

**FINAL WELL REPORT**

**PARAMOUNT RESOURCES LTD.**

**PARA ET AL CAMERON J-04**

**Grid:  $60^{\circ} 10'$ ,  $117^{\circ} 30'$**

**DATE: November 30, 2007**

**COMPANY REPRESENTATIVE:**  
**Dave Block**

## TABLE OF CONTENTS

	Page
<b>A. INTRODUCTION</b>	
Summary.....	1
Locality Map .....	3
 <b>B. GENERAL DATA</b>	
Well Name.....	4
Well Location .....	4
Unique Well Identifier.....	4
Operator.....	4
Contractor.....	4
Drilling Unit .....	4
Position Keeping .....	4
Support Craft .....	4
Drilling Unit Performance .....	4
Difficulties and Delays .....	4
Total Well Cost.....	4
Bottom Hole Co-ordinates.....	4
 <b>C. SUMMARY OF DRILLING OPERATIONS</b>	
Elevations .....	5
Total Depth.....	5
Date and Hour Spudded.....	5
Date Drilling Completed .....	5
Date of Rig Release .....	5
Well Status .....	5
Hole Sizes and Depths.....	5
Casing and Cementing Record .....	5
Sidetracked Hole .....	6
Drilling Fluid.....	6
Fishing Operations.....	7
Well Kicks and Well Control Operations.....	7
Formation Leak Off Tests.....	7
Time Distribution .....	8
Deviation Survey .....	12
Abandonment Plugs.....	12
Composite Well Record .....	12
Completion Record.....	13

D. GEOLOGY	Page
Geological Summary .....	14
Tops.....	14
Sample Descriptions .....	14
Coring Record.....	14
Gas Detection Report.....	14
Drill Stem Tests .....	14
Well Evaluation .....	14
Analyses.....	14
Mud Salinity Record.....	14
Gas, Oil & Water .....	14
Formation Stimulation .....	14
Formation and Test Results .....	14
Detailed Test Pressure Data Readings .....	14
E. ENVIRONMENTAL WELL ANALYSIS .....	15
F. ATTACHMENTS TO WELL HISTORY REPORT .....	16
1. Geological report	
2. Geological composite log	
3. Directional survey report	
4. Survey plan	

## A. INTRODUCTION

Paramount Resources Ltd. (Paramount) drilled Para et al Cameron J-04 as a 1449 meter delineation well. The well was spudded on January 26, 2007 and finished drilling on February 14, 2007. The purpose of the well was to evaluate hydrocarbon potential. The primary target was the Sulphur Point Dolomite formation which was encountered at a depth of 1407 mKB. The secondary target was the Slave Point formation which was encountered at a depth of 1342 mKB.

The drilling contractor was Precision Drilling Ltd based out of Calgary, Alberta. Precision's Rig # 129 was used and is a land rig rated for 1600 m. The rig had a mud system capacity of 53 m<sup>3</sup> and was equipped with a boiler.

The well was drilled on Production License No PL-013 in which Paramount has an 88% working interest under Paramount's Operating License No 1159.

The exact co-ordinates of the well are as follows:

Surface:      Latitude:    60<sup>0</sup> 03' 31.397"  
                  Longitude: 117<sup>0</sup> 30' 47.877"

Cancor Rathole Inc. drilled a 610 mm conductor hole to 12.5 meters. From surface to 0.3 meters was snow pad, from 0.3 to 0.6 meters was dry muskeg, from 0.6 - 1.2 meters was permafrost muskeg, from 1.2 - 2.4 meters was permafrost clay, and from 2.4 to 12.5 meters was clay with boulders. A heavy walled 406 mm conductor pipe was cemented at 12.5 meters.

Precision #129 was moved onto the location starting January 25, 2007. The rig was rigged up, a diverter was nippled up and drilling commenced January 26, 2007 at 16:30 hours. A 311 mm surface hole was drilled to 430 mKB. There were some minor mud ring problems, but no major lost circulation problems were encountered in drilling the surface hole. A string of 219.1 mm, 35.7 kg/m, J-55, ST&C surface casing was run to 430 mKB. The casing was cemented with 36.5 t class 'G' cement plus 2.0% CaCl<sub>2</sub>. There were 8.0 m<sup>3</sup> of cement returned to surface while cementing. The plug was bumped and the float held OK. The plug was down at 20:00 hours on January 30, 2007.

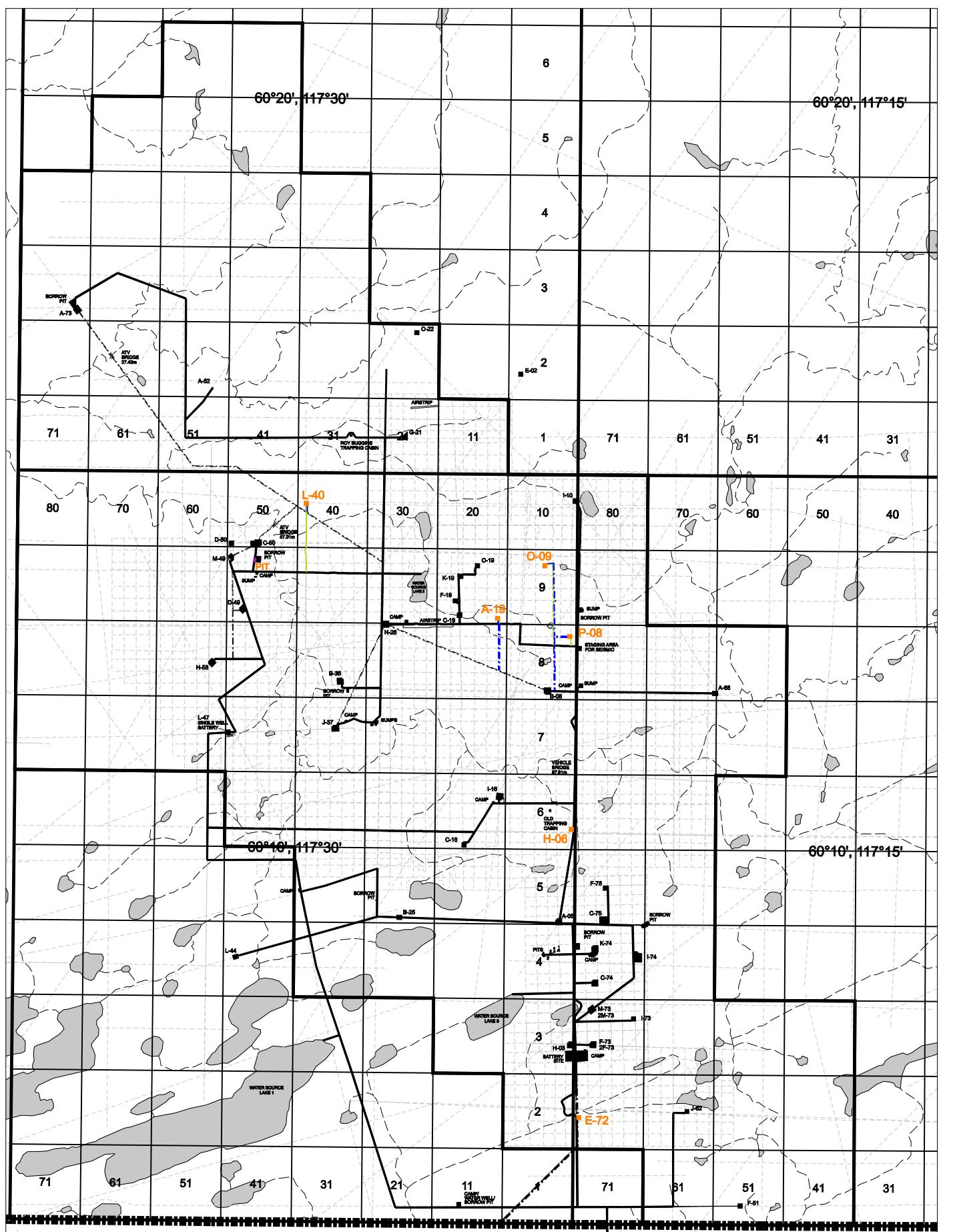
The casing and conductor were trimmed and the casing bowl was welded on. The BOP's were installed and function tested. The BOP's and manifold were pressure tested to 1500 kPa low pressure and 14,000 kPa high pressure. The Hydrex was pressure tested to 1500 kPa and 10,500 kPa.

The float collar and shoe were drilled out to 437 mKB on January 31, 2007. A leak off test was performed with the leak off gradient found to be 30.3 kPa/m. A 200 mm hole was drilled with a flocculated water system to approximately 900 m. Gel was added to the drilling fluid at that point and the gel/chem mud system was then used to drill to a total depth of 1449 mKB. Minor drilling fluid losses started at 598 m and major losses were noted from 690 - 729 m. The losses were cemented off with four cement plugs. After the plugs were drilled out there were still minor losses which were controlled with LCM's while drilling to TD. Weatherford ran induction, density, and sonic logs from bottom to surface casing and a micro-resistivity log from bottom to 1300 mKB.

139.7 mm, 23.07 kg/m, J-55, LT&C production casing was run and set at 1449 mKB with

a stage tool included in the string at 566 m. It was cemented in two stages with the first stage consisting of 6.0 t Thixlite + 1% SMS followed by 13.0 t Expando LWL + 0.1% CFL-3 + 0.2% LTR + 0.2% SPC-II and the second stage consisting of 11.0 t Thixlite + 1% SMS. There were no cement returns to surface. The plug was bumped and held.

Precision #220 was rigged out and released at 23:45 hours on February 16, 2007.



Prepared by:

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**LEGEND:**

The legend consists of four entries, each with a colored square icon and a text label. The first entry has an orange square and the text 'WELL SITES'. The second entry has a blue dashed line and the text 'PIPELINE ROW'. The third entry has a green line and the text 'ROAD ACCESS'. The fourth entry has a magenta square and the text 'PIT'.

REVISED:  
MODEL: AsBuiltJuly2005\_with6Sites  
Date: 14-NOV-05  
Job No.: 04-1150G  
Filename: CH.BASE.NAD83.DGN

**Compiled Map Showing  
SIX SITES PROGRAM**

## SIX SITES PROGRAM with

AS-BUILT JULY 2005

#### Oil & Gas Activity

## CAMERON HILLS ARE

## **Northwest Territories**

### NAD83 UTM Projection

**SCALE 1:125 000**

B. GENERAL DATA

1. Well Name: Para et al Cameron J-04

Authority to Drill a Well No: 2034

Exploration Agreement Number: PL-013

Location Unit: J

Section: 04

Grid Area:  $60^0 10' N$ ,  $117^0 30' W$

Classification: Delineation

2. Coordinates:

Surface:            Latitude:  $60^0 03' 31.397''$   
                          Longitude:  $117^0 30' 47.877''$

3. Unique Well Identifier: 300J046010117300

4. Operator:           Paramount Resources Ltd.

5. Contractor:        Precision Drilling

6. Drilling Unit:      Precision Rig # 129, Land Rig

7. Position Keeping: N/A

8. Support Craft (Helicopter): N/A

9. Drilling Unit Performance: Good

10. Difficulties and Delays: Major lost circulation that was controlled by cementing.

11. Total Well Cost: \$1,204,000

12. Bottom Hole Co-ordinates: same as surface

## C. SUMMARY OF DRILLING OPERATIONS

1. Elevations:  
Ground: 764.62 m above sea level  
KB: 769.2 m above sea level  
KB to Casing Flange: 4.6 m
2. Total Depth:  
FTD: 1449 mKB  
PBTD: 1436 mKB
3. Date and Hour Spudded: January 26, 2007 at 04:15
4. Date Drilling Completed: February 14, 2007
5. Date of Rig Release: February 16, 2007
6. Well status: Cased and Suspended
7. Hole Sizes and Depths:

Conductor Hole:	610 mm to 12.5 m
Surface Hole:	311 mm to 430 mKB
Main Hole:	200 mm to 1449 mKB
8. Casing and Cementing Record:

Conductor Hole:	
Casing Size:	406 mm
Wall Thickness:	9.5 mm
Depth Set:	12.5 m
Cut Height:	At Surface
Date Set:	January 24, 2007
Cement Volume:	1.7 tonnes
Cement Type:	class 'G'
Surface Hole:	
Casing Make:	Ipsco
Casing Size:	219.1 mm
Casing Weight:	35.7 kg/m
Casing Grade:	J-55
Thread:	ST&C
Number of Joints:	32
Depth Set:	430 mKB
Cut Height:	At surface
Date Set:	January 30, 2007
Cement Volume:	36.5 Tonnes
Float Shoe Depth:	430 mKB
Float Collar Depth:	416 mKB
Cement Type:	Class 'G'

Additives: 2.0% CaCl<sub>2</sub>  
 Cement Top: Surface  
 Casing Bowl Size: 228 mm x 219 mm x 21 MPa  
 Casing Bowl Make: ABB Vetco

**Main Hole:**

Casing Size: 139 mm  
 Casing Weight: 23.07 kg/m  
 Casing Grade: J-55  
 Casing Make: IPSCO  
 Number of Joints: 108  
 Thread: LT&C  
 Depth Set: 1449 mKB  
 Cut Height: Surface  
 Date Set: February 16, 2007  
 Float Shoe Depth: 1449 mKB  
 Float Collar Depth: 1436 mKB  
 Stage Tool Depth: 566 mKB  
 Stage #1:  
 Cement Volume 1: 6.0 Tonnes  
 Cement Type 1: Thixlite  
 Additives 1: 1% SMS  
 Cement Volume 2: 13.0 Tonnes  
 Cement Type 2: Expando LWL  
 Additives 2: 0.1% CFL-3 & 0.2% LTR & 0.2% SPC-II  
 Stage #2:  
 Cement Volume 1: 11.0 Tonnes  
 Cement Type 1: Thixlite  
 Additives 1: 1% SMS  
 Cement Top: Close to surface

9. Sidetracked Hole: N/A

10. Drilling Fluid:

Conductor Hole: Water  
 Properties: N/A

Surface Hole: Gel - Chemical  
 Properties: Viscosity: 29 - 55 sec/L  
 Weight: 1010 - 1190 kg/m<sup>3</sup>  
 PH: 9.0 - 10.0

Main (425 - 900 m): Floc water  
 Properties: Viscosity: 29 sec/L

Weight:	1000 - 1040 kg/m <sup>3</sup>
PH:	9.0 - 11.0
Main (900 m – TD):	Gel-chem
Properties:	Viscosity: 4 - 75 sec/L
	Weight: 1030 - 1100 kg/m <sup>3</sup>
	PH: 9.0 – 11.0
	Water loss: 11.0 cc
	Solids: Not reported
	Gels: Not reported
	Filtrate: Not reported
	PV / YP: Not reported

11. Fishing Operations: N/A

12. Well Kicks and Well Control Operations: N/A

13. Formation Leak Off Tests:

Depth:	437 m
Fluid Density:	1000 kg/m <sup>3</sup>
Applied Pressure:	8800 kPa
Hydrostatic Pressure:	4218 kPa
Mud Weight Equivalent:	3089 kg/m <sup>3</sup>
Casing setting depth:	430 mKB

The surface casing leak-off test was taken to a gradient of 30.3 kPa/m before leak off was detected.

#### 14. Time Distribution

Date	Hours	Activity
07/01/24	0.75	Safety meeting
	19.5	Move rig and camp to site
	3.75	Wait on daylight
07/01/25	2.0	Safety meeting
	7.75	Wait on daylight
	14.25	Move rig and rig up rig
07/01/26	1.25	Safety meeting
	0.25	Rig service
	7.0	Rig up rig
	8.75	Nipple up diverter
	5.0	Drill
07/01/27	1.75	Survey
	0.75	Safety meeting
	0.75	Rig service
	19.5	Drill
07/01/28	3.0	Survey
	0.75	Safety meeting
	0.5	Rig service
	10.5	Drill
07/01/29	2.0	Survey
	6.75	Trip
	1.25	Reaming
	2.0	Circulate and condition mud
07/01/30	0.25	Run casing
	1.0	Safety meeting
	0.5	Rig service
	11.0	Run casing
07/01/30	2.5	Circulate and condition mud
	9.0	Trip
	0.75	Safety meeting
	0.5	Rig service
07/01/30	2.75	Trip
	5.5	Reaming
	4.25	Run casing
	5.0	Circulate and condition mud

	1.75	Cement casing
	3.5	Wait on cement
07/01/31	1.0	Safety meeting
	0.25	Rig service
	1.25	Wait on cement
	2.5	Weld casing bowl
	5.75	Nipple up BOP
	6.25	Test BOP's
	1.0	Slip and cut drill line
	2.5	Repair kelly
	2.0	Trip
	1.25	Drill out casing shoe
	0.25	Circulate and condition mud
07/02/01	0.75	Safety meeting
	0.75	Rig service
	0.5	Survey
	14.0	Drill
	2.75	Circulate and condition mud
	0.75	Leak off test
	4.5	Trip
07/02/02	0.75	Safety meeting
	0.5	Rig service
	2.0	Wait on cementers
	5.25	Circulate and condition mud
	9.0	Trip
	6.0	Drill out cement plugs
	0.5	Pump cement plugs
07/02/03	0.75	Safety meeting
	0.75	Rig service
	7.0	Trip
	7.5	Drill out cement plugs
	0.75	Drill
	7.0	Circulate and condition mud
	0.25	Pump cement plugs
07/02/04	1.0	Safety meeting
	0.75	Rig service
	7.0	Trip
	4.25	Circulate and condition mud

	6.25	Pump cement plugs
	4.25	Wait on cement
	0.5	Drill out cement plugs
07/02/05	1.0	Safety meeting
	0.75	Rig service
	6.0	Drill out cement plugs
	12.0	Drill
	3.5	Circulate and condition mud
	0.75	Survey
07/02/06	0.75	Safety meeting
	0.75	Rig service
	1.25	Survey
	14.25	Drill
	4.25	Trip
	0.5	Slip and cut drill line
	2.25	Circulate and condition mud
07/02/07	0.75	Safety meeting
	0.75	Rig service
	0.5	Survey
	8.5	Drill
	13.5	Circulate and condition mud
07/02/08	0.75	Safety meeting
	0.75	Rig service
	5.0	Trip
	2.0	Drill
	15.5	Circulate and condition mud
07/02/09	0.75	Safety meeting
	0.75	Rig service
	13.25	Circulate and condition mud
	4.75	Trip
	1.5	Reaming
	3.0	Drill
07/02/10	0.75	Safety meeting
	0.75	Rig service
	8.75	Drill
	9.5	Circulate and condition mud
	2.0	Trip
	0.5	Thaw kelly

	1.75	Survey
07/02/11	0.75	Safety meeting
	0.75	Rig service
	9.75	Drill
	11.75	Circulate and condition mud
	1.0	Thaw kelly
07/02/12	1.0	Safety meeting
	0.75	Rig service
	1.25	Drill
	3.25	Circulate and condition mud
	10.25	Trip
	6.5	Coring
	1.0	Reaming
07/02/13	1.25	Safety meeting
	0.75	Rig service
	10.25	Coring
	1.0	Circulate and condition mud
	1.5	Reaming
	8.25	Trip
	1.0	Slip and cut drill line
07/02/14	0.75	Safety meeting
	0.75	Rig service
	9.25	Drill
	3.5	Coring
	8.25	Trip
	1.5	Reaming
07/02/15	0.75	Safety meeting
	0.75	Rig service
	0.25	Survey
	12.25	Trip
	7.75	Logging
	2.25	Circulate and condition mud
07/02/16	1.25	Safety meeting
	0.25	Rig service
	6.5	Run casing
	2.0	Circulate and condition mud
	3.0	Cement casing
	3.75	Nipple down BOP's

	7.25	Rig out rig
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### Time Break Down by Activity:

<u>Activity</u>	<u>Hours</u>
Move on, rig up:	40.75
Wait on daylight	11.5
Drilling:	127.25
Surveying:	11.75
Reaming:	12.25
Tripping:	103.0
Circulate and condition mud:	106.75
Running casing:	22.0
Cementing casing:	4.75
Wait on cement	9.0
Wait on cementers:	2.0
Pump cement plugs:	7.0
Drill out cement plugs:	20.0
Drill out casing shoe:	1.25
Rig service:	14.0
Repair Kelly:	2.5
Thaw Kelly:	1.5
Safety meetings:	22.75
Nipple up diverter:	8.75
Weld casing bowl:	2.5
Nipple up BOP's:	5.75
Pressure test BOP's:	6.25
Leak off tests:	0.75
Coring:	20.25
Logging:	7.75
Slip & cut drill line:	2.5
Nipple down BOP's:	3.75
Rig out:	7.25

15. Deviation Survey: See deviation survey summary on page 12-1 of the Geological Report in the Attachments Section.
16. Abandonment Plugs: N/A
17. Composite Well Record: See the copy of the strip log in the Geological Report in the Attachments Section.
18. Completion Record: Reported in a separate report.

D: GEOLOGY

GEOLOGICAL SUMMARY

Tops: See page 16-1 of the Geological Report in the Attachments Section.

Sample Descriptions: See page 19-1 to 19-9 of the Geological Report in the Attachments Section.

Coring: Core #1: Sulphur Point Dolomite: 1406.0 - 1413.4 mKB

Cut: 7.4 m

Recovered: 7.63 m

Core #2: Sulphur Point & Muskeg: 1413.4 - 1425.0 mKB

Cut: 11.6 m

Recovered: 11.6 m

Total Depth: 1406 mKB

GAS DETECTION REPORT

A gas detector was utilized from the drill out of the conductor pipe to total depth. The gas detector readings are included on the composite geological log at the end of the Geological Report in the Attachments Section.

DRILL STEM TESTS: None.

WELL EVALUATION

The following logs were run:

Array Induction Log:	420 - 1449 mKB
Photo Density Dual Spaced Neutron Log:	0 - 1442 mKB
Compensated Sonic Log:	352 - 1446 mKB
Micro Log:	1300 - 1428 mKB

GAS, OIL, & WATER ANALYSES: N/A

FORMATION STIMULATION: N/A

FORMATION AND TEST RESULTS: N/A

DETAILED TEST PRESSURE DATA READINGS: N/A

## E. ENVIRONMENTAL CONSIDERATIONS

There are no known outstanding environmental considerations on this well. The well was drilled sumpless with all drilling fluids being held in tanks on the lease. At the end of the job the water was stripped from the mud system and hauled to L-73 for re-use. The solids were hauled to a remote site at J-04 60<sup>0</sup> 10' N, 117<sup>0</sup> 30' W where they were disposed of using the mix/bury/cover technique.

# Geological Report



On

**Para Et Al Cameron J-04**

**300/J-04-60-10-117-30**

For



**Paramount Resources Ltd.**

**Prepared For: Llew Williams**

**Prepared By: M. A. Salam Khan**



**Khan Petroleum Ltd.**   
(A Complete Wellsite Solution By PowerLog)

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## Table of Contents

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<u>Section</u>	<u>Page</u>
Well Abstract	1-1
Well Summary	2-1
Daily Drilling Summary	3-1
Casing Strings	4-1
Bit Record Summary (IADC)	5-1
Core Descriptions	8-1
Logging Reports	9-1
Deviation Survey Points	12-1
Mud Data	14-1
Work Schedule	15-1
Formation Tops	16-1
Sample Descriptions w/ Formation Tops	19-1

The proposed Para Et Al Cameron J-04 an exploratory well was a part of an extensive exploratory drilling program in the Cameron Hills. The well was proposed to drill vertically as a new delineation well. Paramount Resources Ltd. retained the services of Precision Drilling Rig # 129.

The primary objective is to penetrate the prognosticated oil productive zone in the Sulphur Point Dolomite Section of Sulphur Point Formation. Productions are being drawn from some wells.

Secondary targets were to test gas and heavy hydrocarbon possibilities of in the upper limestone section of Sulphur Point and in the Slave Point formation respectively. The Cameron Hills identifies itself with its structure complexity leading to insufficient geological information. The well bore information will validate the seismic picking of the reservoirs and to learn more about the complex reservoir characteristic of the structures.

The well was spudded at 16:00hrs on the January 26, 2007. Drilling of 311mm hole from surface to 353.0m was completed using one rock bit in 34.75 on bottom bit hours. 219.1mm surface casings were run in setting the shoe at 430.0 and cemented as per program.

Partial mudloss was encountered at 598.0m KB during drilling of 200mm hole and total loss encountered at 676.0m KB. Four cement plugs including two cement squeeze jobs failed to prevent from mudloss. Drilling to TD was completed with partial returns by adding LCM materials and Gel in the mud continuously.

Due to continuous mudloss with partial returns drilling parameters could not be kept consistently. This resulted problems in collecting ditch samples and proper gas show recordings.

Two cores were cut from 1406.0m to 1413.4m and 1425.0m KB respectively with 100% recovery. 200mm hole drilled down to 1449.0m - TD of the well.

Two bits were used in drilling 200mm hole section consuming 92.0 on bottom bit hours including the coring time. Gel Chem mud was used for the surface hole and displaced with Floc water till 850.0m and back to Gel Chem during the last section of drilling.

The well was cased for production tests. The ECP was set at 568.64m KB with the 139.7mm production casing string. The Casing shoe was set at 1449.50m KB.

The Para Et Al Cameron J-04 well data is a source of geological information of the morphological changes and reservoirs characteristics of the crater of the complex of Cameron Hills. The fractured and faulted (?) section in the Wabamun Formation leads to mudloss through its crater and encountered in all the wells drilled. The geology section in the Strip Log gives a brief representation of the individual stratigraphic formations.

The Sulphur Point Limestone section was 10.7m thick from at 1389.0m to 1407.2m RKB. It is comparatively less porous than that of the dolomite section varying between 3% - 8%. No returns were received during drilling of the Limestone Section.

The Dolomite Section was cored and is 16.6m thick. Detail descriptions are given in the core description.

The Slave Point formation was picked up at 1342.5m and 41m thick. Gas shows were noticed although the section with maximum 511/56 units and 640/56 units at 1362.0m and 1372.5m RKB respectively. The section was drilled with partial returns. The Sulphur Point Limestone section was of predominately tan, brown, greenish brown, dark brown, partly light yellow with dark brown stain and rare creamy color. They are friable to crumpled and moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly grainy, intraclasts & occasionally bioclastic debris and calcarenite. They are partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer inclusion, traces of greenish brown shale fragments, and traces of disseminated granular pyrite are found as accessories.

Weak odor of oil was noticed from the beginning of drilling this interval. Traces of light brown oil show was noticed which gradually increased between 1360m to 1375m RKB and faded away with the boundary section of the underline F4 Marker which hardly can be recognized from the drilling parameters and ditch cuttings.

The open hole logging was completed by Weatherford Logging Services.

MAI/MSS/MPD/MDN/MML/ISC/MGS/MTC/MFE/MCG tools were run in. From the ROP and gas data, ditch cuttings and logs the Sulphur Point Dolomite Section does carry positive reservoir properties for production including good oil shows. Limestone section of the Sulphur Point possesses comparatively tight porosity than that of the Dolomite Section. The Slave Point has got good reservoir properties and could be tested for the commercial viability.

Further evaluation and studies are also proposed for the quest of geological interest in the Cameron Hills Field.

# Well Summary

Storage Units: Metric

## Well Information

**Operator:** Paramount Resources Ltd.  
**Well Name:** Para Et Al Cameron J-04  
**Location:** 300/J-04-60-10-117-30  
**UWI:** 300J04601011730  
**Pool:** Sulphur Point & Slave Point.  
**Field:** Cameron Hills  
**State / Province:** Northwest Territory  
**Country:** Canada  
**License Number:** 1159  
**Well Status:** Cased for production testing.

<b>Surface Co-ordinates</b>	<b>Hole Type:</b> Vertical <b>Latitude:</b> 60°3'31.3"	<b>Fault Indicator:</b> <b>Longitude:</b> 117°30'47.8"
<b>N / S:</b>		
<b>E / W:</b>		

<b>Bottom Hole Co-ordinates</b>	<b>Latitude:</b> 60°3'31.3"	<b>Longitude:</b> 117°30'47.8"
---------------------------------	-----------------------------	--------------------------------

**N / S:**  
**E / W:**

<b>Elevations</b>	<b>Ground Elevation:</b> 765.20	<b>Reference:</b> Kelly Bushing to Ground	<b>MSL</b> 4.00
	<b>Kelly Bushing Elevation:</b> 769.20	<b>Cut (-):</b>	0.00
	<b>Casing Flange Elevation:</b> 4.00	<b>Fill (+):</b>	0.60

<b>Total Depth</b>	<b>Measured Depth</b>	<b>True Vertical Depth</b>
<b>Total Depth Driller (Tally) :</b>	1,449.00	1,449.00
<b>Total Depth Driller (Strap or SLM):</b>	1,449.00	1,449.00
<b>Total Depth Logger:</b>	1,449.50	1,449.50

<b>Miscellaneous Depths</b>	<b>Plugback Depth:</b>	<b>Water Depth Reference:</b>
	<b>Sidetrack Depth:</b>	<b>Water Depth:</b>

<b>Well Summary</b>	<b>Drilling Contractor:</b> Precision Rig# 129.	<b>Spud Date:</b> Jan 26, 2007 @ 16:00
	<b>Rig Release Date:</b> Feb 16, 2007 @ 23:59	<b>Total Depth Date:</b> Feb 15, 2007 @ 00:00

<b>Cores</b>	<b>#</b>	<b>Formation</b>	<b>Interval</b>	<b>Cut</b>	<b>Recovered</b>	<b>%</b>	
	2	Sulphur Point & Muskeg	1,413.40	1,425.00	11.60	11.60	100.00
	1	Sulphur Point Dol.	1,406.00	1,413.40	7.40	7.63	103.11

<b>Casing Summary</b>			
<b>Casing Type</b>	<b>Casing Size</b>	<b>Landed Depth</b>	<b>Hole Size</b>
Surface	219.1	430.00	311.0
Production	139.7	1,449.00	200.0

## Daily Drilling Summary

Storage Units:

Metric

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Jan 26, 07	0.00		0.00	0.0	Rig up drilling equipments. Safety meeting . Nipple up diverter line.
Jan 27, 07	194.00	194.00	11.20	17.3	Nippling up diverter line. Rig up all drilling equipments. Test diverter hydrl. Pre-spud safety meeting. Spud the well at 1600hrs. Drilling of 311mm hole from surface to 194.0m. Conduct periodical surveys. Continue drilling.
Jan 28, 07	388.00	194.00	17.50	11.1	Continue drilling of 311mm surface hole from 194.0m to 388.0m with periodical surveys. Encounter mud ring at 387.0m Trip out for mud ring at 387.0m.
Jan 29, 07	430.00	42.00	0.00	0.0	Trip out for cleaning up mud ring encountered at 387.0m. Safety meeting. RIH to 302.0m. Ream down to bottom. Resume drilling and drill down to 430.0m - TD of the surface hole section. Conduct periodical surveys. Circulation and mud conditioning to 1170kg/m3 and FV: 90 sec. Wiper trip to BHA length 180m. Mud conditioning to MW: 1190 kg/m3 and FV: 120 sec. Safety meeting with Power Tongs guys. RIH 219.1mm surface casings. Encounter gravel at 65m. POOH casings and lay out the same. RIH with a rock bit and clean up assembly.
Jan 30, 07	430.00	0.00	0.00	0.0	RIH with a rock bit and clean up assembly. Ream down the tight spots. Circulation and mud conditioning to 1200kg/m3 and FV: 120sec. Safety meeting. POOH. Rig up casing equipments. RIH of 219.1mm surface casing. Casing bridged out at 80m for boulders. POOH and lay down casings. Safety meeting prior to RIH with a rock bit. RIH - reaming off the tight spots. Present bit depth 261m.
Jan 31, 07	430.00	0.00	0.00	0.0	Continue reaming from 56.0m to 143.0m and 180.0m to 205.0m. POOH. Pre-job safety meeting with the casing hands. RIH 219.1mm surface casings. Circulation and mud conditioning through the casing string. Mud conditioned to 1170kg/m3 and FV: 50sec. Run 32 joints: 431.11m; 219.1mm; 35.72kg/m; IPSCO; J-55 surface casings. Set the casing shoe at 430.0m. Conduct cement job with Sangel - pre-mix 36.5 tones 0.1.0 Class "G" + 2% CaCl2. Plug down at 2015hrs. 8m3 good cement return. WOC. Safety meeting. Cut and dress casing string. Nipples up BOP stack.

## Daily Drilling Summary

Storage Units:

Metric

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Feb 1, 07	600.00	170.00	6.70	25.4	Nipples up BOP stack. Test BOPs with Rainbow Pressure Testers. Pressure tested Manifold valves, chokes, all flanges, casing bowl, HCR and manual valves, Blind Rams, kill lines, check valve drilling spool, stabbing valve, inside BOP, Pipe Rams, and annular BOP. Safety meeting. Slip and cut drill line. RIH with a new 200mm PDC bit on drilling BHA, Safety meeting. Tag cement at 416.0m. Drill out float shoe, cement, shoe and 7m new formation. Circulation and mud conditioning. Conduct LOT with Floc water mud at 880kPa equivalent to 30.28kPa/m. Resume drilling and drill down to 600m. Max FG: 1835/241 units against 485.m. Continue drilling.
Feb 2, 07	729.00	129.00	8.20	15.7	Continue drilling from 600.0m to 690.0m with periodical surveys. Lost circulation. Mix and pump LCM. Drill ahead with partial return to 729.0 - 14m inside Fort Simpson Formation. POOH. Safety meeting. Run in hole with open ended drill pipe. RIH to bottom. Circulate out LCM till lost circulation. Safety meeting with Sangel. Set plug between 729.0m to 539.0m. POOH to 10 stands. Circulate and clean out cementing string. RIH and tag cement top at 538.0m
Feb 3, 07	729.00	0.00	0.00	0.0	Circulation and clean up string after POOH 10 stands of DP. Trip in and tag cement top at 593.0m. Drill out cement from 593m to 612m. Lost circulation. Mix and pump LCM. Drill ahead cement plug with partial recovery to 729.0m. Maximum 352 units gas recorded during cement drilling. Circulate out to clean the hole. RIH with open ended drill pipe with periodical flow check. Circulate out LCM with water. Pre-job safety meeting with Sangel. Set Cement Plug# 2 between 729.0m to 523.0m. POOH 13 stands. Circulate to clean out the string - no cement return. RIH to tag cement top.

## Daily Drilling Summary

Storage Units:

Metric

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Feb 4, 07	758.00	29.00	1.20	24.2	RIH and tag cement top at 572.0m. POOH. Lay down cementing string. Pick up drilling BHA. RIH. Flow check at 430.0m & 572.0m - static. Drill out cement from 572.0m to 720.0m. 640units TG recorded at 572.0m while maximum 452units gas recorded during cement drilling. Lost circulation encountered at 719.0m. Mix & pump LCM pill. Drill out cement from 720.0m to 729.0m. Drilled down to 758.0m with partial loss. Ditch cuttings by passed shaker screen as to save LCM materials. Circulation & mud conditioning. POOH. RIH with open ended drill pipe. Circulate out LCM material. Safety meeting with Sangel. Set Cement Plug# 3.
Feb 5, 07	758.00	0.00	0.00	0.0	Set Cement Plug# 3 between 758m to 567m. POOH 12 stands. Squeeze job. 1.3m <sup>3</sup> cement slurry was squeezed at 50 lit/min with maximum 2mPa pressure. WOC. RIH. Feel cement at 618m. Safety meeting with Sangel. Set Cement Plug# 4 between the intervals 618m to 534m. POOH six stands to 487m. Squeeze 1.2m <sup>3</sup> cement slurry at 50 lit/min with maximum 3mPa pressures. WOC. POOH 13 stands and lay down by singles. Safety meeting. RIH with the Bit# 3 and BHA. Flow check at 430m - static. Tag cement top at 566m. Drill out cement from 566m to 758m. TG at 566m was 612units while maximum 359 units gas recorded during cement drilling.
Feb 6, 07	930.00	172.00	8.50	20.2	Resume drilling from 758.0m to 846.0m. Conduct deviation survey at 785.55m. Lost circulation - mix and pump LCM pills. Ditch cuttings by passed shale shaker's screen. Drilling continued with partial loss and low pressure to 895.0m. Normal drilling from 895.0m to 914.0m. Jets plugged. POOH. Flow check at 910.0m, 865.0m, 430.0m and 0m. RIH. TG at 914.0m is 387/56 units. Resume drilling to 930.0m. Drilling continued.
Feb 7, 07	1,072.00	142.00	19.00	7.5	Continue drilling with partial mud loss from 930.0m to 1072.0m. Conduct periodical surveys. Returns were by passed shaker's screen as to save LCM pills. Drilling continued.
Feb 8, 07	1,117.00	45.00	2.00	22.5	Continue drilling 200mm hole from 1062m to 1117m. Mix LCM plug and displace down the hole and drill the hole - drilling continued with partial return. Survey at 1085m. Returns were by passed shaker's screen as to accumulate LCM pills. Drilling continued.

## Daily Drilling Summary

Storage Units:

Metric

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Feb 9, 07	1,117.00	0.00	0.00	0.0	POOH to 588m. Mix LCM slug and displace down the hole. Restored circulation partially. RIH to 700m. Mix LCM slug and pump down the hole. No return. Mix and pump thicker LCM pill down the hole - partial return. RIH to 900m. Mix and displace thicker LCM slug down the hole - partial return. RIH to 1100m. Ream down to 1117.0m with partial return. Well control continued with close observation.
Feb 10, 07	1,147.00	30.00	5.70	5.3	Ream down from 1100m to 1117m. Drilling from 1117m to 1122m. Returns by passed shaker's screen due to mud loss. Bit balled. POOH. Lay down bit and pick a new 200mm, Varel, MKS 55 bit. Set a new pre-mix tank with the mud system. Mix and prepare mud to drill ahead. Drill down to 1147.0m. Mix and prepare new mud with LCM pill.
Feb 11, 07	1,332.00	185.00	7.20	25.7	Mix and prepare new mud with LCM pill to drill ahead. Drilling of 200mm hole from 1147.0m to 1332.0m with partial returns. New mud was prepared with LCM pill every after 5 joints of drilling i.e. mud 20m <sup>3</sup> in every five joints of drilling. Conduct periodical surveys. Continue drilling.
Feb 12, 07	1,406.00	74.00	6.00	12.3	Continue drilling from 1332.0m to 1389.0m. Clean up flow line, pumps and Kelly. Mix and prepare new mud with LCM pill to drill ahead. Resume drilling from 1389.0m to 1406.0m. Lost circulation encountered at 1395.0m. POOH for coring continued.
Feb 13, 07	1,413.40	7.40	4.20	1.8	POOH. Pre-job safety meeting. Lay down bit and pick up core bit and BHA. Flow check at 430.0m. Break circulation. RIH to 1406.0m with intermittent break circulation to condition mud. TG at 1406.0m is 668/84 units. Mud conditioning at 1406.0m. Coring from 1406.0m to 1413.40m. Core barrel jammed. Circulation and mud conditioning. POOH. Lay down core bit. Recover cores.
Feb 14, 07	1,425.00	11.60	6.50	1.8	Retrieve core and reset coring tools. Safety meeting with core hands. Slip and cut drill line. RIH with a new core bit, BHC, ARC 327 and coring BHA. Flow check at 430.0m, 703.0m, 1406.0m - static. Wash down to bottom. Resume coring from 1413.4m to 1425.0m. POOH to retrieve core. Flow check at 1425.0m, 1354.0m, 712.0m, 430.0m and 0m - static. Lay down core barrel and recover core. RIH with bit No. 4RR1 on drilling BHA.

## Daily Drilling Summary

Storage Units:

Metric

Date	Depth	Progress	Rotating Hours	Avg. P.R.	Daily Operational Summary
Feb 15, 07	1,449.00	24.00	9.20	2.6	RIH with bit No. 4RR1 on drilling BHA. Flow check at 430m, 703m and 830m - static. Break circulation at 1425.0m. Trip gas recorded 382/34 units. Reaming the cored section from 1406.0m to 1425.0m. Resume drilling 200mm hole from 1425.0m to 1449.0m. Survey at 1449.0m. Circulate and condition mud to MW: 1060kg/m <sup>3</sup> and FV to 95sec. POOH for logging. Flow check at 1425m, 703m, 430m and 0m - static. Safety meeting. Rig up Weatherford logging tools and equipments. Logging.
Feb 16, 07	1,449.00	0.00	0.00	0.0	Logging. One Run with - MAI/MSS/MPD/MDN/MGS/MML/MTC/MCG tools. RIH with rock bit. Flow check at 430m and 724m - partial loss. TG at 1449.8m is 289/34 units. POOH and lay down drilling strings. Safety meeting with Tong hand crews. Rig up casing equipments and tools. RIH of 139.7mm production casings. Set the ECP (external casing packer) at 568.64m RKB. Set the casing shoe at 1449.5m. Circulate and condition mud through the casings string.
Feb 17, 07	1,449.00	0.00	0.00	0.0	RIH production casings. RIH 109 joints of 139.7mm; 23.07kg/m; IPSCO; J-55 casings. The ECL is set at 566.0m RKB. Circulation through production string - partial returns. TG gas 194/34 units. Safety meeting with the Sanjel cementing hands. Cement job was completed in two stages. Cement slurry from 2 tones THXLITE + 1% SMS was pumped as the lead slurry followed by cement slurry from 13 tones Expandomix LWL + 1% CFL + 2% LTR + 2% SPC-II as tail slurry. Plugged down at 11:14hrs. 2m <sup>3</sup> scavenger cement slurry was received on surface. WOC. Nipple down BOP stacks. Rig down - tear down rig. Rig move.

## Casing Data Summary

Storage Units: Metric

<b>Casing Type:</b>	<b>Surface</b>		
<b>Casing Size:</b>	219.1	<b>Hole Size:</b>	311.0
<b>Casing Landed @:</b>	430.00	<b>Total Joints:</b>	32
<b>Casing Date:</b>	Jan 30, 2007 @ 13:30	<b>Plug Down Date:</b>	Jan 30, 2007 @ 20:15
<b># of Joints / Length / O.D. / Weight:</b> 32 joints; 431.11m; 219.1mm; 35.72kg/m; IPSCO; J-55 types.			
<b>Cementing Details:</b>	Cement job was completed in two stages. Cement slurry from 2 tones THXLITE + 1% SMS was pumped as the lead slurry followed by cement slurry from 13 tones Expandomix LWL + 1% CFL + 2% LTR + 2% SPC-II as tail slurry. Plugged down at 11:14hrs. 2m3 scavenge		
<b>Remarks:</b>	The casings were pulled out from 65.0m and 81.0m respectively as could not pass through. Tight spots were cleaned of with reaming.		
<b>Casing Type:</b>	<b>Production</b>		
<b>Casing Size:</b>	139.7	<b>Hole Size:</b>	200.0
<b>Casing Landed @:</b>	1,449.00	<b>Total Joints:</b>	109
<b>Casing Date:</b>	Feb 16, 2007 @ 06:45	<b>Plug Down Date:</b>	Feb 16, 2007 @ 11:14
<b># of Joints / Length / O.D. / Weight:</b> 109 joints; 1450.48m; 139.7mm; 23.07kg/m; IPSCO; J-55.			
<b>Cementing Details:</b>	Two stages cement jobs with packer set at 566.0m RKB. Lead Slurry: cement slurry from 2 tonnes lead THXLITE + 1% SMS followed by tail slurry of 13 tonnes Expandomix LWL + 1% CFL + 2% LTR + 2% SPC-II. Plug down at 11:14hrs with 2m3 scavenger cement.		
<b>Remarks:</b>	Considerable amount of mud loss was recorded during circulation through the casing string.		

# Bit Record Table (IADC Grading System)

Storage Units: Metric

\*\* For more detailed Bit Information refer to Bit Record \*\*

Bit #	Make	Type	Size	Depth In	Depth Out	Made	Hours	Avg. P.R.	I.A.D.C. Bit Condition									
									I	O	MDC	Loc	B	G	ODC	RP1	RP2	
1A	Varel	CH04JM	311.0	0.0	430.0	430.0	34.75	12.4	2	2	CT	A	E	I	BT	TD	TD	
3	Varel	MKS 65	200.0	430.0	1,122.0	692.0	52.50	13.2	0	0	WT	A	X	I	CT	HP	HP	
4	Varel	MKS55	200.0	1,122.0	1,406.0	284.0	19.75	14.4										
C Bit -	BHC	BHC 40	171.0	1,406.0	1,413.0		7.0	4.00	1.8	0	0	BC	N	X	I	WT	PR	PR
C Bit -	BHC	ARC 32	171.0	1,413.4	1,425.0		11.6	6.50	1.8	0	0	NO	A	X	I	NO	FM	FM
4RR1	Varel	MKS55	200.0	1,425.0	1,449.0	24.0	9.25	2.6										

Total Rotating Hours: 126.75

# Core Report

Storage Units: Metric

Date: February 12, 2007  
Core #: 1  
Formations Cored: Sulphur Point Dol.

## Cored Interval

From: 1,406.00 To: 1,413.40  
Cut: 7.40 Recovered: 7.63 103.11 %  
Core Diameter: 102.0

Coring Company: Baker Hughes.  
Service Representative: K.S. Ciurysek

Core Bit Information Bit Make: BHC Bit Type: BHC 406  
Bit Size (OD): 171.0 Serial #: 7302765  
Original Hole Size: 200.0

Remarks: The core barrel got jammed after coring to 1413.46m. Core interval: 1406.0m to 1413.46m. Recovery: 102.2%

## Detailed Core Descriptions

### Sulphur Pt Dol: 1,407.20 MD, 1,407.20 TVD, -638.00 SSL

1,406.00 to 1,407.30 (1.30)	<b>Limestone</b> tan to brownish gray, compact, very dense argillaceous limestone with patchy white to off white anhydrite and calcite strips intercalated with medium brownish limy shale laminae. Dip angle 25-15. Wash out by mud on surface insuring hardness of the interval. None to very tight intercrystalline porosity on the upper section which increases to vuggy at the lower part. Traces to 5% of bright yellow orange oil staining at the lower section, brownish yellow direct fluorescence, faint intensity slow milky white streaming cut, thin pale white residual ring fluorescence, poor show.
1,407.30 to 1,410.60 (3.30)	<b>Dolomite</b> dolomitic limestone is isolated with dark gray, grey black, firm, compact, dense, subfissile, subplaty, limy shale, micromicaceous common microlaminated with biotitic mica plates. They predominantly of chalky mudstone texture with traces dark brown carbonaceous fossil debris and in part silty. Medium brown, tan, mottled, compact and dense dolomite underlying the limy shale sequence are porous (5% to 14% at places) masked by even brownish yellow to golden yellow oil staining, 20% to 100% white, brownish yellow and yellow gold direct fluorescence, moderate intensity, fast to instantaneous white streaming and blooming cut fluorescence, thin pale brown oil residue, thick white residual ring fluorescence, poor to excellent show.
1,410.60 to 1,411.75 (1.15)	<b>Dolomite</b> spotted with dirty white to tan dolomitic limestone with some patchy shale stringers intercalated with laminae of calcite and anhydrite which has limited the permeability. Porosity in this interval varies from 5% to maximum 10%. This section is masked by 80% patchy oil staining, bright yellow to creamy white, beige direct natural fluorescence, slow to flash white streaming cut fluorescence on 30% of sample, white thin residual ring, thin pale brown oil residue, good show.

1,411.75 to 1,413.40  
(1.65)

**Dolomite**

The lower section is fractured with maximum :30 to :40 dip which could lead to jam the continuous coring. The dense tan, mottled, brownish dolomite section intercalated with brownish gray limy shale appears as patchy lenses rare with anhydrite inclusion. Calcite stringers are common. This section grading to dolomitic limestone with some stains of white chalky limestone. Porosity varies from 6% to 10%. This section is masked with 60% to 100% natural oil staining, weak to strong brownish yellow fluorescence, immediate to slow streaming yellow-white fluorescent cut, good pale yellow fluorescent cut residue, light tan visible cut residue, poor to excellent show show.

# Core Report

Storage Units: Metric

Date: February 13, 2007  
Core #: 2  
Formations Cored: Sulphur Point & Muskeg

**Cored Interval**

From: 1,413.40 To: 1,425.00  
Cut: 11.60 Recovered: 11.60 100.00 %  
Core Diameter: 102.0

Coring Company: Baker Hughes Inteq.  
Service Representative: K.S.Ciurysek

Core Bit Information Bit Make: BHC Bit Type: ARC 327  
Bit Size (OD): 171.0 Serial #: 61414  
Original Hole Size: 200.0

Remarks: Cored Inteval: 1413.4m to 1425.0m. Coring was suspended due to slow ROP - 0.3m/hr.

## Detailed Core Descriptions

1,413.40 to 1,413.80 (0.40)	<b>Shale</b> dark gray, grey black, firm, compact, dense, subfissile, subplaty, noncalcareous, micromicaceous with traces dark brown carbonaceous debris, in part silty limy shale. Partly washed out grading to lumpy limy mudstone, slightly to highly calcareous, off white to white stains of limestone inclusion.
1,413.80 to 1,414.80 (1.00)	<b>Dolomite</b> tan to brownish gray, compact, very dense dolomite mottled and light to medium brown and occasionally dark brown, firm crumbly to moderately hard, speckled with patchy white to off white anhydrite and anhedral to subhedral calcite strips, rare dark black bituminous (?) oil staining, occasionally spotty and grainy, intercalated with medium brownish patchy limy shale strips and black to brownish black minerals stains. Dip angle 10-12°. Porosity 6-12%. Even oil show, masked tan oil stain, 100% golden yellow fluorescence, immediate to slow streaming pale yellow fluorescent cut, good yellow fluorescent cut residue, dark tan visible cut residue. Excellent show
1,414.80 to 1,415.80 (1.00)	<b>Shale</b> tan to brownish gray compact, dense dolomite intercalated often, fractured and overlain of clayey micromicaceous limy shale. Spotty anhydrites with calcite bands are common. Spotty light tan to tan oil stain, 10%-40% scattered golden yellow fluorescence, moderate to slow streaming pale yellow fluorescent cut, very good yellow fluorescent cut residue, dark tan visible cut residue, poor to fair show.
1,415.80 to 1,416.50 (0.70)	<b>Dolomite</b> mottled, tan, brownish gray crumbly to moderately hard dolomite, partly grainy, wackestone to packstone texture, 5% to 9% scattered porosity varying between 10-12 dip angle are masked with even oil stain, fair to good oil show, 80% golden yellow fluorescence, fast to slow streaming pale yellow fluorescent cut, good yellow fluorescent cut residue, tan visible cut residue.

## Core Report

Storage Units: Metric

1,416.50 to 1,418.40 (1.90)	<b>Dolomite</b> dolomite of brownish gray, tan and mottle with limestone grains are alternately intercalated with limy shale leading to vuggy porosity. 10 to 25% of bright yellow orange oil staining increasing to the lower section, brownish yellow direct natural sample fluorescence, faint intensity slow milky white streaming cut, thin pale white residual ring fluorescence, poor show.
1,418.40 to 1,422.90 (4.50)	<b>Dolomite</b> medium brown, off white to light grey, mottled and commonly tan aphanites to rare finely crystalline, relict wackestone with packstone texture visible when partially dolomitize, calcite and anhydrite inclusion. Black dead oil (?) stain with brownish black to black or bituminous partings. Possessing scattered porosity between 4% to 8% changing its depositional facies with variation of dip angle between 12-7. Masked with traces to maximum 60% patchy oil show to brownish yellow to golden yellow oil staining, golden white, brownish yellow and yellow gold direct fluorescence, moderate intensity, fast to slow white streaming and blooming cut fluorescence, thin pale brown oil residue, thick white residual ring fluorescence, poor to good show.
1,422.90 to 1,423.80 (0.90)	<b>Shale</b> dark gray, grayish, firm, compact, dense, subfissile, subplaty, noncalcareous, micromicaceous common traces dark brown carbonaceous debris, in part silty, shale underlying the Muskeg formation separated the Sulphur Point with unconformably fractured with micropyritic shale sequence. Speckled with white dolomitic limestone and stained of anhydrite, calcite and black to brownish black minerals. Presence of anhydrite and dolomitic inclusion increases to lower part. Microlaminations are noticed with the change of facies.

**Muskeg: 1,423.80 MD, 1,423.80 TVD, -654.60 SSL**

1,423.80 to 1,425.00 (1.20)	<b>Anhydrite</b> white, off white, light brown, light gray, white, interbeded with dolomite, inetrbeded with limestone with patchy faint oil stain and black bituminous(?) and black minerals, moderately hard, very hard in parts, blocky, cryptocrystalline to micro crystalline, grading to thomb stone debris.
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# Wireline Logging Summary

Storage Units:

Metric

**Logging Suite Number:** 1  
**Wireline Logging Company:** Weatherford Logging Services.  
**District:** GPR  
**Witness:** Azim Ahmed

**Engineer:** G. Singer  
**Unit Number:** 13124

**Was Pressure Control Equipment Utilized:** No **Maximum Deviation:** 2.700 °  
**Was the Logging Job Mechanically Assisted:** No **Hole Size:** 200.0

**Total Lost Time:** 0.00  
**Loggers' Total Down Time:** 0.00  
**Total Job Time (From Rig up to Rig down):** 6.50

	Measured Depth	True Vertical Depth
<b>Casing Depth Driller</b>	430.00	430.00
<b>Casing Depth Logger</b>	430.80	430.80
<b>Total Depth Driller (Tally)</b>	1,449.00	1,449.00
<b>Total Depth Driller (Strap or SLM)</b>		

**General Remarks:** Logging was completed in one run.

**Logging Run #:** 1  
**Date:** Feb 14, 2007

## Drilling Fluid Data

**Drilling Fluid Type:** Gel Chem.  
**Fluid Density:** 1060.0 **Viscosity:** 93 **pH:** 11.0 **Fluid Loss:** 11.0

**Mud Resistivity (Rm):** 1.18 @ 25.0 ° **Maximum Temperature:** 48.0 °  
**Mud Resistivity (Rm) @ BHT:** 0.78 @ 48.0 ° **Source (Rmf):** Press  
**Mud Filtrate Resistivity (Rmf):** 1.04 @ 25.0 ° **Source (Rmc):** Filter  
**Mud Cake Resistivity (Rmc):** 1.32 @ 25.0 °

## Logging Run Information

**Date on Bottom:** Feb 15, 2007  
**Total Depth Logger:** 1,449.50 (MD) **1,449.50 (TVD)**

**Logging Tools:** MAI/MSS/MPD/MDN/MML/ISC/MGS/MTC/MFE/MCG tools; 430.0m to 1449.5m RKB.

**Remarks:**

- # The well is drilled as a vertical one. and all depth are measured from RKB.
- # The well is drilled by Precision Drilling Rig# 129.
- # Paramount AFE# 07N710028.
- # Logging was completed by Weatherford.
- # 139.7mm production casings were run in.

**Hole Conditions:** Encountered total mudloss at 676.0m RKB. Drilling was completed with partial returns adding LCM pills and Gel in mud continuously. Mudloss was limited during coring.

## Deviation Survey Points

Storage Units: Metric

Survey Type: magnetic / single shot

Measured Depth	Drift Angle (°)	TVD	Measured Depth	Drift Angle (°)	TVD
31.95	0.500	31.95			
59.08	0.250	59.08			
92.08	0.750	92.08			
119.80	0.750	119.80			
147.79	0.400	147.79			
175.57	0.750	175.57			
204.03	1.250	204.03			
232.62	0.750	232.62			
261.17	0.500	261.17			
290.73	0.250	290.73			
319.85	0.750	319.85			
349.04	0.750	349.04			
378.17	1.250	378.17			
407.07	1.000	407.07			
430.00	0.750	430.00			
505.00	1.000	505.00			
641.83	1.250	641.83			
785.55	1.000	785.55			
952.00	2.000	952.00			
991.00	1.500	991.00			
1,040.00	2.750	1,040.00			
1,085.00	2.500	1,085.00			
1,137.00	2.000	1,137.00			
1,449.00	1.000	1,449.00			

## Drilling Fluid Summary

Storage Units:

Metric

Drilling Fluid Type:	Gel Chem	From:	0	To:	430
Drilling Fluid Type:	Flock Water	From:	430	To:	850
Drilling Fluid Type:	Gel Chem	From:	850	To:	1,449

## Work Schedule

Storage Units: Metric

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<b>Company:</b>	Khan Petroleum Ltd.			
<b>Geologist:</b>	Azim Ahmed			
<b>Work Performed</b>	From:	Jan 24, 2007	To:	Feb 16, 2007
<b>Depths Logged</b>	From:	1,280.0	To:	1,449.0
<b>Remarks:</b>	Rig moved from Bitscho 2-11 to J-04 on Jan 24-25, 2007.			

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## Formation Top Summary

Storage Units:

Metric

**Kelly Bushing Elevation:**  
Ground Elevation:

769.20  
765.20

**Casing Flange Elevation:**

4.00

***\*\* All Depths measured from Kelly Bushing Elevation \*\****

Group Formation Member	Prognosis (TVD)	Sample Top (MD)	Sample Top (TVD)	Log Top (MD)	Log Top (TVD)	Subsea	Thickness
<i>Wabamun</i>	549.20	550.00	550.00	551.00	551.00	218.20	170.00
<i>Fort Simpson</i>	721.20	717.00	717.00	717.50	717.50	51.70	563.00
<i>Sample Point</i>	1,280.00	1,280.00	1,280.00			-510.80	
<i>BhL</i>	1,314.10	1,319.50	1,319.50	1,319.70	1,319.70	-550.50	22.50
<i>Slave Point</i>	1,339.00	1,342.00	1,342.00	1,342.80	1,342.80	-573.60	41.50
<i>F4</i>	1,381.10	1,383.50	1,383.50	1,383.70	1,383.70	-614.50	6.00
<i>Watt Mountain</i>	1,388.50	1,389.50	1,389.50	1,389.00	1,389.00	-619.80	8.00
<i>Sulphur Pt Ls</i>	1,398.10	1,396.50	1,396.50	1,394.00	1,394.00	-624.80	10.70
<i>Sulphur Pt Dol</i>	1,405.80	1,407.20	1,407.20	1,406.70	1,406.70	-637.50	16.60
<i>Muskeg</i>	1,426.00	1,423.80	1,423.80	1,424.00	1,424.00	-654.80	25.20
<i>Total Depth</i>	1,449.20	1,449.00	1,449.00	1,449.80	1,449.80	-680.60	

## Sample Descriptions

Storage Units: Metric

### Sample Point: 1,280.00 MD, 1,280.00 TVD, -510.80 SSL

1,280.00 to 1,285.00 (5.00)	80% <b>Shale</b> medium gray, gray, greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan limestone inclusion, abundant of dark brown to black minerals, rare silty, very calcareous to shally limestone.
	20% <b>Limestone</b> off white, light brown, brownish gray, mottled, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, poor intercrystalline visible porosity, no shows.
1,285.00 to 1,290.00 (5.00)	70% <b>Shale</b> medium gray, gray, greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan limestone inclusion, abundant of dark brown to black minerals, traces of loose coarse quartz grains, rare silty, very calcareous to shally limestone.
	30% <b>Limestone</b> off white, light brown, brownish gray, mottled, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, poor intercrystalline visible porosity, no shows.
1,290.00 to 1,295.00 (5.00)	60% <b>Limestone</b> off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
	40% <b>Shale</b> medium gray, gray, greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan limestone inclusion, abundant of dark brown to black minerals, traces of loose coarse quartz grains, rare silty, very calcareous to shally limestone.

## Sample Descriptions

Storage Units: Metric

1,295.00 to 1,300.00 (5.00)	70% <b>Shale</b> medium gray, gray, greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan limestone inclusion, abundant of dark brown to black minerals, traces of loose coarse quartz grains, rare silty, very calcareous to shally limestone.
	30% <b>Limestone</b> off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
1,300.00 to 1,305.00 (5.00)	70% <b>Shale</b> medium gray, gray, partly greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan lumpy to blocky limestone, abundant of dark brown to black minerals, traces of loose coarse quartz grains, rare silty, very calcareous to shally limestone, rare dolomitic.
	30% <b>Limestone</b> off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
1,305.00 to 1,310.00 (5.00)	80% <b>Shale</b> medium gray, gray, partly greenish gray, firm, friable, partly moderately hard to hard, splintery to blocky, micromicaceous, dull earthy texture, mud stone inclusion, smooth to waxy texture in parts, fissile to subfissile, partly platy, carbonaceous, traces of granular pyrite, abundant of gray to tan lumpy to blocky limestone, abundant of dark brown to black minerals, traces of loose coarse quartz grains, rare silty, very calcareous to shally limestone, rare dolomitic.
	20% <b>Limestone</b> off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.

## Sample Descriptions

Storage Units: Metric

1,310.00 to 1,315.00	70% <b>Shale</b> (5.00)	blackish gray, gray, dark gray, firm, friable, moderately hard to hard, predominately blocky, smooth to gritty, commonly micromicaceous & limy, partly dull earthy texture, subfissile, partly platy, rare thinly laminated, occasionally silty, partly carbonaceous, traces of argillaceous dolomitic limestone, rare siltstone & sandstone stringers, slightly calcareous.
	30% <b>Limestone</b>	off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
<b>BhL: 1,319.50 MD, 1,319.50 TVD, -550.30 SSL</b>		
1,315.00 to 1,320.00	80% <b>Shale</b> (5.00)	blackish gray, gray, dark gray, traces greenish gray, firm, friable, moderately hard to hard, predominately blocky, commonly micromicaceous & limy, partly dull earthy texture, partly smooth to gritty, partly subfissile, partly platy, rare thinly laminated, occasionally silty, partly carbonaceous, traces of argillaceous limestone, rare siltstone & sandstone stringers, calcareous.
	20% <b>Limestone</b>	off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
1,320.00 to 1,325.00	50% <b>Limestone</b> (5.00)	off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, traces bituminous in part (?), abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
	50% <b>Shale</b>	blackish gray, gray, dark gray, traces greenish gray, soft to firm, friable, moderately hard to hard, sub blocky to blocky, commonly micromicaceous & limy, partly dull earthy texture, partly smooth to waxy, partly subfissile, partly platy, rare thinly laminated, partly clayey, occasionally silty, partly carbonaceous, traces of argillaceous limestone, traces bituminous in part (?), abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains with rare siltstone & sandstone stringers, calcareous.

## Sample Descriptions

Storage Units: Metric

1,325.00 to 1,330.00 (5.00)	70% <b>Shale</b>  blackish gray, gray, dark gray, traces greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, commonly micromicaceous & limy, partly dull earthy texture, partly smooth to waxy, partly subfissile, partly platy, rare thinly laminated, partly clayey, occasionally silty, partly carbonaceous, clayey in parts, traces of argillaceous limestone, traces bituminous in part (?), abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains with rare siltstone & sandstone stringers, calcareous. traces of siltstone and sandstone stringers, abundant of argillaceous limestone, calcareous.
	30% <b>Limestone</b>  off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, traces bituminous in part (?), abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
1,330.00 to 1,335.00 (5.00)	70% <b>Shale</b>  gray, dark gray, brownish gray, occasionally greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, smooth to gritty, commonly micromicaceous, partly limy, partly dull earthy texture, rare subfissile, partly platy & rare thinly laminated, occasionally silty, partly carbonaceous, traces of argillaceous limestone, traces of coarse quartz grain with some siltstone stringers, calcareous.
	30% <b>Limestone</b>  off white, light brown, brownish gray, mottled, tan, in part chalky, firm to crumpled, rare moderately hard, blocky to subblocky, smooth to gritty, partly grainy, cryptocrystalline to microcrystalline debris, predominately mudstone, rare wackestone, calcarenite, commonly dolomitic & locally grading to dolomitic limestone, traces of calcite inclusions, traces bituminous in part (?), abundant of shale fragments, local disseminated pyrite, traces of loose coarse quartz grains, poor intercrystalline visible porosity, no shows.
1,335.00 to 1,340.00 (5.00)	80% <b>Limestone</b>  white, off white, light brown, mottled, tan, creamy, dark brown, firm to crumpled to moderately hard, lumpy to blocky, partly subblocky, smooth to gritty, predominately microcrystalline to crystalline debris, predominately wackestone to mudstone, locally dolomitic, intraclasts & occasionally bioclastic debris, commonly loose grains to predominately peloids, calcarenite, traces of fine crystalline dolomite, traces of coarse quartz grain, fair visible intracrystalline porosity, no show.
	20% <b>Shale</b>  gray, dark gray, brownish gray, occasionally greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, smooth to gritty, commonly micromicaceous, partly limy, partly dull earthy texture, rare subfissile, partly platy, rare thinly laminated, occasionally silty, partly carbonaceous, traces of argillaceous limestone, traces of granular pyrite, calcareous.

## Sample Descriptions

Storage Units: Metric

### Slave Point: 1,342.00 MD, 1,342.00 TVD, -572.80 SSL

1,340.00 to 1,345.00 (5.00)	100%Limestone	white, off white, light brown, mottled, tan, creamy, dark brown, firm to crumpled to moderately hard, lumpy to blocky, partly subblocky, smooth to gritty, predominately microcrystalline to crystalline debris, predominately wackestone to mudstone, locally dolomitic, intraclasts & occasionally bioclastic debris, commonly loose grains to predominately peloids, calcarenite, traces of fine crystalline dolomite, traces of coarse quartz grain, dense with trace poor intracrystalline porosity, rare traces of light brown oil show to very weak odour, no visible staining, light pale yellow sample fluorescence, faint cut, no residual ring fluorescence, poor show.
1,345.00 to 1,350.00 (5.00)	100%Limestone	brown, greenish brown, tan, dark brown, partly light yellow with dark brown stain, friable to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer, traces of greenish brown shale fragments, traces of nodular pyrite, poor to fair visible intracrystalline porosity, rare traces of light brown oil show to very weak odour, no visible staining, light pale yellow sample fluorescence, no cut, no residual ring fluorescence, poor show.
1,350.00 to 1,355.00 (5.00)	100%Limestone	brown, greenish brown, tan, dark brown, partly light yellow with dark brown stain, rare creamy, friable to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly grainy, intraclasts & occasionally bioclastic debris, calcarenite, partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer inclusion, traces of greenish brown shale fragments, traces of disseminated granular pyrite, fair to good visible intracrystalline porosity, weak odor, traces of light brown oil show, no visible staining, light pale yellow sample fluorescence, very faint cut, no residual ring fluorescence, poor show.
1,355.00 to 1,360.00 (5.00)	100%Limestone	predominately tan, brown, greenish brown, dark brown, partly light yellow with dark brown stain, rare creamy, friable to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly grainy, intraclasts & occasionally bioclastic debris, calcarenite, partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer inclusion, traces of greenish brown shale fragments, traces of disseminated granular pyrite, fair to good visible intracrystalline porosity, weak odor, traces of light brown oil show, no visible staining, light pale yellow sample fluorescence, very faint cut, no residual ring fluorescence, poor show.

## Sample Descriptions

Storage Units: Metric

1,360.00 to 1,365.00 (5.00)	<b>100%Limestone</b> predominately brown, off white, greenish brown, light yellow with dark brown stain, occasionally tan, dark brown, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer & greenish brown shale fragments inclusion, traces of loose coarse quartz grains, good visible intracrystalline porosity, weak odour, no visible staining, patchy golden white natural sample fluorescence, slow faint cut, pale yellowish brown residual ring fluorescence, good show.
1,365.00 to 1,370.00 (5.00)	<b>100%Limestone</b> predominately brown, off white, greenish brown, light yellow with dark brown stain, occasionally tan, dark brown, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly argillaceous, traces of fine crystalline dolomite, rare siltstone stringer & greenish brown shale fragments inclusion, traces of loose coarse quartz grains, good visible intracrystalline porosity, weak odour, no visible staining, patchy golden white natural sample fluorescence, slow faint cut, pale brownish yellow residual ring fluorescence, good show.
1,370.00 to 1,375.00 (5.00)	<b>100%Limestone</b> brown, off white, greenish brown, dark brown, light yellow with dark brown stain, tan, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly grainy, intraclasts & occasionally bioclastic debris, calcarenite, argillaceous in parts, traces of fine crystalline dolomite, rare siltstone stringer & greenish brown shale fragments inclusion, traces of loose coarse quartz grains, traces of bituminous (?) fragments, good visible intracrystalline porosity, weak odor, no visible staining, patchy golden white natural sample fluorescence, slow faint cut, pale brownish yellow residual ring fluorescence, good show.
1,375.00 to 1,380.00 (5.00)	<b>100%Limestone</b> brown, off white, greenish brown, dark brown, light yellow with dark brown stain, tan, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly grainy, intraclasts & occasionally bioclastic debris, calcarenite, argillaceous in parts, traces of fine crystalline dolomite, rare siltstone stringer & greenish brown shale fragments inclusion, traces of loose coarse quartz grains, good visible intracrystalline porosity, weak odour, no visible staining, traces of golden white natural sample fluorescence, slow faint cut, pale brownish yellow residual ring fluorescence, fair show.
	<b>Shale</b> gray, greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, commonly micromicaceous, rare dull earthy texture, partly clayey & soft to firm, rare subfissile, partly platy, occasionally silty, partly carbonaceous, abundant crystalline limestone, traces of fine crystalline dolomite, traces of bituminous (?) fragments, non to slightly calcareous.

## Sample Descriptions

Storage Units: Metric

### F4: 1,383.50 MD, 1,383.50 TVD, -614.30 SSL

1,380.00 to 1,385.00 100% **Limestone**  
(5.00) off white, mottled, light yellow with dark brown stain, light brown, dark brown, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to crystalline debris, predominately wackestone to packstone, locally grading to dolomitic limestone, intraclasts & occasionally bioclastic debris, commonly loose grains to predominately peloids, calcarenite, traces of fine crystalline dolomite, traces of coarse quartz grain, traces of anhydrite inclusion, abundant of gray to greenish gray shale fragments, vuggy to fair visible intracrystalline porosity, very faint odour, no visible staining, traces of light brown oil show, light brownish yellow sample fluorescence, faint cut, no residual ring fluorescence, poor show.

#### **Shale**

gray, greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, commonly micromicaceous, rare dull earthy texture, partly clayey & soft to firm, rare subfissile, partly platy, occasionally silty, partly carbonaceous, abundant crystalline limestone, traces of fine crystalline dolomite, traces of bituminous (?) fragments, traces of coarse quartz grain, traces of anhydrite inclusion, non to slightly calcareous.

### Watt Mountain: 1,389.50 MD, 1,389.50 TVD, -620.30 SSL

1,385.00 to 1,390.00 80% **Limestone**  
(5.00) brown, light yellow with dark brown stain, occasionally tan, dark brown, firm, friable to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly argillaceous, traces of fine crystalline dolomite, traces of greenish brown shale fragments, abundant of anhydrite inclusion, loose coarse quartz grains, tight visible intracrystalline porosity, no shows.

#### 20% **Shale**

gray, greenish gray, moderately hard to hard, partly friable, sub blocky to blocky, commonly micromicaceous, rare dull earthy texture, partly clayey & soft to firm, rare subfissile, partly platy, occasionally silty, partly carbonaceous, abundant crystalline limestone, traces of fine crystalline dolomite, non to slightly calcareous.

1,390.00 to 1,395.00 80% **Limestone**  
(5.00) brown, light yellow with dark brown stain, occasionally tan, dark brown, firm, friable to crumpled to moderately hard, blocky to subblocky, smooth to gritty, predominately microcrystalline to very fine crystalline debris, partly cryptocrystalline, predominately wackestone, partly mudstone, partly argillaceous, traces of fine crystalline dolomite, traces of greenish brown shale fragments, abundant of anhydrite inclusion, loose coarse quartz grains, tight visible intracrystalline porosity, no shows.

## Sample Descriptions

Storage Units: Metric

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1,390.00 to 1,395.00 (5.00)	20% <b>Shale</b> gray, greenish gray, green, moderately hard to hard, partly friable, sub blocky to blocky, smooth to gritty, commonly micromicaceous, rare dull earthy texture, rare subfissile, occasionally thinly laminated, occasionally silty, partly carbonaceous, abundant crystalline limestone, traces of fine crystalline dolomite, abundant of bituminous (?) fragments with dark brown to black minerals, traces of coarse quartz grain with granular pyrite, traces of anhydrite inclusion, calcareous.
1,425.00 to 1,430.00 (5.00)	80% <b>Dolomite</b> light brown, mottled, tan, off white, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, partly earthy & chalky, ratty, predominately cryptocrystalline debris, predominately mudstone, partly wackestone, slightly argillaceous, abundant limestone & anhydrite inclusion, calcarenite, no visible intracrystalline porosity, no shows.  20% <b>Anhydrite</b> white, off white, light brown, light gray, white, interbedded with dolomite, inetrbedded with limestone with patchy faint oil stain and black bituminous(?) and black minerals, moderately hard, very hard in parts, blocky, cryptocrystalline to micro crystalline, grading to thomb stone debris.
1,430.00 to 1,435.00 (5.00)	70% <b>Dolomite</b> light brown, mottled, tan, off white, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, partly earthy & chalky, ratty, predominately cryptocrystalline debris, predominately mudstone, partly wackestone, slightly argillaceous, abundant anhydrite inclusion with some limestone, calcarenite, no visible intracrystalline porosity, no shows.  30% <b>Anhydrite</b> white, off white, hyaline, tan, irregularly shaped, sharp, angular, abundant of calcite inclusion, traces of fine crystalline limestone with abundant of of brownish gray to tan dolomite inclusion, traces of greenish brown shale fragments, traces of carbonaceous material.
1,435.00 to 1,440.00 (5.00)	80% <b>Dolomite</b> light gray, light brown, mottled, tan, stainy, creamy, reddish brown, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, partly earthy & chalky, ratty, predominately cryptocrystalline debris, mudstone, partly packstone, slightly argillaceous, abundant limestone inclusion, locally grading to dolomitic limestone, calcarenite, fossiliferous, abundant of calcite and anhydrite inclusions, traces of bituminous partings with some black minerals, traces of shale grain, tight intracrystalline porosity, no shows.  20% <b>Anhydrite</b> white, off white, hyaline, tan, irregularly shaped, sharp, angular, abundant of calcite inclusion, atraces of fine crystalline limestone with abundant of of brownish gray to tan dolomite inclusion.
1,440.00 to 1,445.00 (5.00)	80% <b>Dolomite</b> light brown, mottled, tan, off white, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, partly earthy & chalky, ratty, predominately cryptocrystalline debris, predominately mudstone, partly wackestone, slightly argillaceous, abundant limestone & anhydrite inclusion, calcarenite, no visible intracrystalline porosity, no shows.

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## Sample Descriptions

Storage Units: Metric

1,440.00 to 1,445.00 (5.00)	20% <b>Anhydrite</b> white, off white, hyaline, tan, irregularly shaped, sharp, angular, abundant of calcite inclusion, atraces of fine crystalline limestone with abundant of of brownish gray to tan dolomite inclusion.
1,445.00 to 1,449.00 (4.00)	60% <b>Dolomite</b> light brown, mottled, tan, off white, firm to crumpled to moderately hard, blocky to subblocky, smooth to gritty, partly earthy & chalky, ratty, predominately cryptocrystalline debris, predominately mudstone, partly wackestone, slightly argillaceous, abundant anhydrite inclusion with some limestone, calcarenite, no visible intracrystalline porosity, no shows.
	40% <b>Anhydrite</b> white, off white, hyaline, tan, irregularly shaped, sharp, angular, abundant of calcite inclusion, traces of fine crystalline limestone with abundant of of brownish gray to tan dolomite inclusion, traces of greenish brown shale fragments, traces of carbonaceous material.

**Well Information**

**Operator:** Paramount Resources Ltd.

**Well Name:** Para Et Al Cameron J-04

**Location:** 300/J-04-60-10-117-30

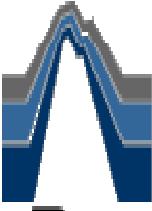
**UWI:** 300J04601011730

**Pool:** Sulphur Point & Slave Point.

**Field:** Cameron Hills

**Province / State:** Northwest Territory

**Country:** Canada



**Paramount**  
*resources ltd.*

**Elevations**

Reference:	MSL	Ground:	765.2 m
Cut(-) / Fill(+):	-0 m	Kelly Bushing:	769.2 m
K.B. to Ground:	4 m	Casing Flange:	4 m

**Total Depth**

Measurement Type	Measured Depth	True Vertical Depth
Drillers TD (Tally)	1449 m	1449 m
Drillers TD (Strap or SLM)	1449 m	1449 m
Loggers TD	1449.5 m	1449.5 m

**Surface Co - Ordinates**

**Well Type:** Straight      **Longitude:** 117°30'47.8"      **Latitude:** 60°3'31.3"

**N / S Co - Ordinates:** \_\_\_\_\_

**E / W Co - Ordinates:** \_\_\_\_\_

**Bottom Hole Co - Ordinates**

**Longitude:** 117°30'47.8"      **Latitude:** 60°3'31.3"

**N / S Co - Ordinates:** \_\_\_\_\_

**E / W Co - Ordinates:** \_\_\_\_\_

**Drilling Fluid Summary**

Fluid Type	From	To
Gel Chem	0 m	430 m
Flock Water	430 m	850 m
Gel Chem	850 m	1449 m

**Casing Summary**

Type	Hole Size	Casing Size	Landed At
Surface	311 mm	219.1 mm	430 m
Production	200 mm	139.7 mm	1449 m

**Well Summary**

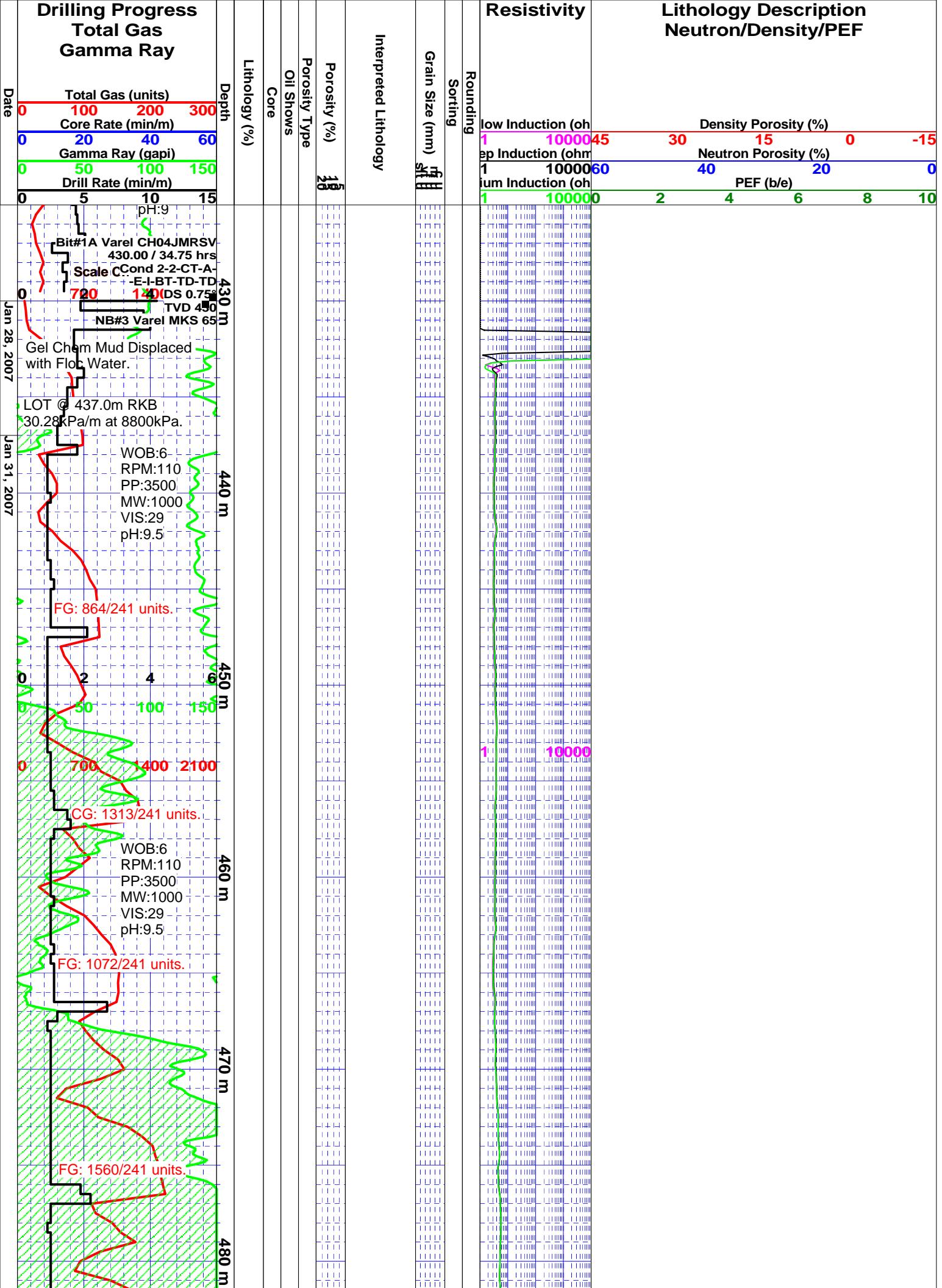
**Spud Date:** Jan 26, 2007 @ 16:00hrs      **Contractor:** Precision Rig# 129.  
**TD Date:** Feb 15, 2007      **Rig Release Date:** Feb 16, 2007 @ 23:59hrs

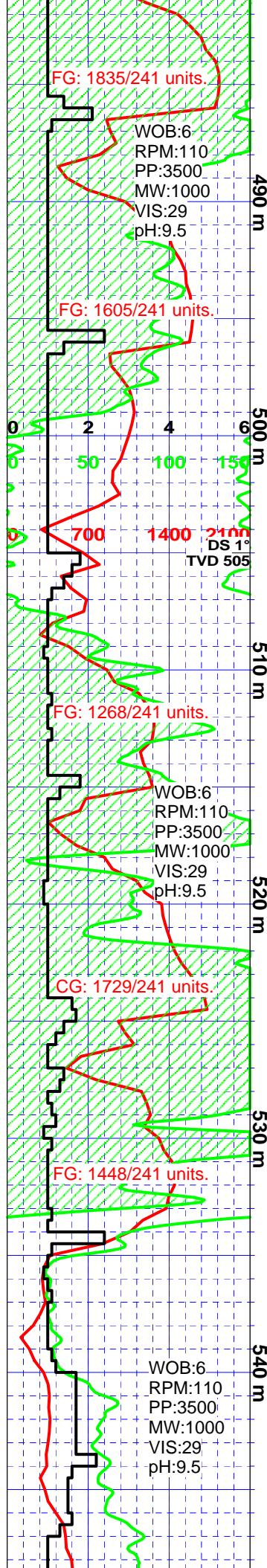
**Work Schedule**

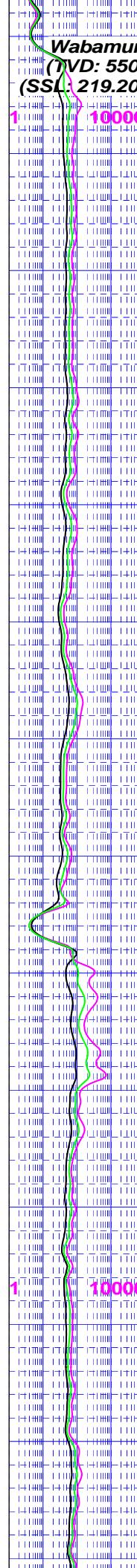
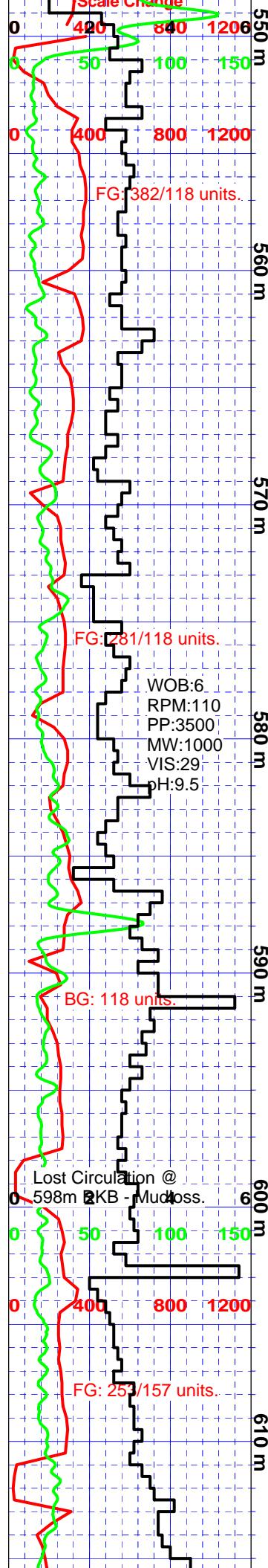
Contractor	Geologist	Log Interval	Dates Logged
Khan Petroleum Ltd.	Azim Ahmed	1280 m - 1449 m	Jan 24, 2007 - Feb 16, 2007

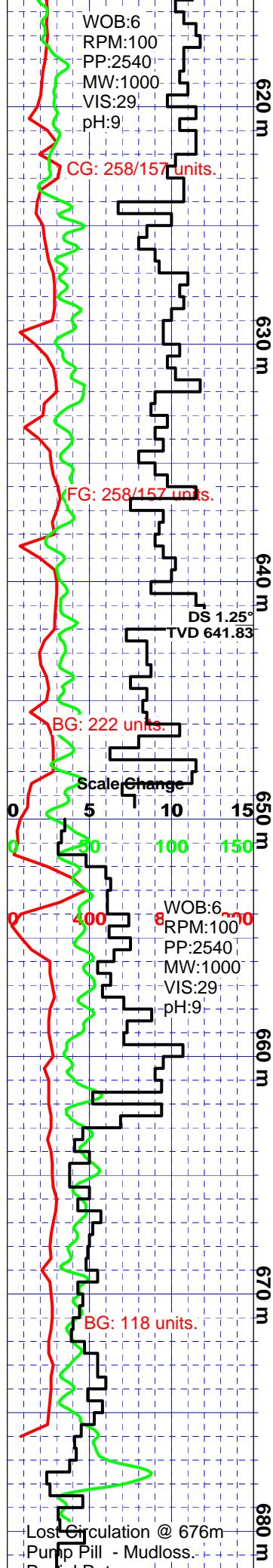
**Remarks**

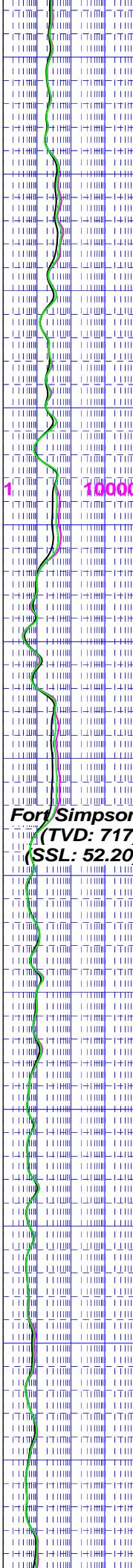
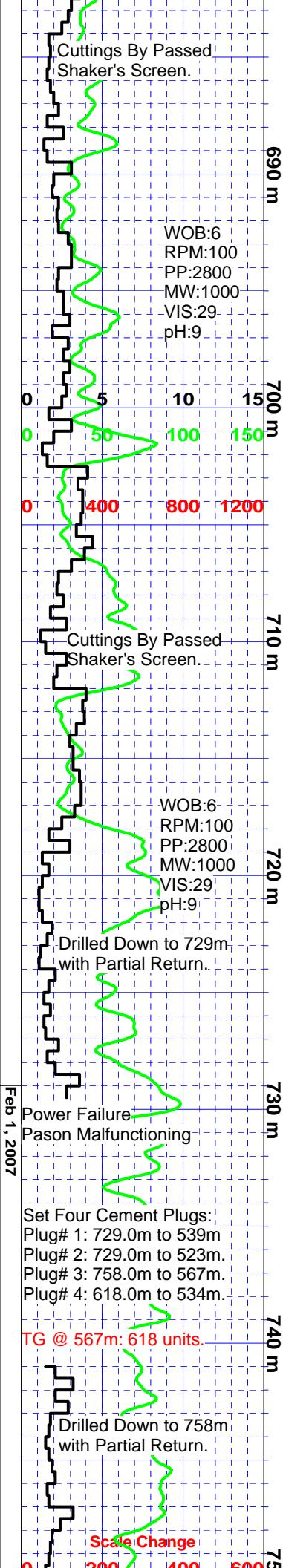
Composite Striplog Presentation - Scales 1:240

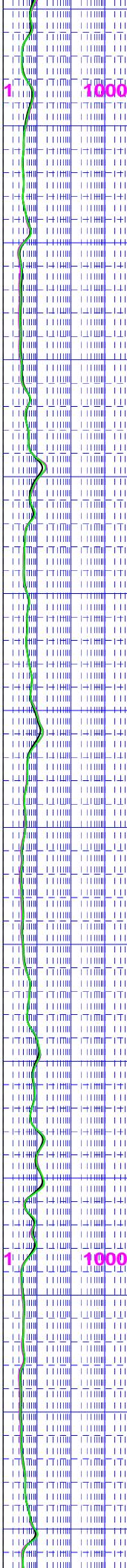
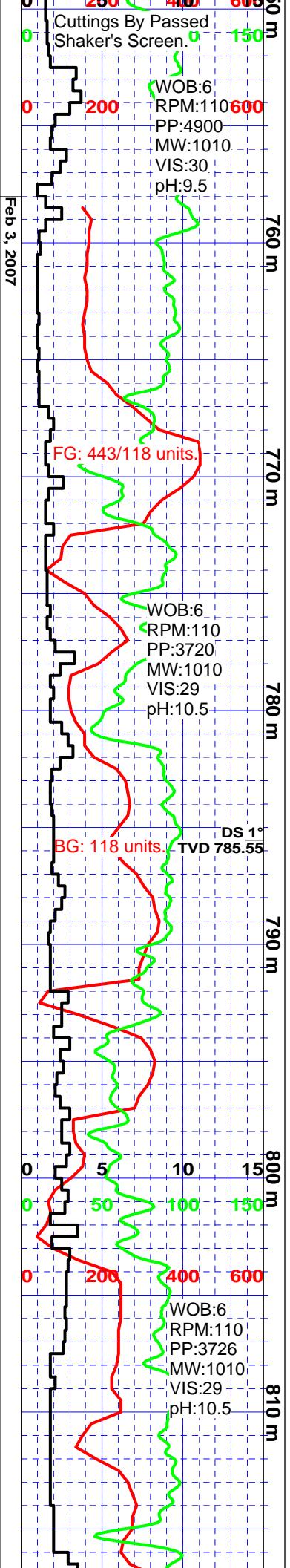


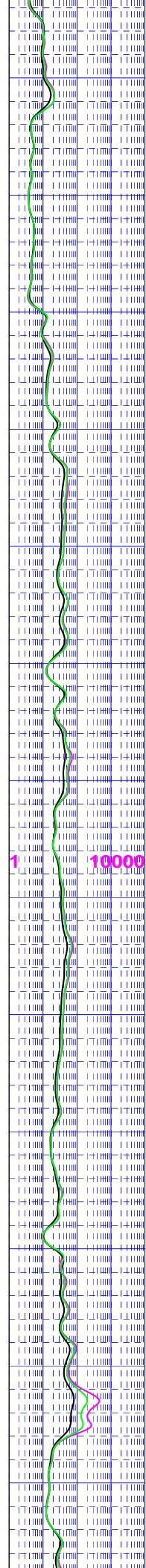
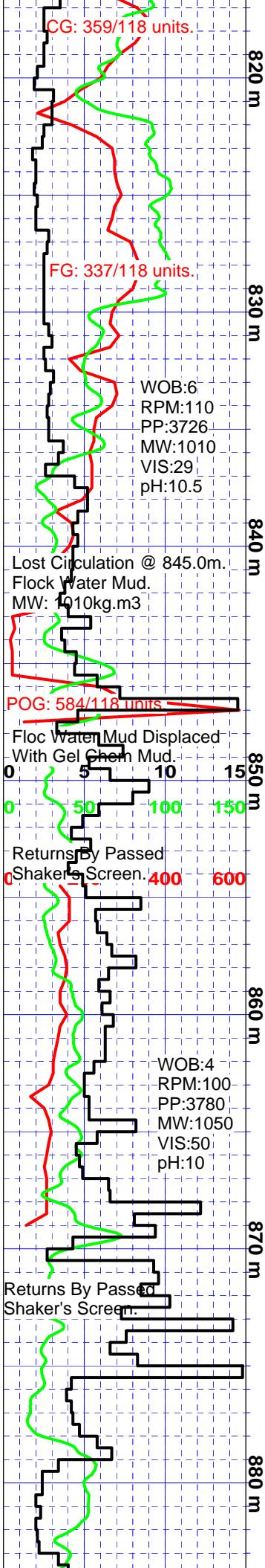


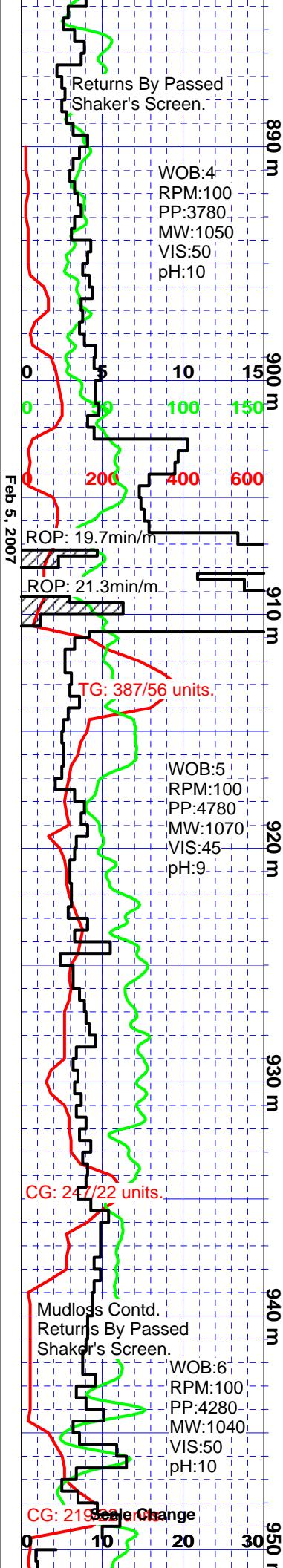


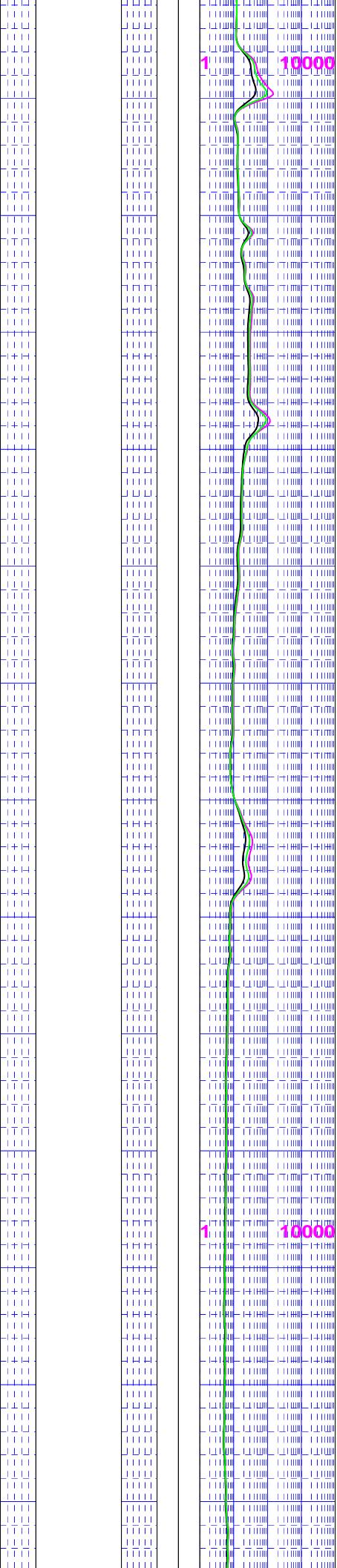
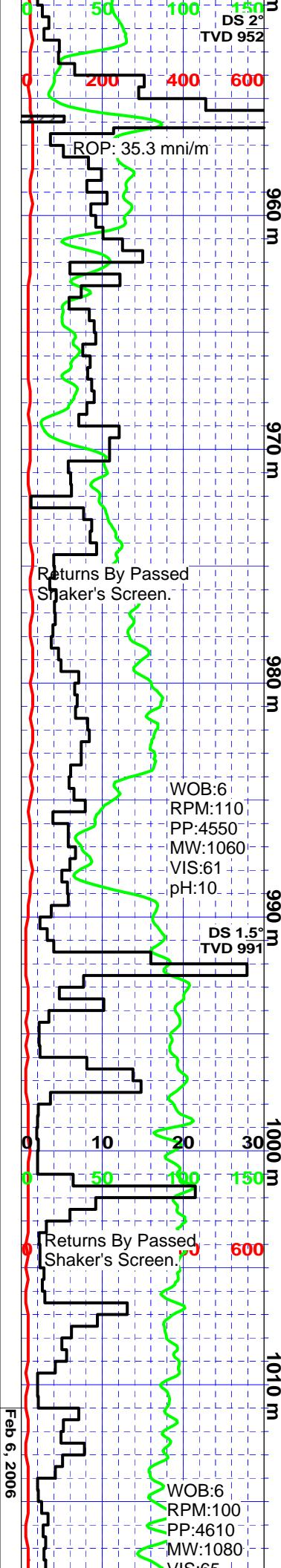


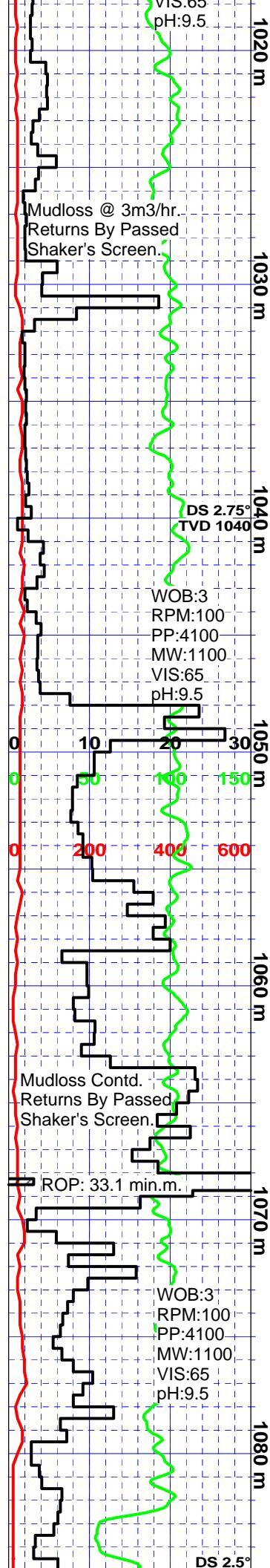


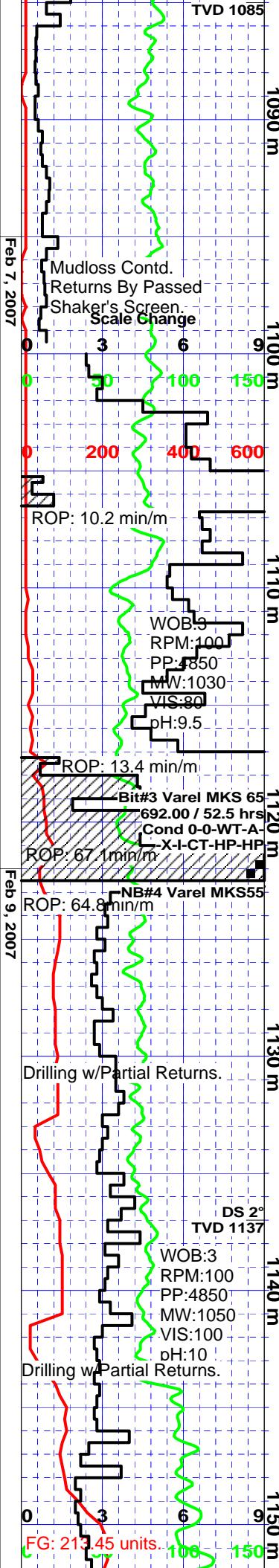


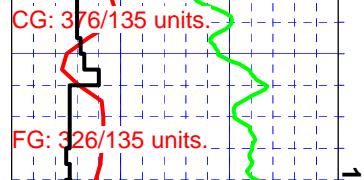
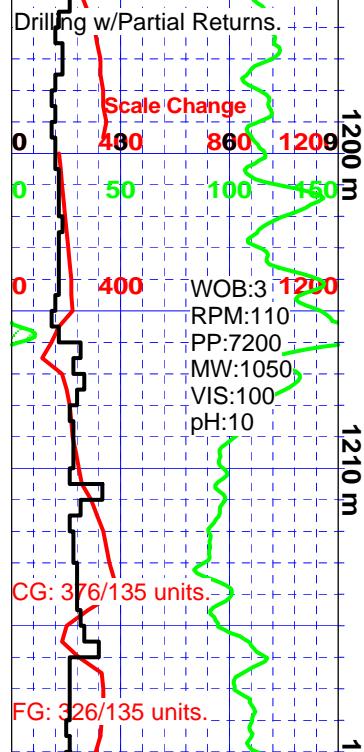
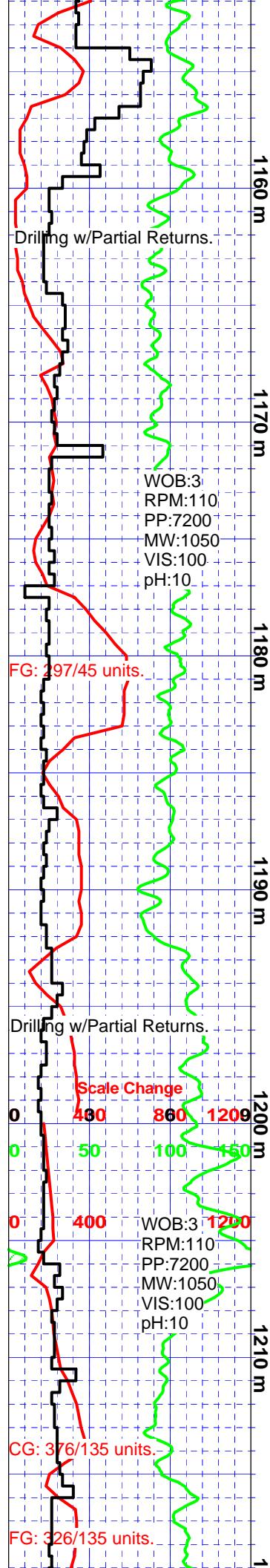


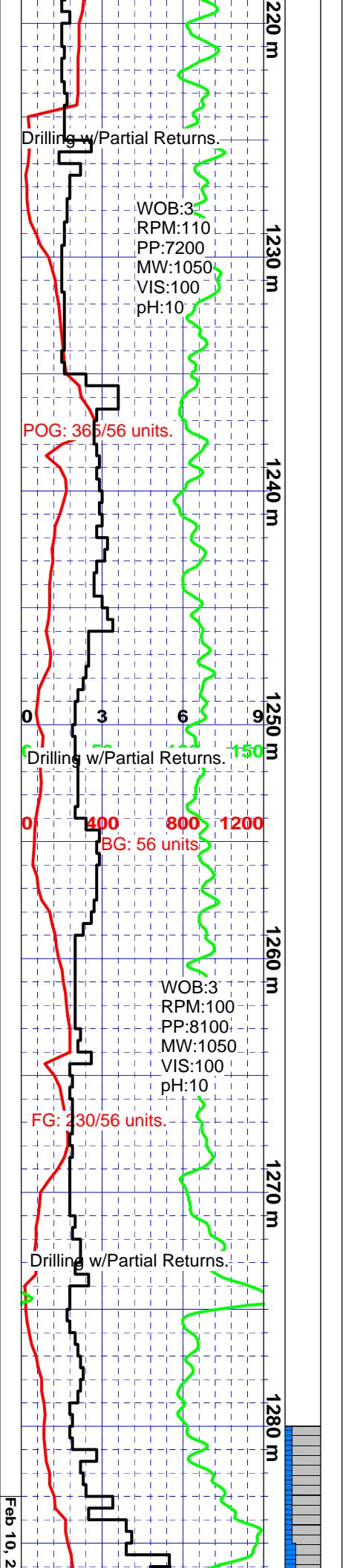




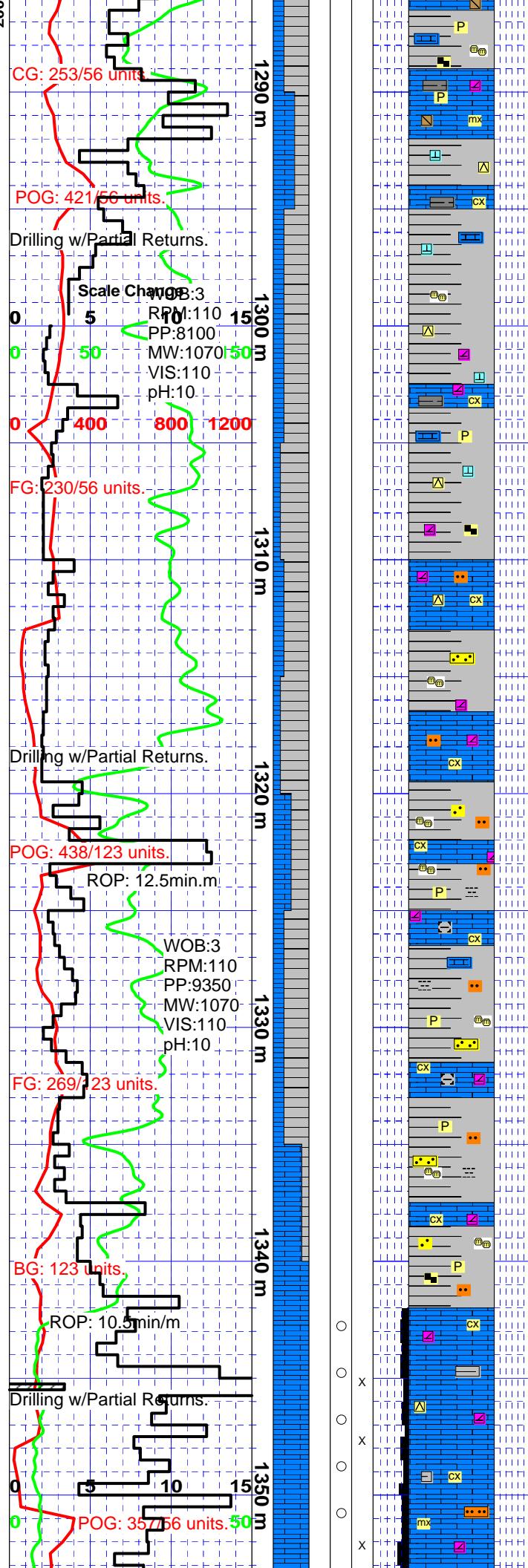








**Sample Point** Sh: m gy, gy, gnsh gy, frm, fri, ptly modly hd - hd, (TVD: 1280) sply - blk, micmica, dull rhy tex, mud stone incl, (SSL: -510.80) sm - wxy tex in parts, fis - sbfis, ptly ptly, carb, trs of gran pyr, abnt of gy - tan ls incl, abnt of dk brn - blk mnrls, rr slty, v calcs - shally ls.



**Ls:** off wh, lt brn, brnsh gy, mot, in pt chky, frm - crpld, rr modly hd, blky - sbblk, sm - grty, ptly grty, crpxl - micxl deb, predly mdst, rr wkest, calcar, comly dolic & locly grdg - dolic ls, trs of calc inclns, abnt of sh frags, loc dism pyr, p intxl vis por, ns.

**Sh:** m gy, gy, gnsh gy, frm, fri, ptly modly hd - hd, sply - blky, micmica, dull rhy tex, mud stone incl, sm - wxy tex in parts, fis - sbfis, ptly ptly, carb, trs of gran pyr, abnt of gy - tan ls incl, abnt of dk brn - blk mnrls, trs of lse c qtz grs, rr sly, v calcs - shally ls.

**Sh:** m gy, gy, ptly gnsh gy, frm, fri, ptly modly hd - hd, sply - blky, micmica, dull rhy tex, mud stone incl, sm - wxy tex in parts, fis - sbfis, ptly ptly, carb, trs of gran pyr, abnt of gy - tan lmpy - blky ls, abnt of dk brn - blk mnrls, trs of lse c qtz grs, rr sly, v calcs - shally ls, rr dolic.

**Sh:** blksh gy, gy, dk gy, trs gnsh gy, frm, fri, modly hd - hd, predly blky, comly micmica & lmy, ptly dull rhy tex, ptly sm - wxy, ptly sbfis, ptly ptly, rr thinly lam, occly sly, ptly carb, trs of arg ls, rr sly & ss strgs, calcs.

**BhL** **Sh:** blksh gy, gy, dk gy, trs gnsh gy, modly hd - hd, (TVD: 1319.5) ptly fri, sb blky - blky, comly micmica & lmy, ptly dull rhy tex, ptly sm - wxy, ptly sbfis, ptly ptly, rr thinly lam, ptly cly, occly sly, ptly carb, cly in parts, trs of arg ls, trs bits in pt (?), abnt of sh frags, loc dism pyr, trs of lse c qtz grs / rr siltsone & ss strgs, calcs. trs of sly & ss strgs, abnt of arg ls, calcs.

**Sh:** gy, dk gy, brnsh gy, occly gnsh gy, modly hd - hd, ptly fri, sb blky - blky, sm - grty, comly micmica, ptly lmy, ptly dull rhy tex, rr sbfis, ptly ptly & rr thinly lam, occly sly, ptly carb, trs of arg ls, trs of c qtz grs / some sly strgs, calcs.

**Sh:** gy, dk gy, brnsh gy, occly gnsh gy, modly hd - hd, ptly fri, sb blky - blky, sm - grty, comly micmica, ptly lmy, ptly dull rhy tex, rr sbfis, ptly ptly, rr thinly lam, occly sly, ptly carb, trs of arg ls, trs of gran pyr, calcs.

**Slave Point** **Ls:** wh, off wh, lt brn, mot, tan, crmy, dk brn, frm - crpld - modly hd, lmpy - blky, ptly sbblk, sm - grty, (TVD: 1342) predly micxl - xln deb, predly wkest - mdst, locly dolic, intcls & occly biocl deb, comly lse grs - predly peloids, calcar, trs of f xln dol, trs of c qtz gr, dns / tr p intxl por, rr trs of lt brn o shw - v wk odour, no vis stng, lt pale yel spl flor, fnt cut, no resdl ring flor, p shw.

