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**CONFIDENTIAL**

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<b>Date:</b>	01 September 2001	<b>Last Casing:</b>	13.3/8" @ 551 mMDRT
<b>Report Number:</b>	5	<b>LOT:</b>	2.15 SG
<b>Report Period:</b>	00:00-24:00 Hours	<b>Mud Weight:</b>	1.26
<b>Depth @ 24:00 Hours:</b>	2050 mMDRT	<b>ECD</b>	1.29
<b>Depth (mTVDRT)</b>	2050 mTVDRT	<b>Mud Type:</b>	KCI-PHPA-glycol
<b>Lag Depth:</b>	2030 mMDRTN/A	<b>Mud Chlorides:</b>	64000
<b>Last Depth:</b>	1343 mMDRT	<b>Est. Pore Press:</b>	1.1
<b>Progress:</b>	687 m	<b>Last Survey Depth:</b>	1963m
<b>Water Depth:</b>	101.2 m LAT	<b>Deviation:</b>	1.4 deg , Az 050 deg
<b>RT-Sea Level:</b>	25 m	<b>Bit Diameter:</b>	12 1/4"

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**OPERATIONS SUMMARY**

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**24 HOUR SUMMARY:** Drill 12 1/4" hole 1343m to 2050m.

**NEXT 24 HOURS:** Drill 12 1/4" hole to 2109m, wiper trip, pull out of hole, run 9 5/8" casing.

**CURRENT OPERATION @ 06:00 Hrs 02/09/2001:** Circulating hole to 1.28 sg mud at 2109m TD 12 1/4" hole.

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**GEOLOGICAL SUMMARY**

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**LITHOLOGY:**

**INTERVAL:** 1343 - 1418

**ROP range:** 10 - 107

**Av ROP:** 36

**ARGILLACEOUS CALCILUTITE INTERBEDDED WITH CALCAREOUS CLAYSTONE.**

**Argillaceous Calcilutite (60%):** very light to light grey, soft, amorphous, abundant light grey argillaceous material, minor calcareous silt.

**Calcareous Claystone (40%):** light to medium grey, olive grey, soft, minor firm, amorphous to sub-blocky, minor calcareous silt, minor quartz silt, rare disseminated clear and yellow to brown stained very fine grained subrounded to rounded, spherical quartz grains, trace pyrite, trace foraminifera, trace glauconite, trace lithic fragments.

**INTERVAL:** 1418 - 1464

**ROP range:** 17 - 120

**Av ROP:** 43

**Calcareous Claystone (90%):** light to medium grey, olive grey, soft, minor firm, amorphous to sub-blocky, minor calcareous silt, minor to abundant quartz silt, rare disseminated clear and yellow to brown stained, very fine grained, subrounded to rounded, spherical quartz grains, trace pyrite, trace foraminifera, trace glauconite, trace lithic fragments, grading to:

**Calcareous Siltstone (10%):** very dark yellowish brown to very dark brown, friable, minor moderately hard, blocky, common calcareous clay matrix, rare to minor carbonaceous matter, trace glauconite. Rarely grades to Siltstone and Claystone.



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**INTERVAL:** 1464 - 1550

**ROP range:** 5 - 138

**Av ROP:** 49

**CLAYSTONE INTERBEDDED WITH MINOR SANDSTONE AND TRACE CALCILUTITE,**

**Claystone (90%):** dark greyish brown, soft to firm, blocky, rare carbonaceous material, trace glauconite.

**Sandstone (10%):** greenish grey, loose, very fine to fine, rarely medium grained quartz, subangular to subrounded, sub spherical to spherical, moderately sorted, rare glauconite, minor carbonaceous fragments.

**Calcilutite (trace):** very light grey, soft, trace carbonaceous matter, trace glauconite.

**INTERVAL:** 1550 - 1600

**ROP range:** 15 - 137

**Av ROP:** 66

**CLAYSTONE INTERBEDDED WITH MINOR SILTY SANDSTONE.**

**Claystone (90%):** medium to dark olive grey, soft to firm, slightly sticky in parts to sub-blocky, common siliceous silt, trace very fine carbonaceous detritus, trace glauconite, trace pyrite, trace micromica, trace silty lithics and very coarse grained quartz sand.

**Silty Sandstone (10%):** light to medium grey, olive grey, loose to friable, predominantly very fine to fine common medium rare coarse and trace very coarse quartz grains, subangular, to rounded, poorly sorted, slightly spherical, trace calcareous cement, trace pyrite cement, minor to common brown argillaceous matrix, trace very fine carbonaceous detritus, trace glauconite, trace brown and grey lithic fragments, tight visual porosity, no fluorescence.

**INTERVAL:** 1600 - 1690

**ROP range:** 10 - 213

**Av ROP:** 74

**SILTY CLAYSTONE INTERBEDDED WITH MINOR SANDSTONE.**

**Silty Claystone (90%):** medium to dark olive grey, soft to firm, slightly sticky in parts to sub-blocky, abundant quartz and lithic silt, trace very fine carbonaceous detritus, trace glauconite, trace pyrite, trace micromica.

**Sandstone (10%):** white to very light grey, loose to friable, predominantly very fine to fine minor medium trace coarse to very coarse quartz grains, subangular to rounded, poorly sorted, slightly spherical, trace calcareous cement, trace pyritic cement, abundant silt matrix, minor to common argillaceous matrix, trace very fine carbonaceous detritus, trace glauconite, trace brown and grey lithic fragments, tight visual porosity, no fluorescence.

**INTERVAL:** 1690 - 1760

**ROP range:** 13 - 108

**Av ROP:** 53

**MASSIVE SILTY CLAYSTONE.**

**Silty Claystone (100%):** medium to dark olive grey, soft to firm, slightly sticky in parts to sub-blocky, abundant quartz and lithic silt, trace very fine carbonaceous detritus, trace glauconite, trace pyrite, trace micromica.

**CONFIDENTIAL****INTERVAL:** 1760 - 1960**ROP range:** 16 - 173**Av ROP:** 79**MASSIVE CLAYSTONE.**

**Claystone (100%):** medium to dark grey, dark olive grey, firm, sub-blocky, minor to common quartz and lithic silt, rare minor very fine carbonaceous detritus, trace micromica, trace glauconite in parts, locally becoming siltier and grading to Silty Claystone.

**INTERVAL:** 1960 - 2040**ROP range:** 14 - 110**Av ROP:** 50**MASSIVE CLAYSTONE.**

**Claystone (100%):** medium to dark grey, olive grey, firm, sub-blocky, common mica, quartz and lithic silt, minor very fine to silty carbonaceous detritus, trace disseminated pyrite and pyritic microlaminae, trace micromica, trace dolomitic inclusions, becoming locally more silty and grading to Silty Claystone in parts.

**INTERVAL:** 2040 – 2109**ROP range:** 8 - 71**Av ROP:** 23.5**INTERBEDDED CLAYSTONE AND SILTY CLAYSTONE**

**Claystone (100%):** medium to dark grey, olive grey, firm, sub-blocky, common mica, quartz and lithic silt, minor very fine to silty carbonaceous detritus, trace disseminated pyrite and pyritic microlaminae, trace micromica, trace dolomitic inclusions, becoming locally more silty and grading to Silty Claystone in parts.

**Silty Claystone (50%):** olive grey to dark olive grey, moderately hard, sub-blocky, rare carbonaceous matter, minor mica silt, rare pyrite, trace lithic fragments, trace glauconite, rarely grades to Argillaceous Siltstone.

**GAS SUMMARY:****Background Gas**

INTERVAL(mMDRT)	Total GAS (%)	CO <sub>2</sub> (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	NC4 (%)	C5 (%)
1343 - 1600	0.06 – 0.22	0.008 – 0.023	0.01 – 0.153	nil	nil	nil	nil	nil
1600 - 1690	0.09 – 0.29	0.004 – 0.035	0.05 – 0.18	nil	nil	nil	nil	nil
1690 - 1760	0.15 – 0.25	0.008 – 0.037	0.08 – 0.16	0.00 – .01	nil	nil	nil	nil
1760 - 1960	0.06 – 0.29	0.007 – 0.029	0.01 – 0.22	0.0 – 0.01	0.0 - 005	nil	nil	nil
1960 – 2050	0.15 – 0.24	0.007 – 0.032	0.1 – 0.20	0.0 – 0.1	nil	nil	nil	nil

**Trip Gas**

DEPTH (mMDRT)	Total GAS (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	C5 (%)
Nil							

**Connection Gas**

DEPTH (mMDRT)	Total GAS (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	C5 (%)
1846	0.21 / 0.12	0.162	0.008		Nil	Nil	
1876	0.29 / 0.19	0.193	0.009	0.005	Nil		
1904	0.30 / 0.12	0.14	0.009	0.004	Nil		
1962	0.29 / 0.15	0.202	Nil	Nil	Nil		

**CONFIDENTIAL****Peaks**

DEPTH (mMDRT)	Total GAS (%)	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	C5 (%)
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Nil

**HYDROCARBON FLUORESCENCE:**

Nil

**FORMATION PRESSURE ESTIMATION:**

Small gas peaks above background were recorded - connection gas from 1846m to 1962m. No connection gas was observed below 1962m as mud wt was raised to 1.26. No significant overpressure cavings were observed dxc unreliable – maximum pore pressure estimated to be about 1.25 sg (1962m).

**SAMPLE QUALITY:**

Adequate.

10 m samples taken due to high ROP's.

**LWD**

Sensor	Meters behind drill bit
Resistivity	14.83
GR	18.18

**MUDLOGGING EQUIPMENT/PERSONNEL:**

Carbide lag check at 1904 m MDRT (0.4% peak –background 0.12%) – average hole diameter calculated to be 12.8”.

**REMARKS:**

Preliminary top Pember: 1418m MDRT (63m high)  
Preliminary top Paaratte: 1463m MDRT (97m high)  
Preliminary top Belfast: 1760m MDRT (23m high)

**WELLSITE GEOLOGISTS**

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