WELLSITE GEOLOGICAL REPORT

PARAMOUNT ET AL CAMERON L - 47

Lat. 60° 06' 31.55" North
Long. 117° 30' 46.21" West.

Hugh Corkin.
Calgary, Alberta.
March 8, 1989.

246-9691
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SOUTHERN CROSS GEOLOGICAL CONSULTING LTD.

[illegible]
HUGH CORKIN – GEOLOGICAL CONSULTANT
P.O.Box 6983, Station D, Calgary, Alberta. T2P 2G2.

March 8, 1989

Paramount Resources Ltd.,
4100 First Canadian Centre,
350 - 7 Avenue S.W.,
Calgary, Alberta. T2P 3W5.

Dear Sirs:

Re: Paramount et al Cameron L-47

Enclosed herewith is a summary of all pertinent geological data from the subject well.

The well, which was spudded at 1300 hours February 11, 1989, was drilled to a total depth of 1565 metres into the Pre-Cambrian Granite. The prime objectives were the Upper Devonian, Slave Point, and the Middle Devonian, Keg River Dolomite. The Middle Devonian Sulphur Point reservoir existed as a secondary objective. No cores were cut but a total of five drillstem tests were run, four after Wireline Logs were obtained.

The well was drilled with Air from the Surface Casing Shoe (390.05m) to the top of the Wabamun, which was found to be water saturated. At 496 metres, the top of the Wabamun, the system was converted to Foam (soap detergent) and drilled down to 1165 metres which was approximately the limit for the compressors. No cuttings were available between 495 metres and 1165 metres while Foam was being utilized to clear the bore hole. The hole was then converted to a regular "chem-gel" mud system at 1165 metres, some distance above the Beaverhill Lake and drilled to total depth (1565 metres).

The first drillstem test was run during penetration to evaluate the stringers of porosity in the Sulphur Point which exhibited fair to good intercrystalline and vuggy porosity in association with indications of slight condensate staining. The test produced a recovery which included 187 metres mud cut water and 45 metres of drilling mud confirming the formation to be water saturated. The remaining four drillstem tests were run after Wireline Logs had been evaluated. One of these tests resulted in a misrun, two

confirmed the Keg River to be oil bearing and the fourth indicated the Slave Point had very limited reservoir qualities. The 85 metres of Inhibitor cut mud obtained from the Slave Point test is inconsistent with porosity observed in the drill cuttings and what was indicated on the mechanical logs, leading to the assumption that this formation had been badly damaged by filtrate invasion.

The data obtained from the drillstem tests, ditch cuttings, gas detector and wireline logs justified running production casing to total depth. The well is currently classified as Standing, waiting on evaluation, and will be completed at some future date. The rig was released at 0530 hours March 6, 1989.

Wellsite geological supervision was performed by Hugh Corkin under the direction of Mr. Glenn A. Downey of Paramount Resources Ltd.

Thank you for the opportunity of serving your Company.

Yours very truly,

H. Corkin.

Hugh Corkin. P.Geol.

PARAMOUNT ET AL CAMERON L - 47

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WELL DATA SUMMARY

Well Name: PARAMOUNT ET AL CAMERON L - 47

Location: Lat. 60° 06' 31.55" N, Long. 117° 39' 18.63" W

Operator: Paramount Resources Limited

Drilling Licence: No. 1396

Elevation: K.B. 723.00m Ground 719.32m

Co-ordinates: As above.

Total Depth: Driller 1565m Logger 1562.5m

Status: Standing waiting on evaluation.

Spud Date: 1300 hours February 11, 1989

Rig Released: 0530 hours March 6, 1989

Hole Size: 311 mm to 390.05 m; 222 mm to 1565 m; --- mm to ---

Surface Casing: Ran 30 joints of 244.5 mm, 53.57 kg/m J-55 LT&C Prudential casing (Total of 392 m) Landed at 390.05 m K.B., cemented with 31 tonnes of Class "G" cement + 3% $CaCl_2$. Plug down at 1515 hrs February 14, 1989.

Production Casing: Ran 121 joints of 139.7 mm, 20.38 kg/m J-55 ST&C Ipsco casing. (Total of 1564.3 m) Landed at 1562.5 m K.B., cemented with 12 tonnes of 0-1-0 cement + 1% NSL + .01% SPC

Cores: NONE

Core #___ _____ (Interval) Rec._____ m _____ (Formation)

Core #___ _____ (Interval) Rec._____ m _____ (Formation)

Core #___ _____ (Interval) Rec._____ m _____ (Formation)

Core #___ _____ (Interval) Rec._____ m _____ (Formation)

Tests:

Drillstem Test # 1 1408m - 1430m (Interval) Sulphur Point (Formation)

Recovered 187m Mud Cut Water, 45m Clobbered Drlg Mud

Drillstem Test # 2 1486m - 1510m (Interval) Keg River (Formation)

Recovered 1 cubic metre very gassified oil

Drillstem Test # 3 1510m - 1534m (Interval) Keg River (Formation)

Recovered 108m total fluid. 18m Inhibitor, 45m O.C.M. 45m brackish oil.

Drillstem Test # 4 1335m - 1359m (Interval) Slave Point (Formation)

Recovered 72m Inhibitor Cut Mud. Misrun.

Drillstem Test # 5 1335m - 1359m (Interval) Slave Point (Formation)

Recovered 85m Inhibitor Cut Mud

Drillstem Test # ___ _____ (Interval) _____ (Formation)

Recovered _____

Logs:

Schlumberger:-

Phasor Induction - SFL

1:600 390 m to 1560.7 m; 1:240 390 m to 1560.7m

Borehole Compensated Sonic Log

1:600 390 m to 1551.2 m; 1:240 390 m to 1551.2m

Compensated Neutron-Litho-Density Log

1:600 390 m to 1562.5 m; 1:240 390 m to 1562.5m

Other Logs listed under the heading "Additional Info"

Abandonment Plugs:

Plug # ___ _____ (Interval) with _____ tonnes of

NONE

Felt at _____ m after _____ hours

Plug #____ _____ with _____ tonnes of
(Interval)

_____

Felt at _____ m after _____ hours

Plug #____ _____ with _____ tonnes of
(Interval)

_____

Felt at _____ m after _____ hours

Plug #____ _____ with _____ tonnes of
(Interval)

_____

Felt at _____ m after _____ hours

Plug #____ _____ with _____ tonnes of
(Interval)

_____

Felt at _____ m after _____ hours

Drilling Contractor: Sierra Drilling Limited Rig No. 2

Ivan LeBlanc Toolpusher

Wellsite Geologist: Hugh Corkin

Wellsite Engineer: Michael Cholach

Additional Information:

Schlumberger Logs continued:-

Microlog 390m - 1556m; Cyberlook 1310m - 1562.5m;

Velocity Survey 390m - 1563.5m.

This well was drilled with Air from the Surface Casing Shoe (390.05m) to 1165m. The well was then converted to mud and drilled to Total Depth (1565m).

Canada Oil and Gas Lands Administration | Administration du pétrole et du gaz des terres du Canada

D.A. 1396

Nova Scotia	☐	West Coast	☐	Exploratory	☒
Newfoundland	☐	Northern	☒	Development	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Delineation	☐
				Service	☐

AUTHORITY TO DRILL A WELL

APPLICATION

This application is submitted with Section 82 of the Canada Oil and Gas Drilling Regulations. When approved under Section 83 of the Regulations, it is the requisite authority for the commencement of drilling operations.

Well Name in Full: PARAMOUNT ET AL CAMERON L-47

Operator: PARAMOUNT RESOURCES LTD. — Drilling Program No.: N/A

Contractor: SIERRA DRILLING LTD. — Permit or Lease No.: N/A

Drilling Rig or Unit: RIG #2 — Estimated Well Cost: LESS THAN ONE (1) MILLION DOLLARS

Location-Unit: L — Section: 47 — Grid Area: 60 10' 117 30'

Coordinates: Lat.: 60° 06' 31.55" N — Long.: 117° 39' 18.63" W

Area: CAMERON HILLS — Field/Pool: N/A

Elevation /KB: 723.33 (ASL) — Elevation: GROUND: 719.32 (ASL)

Approx. Spud Date: 89-02-10 — Estimated Days on Location: 25

Anticipated Total Depth: 1528 m KB — Target Horizon(s): SLAVE POINT, SULPHUR POINT

UWI: 300L476010117300

EVALUATION PROGRAM

Ten-metre sample intervals: N/A

Five-metre sample intervals: FROM UNDER CONDUCTOR CASING TO T.D.

Canned sample intervals: AT 10 M. INTERVALS FOR GEOCHEMICAL ANALYSIS

Conventional cores at: NOT ANTICIPATED

Logs and Tests: AS SPECIFIED IN DRILLING PROGRAM: VELOCITY SURVEY, DIL/CDL-CNS-GR, TESTS TO CONDUCTED ACROSS ZONES INDICATING POTENTIAL HYDROCARBONS. (IE TARGET ZONES)

CASING AND CEMENTING PROGRAM

O.D.	Weight:	Grade:	Setting Depth m KB	Cementing Program (Volumes):
244	53.57	J-55	390 m	CLASS G 100% EXCESS + 2% CACL,
139.7	20.83	J-55	1528 m	CLASS G + 0.75% T-10 20% EXCESS

PLEASE REFER TO DETAILED DRILLING PROGRAM

B.O.P. Equipment: ONE (1)

TWO (

C/

Other Information:

346.1

Signe

D

Department of Energy, Mines and Resources
Ministère de l'Énergie, des Mines et des Ressources

CAMERON HILLS

GEOLOGICAL PROGNOSIS

SP 253 LINE 84-28

PARAMOUNT ET AL CAMERON L-47

Elevations: Ground: 722.00 (estimate) K.B.: 723.0m

	Sub-Sea	Drilling Depth	
Wabamum	+ 235 m	491.0 m	493m
Slave Point	- 614 m	1,340.0 m	1342m
Watt Mountain		1,390.0 m	1392m
Bistcho-Sulphur Point		1,400.0 m	1402m
Muskeg		1,415.0 m	1417m
Keg River		1,495.0 m	1497m
Chinchaga		1,560.0 m	1562m
Pre-Devonian		1,604.0 m	1606m
T.D.		1,620.0 m	1622m

Testing during penetration at decretion of the wellsite geologist.

Suggested Logs:	DILL	T.D. - Surface Casing
	CNL-FDC	T.D. - Surface Casing
	VELOCITY SURVEY	T.D. - Surface Casing
	COMPENSATED SONIC NEUTRON	T.D. - Surface Casing
	MICROLOG	T.D. - Surface Casing

Wellsite Geologist:

DETAILED DRILLING PROGNOSIS

Well Name: Paramount et al Cameron B-8

Location: Coordinates Latitude 60° 10' 06.80" N
Longitude 117° 30' 46.21" W

And

Well Name: Paramount et al Cameron L-47

Location: Coordinates Latitude 60° 10' N
Longitude 117° 30' W Approximately

I GENERAL

		Business	Mobile/Home
a) Contractor:	Sierra Drilling	(403) 526-0489	
Toolpusher:	Ivan LeBlanc		XJ8-7257
b) Field Reps:	Southridge	263-3035 (24 Hours)	
Operational:	Michael Cholach		XJ4-2477
Geological:			

c) Reports & Logs: Daily drilling reports are to be phoned in to Paramount by 08:30, after which the report shall be faxed to C.O.G.L.A. in Yellowknife by Paramount - Calgary Office. Tour Sheets shall be submitted to the Chief as per S 174(2). Geological reports, describing lithology and any other pertinent information, shall be submitted to C.O.G.L.A. in Yellowknife on a weekly basis S 179 (1), (2).

d) Direction to Lease: At the intersection of the MacKenzie Highway and Alberta - N.W.T. border turn west (left hand turn). Follow this road for approximately 30 km. The Camp will be just to the right of the access road. From the campsite turn west (left hand turn) and follow the access road about 0.5 km to the drill site.

e) Credit Card No. A.F.E. No.

f) A geolograph is to be used and charts inserted into the drillfield file.

g) One copy of the tour sheet to be sent to the Chief by Paramount Calgary Office and one inserted into the field file.

h) Notify the Chief and Paramount 24 hours prior to spud.

II SURFACE HOLE

a) Cellar: 0.9 m x 1.8 m diameter, drainage from the cellar will be made possible with the use of a 460 mm diameter culvert from the cellar to the drilling sump.

b) Conductor Pipe: The rathole drilling contractor shall drill and set approximately 25 m of 346.1 mm conductor pipe. In accordance with S 106(1)(a) a diverter system shall be installed.

c) Hole Size: 311 m hole, form surface to 390 m.

d) Casing: In accordance with sections 69 and 70(1)C surface casing will be set at 380 m and cemented to surface. Centralize shoe joint, third joint and fifth joint.

Size	Interval	Mass	Grade	Connection
244.5	Surface 390 m	53.57	K-55	ST & C

Refer to the cementing program for a detailed description of the cementing procedure.

Wait on cement a minimum of 12 hours. Cut off casing and weld on the following casing barrel: ODS 21.0 MPa, 279.5 mm x 244.5 mm Slip on Bowl c/w 2 x 50.8 m 34.5 MPx EFSO Flanged Casing valves. Nipple up BOP (detailed diagram enclosed in section seven of this report). Pressure test and function

test BOP pursuant to sections 60 and 105 as stated in the Regulations.

III MAIN HOLE

a) Hole Size: 222 mm 390 m to 1528 mKB (estimated).

b) Leak Off Test: After drilling out the shoe, drill 5 m of new hole and perform a leak off test in accordance with S 122(2) of the "Regulations". Note results and record in tour book. Post maximum hold back pressure in the dog house and at the manifold.

c) Bits: Drill out utilizing a FDT or equivalent and increasing hardness to J-22 etc. as per consultant's discretion. Review nearby bit records for optimum selection.

d) Drilling Fluid: Refer to the mud program for a detailed description of the drilling fluid system.

e) Deviation: Deviation surveys will be taken in accordance with section 128 (1)(2) of the Regulations.

f) Pressure Testing: As required by S 116 (1)(c) of the Regulations, casing is to be pressure tested once every 1000 rotating hours.

g) Samples: Samples shall be taken at 5 m intervals beginning at surface. These drill cuttings will be collected in accordance with Section 223(1).

h) Total Depth: The total depth as been tentatively set at 1528 mKb (estimated).

i) Downhole Tools: Use shock sub on main hole while drilling our the shoe through to T.D.

j) Logging: DIS SFL INDUCTION LATERLOG

1:240 - Logarithmic Scale - T.D. to surface casing shoe.
1:600 - Linear Scale - T.D. to surface casing shoe.
Resistivity Scale: 0 - 50 ohm - meters.
Conductivity Scale: 0 - 500 - 1000 millisiemens/m.
SP: Possible 10 - 15 millivolt scale per division.

CNL-FDC

1:240 - T.D. to surface casing.
Roll #1 - 1:240.
Bulk Density - 1000 - 3000 kg/m^3 with correction curve.
Gamma Scale - 0 - 150 API units.
Roll #2 - 1:240.
Limestone porosity scale:
Run a repeat at T.D. (memorizer in).

BHCS-GRC

1:240 T.D. to surface casing shoe.
1:600 T.D. to surface casing shoe.
Using standard S.I. scales.

MICROLOG

1:240 T.D. to surface casing shoe.

VELOCITY SURVEY

Note: Logs to be run and scales to be used may be redetermined upon reaching T.D. subject to prevailing hole conditions and interpretation of sample lithology logs.

FLUID SAMPLES AND ANALYSES

Three one litre mud samples are to be caught at 15 minute intervals for Rm and Rmf measurements, while circulating prior to logging.

k) Mud Logging: A mud logging unit will be on location and available to begin gas detection as specified by the Calgary Office (pursuant to S 75(3)(e), S 1900). This facility has the capability to:

a) Measure the methane and total gas from 0 - 100% gas in air.

b) Accurately record gas readings in air.

c) Ascertain the presence of H_2S gas.

In addition to the above mentioned, a hydrocarbon log will furnish the following information:

a) Measure of total gas from the drilling fluid.

b) Chromotographic analysis of hydrocarbons in the mud.

c) A record of the amount of all combustible gases and the amount of methane from the drilling fluid.

d) An interpretive lithology with associated drilling data and hole conditions.

l) Testing:

Primary zones in interest are the Slave Point and Sulphur Point formations, DST's will only run if called by Calgary Office. Run bottom hole test with dual packers, safety joint, jars, pump out sub, extra recorder and bottom hole sampler for maximum information. Report all flow rates and any water salinity. Times to be given by Calgary Office. FSI to 1 1/2 times FF. Measure BHT. Samples to be caught at top, middle and bottom of recovery and sent immediately to Chemex Labs. Water resistivity measurement required. Ensure all information on sample bottles. After log evaluation if more than one test anticipated test utilizing inflatable packers.

m) Abandonment:

If the well proves to be non-productive the abandonment procedure will be determined by the Calgary Office after consultation with the Chief Conservation engineer (pursuant to section 129 and section 203 - 216 inclusive of the regulations).

A suggested abandonment procedure includes running three (3) plugs in the manner described below:

Plug #1 - Run a bottom plug of Class "G" to 2% $CaCl_2$ to cover the interval from total depth to 100 m above total depth.

Plug #2 - run a 100 m plug of Class "G" + 3% $CaCl_2$ across the porous zones. Run in with drill pipe and tag the top of the plug.

Plug #3 - Run and set a 60 m plug of Class "G' + 3% $CaCl_2$, cementing 30 m below and 30 m above the 244 mm surface casing shoe.

Plug #4 - Pull up hole to the 25 m mark and run Permafrost cement to surface.

n) Casing:

Make 15 stand dummy trip and circulate a minimum of 1 hour prior to cementing, or until hole is circulated clean. The annular velocity with 139.7 mm casing cannot exceed 40 m/min while circulating the hole clean.

Casing string:

Size	Interval	Mass	Grade	Connection
139.77	0 - 1528 m	20.83 kg/m	J-55	ST & C

Placement of scratchers and centralizers will be determined by the Calgary Office prior to running casing.

Well Name: PARAMOUNT ET AL CAMERON L - 47

Location: Lat. 60° 06' 31.55" N; Long. 117° 39' 18.63" W

ELECTRIC LOG TOPS

K.B. Elevation 723.00m

Formation	Sample Top	Log Top	Elevation
UPPER DEVONIAN:			
Wabamun	497.0	496.2	+ 226.8
Twin Falls	---	928.0	- 205.0
Hay River	---	982.0	- 259.0
Beaverhill Lake	1275.0	1277.0	- 554.0
Muskwa	1305.0	1304.8	- 581.8
Slave Point	1330.0	1330.3	- 607.3
Fort Vermilion	1360.0	1359.0	- 636.0
MIDDLE DEVONIAN:			
Watt Mountain	1380.0	1378.5	- 655.5
Bistcho	1385.0	1388.0	- 665.0
Sulphur Point	1405.0	1405.0	- 682.0
Muskeg	1440.0	1439.0	- 716.0
Keg River	1485.0	1485.0	- 762.0
PRE-CAMBRIAN:			
Basement	1547.0	1547.0	- 825.0
Total Depth	1565.0	1562.5	- 839.5

PARAMOUNT ET AL CAMERON L - 47

S A M P L E D E S C R I P T I O N

Samples Lagged 1 Min. per 30 Metres

K.B: 723.00m

395 - 410 SHALE - medium to dark grey, slight silty texture, micromicaceous, fairly carbonaceous, non-calcareous, fissile to sub-fissile, brittle, soft;
Trace Inoceramus fragments.

410 - 420 SHALE - medium to dark grey, very silty texture, slightly micromicaceous, carbonaceous in part, non-calcareous, fissile to blocky, soft to very soft.

420 - 425 SHALE - medium to dark grey and black, silty texture, micromicaceous, carbonaceous throughout, non-calcareous, fissile to sub-fissile, very soft.

425 - 445 SHALE - light grey to greyish brown and some light green, very silty texture, micromicaceous, slightly carbonaceous, non-calcareous, platy, medium soft to hard;
Minor SILTSTONE - interbedded stringers, translucent to light grey, quartzose, carbonaceous in part, well cemented with clayey matrix, platy, hard, tight;
Trace SANDSTONE - lens, translucent to rarely transparent, quartzose, very fine grained and grading to Siltstone, slightly carbonaceous, sub-angular, well sorted, well cemented with calcareous matrix, platy, hard, tight;
Trace Shell fragments.

445 - 465 SHALE - medium to dark grey, very silty texture, slightly micromicaceous, carbonaceous, non-calcareous, platy, medium soft to soft;
Trace SANDSTONE - stringers, transparent to translucent and occasionally light grey, quartzose, very fine to fine grained, sub-angular, medium sorted, cemented with slightly calcareous and silty matrix, blocky, hard, tight.

465 - 475 SHALE - medium to dark grey, silty texture, slightly micromicaceous, carbonaceous in part, non-calcareous, fissile to platy, soft to very soft.

475 - 495 SHALE - medium to dark grey, very silty texture, slightly micromicaceous, very carbonaceous, non-calcareous, blocky to sub-fissile, soft to medium soft, brittle in part;
Minor SANDSTONE - interbedded stringers, transparent to mainly translucent, quartzose, very fine to fine grained, sub-rounded to sub-angular, medium sorted, cemented with limy matrix, rarely carbonaceous, medium hard, tight;
Trace PYRITE - nodules and bluish grey BENTONITE.

NOTE: AIR DRILLING ENCOUNTERED WATER AT TOP OF WABAMUN SO FOAM WAS ADDED WHICH RESULTED IN NO CUTTINGS FROM 495m to 1165m.

1165 -1185 SHALE - 90%, medium to very dark grey, silty texture, micromicaceous, non-calcareous, sub-fissile to platy, medium soft;
SILTSTONE - 10%, interbedded stringers, translucent to mainly very light grey, quartzose, micromicaceous, rarely carbonaceous, sub-angular, well sorted, well cemented with calcareous matrix, platy, hard, tight;
Trace SANDSTONE - transparent to translucent, quartzose, very fine grained, sub-angular, well sorted, cemented with calcareous matrix, argillaceous, platy, medium hard, tight, no shows.

1185 - 1200 SHALE - light to mainly dark grey, smooth to slightly silty in part, micromicaceous, rarely carbonaceous, non-calcareous, sub-fissile to platy, medium soft to soft;
Minor SILTSTONE - scattered stringers, translucent to very light grey, quartzose, micaceous, slightly carbonaceous, argillaceous, sub-angular, well sorted, cemented with calcareous matrix, platy, hard, tight.

1200 - 1215 SHALE - light to medium grey, smooth, very slightly micromicaceous, carbonaceous in part, non-calcareous, sub-fissile to platy, medium soft;
SANDSTONE - 5%, transparent to translucent, quartzose, fine grained, sub-angular, well sorted, slightly carbonaceous, well cemented with calcareous matrix, platy, hard, tight;
Rare COAL - jet black, lustrous, conchoidal fracture, angular, brittle.

1215 - 1235 SHALE - light to medium grey, smooth, slightly micromicaceous, occasional carbonaceous partings, non-calcareous, platy, medium soft;
SANDSTONE - 5%, interbedded stringers, transparent to

..... 3

translucent, quartzose, very fine to mainly fine grained, sub-angular to sub-rounded, medium sorted, cemented with calcareous matrix, grading to Siltstone in part, blocky, hard, tight.

1235 - 1250 SHALE - 80%, medium to dark grey, slight silty texture, micromicaceous, carbonaceous occasionally, non-calcareous, platy, medium soft to soft;
SILTSTONE - 20%, interbedded stringers, translucent to mainly light grey, quartzose, sub-angular, well sorted, rarely micaceous, well cemented with calcareous matrix, rarely pyritic, platy, medium hard, tight.

1250 - 1265 SHALE - 75%, medium grey, smooth, carbonaceous, non-calcareous, very slightly micromicaceous, platy, soft;
SILTSTONE - 25%, stringers, translucent to light grey, quartzose, micromicaceous, grading to very fine grained Sandstone in part, sub-angular, well sorted, argillaceous, cemented with calcareous matrix, platy, medium hard, tight, no shows.

1265 - 1275 SHALE - 60%, medium to dark grey, smooth, carbonaceous, rarely micromicaceous, non-calcareous, sub-fissile to platy, soft;
SILTSTONE - 40%, translucent to very light grey, quartzose, micromicaceous, argillaceous, slightly carbonaceous in part, rarely pyritic, sub-angular, well sorted, cemented with calcareous matrix, tight.

BEAVERHILL LAKE : 1275m

1275 - 1305 SHALE - 75%, dark grey, smooth, slightly carbonaceous, non-calcareous, platy, soft;
SANDSTONE - 25%, stringers, translucent to light grey, quartzose, very fine grained, grading to Siltstone in part, sub-angular, well sorted, slightly micromicaceous, argillaceous, well cemented with calcareous matrix, blocky, hard, tight;
Trace MARL - light green, smooth, calcareous, soft.

MUSKWA : 1305m

1305 - 1320 SHALE - 80%, medium to dark grey, smooth, slightly micromicaceous, carbonaceous partings throughout, non-calcareous, sub-fissile to platy, medium soft;
SANDSTONE - 5%, translucent to mainly light grey, quartzose, very fine grained, grading to Siltstone

in part, micaceous, argillaceous, sub-angular, well sorted, calcareous matrix, platy, hard, tight;
LIMESTONE - 15%, stringers, translucent to creamy white, crypto to microcrystalline, argillaceous, platy, hard, tight;
Trace MARL - light green, smooth, calcareous, soft;
Trace Crinoid fragments.

1320 - 1330 SHALE - 80%, medium to dark grey, smooth, slightly micromicaceous, non-calcareous, platy, medium soft;
SILTSTONE - 10%, stringers, translucent to light grey, quartzose, micaceous, slightly carbonaceous, sub-angular, well sorted, calcareous matrix, platy, hard, tight;
LIMESTONE - 10%, white to greyish white, crypto to microcrystalline, very argillaceous, platy, medium hard, tight;
Rare Crinoid fragments.

SLAVE POINT : 1330m

1330 - 1345 LIMESTONE - cream to occasionally medium brown, crypto to microcrystalline, very argillaceous, rarely bioclastic, granular in part, trace poor lemon-yellow fluorescence, no cut or staining, platy, medium hard, tight;
Trace PYRITE - nodules;
Scattered Shell fragments.

1345 - 1355 LIMESTONE - cream to light and medium brown, microcrystalline to very finely granular, very argillaceous, commonly bioclastic with scattered well developed porous Algal stringers, poor to fair intergranular and vuggy porosity, poor to fair permeability, fair iridescent pulsating fluorescence, milky white curling cut, trace condensate staining associated with porosity, mainly tight and hard but porous stringers brittle. Gas readings in 23-27 unit range.

1355 - 1360 LIMESTONE - cream to medium brown, microcrystalline to very finely granular, slightly bioclastic in part, very argillaceous, trace scattered Algal stringers containing poor intergranular and vuggy porosity, limited permeability, very dull fluorescence, no cut or staining, platy, hard, mainly tight;
Minor LIMESTONE - light to medium grey, microcrystalline, silty texture, calcarenitic, very slightly pyritic in part, platy, medium soft to soft, tight, no shows.

FORT VERMILLION : 1360m

1360 - 1380 LIMESTONE - 80%, mainly creamy white to medium brown, microcrystalline to very finely crystalline, sucrosic texture, argillaceous, rarely bioclastic, chalky in part, platy, medium hard, tight, no shows;
SHALE - 15%, light to medium grey, smooth, non-calcareous, sub-fissile to platy, medium soft;
ANHYDRITE - 5%, translucent to greyish white, microcrystalline;
Trace green SHALE.

WATT MOUNTAIN : 1380m

1380 - 1385 LIMESTONE - 60%, light to medium brown, lithographic to cryptocrystalline, argillaceous, platy, hard, tight, no shows;
LIMESTONE - 40%, white to creamy white, microcrystalline, amorphous, chalky texture, platy, very soft to soft, tight;
Trace MARL - green, smooth, calcareous, medium soft to soft;
Trace PYRITE - nodules.

BISTCHO : 1385m

1385 - 1405 LIMESTONE - 90%, creamy white to occasionally very light brown, crypto to microcrystalline, amorphous and chalky in part, argillaceous, rarely pelletoidal, platy, medium soft to hard, tight;
DOLOMITE - 10%, interbedded stringers, medium to mainly dark brown, crypto to finely crystalline, anhydritic, platy, hard, tight, no shows;
Minor PYRITE - disseminated and nodules.

SULPHUR POINT : 1405m

1405 - 1430 DOLOMITE - medium to dark brown, very fine to finely crystalline, sucrosic texture characteristic, anhydritic, rhombic crystals detectable, stringers of fair to good intercrystalline and vuggy porosity, fair permeability, white iridescent fluorescence, slight white cut, a good reservoir but possibly flushed. A drilling break through interval in the 7 to 8 minute range from 15 minutes. Gas in the 10 to 13 unit range.

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1430 - 1440 DOLOMITE - medium to dark brown, very fine to finely crystalline, sucrosic texture common, anhydritic, minor stringers poor intercrystalline and vugular porosity, limited permeability, no shows, platy, hard, mainly tight, porosity appears flushed;
Trace LIMESTONE - stringers, creamy white to medium brown, microcrystalline, bioclastic in part, amorphous chalky texture dominant, argillaceous, platy, medium soft, tight.

MUSKEG : 1440m

1440 - 1450 ANHYDRITE - 75%, translucent to cream and light grey, crypto to microcrystalline, microsucrosic, platy, medium hard to medium soft;
DOLOMITE - 25%, stringers, light to medium brown, very finely crystalline, anhydritic, sucrosic texture, platy, hard, tight.

1450 - 1460 ANHYDRITE - 80%, translucent to creamy white and tan, crypto to microcrystalline, rarely very finely crystalline, slightly chalky in part, platy, medium hard, tight;
DOLOMITE - 20%, medium to dark brown, micro to very finely crystalline, sucrosic texture in part, anhydritic, trace poor intercrystalline porosity, rarely vugular, no shows, platy, hard, mainly tight.

1460 - 1485 SHALE - Cavings, medium grey, smooth, rarely micromicaceous, very slightly calcareous in part, sub-fissile to platy, medium soft;
ANHYDRITE - 80%, interbedded, translucent to creamy white and tan, crypto to microcrystalline, platy, medium hard, tight;
DOLOMITE - 20%, stringers, medium to dark brown, very fine to finely crystalline, anhydritic, platy, hard, tight;
Trace SHALE - green, smooth, calcareous, soft;
Trace PYRITE.

KEG RIVER : 1485m

1485 - 1495 ANHYDRITE - 50%, interbedded, translucent to creamy white and tan, crypto to microcrystalline, platy, medium hard, tight;
DOLOMITE - 50%, light to medium brown, lithographic to very finely crystalline, anhydritic, platy, very hard to hard, tight;
SHALE - cavings common.

1495 - 1500 DOLOMITE - medium brown, very fine to mainly finely crystalline, sucrosic texture characteristic, anhydritic, trace poor to fair intercrystalline and vuggy porosity, dull lemon fluorescence, slight staining and cut, a fair reservoir, platy, hard, mainly tight, low Gas values in the 3 to 4 unit range;
Trace ANHYDRITE - creamy white, microcrystalline, platy, medium hard, tight;
Trace PYRITE - nodules.

1500 - 1515 DOLOMITE - translucent to medium and dark brown, very fine to finely crystalline, sucrosic texture common, anhydritic, trace scattered fair to good vuggy and intercrystalline porosity, fair permeability, fair lemon fluorescence, white smokey cut, light oil staining, platy, hard, mainly tight;
Trace SHALE - green, smooth, dolomitic, medium soft.

1515 - 1523 DOLOMITE - translucent to medium and dark brown, very fine to finely crystalline, scattered poor intercrystalline and vuggy porosity, slight yellow fluorescence and white smoky cut;
Trace ANHYDRITE - creamy white to light grey and semi-translucent, microcrystalline, platy, medium hard, tight;
Trace SHALE - green, smooth, dolomitic, medium soft.

1523 - 1535 DOLOMITE - 60%, very dark to chocolate brown, lithographic, slightly calcareous in part, anhydritic, platy, very hard, dense;
LIMESTONE - 30%, interbedded, creamy white to very light brown, microcrystalline, argillaceous, slightly dolomitic in part, occasionally bioclastic, platy, medium hard, tight;
DOLOMITE - 10%, stringers, translucent to light brown, very fine to finely crystalline, anhydritic, platy, hard, tight;
Trace MARL - lenses, light grey and green, smooth, calcareous, medium soft;
Trace PYRITE - nodules.

1535 - 1547 DOLOMITE - 80%, light, medium and dark brown, very fine to finely crystalline, anhydritic, slightly siliceous, platy, very hard, tight;
SANDSTONE - 20%, translucent, quartzose, very fine to fine grained, sub-angular, well sorted, minor fair intergranular porosity, questionable permeability, slight bright lemon-yellow fluorescence, no cut or staining, slight calcareous matrix, anhydritic;
Trace ANHYDRITE.

PRE-CAMBRIAN : 1547m

1547 - 1565 GRANITE - salmon pink, quartz-feldspar-hornblend rich with minor biotite;
Minor QUARTZITE - translucent to light grey, very siliceous, very hard, dense.

TOTAL DEPTH : 1565m

PARAMOUNT ET AL CAMERON L - 47

GAS REPORTS

Date	Depth	Total Units	Comments
Feb. 20	1165-1168	4-19	Trip Gas
	1168-1170	3-4	Background
	1170-1210	1-2	Background
	1210-1214	3	Background
	1214-1217	4-5	Background
	1217-1236	1-2	Background
Feb. 21	1236-1238	3-5	Background
	1238-1290	1-3	Background
	1290-1291	3-4	Background
	1291-1310	1-3	Background
	1310-1312	4-7	Minor Show
	1312-1317	2-4	Background
	1317-1318	4-6	Minor Show
	1318-1330	1-4	Background
Feb. 22	1330-1350	1-7	Background
	1350-1351	7-9	Show
	1351-1353	10-27	Strong Show
	1353-1354.5	17-18	Show
	1354.5-1359	21-50	Trip Gas
	1359-1362	10-17	Show
	1362-1372	1-3	Background

PARAMOUNT ET AL CAMERON L - 47

GAS REPORTS - continued

Date	Depth	Total Units	Comments
Feb. 23	1372-1396	1-3	Background
	1396-1400	4-9	Minor Show
	1400-1411	2-4	Background
	1411-1424	5-12	Show
	1424-1428	10-13	Show
	1428-1430	6-12	Show
Feb. 25	1430-1438	4-6	Minor Show
	1438-1439	7-9	Show
	1439-1440	5-12	Show
	1440-1441	3	Background
	1441-1443	1-2	Background
	1443-1473	0-1	Background
	1473-1478	0	Mud Vis. 115
Feb. 26	1478-1490	0	Mud Vis. 115
	1490-1494	2-5	Background
	1494-1499	5-7	Minor Show
	1499-1502	2-3	Background
	1502-1505	5-15	Show
	1505-1506	6-9	Minor Show
	1506-1511	3-4	Background
	1511-1532	1-2	Background
	1532-1535	0	Bsl KR Platform

PARAMOUNT ET AL CAMERON L - 47

GEOLOGICAL SUMMARY

The subject well was drilled primarily as a test of the Upper Devonian, Slave Point and the Middle Devonian, Keg River dolomite, with the reservoir of the Middle Devonian Sulphur Point existing as a secondary objective.

The hole was drilled with "Air" from the Surface Casing Shoe to the top of the Wabamun. The top of the Wabamun, at 496 metres, was water saturated which necessitated converting to Foam (soap detergent). Foam was used down to 1165 metres, at which point conversion was made to a regular "chem-gel" mud system, which was used to total depth, 1565 metres. No cuttings or gas readings were obtained between 495 metres and 1165 metres, which covered the Wabamun, Twin Falls and Hay River intervals of the hole.

The Slave Point was encountered at 1330.3 metres (-607.3m) and was approximately 29 metres thick. The formation consisted of a limestone sequence which was tight at the top but a few metres down had some well developed porous Algal stringers. The limestone was cream to medium brown, microcrystalline to very finely granular, slightly bioclastic with scattered well developed porous Algal stringers. Poor to fair intergranular and vuggy porosity with limited permeability was exhibited and was associated with a fair iridescent pulsating fluorescence. This porosity was not tested until after Log evaluations were completed and all that was recovered from the drillstem test was 85 metres of inhibitor cut drilling mud, which suggests the reservoir was badly damaged by invasion.

The Sulphur Point was encountered at 1405 metres (-682m) and consisted of a dolomite sequence which had a characteristic sucrosic texture. The dolomite was medium to dark brown, very fine to finely crystalline with fair to good intercrystalline and vuggy porosity which appeared to be effective. A slight fluorescence and cut was obtained but the reservoir appeared to be flushed. The porosity in the Sulphur Point was tested during penetration and confirmed previous predictions that the reservoir was water saturated by producing a recovery of 187 metres of mud cut water and 45 metres of drilling mud.

The Keg River was penetrated at 1485 metres (-762m) and appeared in cuttings to have been deposited in a bank environment as there was no indication of any biostromal or biohermal buildup even

where porosity existed. The lithology consisted of a dolomitic sequence which varied in colour from a light to a dominant dark brown, was mainly very fine to finely crystalline, commonly anhydritic and had traces of scattered poor to fair intercrystalline and vuggy porosity throughout, and in most cases appeared to be permeable. Associated with the upper porosity was some slight light oil staining which produced a dull lemon fluorescence and a smokey white cut. A total of two drillstem tests evaluated the Keg River after Wireline Logs had been evaluated and both indicated the presence of a hydrocarbon reservoir. Further evaluating will be required before any conclusions can be drawn as to the commercial viability of this well.

All other formations were essentially tight or were flushed as confirmed by samples and wireline logs. Porosities and hydrocarbon shows were checked with a fluoroscope and CCl_4.

Based on the above information and previous knowledge of the reservoirs in the general area, production casing was run to total depth (1565m K.B.). The well is currently classified as Standing - waiting on evaluation. The rig was released at 0530 hours March 6, 1989.

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 12, 1989

DAYS FROM SPUD: 1

DEPTH: 137m PROGRESS: 137m HRS ON BTM: 6-1/4

OPERATION AT 0800 HRS: Waiting for Matting.

MUD PROPERTIES: Wgt 1040 Vis 44 W.L. --- F.C. --- pH ---

SURVEYS: 38m = 1/4°, 65m = 1/8°, 119m = 1/8°, 137m = 1/8°.

REMARKS: Spudded at 1300 hours February 11, 1989.

Drilled to 137m and cellar started caving around the Conductor Pipe, undermining the Matting.
Pulled out of hole and laid down derrick and waited for arrival of addition Matting.

Official: Ground Elevation : 719.32m
K.B. to Ground : 3.68m
Kelly Bushing : 723.00m

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 13, 1989

DAYS FROM SPUD: 2

DEPTH: 306m PROGRESS: 169m HRS ON BTM: 8-3/4

OPERATION AT 0800 HRS: Drilling 311mm hole.

MUD PROPERTIES: Wgt 1160 Vis 52 W.L. --- F.C. --- pH ---

SURVEYS: 164m = 1/4°, 202m = 3°, 230m = 2-1/2°.

REMARKS: Waited for Matting and welded same. Cut off and rewelded Conductor Pipe. Backfilled Cellar with gravel. R.I.H. and drilled to 306m.

GEOLOGIST: H. Corkum

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 14, 1989

DAYS FROM SPUD: 3

DEPTH: 390m PROGRESS: 90m HRS ON BTM: 1-3/4

OPERATION AT 0800 HRS: Running Surface Casing.

MUD PROPERTIES: Wgt 1160 Vis 83 W.L. --- F.C. --- pH ---

SURVEYS: 258m = 1-1/4°, 334m = 3/4°, 372m = 3/4°.

REMARKS: Drilled, circulated and P.O.H.
Running 244.5mm surface casing.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 15, 1989

DAYS FROM SPUD: 4

DEPTH: 390m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Heading up B.O.P.'s.

MUD PROPERTIES: Wgt --- Vis --- W.L. --- F.C. --- pH ---

SURVEYS: ----

REMARKS: Surface Casing: Ran 30 jts 244.5mm, 53.57 kg/m, J-55 LT&C Prudential Casing. Ran total of 392m casing. Landed at 390.05m K.B. Cemented with 31 tonnes Class "G" cement + 3% $CaCl_2$. Plug down at 1515 hours February 14, 1989. W.O.C. Cut off casing. Welded on Bowl. Headed up B.O.P.'s.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 16, 1989

DAYS FROM SPUD: 5

DEPTH: 392m PROGRESS: 2m HRS ON BTM: 3-1/2

OPERATION AT 0800 HRS: Preparing to drill out.

MUD PROPERTIES: Wgt 1110 Vis 62 W.L. --- F.C. --- pH ---

SURVEYS: ----

REMARKS: Headed up B.O.P's. Pressure tested Blind Rams. R.I.H. with Bit and pressure tested Pipe Rams to 7000 kPa. Drilled out Float Collar, Cement and Guide Shoe. Drilled to 392m. Rigged in Excel Pressure Testing. Ran Leak-off Test. P.O.H. 200m and blew out water. R.I.H. to 390m and blowing hole dry. Geologging equipment hooked up ready to go.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 17, 1989

DAYS FROM SPUD: 6

DEPTH: 819m PROGRESS: 427m HRS ON BTM: 18-3/4

OPERATION AT 0800 HRS: Drilling 222mm hole with Foam.

MUD PROPERTIES: Wgt 1110 Vis 50 W.L. --- F.C. --- pH ---

SURVEYS: 560m = 3/4°, 723m = 3/4°.

REMARKS: Formation Top:
Wabamun 497m (=226m).

Drilled with Air to top of Wabamun and encountered water. Converted to Foam at 505m and continued drilling ahead.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 18, 1989

DAYS FROM SPUD: 7

DEPTH: 992m PROGRESS: 173m HRS ON BTM: 9-1/4

OPERATION AT 0800 HRS: Drilling 222mm hole with Foam.

MUD PROPERTIES: Wgt 1100 Vis 51 W.L. --- F.C. --- pH ---

SURVEYS: 838m = 1/2°.

REMARKS: Drilled to 838m and torque increased. P.O.H. and found bearings missing from one cone. R.I.H. and cleaned bridges to bottom - 752m to 838m. Drilled to 992m R.O.P. 18.7m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 19, 1989

DAYS FROM SPUD: 8

DEPTH: 1165m PROGRESS: 173m HRS ON BTM: 8-1/4

OPERATION AT 0800 HRS: Running in hole to drill with Mud.

MUD PROPERTIES: Wgt 1100 Vis 50 W.L. 10.5 F.C. 1.0 pH 9.0

SURVEYS: 992m = 1/4°, 1097m = 2°.

REMARKS: Drilled and circulated to 1165m. R.O.P. 32.9m/hour.
Mud up at 1165m.
Removed diverter to Blooey Line and installed Flow Nipple. R.I.H. with Bit.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 20, 1989

DAYS FROM SPUD: 9

DEPTH: 1238m PROGRESS: 73m HRS ON BTM: 15

OPERATION AT 0800 HRS: Drilling 222mm hole with mud.

MUD PROPERTIES: Wgt 1130 Vis 60 W.L. 7.6 F.C. 2.0 pH 10.0

SURVEYS: 1173m = 3/4°.

REMARKS: R.I.H. Reamed from 650m to 1165m.
Repaired Swivel - 3/4 hour.
Drilled to 1238m. R.O.P. 4.9m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 21, 1989

DAYS FROM SPUD: 10

DEPTH: 1338m PROGRESS: 100m HRS ON BTM: 20-3/4

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1150 Vis 54 W.L. 9.0 F.C. 2.0 pH 11.0

SURVEYS: 1270m = 2-1/2°, 1317m = 1°.

REMARKS: Repaired Pump. Drilled to 1338m. R.O.P. 4.8m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 22, 1989

DAYS FROM SPUD: 11

DEPTH: 1375m PROGRESS: 37m HRS ON BTM: 15

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1160 Vis 60 W.L. 8.5 F.C. 2.0 pH 11.0

SURVEYS: ----

REMARKS: Drilled to 1354m. Tripped for Bit. No tight spots.
Drilled to 1375m R.O.P. 2.5m/hour.

Formation Tops:-

Muskwa	:	1305m	(-582m)
Slave Point	:	1330m	(-607m)

GEOLOGIST: H. Corker

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 23, 1989

DAYS FROM SPUD: 12

DEPTH: 1430m PROGRESS: 55m HRS ON BTM: 12-3/4

OPERATION AT 0800 HRS: Handling DST Tools.

MUD PROPERTIES: Wgt 1170 Vis 68 W.L. 7.0 F.C. 2.0 pH 11.0

SURVEYS: 1420m = 1°

REMARKS: Formation Tops:-

Fort Vermillion	:	1360m	(-637m)
Watt Mountain	:	1380m	(-657m)
Bistcho	:	1385m	(-662m)
Sulphur Point	:	1405m	(-682m)

Drilled to 1430m. R.O.P. 4.3m/hour. Circulated bottom hole sample. Dummy trip to 1300m. Circulated hole clean. P.O.H. to Drill Collars - slipped and cut line.

Rigged in Baker Oil Tools.
Picking up Test Tools.

GEOLOGIST: H. Corker

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 24, 1989

DAYS FROM SPUD: 13

DEPTH: 1430m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Running in hole with Bit #5.

MUD PROPERTIES: Wgt 1170 Vis 68 W.L. 7.0 F.C. 2.0 pH 11.0

SURVEYS: ----

REMARKS: Made up Test Tool. R. I. H. Worked on Flare Stack.
Ran DST #1 1408m - 1430m Sulphur Point.
Complete data on DST #1 on the attached report.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 25, 1989

DAYS FROM SPUD: 14

DEPTH: 1480m PROGRESS: 50m HRS ON BTM: 19-1/2

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1120 Vis 115 W.L. 7.6 F.C. 2.0 pH 10.5

SURVEYS: ----

REMARKS: Formation Top:-
Muskeg 1440m (-717m)

R.I.H. Circulating - plugged jet.
Drilled to 1480m. R.O.P. 2.6m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 26, 1989

DAYS FROM SPUD: 15

DEPTH: 1532m PROGRESS: 52m HRS ON BTM: 16-1/2

OPERATION AT 0800 HRS: Tripping for Bit.

MUD PROPERTIES: Wgt 1140 Vis 55 W.L. 7.6 F.C. 2.0 pH 11.0

SURVEYS: 1519m = 1-1/4°

REMARKS: Formation Top:-
Keg River 1485m (-762m)

Drilled to 1532m R.O.P. 3.2m/hour.
Trip for Bit.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 27, 1989

DAYS FROM SPUD: 16

DEPTH: 1565m TD PROGRESS: 33m HRS ON BTM: 16-1/2

OPERATION AT 0800 HRS: Circulating bottom hole sample.

MUD PROPERTIES: Wgt 1150 Vis 70 W.L. 9.0 F.C. 2.0 pH 11.0

SURVEYS: ----

REMARKS: Formation Tops:-

Pre-Cambrian	:	1547m	(-824m)
Total Depth	:	1565m	(-842m)

Wait for Junk Sub. R.I.H. Broke circulation and worked Junk Sub. Drilled to 1565m (F.T.D.). R.O.P. 2m/hour.

Reached Total Depth at 0700 hours February 27, 1989.

Schlumberger to be on location at 1600 hours today.

GEOLOGIST: H. Corken

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: February 28, 1989

DAYS FROM SPUD: 17

DEPTH: 1565m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Waiting on Tester.

MUD PROPERTIES: Wgt 1150 Vis 70 W.L. 9.0 F.C. 2.0 pH 11.0

SURVEYS: 1565m = 1-1/4°.

REMARKS: P.O.H. and rigged up Schlumberger.

Logs run:

Phasor Induction-SFL	389.1m - 1560.7m
BHC-Sonic-GR/Cal	389.1m - 1551.2m
CNL-LDT-GR-Ten	389.1m - 1562.5m
Microlog-GR-Ten	389.1m - 1556.2m
Cyberlook	1310.0m - 1562.5m
Sat Velocity Monitor	390.0m - 1563.5m

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 1, 1989

DAYS FROM SPUD: 18

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Waiting on daylight to reverse circulate fluid from drill pipe.

MUD PROPERTIES: Wgt 1150 Vis 70 W.L. 9.0 F.C. 2.0 pH 11.0

SURVEYS: ----

REMARKS: Waited on Tester. Ran clean out trip. Rig in Scott Testers. R.I.H. with DST #2 - 1486m - 1510m Keg River. See DST Data Sheet.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 2, 1989

DAYS FROM SPUD: 19

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Pulling DST #3.

MUD PROPERTIES: Wgt 1150 Vis 70 W.L. 9.0 F.C. 2.0 pH 11.0

SURVEYS: ----

REMARKS: Recovered DST #2. R.I.H. with DST #3 1510m - 1534m Keg River. See DST Data Sheet.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 3, 1989

DAYS FROM SPUD: 20

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: P.O.H. with Test Tools.

MUD PROPERTIES: Wgt 1165 Vis 65 W.L. 70 F.C. 2.0 pH 10.5

SURVEYS: ----

REMARKS: P.O.H. with DST #3 and laid down Test Tool.
DST #3 1510m - 1534m Keg River.
See DST Data Sheet for complete details.

Ran clean out trip. R.I.H. with DST #4
1335m - 1359m Slave Point. Unable to pressure up Packers for a seat. P.O.H. - Misrun.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 4, 1989

DAYS FROM SPUD: 21

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Waiting on Float Collar.

MUD PROPERTIES: Wgt 1165 Vis 65 W.L. 7.0 F.C. 2.0 pH 10.5

SURVEYS: ----

REMARKS: Ran DST #5 1325m - 1359m in Slave Point. Recovered 85m Inhibited Mud. See DST Data Sheet for complete details. Rigged out Tester. Rigged up to run Production Casing.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 5, 1989

DAYS FROM SPUD: 22

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Running production casing.

MUD PROPERTIES: Wgt 1165 Vis 65 W.L. 7.0 F.C. 2.0 pH 10.5

SURVEYS: ----

REMARKS: Waited on Float Collar. Running production casing.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON L - 47

DATE: March 6, 1989

DAYS FROM SPUD: 23

DEPTH: 1565m TD PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Rig released at 0500 hours March 6, 1989.

MUD PROPERTIES: Wgt --- Vis --- W.L. ---- F.C. --- pH ---

SURVEYS: ----

REMARKS: Production Casing:-
Ran 121 joints of 139.7mm, 20.38 kg/m, J-55, ST&C Ipsco casing. Landed at 1562.5m K.B. Cemented with 12 tonnes Oilwell cement.

Rig released : 0530 hours March 6, 1989.

Status: Standing - Pending Evaluation.

FINAL REPORT

GEOLOGIST: H. Corkin

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON L - 47

Dst. # One **Interval:** 1408m - 1430m

Test Type:
- ____ Conventional Straddle
- ____ Inflatable Straddle
- X Conventional Bottom Hole
- ____ Inflatable Bottom Hole

Zone(s): Sulphur Point

Times:
- Preflow: 10 mins.
- Initial Shut-in: 70 mins.
- Valve Open: 60 mins.
- Final Shut-in: 120 mins.

Results: Preflow: Weak Air Blow increasing to moderate in 3 minutes. N.G.T.S.

V.O.: Weak to strong Air Blow in 1 minute. Strong throughout. N.G.T.S.

Recovered: 187m Mud Cut Water, 45m Clobbered Drilling Mud.

Pressures:

Initial Hydrostatic (IHP):	16650 kPa
Final Hydrostatic (FHP):	16680 kPa
Preflow (Pref.): Initial : 1489 kPa; Final :	1659 kPa
Initial Shut-in (I.S.I.P.):	9853 kPa
Final Shut-in (F.S.I.P.):	9853 kPa
Initial Flow (IFP):	1659 kPa
Final Flow (FFP):	2513 kPa

Remarks: Conclusive Test. Test interval water saturated. Salinity 100,000 ppm.

BHT : 40°C

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON L - 47

Dst. # Two Interval: 1486m - 1510m

Test Type:
- ____ Conventional Straddle
- X Inflatable Straddle
- ____ Conventional Bottom Hole
- ____ Inflatable Bottom Hole

Zone(s): Keg River

Times:
- Preflow: 45 mins.
- Initial Shut-in: ____ mins.
- Valve Open: ____ mins.
- Final Shut-in: 365 mins.

Results: Preflow: Strong Air Blow in 3 minutes, G.T.S. in 11 minutes, O.T.S. in 40 minutes.

V.O.: Continued through from PreFlow.

Recovered: One cubic metre very gassified Oil. 3½% Drilling Mud. No indication of Water. 33.5° API Gravity at 60°F.

Pressures:
- Initial Hydrostatic (IHP): 17700 kPa
- Final Hydrostatic (FHP): 17482 kPa
- Preflow (Pref.): (a) 5318 kPa (b) 8340 kPa
- Initial Shut-in (I.S.I.P.): 10766 kPa
- Final Shut-in (F.S.I.P.): -----
- Initial Flow (IFP): -----
- Final Flow (FFP): -----

Remarks: H_2S content 15,000 ppm to 35,000 ppm. Shut-in Test Tool. Waiting for daylight and Tank to reverse circulate fluid from Drill Pipe. Oil dark brown colour.

BHT : 42°C.

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON L - 47

Dst. # Three **Interval:** 1510m - 1534m

Test Type:
- ____ Conventional Straddle
- X Inflatable Straddle
- ____ Conventional Bottom Hole
- ____ Inflatable Bottom Hole

Zone(s): Keg River

Times:
- Preflow: 20 mins.
- Initial Shut-in: 50 mins.
- Valve Open: 2nd : 25 mins. 3rd: 60 mins.) Flare Line
- Final Shut-in: 2nd: 30 mins. 3rd:120 mins.) plugged w/Ice.

Results: Preflow: Weak Air Blow increasing to Strong Air Blow. N.G.T.S.

V.O.: Strong Air Blow decreasing to Weak Air Blow. N.G.T.S.

Recovered: 108m Total Recovery - 18m Inhibitor water cut mud, 45m oil cut mud, 45m brackish oil.

Pressures:
- Initial Hydrostatic (IHP): 17990 kPa
- Final Hydrostatic (FHP): 17700 kPa
- Preflow (Pref.): 1519 kPa
- Initial Shut-in (I.S.I.P.): 5318 kPa **See Remarks Below.
- Final Shut-in (F.S.I.P.): 6942 kPa
- Initial Flow (IFP):
- Final Flow (FFP):

Remarks: ** 2nd Flow Start 1063 kPa ; 2nd Flow End 1063 kPa

2nd Shut In 3570 kPa

Final Flow Start 1291 kPa ; Final Flow End 1291 kPa

Shut-in after 5 minutes on V.O. Shut-in to thaw Flare Line.

BHT : 42°C

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON L - 47

Dst. # Four Interval: 1335m - 1359m

Test Type: ____ Conventional Straddle
X Inflatable Straddle
____ Conventional Bottom Hole
____ Inflatable Bottom Hole

Zone(s): Slave Point

Times: Preflow: ____ mins.
Initial Shut-in: ____ mins.
Valve Open: ____ mins.
Final Shut-in: ____ mins.

Results: Preflow:

V.O.:

Recovered: 72m Inhibitor cut mud.

Pressures: Initial Hydrostatic (IHP): 15809 kPa

Final Hydrostatic (FHP): 15809 kPa

Preflow (Pref.): 911 kPa

Initial Shut-in (I.S.I.P.): -----

Final Shut-in (F.S.I.P.): -----

Initial Flow (IFP): -----

Final Flow (FFP): -----

Remarks: Misrun. Could not pressure up Packer. Tried to reset Tool and blew bottom packer in the attempt.

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON L - 47

Dst. # Five Interval: 1335m - 1359m

Test Type:
- ____ Conventional Straddle
- X Inflatable Straddle
- ____ Conventional Bottom Hole
- ____ Inflatable Bottom Hole

Zone(s): Slave Point

Times:
- Preflow: 10 mins.
- Initial Shut-in: 55 mins.
- Valve Open: 60 mins.
- Final Shut-in: 120 mins.

Results: Preflow: Weak air blow throughout.

V.O.: Weak air blow throughout.

Recovered: 85m Inhibited cut mud.

Pressures:
- Initial Hydrostatic (IHP): 15955 kPa
- Final Hydrostatic (FHP): 15809 kPa
- Preflow (Pref.): 911 kPa
- Initial Shut-in (I.S.I.P.): 10914 kPa
- Final Shut-in (F.S.I.P.): 10399 kPa
- Initial Flow (IFP): 1215 kPa
- Final Flow (FFP): 1215 kPa

Remarks: Successful Test. No permeability.

PARAMOUNT ET AL CAMERON L - 47

DEVIATION SURVEYS

Depth Metres	Deviation Degrees	Change Degrees	Interval Metres	Hole Size Millimetres
37	1/4	+ 1/4	37	311
65	1/8	- 1/8	28	311
119	1/8	----	54	311
137	1/8	----	18	311
164	1/4	+ 1/4	27	311
202	3	+ 2-3/4	38	311
230	2-1/2	- 1/2	28	311
258	1-1/4	- 1-1/4	28	311
334	3/4	- 1/2	76	311
372	3/4	----	38	311
560	3/4	----	188	222
723	3/4	----	163	222
838	1/2	- 1/4	115	222
992	1/4	- 1/4	154	222
1097	2	+ 1-3/4	105	222
1173	3/4	- 1-1/4	76	222
1270	2-1/2	+ 1-3/4	157	222
1317	1	- 1-1/2	97	222
1420	1	----	103	222
1519	1-1/4	+ 1/4	99	222
1565	1-1/4	----	46	222

PARAMOUNT ET AL CAMERON L - 47

BIT SUMMARY

No.	Type	Size	In	Out	Metres	Hours	T-B-G
1A	HP11	311	0	137	137	15-3/4	4-3-I
2A	HP11	311	137	372	235	22-3/4	6-3-I
3A	S64	311	372	390	18	23-1/2	1-1-I
1	HP43A	222	390	838	448	36	6-7-1/4
2	HP43A	222	838	1165	327	16	4-3-I
3	HP52A	222	1165	1354	189	96	6-8-1/8
4	H52A	222	1354	1430	76	116	4-3-I
5	F-2	222	1430	1532	102	151	8-3-I
6	HP52A	222	1532	1565	33	17	2-2-I

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

9211-P33-4-2.

WATER ANALYSIS

CONTAINER IDENTITY	
LABORATORY NUMBER	G89-2275-1
LICENCE NUMBER	EA 1390
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-6-31.55-117-39-18.6
WELL NAME	PARAMOUNT et al CAMERON L-47
ELEVATIONS (metres) K.B.	723.00
ELEVATIONS (metres) GRD.	719.32
FIELD OR AREA	CAMERON
POOL OR ZONE	SULPHUR POINT
NAME OF SAMPLER	
COMPANY	BAKER OIL TOOL
TEST TYPE	DST
NO.	1
TEST RECOVERY	232 METRES
MULTIPLE RECOVERY Y	
MULTIPLE RECOVERY N	X
SAMPLING POINT	DOWNHOLE SAMPLER #228
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°C	
TEST INTERVAL (metres)	1408 - 1430
PERFORATIONS (metres)	
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m³/d / OIL m³/d / GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-02-24	89-03-01	89-03-10	D. SHMYR	

ION	Mg/l	Mass Fraction	Meq/l
Na	26 106	0.2960	1 135.61
K	978	0.0111	25.04
Ca	7 207	0.0817	359.63
Mg	910	0.0103	74.80
Ba			
Sr			
Fe	PRESENT		

ION	Mg/l	Mass Fraction	Meq/l
Cl	50 500	0.5726	1 424.10
Br			
I			
HCO_3	744	0.0084	12.20
SO_4	1 745	0.0198	36.30
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	TRACE		

TOTAL SOLIDS Mg/l

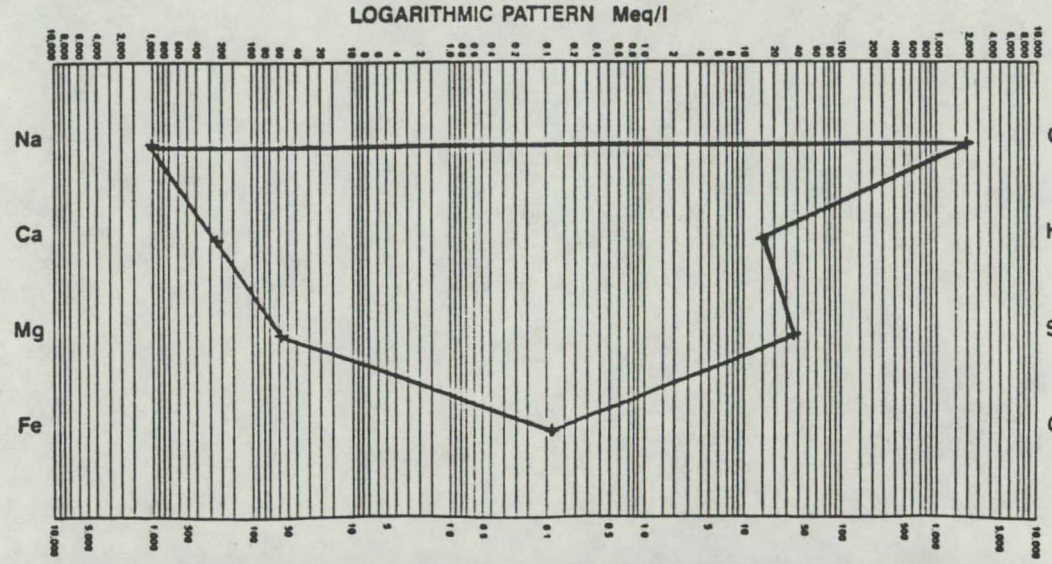
EVAPORATED @ 110°C	EVAPORATED @ 180°C
93 220	
AT IGNITION	CALCULATED
76 840	88 190

ORGANICS: NIL

RELATIVE DENSITY	REFRACTIVE INDEX
1.078 @ 25°C	1.3521 @ 25°C

OBSERVED pH		RESISTIVITY (Ohm m)
7.7	18°C	0.083 @ 25°C

LOGARITHMIC PATTERN Meq/l



REMARKS

BAKER OIL TOOLS DOWNHOLE SAMPLER #228 WAS RECIEVED AT ATMOSPHERIC PRESSURE. CONTAINED IN A CHAMBER WAS 2.25 LITRES OF H2S CUT BLACKISH WATER.

ANALYSIS INDICATIVE OF A SALT WATER.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY	
LABORATORY NUMBER	G89-2275
LICENCE NUMBER	EA 1390
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-6-31.55-117-39-18.6
WELL NAME	PARAMOUNT et al CAMERON L-47
ELEVATIONS (metres) K.B.	723.00
ELEVATIONS (metres) GRD.	719.32
FIELD OR AREA	CAMERON
POOL OR ZONE	SULPHUR POINT
NAME OF SAMPLER	
COMPANY	BAKER OIL TOOL
TEST TYPE	DST
NO.	1
TEST RECOVERY	232 METRES
MULTIPLE RECOVERY Y	
MULTIPLE RECOVERY N	X
SAMPLING POINT	SEE BELOW
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°C	
TEST INTERVAL (metres)	1408 - 1430
PERFORATIONS (metres)	
TYPE OF PRODUCTION: PUMPING	
TYPE OF PRODUCTION: FLOWING	
TYPE OF PRODUCTION: GAS LIFT	
TYPE OF PRODUCTION: SWAB	
PRODUCTION RATES: WATER m^3/d	
PRODUCTION RATES: OIL m^3/d	
PRODUCTION RATES: GAS $10^3m^3/d$	

GAUGE PRESSURE kPa	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED

TEMPERATURE °C	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-02-24	89-03-01	89-03-10	K. SINCLAIR	

SAMPLE #1 - SAMPLED FROM TOP.
SAMPLE CONSISTED OF WATERY MUD WITH A BROWN COLORED FILTRATE.

RESISTIVITY OF THE FILTRATE: 0.911 OHM-METRES @ 25 C.

SAMPLE #2 - SAMPLED FROM MIDDLE.
SAMPLE CONSISTED OF H2S CUT WATER WITH A YELLOW COLORED FILTRATE.

RESISTIVITY OF THE FILTRATE: 0.085 OHM-METRES @ 25 C.

SAMPLE #3 - SAMPLED FROM BOTTOM.
SAMPLE CONSISTED OF MUD WITH A BROWN COLORED FILTRATE.

RESISTIVITY OF THE FILTRATE: 0.723 OHM-METRES @25 C.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

OIL ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4295-1

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON I-47

ELEVATIONS (metres) K.B.: 723 GRD.: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: KEG RIVER

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO.: 2

TEST RECOVERY: REVERSED 1 M3 GAS CUT OIL, H2S

MULTIPLE RECOVERY: Y [ ] N [X]

SAMPLING POINT: BUBBLE HOSE #4

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25° C

TEST INTERVAL (metres): 1486 - 1510

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-01

DATE RECEIVED (Y-M-D): 89-03-03

DATE REPORTED (Y-M-D): 89-03-06

ANALYST: S. SARGIOUS

OTHER INFORMATION:

SAMPLE PROPERTIES

COLOR OF CLEAN OIL: BROWN

B.S. & W. (VOLUME FRACTION): WATER 0.032 | SEDIMENT 0.020 | TOTAL 0.052

DENSITY at 15°C

RELATIVE		ABSOLUTE kg/m³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.855		854

A.P.I. GRAVITY: 34.0

TOTAL SULFUR: (MASS FRACTION) 0.0091 | g/kg 9.1

POUR POINT °C: U.S.B.M. -3 | A.S.T.M.

RVP kPa:

CARBON RESIDUE (MASS FRACTION): CONRADSON 0.0214 | RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm²/s
10	19.4	22.6
20	9.60	11.3
40	4.95	5.90

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
I.B.P.	72
0.05	118
0.10	145
0.15	176
0.20	203
0.25	228
0.30	251
0.35	273
0.40	293
0.45	314
0.50	333
0.55	350
0.60	363
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	366

METHOD: MODIFIED ASTM D-86

BAROM. PRESS. kPa (atm): 89.9 | ROOM TEMP. °C: 22

DISTILLATION SUMMARY (VOLUME FRACTION)

200° C NAPHTHA	275° C KEROSENE	350° C LIGHT GAS OIL
0.195	0.165	0.190

RECOVERED	RESIDUE	DISTILLATION LOSS

BASE TYPE: MIXED

CHARACTERIZATION FACTOR: 11.9

BS & W DETERMINED ON SAMPLE AS RECEIVED. REMAINDER OF ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4295-2

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres): K.B. 723 GRD 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: KEG RIVER

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO. 2

TEST RECOVERY: REVERSED 1 M3 GAS CUT OIL, H2S

MULTIPLE RECOVERY: Y N X

SAMPLING POINT:

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1486 - 1510

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10^3m³/d

PERFORATIONS (metres):

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-01

DATE RECEIVED (Y-M-D): 89-03-03

DATE REPORTED (Y-M-D): 89-03-06

ANALYST: S. SARGIOUS

OTHER INFORMATION:

	BS & W (VOLUME FRACTION)			DENSITY @ 15C		
	WATER	SEDIMENT	TOTAL	REL.	ABS.	API GRAVITY
BUBBLE HOSE #1	0.011	0.015	0.026	0.859	858	33.2
BUBBLE HOSE #2	0.028	0.036	0.064	0.858	857	33.4
BUBBLE HOSE #3	0.016	0.016	0.032	0.857	856	33.6
BUBBLE HOSE #5	0.066	0.038	0.104	0.856	855	33.8
BUBBLE HOSE #6	0.180	0.260	0.440	0.856	855	33.8
TOP OF TOOL	0.080	0.460	0.540	0.856	855	33.8

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY	PVT #7
LABORATORY NUMBER	C89-4362
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	2
TEST RECOVERY	
MULTIPLE RECOVERY Y / N	
SAMPLING POINT	DOWN HOLE SAMPLER
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY	(@ 25°C)
TEST INTERVAL (metres)	1486 - 1510
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m^3/d / OIL m^3/d / GAS $10^3m^3/d$
PERFORATIONS (metres)	

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						6205
TEMPERATURE °C						23

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-03-05	89-03-08	89-03-22	K. BRUNNER	

BUBBLE POINT DETERMINATION @ 42°C: 10 322 KPA

rec ~2.5 l oil

density .856 33.75 °API

BS+W

sed .005 wtr .095 Total .10

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4295-3

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres) K.B.: 723 GRD: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: KEG RIVER

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO: 2

TEST RECOVERY: REVERSED 1 M3 GAS CUT OIL, H2S

MULTIPLE RECOVERY: Y X N

SAMPLING POINT: BUBBLE HOSE #6

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1486 - 1510

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-01

DATE RECEIVED (Y-M-D): 89-03-03

DATE REPORTED (Y-M-D): 89-03-06

ANALYST: S. SARGIOUS

OTHER INFORMATION:

ION	Mg/l	Mass Fraction	Meq/l
Na	11 400	0.3029	495.90
K	160	0.0043	4.10
Ca	1 273	0.0338	63.52
Mg	381	0.0101	31.32
Ba			
Sr			
Fe	MUCH		

ION	Mg/l	Mass Fraction	Meq/l
Cl	13 400	0.3560	377.88
Br			
I			
HCO_3	1 220	0.0324	20.01
SO_4	9 802	0.2604	203.88
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	PRESENT		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C	EVAPORATED @ 180°C
43 730	
AT IGNITION	**CALCULATED**
37 540	37 636

ORGANICS: MUCH

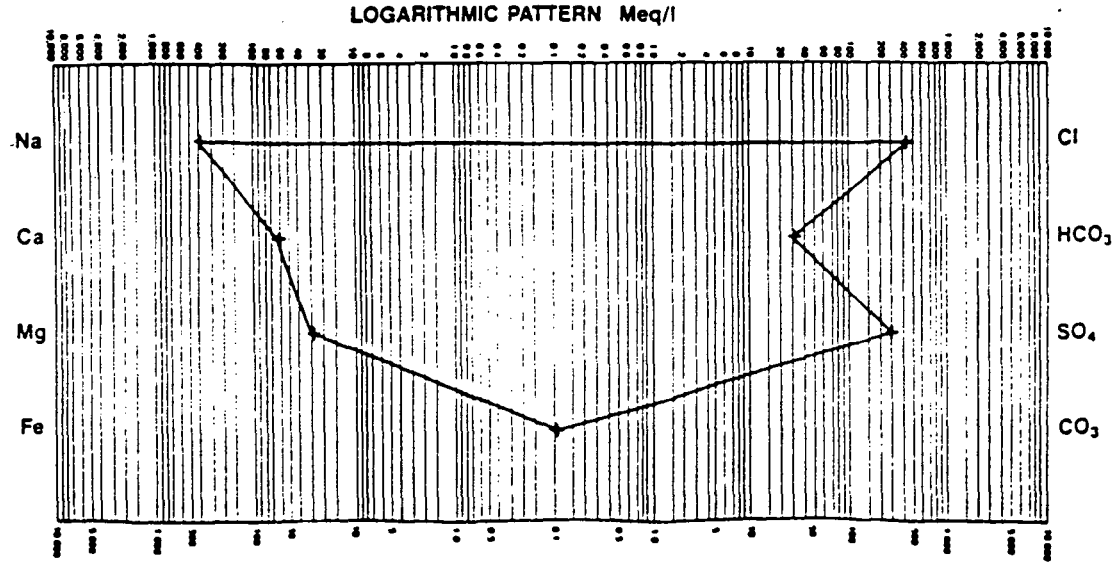
RELATIVE DENSITY	REFRACTIVE INDEX
1.031 @ 25°C	1.3398 @ 25°C

OBSERVED pH		RESISTIVITY (Ohm m)
7.9	23 °C	0.220 @ 25°C

REMARKS

BROWN COLORED FIL-
TRATE RECOVERED FROM
THE WATER PORTION OF
THE SAMPLE.

LOGARITHMIC PATTERN Meq/l



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY			LABORATORY NUMBER: C89-4295-4
LICENCE NUMBER	OPERATOR NAME: PARAMOUNT RESOURCES LTD.		
LOCATION: 60-06-31.55 -117 39	WELL NAME: PARAMOUNT ET AL CAMERON L-47		ELEVATIONS (metres) K.B.: 723 GRD.: 719.3
FIELD OR AREA: CAMERON	POOL OR ZONE: KEG RIVER	NAME OF SAMPLER	COMPANY: SCOTT TESTERS
TEST TYPE: DST	NO.: 2	TEST RECOVERY: REVERSED 1 M3 GAS CUT OIL, H2S	
MULTIPLE RECOVERY: Y [ ] N [X]	SAMPLING POINT	AMT. & TYPE OF CUSHION	MUD RESISTIVITY @ 25°C

TEST INTERVAL (metres): 1486 - 1510

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS $10^3m^3/d$

		SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE	kPa						
TEMPERATURE	°C						

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-03-01	89-03-03	89-03-06	S. SARGIOUS	

TOP OF TOOL

RESISTIVITY: 0.226 OHM M @ 25C

BROWN COLORED FILTRATE RECOVERED FROM THE WATER PORTION OF THE SAMPLE.

9211-P334-2

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

GAS ANALYSIS

CONTAINER IDENTITY	DHS #119
LABORATORY NUMBER	C89-4296-1
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	KEG RIVER
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	3
TEST RECOVERY	108 M
MULTIPLE RECOVERY Y	
MULTIPLE RECOVERY N	X
SAMPLING POINT	DOWN HOLE SAMPLER #119
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°	
TEST INTERVAL (metres)	1510 - 1534
PERFORATIONS (metres)	
TYPE OF PRODUCTION: PUMPING	
TYPE OF PRODUCTION: FLOWING	
TYPE OF PRODUCTION: GAS LIFT	
TYPE OF PRODUCTION: SWAB	
PRODUCTION RATES: WATER m^3/d	
PRODUCTION RATES: OIL m^3/d	
PRODUCTION RATES: GAS $10^3m^3/d$	

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						700
TEMPERATURE °C						20

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-03-03	89-03-03	89-03-09	B. ANDERSON	

COMP	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT ml/m^3
H_2	0.0094	0.0097	
He	0.0004	0.0004	
N_2	0.0172	0.0178	
CO_2	0.0285	0.0000	
H_2S	0.0049	0.0000	
C_1	0.8667	0.8967	
C_2	0.0403	0.0417	
C_3	0.0180	0.0186	66.2
IC_4	0.0035	0.0036	15.3
NC_4	0.0053	0.0055	22.3
IC_5	0.0017	0.0018	8.3
NC_5	0.0013	0.0013	6.3
C_6	0.0008	0.0008	4.4
C_7	0.0019	0.0020	11.7
C_8	0.0001	0.0001	0.7
C_9	0.0000	0.0000	0.0
C_{10+}	0.0000	0.0000	0.0
TOTAL	1.0000	1.0000	135.2

GROSS HEATING VALUE MJ/m³ 15°C AND 101.325 kPa

MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED	DETERMINED DEW POINT °C	VAPOUR PRESSURE PENTANES PLUS
	40.68		80. kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED MEASURED	MOISTURE FREE AS SAMPLED CALCULATED	MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED
	0.650		0.622

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED pPc(abs)	AS SAMPLED pTc	ACID GAS FREE pPc(abs)	ACID GAS FREE pTc
4631. kPa	203.7 K	4528. kPa	198.9 K

H_2S g/m^3: 7.12

RELATIVE MOLECULAR MASS — TOTAL GAS: 18.82 — C_{7+}: 100.91

C5+ ML/MOL 0.742

GROSS HEATING VALUE AS PER AGA REPORT #5

39.44 MAJ/M3 @ 15C AND 101.325 KPA

THE DOWN HOLE SAMPLER WAS RECEIVED WITH AN OPENING PRESSURE OF 700 KPAG @ 20C. IT CONTAINED 641970 ML GAS, 1944 ML OIL AND 756 ML MUDDY WATER @ 20C & 88.5 KPA.

GOR: 283.51 M3/M3 @ 15C & 101.325 KPA

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

OIL ANALYSIS

CONTAINER IDENTITY	
LABORATORY NUMBER	C89-4296-2
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	KEG RIVER
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	3
TEST RECOVERY	108 M
MULTIPLE RECOVERY Y / N	
SAMPLING POINT	DOWN HOLE SAMPLER #119
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°C	
TEST INTERVAL (metres)	1510 - 1534
PERFORATIONS (metres)	
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m³/d / OIL m³/d / GAS 10³m³/d
GAUGE PRESSURE kPa	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
TEMPERATURE °C	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
DATE SAMPLED (Y-M-D)	89-03-03
DATE RECEIVED (Y-M-D)	89-03-03
DATE REPORTED (Y-M-D)	89-03-09
ANALYST	S. SARGIOUS
OTHER INFORMATION	

SAMPLE PROPERTIES

COLOR OF CLEAN OIL	B.S. & W. (VOLUME FRACTION) WATER	SEDIMENT	TOTAL
BROWN	0.172	0.108	0.280

DENSITY at 15°C

RELATIVE AS RECEIVED	RELATIVE AFTER CLEANING	ABSOLUTE kg/m³ AS RECEIVED	ABSOLUTE kg/m³ AFTER CLEANING
	0.855		854

A.P.I. GRAVITY: 34.0

TOTAL SULFUR (MASS FRACTION)	g/kg.	POUR POINT °C U.S.B.M.	A.S.T.M.
0.0122	12.2	-13	

RVP kPa	CARBON RESIDUE (MASS FRACTION) CONRADSON	RAMSBOTTOM
	0.0256	

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm²/s
10	13.6	15.8
20	8.54	10.0
40	4.46	5.32

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
I.B.P.	58
0.05	99
0.10	123
0.15	152
0.20	177
0.25	204
0.30	231
0.35	256
0.40	284
0.45	309
0.50	332
0.55	348
0.60	358
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	360

METHOD: MODIFIED ASTM D 86

BAROM. PRESS. kPa (abs)	ROOM TEMP. °C
88.9	25

DISTILLATION SUMMARY (VOLUME FRACTION)

200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL
0.245	0.145	0.160

RECOVERED	RESIDUE	DISTILLATION LOSS

BASE TYPE: MIXED

CHARACTERIZATION FACTOR: 11.9

BS & W DETERMINED ON SAMPLE AS RECEIVED. REMAINDER OF ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

OIL ANALYSIS

CONTAINER IDENTITY	
LABORATORY NUMBER	C89-4296-3
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	KEG RIVER
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	3
TEST RECOVERY	108 M
MULTIPLE RECOVERY (Y / N)	N: X
SAMPLING POINT	COLLARS #3
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°C	
TEST INTERVAL (metres)	1510 - 1534
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m³/d / OIL m³/d / GAS 10³m³/d
PERFORATIONS (metres)	

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-03-03	89-03-03	89-03-06	S. SARGIOUS	

SAMPLE PROPERTIES

COLOR OF CLEAN OIL	B.S. & W. (VOLUME FRACTION) WATER	SEDIMENT	TOTAL
BROWN	0.080	0.900	0.980

DENSITY at 15°C

RELATIVE AS RECEIVED	RELATIVE AFTER CLEANING	ABSOLUTE kg/m³ AS RECEIVED	ABSOLUTE kg/m³ AFTER CLEANING
	0.866		865

A.P.I. GRAVITY: 31.9

TOTAL SULFUR (MASS FRACTION)	TOTAL SULFUR g/kg.	POUR POINT °C U.S.B.M.	POUR POINT °C A.S.T.M.
0.0127	12.7		

RVP kPa	CARBON RESIDUE (MASS FRACTION) CONRADSON	CARBON RESIDUE (MASS FRACTION) RAMSBOTTOM
	0.0278	

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm²/s
10	17.6	20.2
20	10.1	11.7
40	5.03	5.92

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
I.B.P.	
0.05	
0.10	
0.15	
0.20	
0.25	
0.30	
0.35	
0.40	
0.45	
0.50	
0.55	
0.60	
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	

METHOD:

BAROM. PRESS. kPa (mbs): ROOM TEMP. °C:

DISTILLATION SUMMARY (VOLUME FRACTION)

200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL

RECOVERED	RESIDUE	DISTILLATION LOSS

BASE TYPE:

CHARACTERIZATION FACTOR: 11.8

BS & W DETERMINED ON SAMPLE AS RECEIVED. REMAINDER OF ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

INSUFFICIENT RECOVERABLE SAMPLE FOR FURTHER ANALYSIS.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4296-4

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres) K.B.: 723 GRD.: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: KEG RIVER

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO.: 3

TEST RECOVERY: 108 M

MULTIPLE RECOVERY: Y N X

SAMPLING POINT: DOWN HOLE SAMPLER #119

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1510 - 1534

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m^3/d | OIL m^3/d | GAS $10^3m^3/d$

		SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE	kPa						
TEMPERATURE	°C						

DATE SAMPLED (Y-M-D): 89-03-03

DATE RECEIVED (Y-M-D): 89-03-03

DATE REPORTED (Y-M-D): 89-03-09

ANALYST: S. SARGIOUS

OTHER INFORMATION:

ION	Mg/l	Mass Fraction	Meq/l
Na	13 240	0.3111	575.94
K	205	0.0048	5.25
Ca	1 642	0.0386	81.94
Mg	583	0.0137	47.92
Ba			
Sr			
Fe	MUCH		

ION	Mg/l	Mass Fraction	Meq/l
Cl	17 400	0.4089	490.68
Br			
I			
HCO_3	1 403	0.0330	23.01
SO_4	8 082	0.1899	168.11
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	PRESENT		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C: 46 850

EVAPORATED @ 180°C:

AT IGNITION: 41 370

CALCULATED: 42 555

ORGANICS: MUCH

RELATIVE DENSITY: 1.036 @ 25°C

REFRACTIVE INDEX: 1.3402 @ 25°C

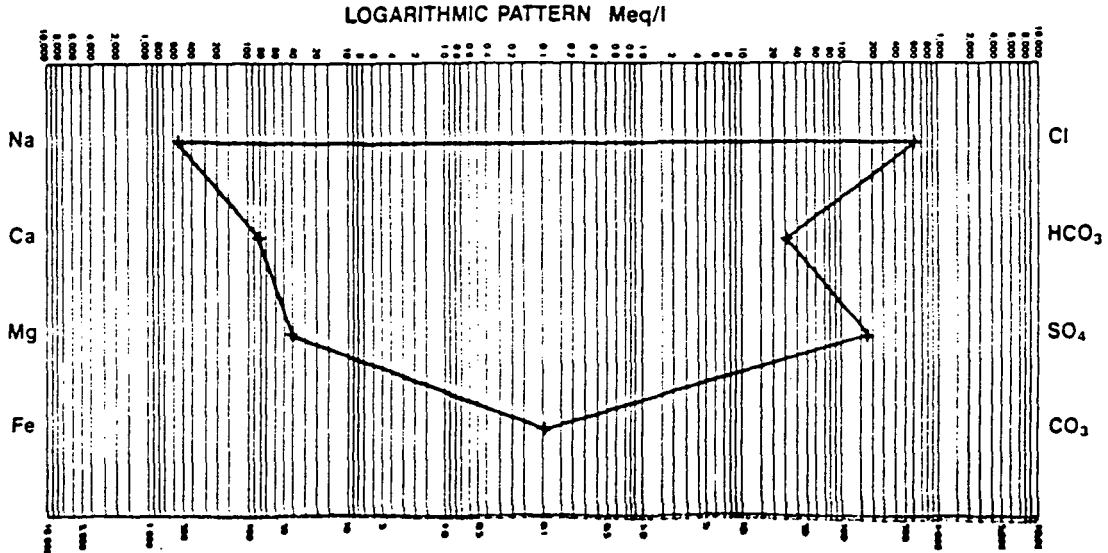
OBSERVED pH: 7.8 @ 23 °C

RESISTIVITY (Ohm m): 0.187 @ 25°C

REMARKS

BROWN COLORED FILTRATE RECOVERED FROM THE WATER PORTION OF THE SAMPLE.

LOGARITHMIC PATTERN Meq/l



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4296-5

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres): K.B. 723 GRD. 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: KEG RIVER

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO. 3

TEST RECOVERY: 108 M

MULTIPLE RECOVERY: Y N

SAMPLING POINT: COLLARS #3

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1510 - 1534

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-03

DATE RECEIVED (Y-M-D): 89-03-03

DATE REPORTED (Y-M-D): 89-03-06

ANALYST: S. SARGIOUS

OTHER INFORMATION:

ION	Mg/l	Mass Fraction	Meq/l	ION	Mg/l	Mass Fraction	Meq/l
Na	7 725	0.2743	336.04	Cl	4 100	0.1456	115.62
K	16	0.0006	0.41	Br			
Ca	809	0.0287	40.37	I			
Mg	136	0.0048	11.18	HCO_3	2 105	0.0747	34.52
Ba				SO_4	13 270	0.4712	276.02
Sr				CO_3	0	0.0000	0.00
Fe	MUCH			OH	0	0.0000	0.00
				H_2S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C: 32 150

EVAPORATED @ 180°C:

AT IGNITION: 27 090

CALCULATED: [illegible] 161

ORGANICS: MUCH

RELATIVE DENSITY: 1.026 @ 25°C

REFRACTIVE INDEX: 1.3378 @ 25°C

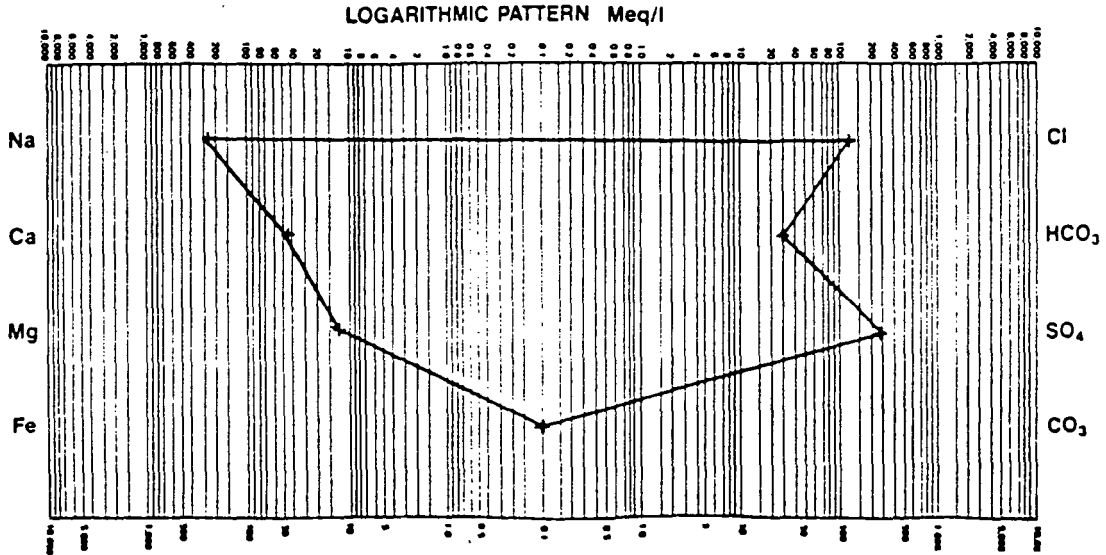
OBSERVED pH: 8.0 @ 23 °C

RESISTIVITY (Ohm m): 0.347 @ 25°C

REMARKS

BROWN COLORED FILTRATE RECOVERED FROM THE WATER PORTION OF THE SAMPLE.

LOGARITHMIC PATTERN Meq/l



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY	
LABORATORY NUMBER	C89-4296-6
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	KEG RIVER
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	3
TEST RECOVERY	108 M
MULTIPLE RECOVERY (Y / N)	
SAMPLING POINT	
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY (@ 25°C)	
TEST INTERVAL (metres)	1510 - 1534
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m^3/d / OIL m^3/d / GAS $10^3m^3/d$
PERFORATIONS (metres)	
GAUGE PRESSURE kPa	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
TEMPERATURE °C	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
DATE SAMPLED (Y-M-D)	89-03-03
DATE RECEIVED (Y-M-D)	89-03-03
DATE REPORTED (Y-M-D)	89-03-06
ANALYST	S. SARGIOUS
OTHER INFORMATION	

COLLARS #1

RESISTIVITY: 0.529 OHM M @ 25C

BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER CONTAINING A TRACE OF HYDROCARBONS.

COLLARS #2

RESISTIVITY: 0.480 OHM M @ 25C

BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER CONTAINING A TRACE OF HYDROCARBONS.

9211-P33 4-2

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4344-1

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres): K.B. 723 GRD. 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: SLAVE POINT

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO. 4

TEST RECOVERY: 72 M MUD CUT INHIBITOR

MULTIPLE RECOVERY: Y [X] N [ ]

SAMPLING POINT: COLLARS - BOTTOM

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1335 - 1359

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10^3m³/d

		SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE	kPa						
TEMPERATURE	°C						

DATE SAMPLED (Y-M-D): 89-03-03

DATE RECEIVED (Y-M-D): 89-03-07

DATE REPORTED (Y-M-D): 89-03-09

ANALYST: S. SARGIOUS

OTHER INFORMATION:

ION	Mg/l	Mass Fraction	Meq/l
Na	7 125	0.3100	309.94
K	40	0.0017	1.02
Ca	240	0.0104	11.98
Mg	12	0.0005	0.99
Ba			
Sr			
Fe	MUCH		

ION	Mg/l	Mass Fraction	Meq/l
Cl	900	0.0392	25.38
Br			
I			
HCO_3	458	0.0199	7.51
SO_4	14 210	0.6182	295.57
CO_3	0	0.0000	0.00
OH	0	0.0000	0.00
H_2S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C: 26 270

EVAPORATED @ 180°C:

AT IGNITION: 22 110

CALCULATED: 22 985

ORGANICS: MUCH

RELATIVE DENSITY: 1.014 @ 25°C

REFRACTIVE INDEX: 1.3362 @ 25°C

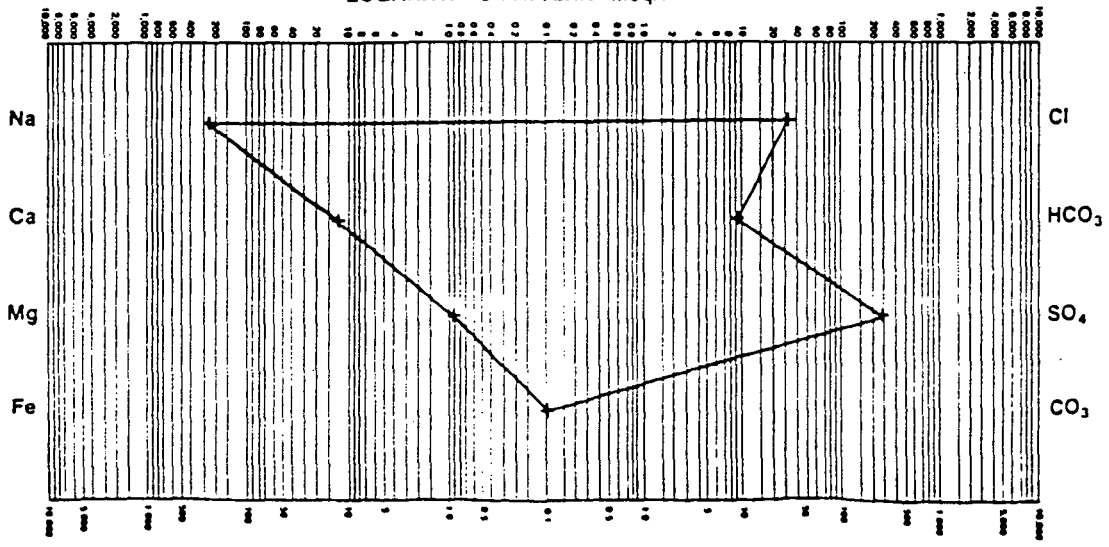
OBSERVED pH: 8.2 @ 23 °C

RESISTIVITY (Ohm m): 0.433 @ 25°C

REMARKS

BROWN COLORED FIL-
TRATE RECOVERED FROM
MUDDY WATER.

LOGARITHMIC PATTERN Meq/l



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY	
LABORATORY NUMBER	C89-4344-2
LICENCE NUMBER	
OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39
WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723
ELEVATIONS (metres) GRD.	719.3
FIELD OR AREA	CAMERON
POOL OR ZONE	SLAVE POINT
NAME OF SAMPLER	
COMPANY	SCOTT TESTERS
TEST TYPE	DST
NO.	4
TEST RECOVERY	72 M MUD CUT INHIBITOR
MULTIPLE RECOVERY (Y / N)	N: X
SAMPLING POINT	
AMT. & TYPE OF CUSHION	
MUD RESISTIVITY @ 25°C	
TEST INTERVAL (metres)	1335 - 1359
TYPE OF PRODUCTION	PUMPING / FLOWING / GAS LIFT / SWAB
PRODUCTION RATES	WATER m³/d / OIL m³/d / GAS 10³m³/d
PERFORATIONS (metres)	
GAUGE PRESSURE kPa	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
TEMPERATURE °C	SEPARATOR / TREATER / RESERVOIR / SOURCE / SAMPLED / RECEIVED
DATE SAMPLED (Y-M-D)	89-03-03
DATE RECEIVED (Y-M-D)	89-03-07
DATE REPORTED (Y-M-D)	89-03-09
ANALYST	S. SARGIOUS
OTHER INFORMATION	

COLLARS - TOP

RESISTIVITY: 0.625 OHM M @ 25C

BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER.

COLLARS - MIDDLE

RESISTIVITY: 0.609 OHM M @ 25C

BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

GAS ANALYSIS

CONTAINER IDENTITY: DHS #302

LABORATORY NUMBER: C89-4345-1

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres) K.B.: 723 GRD.: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: SLAVE POINT

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO.: 5

TEST RECOVERY: 85 M MUD CUT INHIBITOR

MULTIPLE RECOVERY: Y N X

SAMPLING POINT: DOWN HOLE SAMPLER #302

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY @ 25°C:

TEST INTERVAL (metres): 1335 - 1359

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						450
TEMPERATURE °C						20

DATE SAMPLED (Y-M-D): 89-03-04

DATE RECEIVED (Y-M-D): 89-03-07

DATE REPORTED (Y-M-D): 89-03-09

ANALYST: B. ANDERSON

OTHER INFORMATION:

COMP	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT ml/m³
H_2	0.0124	0.0124	
He	0.0009	0.0009	
N_2	0.0220	0.0220	
CO_2	0.0005	0.0000	
H_2S	0.0000	0.0000	
C_1	0.9276	0.9281	
C_2	0.0205	0.0205	
C_3	0.0100	0.0100	36.8
IC_4	0.0015	0.0015	6.5
NC_4	0.0026	0.0026	10.9
IC_5	0.0007	0.0007	3.4
NC_5	0.0006	0.0006	2.9
C_6	0.0004	0.0004	2.2
C_7	0.0001	0.0001	0.6
C_8	0.0002	0.0002	1.4
C_9	TRACE	TRACE	0.0
C_{10+}	0.0000	0.0000	0.0
TOTAL	1.0000	1.0000	64.7

GROSS HEATING VALUE MJ/m³ 15°C AND 101.325 kPa

MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED	DETERMINED DEW POINT	VAPOUR PRESSURE PENTANES PLUS
	38.35	°C	96. kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED MEASURED	MOISTURE FREE AS SAMPLED CALCULATED	MOISTURE AND ACID GAS FREE MEASURED	MOISTURE AND ACID GAS FREE CALCULATED
	0.587		0.586

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED pPc(abs)	AS SAMPLED pTc	ACID GAS FREE pPc(abs)	ACID GAS FREE pTc
4521. kPa	192.7 K	4520. kPa	192.6 K

H_2S g/m³: 0.00

RELATIVE MOLECULAR MASS: TOTAL GAS 17.00 C_{7+} 109.56

C5+ ML/MOL 0.248

GROSS HEATING VALUE AS PER AGA REPORT #5

38.33 MAJ/M3 @ 15C AND 101.325 KPA

THE DOWN HOLE SAMPLER WAS RECEIVED WITH AN OPENING PRESSURE OF 450 KPAG @ 20C. IT CONTAINED 145010 ML GAS, 400 ML OIL AND 3600 ML MUDDY WATER @ 20C & 88.5 KPA.

GOR: 311.24 M3/M3 @ 15C & 101.325 KPA

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

OIL ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4345-2

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres) K.B.: 723 GRD.: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: SLAVE POINT

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST NO.: 5

TEST RECOVERY: 85 M MUD CUT INHIBITOR

MULTIPLE RECOVERY: Y [ ] N [X]

SAMPLING POINT: DOWN HOLE SAMPLER #302

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1335 - 1359

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-04

DATE RECEIVED (Y-M-D): 89-03-07

DATE REPORTED (Y-M-D): 89-03-09

ANALYST: S. SARGIOUS

OTHER INFORMATION:

SAMPLE PROPERTIES

COLOR OF CLEAN OIL: BROWN

B.S. & W. (VOLUME FRACTION): WATER 0.400 | SEDIMENT 0.500 | TOTAL 0.900

DENSITY at 15°C

RELATIVE		ABSOLUTE kg/m³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.852		851

A.P.I. GRAVITY: 34.6

TOTAL SULFUR: (MASS FRACTION) 0.0088 | g/kg 8.8

POUR POINT °C: U.S.B.M. -13 | A.S.T.M.

RVP kPa:

CARBON RESIDUE (MASS FRACTION): CONRADSON 0.0111 | RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm²/s
10	12.2	14.2
20	7.68	9.04
40	3.92	4.69

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
I.B.P.	
0.05	
0.10	
0.15	
0.20	
0.25	
0.30	
0.35	
0.40	
0.45	
0.50	
0.55	
0.60	
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	

METHOD:

BAROM. PRESS. kPa (abs): ROOM TEMP. °C:

DISTILLATION SUMMARY (VOLUME FRACTION)

200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL

RECOVERED	RESIDUE	DISTILLATION LOSS

BASE TYPE:

CHARACTERIZATION FACTOR: 11.8

BS & W DETERMINED ON SAMPLE AS RECEIVED. REMAINDER OF ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING. INSUFFICIENT RECOVERABLE OIL FOR FURTHER ANALYSIS.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

CONTAINER IDENTITY:

LABORATORY NUMBER: C89-4345-3

LICENCE NUMBER:

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

LOCATION: 60-06-31.55 -117 39

WELL NAME: PARAMOUNT ET AL CAMERON L-47

ELEVATIONS (metres) K.B.: 723 GRD.: 719.3

FIELD OR AREA: CAMERON

POOL OR ZONE: SLAVE POINT

NAME OF SAMPLER:

COMPANY: SCOTT TESTERS

TEST TYPE: DST

NO.: 5

TEST RECOVERY: 85 M MUD CUT INHIBITOR

MULTIPLE RECOVERY: Y [ ] N [X]

SAMPLING POINT: DOWN HOLE SAMPLER #302

AMT. & TYPE OF CUSHION:

MUD RESISTIVITY: @ 25°C

TEST INTERVAL (metres): 1335 - 1359

PERFORATIONS (metres):

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10^3m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D): 89-03-04

DATE RECEIVED (Y-M-D): 89-03-07

DATE REPORTED (Y-M-D): 89-03-09

ANALYST: S. SARGIOUS

OTHER INFORMATION:

ION	Mg/l	Mass Fraction	Meq/l	ION	Mg/l	Mass Fraction	Meq/l
Na	8 460	0.2938	368.01	Cl	6 780	0.2354	191.20
K	63	0.0022	1.61	Br			
Ca	601	0.0209	29.99	I			
Mg	388	0.0135	31.89	HCO_3	915	0.0318	15.01
Ba				SO_4	11 590	0.4025	241.07
Sr				CO_3	0	0.0000	0.00
Fe	MUCH			OH	0	0.0000	0.00
				H_2S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C	EVAPORATED @ 180°C
31 790	
AT IGNITION	**CALCULATED**
27 560	28 797

ORGANICS: MUCH

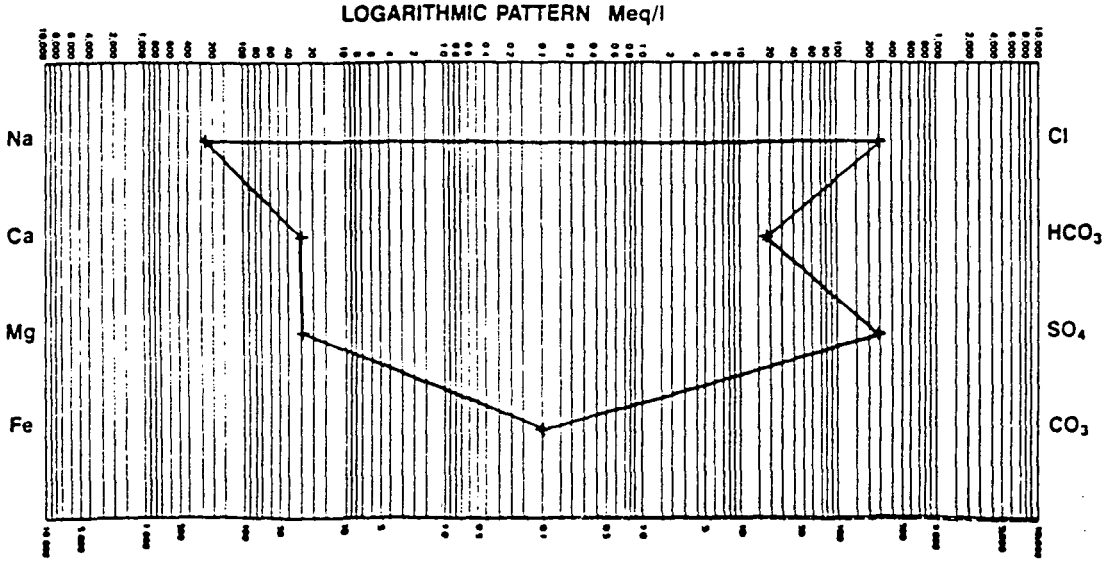
RELATIVE DENSITY	REFRACTIVE INDEX
1.027 @ 25°C	1.3373 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm m)
7.9 @ 23 °C	0.306 @ 25°C

REMARKS

BROWN COLORED FIL-TRATE RECOVERED FROM THE WATER PORTION OF THE SAMPLE.

LOGARITHMIC PATTERN Meq/l



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

CONTAINER IDENTITY		LABORATORY NUMBER	C89-4345-4
LICENCE NUMBER		OPERATOR NAME	PARAMOUNT RESOURCES LTD.
LOCATION	60-06-31.55 -117 39	WELL NAME	PARAMOUNT ET AL CAMERON L-47
ELEVATIONS (metres) K.B.	723	GRD.	719.3
FIELD OR AREA	CAMERON	POOL OR ZONE	SLAVE POINT
NAME OF SAMPLER		COMPANY	SCOTT TESTERS
TEST TYPE	DST	NO.	5
TEST RECOVERY	85 M MUD CUT INHIBITOR		
MULTIPLE RECOVERY	Y:	N: X	
SAMPLING POINT		AMT. & TYPE OF CUSHION	
MUD RESISTIVITY	@ 25°C		
TEST INTERVAL (metres)	1335 - 1359		
TYPE OF PRODUCTION	PUMPING	FLOWING	GAS LIFT	SWAB
PRODUCTION RATES	WATER m^3/d	OIL m^3/d	GAS $10^3m^3/d$	
PERFORATIONS (metres)				

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
89-03-04	89-03-07	89-03-09	S. SARGIOUS	

TOP

RESISTIVITY: 0.645 OHM M @ 25C
BROWN COLORED FILTRATE RECOVERED FROM A SAMPLE CONTAINING APPROXIMATELY 25% SEDIMENT.

MIDDLE

RESISTIVITY: 0.449 OHM M @ 25C
BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER.

BOTTOM

RESISTIVITY: 0.389 OHM M @ 25C
BROWN COLORED FILTRATE RECOVERED FROM MUDDY WATER.

S11-P33-4-2

OTTAWA CO

AGAT Laboratories

CALGARY — EDMONTON — GRANDE PRAIRIE

OIL ANALYSIS

CONTAINER IDENTIFICATION: PB #1

LABORATORY NUMBER: 09839A

OPERATOR NAME: PARAMOUNT RESOURCES LTD. *****

UNIQUE WELL IDENTIFIER:

WELL NAME: PARAMOUNT CAMERON L-47

ELEVATIONS KB m: GRD m:

FIELD OR AREA: CAMERON

POOL OR ZONE: BEG RIVER

NAME OF SAMPLER:

COMPANY: SAME

TEST TYPE:

NO:

TEST RECOVERY:

SAMPLING POINT:

AMT & TYPE OF CUSHION:

MUD RESISTIVITY/ Ω m @25° C:

TEST INTERVAL OR PERFS: 1496.5-1499m

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE ° C						

DATE SAMPLED (Y-M-D):

DATE RECEIVED (Y-M-D): 89-04-05

DATE REPORTED (Y-M-D): 89-04-11

ANALYST: R,C,B,L

OTHER INFORMATION:

SAMPLE PROPERTIES

COLOUR OF CLEAN OIL: DARK BROWN

B.S. & W. (VOLUME FRACTION)

WATER	SEDIMENT	TOTAL
0.009	TRACE	0.009

COLOUR NUMBER ASTM D-155: D 8 A.S.T.M.

DENSITY

RELATIVE		ABSOLUTE p/kg*m^{-3}	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.8563		855.5

API GRAVITY @ 15° C: 33.75

TOTAL SULPHUR (MASS FRACTION)	TOTAL SALT g*m^{-3}	POUR POINT / ° C U.S.B.M.	POUR POINT / ° C A.S.T.M.
0.00886			-9

RVP/kPa	CARBON RESIDUE (MASS FRACTION) CONRADSON	CARBON RESIDUE (MASS FRACTION) RAMSBOTTOM

VISCOSITY

TEMP / °C	ABSOLUTE/mPa*s	KINEMATIC/mm^2*s^{-1}
25	7.37	8.68
38	5.08	6.04
50	3.78	4.54

DISTILLATION

VOLUME FRACTION	TEMP. / °C
0.05	122.3
0.10	151.6
0.15	174.9
0.20	197.1
0.25	221.4
0.30	243.6
0.35	263.8
0.40	284.0
0.45	300.2
0.50	319.4
0.55	336.6
0.60	355.8
0.65	363.9
0.70	372.0
0.75	379.1
0.80	383.1
0.85	391.2
0.90	
0.95	
1.00	
F.B.P	391.2
CRACKED	

METHOD: A.S.T.M.-D86*

INITIAL BOILING POINT: 85.9

ABS BAROM PRESS/kPa: 89.1

ROOM TEMP./°C: 19.0

DISTILLATION SUMMARY (VOLUME FRACTION)

200° C NAPHTHA	275° C KEROSENE	350° C LIGHT GAS OIL
0.21	0.38	0.58

RECOVERED	RESIDUE	DISTILLATION LOSS
0.90	0.08	0.02

CHARACTERIZATION FACTOR: 11.9

REMARKS: * THE DISTILLATION TEMPERATURES HAVE BEEN CORRECTED TO 101.3 KPA(ABS).

89-04-02

LLOYD JEFFRIES
MIKE CHOLACH

RE: PARAMOUNT et al CAMRON L-47

OPENED WELL AT 1200 HOURS. SITP 690 PSI

	TIME	PRESS	CHOKE	ORIFICE	SEP.	STAT.	DIFF	OIL	Cum Oil
	12:00	690	18/64	1.25					
*	12:30	400	18/64	"	55	56	8	9	9
	13:00	405	21/64	"	58	56	14	14	23
**	13:30	425	"	"	56	56	14	14	39
***	14:00	435	"	"	45	42	20	14	53
	14:30	450	"	"	46	43	22	15	68
	15:00	465	"	"	45	43	24	16	82
	15:30	480	"	"	45	43	26	16	98
	16:00	485	"	"	44	43	27	17	115
	16:30	490	"	"	44	43	28	16	131

TOTAL OIL PRODUCTION 520 BBLS.

avg 698 B/D

* BYPASSING FLUID TO FLARE STACK
** H_2S - 30 ppm
*** REDUCED SEPARATOR PRESSURE TO ~~44~~ PSI

M-31: TIGHTENED WELLHEAD BOLTS

89.04.01

LLOYD JEFFRIES
MIKE CADLACH

FAX 262-7994

PARAMOUNT et al CAMERON 1-47

OPENED WELL AT 14:05 FLUID TO SURFACE AT 14:20. SHUT IN PRESSURE 620 PSI.

FLOW DATA

TIME	PRESS	CHOKE	SEP PRESS	STATIC	DIFF	ORIFICE	BBL OIL	COM
14:05	620	16/64				1/4.25		
14:30		16/64				"	18	18
15:00	400	20/64	43	40	52	"	20	38
15:30	415	"	43	40	39	"	30	68
16:00	420	"	43	40	69	"	25	93
16:30	420	"	50	46	62	"	32	125
17:00	440	"	50	46	63	"	25	150
17:30	450	"	50	46	70	"	28	178
* 18:00	460	"	58	62	54	"	26	204
18:30	470	"	58	56	62	"	24	228
19:00	475	"	60	56	68	"	22	250

* INCREASED SCRUBBER PRESS TO 60 PSI

CUMMULATIVE PRODUCTION TO DATE: 389 BBLS

avg 1200 B/D

DAILY COST $6190

CUMMULATIVE COST $352,702

PARAMOUNT et al CAMERON B-01

PLACED R AND F PROFILES IN TUBING. BOTH HELD (TUBING WAS ICED OFF AT 7500 M. USED MECHANICAL INJECTION UNIT TO CLEAR ICE)

DAILY COSTS MARCH 21 TO 31/89 $19,650

G.O.R ≈ 555

89-03-31

LLOYD JEFFRIES FAX 262-7994
MIKE CHOLACH

PARAMOUNT et al CAMERON L-47

NOTE: TOTAL OIL PRODUCTION TO 08:00 HOURS 89.03.30 WAS 57 BBLS.

SUMMARY OF FLOW PERIODS.

TIME	CHOKE	PRESS.	ORIFICE	SP	DP	PROD (BBLS)
0800-1000	12/64	200	0.75"	38	14	14

RIGGED IN NOWSCO FOR ACID-N_2 SQUEEZE (KEG RIVER FORMATION-PERFORATIONS 1496.5m - 1499 m). HELD SAFETY MEETING. PRESSURE TESTED LINES TO 20 mPa. PUMPED 0.5 m^3 28% HCL @ 4000 kPa. CONTINUED PUMPING 1.2 m^3 ACID + 100 m^3/min N_2. STOPPED PUMPING WHEN PRESSURE REACHED 16 mPa. DISCUSSED HIGHER PUMPING PRESSURE. CONTINUED PUMPING 0.7 m^3 HCL + 100 m^3/min N_2 TO 23 mPa. FEED RATE 0.1 m^3/min. DISPLACED ACID WITH 5.4 m^3 N_2 AT 23 mPa. PRESSURE BROKE TO 6 mPa 35 MIN. FROM COMMENCEMENT OF ACID-N_2 SQUEEZE. SHUT IN WELL AND RIGGED TO FLOW. SITP 7 mPa - 1000 PSI.

FLOWED WELL FROM 13:15 TO 14:45. FLUID AT SURFACE AT 13:35. FLOWED BACK 8.2 m^3 FLUID (EMPTIED TANK) FLOW PRESSURE INCREASED FROM 200 PSI TO 350 PSI.

TIME	PRESS	CHOKE	SP	DP	VOL	ORIFICE
13:35	200	32/64	-			1.25
14:45	350	32/64	38	75	8.2 m^3	"

NOTE: WELL FLOWED 1 m^3 EVERY 6 MIN FOR LAST 3 m^3.

1509 B/O

RIGGED IN ET UNIT. PRESSURE TESTED TO 21 mPa. RIH WITH E.T. STARTED PUMPING N_2 AT 500 m AT 20 m^3/m. TAGGED PBTD AT 1507m. POH TO 1000 m AND STOPPED PUMPING N_2. POH AND RIGGED OUT. WELL PRODUCED 33 BBL OIL WHILE PUMPING N_2

STARTED FLOWING WELL AT 18:45 HOURS. FLUID AT SURFACE AT 19:05 HOURS. INCREASED CHOKE SETTING TO 32/64" SEPARATOR STARTED BY PASSING OIL. REDUCED CHOKE OPENING TO 24/64" FLOW STABILIZED AT 420 PSI STATIC PRESSURE 43, DIFFERENTIAL PRESSURE 38, ORIFICE SIZE 1.25" SHUT WELL IN AT 19:40 HOURS. PRODUCED 35 BBL OIL.

TOTAL OIL PRODUCTION FOR 89-03-31 IS 82 BBLS.
CUMMULATIVE PRODUCTION IS 1895 BBLS.

DAILY COST - $41,305
CUMMULATIVE COST - $346,512

89.03.30

LLOYD JEFFRIES FAX 262-7994
MIKE CHOLACH

PARAMOUNT et al CAMERON L-47

COMPLETED HOOKING UP TANKS, SEPARATOR, WELLHEAD AND FLARE STACK. TRIED TO FLOW WELL, FITTINGS LEAKING AROUND SEPARATOR. REPLACED 2 NIPPLES.

SITP 4800 KPa. STARTED FLOWING WELL AT 17:30 HOURS. PRESSURE DROPPED TO 0 IN 5 MINUTES, HOWEVER, FLAME STAYED LIT WITH A 3 FT FLAME. WELL STARTED MAKING OIL AT 18:00 HOURS. FLOW PRESSURE VARIED FROM 0 TO 80 PSI. FROM 18:00 HOURS TO 19:00 HOURS, FLOW PRESSURE 0; HOWEVER, THERE WAS CONSTANT FLUID MOVEMENT. AT 20:00 HOURS, FLOW PRESSURE INCREASED TO 150 PSI WITH GOOD FLUID MOVEMENT

Summary:

TIME	FLOW PRESSURE	CHOKE	STATIC	GAS*	OIL
18.00	20-80	24/64	40	25	
19:00	0	"	38	8	
20.00	150	"	38	80.30	6BBL

L-47 SITE HAS BEEN LEVELLED. GRASS SEEDING TO FOLLOW.

10 HOUR FLOW ON 32/64 CHOKE, THROUGH SEPARATOR 44 BBLS. AT APPROX. 890 MCF/BBL. 890 cf/BBL

COSTS: MARCH 22 - 31 = $ 24,715

CUMMULATIVE COSTS $ 305,207.

106 BBLS/day

89-03-28

T: LLOYD JEFFRIES FAX 262-7994
FR MIKE CHOLACH

RE: DAILY REPORTS

B-08: MOVED OUT RENTAL EQUIPMENT

L-47: SPOTTED TANKS SEPARATOR AND FLARE STACK

Ptarmigan Inn.

Fax-874-3392

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ETAL CAMEROON L-97 DATE: MARCH 22/89

PURPOSE OF JOB: Completion.

CURRENT OPERATION: Rig Released 2400 Hrs 89-03-21

CONTRACTOR: Roll'n #31 CHP _____ kPa@ _____ h THP _____ kPa@ _____ h

REMARKS:

Flow well to 0900 Hrs: Shut in & Record Press
Produced 3.15m³ oil, total Recovery 8.55m³ 120 bbl
Mix 13m³ Fresh Water w/ .5% Nowcor 200 Inhibitor
Bleed off well, Unseat Packer, Displace Annulus
w/ 12.64m³ Inhibited Water, Reset Packer & Land
Tbg w/ Doghut, Press Test Packer, Annulus to 14mpa, 15 min
OK, Rig out BOPs, Install & Make up Well Head.
Rig Swab Equip, Lower water level in Annulus w/ Rig
Air & Top off w/ Diesel, Pull 9 Swabs, Recover 6.75 m³ total
Recovery 15.3 m³, Well Flowing, Very gassy, Shut in &
Rig out Swab Equip, Rig out Service Rig & Equip
Rig Released 89-03-21 - 2400 Hrs. Empty Service Rig Tank &
Transfered 9m³ Oil To B-08 Lease Tank.
Final Landing Depth, TBG Landed @ 1493.17mKB "R" Nipple
@ 1491.98mKB, Packer @ 1481.45mKB, "F" Nipple @ 1470.48mKB
Shut in Press after 8.5 Hrs -4600 kPa.

TOTAL LOAD FLUID (m³): _____ DAILY RECOVERY (m³): _____

RECOVERED TO DATE (m³): 9m³ (oil) LOAD TO RECOVER (m³): _____

TOTAL DAILY COSTS: 12330 TOTAL COSTS TO DATE: 201274.

-8 Clear.

ROLL'N

SWAB REPORT

#305 - 5208 - 53 AVENUE
RED DEER, ALBERTA T4N 5K2

OIL CO. Paramont Res DATE Mar 21 REPORT NO. 1
ADDRESS ______ P.O. NO. ______ RIG NO. 31

WELL NAME & LOCATION Cameron Hills 6-47

TIME	SWAB NO.	FLUID LEVEL	DEPTH PULL FROM	M M IN TANK	PREVIOUS M M	M^3 PULLED	TOTAL M^3	REMARKS
5:20	1	Surf	388	114	108	.90	.90	1 cup 2 saver Rubs
5:40	2	780	1078	120	114	.90	1.80	
6:00	3	980	1295	126	120	.90	2.70	
6:30	4	1168	1416	132	126	.90	3.60	Little Gassy
6:55	5	THTM	1295	138	132	.90	4.50	" "
7:30	1	982	1416	142	138	.60	5.10	Gassing after Swab.
7:45	2	1168	PSN	146	142	.60	5.70	Gassing after Swab
8:15	3	1168	PSN	149	146	.45	6.15	" " " - Oil
9:00	4	1254	PSN	153	149	.60	6.75	" " " - Oil
10:00	1	900 KPA			Pressure Readings.			shut in @ 0900 hrs
[illegible]15	2	1200 KPA						153 Total in Rig Tank.
[illegible]	3	1700 KPA		Pumped 65cm Water to Storage.				
10:45	4	2000 KPA.		85cm Oil Trucked away. Empty Rig Tank.				
11:00	5	2400 KPA.						
11:15	6	2800 KPA.						
11:30	7	3100 KPA.			5:00	4500		
11:45	8	3400 KPA.			5:30	4500		
12:00	9	3800 KPA.			6:00	4600		
12:15	10	4000 KPA.			6:30	4600	KPa.	
12:30	11	4200 KPA						
12:45	12	4200 KPA						
1:00	13	4200 KPA.						
1:15	14	4200 KPA.						
1:30	15	4400 KPA						
1:45	16	4500 KPA.						
2:00	17	4500 KPA						
2:30	18	4500 KPA						
[illegible]00	19	4500 KPA						
[illegible]30	20	4500 KPA.						
4:00	21	4500						
4:30	22	4500						

8450

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ET AL CAMERON HILLS I-47 DATE: MARCH 21/89

PURPOSE OF JOB: Completion.

CURRENT OPERATION: SWAB TEST

CONTRACTOR: Rolli 31 CHP _____ kPa@ ____ h THP _____ kPa@ ____ h

REMARKS:

CIRC & PBTD 1507 MKB, PULL OUT 18 JTS TO 1343 m WORK JTG & SCRAPER THROUGH TIGHT SPOT SEVERAL TIMES, LOOSEN METAL, & PUSH TO BTM, DISPLACE WELL W/ 17.4 m^3 CLEAN PROD WATER POOH & PULL 152 JTS JTG TO BIT & SCRAPER. BREAK OUT BIT & SCRAPER; RIG PLAN WEST SPECIALTIES, RUN 101.6 MM HSC, 13 SPM 23 GR. CORRELATE OF DEPTH, PERFORATE 1496.5 TO 1499.0 m, 2.5 m TOTAL OF 34 SHOTS. RIG OUT NORWEST SHOOTERS, PR/ RUN ALL SHOTS FIRED. MAKE UP & RUN BAKER "R" NIPPLE 2.25 ID, 1 JT 73 MM JTG, 139.7 MM GUIBERSON UNI VI PACKER, 1 JT 73 MM JTG, BAKER "F" NIPPLE 2.31 ID, 154 JTS JTG TO SURFACE, SET PACKER, LAND JTG @ 1492.17 MKB, "R" NIPPLE @ 1491.92 MKB PACKER RUBBERS @ 1481.45 MKB, "F" NIPPLE @ 1470.48 MKB. RIG TO SWAB PULL 9 SWABS, RECOVERED 5.4 m^3, WELL FLOWED .45 m^3 OIL, FLUID LEVEL [illegible]

TOTAL LOAD FLUID (m^3): _____ DAILY RECOVERY (m^3): _____

RECOVERED TO DATE (m^3): _____ LOAD TO RECOVER (m^3): _____

REPORT FROM: MARK Gosselin RADIO PHONE: 551-8011

TAKEN BY: _____

TOTAL DAILY COSTS: 24279- TOTAL COSTS TO DATE: 267862-

-15° CLOUDY.

.37 PSI/FT

ROLL'N

SWAB REPORT

OIL CO. Paramount DATE March 21/89 REPORT NO. ____

ADDRESS ____ P.O. NO. ____ RIG NO. ____

#305 - 5208 - 53 AVENUE
RED DEER, ALBERTA T4N 5K2

WELL NAME & LOCATION CAMERON Hills L-47

TIME	SWAB NO	FLUID LEVEL	DEPTH PULL FROM	M M IN TANK	PREVIOUS M M	M^3 PULLED	TOTAL M^3	REMARKS
11:15	1	80	540	114	110	1.35	1.35	
2:00	2	500	830	125	119	.910	2.25	
2:15	3	780	780	129	125	.060	2.85	
2:30	4	980	1264	133	129	.060	3.45	Gasing
2:45	5	1108	1416	140	133	1.05	4.50	Gasing after swab
3:30	6	1168	PSN	145	140	.75	5.25	Flowed after Swab, New Cup.
4:00	7	1L	PSN	148	145	.45	5.70	Flowed Well - Oil - Sample #1
4:15	Pumped 6.8cm over To storage							
4:45				80	148			Shut Well in.
5:00	8		[redacted]	85	80	.45	6.15	Flowed Well 272 bbl
5:45	9	1100	PSN	90	83	105	7.30	Flowed Well - Sample #2. 252 bbl

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: Paramount et al Cameron Hills L-47 DATE: March 20/89

PURPOSE OF JOB: Completion

CURRENT OPERATION: Run Bit & Scraper to Btm

CONTRACTOR: Roll'N #31 CHP ____ kPa@ ____ h THP ____ kPa@ ____ h

REMARKS:

WOC to 1200 Hrs total 14.25 Hrs, Measure OD, ID of Mill & Subs, Make up 121 mm Flat Bottom Junk Mill, Bit sub w/ 6-13mm DC, X/O sub, 134 jts 73 mm Tbg. tag top of Retainer @ 1343 mKB, Break circ, Press test to 10000 KPA OK; Mill out Guiberson Cement Retainer, Mill 1.7m Cement to 1345.4m. Press test to 14000 KPA, Hold For 15 min, ok. Run 18 jts Tbg, Tag ~~Btm @~~ 1506.5 mKB, (Pushed .3 m Cement Plug of to Btm with mill, Mill off cement to Bridge Plug @ 1507 mKB. Circ for 30 min. Pull out, Work tight spot @ 1343 m, POOH, Make up 121 mm Bit & Scraper, Run into 1343 m Work Tight Spot, Circ & Scrape

Run in 18 Jts

TOTAL LOAD FLUID (m^3): ____ DAILY RECOVERY (m^3): ____

RECOVERED TO DATE (m^3): ____ LOAD TO RECOVER (m^3): ____

REPORT FROM: Mark Gosselin RADIO PHONE: 551 8011

TAKEN BY: ____

TOTAL DAILY COSTS: 13305 TOTAL COSTS TO DATE: 243583

-27 °C clear.

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ETAL CAMERON HILLS L-47 DATE: MARCH 19/89

PURPOSE OF JOB: Completion

CURRENT OPERATION: WOC Cement down @ 21:40 Hrs 89-03-18.

CONTRACTOR: Rollin #31 CHP _____ kPa@ _____ h THP _____ kPa@ _____ h

REMARKS: Pull 13 Swabs Recovered 14.55 m^3 Total of 42 Swabs Pulled, Total Recovered 57.3 m^3 Fluid level @ 560.0 M & Holding Steady, Swab rate @ 1.5 m^3/hr. Black Gassy Formation Water, Rig down Swab Equip. Unseat Uni VI Packer, Prepare & Pull w/ 158 Jts, Break out Packer & 2 tail Jts, Rig up Norwest Shooters. Run 139.7 mm Baker Model "5" Drillable Bridge Plug. Set @ 1507 mKB, Run 139.7 mm Guiberson Type "A" Cement Retainer, Correlate & depth, Set @ 1343 mKB. Rig out Norwest Shooters, Service & Make up Cement Retainer Swap Latch Stinger, Run in w/ 140 Jts Tbg. Break Circ & Circ well, Rig Nowsco, Safety Meeting, Press Test To 25000 kPa, Sting into Retainer, Est Feed Rate of .4 m^3 min @ 14000 kPa. Mix 4T 0-1-0 + .7% NFL 1 + .1% FL, 3 m^3 slurry Squeeze w/ 3.8 m^3 Water @ 11000 kPa, .4 m^3/min, Stage 10 min last 1.3 m^3 Final Press 15000 kPa. Pull out of Retainer, Backwash .02 m^3 Cement, Rig out Nowsco, Pull 140 Jts Tbg to Stinger, WOC.

TOTAL LOAD FLUID (m^3): _____ DAILY RECOVERY (m^3): _____

RECOVERED TO DATE (m^3): _____ LOAD TO RECOVER (m^3): _____

REPORT FROM: Mark Gosselin RADIO PHONE: 551-8011

TAKEN BY: _____

TOTAL DAILY COSTS: 28383.- TOTAL COSTS TO DATE: 230278.-

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ETAL CAMERON HILLS L-47 DATE: MARCH 19/89

PURPOSE OF JOB: COMPLETION

CURRENT OPERATION: SWAB TEST KEG RIVER

CONTRACTOR: ROLL'N #31 CHP _____ kPa@ ____ h THP _____ kPa@ ____ h

REMARKS:

PULL 10 SWABS RECOVERED 4.5m³, SWAB IBG DRY, VERY LITTLE GAS, RIG NOWSCO, FILL TBG W/ 4.6m³ POOL WATER, UNSEAT PACKER, SAFTY MEETING & PRESS TEST TO 26000 KPA, CIRC ACID TO PERFS 4.23m³, SET PACKER, SQUEEZE TOTAL OF 8.m³ 28% HCL, MAX PRESS 17000 KPA, AVE PRESS 11000 KPA, MAX RATE .9m³/min INITIAL SHOT IN 9000 KPA, PRESS BLED OFF TO 0 KPA INSTANTLY RIG OUT NOWSCO, RIG 73 mm SWAB EQUIP. PULL 29 SWABS, TOTAL LOAD FLUID TO RECOVER 12.73m³ RECOVERED 45.15m³ FLUID LEVEL @ 563.m NEW RECOVERY FLUID 32.4 m³. BLACK FORMATION WATER

TOTAL LOAD FLUID (m³): 12.73 DAILY RECOVERY (m³): _____

RECOVERED TO DATE (m³): 45.15 LOAD TO RECOVER (m³): _____

REPORT FROM: MARK GOSSELIN RADIO PHONE: 551-8011

TAKEN BY: _____

TOTAL DAILY COSTS: 24985 TOTAL COSTS TO DATE: 201895

GGAT Laboratories

CALGARY — EDMONTON — GRANDE PRAIRIE

WATER ANALYSIS

CONTAINER IDENTIFICATION: PB#1

LABORATORY NUMBER: W9730A

OPERATOR NAME: PARAMOUNT RESOURCES LTD.

UNIQUE WELL IDENTIFIER:

WELL NAME: PARAMOUNT et al CAMF

ELEVATIONS KB m: 733 GRD m:

FIELD OR AREA: CAMERON HILLS

POOL OR ZONE: KEG RIVER

COMPANY: SAME

TEST TYPE: NO:

SAMPLING POINT:

...r & TYPE OF CUSHION:

MUD RESISTIVITY/Ω m @ 25° C:

TEST INTERVAL OR PERFS: 1542-1547 mKB

TYPE OF P...ODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10³ m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE ° C						

DATE SAMPLED (Y-M-D):

DATE RECEIVED (Y-M-D): 89-03-21

DATE REPORTED (Y-M-D): 89-03-28

ANALYST: L

OTHER INFORMATION:

ION	mg/L	MASS FRACTION	mmol/L
Na	29900.0	0.224	1300.0
K	1680.0	0.013	43.1
Ca	12400.0	0.093	310.0
Mg	3130.0	0.023	129.0
Ba	N.A.	N.A.	N.A.
Sr	N.A.	N.A.	N.A.
Fe	34.7	TRC*	0.6

ION	mg/L	MASS FRACTION	mmol/L
Cl	85200.0	0.637	2400.0
Br	N.A.	N.A.	N.A.
I	N.A.	N.A.	N.A.
HCO_3	250.0	0.002	4.1
SO_4	900.0	0.007	9.4
CO_3	NIL	NIL	NIL
OH	NIL	NIL	NIL
H_2S	248.0	0.002	7.3

DISSOLVED TOTAL SOLIDS mg/L

EVAPORATED AT 110° C:

EVAPORATED AT 180° C:

AT IGNITION:

CALCULATED: 134200.0

RELATIVE DENSITY: 1.097 @ 25° C

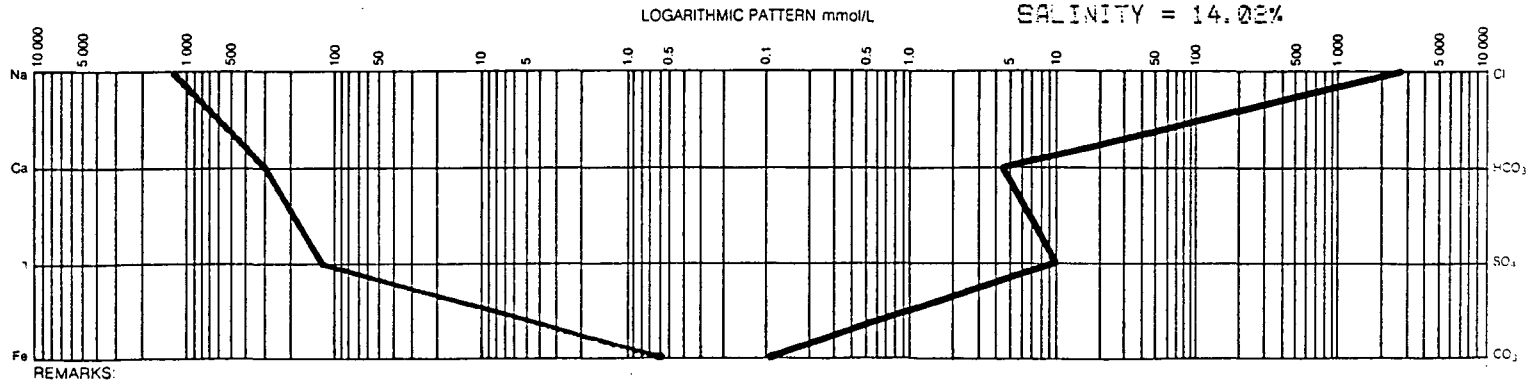
REFRACTIVE INDEX: N.A. @ 25° C

OBSERVED pH: 6.56 @ 25° C

RESISTIVITY/OHM •m: 0.06 @ 25° C

LOGARITHMIC PATTERN mmol/L

SALINITY = 14.02%



REMARKS:

TRC+= LESS THAN 0.1 N.D.= NOT DETECTED NIL= 0.0 TRC*= LESS THAN 0.001 N.A.= NOT ANALYZED

GGAT Laboratories

CALGARY — EDMONTON — GRANDE PRAIRIE

WATER ANALYSIS

CONTAINER IDENTIFICATION	LABORATORY NUMBER
PB#2	WS7308

OPERATOR NAME: PARAMOUNT RESOURCES LTD. ****

UNIQUE WELL IDENTIFIER	WELL NAME	ELEVATIONS KB m	ELEVATIONS GRD m
	PARAMOUNT et al CAMERON HILLS	733	

FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
CAMERON HILLS	KEG RIVER		SAME

TEST TYPE	NO	TEST RECOVERY

SAMPLING POINT	AMT & TYPE OF CUSHION	MUD RESISTIVITY/Ω m @ 25° C

TEST INTERVAL OR PERFS: 1542-1547 mKB

TYPE OF PRODUCTION: PUMPING | FLOWING | GAS LIFT | SWAB

PRODUCTION RATES: WATER m³/d | OIL m³/d | GAS 10^3 m³/d

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa						
TEMPERATURE °C						

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
	89-03-21	89-03-29	L	

ION	mg/L	MASS FRACTION	mmol/L
Na	28600.0	0.223	1250.0
K	1530.0	0.012	39.2
Ca	11600.0	0.090	289.0
Mg	3030.0	0.024	125.0
Ba	N.A.	N.A.	N.A.
Sr	N.A.	N.A.	N.A.
Fe	2.6	TRC*	TRC+

ION	mg/L	MASS FRACTION	mmol/L
Cl	82000.0	0.639	2310.0
Br	N.A.	N.A.	N.A.
I	N.A.	N.A.	N.A.
HCO_3	433.0	0.003	7.1
SO_4	914.0	0.007	9.5
CO_3	NIL	NIL	NIL
OH	NIL	NIL	NIL
H_2S	284.0	0.002	8.3

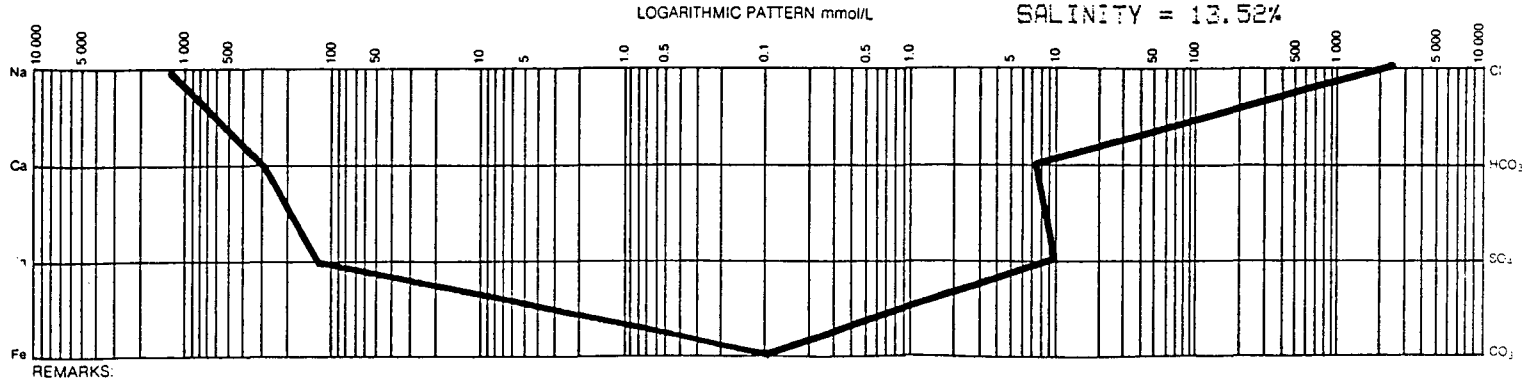
DISSOLVED TOTAL SOLIDS mg/L

EVAPORATED AT 110° C	EVAPORATED AT 180° C
AT IGNITION	**CALCULATED**
	128000.0

RELATIVE DENSITY	REFRACTIVE INDEX
1.095 @ 25° C	N.A. @ 25° C
OBSERVED pH	**RESISTIVITY/OHM •m**
6.74 @ 25° C	0.06 @ 25° C

LOGARITHMIC PATTERN mmol/L

SALINITY = 13.52%



REMARKS:

TRC+= LESS THAN 0.1 N.D.= NOT DETECTED NIL= 0.0 TRC*= LESS THAN 0.001 N.A.= NOT ANALYZED

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ET AL CAMERON HILLS L-47 DATE: MARCH 17/89

PURPOSE OF JOB: COMPLETION

CURRENT OPERATION: SWAB TEST

CONTRACTOR: ROLL'N 31 CHP _____ kPa@ _____ h THP _____ kPa@ _____ h

REMARKS:

POLL 10 SWABS, SWAB FLUID LEVEL d/ TO 1536 M. SWAB tbg dry, RECOVERED 4.65 m^3 (369 VOLUME) PROD WATER Rig in Norwest, SAFETY MEETING, PRESS TEST TO 20 MPA. PUMP 3 m^3 28% HCL ACID, DISPLACE W/ 4.67 m^3 PROD WATER, SQUEEZE TO 18000 KPA, BREAKDOWN, PUMP RATE @ .6 m^3 @ 13000 KPA. INITIAL SHUT IN 11,500 KPA AFTER 15 min 8 KPA. Rig out Norwest Rig 73 mm SWAB EQUIP, TOTAL LOAD FLUID TO RECOVER 7.67 m^3, RUN 13 SWABS, RECOVERED 12.9 m^3, FLUID LEVEL STABILIZED @ 900 M, NEW RECOVERY 5.23 m^3 OF DIRTY BLACK GASSY FORMATION WATER, Rig out SWAB EQUIP UNSEAT PACKER, POOH W/ 161 JTS, BREAK OUT PACKER & TAIL JT. Rig NORWEST SHOOTERS, RUN 139.7 mm BAKER MODEL "S" DRILLABLE BRIDGE PLUG, SET @ 1535. MKB, 3 RUNS & RUN 101.6 mm HSC, 13 SPM, 23 GR, CORRELATE of DEPTH, PERF 1509.5-1525 m 15.5 M total of 202 SHOTS, RUN 2 JTS, PACKER @ 158 JTS, TBG @ 1525, PACKER @ 1505. lower K. R.

TOTAL LOAD FLUID (m^3): _____ DAILY RECOVERY (m^3): _____

RECOVERED TO DATE (m^3): _____ LOAD TO RECOVER (m^3): _____

REPORT FROM: MARK GOSSELIN RADIO PHONE: 551-8011

TAKEN BY: _____

TOTAL DAILY COSTS: 49754.- TOTAL COSTS TO DATE: 176910.-

1340-11

PARAMOUNT RESOURCES LTD.

WELL COMPLETION REPORT

WELL NAME: PARAMOUNT ET AL CAMERON HILLS L-47 DATE: MARCH 16/89

PURPOSE OF JOB: Completion.

CURRENT OPERATION: Swab Test -27 Clear.

CONTRACTOR: Roll'n #31 CHP _____ kPa@ _____ h THP _____ kPa@ _____ h

REMARKS: Wait on Cement to 1200 Hrs. Open up well, Run in slowly 25 JTs total of 163 jts, tag PBTD @ 1553 mKB, Circ 30 min, Prepare & Pull 163 jts to Scraper & bit, Breakout Bit & Scraper, GO GIA Rig inspection & Crew BOP Drill, OK - Crew in Positions & Well Secure in 45 secs, Rig Norwest Shooters, Run CCL-CBL-VDL F/ 1553.3 m to 1300 m, Run 7000 KPA Press Pass w/ Bond Log F/ 1553.3 m to 1340 m, Good Cement Bond to 1384 m, No Bond F/ 1384 m to Upper Perfs @ 1345 m, Rig down Logging tools, Press up To 14000 KPA, Breakdown @ 12000 KPA, Feed Rate of .075 m^3/min @ 10000 KPA, Bleed off, Rig Perf Unit, Run 101.6 mm HSC, 13 SPM 23 Gr, Correlate on depth, Perforate F/ 1542 - 1547 mKB - 5 m total of 62 shots, Rig out Perf Unit, Ck Gun all shots Fired. Make up 1 jt, Uni VI Packer, PSN, Run w/ 161 jts, Land Tbg @ 1542 mKB, Packer Rubbers @ 1535 mKB. Set Packer. Rig 73 mm Swab Equip.

Swab Test.

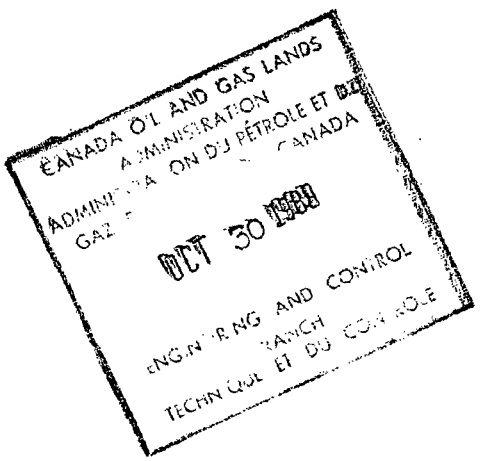
TOTAL LOAD FLUID (m^3): _____ DAILY RECOVERY (m^3): _____

RECOVERED TO DATE (m^3): _____ LOAD TO RECOVER (m^3): _____

REPORT FROM: Mark Gosselin RADIO PHONE: 551 Bell.

TAKEN BY: _____

TOTAL DAILY COSTS: 19065.- TOTAL COSTS TO DATE: 133156.-


CANADA OIL AND GAS LANDS
ADMINISTRATION
OCT 30
ENGINEERING AND CONTROL
BRANCH