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**FINAL WELL REPORT**

**PARAMOUNT RESOURCES LTD.**

**PARA ET AL CAMERON K-74**

**Grid:  $60^{\circ} 10'$ ,  $117^{\circ} 15'$**

**DATE: June 26, 2003**

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

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## A. INTRODUCTION

Paramount Resources Ltd. (Paramount) drilled a 1465 meter exploratory well spudded on January 24, 2003 and finishing on February 6, 2003 to evaluate hydrocarbon potential. The primary target was the Sulphur Point formation at a depth of 1421 mKB. The secondary target was the Slave Point formation at 1355 mKB

The drilling contractor was Precision Drilling based out of Calgary, Alberta. Precision rig # 117 was used and is a land rig rated for 1800 m. The rig had a mud system capacity of 65 m<sup>3</sup> and was equipped with a boiler.

The well was drilled on Production License No PL-13 in which Paramount has an 88% working interest. Operating License No 1972 was issued to Paramount on December 6, 2003.

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

Latitude: 60° 03' 40.733"  
Longitude: 117° 29' 11.066"

Shadow Rathole Drilling Ltd. drilled a 610 mm conductor hole to 12.2 meters. From surface to 0.9 meters was frozen snow fill, 0.9 – 3.7 m was frozen muskeg, and 3.7 – 12.2 m was good clay and small rocks. A 406 mm conductor pipe was set and cemented at 12.2 meters and set and cemented a 406 mm conductor pipe.

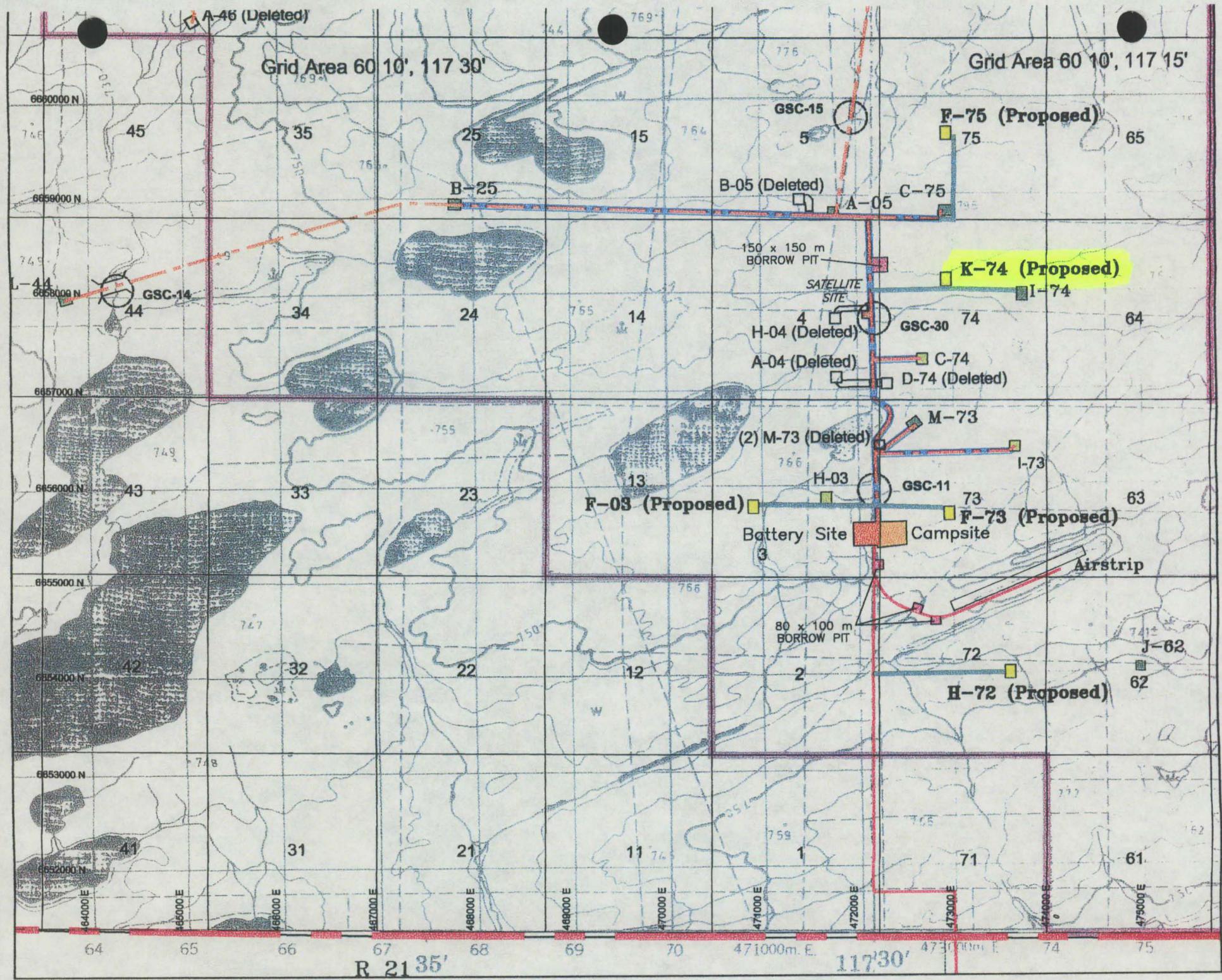
Precision #117 was moved onto the location and rigged up on January 23, 2003. The diverter was nippled up, the rig was rigged up, and the well was spudded on January 24, 2003 at 16:15 hours. A 311 mm surface hole was drilled to 431 mKB. There were no major lost circulation or mud ring problems but rock and gravel were encountered from 90 to 98 meters. A string of 219.1 mm, 35.7 kg/m, J-55, ST&C surface casing was run to 432 mKB. The casing was cemented with 34 t class 'G' cement plus 2% CaCl<sub>2</sub>. There were 7 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 07:11 hours on January 27, 2003.

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 10500 kPa high pressure.

The float collar and shoe were drilled out to 438 mKB on January 28, 2003. A leak off test was performed with the leak off gradient found to be 27.55 kPa/m. A 200 mm hole was drilled with a flocculated water system to approximately 562 mKB when circulation losses were encountered. LCM's were pumped but losses continued. The hole was drilled with losses to 722 mKB. The losses were cemented off and drilling continued with the flocculated water system to 1250 m. A gel/chem mud system was then used. A core was cut from 1420.5 – 1438.5 mKB. The well was drilled to a total depth of 1465 mKB. Computalog ran induction, density, and sonic logs from bottom to surface casing and a micro resistivity log from bottom to 1300 mKB.

139.7 mm, 20.83 kg/m, J-55, ST&C production casing was run and set at 1461 mKB. It was cemented with 20.0 t Fill-Lite 2-125 + 3% A-9 + 0.6% R-3 and 5 t 'G' cement + 0.1% R-3 + 0.4% FL-77. There were 5 m<sup>3</sup> cement returns and the plug was bumped with 3.5 MPa.

Precision #117 was rigged out and released at 08:00 hours on February 6, 2003.



## B.GENERAL DATA

1. Well Name: Para et al Cameron K-74  
Authority to Drill a Well No: 1972  
Exploration Agreement Number: PL-13  
Location Unit: K  
Section: 74  
Grid Area:  $60^0 10' N$ ,  $117^0 15' W$   
Classification: Development
2. Coordinates:  
Latitude:  $60^0 03' 40.733''$   
Longitude:  $117^0 29' 27.326''$
3. Unique Well Identifier: 300K746010117150
4. Operator: Paramount Resources Ltd.
5. Contractor: Precision Drilling
6. Drilling Unit: Precision Rig # 117, Land Rig
7. Position Keeping: N/A
8. Support Craft (Helicopter): N/A
9. Drilling Unit Performance: Good
10. Difficulties and Delays: Lost circulation that was cemented off
11. Total Well Cost: \$840,900
12. Bottom Hole Co-ordinates: Same as surface

## C. SUMMARY OF DRILLING OPERATIONS

### 1. Elevations:

Ground: 778.16 m above sea level  
KB: 782.64 m above sea level  
KB to Casing Flange: 4.48 m

### 2. Total Depth:

FTD: 1465 mKB  
PBTD: 1456 mKB  
TVD: 1465 mKB

### 3. Date and Hour Spudded: January 24, 2003 at 16:15 hours

### 4. Date Drilling Completed: February 5, 2003

### 5. Date of Rig Release: February 6, 2003

### 6. Well status: Cased and Suspended

### 7. Hole Sizes and Depths:

Conductor Hole: 610 mm to 12.2 m  
Surface Hole: 311 mm to 431 mKB  
Main Hole: 200 mm to 1465 mKB

### 8. Casing and Cementing Record:

#### Conductor Hole:

Casing Size: 406 mm  
Wall Thickness: 7 mm  
Depth Set: 12.2 m  
Cut Height: At Surface  
Date Set: January 15, 2003  
Cement Volume: 40 sacks  
Cement Type: Portland Normal

#### 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: 34  
Depth Set: 431 mKB  
Cut Height: At surface  
Date Set: January 27, 2003  
Cement Volume: 34 Tonnes

Float Shoe Depth: 431 mKB  
 Float Collar Depth: 425 mKB  
 Cement Type: Class 'G'  
 Additives: 2% CaCl<sub>2</sub>  
 Cement Top: Surface  
 Casing Bowl Size: 279 mm x 21 Mpa  
 Casing Bowl Make: ABB Vetco

**Main Hole:**

Casing Size: 139 mm  
 Casing Weight: 20.83 kg/m  
 Casing Grade: J-55  
 Casing Make: Ipsco  
 Number of Joints: 117  
 Thread: ST&C  
 Depth Set: 1461 m KB  
 Cut Height: Surface  
 Date Set: February 5, 2003  
 Float Shoe Depth: 1461 mKB  
 Float Collar Depth: 1456 mKB  
 Cement Volume 1: 20.0 Tonnes  
 Cement Type 1: Fill-Lite 2-125  
 Additives 1: 3% A-9 & 0.6% R-3  
 Cement Volume 2: 5 Tonnes  
 Cement Type 2: Class 'G'  
 Additives 2: 0.1% R3 & 0.4% FL-77  
 Cement Top: To be determined by cement bond log.

9. Sidetracked Hole: N/A

10. Drilling Fluid:

Conductor Hole: Water  
 Properties: N/A

Surface Hole: Gel - Chemical  
 Properties: Viscosity: 40 - 55 sec/L  
 Weight: 1100 - 1190 kg/m<sup>3</sup>  
 PH: 9.0 - 10.0

Main (436 - 1250 m): Floc water  
 Properties: Viscosity: 30 sec/L  
 Weight: 1000 kg/m<sup>3</sup>  
 PH: 9.0

Main (1250 m - TD): GeI-chem

Properties:	Viscosity:	48 - 55 sec/L
	Weight:	1050 - 1080 kg/m <sup>3</sup>
	PH:	10.5 – 11.0
	Water loss:	9.0 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:	438 m
Fluid Density:	1000 kg/m <sup>3</sup>
Applied Pressure:	7630 kPa
Hydrostatic Pressure:	4228 kPa
Mud Weight Equivalent:	2805 kg/m <sup>3</sup>
Casing setting depth:	431 mKB

The surface casing leak-off test was taken to a gradient of 27.5 kPa/m before leak off was detected.

#### 14. Time Distribution

Date	Hours	Activity
03/01/23	16.0	Move in / rig up
03/01/24	8.0	Move in / rig up
	0.25	Safety meeting
	8.0	Nipple up BOP's
	7.25	Drill
	0.5	Survey
03/01/25	6.0	Clean out pumps
	1.25	Survey
	10.75	Drill
	3.0	Trip
	3.0	Circulate and condition mud
03/01/26	11.5	Drill
	2.25	Circulate and condition mud
	0.25	Rig service
	2.25	Survey
	7.75	Trip
03/01/27	0.5	Safety meeting
	4.75	Run casing
	1.25	Cement casing
	4.0	Wait on cement
	4.0	Wait on equipment
	8.0	Nipple up BOP's
	1.5	Circulate and condition mud
03/01/28	0.5	Safety meeting
	2.0	Trip
	2.0	Thaw rat hole
	11.0	Wait on equipment
	5.0	Nipple up BOP's
	3.5	Pressure test BOP's
03/01/29	0.25	Safety meeting
	3.75	Trip
	0.5	Survey
	10.75	Drill
	0.5	Circulate and condition mud
	5.25	Wait on water

	2.0	Drill out casing shoe
	1.0	Leak off test
03/01/30	0.25	Rig service
	0.5	Safety meeting
	2.75	Wait on cementers
	3.25	Cement off losses
	5.25	Trip
	11.75	Wait on cement
	0.25	Circulate and condition mud
03/01/31	0.25	Rig service
	0.5	Safety meeting
	2.0	Drill out cement
	9.25	Trip
	3.25	Cement off losses
	8.75	Wait on cement
03/02/01	0.25	Rig service
	1.0	Survey
	5.25	Drill out cement
	13.0	Drill
	4.5	Trip
03/02/02	0.5	Rig service
	21.25	Drill
	0.5	Circulate and condition mud
	1.75	Survey
03/02/03	0.25	Safety meeting
	0.75	Drill
	0.25	Rig service
	1.25	Ream
	3.75	Coring
	2.75	Circulate and condition mud
	15.0	Trip
03/02/04	0.25	Safety meeting
	0.25	Rig service
	1.75	Circulate and condition mud
	11.0	Trip
	4.0	Logging
	3.25	Drill

	2.5	Coring
	1.0	Wait on orders
03/02/05	0.25	Safety meeting
	0.25	Rig service
	4.0	Circulate and condition mud
	9.5	Trip
	1.0	Logging
	6.25	Run casing
	0.75	Cement casing
	2.0	Slip & cut drill line
03/02/06	1.5	Cement casing
	6.5	Rig out

### Time Break Down by Activity:

<u>Activity</u>	<u>Hours</u>
Move in / rig up:	24.0
Drilling:	78.5
Drill out casing shoe:	2.0
Surveying:	7.25
Circulate and condition mud:	17.0
Cement off losses:	6.5
Drill out cement plugs:	7.25
Running casing:	11.0
Cementing casing:	3.5
Wait on cement	24.5
Wait on water:	5.25
Rig service:	2.25
Tripping:	71.0
Safety meetings:	3.25
Nipple up BOP's:	21.0
Pressure test BOP's	3.5
Leak off tests:	1.0
Slip & cut drill line:	2.0
Logging:	5.0
Coring:	6.25
Reaming:	1.25
Clean out pumps:	6.0
Thaw rat hole:	2.0
Wait on equipment:	15.0
Wait on orders:	1.0
Rig out:	6.5

15. Deviation Survey: See page 8 of the Geological Report in the Attachment Section
16. Abandonment Plugs: N/A
17. Composite Well Record: See the copy of the strip log in the Geological Report in the Attachment Section.
18. Completion Record: Reported in a separate report.

D: GEOLOGY

GEOLOGICAL SUMMARY

Tops: See page 12 of the Geological Report in the Attachment Section.

Sample Descriptions: See page 13 - 17 of the Geological Report in the Attachment Section.

Total Depth: 1465 mKB

Coring Record: #1: Sulphur Point: 1420.5 – 1438.5  
Cut: 18.0 m  
Rec: 18.0 m

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 Appendix Section.

DRILL STEM TESTS

There were no drill stem tests run on the well.

WELL EVALUATION

The following logs were run:

Simultaneous Triple Induction Shallow Focused Log:	430.5 – 1462.1 mKB
Spectral Density Compensated Neutron Log:	430.5 – 1454.6 mKB
Borehole Compensated Sonic Log:	430.5 – 1439.9 mKB
Micro Resistivity Log:	1300.0 – 1444.7 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 the next lease for re-use. The solids were hauled to a remote site where they were disposed of using the mix/bury/cover technique.



# RUNNING HORSE RESOURCES INC.



CALGARY ALBERTA CANADA  
Telephone 403.660.9883 Facsimile 403.262.5211  
wellsitegeologists@telusplanet.net  
www.wellsitegeologists.com

## Geological Report

on

### Para et al Cameron K-74

Well Reached Total Depth of 1465 metres  
on  
February 04, 2003 @ 11:40 hours.

for

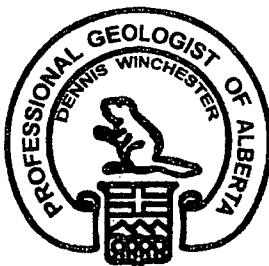


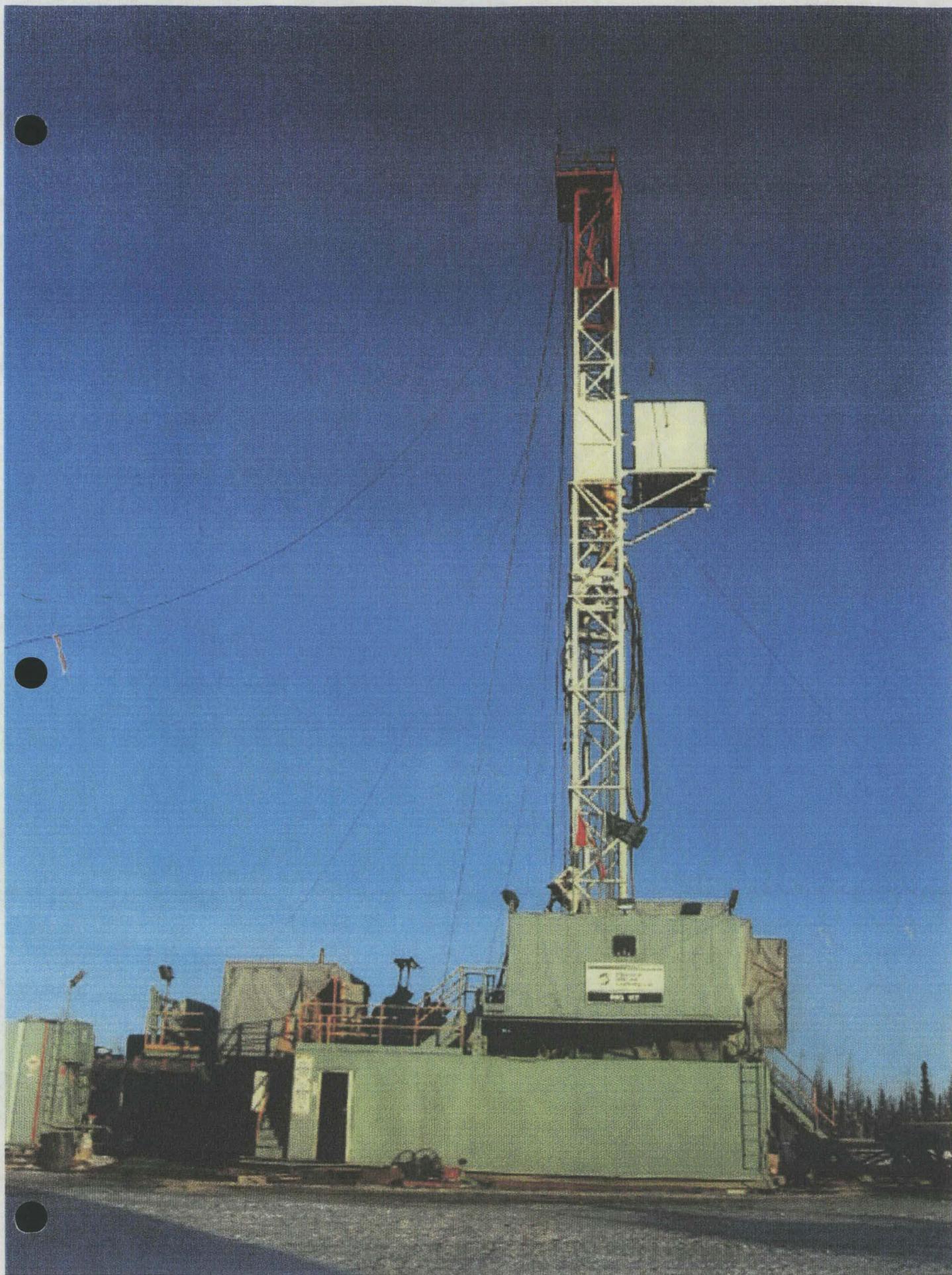
Prepared for: **Mr. Llew Williams**  
**Paramount Resources Ltd.**

Wellsite Geologist: **Brad Powell, B.Sc.**  
**Running Horse Resources Inc.**

Approved by:

Dennis Winchester  
**Dennis Winchester, P.Geol.**  
**Running Horse Resources Inc.**





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<b>CD (digital logs, pdf reports &amp; striplogs, photos)</b>	<b>Back Cover Slip</b>

## Executive Summary

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**Para et al Cameron K-74** is a vertical well spudded by Precision Drilling Rig #117 on January 24, 2003 @ 16:15. Surface hole is 311mm drilled to 430.5m with 219.1 mm casing landed at 430.5m. The 200mm main hole terminated in the **Muskeg Formation** at 1465.0m on February 4, 2003 @ 11:40.

This well was drilled primarily to produce oil from the **Sulphur Point Dolomite** and secondarily to evaluate the **Slave Point** for possible gas. Samples were taken from 1300m to TD at 1465m. An 18m core was cut of the **Sulphur Point Dolomite** from 1420.5-1438.5m. Triple Induction, SP, Neutron Density, Compensated Sonic, Gamma Ray and XY Caliper logs were run from TD to surface casing. Microlog was run from TD to 1300m.

The **Slave Point** was picked in samples at 1355m and was confirmed on logs at 1355m. It is approximately 30m thick, underlain by the Fort Vermillion formation. It can be described as cream to light brown to brown, mottled, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, mudstone to occasionally wackestone. It was chalky in part and had scattered pellets providing some matrix support. It had argillaceous laminations and common bituminous partings. The Slave point has local poor pinpoint and vug porosity, assumed chalky/earthy porosity, and traces of poor intercrystalline porosity. Porosity increased downsection, with Density logs indicating average porosity over the section of 3-6% and porosity in the lower Slave Point 1375-1385m of 9-13%. This was co-related to drilling breaks and with gas detector responses. There were gas peaks in this lower porous interval of up to 450 units over a baseline of 50 units at 1380-1382m. Samples showed pale yellow fluorescence, with weak green watery cuts. Analysis of the induction logs showed intervals of 40-60 ohms on the deep induction, associated with the porous intervals. Curve separation suggests permeability. **The Slave Point may be of economic value at this location.**

The **Sulphur Point dolomite** is a microcrystalline to medium crystalline dolostone, occurring as breccia at the top of the formation. The dolomite was picked in core at 1424.1m and 1424.0m on logs. It was 13m thick. Observation of cores saw common euhedral dolomite crystals and rhombs growing in fractures and common good to excellent interconnected vug porosity. Good intercrystalline sucrosic porosity was also seen throughout. Density logs show average porosity of 6% with intervals of porosity up to 15% on a dolomite scale from 1431-1433m. A second interval of dolomite, occurring in what may be the Muskeg formation from 1438.5-1447m shows average porosity of 6-12%. The samples were light brown to brown and saw some good dark brown oil staining, as well as massive even oil staining in the core. The core had a slightly sour odor. The samples and core had bright yellow fluorescence with instant thick milky yellowish cuts. Induction log analysis showed an average of about 50-100ohms on the

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## **Executive Summary**

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deep induction in the upper interval of 1424-1437m, 150 ohms in the most porous zones with good curve separation. Readings of 20-40ohms in the bottom interval of 1438.5-1447m also show good curve separation. **The Sulphur Point dolomite appears to have good potential for oil production.**

Based on sample evaluation, gas detector responses, and analysis of geophysical logs, **Para et al Cameron K-74** was cased for production.

## Well Data Summary

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<b>OPERATOR</b>	Paramount Resources Ltd.
<b>WELL NAME</b>	Para et al Cameron K-74
<b>LOCATION</b>	Unit K Section 74
	Grid Area: Lat 60° 10' N Long 117° 15' W
<b>UWI</b>	300K746010117150
<b>POOL</b>	
<b>FIELD</b>	
<b>PROVINCE</b>	NorthWest Territories
<b>LICENCE NUMBER</b>	1972
<b>CLASSIFICATION</b>	Production
<b>A.F.E. NUMBER</b>	02N31149
<b>SURFACE COORDINATES</b>	Latitude: 60° 03' 40.733" North Longitude: 117° 29' 27.326" West
<b>ELEVATIONS</b>	KB: 782.64m GL: 778.16m
<b>TOTAL DEPTH</b>	Driller: 1465.0m (-682.36m SubSea) Logger: 1464.2m (-681.56m SubSea)
<b>DRILLING CONTRACTOR</b>	Precision Drilling Rig #117
<b>ENGINEER</b>	Brian Neigum 403-997-5286
<b>GEOLOGIST</b>	Brad Powell 403-861-0838
<b>SPUD DATE</b>	January 24, 2003 @ 16:15
<b>COMPLETED DRILLING</b>	February 4, 2003 @ 11:40

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# Well Data Summary

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**HOLE SIZE** Surface hole: 311mm  
Main hole: 200mm

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**LOGGING** STI / MRT/ SpeD / CNS / GR / XY CAL / BCS from TD to surface casing.  
Microlog from TD to top of Slave Point.

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**DST's** none

**CORE** Core #1: 1420.5 – 1438.5m **100% recovery**

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**SAMPLES** Operator: 1 set vials (@ 5m) over interval: 1300m - TD  
NEB: 2 sets vials (@ 5m) over interval: 1300m - TD  
1 set bags (@ 5m) over interval: 1300m - TD  
1 set geochem jars (@ 5m) over interval: 1300m - TD

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**DIRECTIONS** From High Level, Alberta, go north on Highway 35. 1.3km south of Indian Cabins, turn west onto main road and go 32km, staying right at all Y forks. Turn right up big hill, drive 10.5km. Turn right to location.

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## PROBLEMS

**On Surface Hole:** None.

**On Main Hole:** Lost circulation in Wabamun formation, starting at 570m. Had to drill ahead blind into Fort Simpson shale at 722m and then plug back. 5 plugs were run. The cement was drilled out and then normal drilling ahead.

# Logging Summary

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**Date:** February 4, 2003

**Logging Company:** Computalog      **Engineer:** Dritan Kola

**Mud Properties:** WT: 1070 kg/m<sup>3</sup>    Visc: 85 s/L    WL: 10.5    pH: 9.0

**Hole Size:** 200mm

**Surface Casing:** 219.1mm, 35.7kg/m, set @ 430.5m

**Depths:** Driller: 1465.0m    Strap: 1465.0m    Logger: 1464.2m

**Logging Times:** First Alerted: 08:00 February 3, 2003  
Time Required: 19:00 February 4, 2003 (8.0hr final notice)  
Arrived: 18:10 February 4, 2003

**Hole Condition:** Good

**Circulations:** 1hr after TD then 1.5hr after wiper trip

**Wiper Trips:** 20 stands

**LOGGING SEQUENCE**      **Run #1:** STI / MRT/ SpeD / CNS / GR / CAL / BCS

**Interval:** TD to surface casing (with MRT from TD to top of Slave Point)

**REMARKS:** No problems getting logging tools to bottom for Run #1. On bottom with Run #1 @ 21:20 February 4, 2003.

# Bit Record & Casing Summary

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## Bit Record

Bit #	Make	Type	Size	In (m)	Out (m)	Meters (m)	Hours	ROP (m/hr)	IADC T - B - G
1A	Smith	FTD	311mm	0	89	89	9.25	9.62	8 - 3 - IN
2A	Reed	HP-12	311mm	89	427	338	20	16.90	6 - 8 - IN
3A	Hughes	GT-1	311mm	427	430.5	3.5	0.5	70.00	1 - 2 - IN
1	Varel	665	200mm	430.5	1420.5	990	46.75	21.31	98%
2	BHC-406 coring	199 X 102	199mm	1420.5	1438.5	18	1.05	18	94%
1RR	Varel	665	200mm	1438.5	1465	26.5	3.25	8.15	97%

## Casing Summary

Type	Csg. Size	Hole Size	Landed	Total Jts	Remarks
Surf	219.1mm	311mm	430.5m	36	36 joints of 219.1mm 35.72kg/m, J-55, 8RD ST&C new casing ran. Cemented with BJ 34t of 0:1:0 Class G + 2% CaCl2. Approximately 7m3 of good returns, float OK, plug down @ 07:38 Jan 27, 2003.
Prod	139.7mm	200mm	1461.34	112	112 joints of 139.7mm 20.83 kg/m, J-55, 8RD ST&C new casing ran. Cemented with 20t of Fillite 2-125 with 0.6% R-3, 3% A-9, and 5t of G 0.4% FL-77 and 0.1% R-3. 5.0 m3 of good returns. Plug down @ 01:13 February 6, 2003.

## Deviation Surveys

#	Depth Meters	Inc Deg	Azimuth Degrees	TVD Meters	North Meters	East Meters	Section Meters	Dogleg /30m	BldRate /30m	TrnRate /30m
---	-----------------	------------	--------------------	---------------	-----------------	----------------	-------------------	----------------	-----------------	-----------------

30	0.50
60	0.50
90	0.50
124	0.50
152	0.75
177	1.00
206	0.25
234	1.00
274	0.50
292	0.75
320	1.00
351	0.50
379	0.75
408	2.00
430	2.00
529	1.00
644	0.75
760	1.00
856	0.25
948	0.75
1043	0.25
1139	0.25
1235	0.75
1330	0.25

## Daily Drilling Summary

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<u>Date</u>	<u>Depth</u>	<u>Progress</u>	<u>Operations</u>
* note that operations are as reported the previous 24hrs to 08:00 on the date shown			
Jan 24	0	0	Move rig to location. Start rigging up rig.
Jan 25	105	105	Nipple up diverter, function test. Test accumulator and related BOP equipment. Spud well January 24, 2003 @ 16:15. Drill 311mm surface hole with Bit #1A with surveys and required rig service to 90m. Raise VIS in premix mud due to pea gravel. Drill ahead to 105m. POOH trip for bit, mud pump no pressure.
Jan 26	370	265	Clean gravel from shaker tank. RIH with Bit #2. Clean out mud pump and drill ahead from 105m to 370m.
Jan 27	430.5	60.5	Circulate out mud ring. Drill 311mm surface hole with surveys and required rig service from 370m to 427m. POOH for wiper trip with strap. RIH with Bit #3A and drill to surface casing point at 430.5m. POOH. Run 36 joints 219.1mm surface casing. Circulate casing and condition mud for cementing. Rig up cementers and cement with BJ.
Jan 28	430.5	0	WOC. Nipple down diverter, weld on bowl and nipple up BOP. Wait on $\frac{1}{4}$ turn choke manifolds.
Jan 29	580	129.5	Wait on $\frac{1}{4}$ turn choke manifold. Install manifold and nipple it up to BOPs. Pressure test blind rams, kill lines, HCR, pipe rams, lower Kelly cock, annular, inside BOPs and all manifold valves. BOP drill. Drill out cement and do leak off test. Drill ahead 200mm main hole with Bit #1 with surveys and required rig service from 430.5m to 570m. At 570m, began to lose circulation with partial losses, with full losses at 575m. Drill ahead blind to 580m.

## Daily Drilling Summary

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Jan 30	722	142	Drill ahead 200mm main hole with Bit #1 with surveys and required rig service from 580m to 722m. POOH and lay down BHA. RIH open ended and wait on cementers for plug back job. Pump plug #1 7t of RAS-2. Pull out 15 stands and pump water to clean pipe. WOC.
Jan 31	722	0	Tag plug #1 @ 595.59m. Pump plug #2 3.5t of RAS-2. Pull 17 stands and WOC. RIH and tag plug #2 @ 566.77m. Pump plug #3 3.5t of RAS-2. Pull 17 stands and WOC. RIH and tag plug #3 @ 561.82m. Still circulation losses. RIH and pump plug #4 4t of RAS-2. Pull out 18.5 stands and WOC. RIH and tag plug #4 @ 550m. POOH, make up BHA and RIH, clean to top to plug.
Feb 1	722	0	RIH to start drilling out plug (top of plug is at 550m), drill to 562m, lost circulation, drill ahead with losses to 600m, POOH, RIH open ended, wait for cementers, run plug #5, WOC, POOH, RIH with BHA, tag plug #5 drill out plug to 646m
Feb 2	1182	460	Drill out plug from 646m to 722m, drill ahead 200mm main hole with Bit #1RR with required surveys and rig service from 722m to 1182m.
Feb 3	1420.5	238.5	Drill 200mm main hole from 1182m to 1420.5m core point.
Feb 4	1438.5	18	1420.5m core point, wiper trip, RIH, circulate, strap out, make up coring BHA, core 1420.5-1438.5m, POOH and recover core, RIH.
Feb 5	1465	26.5	Drill ahead 200mm main hole with required surveys and rig service from 1438.5m to TD 1465m. TD @ 11:40 January 4, 2003. Circulate 1 hour, 20 stand wiper trip, RIH, circulate 1.5 hours. POOH to log. Rig up Computalog. Log Run #1. Rig out loggers. RIH and circulate to condition hole for casing.
Feb 6	1465	0	Circulate, wait on orders. POOH to run production casing. Run 112 joints 139.7mm

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## **Daily Drilling Summary**

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production casing and cement. Plug down @ 01:13 February 6, 2003. Tear out rig. Rig release @ 08:00 February 6, 2003.

## Formation Tops

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**Kelly Bushing Elevation:** 782.64m

Formation	Sample (m)	Logger (m)	Elevation (m)
Wabamun		558.5	+224.14
Fort Simpson		724.0	+58.64
Beaverhill Lake		1296.5	-513.86
Slave Point *	1355.0	1355.0	-572.36
F4	1397.5	1397.0	-614.36
Watt Mountain	1405.0	1405.0	-622.36
Sulphur Point LS	1411.0	1414.5	-631.86
Sulphur Point DOL **	1424.1	1424.0	-641.36
Muskeg	1438.5	1438.0	-655.36
T.D.	1465.0	1464.2	-681.56

*\*\*Primary Zones of Interest*

*\* Secondary Zones of Interest*

## Sample Descriptions

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### BEAVERHILL LAKE @ 1298m

1295-1305 SHALE 100%, 50% gray brown to medium brown, micromicaceous in part, blocky, firm, dolomitic in part, silty in part, trace calcite veining, 50% light greenish gray to light green, dull to slightly micromicaceous, platy, fissile to firm, smooth and waxy in part, calcareous, locally pyritized and pyrite nodules

1305-1310 SHALE 30% gray brown to medium brown, micromicaceous in part, blocky, firm, dolomitic in part, silty in part, trace calcite veining, SHALE 40% light greenish gray to light green, dull to slightly micromicaceous, platy, fissile to firm, smooth and waxy in part, calcareous, locally pyritized and pyrite nodules, LIMESTONE 30%, off white to light gray, micritic, mudstone, lumpy to blocky, dense, tight, locally pyritized, no shows

1310-1315 LIMESTONE 60% as above, SHALE 40%, brown and green

1315-1320 SHALE 70% light greenish gray to light green, dull to slightly micromicaceous, platy to blocky, fissile to firm, smooth waxy in part, calcareous, scattered pyrite nodules, SHALE 10% gray brown to medium brown, micromicaceous in part, blocky, firm, dolomitic in part, silty in part, trace calcite veining, LIMESTONE 20%, off white to light gray, micritic, mudstone, lumpy to blocky, dense, tight, locally pyritized, no shows

1320-1325 SHALE 80%, light greenish gray to light green, dull to slightly micromicaceous, platy to blocky, fissile to firm, smooth waxy in part, calcareous, scattered pyrite nodules, SHALE 10% gray brown to medium brown, micromicaceous in part, blocky, firm, dolomitic in part, silty in part, trace calcite veining, LIMESTONE 10%, off white to light gray, micritic, mudstone, lumpy to blocky, dense, tight, locally pyritized, no shows

### MUSKWA @ 1329m

1325-1330 SHALE 40%, dark brown to black, bituminous appearance, lumpy to blocky, firm, LIMESTONE 10%, off white to light gray, micritic, mudstone, lumpy to blocky, dense, tight, locally pyritized, no shows, SHALE 50%, brown and green, as above (cavings?)

1330-1340 LIMESTONE 40%, off white to light gray, buff to occasional light brown, micritic to occasional very fine crystalline, mudstone, lumpy to blocky, dense, tight, locally pyritized and coarse pyrite nodules, trace bioclastic debris, no shows, SHALE 40%, light greenish gray to light green, dull to slightly micromicaceous, platy to blocky, fissile to firm, smooth waxy in part, calcareous, scattered pyrite nodules, SHALE 20% dark brown to black, bituminous appearance, trace limy streaks, blocky, firm

## Sample Descriptions

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1340-1350 LIMESTONE 40%, off white to light gray, buff to occasional light brown, micritic to occasional very fine crystalline, mudstone, lumpy to blocky, dense, tight, locally pyritized and coarse pyrite nodules, trace bioclastic debris, no shows, SHALE 50%, light greenish gray to light green, dull to slightly micromicaceous, platy to blocky, fissile to firm, smooth waxy in part, calcareous, scattered pyrite nodules, SHALE 10% dark brown to black, bituminous appearance, trace limy streaks, blocky, firm

1350-1355 LIMESTONE, 50% as above, SHALE 50% light greenish gray to light green, as above, ROP falling off, becoming limier down section

### SLAVE POINT @ 1355m

1355-1360 LIMESTONE 100%, cream to light brown, brown, cryptocrystalline to very fine crystalline, mudstone to wackestone, in part chalky, argillaceous in part, lumpy to blocky, scattered pyrite nodules and locally disseminated pyrite crystals, local bitumen, trace fossil debris, dense with trace poor intercrystalline porosity, inferred earthy porosity, tight, questionable show

1360-1365 LIMESTONE 100%, cream to light brown to brown, mottled, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, mudstone to occasionally wackestone, in part chalky, argillaceous in part, lumpy to blocky, scattered pyrite nodules and locally disseminated pyrite crystals, trace bituminous partings, dense, massive, generally tight with trace local poor pinpoint and vug porosity, assumed chalky/earthy porosity, pale yellow fluorescence, weak green watery cut, slightly gassy odor

1365-1370 LIMESTONE 100%, cream to light brown to brown, mottled, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, mudstone to occasionally wackestone, scattered pellets, in part chalky, argillaceous laminations, lumpy to blocky, scattered pyrite nodules and locally disseminated pyrite crystals, common bituminous partings, dense, massive, generally local poor pinpoint and vug porosity, assumed chalky/earthy porosity, trace poor intercrystalline porosity, pale yellow fluorescence, very weak green watery cut

1370-1375 LIMESTONE 100%, cream to light brown to brown, mottled, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, mudstone to occasionally wackestone, scattered pellets, in part chalky, argillaceous laminations, lumpy to blocky, scattered pyrite nodules and locally disseminated pyrite crystals, common bituminous partings, dense, massive, generally local poor pinpoint and vug porosity, assumed chalky/earthy porosity, trace poor intercrystalline porosity, pale yellow fluorescence, very weak green watery cut, oily odor and slight sheen on sample when washing

## Sample Descriptions

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1375-1385 LIMESTONE 100%, cream to light brown to brown, mottled, cryptocrystalline to coarse crystalline, mudstone to wackestone, argillaceous matrix supported grains, scattered pellets, in part chalky, argillaceous laminations, lumpy to blocky, scattered pyrite nodules and locally disseminated pyrite crystals, common bituminous partings, scattered sparry calcite crystals, massive, local good pinpoint and vug porosity, assumed chalky/earthy porosity, trace fair intercrystalline porosity, pale yellow fluorescence, watery yellow white cut

1385-1390 LIMESTONE 80%, cream to brown, very mottled, mudstone to wackestone, microcrystalline to coarse crystalline, argillaceous, lumpy to blocky, dolomitic in part, tight, yellow fluorescence, weak faint green cut, DOLOMITE 20%, medium brown, cryptocrystalline to microcrystalline, blocky, firm, tight, questionable show, minor ANHYDRITE stringers, off white to tan, cryptocrystalline, pearly lustre in part, calcareous in part, soft

1390-1395 LIMESTONE 70%, cream to brown, very mottled, mudstone to wackestone, microcrystalline to coarse crystalline, argillaceous, lumpy to blocky, dolomitic in part, tight, yellow fluorescence, weak faint green cut, DOLOMITE 20%, medium brown, cryptocrystalline to microcrystalline, blocky, firm, tight, questionable show, 10% ANHYDRITE stringers, off white to tan, cryptocrystalline, pearly lustre in part, calcareous in part, soft

### F4 MARKER @ 1397.5m

1395-1400 LIMESTONE 70%, cream to brown, very mottled, mudstone to wackestone, microcrystalline to coarse crystalline, argillaceous, lumpy to blocky, dolomitic in part, anhydritic in part, tight, yellow fluorescence, weak faint green cut, DOLOMITE 10%, medium brown, cryptocrystalline to microcrystalline, blocky, firm, tight, questionable show, 10% ANHYDRITE stringers, off white to tan, cryptocrystalline, pearly lustre in part, calcareous in part, soft, 10% SHALE, gray to green

1400-1405 LIMESTONE 70%, cream to light brown, occasional light gray tan, becoming lighter than as above, predominantly microcrystalline mudstone to finely crystalline wackestone, argillaceous in part, silty, scattered anhydrite and dolomitic streaks, lumpy to blocky, scattered fossil debris including Crinoids, Ostracods, streaks of poor pinpoint and inter crystalline porosity, no shows, 20% ANHYDRITE, pearly to opaque in part, off white to tan, firm, tight, 10% SHALE partings, gray to green, platy, fissile, trace varicoloured coarse free quartz grained

### WATT MOUNTAIN @ 1405m

1405-1411 SHALE 100%, slightly greenish gray to mint green, occasionally bright blue green, waxy, soft, slightly calcareous in part, common disseminated pyrite and very

## Sample Descriptions

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coarse cubic pyrite crystals and crystalline clusters, scattered rounded coarse to granule sized frosted varicoloured free quartz grained

### **SULPHUR POINT LIMESTONE @ 1411m**

1411-1415 LIMESTONE 70%, predominantly off white to tan, light brown to dark brown, occasionally gray, cryptocrystalline to medium crystalline, mudstone to wackestone with argillaceous lime matrix, chalky, lumpy to blocky, tight with streaks of poor pinpoint porosity, assumed earthy porosity, slight oily odor, trace bituminous partings, trace unspecified fossil debris inclusion Crinoids, scattered dull gold fluorescence, no cut, SHALE 30%, as above (cavings)

1415-1420.5 LIMESTONE 100%, off white to tan, light to dark brown, occasionally gray, cryptocrystalline to medium crystalline, mudstone to in part bioclastic wackestone with argillaceous lime matrix, chalky in part, lumpy to blocky, tight with streaks of poor pinpoint porosity, assumed earthy porosity, scattered unspecified fossil debris, scattered dull gold fluorescence, questionable show

### **1420.5-1438.5 SEE DETAILED CORE STRIPLOG FOR DESCRIPTIONS OVER THE INTERVAL 1420.5 to 1438.5m**

1420.5-1424.1 LIMESTONE breccia, buff to tan rock fragments with light brown to brown lime mud matrix, cryptocrystalline to microcrystalline, collapse breccia?, very worked, fracturing throughout, predominantly mudstone, in part chalky, with trace dark grey shale partings, trace spotty bleeding oil and oil staining, very dense, firm, generally tight, waxy green shale partings, scattered stylolites, scattered calcite veining, trace pyrite, dolomitic streaks

### **SULPHUR POINT DOLOMITE @ 1424.1m**

1424.1-1427.4 DOLOMITE, light greyish brown to dark greyish brown, streaks of dark brown oil staining, rough texture, mottled, microcrystalline, to very fine crystalline, poor to streaks of excellent interconnected vug porosity with vugs to 2 to 3cm with 1cm clear euhedral rhombs in vug linings, with seeping oil, fair intercrystalline porosity

1427.4-1428.1 DOLOMITE, light to dark brown, with even heavy dark brown oil staining, saturated with oil with bleeding from pores, microcrystalline, to very fine crystalline, even deep yellow to gold fluorescence, excellent sucrosic intercrystalline and vuggy porosity, banded in part, good vertical fracturing

1428.1-1435 DOLOMITE, off white to dark brown oil stained, banded in part, predominantly microcrystalline to very fine crystalline, to fine lower crystalline, bleeding oil, poor to excellent vug porosity, ex sucrosic intercrystalline porosity, common

## Sample Descriptions

---

fractures throughout, fine clear euhedral rhombs lining vug and fracture surfaces, vugs to 2 to 3cm, scattered free rhombs and fragments in sample, oil soaked section with strong yellow to gold fluorescence, lower section has crumbly, rough texture, scattered dark shale partings

1435-1437 DOLOMITE, becoming lighter, tan to even oil stained, very fine to finely crystalline, good intercrystalline porosity, sucrosic, very fractured, with euhedral rhombs and calcite lining vugs and fracture surfaces, vugs to 1cm, in part interconnected, trace green waxy shale partings locally pyritized and pyrite crystals, streaks of excellent intercrystalline and vug porosity, even yellow to gold oil staining

1437-1437.4 SHALE, dark grey to dark grey green, soft, waxy, argillaceous, common slickensides

1437.4-1438.5 SHALE AND ANHYDRITE?, tan to slightly greenish grey dolomitic anhydrite fragments in a argillaceous dark greyish green mud matrix, anhydrite is very firm, dense and tight, whole section is very crumbly

### MUSKEG @ 1438.5m

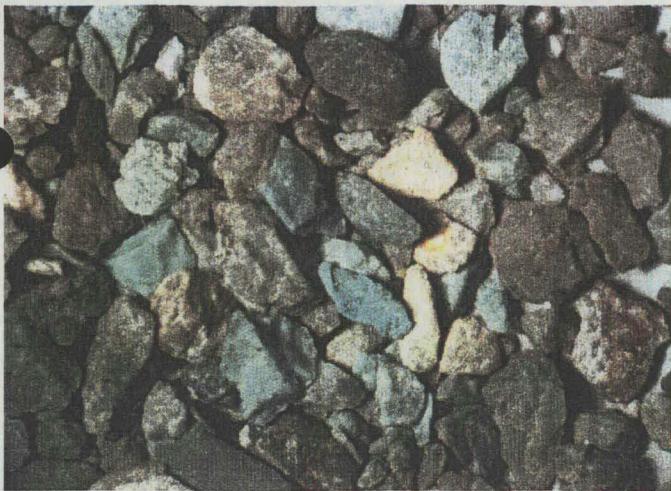
1438.5-1440 SHALE 80%, gray to green gray, light green, waxy smooth, platy, fissile, locally pyritized abundant pyrite crystals, DOLOMITE 20%, tan to light brown, cryptocrystalline to microcrystalline, mudstone, anhydritic, tight, dense, firm, no show

1440-1445 DOLOMITE 100%, light to dark brown oil stained, microcrystalline to medium crystalline, sucrosic, fair to good intercrystalline porosity, scattered free rhombs in sample suggest fracture and vug porosity, locally anhydritic, pale yellow fluorescence, weak green cut

1445-1450 DOLOMITE 70%, light to dark brown oil stained, microcrystalline to medium crystalline, sucrosic, fair to good intercrystalline porosity, scattered free rhombs in sample suggest fracture and vug porosity, locally anhydritic, local pyrite, pale yellow fluorescence, weak green cut, ANHYDRITE 30%, pearly to off white to tan, occasional gray, cryptocrystalline, dense, tight

1450-1455 ANHYDRITE 90%, pearly to off white to tan, occasional gray, cryptocrystalline, dense, tight, DOLOMITE 10%, light to dark brown oil stain, microcrystalline to very fine crystalline, fair to good intercrystalline porosity, streaks of good vug porosity, pale yellow fluorescence, weak green cut

1455-1465 ANHYDRITE 100%, pearly to watery lustre in part, off white to tan to light brown, occasional gray, cryptocrystalline, dense, tight, scattered DOLOMITE stringers, scattered cubic pyrite crystals



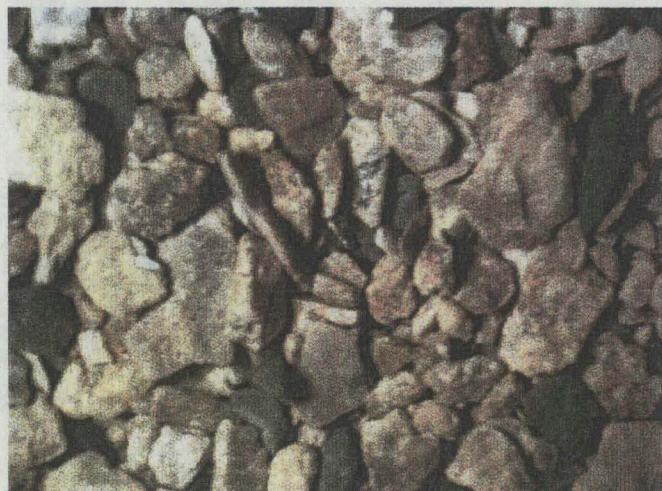
1410m, Watt Mountain apple green shale 10X



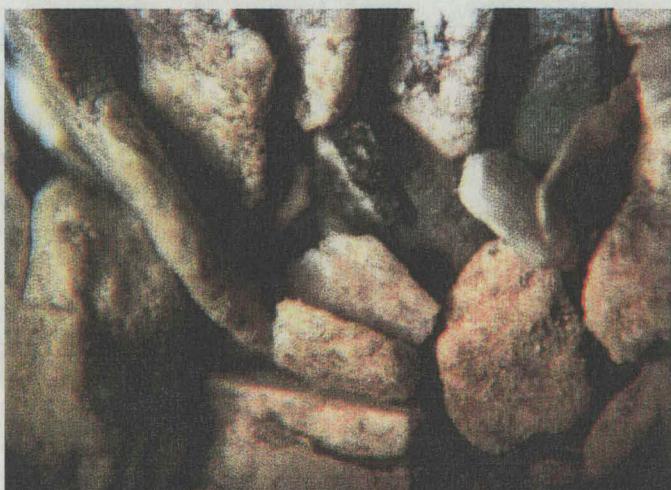
1410m, Watt Mountain apple green Shale 30X



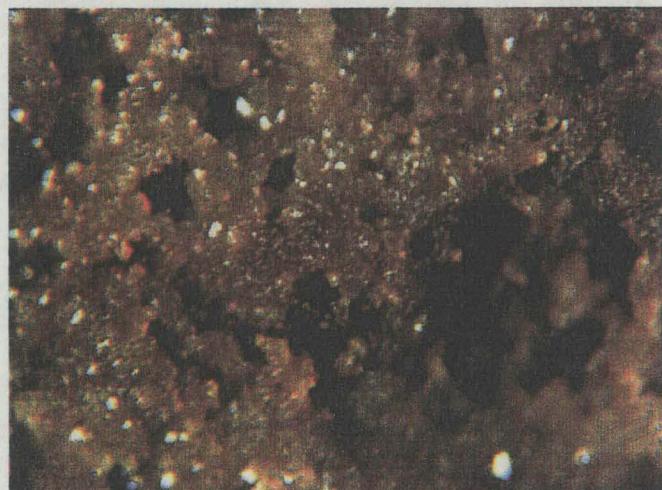
1411m, Watt Mountain, Cubic Pyrite Rhombs



1375m, Slave Point Limestone, 10X zoom



1375m, Slave Point Limestone, 30X zoom



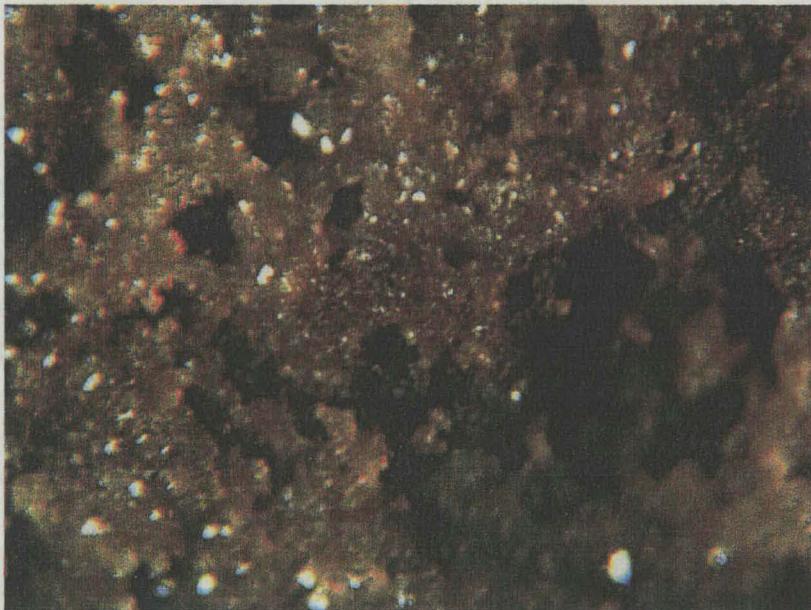
1433m, Sulphur Point Dolomite in Core, 30X



1435m, Sulphur Point Dolomite 10X zoom



1435m, Sulphur Point Dolomite 30X



Sulphur Point Dolomite  
Taken from the Core at  
1433m.

1460m, Muskeg  
Anhydrite + tight  
Dolomite





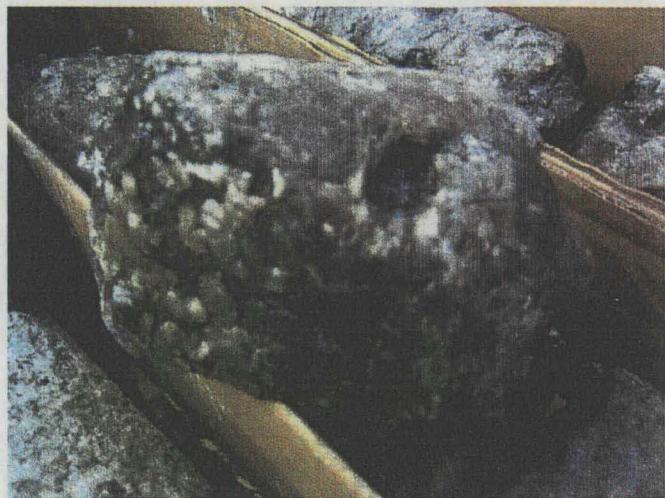
Muddy Core right out of Core Barrel



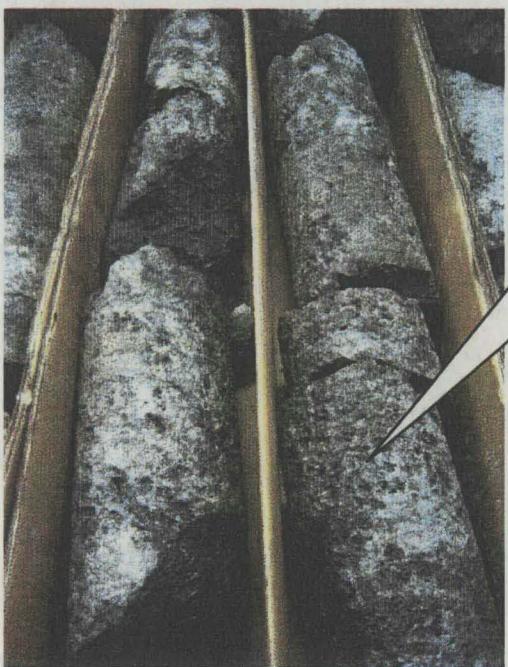
1420.8m, Very Tight Sulphur Point Ls.



1425m, rough mottled Sulphur Pt. Dolomite



Vugs & Dol rhombs lining fracture surface



1427m, Sulphur Point Dolomite with abundant Pin-point & Vuggy porosity

1427m, Sulphur Point Dolomite with medium brown weeping oil



HOME >



**Paramount**  
*resources ltd.*

Scale 1:240 (5"=100') Metric

Well Name: Para et al Cameron K-74

Location: K-74 Grid Area: Lat 60° 10' N Long 117° 15' W

Licence Number: 1972

Spud Date: Jan 24, '03 @ 16:15

Surface Coordinates: Latitude: 60° 03' 40.733" North  
Longitude: 117° 29' 27.326" West

Region: Camern Hills, NWT  
Drilling Completed: Feb 4, '03 @ 11:40

**Bottom Hole Coordinates**

Ground Elevation (m): 778.16m

Logged Interval (m): 1295m To: 1465m

Formation: Primary = Sulphur Point DOL

Type of Drilling Fluid: Gelchem

K.B. Elevation (m): 782.64m

Total Depth (m): 1465m

Secondary = Slave Point

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

**CORE**

Contractor:

Core #:

Formation:

Core Interval:

From:

To:

Cut:

Recovered:

Bit type:

Size:

Coring Time:

**OPERATOR**

Company: Paramount Resources Ltd.

Address: 4700 Bankers Hall West

888 3rd Street S.W.

Calgary, Alberta T2P 5C5

## GEOLIST

Name: Brad Powell, B.Sc.  
 Company: Running Horse Resources Inc.  
 Address: website: [www.WellsiteGeologists.com](http://www.WellsiteGeologists.com)  
 email: [WellsiteGeologists@telus.net](mailto:WellsiteGeologists@telus.net)  
 Cell: 403-660-9883, Off 403-234-7625

## Cores

Core #1: 1420.5-1438.5m  
 See detailed core log.

## Comments

This well was drilled by Precision Drilling Rig #117.  
 A Continental gas detector was run.  
 Gamma data provided by Computalog.  
 Paramount AFE #02N31149

## ROCK TYPES



## ACCESSORIES

MINERAL	FERR	SILT	CORAL	STROM	TEXTURE
<input checked="" type="checkbox"/> Anhy	<input checked="" type="checkbox"/> Ferr	<input checked="" type="checkbox"/> Silt	<input checked="" type="checkbox"/> Crin	<input checked="" type="checkbox"/> Anhy	<input checked="" type="checkbox"/> Boundst
<input checked="" type="checkbox"/> Arggrn	<input checked="" type="checkbox"/> Glau	<input checked="" type="checkbox"/> Sulphur	<input checked="" type="checkbox"/> Echin	<input checked="" type="checkbox"/> Arg	<input checked="" type="checkbox"/> Chalky
<input checked="" type="checkbox"/> Arg	<input checked="" type="checkbox"/> Gyp	<input checked="" type="checkbox"/> Tuff	<input checked="" type="checkbox"/> Fish	<input checked="" type="checkbox"/> Bent	<input checked="" type="checkbox"/> Cryxln
<input checked="" type="checkbox"/> Bent	<input checked="" type="checkbox"/> Hvymin		<input checked="" type="checkbox"/> Foram	<input checked="" type="checkbox"/> Coal	<input checked="" type="checkbox"/> Earthy
<input checked="" type="checkbox"/> Bit	<input checked="" type="checkbox"/> Kaol		<input checked="" type="checkbox"/> Fossil	<input checked="" type="checkbox"/> Dol	<input checked="" type="checkbox"/> Finexln
<input checked="" type="checkbox"/> Brecfrag	<input checked="" type="checkbox"/> Marl		<input checked="" type="checkbox"/> Gastro	<input checked="" type="checkbox"/> Gyp	<input checked="" type="checkbox"/> Grainst
<input checked="" type="checkbox"/> Calc	<input checked="" type="checkbox"/> Minxl		<input checked="" type="checkbox"/> Oolite	<input checked="" type="checkbox"/> Ls	<input checked="" type="checkbox"/> Lithogr
<input checked="" type="checkbox"/> Carb	<input checked="" type="checkbox"/> Nodule		<input checked="" type="checkbox"/> Ostra	<input checked="" type="checkbox"/> Mrst	<input checked="" type="checkbox"/> Microxln
<input checked="" type="checkbox"/> Chtdk	<input checked="" type="checkbox"/> Phos		<input checked="" type="checkbox"/> Pelec	<input checked="" type="checkbox"/> Sltstrg	<input checked="" type="checkbox"/> Mudst
<input checked="" type="checkbox"/> Chtlt	<input checked="" type="checkbox"/> Pyr		<input checked="" type="checkbox"/> Pellet	<input checked="" type="checkbox"/> Ssstrg	<input checked="" type="checkbox"/> Packst
<input checked="" type="checkbox"/> Dol	<input checked="" type="checkbox"/> Salt		<input checked="" type="checkbox"/> Pisolite		<input checked="" type="checkbox"/> Wackest
<input checked="" type="checkbox"/> Feldspar	<input checked="" type="checkbox"/> Sandy		<input checked="" type="checkbox"/> Plant		

## FOSSIL

<input checked="" type="checkbox"/> Algae	<input checked="" type="checkbox"/> Amph	<input checked="" type="checkbox"/> Belm	<input checked="" type="checkbox"/> Bioclst	<input checked="" type="checkbox"/> Brach	<input checked="" type="checkbox"/> Bryozoa	<input checked="" type="checkbox"/> Cephal
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### OTHER SYMBOLS

POROSITY TYPE	
E	Earthy
S	Fenest
F	Fracture
X	Inter
A	Moldic

<input type="checkbox"/>	Organic
<input type="checkbox"/>	Pinpoint
<input checked="" type="checkbox"/>	Vuggy
<input type="checkbox"/>	Well

<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Poor
<input type="checkbox"/>	Rounded
<input type="checkbox"/>	Subrnd

<input type="checkbox"/>	Subang
<input type="checkbox"/>	Angular
<input type="checkbox"/>	Even
<input type="checkbox"/>	Spotted

<input type="checkbox"/>	Ques
<input type="checkbox"/>	Dead
<input type="checkbox"/>	Core
<input type="checkbox"/>	Dst

EVENTS	
<input type="checkbox"/>	Rft
<input type="checkbox"/>	Sidewall

### Curve Track 1

ROP (min/m)  
Gas (units)  
Gamma (API)  
X Caliper (mm)  
Y Caliper (mm)

Depth

Porosity Type

Lithology

Grain Size

Sorting

Rounding

Oil Shows

Sonic (usec/m)

PEF (be)

Neutron Porosity (%)

Density Porosity (%)

Induction

Shallow Induction (ohmm)

Medium Induction (ohmm)

Deep Induction (ohmm)

0 ROP (min/m)  
0 Gas (units)  
0 Gamma (API)  
50 X Caliper (mm)  
50 Y Caliper (mm)

1300m @ 13:40 Feb 2, 2003

BIT #1RR 200mm  
Varie 665 PDC type IN  
@ 430m  
WOB: 9000daN  
RPM: 90-100  
PRESS: 10000k  
P.O.: 1.5 m3/min  
ANN V: 65 m/min

MUD WT: 1070kg/  
VIS: 55s/L pH: 1  
WATER LOSS: 9.0

10 Depth

1295 Porosity Type

24% Lithology

18%

12%

6%

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

P

500 Sonic (usec/m)  
1000 PEF (be)  
45 Neutron Porosity (%)  
45 Density Porosity (%)

500 Sonic (usec/m)  
1000 PEF (be)  
-13 Neutron Porosity (%)  
-15 Density Porosity (%)

500 Sonic (usec/m)  
1000 PEF (be)  
1 Medium Induction (ohmm)  
10 Deep Induction (ohmm)

500 Sonic (usec/m)  
1000 PEF (be)  
10 Shallow Induction (ohmm)  
100 Medium Induction (ohmm)  
1000 Deep Induction (ohmm)

### Geological Descriptions

500 Sonic (usec/m)

BEAVERHILL LAKE @ 1298m

SH 100%, 50% gy brn to med brn, mmica ip, blky, frm, dolc ip, silty ip, tr cal veining, 50% lt greenish gy to lt gn, dull to sl mmica, platy, fis to firm, smooth and waxy ip, calc, locally pyrz and pyr nod, ls 30%, off wh to lt gy, mict, mudst, lumpy to blky, dns, ls, locally pyrz, ns

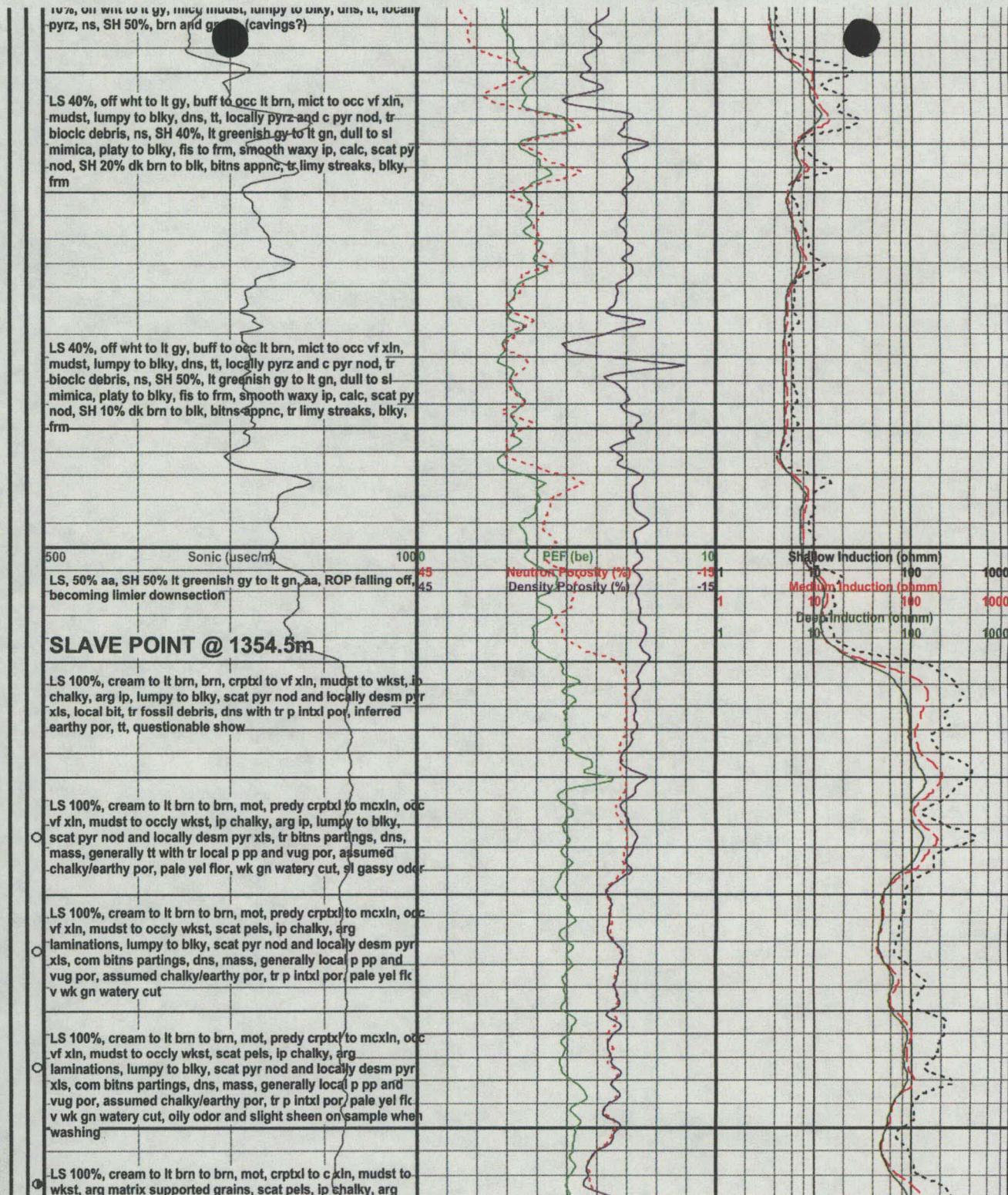
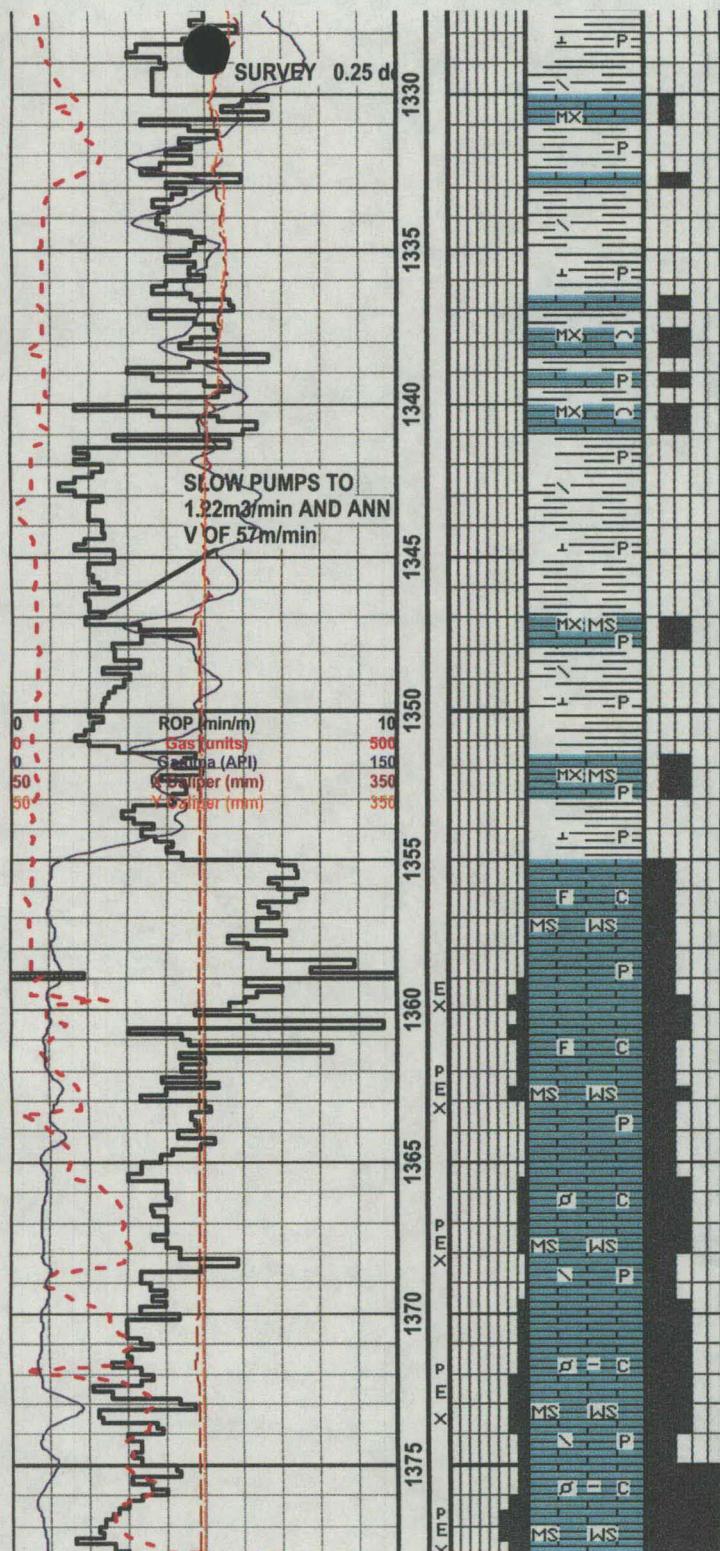
SH 30% gy brn to med brn, mmica ip, blky, frm, dolc ip, silty ip, tr cal veining, SH 40% lt greenish gy to lt gn, dull to sl mmica, platy, fis to firm, smooth and waxy ip, calc, locally pyrz and pyr nod, ls 30%, off wh to lt gy, mict, mudst, lumpy to blky, dns, ls, locally pyrz, ns

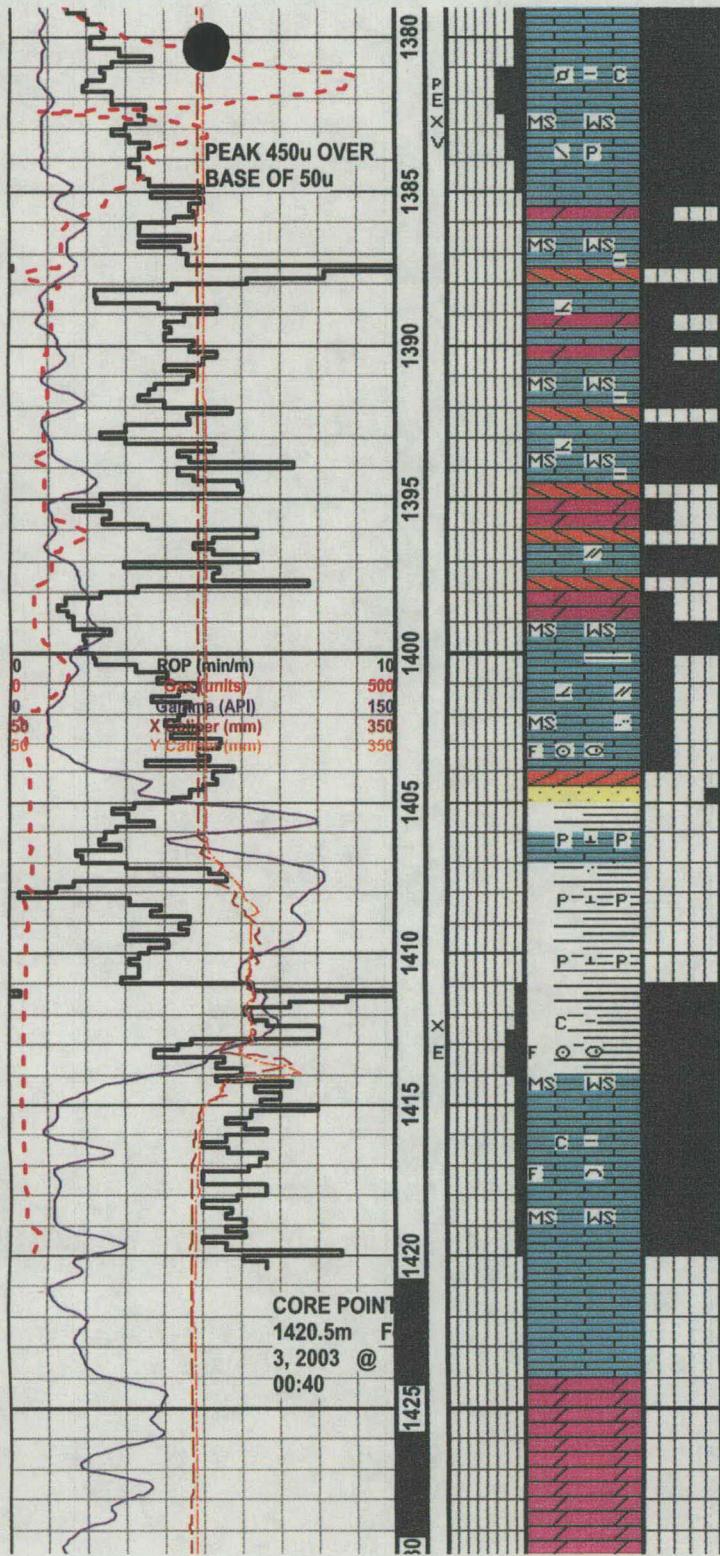
LS 60% aa, SH 40%, brn and green

SH 70% lt greenish gy to lt gn, dull to sl mmica, platy to blky, fis to frm, smooth waxy ip, calc, scat pyr nod, SH 10% gy brn, med brn, mmica ip, blky, frm, dolc ip, silty ip, tr cal veining, LS 20%, off wh to lt gy, mict, mudst, lumpy to blky, dns, ls, locally pyrz, ns

SH 80%, lt greenish gy to lt gn, dull to sl mmica, platy to blky, fis to frm, smooth waxy ip, calc, scat pyr nod, SH 10% gy brn, med brn, mmica ip, blky, frm, dolc ip, silty ip, tr cal veining, LS 10%, off wh to lt gy, mict, mudst, lumpy to blky, dns, ls, locally pyrz, ns

MUSKWA @ 1329m





and vug por, assumed chalky earthy por, tr fair intxl por, pale  
yel flor, watery yel wh cut

-LS 80%, cream to brn, v mot, mudst to wkst, mxcln to c xln, arg, lumpy to blky, dolc ip, tt, yel flor, wk faint gn cut, DOL 20%, med brn, crptx to mxcln, blky, frm, tt, questionable show, -mnr ANHY stringers, off wh to tan, crptx, pearly lustre ip, calc ip, soft

LS 70%, cream to brn, v mot, mudst to wkst, mcxln to c xln, arg, lumpy to blky, dolc ip, tt, yel flor, wk faint gr-cut, DOL 20%, med brn, crpxl to mcxln, blky, frm, tt, questionable shov, 10% ANHY stringers, off wh to tan, crptx, pearly lustre ip, calc ip, soft

F4 MARKER @ 1397.5m

LS 70%, cream to brn, v mot, mudst to wkst, mxcln to c xln, arg, lumpy to blky, dolc ip, anhyd ip, tt, yel flor, wt faint gn cu, DOL 10%, med brn, crptx to mxcln, blky, frm, tt, questionable show, 10% ANHY stringers, off wh to tan, drptx, pearly lustre, ip, calc ip, soft, 10% SH, gy to green.

WATT MOUNTAIN @ 1405m

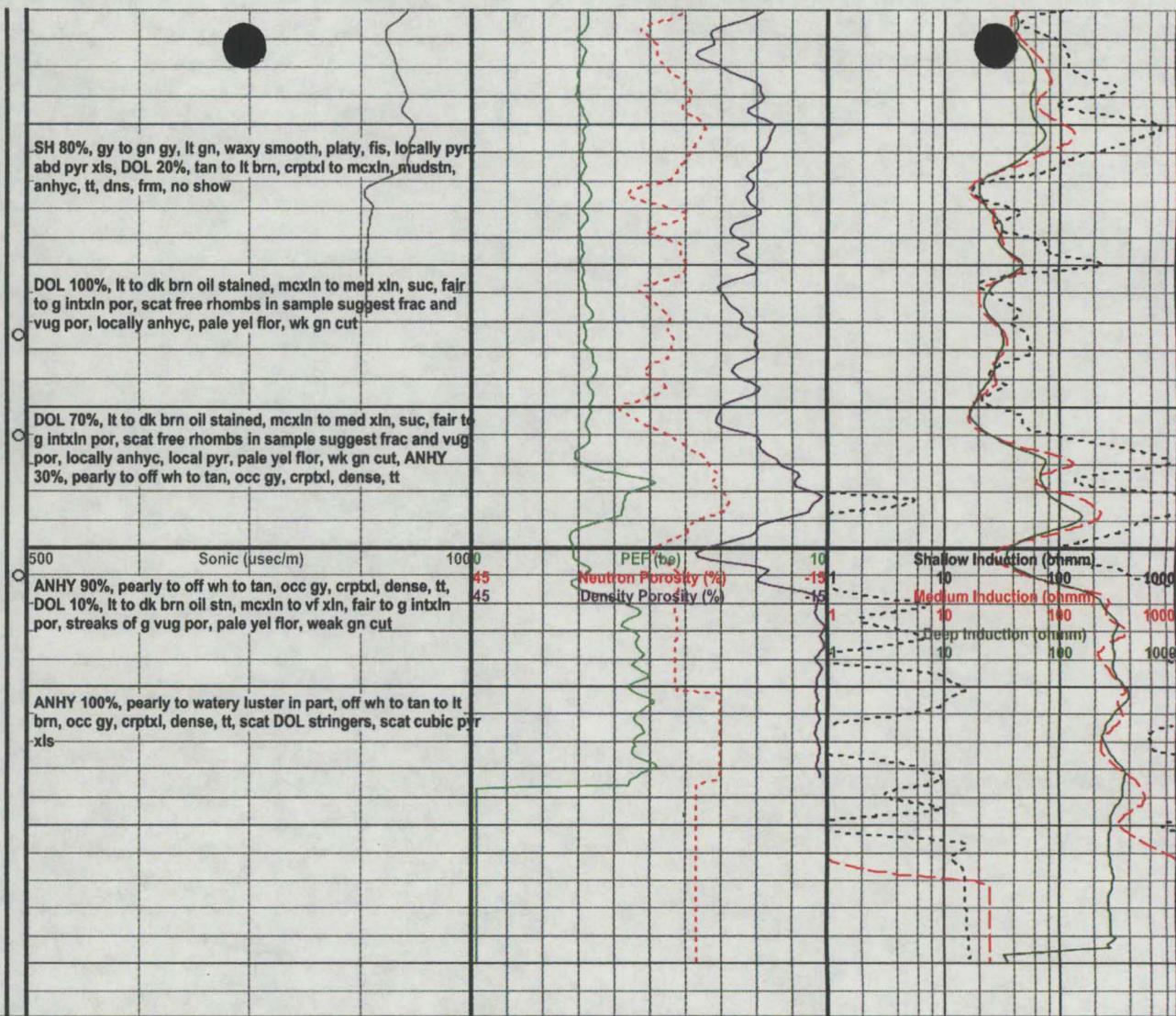
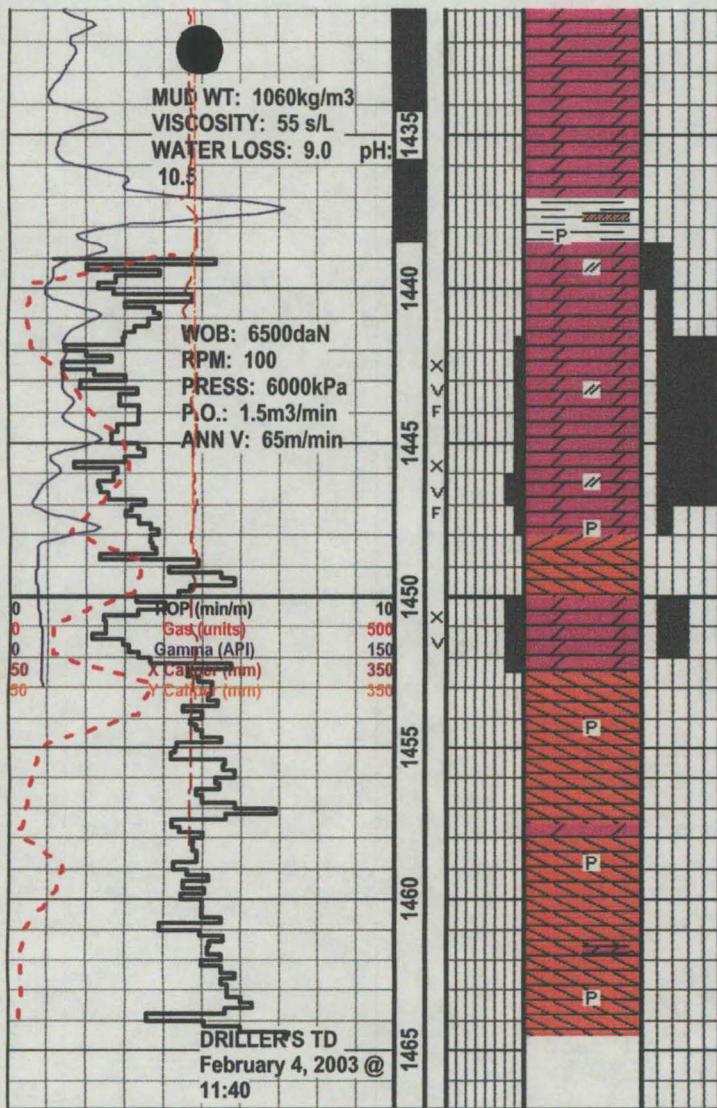
SH 100%, sl greenish gy to mint gn, occly bri blue gn, waxy, soft, sl calc ip, com desm pyr and v/c cubic pyr xls and xl clusters, scat rnd c to granule sized fros vcol free qtz gr

**SULPHUR POINT LS @ 1411m**

LS 70%, predy off wh to tan, lt brn to dk brn, occly gy, crpxd to med xln, mudst to wkst with arg lime matrix, chalky, lumpy to blky, tt with streaks of p pp por, assumed earthy por, slight oil odor, tr bitsn partings, tr unspec fossil debris incl Crin, scat -dull gold flr, no cut, SH 30%, aa (cavings)

-LS 100%, off wh to tan, lt to dk brn, occly gy, crpxl to med xln, mudst to ip bioclc wkst with arg lime matrix, chalky ip, lumpst to blky, lt with streaks of pp por, assumed earthy por, scat -unspec fossil debris, scat dull gold flor, questionable show.

SEE DETAILED CORE STRIPLOG  
FOR DESCRIPTIONS OVER THE  
INTERVAL 1420.5-1438.5m



# Running Horse Resources Inc.

[www.wellsitegeologists.com](http://www.wellsitegeologists.com)

Scale 1:48 (25"=100') Metric

Well Name: Para et al Cameron K-74  
Location: K-74 Grid Area: Lat 60° 10' N Long 117° 15' W  
Licence Number: 1972 Region: Camern Hills, NWT  
Spud Date: Drilling Completed:  
Surface Coordinates: Latitude: 60° 03' 40.733" North  
Longitude: 117° 29' 27.326" West

Bottom Hole  
Coordinates:  
Ground Elevation (m): 778.16m K.B. Elevation (m): 782.64m  
Logged Interval (m): 1420.5m To: 1438.5m Total Depth (m): 1438.5m  
Formation: Sulphur Pont Dolomite  
Type of Drilling Fluid: Gelchem

Printed by STRIP.LOG from WellSight Systems Inc. 1-800-447-1534 [www.wellsight.com](http://www.wellsight.com)

## OPERATOR

Company: Paramount Resources Ltd.  
Address: 4700 Bankers Hall West  
888 3rd Street S.W.  
Calgary, Alberta T2P 5C5

## GEOLOGIST

Name: Brad Powell, B.Sc.  
Company: Running Horse Resources Inc.  
Address: 66A New Street S.E.  
Calgary, Alberta T2G 3X9  
(403) 660-9883

## Comments

This well was drilled by Presicion Drilling Rig #117.  
A Continental gas detector was run.  
Gamma data provided by Computalog.  
Paramount AFE #02N31149

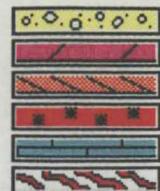
## CORE

Contractor: Baker Hughes Inteq  
Core #: 1  
Formation: Sukphur Point Dolomite  
Core Interval: From: 1420.5m Cut: 18.0m  
To: 1438.5m Recovered: 18.0m  
Bit type: BHC-406  
Size: 199 X 102mm  
Coring Time: 65min

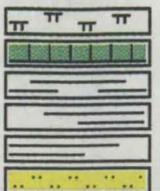
### ROCK TYPES



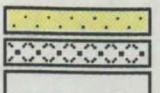
Anhy  
Bent  
Brec  
Cht  
Clyst  
Coal



Congl  
Dol  
Gyp  
Igne  
Lmst  
Meta



Mrlst  
Salt  
Shale  
Shcol  
Shgy  
Sltst



Ss  
Till  
Blank

### ACCESSORIES

#### MINERAL

Anhy  
Arggrn  
Arg  
Bent  
Bit  
Brecfrag  
Calc  
Carb  
Chtdk  
Chtlt  
Dol  
Feldspar  
Ferrpel  
Ferr  
Glau  
Gyp  
Hvymin  
Kaol

#### FOSSIL

Marl  
Minxl  
Nodule  
Phos  
Pyr  
Salt  
Sandy  
Silt  
Sil  
Sulphur  
Tuff

Algae  
Amph  
Belm  
Bioclst  
Brach  
Bryozoa  
Cephal

#### CORAL

Coral  
Crin  
Echin  
Fish  
Foram  
Fossil  
Gastro  
Oolite  
Ostra  
Pelec  
Pellet  
Pisolite  
Plant  
Strom

#### TEXTURE

Dol  
Gyp  
Ls  
Mrst  
Sltstrg  
Ssstrg

Boundst  
Chalky  
Cryxln  
Earthy  
Finexln  
Grainst  
Lithogr  
Microxln  
Mudst  
Packst  
Wackest

### OTHER SYMBOLS

#### POROSITY TYPE

Earthy  
Fenest  
Fracture  
Inter  
Moldic  
Organic  
Pinpoint

#### SORTING

Vuggy  
Well  
Moderate  
Poor

Rounded  
Subrnd

#### ROUNDING

Subang  
Angular

Even  
Spotted  
Ques  
Dead

#### INTERVALS

None  
Core  
Dst

Rft  
Sidewall

#### EVENTS

## Curve Track 1

ROP (min/m)  
Gas (units)  
Gamma (API)



## Geological Descriptions

ROP (min/m) 20  
Gas (units) 200  
Gamma (API) 150

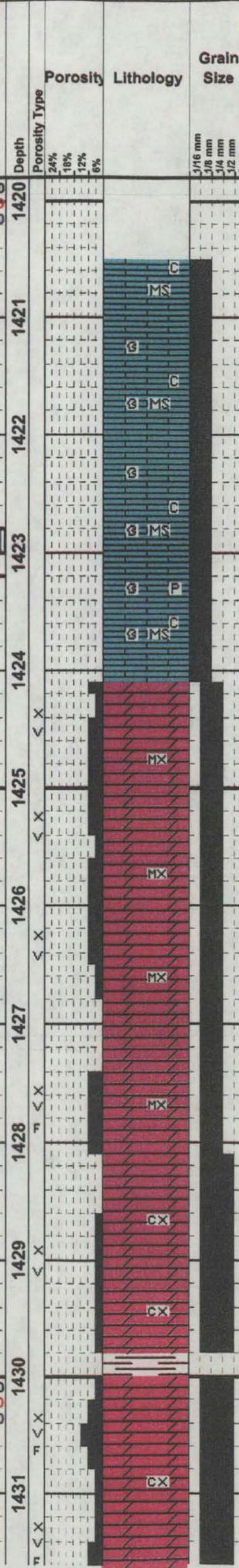
BIT TYPE:  
BHC-406 199 x  
-102mm

QUESTIONABLE  
ROP AND GAS  
VALUES FROM  
1420.5-1423m

MUD WT:  
1070kg/m<sup>3</sup>  
VISCOSITY: 75 s/L  
WATER LOSS: 9.0  
pH: 10.5

WOB: 2-4000daN.  
RPM: 60  
PRESS: 5800kPa  
P.O.: 1.00m<sup>3</sup>/min  
ANN V: 47m/min

ROP (min/m) 20  
Gas (units) 200  
Gamma (API) 150



LIMESTONE breccia, buff to tan rock fragments with light brown to brown lime mud matrix, cryptocrystalline to microcrystalline, collapse breccia?, very worked, fracturing throughout, predominantly mudstone, in part chalky, with trace dark grey shale partings, trace spotty bleeding oil and oil staining, very dense, firm, generally tight, waxy green shale partings, scattered stylolites, scattered calcite veining, trace pyrite, dolomitic streaks

## SULPHUR POINT DOLOMITE @ 1424.1M

DOLOMITE, light greyish brown to dark greyish brown, streaks of dark brown oil staining, rough texture, mottled, microcrystalline, to very fine crystalline, poor to streaks of excellent interconnected vug porosity with vugs to 2-3cm with 1cm clear euhedral rhombs in vug linings, with seeping oil, fair intercrystalline porosity

DOLOMITE, light to dark brown, with even heavy dark brown oil staining, saturated with oil with bleeding from pores, microcrystalline, to very fine crystalline, even deep yellow to gold fluorescence, excellent sucrosic intercrystalline and vuggy porosity, banded in part, good vertical facturing

DOLOMITE, off white to dark brown oil stained, banded in part, predominantly microcrystalline to very fine crystalline, to fine lower crystalline, bleeding oil, poor to excellent vug por, ex suc intxl porosity, common fract throughout, fine clear euhedral rhombs lining vug and fracture surfaces, vugs to 2-3cm, scat free rhombs and frags in sample, oil soaked section with strong yellow to

