTONE: translucent, transparent, frosted in part, fine to coarse, poor sorted, sub rounded to rounded, loose, good inferred porosity, no fluorescence.

INTERVAL: 1512.0 to 1560.0 m MDRT (-1490.5 to -1538.5 m TVDSS)
ROP (Range): 14.0 to 59.0 m/h
Av. ROP: 27.0 m/h

Interbedded SILTSTONE and SANDSTONE.

SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.

SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.

INTERVAL: 1560.0 to 1595.0 m MDRT (-1538.5 to -1573.5 m TVDSS)
ROP (Range): 20.0 to 25.0 m/h
Av. ROP: 22.0 m/h

Interbedded SILTSTONE and SANDSTONE with minor COAL seams.

SANDSTONE: light grey, light olive grey, moderate yellowish green, translucent, transparent, predominantly very fine to fine well sorted aggregates, 5% fine to coarse moderate sorted loose, sub angular to sub rounded, siliceous cement, trace argillaceous matrix, trace carbonaceous specks, rare very fine glauconite, interlaminated with and grading to SILTSTONE, loose to friable, fair to tight visible porosity, good inferred porosity, no fluorescence.

SILTSTONE: olive grey, light brownish grey, non to slightly calcareous, rare micro mica, trace carbonaceous laminae and material, trace nodular pyrite, trace coarse embedded quartz grains, trace black Coal fragments and laminae, soft to firm, sub-blocky, grading to and interlaminated with very fine SANDSTONE.

COAL: black, brownish black, earthy to sub vitreous, rare vitreous, lignitic, soft to brittle, angular, grading to carbonaceous Claystone.

GAS SUMMARY

Background Gas							
INTERVAL (m MDRT)	Total Gas (Units)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
816.0 - 970.0	0	5	0	0	0	0	0
970.0 - 1040.0	0	9	11	0	0	0	0
1040.0 - 1090.0	0	14	0	0	0	0	0
1090.0 - 1250.0	1	92	0	0	0	0	0
1250.0 - 1344.0	2	294	0	0	0	0	0
1344.0 - 1393.5	1	103	0	0	0	0	0
1393.5 - 1434.0	1	92	20	0	0	0	0
1434.0 - 1473.0	0	33	3	0	0	0	0
1473.0 - 1494.0	0	10	0	0	0	0	0
1494.0 - 1512.0	0	9	0	0	0	0	0
1512.0 - 1560.0	0	8	0	0	0	0	0
1560.0 - 1595.0	0	7	0	0	0	0	0

MWD

Sensor Offsets: Run 2

GR : 16.45 m
 Res : 16.37 m
 Directional : 24.45 m
 Sonic : 33.83 m
 Density : 39.78 m
 Neutron : 41.76 m

Lost depth tracking / RT data between 1567.0 to 1584.0 mMDRT.

PROVISIONAL FORMATION TOPS

Formation Name	Prognosed Depths			Actual Depths			Diff. TVT (m)	Picks Based On
	MD (m)	TVDRT (m)	TVDSS (m)	MD (m)	TVDRT (m)	TVDSS (m)		
Recent Carbonates	118.0	118.0	(96.5)	95.5	95.5	(74.0)	22.5 H	Offset Stratigraphy
Torquay Group (Reefal Carbonate)	138.0	138.0	(116.5)	131.0	131.0	(109.5)	7.0 H	ROP
Torquay Group (Marl)	718.0	718.0	(696.5)	715.0	715.0	(693.5)	3.0 H	ROP
Oligocene Sandstones (Lower Torqay Group)	1023.0	1023.0	(1001.5)				-	
Demons Bluff Formation	1398.0	1398.0	(1376.5)	1393.5	1393.5	(1372.0)	4.5 H	LWD Lithology
Upper Eastern View Group	1478.0	1478.0	(1456.5)	1480.5	1480.5	(1459.0)	2.5 L	LWD
Middle Eastern View Group	1868.0						-	

SURVEY DATA

MD (m)	Inc (°)	Azi (°)	TVD (m)	TVDSS (m)	V.Sec (m)	Dogleg (°/100ft)	E/W (m)	N/S (m)
879.0	0.43	77.12	879.0	857.5	0.98	0.24	0.24	0.98

990.8	0.34	90.11	990.8	969.3	1.08	0.03	0.98	1.08
1078.3	0.31	90.35	1078.3	1056.8	1.08	0.01	1.47	1.08
1106.4	0.42	79.90	1106.4	1084.9	1.09	0.14	1.65	1.09
1136.0	0.37	78.73	1136.0	1114.5	1.13	0.05	1.85	1.13
1164.9	0.40	84.09	1164.9	1143.4	1.16	0.05	2.04	1.16
1191.9	0.35	86.03	1191.8	1170.3	1.17	0.06	2.22	1.17
1221.3	0.44	97.02	1221.3	1199.8	1.17	0.12	2.42	1.17
1338.7	0.51	93.25	1338.6	1317.1	1.08	0.02	3.39	1.08
1367.8	0.54	94.83	1367.7	1346.2	1.06	0.03	3.66	1.06
1456.7	0.52	105.25	1456.6	1435.1	0.92	0.03	4.46	0.92
1530.2	0.55	90.58	1530.2	1508.7	0.83	0.06	5.14	0.83

WELLSITE GEOLOGISTS

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