

9211-PS3-4-1

OTTAWA COPY

WELLSITE GEOLOGICAL REPORT

PARAMOUNT ET AL CAMERON B - 08

Lat. $60^{\circ}07'06.80''$ North
Long. $117^{\circ}30'46.21''$ West

Hugh Corkin.
Calgary, Alberta.
February 6, 1989.

MICROFILMED
SUR MICROFILM:

SOUTHERN CROSS GEOLOGICAL CONSULTING LTD.

HUGH CORKIN - GEOLOGICAL CONSULTANT
P.O. Box 6983, Station D, Calgary, Alberta. T2P 2G2.

February 13, 1989.

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

Dear Sirs:

Re: Paramount et al Cameron B - 08

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

The well, which was spudded at 0615 hours January 19, 1989, was drilled to a total depth of 1560 metres into the Pre-Devonian. The prime objectives were the Upper Devonian, Slave Point and the Middle Devonian, Keg River Dolomite. The Middle Devonian Bistcho-Sulphur Point reservoirs existed as secondary objectives. No cores were cut but three drillstem tests were run, two after Wireline Logs were obtained.

The well was drilled with Air from the Surface Casing Shoe to the top of the Wabamun which was found to be water saturated. At 557 metres, the top of the Wabamun, the system was converted to Foam (soap detergent), and drilled down to 1197 metres. No cuttings were therefore available between 557 metres and 1197 metres. The hole was then converted to a regular "chem-gel" mud system at 1197 metres, some distance above the Slave Point and drilled to total depth (1560 metres).

The first drillstem test was run during penetration to evaluate the algal beds of the Slave Point which exhibited fair to good intergranular porosity in association with a poor to fair lemon-yellow fluorescence and an indication of some Gilsonite coating of cavities. The Test resulted in a misrun due to the

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plugging of the Tool with shale. The second and third drillstem tests were conducted after Schlumberger Logs were run. The second Test attempted to evaluate the observed porosity in the Keg River dolomites but resulted in a misrun caused by plugging of the Test Tool. Drillstem Test #3 evaluated the Sulphur Point (Bistcho) which contained some poor pin-point and poor intercristalline porosity associated with a yellow fluorescence and a weak milky white cut. On valve-open there was gas to surface immediately at $4248 \text{ m}^3/\text{d}$ and increased to $8887 \text{ m}^3/\text{d}$ in 30 minutes, stabilizing at $8500 \text{ m}^3/\text{d}$ with no water.

The data obtained from the drillstem test, ditch cuttings and the wireline logs justified running production casing to total depth. The well is classified as a Potential Gaswell which shall be completed at some future date. The rig was released at 2200 hours February 9, 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.

SOUTHERN CROSS GEOLOGICAL CONSULTING LTD

WELL DATA SUMMARY

Tests:

Drillstem Test # 1 1351m - 1370m Slave Point
(Interval) (Formation)

Recovered 60m Inhibitor & Water Cut Mud. Misrun.

Drillstem Test # 2 1512m - 1522m Keq River
(Interval) (Formation)

Recovered Nothing. Misrun.

Drillstem Test # 3 1410m - 1420m Sulphur Point
(Interval) (Formation)

Recovered 156m Mud. Sucessful Test.

Drillstem Test # _____ (Interval) _____ (Formation)

Recovered _____

Drillstem Test # _____ (Interval) _____ (Formation)

Recovered _____

Drillstem Test # _____ (Interval) _____ (Formation)

Recovered _____

Logs:

Schlumberger:-

1. Dual Induction - SFL

1:600 389.8 m to 1557.8 m; 1:240 389.8 m to 1557.8 m

2. Borehole Compensated Sonic Log

1:600 389.8 m to 1547.5 m; 1:240 389.8 m to 1547.5 m

3. Compensated Neutron - Litho - Density Log

1:600 389.8 m to 1558.8 m; 1:240 389.8 m to 1558.8 m

Other Logs listed under the heading "Additional Info"

Abandonment Plugs:

Plug # _____ with _____ tonnes of
(Interval)

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 389.8m - 1552m; Velocity Monitor Log 390m - 1557m;

Cyberlook 1325m - 1552m.

This well was drilled with Air from the Surface Casing Shoe (390m) to

1197m. The well was then converted to mud and drilled to Total Depth

(1560m).



Canada Oil and Gas Lands Administration

Administration du pétrole et du gaz des terres du Canada

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 B-8**

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

Contractor: **SERRIA DRILLING LTD.** Permit or Lease No.: **N/A**

Drilling Rig or Unit: **LESS. THAN. ONE. (1). MILLION DOLLAR**

Location-Unit: **B** Section: **8** Grid Area: **.60..10!..117..30!**

Coordinates: Lat.: **60°.10!.06.80"** Long.: **117°.30!.46.21"**

Area: **CAMERON HILLS** Field/Pool: **N/A**

Elevation-RT/KB: **(ASL)** Section: **GROUND: .786.20** (BRT)

Approx. Spud Date: **JANUARY 1, 1989** Estimated Days on Location: **25**

Anticipated Total Depth: **1528 m** Target Horizon(s) **SLAVE POINT**
SULPHUR POINT

EVALUATION PROGRAM

Ten-metre sample intervals N/A.....
Five-metre sample intervals . . AS . SPECIFIED . 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.
(IF TARGET ZONES)

CASING AND CEMENTING PROGRAM

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

PLEASE REFER TO DETAILED DRILLING PROGRAM. SEE "CEMENTITING PROGRAM".

B.O.P. Equipment: ONE (1) HYDRIL GK 9-9000 SPHERICAL
.....
TWO (2) SHAFFER TYPE E. SINGLE GATE, 9" - 3000 PSI
.....
C/W 4½ AND PIPE RAMS

Other Information: PLEASE REFER TO DETAILED DRILLING PROGRAM, SEE "REG INVENTORY".

Signed: Lloyd Jeffries Title: DRILLING MANAGER
Date: DECEMBER 9, 1988 Company: PARAMOUNT RESOURCES LTD.

APPROVAL

An approved copy of this notice is to be posted at each wellsite.

Signed:
Engineering Branch

Date:

File:.....

**Department of Energy,
Mines and Resources**

Department of Indian Affairs and Northern Development

Ministère de l'Énergie, des Mines et des Ressources

**Ministère des Affaires indiennes
et du Nord Canadien**

Canadä

CAMERON HILLS

GEOLOGICAL PROGNOSIS

PARAMOUNT ET AL CAMERON B-8

Elevations: Ground: 786.20 (actual) K.B.: ~~789.90~~ **789.90m**

	<u>Sub-Sea</u>	<u>Drilling Depth</u>	
Wabamun	+ 330 m	460.2 m	459.9m
Twin Falls	- 20 m	810.2 m	809.9m
Slave Point	- 542 m	1,332.2 m	1331.9m
Watt Mountain	- 592 m	1,382.2 m	1381.9m
Bistcho-Sulphur Point	- 614 m	1,404.2 m	1403.9m
Muskeg	- 632 m	1,422.2 m	1421.9m
Keg River	- 687 m	1,477.2 m	1476.9m
Pre-Devonian	- 722 m	1,512.2 m	1,511.9m
T.D.	- 738 m	1,528.2 m	1,527.9m

Testing during penetration at discretion 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 $60^{\circ} 10' 06.80''$ N
Longitude $117^{\circ} 30' 46.21''$ W

And

Well Name: Paramount et al Cameron L-47

Location: Coordinates Latitude $60^{\circ} 10' N$
Longitude $117^{\circ} 30' W$ Approximately

I GENERAL

	<u>Business</u>	<u>Mobile/Home</u>
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 geograph 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.

<u>Size</u>	<u>Interval</u>	<u>Mass</u>	<u>Grade</u>	<u>Connection</u>
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 MPa 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/m³ 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.

1) 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:

<u>Size</u>	<u>Interval</u>	<u>Mass</u>	<u>Grade</u>	<u>Connection</u>
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 B-08

Location: Lat. $60^{\circ}07'06.80''$ N; Long. $117^{\circ}30'46.21''$ W

ELECTRIC LOG TOPS

K.B. Elevation 789.90m

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

PARAMOUNT ET AL CAMERON B - 08

Samples Lagged 1 Min. per 30 Metres

K.B: 789.90m

395 - 425 SHALE - medium to dark greyish brown, silty texture, slightly micromicaceous, rarely carbonaceous, non-calcareous, sub-fissile to blocky, soft.

425 - 440 SHALE - medium to dark grey, very silty texture, slightly micromicaceous, carbonaceous throughout, non-calcareous, fissile to blocky, very soft.

440 - 460 SHALE - medium grey to light brown, rarely green, very silty texture, micromicaceous, slightly carbonaceous in part, non-calcareous, platy, medium hard to hard;
Trace SILTSTONE - stringers, translucent to light grey, quartzose, slightly carbonaceous, cemented with clayey matrix, blocky, hard, tight;
Trace SANDSTONE - translucent, quartzose, very fine grained, sub-angular, well sorted, cemented with limy matrix, platy, hard, tight.

460 - 490 SHALE - medium to dark grey, slightly silty to very silty texture, micromicaceous in part, slightly carbonaceous, non-calcareous, platy, soft to medium hard;
Minor SANDSTONE - stringers, transparent to translucent, quartzose, very fine to fine grained, sub-angular, medium sorted, well cemented with silty and calcareous matrix, blocky, hard, tight.

490 - 510 SHALE - medium to dark grey, silty texture, slightly micromicaceous, sub-fissile to blocky, non-calcareous, medium soft.

510 - 530 SHALE - medium to dark grey, very silty texture, micromicaceous, slightly bitumenous, non-calcareous, blocky to sub-fissile, medium soft to soft;
Minor SANDSTONE - stringers, transparent to translucent, quartzose, very fine to fine grained, sub-rounded, medium sorted, cemented with slightly calcareous matrix, carbonaceous in part, rarely

glauconitic, platy, medium hard, tight;
 Trace BENTONITE - white to bluish grey, amorphous, very soft.

530 - 545 SHALE - medium to dark greyish brown, very silty texture, slightly micromicaceous, rarely carbonaceous, non-calcareous, sub-fissile to platy, medium soft to soft.

545 - 555 SHALE - medium to dark grey, very silty texture, micromicaceous, slightly carbonaceous, non-calcareous, sub-fissile to blocky, appears to be bentonitic in part, soft to very soft;
 Minor SANDSTONE - interbedded stringers, transparent to mainly translucent, quartzose, very fine grained, sub-angular to sub-rounded, well sorted, calcareous matrix, rarely glauconitic, platy, medium soft, tight.

AIR DRILLING ENCOUNTERED WATER AT TOP OF WABAMUN
 SO FOAM WAS ADDED WHICH RESULTED IN NO CUTTINGS
 FROM 555m - 1197m.

1197 - 1210 SHALE - light to mainly medium grey, silty texture, very micromicaceous, very slightly carbonaceous, slightly calcareous, rarely bentonitic in part, blocky to sub-fissile, medium soft;
 Trace LIMESTONE - stringers, cream to very light brown, microcrystalline, argillaceous, blocky, medium hard, tight.

1210 - 1240 SHALE - 50%, medium to dark grey, smooth, slightly micromicaceous, non-calcareous, platy, medium soft;
SILTSTONE - 40%, very light to light grey, calcarenitic, micromicaceous, some biotite inclusions, slightly argillaceous, blocky to sub-fissile, soft and brittle;
LIMESTONE - 10%, stringers, white to cream, micro to very finely crystalline, slightly argillaceous, blocky, medium hard, tight;
 Trace Crinoid fragments;
 Rare PYRITE - nodules.

1240 - 1260 SHALE - 50%, medium to dark grey, smooth, micromicaceous, non-calcareous, slightly carbonaceous, platy, sub-fissile, medium soft;
SILTSTONE - 35%, very light to light grey, calcarenitic, micromicaceous, some skeletal inclusions, very calcareous, sub-angular, well sorted, platy, soft and brittle;
LIMESTONE - 15%, interbedded, cream, micro to very finely crystalline, argillaceous, Ostracod inclusions

throughout, blocky, medium hard, tight;
 Trace PYRITE - nodules.

1260 - 1280 SHALE - 80%, medium to dark grey, smooth, slightly micromicaceous, non-calcareous, rarely carbonaceous, sub-fissile, platy, medium soft;
LIMESTONE - 10%, stringers, cream to creamy white, crypto to very finely crystalline, argillaceous, platy, medium hard;
SILTSTONE - 10%, very light to light grey, calcarenitic, very micromicaceous, sub-angular, well sorted, limy matrix, platy, tight;
 Trace MARL - very light green, smooth, calcareous, soft;
 Trace SHELLS - fragments.

1280 - 1300 SHALE - 70%, medium to mainly dark grey, smooth, micromicaceous, carbonaceous, flecks in part, non-calcareous, sub-fissile, platy, soft;
SILTSTONE - 25%, translucent to very light grey, quartzose, micromicaceous, rarely carbonaceous, sub-angular, well sorted, well cemented with calcareous matrix, platy, medium hard, tight;
 Minor LIMESTONE - stringers, cream to light brown, crypto to microcrystalline, argillaceous, platy, medium hard, tight.

BEAVERHILL LAKE : 1300m

1300 - 1310 SILTSTONE - 50%, dark to very dark brown, quartzose, micaceous, sub-angular, well sorted, cemented with slightly calcareous matrix, platy, hard, tight;
SHALE - 40%, light to medium grey, smooth, slightly micromicaceous, non-calcareous, platy, medium soft;
LIMESTONE - 10%, creamy white, micro to very finely crystalline, argillaceous, blocky, medium hard, tight.

1310 - 1325 SHALE - 90%, medium to rarely dark grey, smooth, rarely micromicaceous, non-calcareous, sub-fissile, platy, medium soft;
SANDSTONE - 10%, translucent to very light grey, quartzose, very fine grained, sub-angular, well sorted, slightly micaceous, cemented with calcareous matrix, platy, hard, tight;
 Trace LIMESTONE - as above.

MUSKWA : 1325m

1325 - 1340 SHALE - 85%, medium grey, smooth, slightly

micromicaceous, non-calcareous, sub-fissile, platy, medium soft;
LIMESTONE - 15%, stringers, cream to creamy white, micro to very finely crystalline, very argillaceous, platy to blocky, hard, tight.

1340 - 1348 SHALE - 80%, light to medium grey, smooth, slightly micromicaceous, non-calcareous, platy, medium soft; LIMESTONE - 20%, interbedded stringers, cream to creamy white, micro to very finely crystalline, argillaceous, rare Ostrapod inclusions, platy, medium hard, tight.

SLAVE POINT : 1348m

1348 - 1359 LIMESTONE - cream to occasionally medium brown, lithographic to very finely crystalline, amorphous and chalky texture in part, argillaceous, bioclastic, trace poor yellow fluorescence, no cut, platy, medium hard, tight;
 Trace PYRITE - nodules;
 Trace Shell, Coral, Crinoid and Ostracod fragments.

1359 - 1375 LIMESTONE - creamy light brown to medium brown, cryptocrystalline to finely granular, argillaceous, bioclastic with well developed porous Algal stringers, fair to good intergranular porosity and fair permeability, poor to fair lemon-yellow fluorescence, no cut but some Gilsonite coating of cavities observed, reservoir stringers appear to have approximately 12% porosity, mainly tight and hard but porous stringers very brittle.

1375 - 1380 LIMESTONE - cream to medium brown, cryptocrystalline to finely granular, argillaceous, bioclastic and granular, trace scattered poor intergranular and vuggy porosity, limited permeability, no fluorescence or cut, platy, hard.

FORT VERMILION : 1380m

1380 - 1395 LIMESTONE - 80%, creamy white to medium brown, microcrystalline to finely granular, argillaceous, bioclastic, trace intergranular and vuggy porosity, no permeability, no shows, platy, medium hard, mainly tight;
SHALE - 20%, light to medium grey and light green, smooth, slightly micromicaceous, slightly calcareous, platy, sub-fissile, medium soft;
 Trace Shell fragments.

WATT MOUNTAIN : 1395m

1395 - 1405 LIMESTONE - 80%, white to light and medium brown, cryptocrystalline to finely granular, argillaceous, bioclastic, stringers, poor to fair intergranular porosity, fair permeability, slight lemon-white fluorescence, no cut, platy, mainly tight;
LIMESTONE - 10%, white, microcrystalline, amorphous, chalky texture, platy, soft, tight;
SHALE - 10%, light to medium grey, smooth, very slightly calcareous, platy, medium soft;
Trace green SHALE;
Rare Shell fragments.

BISTCHO : 1405m

1405 - 1425 DOLOMITE - light to medium brown, very fine to finely crystalline, anhydritic, poor pin-point and poor intercrystalline porosity, yellow fluorescence throughout, weak milky white cut, fair show, platy, hard, mainly tight;
Trace SHALE - stringers, light to medium grey, smooth, slightly calcareous, platy, medium soft.

MUSKEG : 1425m

1425 - 1430 ANHYDRITE - 75%, creamy-white and silvery grey, microcrystalline, microsucrosic in part, mainly chalky, soft;
DOLOMITE - 25%, light brown, micro to very finely crystalline, sucrosic texture, platy, tight, hard.

1430 - 1435 ANHYDRITE - 50%, translucent to white, microcrystalline, microsucrosic, blocky, soft;
DOLOMITE - 50%, interbedded, light brown, crypto to very finely crystalline, anhydritic, platy, hard, tight.

1435 - 1450 ANHYDRITE - translucent to white and very light grey, crypto to microcrystalline, microsucrosic texture common, rarely chalky and amorphous, blocky, medium soft, tight;
DOLOMITE - 10%, interbedded, light brown, micro to very finely crystalline, anhydritic, platy, hard, tight;
SHALE - cavings very bad.

1450 - 1460 ANHYDRITE - 75%, translucent to white, crypto to

microcrystalline, microsucrosic in part, rarely chalky and amorphous, platy, hard, tight;
DOLOMITE - 25%, interbedded, creamy light brown to medium brown, very finely crystalline, anhydritic, trace scattered fair intercrystalline porosity, no shows, mainly tight, platy, hard.

1460 - 1480 ANHYDRITE - 50%, translucent to white, crypto to microcrystalline, platy, hard, tight;
DOLOMITE - 50%, interbedded, medium brown, very fine to finely crystalline, anhydritic, trace fair intercrystalline and poor pin-point porosity, no shows, platy, hard, mainly tight.

1480 - 1495 DOLOMITE - 75%, light to medium brown, crypto to finely crystalline, anhydritic, trace scattered poor intercrystalline porosity, no shows, mainly tight, platy, hard;
ANHYDRITE - 25%, translucent to white, crypto to microcrystalline, platy, hard, tight.

1495 - 1510 DOLOMITE - 80%, medium to dark brown, micro to very finely crystalline, occasionally fragmental, very anhydritic, trace poor intercrystalline porosity, no shows, mainly tight, platy, very hard;
ANHYDRITE - 10%, translucent to white, crypto to microcrystalline, platy, medium hard, tight;
SHALE - 10%, medium grey, smooth, dolomitic, platy, medium soft.

KEG RIVER : 1510m

1510 - 1520 DOLOMITE - 95%, cream to medium brown, micro to finely crystalline, very anhydritic, sucrosic texture common, rarely fragmental, trace poor scattered intercrystalline porosity, poor lemon fluorescence, slight cut, platy, hard, mainly tight;
SHALE - 5%, medium grey, smooth, micromicaceous, non-calcareous, platy, medium soft;
Minor ANHYDRITE - translucent to white, micro to very finely crystalline, sucrosic texture, platy, medium hard, tight.

1520 - 1530 DOLOMITE - semi-translucent to mainly medium brown, finely crystalline, anhydritic, trace poor intercrystalline porosity, some gilsonite coating of cavities, poor lemon-yellow fluorescence, white milky cut, platy, hard, mainly tight.

PRE-DEVONIAN : 1530m

1530 - 1545 QUARTZITE - translucent to buff and light brown, very fine to occasionally fine grained, siliceous, dolomitic, well sorted, platy, very hard, tight; Minor DOLOMITE - stringers, medium to dark brown, very fine to finely crystalline, slightly anhydritic, blocky, hard, tight.

1545 - 1560 QUARTZITE - translucent to buff through medium brown, micro to very fine grained, silty texture, siliceous, well sorted, platy, very hard, tight.

TOTAL DEPTH : 1560m

PARAMOUNT ET AL CAMERON B - 08

GAS REPORTS

Date	Depth	Total Units	C ₁ %	C ₂ %	C ₃ %	Comment
Jan 28	1200-1243	7-19	---	---	---	Background
Jan 29	1243-1267					Repairs
Jan 30	1267-1318	5	.048	tr	---	Background
Feb 01	1318-1340	25	.02	.005	---	Background
	1340-1355	1	.01	tr	---	Background
	1355-1370	3.1	.025	.006	---	Background
	Shows					
	1360-1362	9	.08	.016	---	Show
	1369-1370	20	.16	.029	tr	Show
Feb 03	1370-1375					Repairs
	1375-1405	2.5	.02	.005	---	Background
	Shows					
	1389-1391	12	.10	.02	.002	Show
	1403-1405	38	.34	.04	.001	Show
Feb 04	1405-1427	10	.09	.01	---	Background
	1427-1456	5	.042	.008	---	Background
	1456-1496	14	.10	.027	.005	Background
	Shows					
	1408-1409	20	.17	.03	.001	Show
	1412-1416	30	.26	.04	.002	Show

PARAMOUNT ET AL CAMERON B - 08

GAS REPORTS - continued

Date	Depth	Total Units	C ₁ %	C ₂ %	C ₃ %	Comment
Feb 04	1445-1447	20	.15	.034	.005	Show
	1457-1460	24	.18	.045	.008	Show
	1467-1469	50	.39	.081	.016	Show
	1481-1484	38	.29	.07	.015	Show
Feb 05	1496-1501	14	.09	.03	.006	Background
	1501-1510	2	.018	.002	---	Background
	Shows					
	1499-1500	21	.15	.04	.009	Show
Feb 06	1510-1560	2	.018	.001	---	Background
	Shows					
	1512-1516	12	.09	.023	.002	Show
	1516-1517	34	.30	.045	.001	Show
	1517-1518	22	.16	.043	.009	Show

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 above the Slave Point carbonates. The top of the Wabamun at 557 metres was water saturated which necessitated converting to Foam (soap detergent). Foam was used down to 1197 metres, at which point conversion was made to a regular "chem-gel" mud system which was used to total depth, 1560 metres. No cuttings were produced between 557 metres and 1197 metres, which covered the Wabamun, Twin Falls and Hay River interval of the hole.

The Slave Point was encountered at 1347 metres (-557.1m) and was 37 metres thick. The formation consisted of a limestone sequence which was tight over the upper few metres but below were developed several porous Algal stringers. The limestone was creamy light brown to medium brown, cryptocrystalline to finely granular, bioclastic with well developed porous Algal stringers. Fair to good intergranular porosity and fair permeability was exhibited and was associated with a poor to fair lemon-yellow fluorescence with a trace of Gilsonite. An attempt was made to drillstem test this porosity immediately after penetration but a misrun resulted due to severe plugging of the Tool. The Keg River was encountered at 1510 metres (-720.1m) and consisted of a cream to medium brown, micro to finely crystalline, anhydritic dolomite which was rarely fragmental. The interval was mainly tight but there were traces of poor scattered stringers of intercrystalline porosity that were associated with slight lemon-yellow fluorescence and a white milky cut. A drillstem test was attempted after Log evaluations but resulted in a misrun due to a plugged Tool.

The Sulphur Point was penetrated at 1412 metres (-622.1m) and was ten metres thick. The formation consisted of a light to medium brown, very fine to finely crystalline, anhydritic dolomite. The interval was mainly tight but there were lenses which contained traces of poor pin-point and poor intercrystalline porosity which was associated with a yellow fluorescence and a weak milky white

cut. The Sulphur Point was evaluated by drillstem test number three over the interval 1410 - 1420 metres. On valve-open there was gas to surface immediately at 4248 m³/d and increased to 8887 m³/d in 30 minutes, stabilizing at 8500 m³/d with no water.

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 CCl₄.

Based on the above information and previous knowledge of the reservoirs in the general area, production casing was run to total depth (1560 m K.B.). The well is currently classified as a Potential Gaswell. The rig was released on February 9, 1989.

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 19, 1989

DAYS FROM SPUD: 0

DEPTH: 55m PROGRESS: 55m HRS ON BTM: 1-1/2

OPERATION AT 0800 HRS: Drilling 311mm hole.

MUD PROPERTIES: Wgt 1010 Vis 32 W.L. --- F.C. --- pH ---

SURVEYS: 37m = 1/4^o.

REMARKS: Spudded at 0615 hours January 19, 1989.

GEOLOGIST: A. Borkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 20, 1989

DAYS FROM SPUD: 1

DEPTH: 326m PROGRESS: 270m HRS ON BTM: 11-3/4

OPERATION AT 0800 HRS: Pull out of Hole. Change Pump Head.

MUD PROPERTIES: Wgt 1230 Vis 38 W.L. --- F.C. --- pH ---

SURVEYS: 65m = $1/2^{\circ}$, 92m = $3/4^{\circ}$, 127m = $7/8^{\circ}$, 156m = $1/2^{\circ}$,
194m = $3/4^{\circ}$, 231m = 1° , 260m = 1° , 298m = $3/4^{\circ}$.

REMARKS:

GEOLOGIST: H. Boekn

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 21, 1989

DAYS FROM SPUD: 2

DEPTH: 390m PROGRESS: 64m HRS ON BTM: 2-1/4

OPERATION AT 0800 HRS: Waiting for Float Collar.

MUD PROPERTIES: Wgt 1220 Vis 84 W.L. --- F.C. --- pH ---

SURVEYS: 340m = 1.

REMARKS: Damaged Float Collar which had to be replaced.

GEOLOGIST:

H. Loeke

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 22, 1989

DAYS FROM SPUD: 3

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

OPERATION AT 0800 HRS: Heading up.

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

SURVEYS: 390m = 1.

REMARKS: Surface Casing:

Ran 31 its, 244.5mm, 53.6 kg/m. J-55 LT&C Prudential Casing. Landed at 390m K.B. Cemented with 31 tonnes Class "G" cement + 3% CaCl₂. Plug down at 1718 hours January 21, 1989.

Official Ground Elevation : 786.20m
K.B. to Ground : 3.70m
Kelly Bushing : 789.90m

GEOLOGIST: A. Coekin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 23, 1989

DAYS FROM SPUD: 4

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

OPERATION AT 0800 HRS: Pressure Testing B.O.P's.

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

SURVEYS: ----

REMARKS: Welded on Casing Bowl. Nipped up B.O.P's.
Welding and installing Air Equipment.
Pressure Testing B.O.P's.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 24, 1989

DAYS FROM SPUD: 5

DEPTH: 445m PROGRESS: 55m HRS ON BTM: 1-1/2

OPERATION AT 0800 HRS: Air drilling 222mm hole.

MUD PROPERTIES: Wgt 1080 Vis 46 W.L. --- F.C. --- pH ---

SURVEYS: ----

REMARKS: Ran Formation Leak-Off Test below Shoe.
Pressured up to 4800 kPa.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 25, 1989

DAYS FROM SPUD: 6

DEPTH: 806m PROGRESS: 36.1m HRS ON BTM: 18

OPERATION AT 0800 HRS: Air drilling 222mm hole.

MUD PROPERTIES: Wgt 1108 Vis 68 W.L. --- F.C. --- pH ---

SURVEYS: 540m = $3/4^{\circ}$, 693m = $3/4^{\circ}$

REMARKS: Formation Top:
Wabamun 557m (+232.1m)

Took on water at top of Wabamun so converted to Foam at 577m. Lost circulation at 805m. Had brief Gas blow with 1.5m Flame from blooey line. Hole pulled tight, circulated and worked pipe. Pulled up 5 singles and reamed through tight spot three times at 770m. Cleaned to bottom and drilled to 806m.
R.O.P. 20m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 26, 1989

DAYS FROM SPUD: 7

DEPTH: 1010m PROGRESS: 183m HRS ON BTM: 10

OPERATION AT 0800 HRS: Drilling 222mm hole with air and foam.

MUD PROPERTIES: Wgt 1120 Vis 65 W.L. --- F.C. --- pH ---

SURVEYS: 894m = 1°

REMARKS: Drilled, tripped for Bit. Reamed Bridges (476m-500m).
Reamed to bottom from 771m to 827m.

Formation Top:
Twin Falls 852m (-62.1m).

GEOLOGIST: H. Cooken

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 27, 1989

DAYS FROM SPUD: 8

DEPTH: 1197m PROGRESS: 187m HRS ON BTM: 10

OPERATION AT 0800 HRS: Running in hole.

MUD PROPERTIES: Wgt 1100 Vis 105 W.L. --- F.C. --- pH ---

SURVEYS: 1049m = 1-1/4", 1193m = MR.

REMARKS: Drilled and ran surveys to 1197m. Unable to regain full circulation after survey at 1103m. P.O.H. and filled hole with 4.0m³ mud every 10 stands to 700m. Unable to gain circulation. Pumped two 15m³ Pills. Circulated 1/2 hour. Running in hole and reaming tight spots.

GEOLOGIST: H. Coekin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 28, 1989

DAYS FROM SPUD: 9

DEPTH: 1246m PROGRESS: 49m HRS ON BTM: 16

OPERATION AT 0800 HRS: Control drilling.

MUD PROPERTIES: Wgt 1115 Vis 47 W.L. 6.5 F.C. 1.0 pH 9.5

SURVEYS: 1212m = 4-1/4°, 1232m = 7°.

REMARKS: R.I.H. and reamed tight spots. Condition mud due to foaming. Clean to bottom. Drilled and surveyed at 1212m = 4-1/4. Drilled and fanned hole, survey at 1232m = 7. Drilled and fanned hole to 1246m. R.O.P. 2.0m/hour.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 29, 1989

DAYS FROM SPUD: 10

DEPTH: 1270m PROGRESS: 24m HRS ON BTM: 12-1/2

OPERATION AT 0800 HRS: Controlled drilling.

MUD PROPERTIES: Wgt 1160 Vis 49 W.L. 8.0 F.C. 1.5 pH 9.5

SURVEYS: 1250m = 6°, 1260m = 6-3/4°.

REMARKS: Control drilled to 1267m and surveyed twice. Bit balled up. Round Trip. Resurveyed at 1193m = 6-3/4, 1212m = 7. Drilled to 1270m. R.O.P. 1.5m/hour.

GEOLOGIST:

H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 30, 1989

DAYS FROM SPUD: 11

DEPTH: 1318m PROGRESS: 48m HRS ON BTM: 11-1/2

OPERATION AT 0800 HRS: Pulling out of hole for Repairs.

MUD PROPERTIES: Wgt 1150 Vis 49 W.L. 7.5 F.C. 1.0 pH 9.0

SURVEYS: 1270m = 6-1/8°, 1279m = 5-1/4°, 1299m = 4°.

REMARKS: Control drill and survey. Gradually increasing W.O.B. from 5,000 daN to 10,000 daN. Repaired hydraulic motor coupler on Swivel. Drilled to 1318m. R.O.P. 4.2m/hour. Work on Pump Clutch - unable to repair so pulled drill pipe into Surface Casing and wait on parts.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: January 31, 1989

DAYS FROM SPUD: 12

DEPTH: 1318m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Cleaning to bottom.

MUD PROPERTIES: Wgt 1150 Vis 52 W.L. 7.5 F.C. 1.0 pH 10.5

SURVEYS: ----

REMARKS: Repaired Pump Clutch. P.O.H. Removed Grant Head and installed flow nipple. R.I.H. and clean to bottom.

GEOLOGIST: *W. Corken*

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 1, 1989

DAY FROM SPUD: 13

DEPTH: 1370m PROGRESS: 52m HRS ON BTM: 11-1/4

OPERATION AT 0800 HRS: Handling DST Tools.

MUD PROPERTIES: Wgt 1120 Vis 57 W.L. 6.5 F.C. 2.0 pH 10.5

SURVEYS: 1327m = 2-1/4°, 1365m = 2°

REMARKS: R. I. H. and cleaned last 5 singles to bottom.
Drilled to 1370m. Circulated up bottom hole sample.
Dummy tripped and P.O.H. Make up Test Tool for
DST #1 1353m-1370m

Sample Top:
Slave Point 1348m (-558.1m)

GEOLOGIST: *H. Coekin*

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 2, 1989

DAYS FROM SPUD: 14

DEPTH: 1370m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Laying down Test Tools.

MUD PROPERTIES: Wgt 1120 Vis 57 W.L. 6.5 F.C. 2.0 pH 10.5

SURVEYS: ----

REMARKS: Made up Test Tools. R.I.H. with DST #1 1351m-1370m to test Slave Point Formation. Ran DST and recovered Tool.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 3, 1989

DAYS FROM SPUD: 15

DEPTH: 1417m PROGRESS: 47m HRS ON BTM: 11-3/4

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1180 Vis 52 W.L. 6.5 F.C. 1.0 pH 9.0

SURVEYS: -----

REMARKS: Layed down Test Tool. DST #1 was misrun due to plugging. Unplugged Drill Collar. R.I.H. and cleaned to bottom. Replaced wash pipe and packing. Drilled to 1417m R.O.P. 4m/hour.

GEOLOGIST: A. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 4, 1989

DAYS FROM SPUD: 16

DEPTH: 1500m PROGRESS: 83m HRS ON BTM: 20

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1140 Vis 70 W.L. 7.0 F.C. 1.0 pH 9.0

SURVEYS: 1403m = MR, 1413m = MR, 1413m = 2-1/2^o

REMARKS: Sample Tops:
Watt Mountain 1395m (-605.1m)
Bistcho-Sulphur Point 1405m (-615.1m)
Muskeg 1425m (-635.1m)
Keg River 1510m (-720.1m)

Drilled and Surveys to 1500m.

GEOLOGIST: H. Corkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 5, 1989

DAYS FROM SPUD: 17

DEPTH: 1515m PROGRESS: 15m HRS ON BTM: 7

OPERATION AT 0800 HRS: Drilling 222mm hole.

MUD PROPERTIES: Wgt 1120 Vis 50 W.L. 10 F.C. 2.0 pH 11.0

SURVEYS: 1500m = 3°

REMARKS: P.O.H. Reamed back 1423m-1404m. Hole very tight (2-1/4 hours). R.I.H. with DC's. Relocked hydraulic Swivel Motor. Repaired Air Compressor and adjusted Brakes. R.I.H. to bottom. Drilled to 1515m. R.O.P. 2.1m/hour.

GEOLOGIST: H. Coekens

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

PARAMOUNT ET AL CAMERON
LOCATION: B - 08

DATE: February 6, 1989

DAYS FROM SPUD: 18

DEPTH: 1560m PROGRESS: 45m HRS ON BTM: 13

OPERATION AT 0800 HRS: Pulling out of hole to run Wireline Logs.

MUD PROPERTIES: Wgt 1150 Vis 85 W.L. 6.5 F.C. 1.0 pH 10.0

SURVEYS:

REMARKS: Repaired Pump. Drilled and reached Total Depth (1560m) at 2358 hours February 5, 1989. Circulated Bottom Hole sample. Dummy tripped to 1289m. Circulated hole clean and P.O.H. to Log.

Sample Tops:

Pre-Devonian 1530m (-740.1m)
Total Depth 1560m (-770.1m)

GEOLOGIST:

H. Boekan

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 7. 1989

DAYS FROM SPUD: 19

DEPTH: 1560m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Run in hole with DST #2.

MUD PROPERTIES: Wgt 1150 Vis 85 W.L. 6.5 F.C. 1.0 pH 10.0

SURVEYS: 1555m = 3-1/4°.

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

Logs Run : DIL-SFL-GR/SP-Ten 389.8m-1557.8m
BHC-Sonic-GR/Cal 389.8m-1547.5m
CNL-LDT-GR-Ten 389.8m-1558.8m
Microlog-GR-Ten 389.8m-1552.0m
Cyberlook 1325.0m-1559.6m

Rigged in Baker for DST #2 Keg River 1512m-1522m
Run Test Tool to bottom.

GEOLOGIST: H. Lorkin

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

DAYS FROM SPUD: 20

DEPTH: 1560m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Running in hole for clean-out Trip.

MUD PROPERTIES: Wgt 1150 Vis 60 W.L. 7.8 F.C. 1.0 pH 10.0

SURVEYS: -----

REMARKS: Ran DST's #2 and #3.

GEOLOGIST: H. Corkin.

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

PARAMOUNT ET AL CAMERON
LOCATION: B - 08

DATE: February 9, 1989

DAYS FROM SPUD: 21

DEPTH: 1560m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Cementing Production Casing.

MUD PROPERTIES: Wgt 1110 Vis 67 W.L. --- F.C. --- pH ---

SURVEYS: ----

REMARKS: Started cementing casing after 23.25 hours of Rig repairs.

GEOLOGIST: *Sh. Corkin*

SOUTHERN CROSS GEOLOGICAL CONSULTING LIMITED

DAILY DRILLING REPORT

LOCATION: PARAMOUNT ET AL CAMERON
B - 08

DATE: February 10, 1989

DAYS FROM SPUD: 22

DEPTH: 1560m PROGRESS: ---- HRS ON BTM: ----

OPERATION AT 0800 HRS: Rig released.

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

SURVEYS: ----

REMARKS: Status: Potential Gaswell.

Rig Release: 2200 hours February 9, 1989.

FINAL REPORT.

GEOLOGIST: H. Corkin

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON B-08

Dst. # One Interval: 1351m - 1370m

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

Zone(s): Slave Point

Times: Preflow: 10 mins.
Initial Shut-in: 60 mins.
Valve Open: 30 mins.
Final Shut-in: 150 mins.

Results: Preflow: Weak Air Blow. Steady throughout.

V.O.: Faint Air Blow. T.S.T.M. N.G.T.S.

Recovered: 60m Inhibitor and Water Cut Mud.

Pressures: Initial Hydrostatic (IHP): -----
Final Hydrostatic (FHP): -----
Preflow (Pref.): -----
Initial Shut-in (I.S.I.P.): -----
Final Shut-in (F.S.I.P.): -----
Initial Flow (IFP): -----
Final Flow (FFP): -----

Remarks: Misrun. Plugged Tool.

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON B-08

Dst. # Two

Interval: 1512m - 1522m

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

Zone(s): Keq River

Times: Preflow: 10 mins. Initial Shut-in: 30 mins. Valve Open: 60 mins. Final Shut-in: 120 mins.

X
PLATE 2N 503
90
110

ACTUAL
22
60
110

Results: Preflow: Weak Air Blow to Fair in 5 minutes. Steady throughout.

V.O.: Fair Air Blow after 10 minutes. Declined. N.G.T.S.

Recovered: 00m

Pressures: Initial Hydrostatic (IHP): 18310 kPa

Final Hydrostatic (FHP): 18052 kPa

Preflow (Pref.): 9638 kPa

Initial Shut-in (I.S.I.P.): 10388 kPa

Final Shut-in (F.S.I.P.): 10466 kPa

Initial Flow (IFP): 10388 kPa

Final Flow (FFP): 10388 kPa

Remarks: Misrun. Tool was plugged during the Test.

DRILL STEM TEST RESULTS

Well Name: PARAMOUNT ET AL CAMERON B-08

Dst. # Three Interval: 1410m - 1420m

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

Zone(s): Sulphur Point

Times:	Preflow:	10 mins.	<u>ACTUAL</u>
	Initial Shut-in:	30 mins.	13
	Valve Open:	60 mins.	23
	Final Shut-in:	120 mins.	53
			121

Results: Preflow: Strong Blow in 3 minutes. G.T.S in 7 minutes
at 402 m³/d.

V.O.: Very Strong Gas Blow throughout. G.T.S. immediately
at 4248 m³/d and incr. to 8887 m³/d in 30 minutes.
Stabilized at 8500 m³/d.

Recovered: 156m mud.

Pressures:	Initial Hydrostatic (IHP):	17267 kPa
	Final Hydrostatic (FHP):	17129 kPa
	Preflow (Pref.):	889 kPa
	Initial Shut-in (I.S.I.P.):	9733 kPa
	Final Shut-in (F.S.I.P.):	9672 kPa
	Initial Flow (IFP):	1233 kPa
	Final Flow (FFP):	1491 kPa

Remarks: Successful Test. Results suggest average permeability.
Minor plugging during the Flows. This did not seriously affect
the results. The extrapolated shut-in pressures suggest a
possible 1.4% reservoir depletion.

PARAMOUNT ET AL CAMERON B - 08

DEVIATION SURVEYS

<u>Depth Metres</u>	<u>Deviation Degrees</u>	<u>Change Degrees</u>	<u>Interval Metres</u>	<u>Hole Size Millimetres</u>
37	1/4	+ 1/4	37	311
65	1/2	+ 1/4	28	311
92	3/4	+ 1/4	27	311
127	7/8	+ 1/8	35	311
156	1/2	- 3/8	29	311
194	3/4	+ 1/4	38	311
231	1	+ 1/4	37	311
260	1	---	29	311
298	3/4	- 1/4	38	311
340	1	+ 1/4	42	311
390	1	---	50	311
540	3/4	- 1/4	150	222
693	3/4	---	153	222
894	1	+ 1/4	201	222
1049	1-1/4	+ 1/4	155	222
1193	6-3/4	+5-1/2	144	222
1212	7	+ 1/4	119	222
1232	7	---	20	222
1250	6	- 1	18	222
1260	6-3/4	+ 3/4	10	222

PARAMOUNT ET AL CAMERON B - 08

DEVIATION SURVEYS - continued

<u>Depth Metres</u>	<u>Deviation Degrees</u>	<u>Change Degrees</u>	<u>Interval Metres</u>	<u>Hole Size Millimetres</u>
1270	6-1/8	- 5/8	10	222
1279	5-1/4	- 7/8	9	222
1299	4	-1-1/4	20	222
1327	2-1/4	-1-3/4	28	222
1365	2	- 1/4	38	222
1403	MR	---	38	222
1413	2-1/2	+ 1/2	10	222
1500	3	+ 1/4	87	222
1555	3-1/4	+ 1/4	55	222

PARAMOUNT ET AL CAMERON B - 08

BIT SUMMARY

<u>NO.</u>	<u>TYPE</u>	<u>SIZE</u>	<u>IN</u>	<u>OUT</u>	<u>METRES</u>	<u>HOURS</u>	<u>T-B-G</u>
1A	X3A	311	0	55	55	1-1/2	3-3-I
2A	HW	311	55	203	148	6-3/4	5-2-I
3A	HP11	311	203	390	187	15-1/2	3-1-I
1	J-22	222	390	827	437	20-1/4	2-1-I
2	J-11	222	827	1267	440	68	3-2-I
3	HP51A	222	1267	1370	103	92-3/4	1-1-I
3RR	HP51A	222	1370	1501	131	124-1/2	7-4-1/8
4	HP51A	222	1501	1560	59	144-1/2	4-3-I