Az. 336.21°



# DAILY GEOLOGICAL REPORT

Date: Report Number: Report Period: Spud Date: Days From Spud: Depth @ 0600 Hrs:	18 March 2008 10 06:00 - 06:00 Hours 10-Mar-2008 13:00 Hours 7.7 1998.0 mMDRT	Rig: Bit Diameter: Last Casing: FIT: Mud Weight: ECD:	West Triton 216 mm (8 ½") 244mm casing @ 902.1 mMDRT 1.78 sg EMW @ 902.0 mMDRT 1.18 sg
Lag Depth:	-1959.8 mTVDAHD	Mud Type:	KCL Polymer
	1998.0 mMDRT	Mud Chlorides:	49000.00 mg/L
Last Depth: Progress:	1622.0 mMDRT 376.0 m		
Water Depth:	90.0 m	Last Survey:	1895.34 mMDRT
RT:	38.0 m	Deviation:	Inc. 0.85°

## **OPERATIONS SUMMARY**

**24 HOUR SUMMARY:** Drilled 216mm section from 1622.0 to 1998.0 mMDRT. POOH for bit change.

**NEXT 24 HOURS:** POOH to surface. Change out LWD tools and BHA. RIH to drill ahead 216mm section.

# CURRENT OPERATION @ 06:00 HRS (18-Mar-2008): Pulling out of hole to change bit - at 216mm casing shoe.

# **GEOLOGICAL SUMMARY**

#### LITHOLOGY

 INTERVAL:
 1610.0 to 1645.0 mMDRT (-1571.8 to -1606.8 mTVDAHD)

 ROP (Range):
 10.0 to 36.0 m/h

 Av. ROP:
 22.0 m/h

#### Interbedded CALCAREOUS CLAYSTONE and MARL

CALCAREOUS CLAYSTONE (Trace to 90%): light grey to light green grey, light to medium olive grey, grading to a MARL, trace glauconite grains, trace disseminated pyrite, trace to common calcite grains, trace fossil fragments, soft to firm, sub-blocky.

MARL (10 to 100%): light green grey to light olive grey, medium grey, grading to a calcareous CLAYSTONE, trace glauconite, trace carbonaceous specks, trace disseminated pyrite, soft to firm, subblocky.

INTERVAL:	1645.0 to 1705.0 mMDRT	(-1606.8 to -1666.8 mTVDAHD)
ROP (Range):	8.0 to 82.0 m/h	
Av. ROP:	22.0 m/h	

# Interbedded MARL and CALCAREOUS CLAYSTONE with minor CALCILUTITE and CALCARENITE beds

MARL (40 to 90%): light green grey to light olive grey, medium olive grey to light grey, in part grading to a calcareous CLAYSTONE, trace glauconite, trace fossil fragments, trace disseminated pyrite.

CALCAREOUS CLAYSTONE (10 to 50%): light to medium grey, medium olive grey, grading to MARL, trace carbonaceous specks and micro laminations, trace glauconite, trace disseminated pyrite, firm, sub-blocky.

CALCILUTITE (10%): white to very light grey, trace calcite grains, trace fossil fragments, soft to firm, subblocky.

CALCARENITE (20%): light grey to light blue grey, white, common very fine quartz and calcite grains, om fossil fragments, moderately hard, sub-blocky.

 INTERVAL:
 1705.0 to 1725.0 mMDRT (-1666.8 to -1686.8 mTVDAHD)

 ROP (Range):
 11.0 to 39.0 m/h

 Av. ROP:
 20.0 m/h

#### Interbedded MARL and CALCAREOUS CLAYSTONE

MARL (40 to 50%): light to medium green grey, medium olive grey, trace carbonaceous specks, trace glauconite, rare fossil fragments, soft to firm, sub-blocky.

CALCAREOUS CLAYSTONE (50 to 60%): light grey to light brown grey, medium grey to medium olive grey, slightly arenaceous, trace carbonaceous specks, trace glauconite, firm to moderately hard, subblocky.

INTERVAL:	1725.0 to 1740.0 mMDRT	(-1686.8 to -1701.8 mTVDAHD)
ROP (Range):	13.0 to 44.0 m/h	
Av. ROP:	28.0 m/h	

#### Interbedded MARL and CALCAREOUS CLAYSTONE

MARL (70 to 80%): light to medium green grey, olive grey, grading to a calcareous CLAYSTONE, trace glauconite, trace carbonaceous specks, rare fossil fragments, soft to firm, sub-blocky.

CALCAREOUS CLAYSTONE (20 to 30%): light to medium grey, medium green grey to medium olive grey, trace carbonaceous specks, trace disseminated pyrite soft to firm, sub-blocky.

INTERVAL:	1740.0 to 1797.0 mMDRT	(-1701.8 to -1758.8 mTVDAHD)
ROP (Range):	29.0 to 70.0 m/h	
Av. ROP:	49.0 m/h	

#### Interbedded CALCAREOUS SILTSTONE, CALCAREOUS CLAYSTONE and MARL

CALCAREOUS SILTSTONE (20 to 40%): medium to dark grey, medium olive grey, trace disseminated pyrite, trace carbonaceous specks, moderately hard to hard, sub-blocky to blocky, in part sub-fissile.

CALCAREOUS CLAYSTONE (30 to 60%): light to medium grey, medium olive grey to dark grey, grading to MARL in part, trace carbonaceous specks, trace disseminated pyrite, trace glauconite, firm to moderately hard, sub-blocky.

MARL (20 to 40%): light to medium grey, light green grey to light olive grey, trace glauconite, trace carbonaceous specks, soft to firm, sub-blocky.

INTERVAL:	1796.0 to 1910.0 mMDRT	(-1758.8 to -1871.8 mTVDAHD)
ROP (Range):	29.0 to 157.0 m/h	
Av. ROP:	103.0 m/h	

#### Interbedded CALCAREOUS SILTSTONE & CLAYSTONE with minor MARL

CALCAREOUS SILTSTONE (40 to 50%): medium to dark grey, medium olive grey, trace disseminated pyrite, trace carbonaceous specks, moderately hard to hard, sub-blocky to blocky, in part sub-fissile.

CALCAREOUS CLAYSTONE (20 to 50%): light to medium grey, medium olive grey, trace carbonaceous specks and micro laminations, trace glauconite, trace disseminated pyrite, firm to moderately hard, subblocky.

MARL (10 to 40%): light to medium grey, light green grey to light olive grey, trace glauconite, trace carbonaceous specks, soft to firm, sub-blocky.

INTERVAL:	1910.0 to 1998.0 mMDRT	(-1871.8 to -1959.8 mTVDAHD)
ROP (Range):	4.0 to 64.0 m/h	
Av. ROP:	29.0 m/h	

### Interbedded CALCAREOUS SILTSTONE & CLAYSTONE with minor MARL

CALCAREOUS CLAYSTONE (45 to 70%): light to medium grey, medium brown grey, abundant calcareous material, common micro fossils and ooliths, silty in part and locally grading to calcareous siltstone, occasional carbonaceous material, firm to hard, dispersive, sub-blocky.

CALCAREOUS SILTSTONE (30 to 55%): pale to medium grey, dark grey in part, medium brown grey, abundant calcareous material, common micro-fossils, commonly argillaceous and grading to calcareous claystone, minor nodular and disseminated pyrite, moderately hard to hard, very hard where dark grey, subblocky.

MARL (10 to 30%): light to medium grey, light green grey to light olive grey, slightly arenaceous, trace glauconite, trace carbonaceous specks, soft to firm, sub-blocky.



### HYDROCARBON FLUORESCENCE

No Shows

## GAS SUMMARY

Background Ga	as						
INTERVAL (mMDRT)	Total Gas (%)	C1 (ppm)	C2 (ppm)	C3 (ppm)	iC4 (ppm)	nC4 (ppm)	C5 (ppm)
1615.0 - 1645.0	0.12	1053	5	2	0	0	0
1645.0 - 1705.0	0.07	615	6	2	0	0	0
1705.0 - 1725.0	0.07	594	7	2	0	0	0
1725.0 - 1740.0	0.08	435	4	2	0	0	0
1740.0 - 1797.0	0.15	1200	6	3	0	0	0
1796.0 - 1889.0	0.31	2247	7	5	1	1	0
1889.0 - 1944.0	0.01	53	0	0	0	0	0
1944.0 - 1998.0	0.08	693	3	2	0	0	0

#### CALCIMETRY

Interval (mMDRT)	Calcite Range	Dolomite Range
1610.0 - 1645.0	27 - 33 %	1 - 1 %
1645.0 - 1705.0	36 - 45 %	1 - 8 %
1705.0 - 1725.0	35 %	12 %
1725.0 - 1740.0	58 - 58 %	7 - 7 %

#### SAMPLE QUALITY

5 m samples were collected from 1610.0 to 1740.0 mMDRT, 5-10 m samples were collected from 1740.0 to 1995.0 mMDRT.

#### MWD

 MWD SENSOR OFFSET FROM BIT

 GR
 : 12.33m

 RES
 : 12.86m

 SONIC
 : 26.53m

 NEUTRON
 : 34.53m

 DENSITY
 : 33.42m

 SURVEY
 : 18.74m

### REMARKS

Drilled 216mm section from 1622.0 to 1998.0 mMDRT. At 1998.0 mMDRT the hole was circulated clean and the bit pulled out of hole due to slow ROP. Pulled out of hole to 1300.0 mMDRT, back reamed out of the hole from 1300.0 to 902.0 mMDRT due to tight hole conditions.

#### WELLSITE GEOLOGISTS

Fred Fernandes / Adam Cruickshank