



PARAMOUNT RESOURCES LTD.

4100 - FIRST CANADIAN CENTRE, 350 - 7TH AVENUE S.W.
CALGARY, ALBERTA T2P 3W5
TELEPHONE: (403) 266-2047
FAX: (403) 262-7994

Box 2

9211-P33-4-2,

OTTAWA COPY

CANADA OIL AND GAS LANDS ADMINISTRATION ADMINISTRATION DU PETROLE ET DU GAS JUN 6 1990 ENGINEERING AND CONTROL TECHNIQUE ET DU CONTRÔLE

**FINAL WELL REPORT
FOR
PARAMOUNT
ET AL
CAMERON L-47**

FINAL WELL REPORT
FOR
PARAMOUNT ET AL CAMERON L-47

PARAMOUNT RESOURCES LTD.

4000 First Canadian Centre
350 - 7th Avenue S.W.
CALGARY, Alberta
T2P 3W5

Michael Cholach, P.Geol.

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A. INTRODUCTION

1. Summary

The Paramount et al Cameron L-47 well was drilled by Paramount Resources Ltd. during the first quarter of 1989 to explore for reserves of natural gas in the Slave Point, Sulphur Point, and Keg River Formations. The drilling contractor was Sierra Drilling Ltd. The rig was a Sierra 5000 top drive unit with a hydraulic pipe handling system. The rig also has slant hole capability for angles from 45 degrees to 90 degrees. Rig capacity is 110,000 daN.

The L-47 well was drilled to a total depth of 1565 m. Surface hole (311 mm) was drilled to 390 m, cased with 244.5 mm casing, and cemented. The main hole (222 mm) was drilled to 1565 m. The hole was logged, logs run were:

DIL-SFL-GR-SP-Ten
BHC-SONIC-GR-CAL
CNL-LDT-GR-C1-C2-Ten
MICROLOG-GR-Ten
CYBERLOOK
VELOCITY MONITOR LOG.

A total of five drill stem tests were run to test the Slave Point, Sulphur Point, and Keg River Formations.

DST #1, Slave Point, 1408 m - 1430 m, recovered 45 m of mud and 187 m of MCSW, successful test.

DST #2, Keg River, 1486 m - 1510 m, OTS in 40 minutes, successful test.

DST #3, Keg River, 1510 m - 1534 m, recovered 18 m mud, 45 m OCM and 45 oil, successful test.

DST #4, Slave Point, 1335 m - 1359 m, misrun.

DST #5, Slave Point, 1335 m - 1359 m, recovered 85 m of inhibitor cut mud, successful test.

The well was cased with 139.7 mm casing and cemented in two stages. Stage #1 was unsuccessful and was later recemented with a service rig. The casing was cleaned with a bit and scraper. Computalog ran a bond log.

Several intervals of the Keg River Formation were evaluated. The first zone from 1542 m to 1547 m was perforated. A packer and tubing were run in the hole. The formation was acidized and then swabbed. Only black formation water was recovered and the tubing was pulled.

A bridge plug was then set above the perforations and a second interval in the Keg River was perforated from 1509.5 m to 1515 m. A packer and tubing were run in the hole, formation acidized, and then swabbed. Only black gassy formation water was recovered. The tubing was pulled, and a bridge plug was set above the perforations.

A third interval in the Keg River Formation was perforated from 1496.5 m to 1499.0 m. A packer, R and F nipples and tubing were run. The well was swabbed and flowed, total oil recovered was 15.3 m³.

A nitrified acid squeeze was performed and the well was flow tested at rates ranging from 2.2 m³ to 5.8 m³ per hour. Total oil produced was 82.9 m³.

An extended flow test was performed on the L-47 well from February 17, 1990 to March 15, 1990 inclusive. Total fluid recovery for this period was 963.90 m³ consisting of 810.50 m³ oil and 151.40 m³ water.

2. Locality Map (See Figure 1, Following Page)

B. GENERAL DATA

1. Well Name

Paramount et al Cameron L-47
Exploration Agreement No. 312
Grid Area: 60° 10' N, 117° 30' W

2. Well Location

Surveyed by conventional ground traverse methods to determine final position.

UTM Ref. Meridian: 117°

Coordinates: North 666 3498.35
East 46 3574.91

Lat. 60° 06' 31.55"
Long. 117° 39' 18.63"

3. Unique Well Identifier

300L476010117300

4. Operator And Drilling Contractor

Operator: Paramount Resources Ltd.
4000 First Canadian Centre
350 - 7th Avenue S.W.
Calgary, Alberta
T2P 3W5

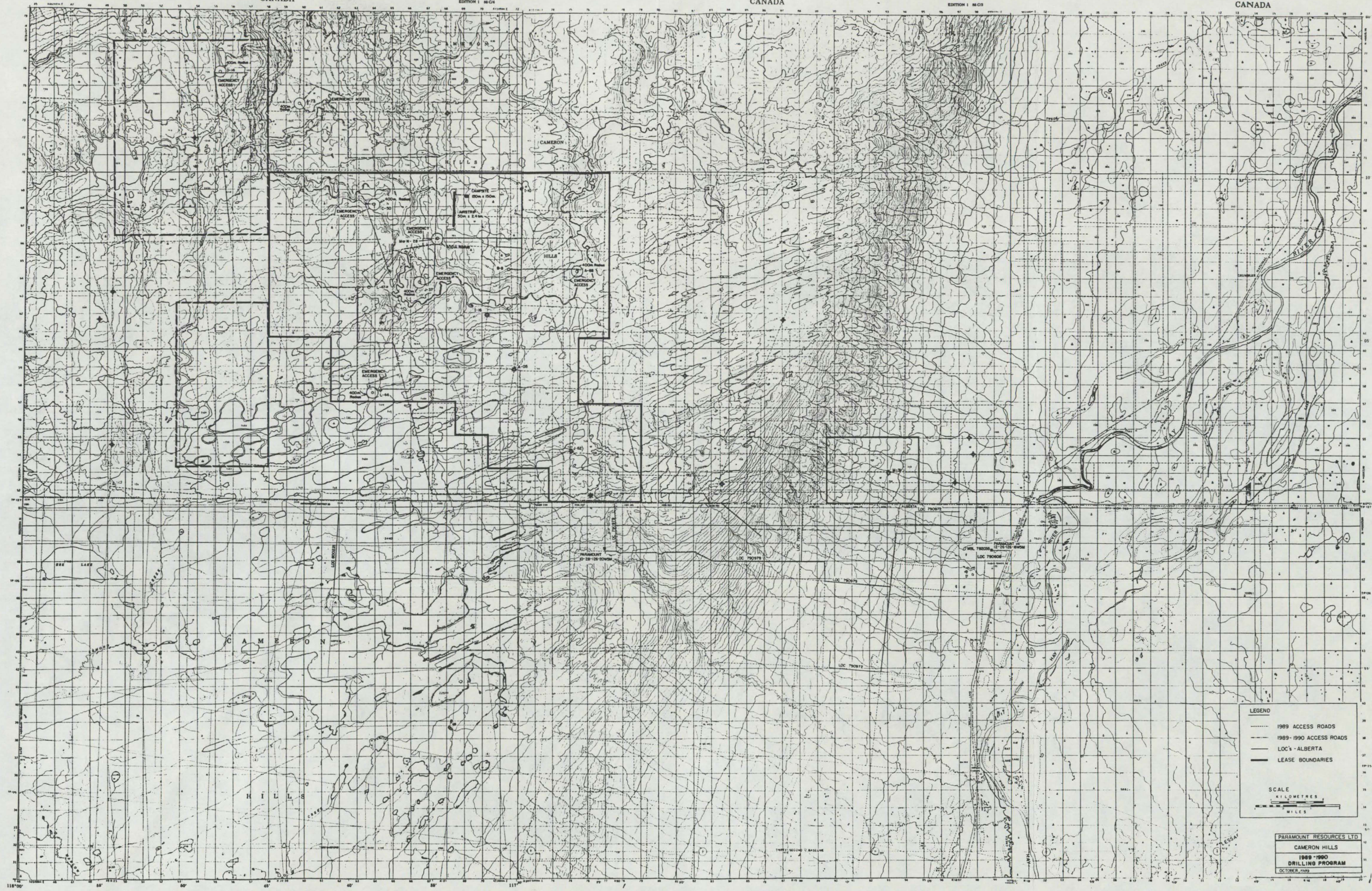
CANADA

EDITION 1 86 C4

CANADA

EDITION 1 86 C3

CANADA



LEGEND

- 1989 ACCESS ROADS
- 1989-1990 ACCESS ROADS
- LOC'S - ALBERTA
- LEASE BOUNDARIES

SCALE

KILOMETRES

MILES

PARAMOUNT RESOURCES LTD
CAMERON HILLS
1989-1990
DRILLING PROGRAM
OCTOBER, 1989

Drilling Contractor: Sierra Drilling Ltd.
P.O. Box 177
Medicine Hat, Alberta
T1A 7E8

- 5. Drilling Unit (N/A)
- 6. Position Keeping (N/A)
- 7. Support Craft (N/A)
- 8. Drilling Unit Performance (N/A)
- 9. Difficulties And Delays (N/A)

C. SUMMARY OF OPERATIONS

1. Elevations

Rotary Table 723.00 m

Ground 719.32 m

2. Total Depth

Drilled 1565.00 m

Logged 1562.50 m

PBTD 1507.00 m .

3. Date And Hour Spudded

Spudded 1989-02-11 at 13:00 hours.

4. Date Drilling Completed

1989-02-27

5. Date Of Rig Release

1989-03-06

6. Well Status

Shut In.

7. Hole Sizes And Depth

Surface Hole 311 mm - 390 m

Main Hole 222 mm - 1565 m

See Table 1 for Bit Record. (Following Page).

8. Casing And Cement Record

Surface Casing: Ran 30 joints, ⁴224.5 mm, 53.6 kg/m, J-55, LT&C Casing. Landed at 390.05 mKB. Cemented with 31 tonnes Class 'G' cement + 3% CaCl₂.

Production Casing: Ran 121 joints, 139.7 mm, 20.83 kg/m, J-55, ST&C Casing. Landed at 1562.50 mKB.

Cementing:

*Stage #1: Cemented with 12.0 tonnes 0.1.0 cement + 1.0% NFL₃ + 0.1% SPC 12000. Displaced cement with 3.5 m³ water + 16.2 m³ mud₃. Plug did not hit. Over displaced with 6.5 m³ mud before plug hit. Pressured up on EPC to 23 mPa. Dropped dart, opened DV tool, circulated for one hour.

Stage #2: Preflushed with 2.0 m³ water, cemented with 41.0 tonnes 0.1.8 cement + 0.75% T-10. Displaced cement with 16.8 m³ water. Bumped plug with 20 mPa, bled off to atmosphere. Held O.K. No fluid drop in annulus. Plug down 19:10 hours on 1989-02-05.

*Stage #1 recemented with service rig.

The calculated cement rise behind the 139.7 mm casing was 390 m.

Casing is held by a Barber 11" x 5 1/2" casing hanger and 11" x 5 1/2" secondary seal.

9. Sidetracked Hole (N/A)

TABLE 1

PARAMOUNT ET AL CAMERON L-47

BIT RECORD

<u>NO.</u>	<u>SIZE MM</u>	<u>MAKE</u>	<u>TYPE</u>	<u>DEPTH OUT</u>	<u>METRES DRILLED</u>	<u>HOURS</u>	<u>METRES PER HOUR</u>	<u>ACCUM HOURS</u>
1A	311	REED	HP11	137	137	7.00	7.00	7.00
2A	311	REED	HP11	372	235	15.75	14.90	22.75
3A	311	HW	X3A	390	18	.75	24.00	23.50
1	222	REED	HP43A	838	448	14.25	31.40	37.75
2	222	REED	HP43A	1165	327	16.00	20.40	53.75
3	222	REED	HP52A	1354	189	43.75	4.30	97.50
4	222	REED	HP52A	1430	76	19.75	3.80	117.25
5	222	SMITH	F-2	1532	102	35.75	2.80	153.00
6	222	REED	HP52A	1565	33	16.25	2.00	169.25

10. Drilling Fluid

Surface Hole (0 - 390 m):

This section of the hole was drilled with a bentonite-lime slurry which had the following properties:

Weight	1160 kg/m ³
Viscosity	45 to 92

Main Hole (390 m - 1565 mKB):

The interval from 390 m to 1156 m was drilled with air and foam. While air drilling, a reserve mud supply of 1100 kg/m³ mud was kept on hand. The mud had a viscosity of 40 - 45 and a pH of 9.0 - 9.5.

The interval from 1156 m to 1565 m was drilled with a gel-chem mud having a density ranging from 1100 kg/m³ to about 1150 kg/m³. Viscosity was maintained around 65. Alkalinity was controlled with caustic soda at 10.5 to 11.0. Fluid loss was maintained 8.0 or less with drispac.

11. Fishing Operations (N/A)

12. Well Kicks

None encountered.

13. Formation Leak-Off Test

A FLOT was run at 392 m (surface casing landed at 390 mKB). The fluid density was 1000 kg/m³ and had a gradient of 9.81 kg/m. The maximum pressure applied reached 4800 kPa with no formation breakdown giving a formation gradient of 22.1 kPa/m.

14. Time Distribution (See Table 2, Following Page)

15. Deviation Survey (N/A)

16. Abandonment Plugs (N/A)

17. Composite Well Record (In Pocket)

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 1 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 2 OF 10

DATE	FROM	TO	DRILL	CIRC. COND. MUD	TRIPS	RIG SERVICE	RIG REPAIRS	SLIP & CUT LINE	DEV. SURVEY	WIRELINE LOGS	RUN CASING CEMENT	W.O.C.	NIPPLE UP B.O.P.	TEST B.O.P.	DRILL STEM TEST	REAM	OTHER	B.O.P. DRILL	DEPTH 24:00 HOURS
1989-02-14	00:00	00:15														0.25			
1989-02-14	00:15	00:30			0.25														
1989-02-14	00:30	01:15	0.75																
1989-02-14	01:15	02:00		0.75															
1989-02-14	02:00	02:15							0.25										
1989-02-14	02:15	04:00			1.75														
1989-02-14	04:00	08:00									4.00								
1989-02-14	08:00	08:15				0.25													
1989-02-14	08:15	14:15									6.00								
1989-02-14	14:15	15:15									1.00								
1989-02-14	15:15	21:15										6.00							
1989-02-14	21:15	24:00											2.75						390
1989-02-15	00:00	16:00											18.00						
1989-02-15	16:00	18:45												2.75					
1989-02-15	18:45	20:45			2.00														
1989-02-15	20:45	24:00												3.25					390

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 3 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 06:30 HOURS

PAGE 4 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 5 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 6 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 7 OF 10

[illegible]

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 8 OF 10

DATE	FROM	TO	DRILL	CIRC. COND. MUD	TRIPS	RIG SERVICE	RIG REPAIRS	SLIP & CUT LINE	DEV. SURVEY	WIRELINE LOGS	RUN CASING CEMENT	W.O.C.	NIPPLE UP B.O.P.	TEST B.O.P.	DRILL STEM TEST	REAM	OTHER	B.O.P. DRILL	DEPTH 24:00 HOURS
1989-02-27	00:00	07:30	7.50																
1989-02-27	07:30	08:30		1.00															
1989-02-27	08:30	09:45			1.25														
1989-02-27	09:45	11:15		1.50															
1989-02-27	11:15	15:45			4.50														
1989-02-27	15:45	24:00								8.25									1565
1989-02-28	00:00	06:00								6.00									
1989-02-28	06:00	07:30															1.50		
1989-02-28	07:30	08:00			0.50														
1989-02-28	08:00	08:15				0.25													
1989-02-28	08:15	11:30			3.25														
1989-02-28	11:30	12:45		1.25															
1989-02-28	12:45	17:15			4.50														
1989-02-28	17:15	21:00															3.75		
1989-02-28	21:00	21:15				0.25													
1989-02-28	21:15	24:00			2.75														1565
1989-03-01	00:00	10:30													10.50				
1989-03-01	10:30	11:30		1.00															
1989-03-01	11:30	15:00			3.50														
1989-03-01	15:00	15:15					0.25												
1989-03-01	15:15	16:15			1.00														
1989-03-01	16:15	18:30															2.25		
1989-03-01	18:30	22:45			4.25														
1989-03-01	22:45	24:00													1.25				1565

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 06:30 HOURS

PAGE 9 OF 10

DATE	FROM	TO	DRILL	CIRC. COND. MUD	TRIPS	RIG SERVICE	RIG REPAIRS	SLIP & CUT LINE	DEV. SURVEY	WIRELINE LOGS	RUN CASING CEMENT	W.O.C.	NIPPLE UP B.O.P.	TEST B.O.P.	DRILL STEM TEST	REAM	OTHER	B.O.P. DRILL	DEPTH 24:00 HOURS
1989-03-02	00:00	05:30													5.50				
1989-03-02	05:30	08:00			2.50														
1989-03-02	08:00	08:15				0.25													
1989-03-02	08:15	09:45			1.50														
1989-03-02	09:45	12:00															2.25		
1989-03-02	12:00	15:30			3.50														
1989-03-02	15:30	18:15		2.75															
1989-03-02	18:15	22:45			4.50														
1989-03-02	22:45	24:00															1.25		1565
1989-03-03	00:00	00:45															0.75		
1989-03-03	00:45	03:30			2.75														
1989-03-03	03:30	07:00													3.50				
1989-03-03	07:00	08:00			1.00														
1989-03-03	08:00	08:15				0.25													
1989-03-03	08:15	11:30			3.25														
1989-03-03	11:30	13:45															2.25		
1989-03-03	13:45	18:00			4.25														
1989-03-03	18:00	20:30		2.50															
1989-03-03	20:30	24:00			3.50														1565
1989-03-04	00:00	01:00			1.00														
1989-03-04	01:00	03:15															2.25		
1989-03-04	03:15	06:15			3.00														
1989-03-04	06:15	13:00													6.75				
1989-03-04	13:00	17:00			4.00														
1989-03-04	17:00	20:30															3.50		
1989-03-04	20:30	24:00									3.50								1565

TABLE 2

PARAMOUNT ET AL CAMERON L-47

TIME DISTRIBUTION

SPUDED WELL ON 1989-02-11 AT 13:00 HOURS

RIG RELEASED ON 1989-03-06 AT 05:30 HOURS

PAGE 10 OF 10

<u>DATE</u>	<u>FROM</u>	<u>TO</u>	<u>DRILL</u>	<u>CIRC.</u> <u>COND.</u> <u>MUD</u>	<u>TRIPS</u>	<u>RIG</u> <u>SERVICE</u>	<u>RIG</u> <u>REPAIRS</u>	<u>SLIP &</u> <u>CUT LINE</u>	<u>DEV.</u> <u>SURVEY</u>	<u>WIRELINE</u> <u>LOGS</u>	<u>RUN</u> <u>CASING</u> <u>CEMENT</u>	<u>W.O.C.</u>	<u>NIPPLE</u> <u>UP</u> <u>B.O.P.</u>	<u>TEST</u> <u>B.O.P.</u>	<u>DRILL</u> <u>STEM</u> <u>TEST</u>	<u>REAM</u>	<u>OTHER</u>	<u>B.O.P.</u>	<u>DEPTH</u> <u>24:00</u> <u>HOURS</u>
1989-03-05	00:00	05:00															5.00		
1989-03-05	05:00	14:45									9.75								
1989-03-05	14:45	15:00																0.25	
1989-03-05	15:00	19:30									4.50								
1989-03-05	19:30	24:00										4.50							1565
1989-03-06	00:00	01:30										1.50							
1989-03-06	01:30	05:30															4.00		1565
TOTALS			172.25	24.25	125.00	6.50	3.00	1.00	10.00	14.25	28.75	12.00	18.75	6.00	35.25	12.25	74.25	1.00	

D. GEOLOGY

Regional Geological Discussion:

The geological record in the Cameron Hills area can be divided into six lithostratigraphic intervals, each generally bounded by major transgressive or regressive events. These intervals are:

1. Lower Elk Point Group
2. Upper Elk Point Group
3. Beaverhill Lake Group
4. Woodbend Group
5. Winterburn Group
6. Wabamun Group

Lower Elk Point Group

This group includes the interval from the Basal Devonian sands to the base of the Keg River Formation. The evaporites of the Chinchaga Formation and silici-clastics of the basal Granite Wash were deposited within a shallow restricted epicontinental seaway. These deposits onlap the Pre-Devonian surface and range in thickness from zero over the prominent Tathlina and Peace River archs to nearly 300 metres within the interarch basins.

Upper Elk Point Group

A major transgression resulted in the deposition of organic rich open marine carbonates of the Lower Keg River Formation. This crinoid/brachiopod rich carbonate platform ranges in thickness from 15 to 50 metres.

Continued marine transgression and subsidence led to the formation of an extension Upper Keg River barrier reef complex (Shekelie-Presquile Barrier Complex) which enclosed the Elk Point basin on its northern and western sides. Southeast of this barrier, isolated pinnacle reefs, low energy reef mounds and shelf deposits of the Upper Keg River Formation were deposited. Generally the Upper Keg River is deposited conformably upon Lower Keg River Platform carbonates, but in areas of high Pre-Devonian topography, these rocks are deposited unconformably upon the Pre-Devonian surface (e.g. A-5 and I-10 wells).

Relatively open marine conditions existed through to the end of the Keg River time with normal salinity maintained by marine water entering the basin from both the northwest and northeast. During the early Givetian stage the Tathlina land mass elevated resulting in the restriction of the Elk Point basin with normal marine conditions restricted to the Shekelie Barrier Complex. Southeast of the Barrier Complex, the increasingly evaporitic conditions resulted in deposition of interbedded anhydrites and dolomites of the Muskeg Formation.

Toward the end of Upper Elk Point time subsidence of the barrier complex allowed normal marine conditions to return to the northern end of the Elk Point basin resulting in deposition of the regional extensive Sulphur Point dolomites and limestones. Detailed correlations of the Sulphur Point carbonates with adjacent anhydrite/dolomite cycles of the uppermost Muskeg Formation indicated a facies relationship exists between these two formations.

Upper Elk Point deposition was terminated by a pronounced regression, resulting in widespread deposition of shallow marine and continental shales and silty sandstone of the Watt Mountain Formation.

Beaverhill Lake Group

Beaverhill Lake Group sedimentation began with gradual marine transgression over a relatively flat surface of Watt Mountain clastics. The initial deposits comprised of the peritidal and shallow restricted shelf carbonates of the Fort Vermilion Formation. Continued transgression created more open marine conditions and the shallow shelf carbonates of the Slave Point were deposited.

Further marine transgression over the Slave Point surface resulted in deposition of a sequence of basin filling argillaceous limestones and calcareous shales of the Waterways Formation.

Woodbend Group

In northern Alberta the transition from the shallow marine Waterways Formation to the deeper water Woodbend Group is conformable. This transgressive pulse produced the most extensive Devonian marine incursion into the Alberta Basin and is represented by euxinic "deep" water organic rich shales of the Muskwa/Duvernay Formation. These shales are overlain by thick accumulations of Upper Woodbend Group shales of the Fort Simpson Formation and carbonates of the Twin Falls (Grosmont) Formation.

Winterburn Group

The regressive sedimentation patterns developed during infilling of the Woodbend Basin continued with shallow water carbonate shelf deposits prograding out over basin filling clastics. In northern Alberta a regressive pulse allowed the argillaceous carbonates of the Basal Nisku Formation to give way to cleaner shallow water shelf carbonates of the Calmar Formation and Blue Ridge Member of the Graminia Formation. A second major regressive pulse occurred at the close of Winterburn time resulting in the deposition of terrigenous clastics of the Graminia Silt unit.

Wabamun Group

The Wabamun Group carbonate ramp sequence conformably overlies the Winterburn Group. These largely lime mud rich, burrowed pelletoidal limestones, grading locally to lime grainstones, were deposited in response to six major eustatic sea level rises and accentuated by local subsidence patterns.

Well Summary

Paramount et al Cameron L-47 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 air from the Surface Casing Shoe to the top of the Wabamun. The top of the Wabamun, at 496 m, was water saturated which necessitated converting to foam (soap detergent). Foam was used down to 1165 m, at which point conversion was made to a regular "chem-gel" mud system, which was used to total depth, 1565 m. No cuttings or gas readings were obtained between 495 m and 1165 m, which covered the Wabamun, Twin Falls, and Hay River intervals of the hole.

The Slave Point was encountered at 1330.3 m and was approximately 29 m 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 drill stem test was 85 m of inhibitor cut drilling mud, which suggests the reservoir was badly damaged by invasion.

The Sulphur Point was encountered at 1405 m 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 m of mud cut water and 45 m of drilling mud.

The Keg River was penetrated at 1485 m and appeared in cuttings to have been deposited on 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 color 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 drill stem tests evaluated the Keg River after Wireline Logs had been evaluated and both indicated the presence of a hydrocarbons 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, 1565 mKB. The rig was released at 05:30 hours on March 6, 1989.

1. Drill Cuttings

The hole was drilled with air, and air-plus detergent from 390 m to 1165 m. No samples are available for the interval from 495 m to 1165 m. Samples were collected from 1197 m to total depth of 1568 m

Sample Distribution = Washed Cuttings, 5 Metre Intervals

One Set Samples	-	C.O.G.L.A., Yellowknife
One Set Samples	-	I.S.P.G., Calgary
One Set Samples	-	Paramount, Calgary.

Sample Distribution = Unwashed Cuttings, 10 Metre Intervals

One Set Samples	-	I.S.P.G., Calgary.
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Sample Distribution = Unwashed Cuttings, 5 Metre Intervals

One Set Samples	-	I.S.P.G., Calgary.
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2. Cores (N/A)

3. Lithology (See Following Pages)

4. Stratigraphic Column (See Following Pages)

5. Biostratigraphic Data (N/A)

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

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.

- 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

GAS REPORTS

<u>Date</u>	<u>Depth</u>	<u>Total Units</u>	<u>Comments</u>
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

<u>Date</u>	<u>Depth</u>	<u>Total Units</u>	<u>Comments</u>
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

TABLE OF FORMATIONS

AGE	FORMATION		LITHOLOGY
LATE DEVONIAN	Wabamun		Limestone: crypto to micro crystalline
	Winterburn		Limestone: crypto - micro crystalline, argillaceous
	Woodbend Group	Twin Falls (Grosmont)	Limestone: crypto - micro
		Fort Simpson	shales
		Muskwa	organic rich shales
	Beaverhill Lake	Waterways	shales (basinal)
		Slave Point	Limestone
MIDDLE DEVONIAN	Upper Elk Pt.	Ft. Vermilion	Limestone
		Watt Mountain	shales - bituminous
	Upper Elk Pt.	Sulphur Point	Limestone & Dolomite
		Muskeg	anhydrite & dolomite / Dolomite
		Lower Keg River	organic rich limestone & dolomite
	Lower Elk Point	Chinchaga	anhydrite
		Granite Wash	sands
	EARLY DEVONIAN		
PRE DEVONIAN			

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

[illegible]

E. WELL EVALUATION

1. Downhole Logs (In Pocket, At The End)

TABLE 3

DOWNHOLE LOG SUMMARY - Schlumberger

<u>DATE</u>	<u>RUN</u>	<u>TYPE</u>	<u>SCALE</u>	<u>INTERVAL (M)</u>
1990-02-06	1	PHASOR INDUCTION-SFL-SP-GR	1-600	390.0 - 1560.7
			1-240	390.0 - 1560.7
	1	BHC-SONIC-GR-CAL-Ten	1-600	390.0 - 1551.2
			1-240	390.0 - 1551.2
	1	CNL-LDT-GR	1-600	390.0 - 1562.5
			1-240	390.0 - 1562.5
	1	MICROLOG	1-240	390.0 - 1556.2
	1	VELOCITY MONITOR LOG		390.0 - 1563.5
	1	CYBERLOOK		1310.0 - 1562.5

2. Other Logs (N/A)

3. Synthetic Seismograms

Refer to Well Seismic Log in pocket.

4. Formation Stimulation

1989-03-16: Rigged in Norwest Shooters. Perforated 1542 m - 1547 m with a 101.6 mm HSC, 13 spm, 23 gr., total 62 shots. Ran in hole with packer and tubing.

1989-03-17: Rigged in Nowsco, acidized with 3 m³ of 28% HCL. Swabbed well, recovered 5.23 m³ of dirty, black, gassy formation water.

Unseated packer and pulled tubing. Rigged in Norwest Shooters, set Baker Model 'S' drillable bridge plug at 1535 mKB. Perforated interval from 1509.5 m to 1525 m with 101.6 HSC, 13 spm, 23 gr., total 202 shots.

Ran packer and tubing in hole.

1989-03-18: Rigged in Nowsco, squeezed 8 m³ 28% HCL. Maximum pressure 17,000 kPa, average pressure 11,000 kPa at 0.9 m³ per minute. Pressure bled off instantly. Ran packer₃ and tubing in hole. Swabbed well, recovered 32.4 m³ black formation water.

1989-03-19: Swabbing, recovered 57.3 m³ of black formation water.

Rigged in Norwest Shooters, set Baker Model 'S' drillable bridge plug at 1507 mKB.

1989-03-21: Rigged in Norwest Shooters, perforated from 1496.5 m to 1499.0 m with 101.6 mm, HSC, 13 spm, total 34 shots. Ran in hole with Baker "R" nipple, 2.25 I.D.; 1 joint, 73 mm tubing, 139.7 mm Guiberson Packer; 1 joint, 73 mm tubing, Baker 'F' nipple, 2.31 I.D.; 154 joints, 73 mm tubing. Set packer and landed at 1492.17 mKB, 'R' nipple at 1491.92 mKB, packer rubbers at 1481.45 mKB; 'F' nipple at 1470.48 mKB.

Swabbed well, recovered 5.4 m³ fluid, well flowed 0.45 m³ oil.

1989-03-22: Flowed well, produced 3.15 m³ oil. Unseated packer, displaced annulus with 12.64 m³ inhibited water. Reset packer and pressure tested to 14 mPa.

Swabbing, recovered 6.75 m³ fluid. Total fluid recovery 15.3 m³. Well flowing very gassy.

Released service rig.

1989-03-30: Flowed well for one hour, produced 1.0 m³ oil.

1990-03-31: Flowed well for 2 hours, produced 2.2 m³ oil. Rigged in Nowsco for nitrified acid squeeze.

Pumped 0.5 m^3 28% HCL at 4000 kPa. Continued pumping 1.8 m^3 HCL acid + $100 \text{ m}^3/\text{min}$. N_2 at 16 mPa. Continued pumping 0.7 m^3 HCL acid + $100 \text{ m}^3/\text{min}$. N_2 at 23 mPa at a feed rate of $0.1 \text{ m}^3/\text{min}$.

Displaced acid with 5.4 m^3 N_2 at 23 mPa. Pressure broke to 6 mPa after 35 minutes from commencement of HCL- N_2 squeeze. Shut well in and rigged to flow. SITP 7^2 mPa . Flowed well back to 2.0 mPa to 3.5 mPa, recovered 8.2 m^3 fluid.

Rigged in E.T. unit, started pumping N_2 at 500 m at $20 \text{ m}^3/\text{m}^3$. Tagged PBTD at 1507 m. Pulled out of hole and stopped pumping N_2 at 1000 m. Well produced 5.3 m^3 oil while pumping N_2 . Flowed well for 1.5 hours, produced 5.6 m^3 oil.

Cumulative oil produced from 1989-03-30 was 22.3 m^3

1989-04-01: Flowed well at 28/64 choke for 3.5 hours, produced 39.8 m^3 oil. Cumulative oil produced was 62.1 m^3 . Flow pressure increased from 2800 kPa to 3200 kPa.

1989-04-02: Flowed well at 21/64 choke for 4.0 hours, produced 20.8 m^3 oil. Cumulative oil produced 82.9 m^3 . Flow pressure increased from 28000 kPa to 24000 kPa.

Well shut in.

5. Formation And Production Test Results

DST #1: Sulphur Point Formation, 1408 m - 1430 m.

Times: 8 / 69 / 57 / 121.

Total fluid recovery of 232 m consisting of 45 m of clobbered mud and 187 m of mud cut water. NGTS.

Pressure:	IHP	16,726
	SPF	1,164
	EPF	1,664
	ISI	10,112
	SVO	1,595
	EVO	2,759
	FSI	10,103
	FHP	16,767.

Successful test.

DST #2: Keg River Formation, 1486 m - 1510 m.

Times: 45 / 365.

SAB, GTS in 11 minutes, OTS 40 minutes.

Pressure	IHP	17,448
	SVO	6,199
	EVO	8,233
	FHP	17,348

Reverse circulated oil. Successful test.

DST #3: Keg River Formation, 1510 m - 1534 m.

Times: 20 / 50 / 115 / 120.

Preflow: WAB increasing to SAB in 20 minutes.

Valve Open: FAB decreasing to WAB, NGTS.

Recovered 18 m of mud and water cut inhibitor, 45 m OCM, and 45 m brackish oil.

Pressure	IHP	17,891
	SPF	1,516
	EPF	1,313
	ISI	5,454
	SVO	1,004
	EVO	1,313
	FSI	7,030
	FHP	17,723.

Successful test.

DST #4: Slave Point Formation, 1335 m - 1359 m.

Times: 10.

Preflow: Dead.

Pressure	IHP	15,779
	SPF	883
	EPF	794
	IHP	15,759

Misrun.

DST #5: Slave Point Formation, 1335 m - 1359 m.

Times: 10 / 55 / 60 / 120.

Preflow: WAB, NGTS.

Valve Open: WAB, NGTS.

Recovery: 85 m of inhibitor cut mud.

Pressure	IHP	13,829
	SPF	958
	EPF	945
	ISI	9,852
	SVO	1,234
	EVO	1,221
	FSI	10,459
	FHP	15,712.

Successful test.

Analytical Data for DST No.'s 1, 3, and 5 follows.

F. ENVIRONMENTAL REPORT (N/A)



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

DST #1



WATER ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		689-2275-1	
LICENCE NUMBER		OPERATOR NAME	
EA 1390		PARAMOUNT RESOURCES LTD.	
LOCATION		WELL NAME	
60-6-31.55-117-39-18.6		PARAMOUNT et al CAMERON L-47	
FIELD OR AREA		POOL OR ZONE	
CAMERON		SULPHUR POINT	
TEST TYPE		TEST RECOVERY	
DST		232 METRES	
NO.			
1			
MULTIPLE RECOVERY			
Y N			
X			
SAMPLING POINT		AMT. & TYPE OF CUSHION	
DOWNHOLE SAMPLER #228			
MUD RESISTIVITY			
		(at 25°C)	
TEST INTERVAL (metres)		TYPE OF PRODUCTION	
1408 - 1430		PUMPING FLOWING GAS LIFT SWAB	
PERFORATIONS (metres)		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
DATE SAMPLED (Y-M-D)		ANALYST	
89-02-24		D. SHMYR	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
89-03-01			
DATE REPORTED (Y-M-D)			
89-03-10			

ION	Mg/l	Mass Fraction	Meq/l	ION	Mg/l	Mass Fraction	Meq/l
Na	26 106	0.2960	1 135.61	Cl	50 500	0.5726	1 424.10
K	978	0.0111	25.04	Br			
Ca	7 207	0.0817	359.63	I			
Mg	910	0.0103	74.80	HCO ₃	744	0.0084	12.20
Ba				SO ₄	1 745	0.0198	36.30
Sr				CO ₃	0	0.0000	0.00
Fe	PRESENT			OH	0	0.0000	0.00
				H ₂ S	TRACE		

TOTAL SOLIDS Mg/l

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

ORGANICS: NIL

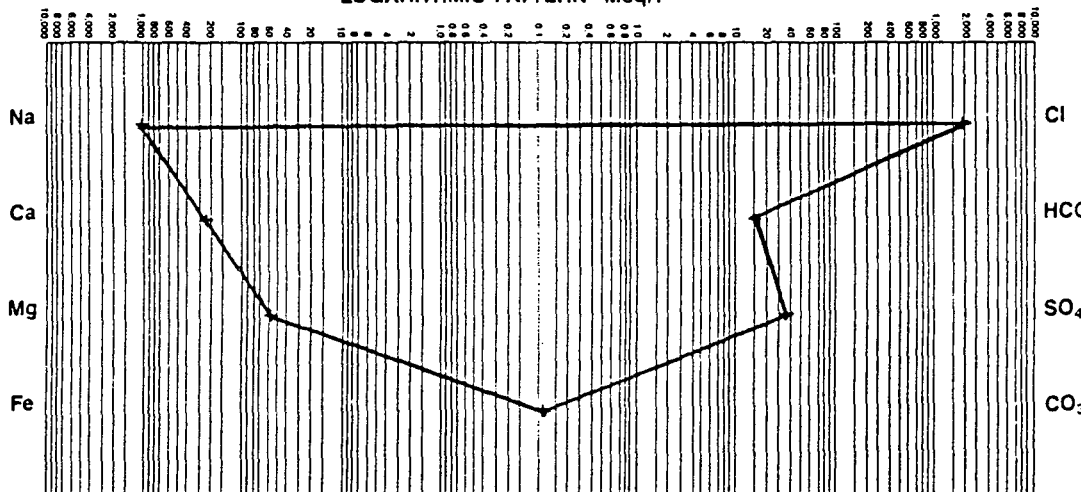
RELATIVE DENSITY	REFRACTIVE INDEX
1.078 @ 25°C	1.3521 @ 25°C

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

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.

LOGARITHMIC PATTERN Meq/l





CONTAINER IDENTITY		LABORATORY NUMBER	
		689-2275	
LICENCE NUMBER	OPERATOR NAME		
EA 1390	PARAMOUNT RESOURCES LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
60-6-31.55-117-39-18.6	PARAMOUNT et al CAMERON L-47		K.B. 723.00 GRD. 719.32
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
CAMERON	SULPHUR POINT		BAKER OIL TOOL
TEST TYPE	NO.	TEST RECOVERY	
DST	1	232 METRES	
MULTIPLE RECOVERY	Y N		
	X		
TEST INTERVAL (metres)	SAMPLING POINT		
1408 - 1430	SEE BELOW		
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION		
	MUD RESISTIVITY		
	(at 25°C)		
	TYPE OF PRODUCTION		
	PUMPING FLOWING GAS LIFT SWAB		
	PRODUCTION RATES		
	WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	GAUGE PRESSURE kPa		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	TEMPERATURE °C		
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
89-02-24	89-03-01	89-03-10	K. SINCLAIR
OTHER INFORMATION			

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.

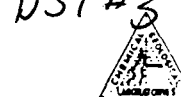
SAMPLE CONSISTED OF H₂S CUT WATER WITH A YELLOW COLORED FILTRATE.

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.



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	
FIELD OR AREA CAMERON		POOL OR ZONE KEG RIVER	
TEST TYPE DST		TEST RECOVERY 108 M	
NO. 3		ELEVATIONS (metres) K.B. 723 GRD. 719.3	
MULTIPLE RECOVERY Y ☐ N ☒		NAME OF SAMPLER SCOTT TESTERS	
TEST INTERVAL (metres) 1510 - 1534		SAMPLING POINT DOWN HOLE SAMPLER #119	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION MUD RESISTIVITY @ 25°C	
		TYPE OF PRODUCTION PUMPING ☐ FLOWING ☐ GAS LIFT ☐ SWAB ☐	
		PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED GAUGE PRESSURE kPa 700	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED TEMPERATURE °C 20	
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 B. ANDERSON	
		OTHER INFORMATION	

COMP	MOLE FRACTION		PETROLEUM LIQUID CONTENT mL/m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H ₂	0.0094	0.0097	
He	0.0004	0.0004	
N ₂	0.0172	0.0178	
CO ₂	0.0285	0.0000	
H ₂ S	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/m ³ 15°C AND 101.325 kPa			
MOISTURE AND ACID GAS FREE MEASURED		DETERMINED DEW POINT	
CALCULATED 40.68		°C	
VAPOUR PRESSURE PENTANES PLUS 80. kPa			
RELATIVE DENSITY			
MOISTURE FREE AS SAMPLED MEASURED		MOISTURE AND ACID GAS FREE MEASURED	
CALCULATED 0.650		CALCULATED 0.622	
PSEUDO CRITICAL PROPERTIES (CALCULATED)			
AS SAMPLED pPc (abs) 4631. kPa		ACID GAS FREE pTc 198.9 K	
pTc 203.7 K		pPc (abs) 4528. kPa	
H ₂ S 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 CON-
TAINED 641970 ML GAS, 1944 ML OIL AND 756 ML
MUDDY WATER @ 20C & 88.5 KPA.

GOR: 283.51 M³/M³ @ 15C & 101.325 KPA



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		C89-4296-2	
LICENCE NUMBER	OPERATOR NAME		
	PARAMOUNT RESOURCES LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
60-06-31.55 -117 39	PARAMOUNT ET AL CAMERON L-47		K.B. 723 GRD. 719.3
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
CAMERON	KEG RIVER		SCOTT TESTERS
TEST TYPE	NO.	TEST RECOVERY	
DST	3	108 M	
MULTIPLE RECOVERY ☐ Y ☐ N			
SAMPLING POINT		AMT. & TYPE OF CUSHION	
DOWN HOLE SAMPLER #119			
TYPE OF PRODUCTION			
PUMPING		FLOWING	GAS LIFT
		SWAB	
PRODUCTION RATES			
WATER m ³ /d		OIL m ³ /d	GAS 10 ³ m ³ /d
SEPARATOR		TREATER	RESERVOIR
GAUGE PRESSURE kPa		SOURCE	SAMPLED
		RECEIVED	
SEPARATOR		TREATER	RESERVOIR
TEMPERATURE °C		SOURCE	SAMPLED
		RECEIVED	
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
89-03-03	89-03-03	89-03-09	S. SARGIOUS
OTHER INFORMATION			

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER	SEDIMENT
		0.172	0.108
		TOTAL	
		0.280	
----- DENSITY at 15°C -----			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.855		854
A.P.I. GRAVITY			
34.0			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION)	g/kg.	U.S.B.M.	A.S.T.M.
0.0122	12.2	-13	
CARBON RESIDUE (MASS FRACTION)			
RVP kPa	CONRADSON	RAMSBOTTOM	
	0.0256		

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s
10	13.6	15.8
20	8.54	10.0
40	4.46	5.32

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	METHOD						
L.B.P.	58	MODIFIED ASTM D 86						
0.05	99							
0.10	123							
0.15	152							
0.20	177							
0.25	204		BAROM. PRESS. kPa (mm) 88.9					
0.30	231		ROOM TEMP. °C 25					
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.		DISTILLATION SUMMARY (VOLUME FRACTION)						
		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">200° C NAPHTHA</th> <th style="width: 33%; text-align: center;">273° C KEROSENE</th> <th style="width: 33%; text-align: center;">350° C LIGHT GAS OIL</th> </tr> </thead> <tbody> <tr> <td style="border: 1px solid black; text-align: center; padding: 5px;">0.245</td> <td style="border: 1px solid black; text-align: center; padding: 5px;">0.145</td> <td style="border: 1px solid black; text-align: center; padding: 5px;">0.160</td> </tr> </tbody> </table>	200° C NAPHTHA	273° C KEROSENE	350° C LIGHT GAS OIL	0.245	0.145	0.160
200° C NAPHTHA	273° C KEROSENE	350° C LIGHT GAS OIL						
0.245	0.145	0.160						
		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">RECOVERED</th> <th style="width: 33%; text-align: center;">RESIDUE</th> <th style="width: 33%; text-align: center;">DISTILLATION LOSS</th> </tr> </thead> <tbody> <tr> <td style="border: 1px solid black; height: 30px;"></td> <td style="border: 1px solid black; height: 30px;"></td> <td style="border: 1px solid black; height: 30px;"></td> </tr> </tbody> </table>	RECOVERED	RESIDUE	DISTILLATION LOSS			
RECOVERED	RESIDUE	DISTILLATION LOSS						
CRACKED	360	BASE TYPE: MIXED CHARACTERIZATION FACTOR: 11.9						

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



OIL ANALYSIS

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

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER SEDIMENT TOTAL	
		0.080 0.900 0.980	
DENSITY at 15° C			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED AFTER CLEANING		AS RECEIVED AFTER CLEANING	
0.866		865	
A.P.I. GRAVITY			
31.9			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION) g/kg		U.S.B.M. A.S.T.M.	
0.0127 12.7			
CARBON RESIDUE (MASS FRACTION)			
RVP kPa		CONRADSON RAMSBOTTOM	
		0.0278	
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	
10	17.6	20.2	
20	10.1	11.7	
40	5.03	5.92	

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	
L.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 SAMPLE FOR FURTHER ANALYSIS.



WATER ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		C89-4296-4	
LICENCE NUMBER		OPERATOR NAME	
		PARAMOUNT RESOURCES LTD.	
LOCATION		WELL NAME	
60-06-31.55 -117 39		PARAMOUNT ET AL CAMERON L-47	
FIELD OR AREA		POOL OR ZONE	
CAMERON		KEG RIVER	
TEST TYPE		TEST RECOVERY	
DST		108 M	
NO. 3			
MULTIPLE RECOVERY			
Y N			
X			
SAMPLING POINT		AMT. & TYPE OF CUSHION	
DOWN HOLE SAMPLER #119			
TYPE OF PRODUCTION		MUD RESISTIVITY	
PUMPING FLOWING GAS LIFT SWAB		(u 25°C)	
PRODUCTION RATES			
WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
GAUGE PRESSURE kPa			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		ANALYST	
89-03-03		S. SARGIOUS	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
89-03-03			
DATE REPORTED (Y-M-D)			
89-03-09			

ION	Mg/l	Mass Fraction	Meq/l	ION	Mg/l	Mass Fraction	Meq/l
Na	13 240	0.3111	575.94	Cl	17 400	0.4089	490.68
K	205	0.0048	5.25	Br			
Ca	1 642	0.0386	81.94	I			
Mg	583	0.0137	47.92	HCO ₃	1 403	0.0330	23.01
Ba				SO ₄	8 082	0.1899	168.11
Sr				CO ₃	0	0.0000	0.00
Fe	MUCH			OH	0	0.0000	0.00
				H ₂ S	PRESENT		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C	EVAPORATED @ 180°C
46 850	
AT IGNITION	CALCULATED
41 370	42 555

ORGANICS: MUCH

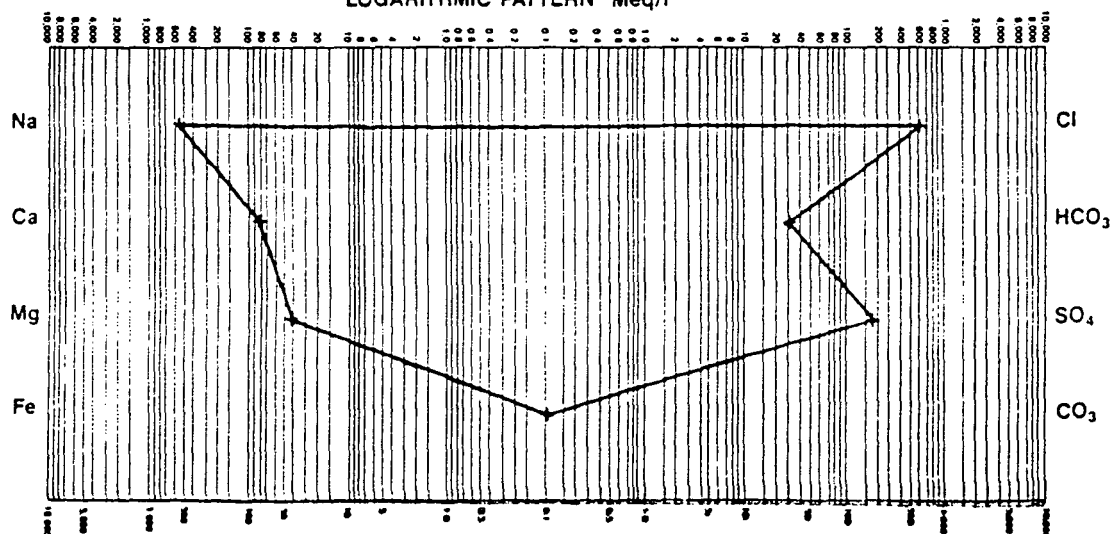
RELATIVE DENSITY	REFRACTIVE INDEX
1.036 @ 25°C	1.3402 @ 25°C

OBSERVED pH	RESISTIVITY (Ohm m)
7.8 @ 23 °C	0.187 @ 25°C

REMARKS

BROWN COLORED FIL-
TRATE 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		WELL NAME	
60-06-31.55 -117 39		PARAMOUNT ET AL CAMERON L-47	
FIELD OR AREA		NAME OF SAMPLER	
CAMERON		KEG RIVER	
TEST TYPE		TEST RECOVERY	
DST		108 M	
NO.			
3			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
1510 - 1534		COLLARS #3	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		(a 25°C)	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	
89-03-03		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 ₂ S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C

32 150

EVAPORATED @ 180°C

AT IGNITION

27 090

CALCULATED

13 161

ORGANICS: MUCH

RELATIVE DENSITY

1.026 @ 25°C

REFRACTIVE INDEX

1.3378 @ 25°C

OBSERVED pH

8.0 @ 23 °C

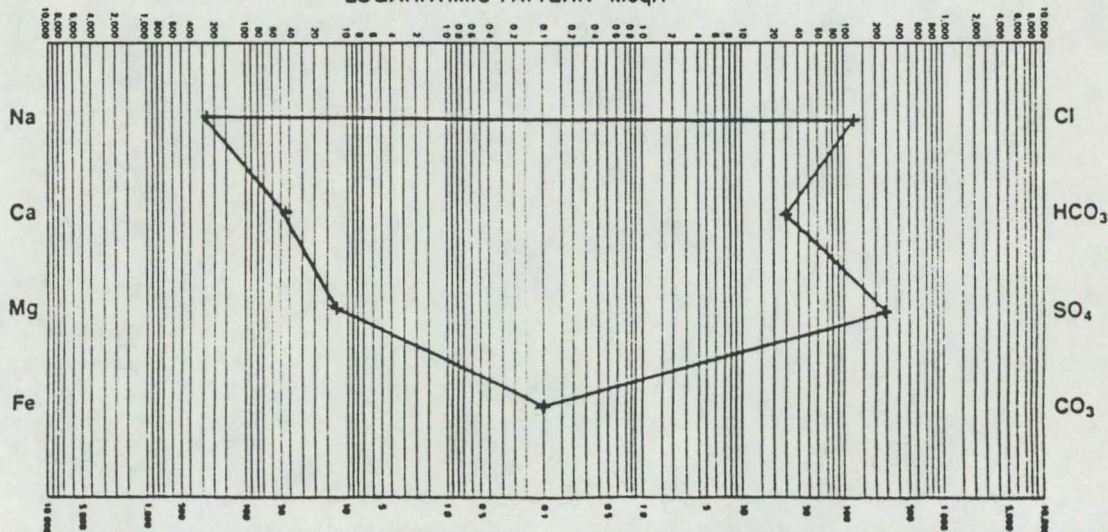
RESISTIVITY (Ohm m)

0.347 @ 25°C

REMARKS

BROWN COLORED FIL-
TRATE 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		WELL NAME	
60-06-31.55 -117 39		PARAMOUNT ET AL CAMERON L-47	
FIELD OR AREA		POOL OR ZONE	
CAMERON		KEG RIVER	
TEST TYPE		NAME OF SAMPLER	
DST			
NO.		TEST RECOVERY	
3		108 M	
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
1510 - 1534			
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		(a 25°C)	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa			
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	
89-03-03		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.



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	
FIELD OR AREA CAMERON		POOL OR ZONE SLAVE POINT	
TEST TYPE DST		TEST RECOVERY	
NO. 5		85 M MUD CUT INHIBITOR	
MULTIPLE RECOVERY Y N X			
TEST INTERVAL (metres) 1335 - 1359		SAMPLING POINT DOWN HOLE SAMPLER #302	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY @ 25°C	
		TYPE OF PRODUCTION PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED GAUGE PRESSURE kPa 450	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED 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		PETROLEUM LIQUID CONTENT ml/m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H ₂	0.0124	0.0124	
He	0.0003	0.0009	
N ₂	0.0220	0.0220	
CO ₂	0.0005	0.0000	
H ₂ S	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/m ³) 15°C AND 101.325 kPa			
MOISTURE AND ACID GAS FREE MEASURED		CALCULATED 38.35	
DETERMINED DEW POINT °C		VAPOUR PRESSURE PENTANES PLUS 96. kPa	
RELATIVE DENSITY			
MOISTURE FREE AS SAMPLED MEASURED		CALCULATED 0.587	
MOISTURE AND ACID GAS FREE MEASURED		CALCULATED 0.586	
PSEUDO CRITICAL PROPERTIES (CALCULATED)			
AS SAMPLED pPc(aba) 4521. kPa		ACID GAS FREE pTc 192.6 K	
pTc 192.7 K		pPc(aba) 4520. kPa	
H ₂ S g/m ³ 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 CON-
TAINED 145010 ML GAS, 400 ML OIL AND 3600 ML
MUDDY WATER @ 20C & 88.5 KPA.

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



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		C89-4345-2	
LICENCE NUMBER		OPERATOR NAME	
		PARAMOUNT RESOURCES LTD.	
LOCATION		WELL NAME	
60-06-31.55 -117 39		PARAMOUNT ET AL CAMERON L-47	
FIELD OR AREA		POOL OR ZONE	
CAMERON		SLAVE POINT	
NAME OF SAMPLER		COMPANY	
		SCOTT TESTERS	
TEST TYPE	NO.	TEST RECOVERY	
DST	5	85 M MUD CUT INHIBITOR	
MULTIPLE RECOVERY	Y N		
	X		
TEST INTERVAL (metres)		SAMPLING POINT	
1335 - 1359		DOWN HOLE SAMPLER #302	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
DATE SAMPLED (Y-M-D)		ANALYST	
89-03-04		S. SARGIOUS	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
89-03-07			
DATE REPORTED (Y-M-D)			
89-03-09			

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)		
BROWN		WATER	SEDIMENT	TOTAL
		0.400	0.500	0.900
DENSITY at 15°C				
RELATIVE		ABSOLUTE kg/m ³		
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING	
	0.852		851	
A.P.I. GRAVITY				
34.6				
TOTAL SULFUR		POUR POINT °C		
(MASS FRACTION)	g/kg	U.S.B.M.	A.S.T.M.	
0.0088	8.8	-13		
CARBON RESIDUE (MASS FRACTION)				
RVP kPa		CONRADSON	RAMSBOTTOM	
		0.0111		
VISCOSITY				
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s		
10	12.2	14.2		
20	7.68	9.04		
40	3.92	4.69		

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	METHOD	
L.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			
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.



WATER ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		C89-4345-3	
LICENCE NUMBER		OPERATOR NAME	
		PARAMOUNT RESOURCES LTD.	
LOCATION		WELL NAME	
60-06-31.55 -117 39		PARAMOUNT ET AL CAMERON 1-47	
FIELD OR AREA		POOL OR ZONE	
CAMERON		SLAVE POINT	
TEST TYPE		TEST RECOVERY	
DST		85 M MUD CUT INHIBITOR	
NO. 5			
MULTIPLE RECOVERY			
Y N			
X			
SAMPLING POINT		AMT. & TYPE OF CUSHION	
DOWN HOLE SAMPLER #302			
MUD RESISTIVITY		(u 25°C)	
TEST INTERVAL (metres)		TYPE OF PRODUCTION	
1335 - 1359		PUMPING FLOWING GAS LIFT SWAB	
PERFORATIONS (metres)		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
DATE SAMPLED (Y-M-D)		ANALYST	
89-03-04		S. SARGIOUS	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
89-03-07			
DATE REPORTED (Y-M-D)			
89-03-09			

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 ₂ S	NIL		

TOTAL SOLIDS Mg/l

EVAPORATED @ 110°C

31 790

EVAPORATED @ 180°C

AT IGNITION

27 560

CALCULATED

28 797

ORGANICS: MUCH

RELATIVE DENSITY

1.027 @ 25°C

REFRACTIVE INDEX

1.3373 @ 25°C

OBSERVED pH

7.9 @ 23 °C

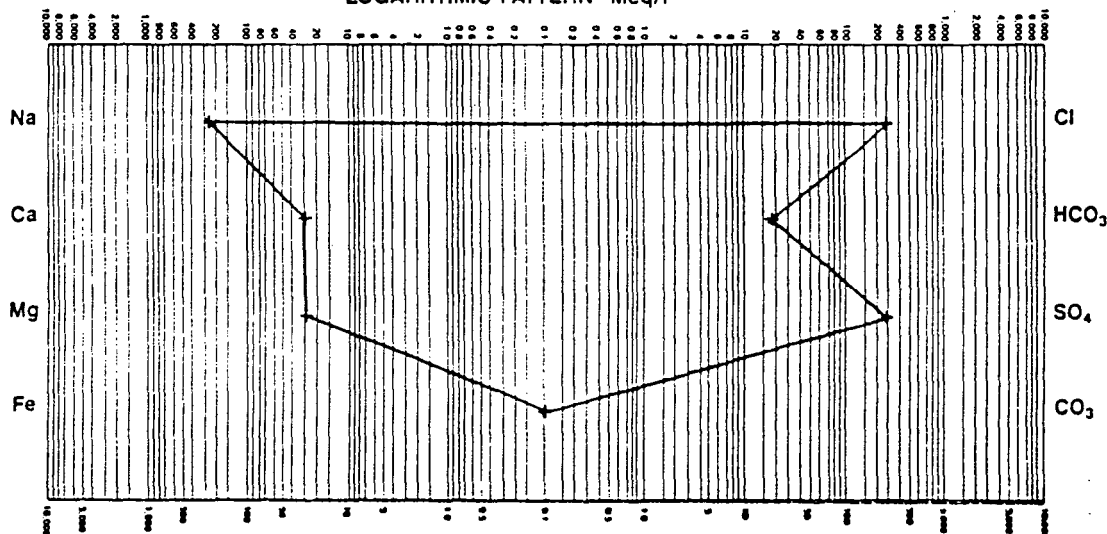
RESISTIVITY (Ohm m)

0.306 @ 25°C

REMARKS

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

LOGARITHMIC PATTERN Meq/l





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																																					
FIELD OR AREA CAMERON		NAME OF SAMPLER SLAVE POINT																																					
TEST TYPE DST		TEST RECOVERY 85 M MUD CUT INHIBITOR																																					
NO. 5		ELEVATIONS (metres) K.B. 723 GRD. 719.3																																					
MULTIPLE RECOVERY Y ☐ N ☒		COMPANY SCOTT TESTERS																																					
TEST INTERVAL (metres) 1335 - 1359		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">SAMPLING POINT</td> <td style="width: 33%;">AMT. & TYPE OF CUSHION</td> <td style="width: 33%;">MUD RESISTIVITY (at 25°C)</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>		SAMPLING POINT	AMT. & TYPE OF CUSHION	MUD RESISTIVITY (at 25°C)																																	
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PERFORATIONS (metres)		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4" style="text-align: center;">TYPE OF PRODUCTION</td> </tr> <tr> <td style="width: 25%; text-align: center;">PUMPING</td> <td style="width: 25%; text-align: center;">FLOWING</td> <td style="width: 25%; text-align: center;">GAS LIFT</td> <td style="width: 25%; text-align: center;">SWAB</td> </tr> <tr> <td colspan="4" style="text-align: center;">PRODUCTION RATES</td> </tr> <tr> <td style="text-align: center;">WATER m³/d</td> <td style="text-align: center;">OIL m³/d</td> <td colspan="2" style="text-align: center;">GAS 10³m³/d</td> </tr> <tr> <td style="text-align: center;">SEPARATOR</td> <td style="text-align: center;">TREATER</td> <td style="text-align: center;">RESERVOIR</td> <td style="text-align: center;">SOURCE</td> </tr> <tr> <td style="text-align: center;">GAUGE PRESSURE kPa</td> <td style="text-align: center;">SEPARATOR</td> <td style="text-align: center;">TREATER</td> <td style="text-align: center;">RESERVOIR</td> </tr> <tr> <td style="text-align: center;">TEMPERATURE °C</td> <td style="text-align: center;">SEPARATOR</td> <td style="text-align: center;">TREATER</td> <td style="text-align: center;">RESERVOIR</td> </tr> <tr> <td style="text-align: center;">DATE SAMPLED (Y-M-D)</td> <td style="text-align: center;">DATE RECEIVED (Y-M-D)</td> <td style="text-align: center;">DATE REPORTED (Y-M-D)</td> <td style="text-align: center;">ANALYST</td> </tr> <tr> <td style="text-align: center;">89-03-04</td> <td style="text-align: center;">89-03-07</td> <td style="text-align: center;">89-03-09</td> <td style="text-align: center;">S. SARGIOUS</td> </tr> </table>		TYPE OF PRODUCTION				PUMPING	FLOWING	GAS LIFT	SWAB	PRODUCTION RATES				WATER m ³ /d	OIL m ³ /d	GAS 10 ³ m ³ /d		SEPARATOR	TREATER	RESERVOIR	SOURCE	GAUGE PRESSURE kPa	SEPARATOR	TREATER	RESERVOIR	TEMPERATURE °C	SEPARATOR	TREATER	RESERVOIR	DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	89-03-04	89-03-07	89-03-09	S. SARGIOUS
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TEMPERATURE °C	SEPARATOR	TREATER	RESERVOIR																																				
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST																																				
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.



CALGARY

EDMONTON

GRANDE PRAIRIE

A C A Laboratories



OIL ANALYSIS

CONTAINER IDENTIFICATION

LABORATORY NUMBER

PB #1

09839A

OPERATOR NAME

PARAMOUNT RESOURCES LTD.

UNIQUE WELL IDENTIFIER

WELL NAME

KB m ELEVATIONS GRD m

PARAMOUNT CAMERON L-47

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

CAMERON

AEG RIVER

SAME

TEST TYPE

NO

TEST RECOVERY

TEST INTERVAL OR PERFS

SAMPLING POINT

AMT & TYPE OF CUSHION

MUD RESISTIVITY Ω m

@ 25° C

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

SAMPLE PROPERTIES

B.S. & W. (VOLUME FRACTION)

COLOUR OF CLEAN OIL

WATER

SEDIMENT

TOTAL

DARK BROWN

0.009

TRACE

0.009

COLOUR NUMBER ASTM D-155

D 8 A.S.T.M.

DENSITY

RELATIVE

AS RECEIVED

AFTER CLEANING

AS RECEIVED

AFTER CLEANING

0.8563

855.5

API GRAVITY @ 15° C

33.75

TOTAL SULPHUR
(MASS FRACTION)

0.00886

TOTAL SALT g/m³

U.S.B.M.

A.S.T.M.

-9

POUR POINT / ° C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

CONRADSON

RAMSBOTTOM

RVP/kPa

VISCOSITY

TEMP / ° C

ABSOLUTE/mPa·s

KINEMATIC/mm²·s⁻¹

25

7.37

8.68

38

5.08

6.04

50

3.78

4.54

DISTILLATION

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

0.21

275° C
KEROSENE

0.38

350° C
LIGHT GAS OIL

0.58

RECOVERED

0.90

RESIDUE

0.08

DISTILLATION
LOSS

0.02

CHARACTERIZATION
FACTOR

11.9

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	

REMARKS

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

**4G****Laboratories**

CALGARY

EDMONTON

GRANDE PRAIRIE

WATER ANALYSIS

CONTAINER IDENTIFICATION

LABORATORY NUMBER

PB#1

W9730A

OPERATOR NAME

PARAMOUNT RESOURCES LTD.

UNIQUE WELL IDENTIFIER

WELL NAME

ELEVATIONS

GRD m

PARAMOUNT et al CAMERON HILLS

723

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

CAMERON HILLS

KEG RIVER

SAME

TEST TYPE

NO

TEST RECOVERY

TEST INTERVAL OR PERFS

1542-1547
mKB

SAMPLING POINT

AMT & TYPE OF CUSHION

MUD RESISTIVITY/Ω m

@ 25° C

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³ m³/d

GAUGE PRESSURE kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE °C

DATE SAMPLED (Y-M-D)

DATE RECEIVED (Y-M-D)

DATE REPORTED (Y-M-D)

ANALYST

OTHER INFORMATION

89-03-21

89-03-28

L

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 ₂ S	248.0	0.002	7.3

DISSOLVED
TOTAL SOLIDS

mg/L

EVAPORATED AT 110° C

EVAPORATED AT 180° C

AT IGNITION

CALCULATED

134000.0

RELATIVE DENSITY

1.097 @ 25° C

REFRACTIVE INDEX

N.A. @ 25° C

OBSERVED pH

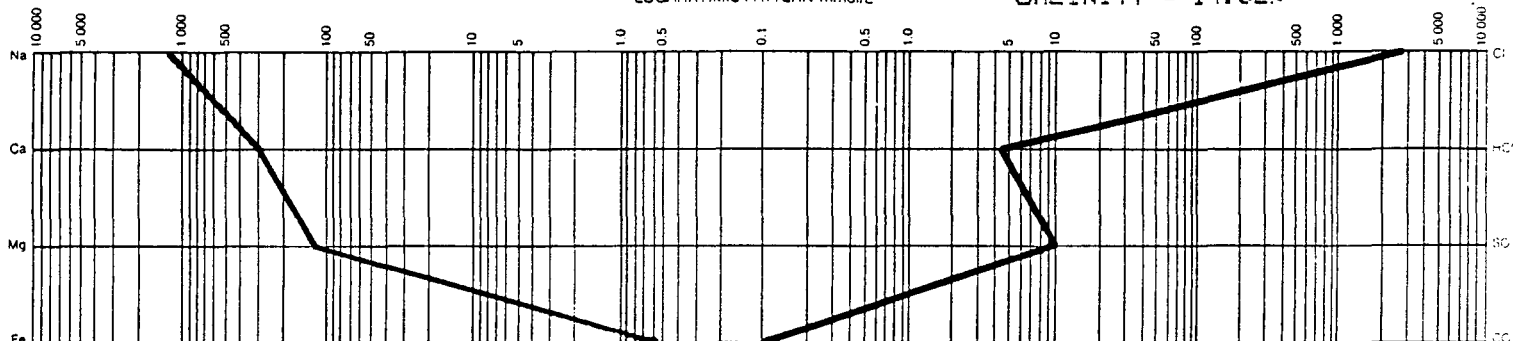
6.56 @ 25° C

RESISTIVITY/Ωm *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



CALGARY

EDMONTON

GRANDE PRAIRIE

WATER ANALYSIS

CONTAINER IDENTIFICATION

PB#2

LABORATORY NUMBER

W97308

OPERATOR NAME

PARAMOUNT RESOURCES LTD.

UNIQUE WELL IDENTIFIER

WELL NAME

PARAMOUNT et al CAMERON HILLS

KB m ELEVATIONS GRD m

723

FIELD OR AREA

CAMERON HILLS

POOL OR ZONE

KEB RIVER

NAME OF SAMPLER

COMPANY

SAME

TEST TYPE

NO

TEST RECOVERY

TEST INTERVAL OR PERFS

1542-1547
mKB

SAMPLING POINT

AMT & TYPE OF CUSHION

MUD RESISTIVITY: Ω m

@ 25° C

TYPE OF PRODUCTION

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	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 ₂ S	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

1.095 @ 25° C

REFRACTIVE INDEX

N.A. @ 25° C

OBSERVED pH

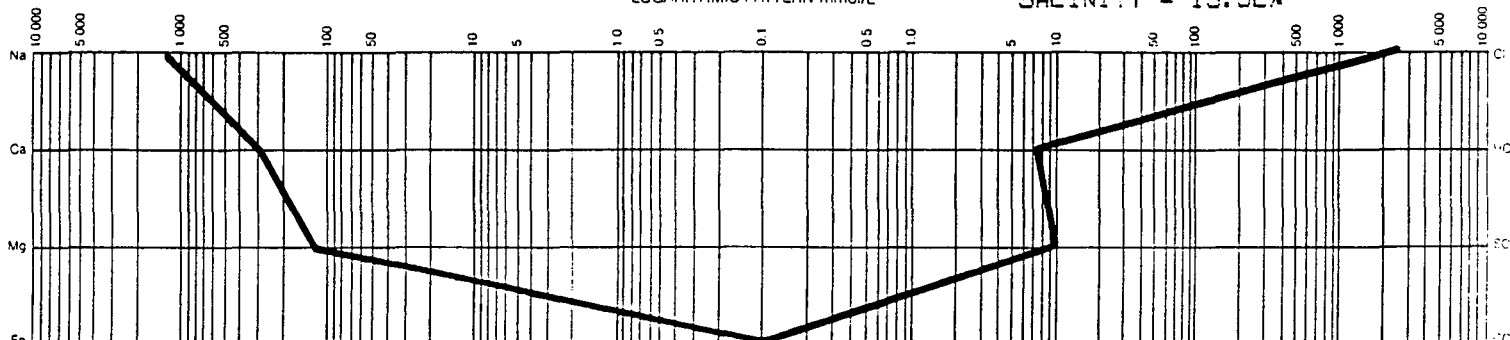
6.74 @ 25° C

RESISTIVITY/OHM •m

0.06 @ 25° C

LOGARITHMIC PATTERN mmol/L

SALINITY = 13.52%



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

G. APPENDICES TO WELL HISTORY REPORT

1. Oil, Gas, And Water Analyses (See Section E, 5.)
2. Reservoir Engineering Data (N/A)
3. Petrographic Record (N/A)
4. Details Of Formation And Production Testing
See Table 4, Extended Flow Test and see Section E, 4.
5. Petrological Reports (N/A)
6. Paleontological Reports (N/A)
7. Palynological Reports (N/A)
8. Geochemical Reports (N/A)
9. Age Determinations (K/Ar etc.) (N/A)
10. Processed Combination Of Well Logs (See Cyberlook In Pocket)
11. Deviation Record (See Table 5, See Following Pages)
12. Gas Detector Log Or Mud Log Records
See Section G. 16. Also refer to Composite Well Log (See Section G, 14. In Pocket).
13. Completion Data (See Section E, 4.)
14. Composite Well Record (In Pocket)
15. Final Survey Plat (In Pocket)
16. Mud Data (See Following Pages)

SECTION G, 4.

TABLE 4

PARAMOUNT ET AL CAMERON L-47

EXTENDED FLOW TEST

TABLE 4

PARAMOUNT ET AL CAMERON L-47

EXTENDED FLOW TEST

DATE	OIL ₃ m	CUM. m ³	GAS ₃ 10 ³ m	CUM. ₃ 10 ³ m	GOR	WATER %	M3	CUM. m ³	TOTAL DAILY FLUID ₃ m	CUM. FLUID ₃ m
1990-02-17	17.31	17.31	1.04	1.04	0.06008				17.31	17.31
1990-02-18	49.71	67.02	3.08	4.12	0.06196				49.71	67.02
1990-02-19	50.12	117.14	3.00	7.12	0.05986				50.21	117.23
1990-02-20	52.39	169.53	3.02	10.14	0.05764				52.39	169.62
1990-02-21										
1990-02-22	72.56	242.09	4.71	14.85	0.06491				72.56	242.18
1990-02-23	42.49	284.58	2.56	17.41	0.06025				42.49	284.67
1990-02-24	34.25	318.83	2.13	19.54	0.06219	18	7.40	7.40	41.65	326.32
1990-02-25										
1990-02-26	40.52	359.35	7.02	26.56	0.17325	5	2.28	9.68	42.80	369.12
1990-02-27	43.75	403.10	4.16	30.72	0.09509	20	11.13	20.81	54.85	423.97
1990-02-28	36.57	439.67	3.05	33.77	0.08340	22	10.18	30.99	46.75	470.72
1990-03-01	26.95	466.62	4.25	38.02	0.15770	13	3.99	34.98	30.94	501.66
1990-03-02	28.74	495.36	3.52	41.54	0.12248	19	6.59	41.57	35.33	536.99
1990-03-03	19.26	514.62	3.66	45.20	0.19003	23	8.50	50.07	36.91	573.90
1990-03-04	25.39	540.01	3.15	48.35	0.12406	31	8.57	58.64	27.76	601.66
1990-03-05	36.28	576.29	3.24	51.59	0.08931	17	7.67	66.31	43.95	645.61
1990-03-06	31.15	607.44	3.24	54.83	0.10401	19	7.20	73.51	38.35	683.96
1990-03-07	26.45	633.89	2.87	57.70	0.10851	23	7.94	81.45	34.39	718.35
1990-03-08	31.04	664.93	2.54	60.24	0.08183	19	7.50	88.95	38.54	756.89
1990-03-09	29.56	694.49	2.54	62.78	0.08593	26	10.37	99.32	39.93	796.82
1990-03-10	15.35	709.84	1.07	63.85	0.06971	29	5.75	105.07	20.10	816.92
1990-03-11	5.60	715.44	2.83	66.68	0.50536	26	1.98	107.05	7.58	824.50
1990-03-12	24.77	740.21	4.23	70.91	0.17077	27	9.21	116.26	33.98	858.48
1990-03-13	31.70	771.91	3.24	74.15	0.10221	31	14.05	130.31	45.75	904.23
1990-03-14	18.83	790.74	3.24	77.39	0.17207	34	9.69	140.00	28.52	932.75
1990-03-15	19.76	810.50	3.24	80.63	0.16397	37	11.40	151.40	31.16	963.90

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
 ADDRESS : CALGARY ALTA LOCATION : L-47
 FIELD & POOL : STATUS : OIL
 TYPE OF TEST : FLOW & BUILDUP DATE OF TEST : FEB 17-25/90
 PERF/O.H. INT : 1492.8 to 1495.3 PROD. THROUGH : TUBING
 ELEV.(CF) : 719.3 (KB) : 723.0 MID-POINT OF PROD. INTERVAL : 1494.1
 POOL DATUM : DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 5700 SHUT-IN TIME : FEB 24 @ 0800 HRS
 CASING PRES : ON/OFF BOT. : 17/2@1000-25/2@0813 HRS
 RUN DEPTH : 1468.0 SURFACE TEMP. :
 TEMPERATURE AT RUN DEPTH : PRES. AT MID-POINT OF PERF. : 0.0
 PRES. AT RUN DEPTH : 10454.8 DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14352N
 RANGE : 0 - 25166 CLOCK RANGE : 180 HR
 CAL. EQU. : 499.31 * Defl. - 31.04 LATEST CALIBRATION : 6/12/89

COMMENTS	TIME hrs	DEFL mm	PRESSURE KPAG		
			----- CALC	CORR	CORRECTED
pth : 1468.0 m					
ON BOTTOM	0.00	21.138	10523.3	-19.8	10503.5
FEB 17@ 1000 HRS	2.00	21.158	10533.3	-19.9	10513.4
	4.00	21.165	10536.8	-19.9	10516.9
	6.00	21.158	10533.3	-19.9	10513.4
	7.00	21.200	10554.3	-20.0	10534.3
	8.00	21.200	10554.3	-20.0	10534.3
	10.00	21.200	10554.3	-20.0	10534.3
	12.00	21.192	10550.3	-20.0	10530.3
	16.00	21.182	10545.3	-19.9	10525.3
	20.00	21.182	10545.3	-19.9	10525.3
	24.00	21.178	10543.3	-19.9	10523.4
	30.00	21.178	10543.3	-19.9	10523.4
	36.00	21.158	10533.3	-19.9	10513.4
	42.00	21.145	10526.8	-19.9	10507.0
	48.00	21.145	10526.8	-19.9	10507.0
	54.00	21.145	10526.8	-19.9	10507.0
	60.00	21.128	10518.3	-19.8	10498.5
	66.00	21.128	10518.3	-19.8	10498.5
	72.00	21.110	10509.3	-19.8	10489.6
	78.00	21.110	10509.3	-19.8	10489.6

REMARKS :

SURVEY COMPANY : SOLID WIRELINE TEST BY : K.T.

SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
 DATE OF TEST : FEB 17-25/90 LOCATION : L-47
 DEPTH : 1468.0 SERIAL NO. : 14352N

COMMENTS	TIME hrs	DEFL mm	----- CALC	PRESSURE KPAG CORR	----- CORRECTED
	84.00	21.110	10509.3	-19.8	10489.6
	90.00	21.110	10509.3	-19.8	10489.6
	96.00	21.110	10509.3	-19.8	10489.6
	102.00	21.100	10504.4	-19.8	10484.6
	108.00	21.100	10504.4	-19.8	10484.6
	114.00	21.100	10504.4	-19.8	10484.6
	120.00	21.080	10494.4	-19.7	10474.7
	120.25	21.190	10549.3	-20.0	10529.3
	120.50	21.212	10560.3	-20.0	10540.3
	120.75	21.192	10550.3	-20.0	10530.3
	121.00	21.148	10528.3	-19.9	10508.4
	121.50	21.052	10480.4	-19.6	10460.7
	122.00	21.032	10470.4	-19.6	10450.8
	123.00	21.070	10489.4	-19.7	10469.7
	124.00	21.088	10498.4	-19.7	10478.6
	128.00	21.088	10498.4	-19.7	10478.6
	132.00	21.088	10498.4	-19.7	10478.6
	138.00	21.068	10488.4	-19.7	10468.7
	144.00	21.065	10486.9	-19.7	10467.2
	150.00	21.065	10486.9	-19.7	10467.2
	156.00	21.065	10486.9	-19.7	10467.2
	162.00	21.065	10486.9	-19.7	10467.2
	166.00	21.065	10486.9	-19.7	10467.2
WELL SHUT-IN	0.00	21.065	10486.9	-19.7	10467.2
FEB 24@ 0800 HRS	.25	21.178	10543.3	-19.9	10523.4
	.50	21.210	10559.3	-20.0	10539.3
	.75	21.192	10550.3	-20.0	10530.3
	1.00	21.140	10524.3	-19.8	10504.5
	1.50	21.060	10484.4	-19.7	10464.7
	2.00	21.028	10468.4	-19.6	10448.8
	3.00	21.032	10470.4	-19.6	10450.8
	4.00	21.040	10474.4	-19.6	10454.8
	6.00	21.040	10474.4	-19.6	10454.8
	8.00	21.040	10474.4	-19.6	10454.8

CHART RAN OUT @ 8 HRS OF SHUT-IN.
 RECORDERS OFF BOTTOM FEB 25 @ 0813 HRS.

SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD	WELL NAME : PARAMOUNT ET AL CAMERON
ADDRESS : CALGARY ALTA	LOCATION : L-47
FIELD & POOL :	STATUS : OIL
TYPE OF TEST : FLOW & BUILDUP	DATE OF TEST : FEB 17-25/90
PERF/O.H. INT : 1492.8 to 1495.3	PROD. THROUGH : TUBING
ELEV.(CF) : 719.3 (KB) : 723.0	MID-POINT OF PROD. INTERVAL : 1494.1
POOL DATUM :	DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 5700	SHUT-IN TIME : FEB 24 @ 0800 HRS
CASING PRES :	ON/OFF BOT. : 17/2@1000-25/2@0813 HRS
RUN DEPTH : 1470.0	SURFACE TEMP. :
TEMPERATURE AT RUN DEPTH :	PRES. AT MID-POINT OF PERF. : 0.0
PRES. AT RUN DEPTH : 10492.7	DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14366N	CLOCK RANGE : 180 HR
RANGE : 0 - 25166	LATEST CALIBRATION : 6/12/89
CAL. EQU. : 505.48 * Defl. - 32.02	

COMMENTS	TIME hrs	DEFL mm	----- PRESSURE KPAG -----		
			CALC	CORR	CORRECTED
Depth : 1470.0 m					
ON BOTTOM	0.00	21.040	10603.3	-32.3	10571.0
FEB 17@ 1000 HRS	2.00	21.050	10608.4	-32.3	10576.0
	4.00	21.050	10608.4	-32.3	10576.0
	6.00	21.040	10603.3	-32.3	10571.0
	7.00	21.065	10616.0	-32.4	10583.6
	8.00	21.065	10616.0	-32.4	10583.6
	10.00	21.060	10613.5	-32.4	10581.1
	12.00	21.060	10613.5	-32.4	10581.1
	16.00	21.060	10613.5	-32.4	10581.1
	20.00	21.060	10613.5	-32.4	10581.1
	24.00	21.060	10613.5	-32.4	10581.1
	30.00	21.050	10608.4	-32.3	10576.0
	36.00	21.058	10612.4	-32.4	10580.1
	42.00	21.058	10612.4	-32.4	10580.1
	48.00	21.058	10612.4	-32.4	10580.1
	54.00	21.058	10612.4	-32.4	10580.1
	60.00	21.065	10616.0	-32.4	10583.6
	66.00	21.058	10612.4	-32.4	10580.1
	72.00	21.058	10612.4	-32.4	10580.1
	78.00	21.050	10608.4	-32.3	10576.0

REMARKS :

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.

SOLID WIRELINE SERVICES

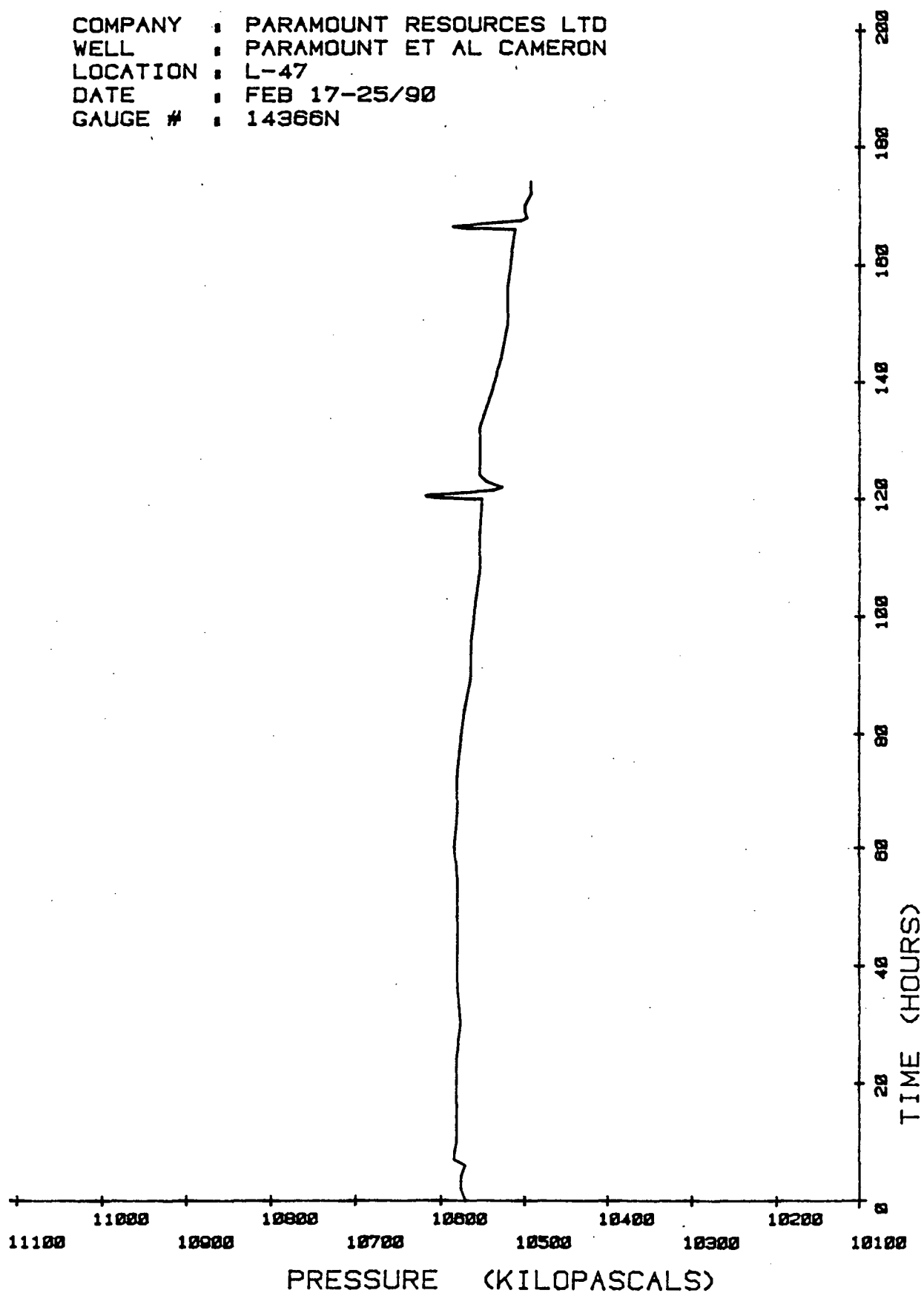
SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
 DATE OF TEST : FEB 17-25/90 LOCATION : L-47
 DEPTH : 1470.0 SERIAL NO. : 14366N

COMMENTS	TIME hrs	DEFL mm	----- CALC	PRESSURE KPAG CORR	----- CORRECTED
	84.00	21.040	10603.3	-32.3	10571.0
	90.00	21.025	10595.8	-32.3	10563.4
	96.00	21.025	10595.8	-32.3	10563.4
	102.00	21.015	10590.7	-32.3	10558.4
	108.00	21.005	10585.7	-32.3	10553.3
	114.00	21.005	10585.7	-32.3	10553.3
	120.00	21.000	10583.1	-32.3	10550.8
	120.25	21.108	10637.7	-32.4	10605.4
	120.50	21.132	10649.8	-32.4	10617.5
	120.75	21.122	10644.8	-32.4	10612.4
	121.00	21.065	10616.0	-32.4	10583.6
	121.50	20.972	10569.0	-32.3	10536.6
	122.00	20.952	10558.9	-32.3	10526.5
	123.00	20.990	10578.1	-32.3	10545.7
	124.00	21.005	10585.7	-32.3	10553.3
	128.00	21.005	10585.7	-32.3	10553.3
	132.00	21.005	10585.7	-32.3	10553.3
	138.00	20.978	10572.0	-32.3	10539.7
	144.00	20.955	10560.4	-32.3	10528.0
	150.00	20.940	10552.8	-32.3	10520.5
	156.00	20.940	10552.8	-32.3	10520.5
	162.00	20.930	10547.7	-32.3	10515.4
	166.00	20.922	10543.7	-32.3	10511.4
WELL SHUT-IN	0.00	20.922	10543.7	-32.3	10511.4
FEB 24@ 0800 HRS	.25	21.040	10603.3	-32.3	10571.0
	.50	21.068	10617.5	-32.4	10585.1
	.75	21.042	10604.4	-32.3	10572.0
	1.00	20.990	10578.1	-32.3	10545.7
	1.50	20.908	10536.6	-32.3	10504.3
	2.00	20.895	10530.0	-32.3	10497.7
	3.00	20.900	10532.6	-32.3	10500.3
	4.00	20.900	10532.6	-32.3	10500.3
	6.00	20.885	10525.0	-32.3	10492.7
	8.00	20.885	10525.0	-32.3	10492.7

CHART RAN OUT @ 8 HRS OF SHUT-IN.
 RECORDERS OFF BOTTOM FEB 25 @ 0813 HRS.

COMPANY : PARAMOUNT RESOURCES LTD
WELL : PARAMOUNT ET AL CAMERON
LOCATION : L-47
DATE : FEB 17-25/90
GAUGE # : 14366N



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
 ADDRESS : CALGARY ALTA LOCATION : L-47 (N.W.T.)
 FIELD & POOL : STATUS : OIL
 TYPE OF TEST : BUILDUP DATE OF TEST : MARCH 18-21/90
 PERF/O.H. INT : 1492.8 to 1495.8 PROD. THROUGH : TUBING
 ELEV.(CF) : 719.3 (KB) : 723.0 MID-POINT OF PROD. INTERVAL : 1494.3
 POOL DATUM : DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 3460;4900 SHUT-IN TIME : MAR 18 @ 0730 HRS
 CASING PRES : ON/OFF BOT. : 18/3@0930-21/3@1240 HRS
 RUN DEPTH : 1469.0 SURFACE TEMP. :
 TEMPERATURE AT RUN DEPTH : 56 C PRES. AT MID-POINT OF PERF. : 0.0
 PRES. AT RUN DEPTH : 10567.9 DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

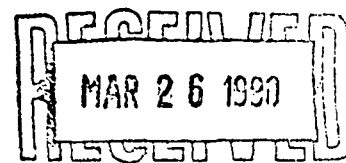
ELEMENT SERIAL NO. : 14361N
 RANGE : 0 - 25511 CLOCK RANGE : 72 HR
 CAL. EQU. : 508.74 * Defl. - 21.53 LATEST CALIBRATION : 12/2/90

COMMENTS	TIME hrs	DEFL mm	----- CALC	PRESSURE KPAG CORR CORRECTED
Depth : 1469.0 m				
ON BOTTOM	2.00	20.740	10529.8	-21.8 10508.0
MAR 18@ 0930 HRS	2.25	20.783	10551.7	-21.9 10529.8
WELL SHUT-IN	2.50	20.790	10555.2	-21.9 10533.4
MAR 18@ 0730 HRS	2.75	20.790	10555.2	-21.9 10533.4
	3.00	20.800	10560.3	-21.9 10538.5
	3.25	20.820	10570.5	-21.9 10548.6
	3.50	20.832	10576.6	-21.9 10554.7
	3.75	20.850	10585.8	-21.9 10563.9
	4.00	20.862	10591.9	-21.9 10569.9
	4.50	20.850	10585.8	-21.9 10563.9
	5.00	20.850	10585.8	-21.9 10563.9
	5.50	20.825	10573.1	-21.9 10551.2
	6.00	20.813	10566.9	-21.9 10545.1
	7.00	20.800	10560.3	-21.9 10538.5
	8.00	20.790	10555.2	-21.9 10533.4
	8.25	20.882	10602.0	-21.9 10580.1
	8.50	20.765	10542.5	-21.9 10520.7
	9.00	20.795	10557.8	-21.9 10535.9
	10.00	20.795	10557.8	-21.9 10535.9
	12.00	20.795	10557.8	-21.9 10535.9

REMARKS :

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



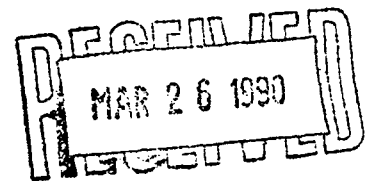
SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
DATE OF TEST : MARCH 18-21/90 LOCATION : L-47 (N.W.T.)
DEPTH : 1469.0 SERIAL NO. : 14361N

COMMENTS	TIME hrs	DEFL mm	PRESSURE KPAG		
			----- CALC	CORR	CORRECTED
	14.00	20.795	10557.8	-21.9	10535.9
	14.50	20.890	10606.1	-21.9	10584.2
	15.00	20.755	10537.4	-21.8	10515.6
	16.00	20.780	10550.2	-21.9	10528.3
	18.00	20.792	10556.3	-21.9	10534.4
	20.00	20.800	10560.3	-21.9	10538.5
	22.00	20.800	10560.3	-21.9	10538.5
	24.00	20.800	10560.3	-21.9	10538.5
	28.00	20.808	10564.4	-21.9	10542.5
	32.00	20.818	10569.5	-21.9	10547.6
	36.00	20.823	10572.0	-21.9	10550.1
	40.00	20.835	10578.1	-21.9	10556.2
	44.00	20.842	10581.7	-21.9	10559.8
	48.00	20.842	10581.7	-21.9	10559.8
	52.00	20.845	10583.2	-21.9	10561.3
	56.00	20.850	10585.8	-21.9	10563.9
	60.00	20.855	10588.3	-21.9	10566.4
	64.00	20.858	10589.8	-21.9	10567.9
	68.00	20.858	10589.8	-21.9	10567.9
	72.00	20.858	10589.8	-21.9	10567.9

CHART RAN OUT @ 72 HRS OF SHUT-IN.
RECORDERS OFF BOTTOM MARCH 21 @ 1240 HRS.



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
 ADDRESS : CALGARY ALTA
 FIELD & POOL :
 TYPE OF TEST : BUILDUP
 PERF/O.H. INT : 1492.8 to 1495.8
 ELEV.(CF) : 719.3 (KB) : 723.0
 POOL DATUM :
 WELL NAME : PARAMOUNT ET AL CAMERON
 LOCATION : L-47 (N.W.T.)
 STATUS : OIL
 DATE OF TEST : MARCH 18-21/90
 PROD. THROUGH : TUBING
 MID-POINT OF PROD. INTERVAL : 1494.3
 DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 3460;4900
 CASING PRES :
 RUN DEPTH : 1471.0
 TEMPERATURE AT RUN DEPTH : 56 C
 PRES. AT RUN DEPTH : 10560.0
 SHUT-IN TIME : MAR 18 @ 0730 HRS
 ON/OFF BOT. : 18/3@0930-21/3@1240 HRS
 SURFACE TEMP. :
 PRES. AT MID-POINT OF PERF. : 0.0
 DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

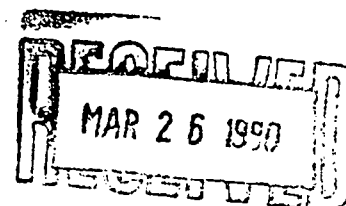
ELEMENT SERIAL NO. : 14363N
 RANGE : 0 - 25511
 CAL. EQU. : 512.62 * Defl. - 51.32
 CLOCK RANGE : 72 HR
 LATEST CALIBRATION : 12/2/90

COMMENTS	TIME hrs	DEFL mm	----- CALC	PRESSURE KPAG CORR CORRECTED
Depth : 1471.0 m				
ON BOTTOM	2.00	20.680	10549.6	-40.9 10508.7
MAR 18@ 0930 HRS	2.25	20.722	10571.1	-40.9 10530.3
WELL SHUT-IN	2.50	20.725	10572.6	-40.9 10531.8
MAR 18@ 0730 HRS	2.75	20.725	10572.6	-40.9 10531.8
	3.00	20.728	10574.2	-40.9 10533.3
	3.25	20.733	10576.7	-40.9 10535.9
	3.50	20.745	10582.9	-40.8 10542.1
	3.75	20.760	10590.6	-40.8 10549.7
	4.00	20.772	10596.7	-40.8 10555.9
	4.50	20.768	10594.7	-40.8 10553.8
	5.00	20.768	10594.7	-40.8 10553.8
	5.50	20.750	10585.5	-40.8 10544.6
	6.00	20.740	10580.3	-40.9 10539.5
	7.00	20.740	10580.3	-40.9 10539.5
	8.00	20.732	10576.2	-40.9 10535.4
	8.25	20.792	10607.0	-40.8 10566.2
	8.50	20.708	10563.9	-40.9 10523.1
	9.00	20.720	10570.1	-40.9 10529.2
	10.00	20.720	10570.1	-40.9 10529.2
	12.00	20.728	10574.2	-40.9 10533.3

REMARKS :

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



SOLID WIRELINE SERVICES

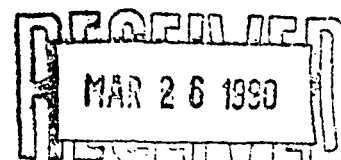
SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
DATE OF TEST : MARCH 18-21/90
DEPTH : 1471.0

WELL NAME : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
SERIAL NO. : 14363N

COMMENTS	TIME	DEFL	----- PRESSURE KPAG -----		
	hrs	mm	CALC	CORR	CORRECTED
	14.00	20.728	10574.2	-40.9	10533.3
	14.50	20.805	10613.7	-40.8	10572.8
	15.00	20.700	10559.8	-40.9	10519.0
	16.00	20.725	10572.6	-40.9	10531.8
	18.00	20.740	10580.3	-40.9	10539.5
	20.00	20.745	10582.9	-40.8	10542.1
	22.00	20.745	10582.9	-40.8	10542.1
	24.00	20.750	10585.5	-40.8	10544.6
	28.00	20.753	10587.0	-40.8	10546.2
	32.00	20.758	10589.6	-40.8	10548.7
	36.00	20.760	10590.6	-40.8	10549.7
	40.00	20.763	10592.1	-40.8	10551.3
	44.00	20.765	10593.2	-40.8	10552.3
	48.00	20.768	10594.7	-40.8	10553.8
	52.00	20.772	10596.7	-40.8	10555.9
	56.00	20.775	10598.3	-40.8	10557.4
	60.00	20.778	10599.8	-40.8	10559.0
	64.00	20.780	10600.8	-40.8	10560.0
	68.00	20.780	10600.8	-40.8	10560.0
	72.00	20.780	10600.8	-40.8	10560.0

CHART RAN OUT @ 72 HRS OF SHUT-IN.
RECORDERS OFF BOTTOM MARCH 21 @ 1240 HRS.



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
 ADDRESS : CALGARY ALTA
 FIELD & POOL :
 TYPE OF TEST : STATIC GRADIENT
 PERF/O.H. INT : 1492.8 to 1495.8
 ELEV.(CF) : 719.3 (KB) : 723.0
 POOL DATUM :
 WELL NAME : PARAMOUNT ET AL CAMERON
 LOCATION : L-47 (N.W.T.)
 STATUS : OIL
 DATE OF TEST : MARCH 21/90
 PROD. THROUGH : TUBING
 MID-POINT OF PROD. INTERVAL : 1494.3
 DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 4900
 CASING PRES :
 RUN DEPTH TOP : 1492.0
 TEMPERATURE AT RUN DEPTH : 56 C
 GRAD. AT RUN DEPTH TOP : 7.735
 PRES. AT RUN DEPTH TOP : 10711.2
 SHUT-IN TIME : MAR 18 @ 0730 HRS
 ON BOTTOM/OFF BOTTOM : 1452-1502 HRS
 SURFACE TEMPERATURE :
 PRES. AT MID-POINT OF PERF. : 10729.0
 DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in meters (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14361N
 RANGE : 0 - 25511
 CAL. EQUATION : $508.74 * Defl. + -21.53$ LATEST CALIBRATION : 12/2/90
 CLOCK RANGE : 3 HR

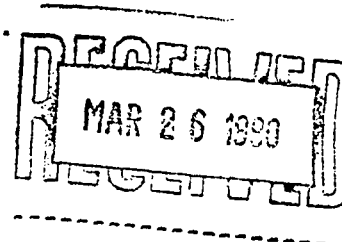
TOP RECORDER DEPTH (m)	DEFLECTION mm	CALCULATED PRESSURE KPAG	CORRECTION P + PC KPAG	CORRECTED PRESSURE KPAG	GRADIENT KPAG/m
0.0	9.690	4908.2	8.1	4916.3	0.000
0.0	9.640	4882.8	8.2	4890.9	0.000
298.0	9.930	5030.3	7.6	5037.9	.490
598.0	10.210	5172.7	6.8	5179.6	.472
898.0	11.970	6068.1	1.7	6069.8	2.967
1198.0	16.642	8445.0	-12.0	8433.0	7.877
1298.0	18.185	9230.0	-16.5	9213.5	7.805
1398.0	19.708	10004.8	-21.0	9983.8	7.704
1448.0	20.470	10392.4	-21.6	10370.8	7.740
1492.0	21.140	10733.3	-22.1	10711.2	7.735

REMARKS :

FINAL SURFACE FLEX PRESSURE THIS REC'D = 4878.8 KPAG.

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
 ADDRESS : CALGARY ALTA
 FIELD & POOL :
 TYPE OF TEST : STATIC GRADIENT
 PERF/O.H. INT : 1492.8 to 1495.8
 ELEV.(CF) : 719.3 (KB) : 723.0
 POOL DATUM :

WELL NAME : PARAMOUNT ET AL CAMERON
 LOCATION : L-47 (N.W.T.)
 STATUS : OIL
 DATE OF TEST : MARCH 21/90
 PROD. THROUGH : TUBING
 MID-POINT OF PROD. INTERVAL : 1494.3
 DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 4900

CASING PRES :

RUN DEPTH BOT. : 1494.0

TEMPERATURE AT RUN DEPTH : 56 C

GRAD. AT RUN DEPTH BOT. : 7.716

PRES. AT RUN DEPTH BOT. : 10698.5

SHUT-IN TIME : MAR 18 @ 0730 HRS

ON BOTTOM/OFF BOTTOM : 1452-1502 HRS

SURFACE TEMPERATURE :

PRES. AT MID-POINT OF PERF. : 10700.8

DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in meters (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14363N

RANGE : 0 - 25511

CLOCK RANGE : 3 HR

CAL. EQUATION : $512.62 * \text{Defl.} + -51.32$ LATEST CALIBRATION : 12/2/90

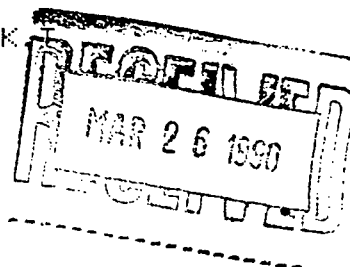
BOTTOM RECORDER DEPTH (m)	DEFLECTION mm	CALCULATED PRESSURE KPAG	CORRECTION P + PC KPAG	CORRECTED PRESSURE KPAG	GRADIENT KPAG/m
0.0	9.740	4941.6	-9.9	4931.6	0.000
0.0	9.690	4915.9	-9.6	4906.3	0.000
300.0	9.950	5049.2	-11.0	5038.2	.440
600.0	10.232	5193.8	-11.9	5181.9	.479
900.0	12.000	6100.1	-17.3	6082.7	3.003
1200.0	16.620	8468.4	-31.6	8436.8	7.847
1300.0	18.135	9245.0	-36.3	9208.7	7.719
1400.0	19.635	10013.9	-40.9	9973.0	7.643
1450.0	20.388	10399.9	-40.9	10359.0	7.720
1494.0	21.050	10739.2	-40.8	10698.5	7.716

REMARKS :

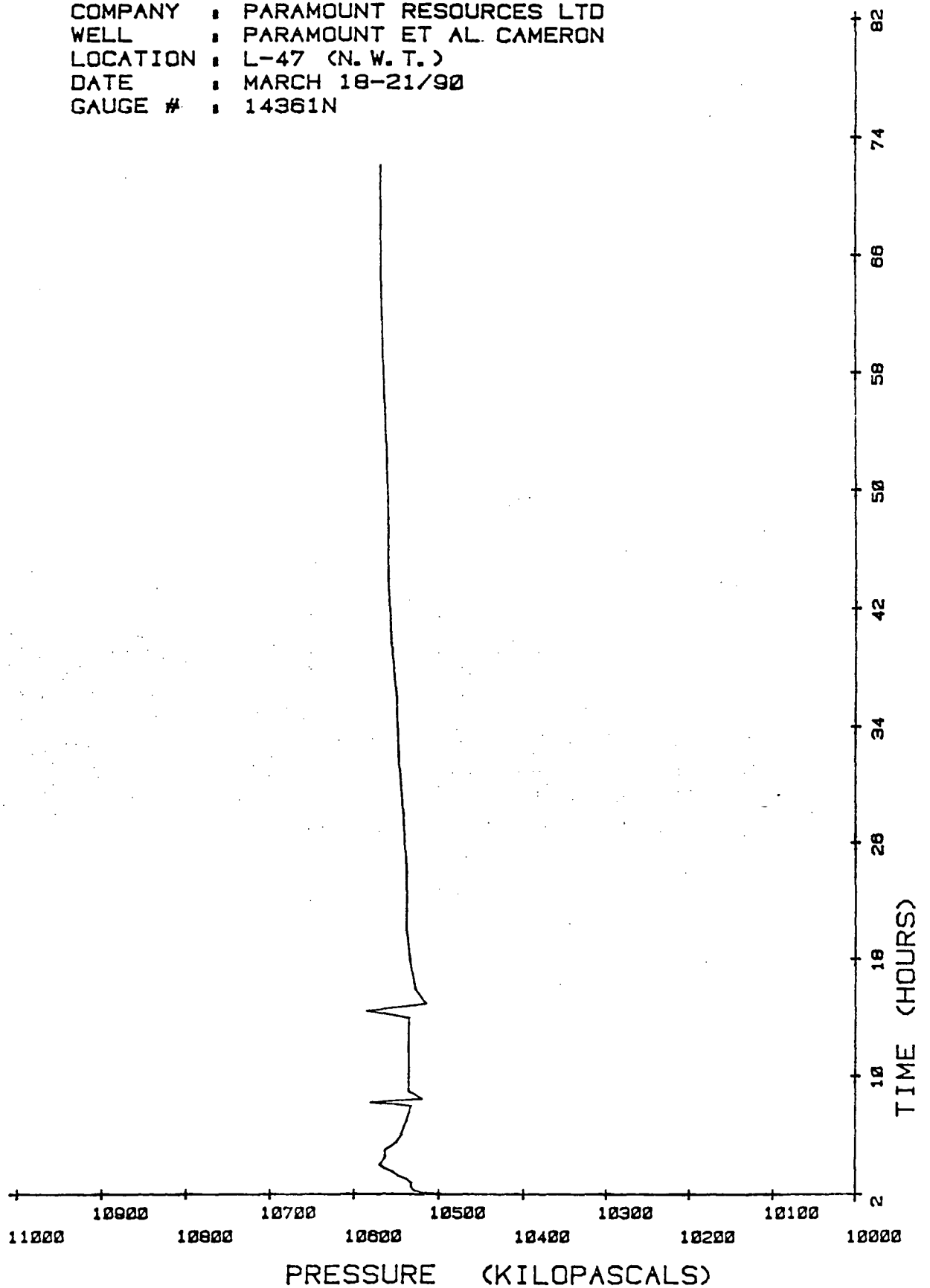
FINAL SURFACE FLEX PRESSURE THIS REC'D = 4878.1 KPAG.

SURVEY COMPANY : SOLID WIRELINE

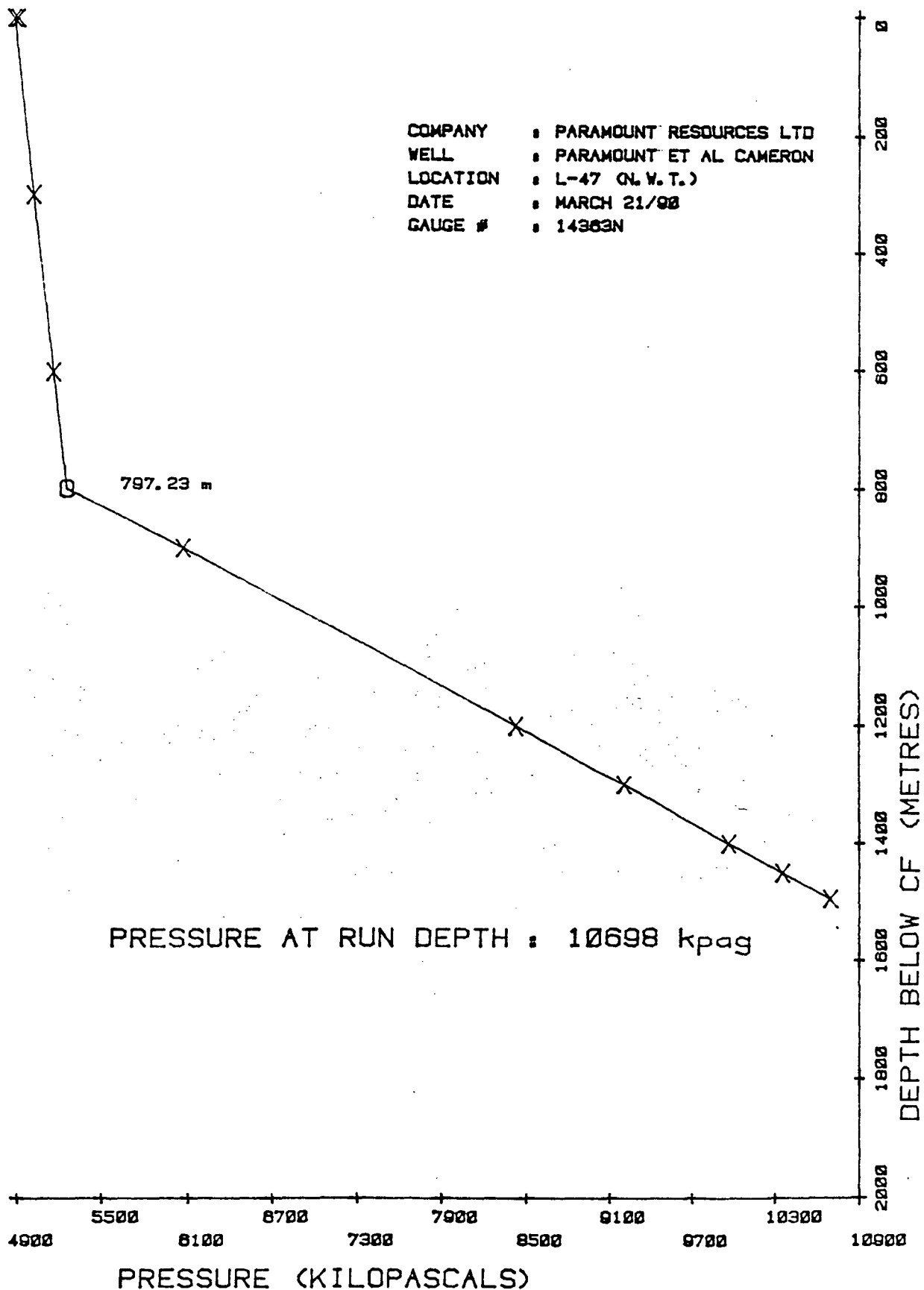
TEST BY : K



COMPANY : PARAMOUNT RESOURCES LTD
WELL : PARAMOUNT ET AL. CAMERON
LOCATION : L-47 (N.W.T.)
DATE : MARCH 18-21/90
GAUGE # : 14361N



COMPANY : PARAMOUNT RESOURCES LTD
WELL : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
DATE : MARCH 21/98
GAUGE # : 14363N



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD	WELL NAME : PARAMOUNT ET AL CAMERON
ADDRESS : CALGARY ALTA	LOCATION : L-47 (N.W.T.)
FIELD & POOL :	STATUS : OIL
TYPE OF TEST : STATIC GRADIENT	DATE OF TEST : MARCH 21/90
PERF/O.H. INT : 1492.8 to 1495.8	PROD. THROUGH : TUBING
ELEV.(CF) : 719.3 (KB) : 723.0	MID-POINT OF PROD. INTERVAL : 1494.3
POOL DATUM :	DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 4900	
CASING PRES :	SHUT-IN TIME : MAR 18 @ 0730 HRS
RUN DEPTH BOT. : 1494.0	ON BOTTOM/OFF BOTTOM : 1452-1502 HRS
TEMPERATURE AT RUN DEPTH : 56 C	SURFACE TEMPERATURE :
GRAD. AT RUN DEPTH BOT. : 7.716	PRES. AT MID-POINT OF PERF. : 10700.8
PRES. AT RUN DEPTH BOT. : 10698.5	DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in meters (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14363N
 RANGE : 0 - 25511
 CAL. EQUATION : $512.62 * \text{Defl.} + -51.32$ LATEST CALIBRATION : 12/2/90

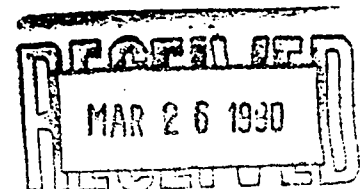
BOTTOM RECORDER DEPTH (m)	DEFLECTION mm	CALCULATED PRESSURE KPAG	CORRECTION P + PC KPAG	CORRECTED PRESSURE KPAG	GRADIENT KPAG/m
0.0	9.740	4941.6	-9.9	4931.6	0.000
0.0	9.690	4915.9	-9.6	4906.3	0.000
300.0	9.950	5049.2	-11.0	5038.2	.440
600.0	10.232	5193.8	-11.9	5181.9	.479
900.0	12.000	6100.1	-17.3	6082.7	3.003
1200.0	16.620	8468.4	-31.6	8436.8	7.847
1300.0	18.135	9245.0	-36.3	9208.7	7.719
1400.0	19.635	10013.9	-40.9	9973.0	7.643
1450.0	20.388	10399.9	-40.9	10359.0	7.720
1494.0	21.050	10739.2	-40.8	10698.5	7.716

REMARKS :

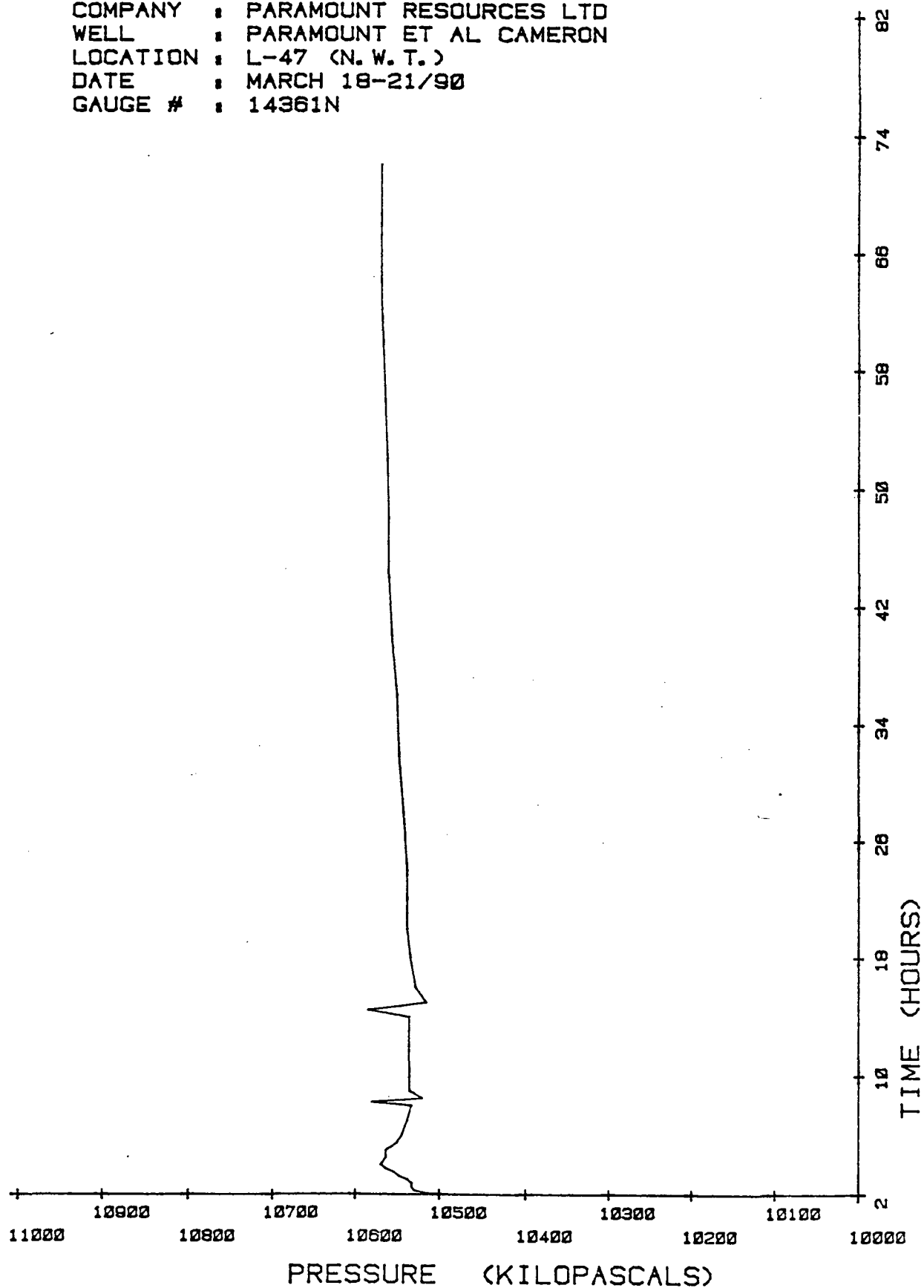
FINAL SURFACE FLEX PRESSURE THIS REC'D = 4878.1 KPAG.

SURVEY COMPANY : SOLID WIRELINE

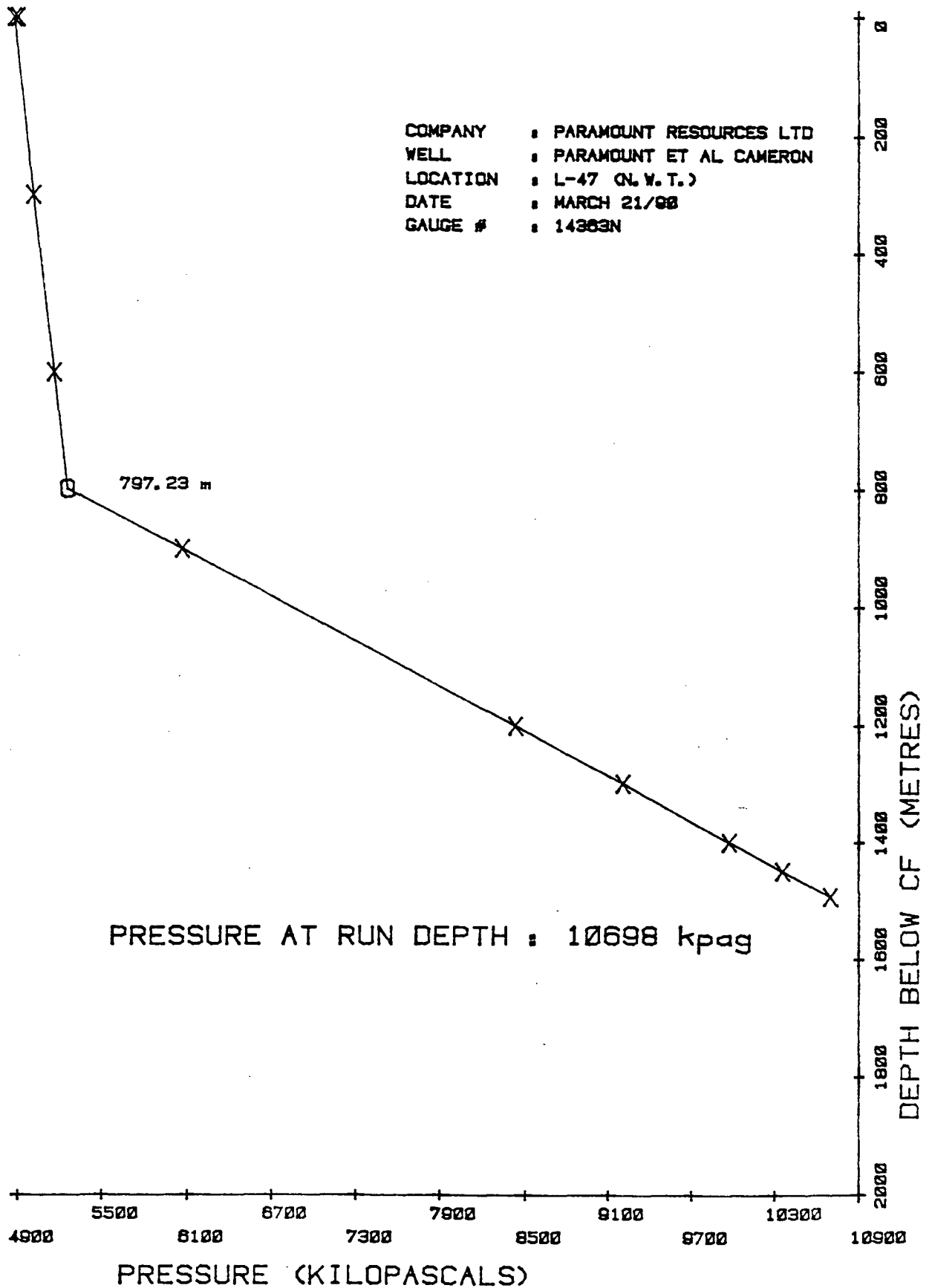
TEST BY : K.T.



COMPANY : PARAMOUNT RESOURCES LTD
WELL : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
DATE : MARCH 18-21/90
GAUGE # : 14361N



COMPANY : PARAMOUNT RESOURCES LTD
WELL : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
DATE : MARCH 21/88
GAUGE # : 14383N



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD	WELL NAME : PARAMOUNT ET AL CAMERON
ADDRESS : CALGARY ALTA	LOCATION : L-47 (N.W.T.)
FIELD & POOL :	STATUS : OIL
TYPE OF TEST : BUILDUP	DATE OF TEST : MARCH 18-21/90
PERF/O.H. INT : 1492.8 to 1495.8	PROD. THROUGH : TUBING
ELEV.(CF) : 719.3 (KB) : 723.0	MID-POINT OF PROD. INTERVAL : 1494.3
POOL DATUM :	DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 3460;4900	SHUT-IN TIME : MAR 18 @ 0730 HRS
CASING PRES :	ON/OFF BOT. : 18/3@0730-21/3@1240 HRS
RUN DEPTH : 1469.0	SURFACE TEMP. :
TEMPERATURE AT RUN DEPTH : 56 C	PRES. AT MID-POINT OF PERF. : 0.0
PRES. AT RUN DEPTH : 10567.9	DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

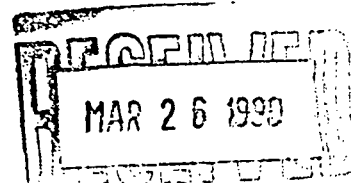
ELEMENT SERIAL NO. : 14361N	CLOCK RANGE : 72 HR
RANGE : 0 - 25511	LATEST CALIBRATION : 12/2/90
CAL. EQU. : 508.74 * Defl. - 21.53	

COMMENTS	TIME hrs	DEFL mm	PRESSURE KPAG		
			----- CALC	CORR	CORRECTED
Depth : 1469.0 m					
ON BOTTOM	2.00	20.740	10529.8	-21.8	10508.0
MAR 18@ 0930 HRS	2.25	20.783	10551.7	-21.9	10529.8
WELL SHUT-IN	2.50	20.790	10555.2	-21.9	10533.4
MAR 18@ 0730 HRS	2.75	20.790	10555.2	-21.9	10533.4
	3.00	20.800	10560.3	-21.9	10538.5
	3.25	20.820	10570.5	-21.9	10548.6
	3.50	20.832	10576.6	-21.9	10554.7
	3.75	20.850	10585.8	-21.9	10563.9
	4.00	20.862	10591.9	-21.9	10569.9
	4.50	20.850	10585.8	-21.9	10563.9
	5.00	20.850	10585.8	-21.9	10563.9
	5.50	20.825	10573.1	-21.9	10551.2
	6.00	20.813	10566.9	-21.9	10545.1
	7.00	20.800	10560.3	-21.9	10538.5
	8.00	20.790	10555.2	-21.9	10533.4
	8.25	20.882	10602.0	-21.9	10580.1
	8.50	20.765	10542.5	-21.9	10520.7
	9.00	20.795	10557.8	-21.9	10535.9
	10.00	20.795	10557.8	-21.9	10535.9
	12.00	20.795	10557.8	-21.9	10535.9

REMARKS :

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



SOLID WIRELINE SERVICES

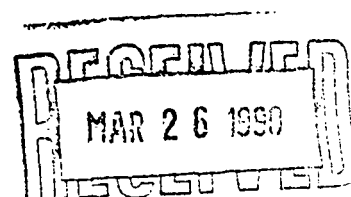
SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
DATE OF TEST : MARCH 18-21/90
DEPTH : 1469.0

WELL NAME : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
SERIAL NO. : 14361N

COMMENTS	TIME hrs	DEFL mm	PRESSURE KPAG		
			----- CALC	CORR	CORRECTED
	14.00	20.795	10557.8	-21.9	10535.9
	14.50	20.890	10606.1	-21.9	10584.2
	15.00	20.755	10537.4	-21.8	10515.6
	16.00	20.780	10550.2	-21.9	10528.3
	18.00	20.792	10556.3	-21.9	10534.4
	20.00	20.800	10560.3	-21.9	10538.5
	22.00	20.800	10560.3	-21.9	10538.5
	24.00	20.800	10560.3	-21.9	10538.5
	28.00	20.808	10564.4	-21.9	10542.5
	32.00	20.818	10569.5	-21.9	10547.6
	36.00	20.823	10572.0	-21.9	10550.1
	40.00	20.835	10578.1	-21.9	10556.2
	44.00	20.842	10581.7	-21.9	10559.8
	48.00	20.842	10581.7	-21.9	10559.8
	52.00	20.845	10583.2	-21.9	10561.3
	56.00	20.850	10585.8	-21.9	10563.9
	60.00	20.855	10588.3	-21.9	10566.4
	64.00	20.858	10589.8	-21.9	10567.9
	68.00	20.858	10589.8	-21.9	10567.9
	72.00	20.858	10589.8	-21.9	10567.9

CHART RAN OUT @ 72 HRS OF SHUT-IN.
RECORDERS OFF BOTTOM MARCH 21 @ 1240 HRS.



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD WELL NAME : PARAMOUNT ET AL CAMERON
 ADDRESS : CALGARY ALTA LOCATION : L-47 (N.W.T.)
 FIELD & POOL : STATUS : OIL
 TYPE OF TEST : BUILDUP DATE OF TEST : MARCH 18-21/90
 PERF/O.H. INT : 1492.8 to 1495.8 PROD. THROUGH : TUBING
 ELEV.(CF) : 719.3 (KB) : 723.0 MID-POINT OF PROD. INTERVAL : 1494.3
 POOL DATUM : DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 3460;4900 SHUT-IN TIME : MAR 18 @ 0730 HRS
 CASING PRES : ON/OFF BOT. : 18/3@0930-21/3@1240 HRS
 RUN DEPTH : 1471.0 SURFACE TEMP. :
 TEMPERATURE AT RUN DEPTH : 56 C PRES. AT MID-POINT OF PERF. : 0.0
 PRES. AT RUN DEPTH : 10560.0 DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in metres (CF) ; Pressure in KPAG)

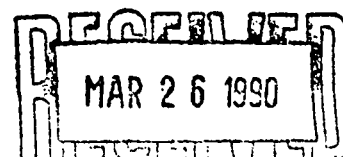
ELEMENT SERIAL NO. : 14363N
 RANGE : 0 - 25511 CLOCK RANGE : 72 HR
 CAL. EQU. : 512.62 * Defl. - 51.32 LATEST CALIBRATION : 12/2/90

COMMENTS	TIME hrs	DEFL mm	PRESSURE KPAG		
			----- CALC.	CORR	CORRECTED
Depth : 1471.0 m					
ON BOTTOM	2.00	20.680	10549.6	-40.9	10508.7
MAR 18@ 0930 HRS	2.25	20.722	10571.1	-40.9	10530.3
WELL SHUT-IN	2.50	20.725	10572.6	-40.9	10531.8
MAR 18@ 0730 HRS	2.75	20.725	10572.6	-40.9	10531.8
	3.00	20.728	10574.2	-40.9	10533.3
	3.25	20.733	10576.7	-40.9	10535.9
	3.50	20.745	10582.9	-40.8	10542.1
	3.75	20.760	10590.6	-40.8	10549.7
	4.00	20.772	10596.7	-40.8	10555.9
	4.50	20.768	10594.7	-40.8	10553.8
	5.00	20.768	10594.7	-40.8	10553.8
	5.50	20.750	10585.5	-40.8	10544.6
	6.00	20.740	10580.3	-40.9	10539.5
	7.00	20.740	10580.3	-40.9	10539.5
	8.00	20.732	10576.2	-40.9	10535.4
	8.25	20.792	10607.0	-40.8	10566.2
	8.50	20.708	10563.9	-40.9	10523.1
	9.00	20.720	10570.1	-40.9	10529.2
	10.00	20.720	10570.1	-40.9	10529.2
	12.00	20.728	10574.2	-40.9	10533.3

REMARKS :

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



SOLID WIRELINE SERVICES

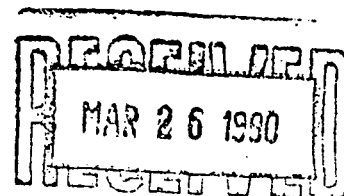
SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD
DATE OF TEST : MARCH 18-21/90
DEPTH : 1471.0

WELL NAME : PARAMOUNT ET AL CAMERON
LOCATION : L-47 (N.W.T.)
SERIAL NO. : 14363N

COMMENTS	TIME hrs	DEFL mm	----- CALC	----- PRESSURE KPA CORR	----- CORRECTED
	14.00	20.728	10574.2	-40.9	10533.3
	14.50	20.805	10613.7	-40.8	10572.8
	15.00	20.700	10559.8	-40.9	10519.0
	16.00	20.725	10572.6	-40.9	10531.8
	18.00	20.740	10580.3	-40.9	10539.5
	20.00	20.745	10582.9	-40.8	10542.1
	22.00	20.745	10582.9	-40.8	10542.1
	24.00	20.750	10585.5	-40.8	10544.6
	28.00	20.753	10587.0	-40.8	10546.2
	32.00	20.758	10589.6	-40.8	10548.7
	36.00	20.760	10590.6	-40.8	10549.7
	40.00	20.763	10592.1	-40.8	10551.3
	44.00	20.765	10593.2	-40.8	10552.3
	48.00	20.768	10594.7	-40.8	10553.8
	52.00	20.772	10596.7	-40.8	10555.9
	56.00	20.775	10598.3	-40.8	10557.4
	60.00	20.778	10599.8	-40.8	10559.0
	64.00	20.780	10600.8	-40.8	10560.0
	68.00	20.780	10600.8	-40.8	10560.0
	72.00	20.780	10600.8	-40.8	10560.0

CHART RAN OUT @ 72 HRS OF SHUT-IN.
RECORDERS OFF BOTTOM MARCH 21 @ 1240 HRS.



SOLID WIRELINE SERVICES

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : PARAMOUNT RESOURCES LTD	WELL NAME : PARAMOUNT ET AL CAMERON
ADDRESS : CALGARY ALTA	LOCATION : L-47 (N.W.T.)
FIELD & POOL :	STATUS : OIL
TYPE OF TEST : STATIC GRADIENT	DATE OF TEST : MARCH 21/90
PERF/O.H. INT : 1492.8 to 1495.8	PROD. THROUGH : TUBING
ELEV.(CF) : 719.3 (KB) : 723.0	MID-POINT OF PROD. INTERVAL : 1494.3
POOL DATUM :	DATUM DEPTH OF WELL : 0.0

STATIC TEST

TUBING PRES : 4900	
CASING PRES :	SHUT-IN TIME : MAR 18 @ 0730 HRS
RUN DEPTH TOP : 1492.0	ON BOTTOM/OFF BOTTOM : 1452-1502 HRS
TEMPERATURE AT RUN DEPTH : 56 C	SURFACE TEMPERATURE :
GRAD. AT RUN DEPTH TOP : 7.735	PRES. AT MID-POINT OF PERF. : 10729.0
PRES. AT RUN DEPTH TOP : 10711.2	DATUM DEPTH PRESS. : 0.0

NOTE : All above units in metric (Depth in meters (CF) ; Pressure in KPAG)

ELEMENT SERIAL NO. : 14361N
 RANGE : 0 - 25511
 CAL. EQUATION : $508.74 * \text{Defl.} + -21.53$ LATEST CALIBRATION : 12/2/90
 CLOCK RANGE : 3 HR

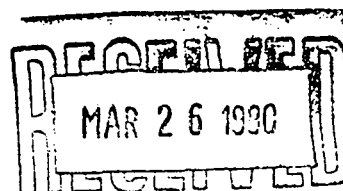
TOP RECORDER DEPTH (m)	DEFLECTION mm	CALCULATED PRESSURE KPAG	CORRECTION P + PC KPAG	CORRECTED PRESSURE KPAG	GRADIENT KPAG/m
0.0	9.690	4908.2	8.1	4916.3	0.000
0.0	9.640	4882.8	8.2	4890.9	0.000
298.0	9.930	5030.3	7.6	5037.9	.490
598.0	10.210	5172.7	6.8	5179.6	.472
898.0	11.970	6068.1	1.7	6069.8	2.967
1198.0	16.642	8445.0	-12.0	8433.0	7.877
1298.0	18.185	9230.0	-16.5	9213.5	7.805
1398.0	19.708	10004.8	-21.0	9983.8	7.704
1448.0	20.470	10392.4	-21.6	10370.8	7.740
1492.0	21.140	10733.3	-22.1	10711.2	7.735

REMARKS :

FINAL SURFACE FLEX PRESSURE THIS REC'D = 4878.8 KPAG.

SURVEY COMPANY : SOLID WIRELINE

TEST BY : K.T.



SECTION G, 10.

PARAMOUNT ET AL CAMERON L-47

PROCESSED COMBINATION OF WELL LOGS

'CYBERLOOK'

SECTION G, 11.

TABLE 5

PARAMOUNT ET AL CAMERON L-47

DEVIATION RECORD

TABLE 5

PARAMOUNT ET AL CAMERON L-47

DEVIATION RECORD

DEPTH (M)	DEVIATION (DEGREES)
37	1/4
65	1/8
119	1/8
137	1/8
164	1/4
202	3
230	2 1/2
258	1 1/4
334	3/4
372	3/4
560	3/4
723	3/4
838	1/2
992	1/4
1097	2
1173	3/4
1270	2 1/2
1317	1
1420	1
1519	1 1/4
1565	1 1/4

SECTION G, 14.

PARAMOUNT ET AL CAMERON L-47

COMPOSITE WELL RECORD

SECTION G, 15.

PARAMOUNT ET AL CAMERON L-47

FINAL SURVEY PLAN

SECTION G, 16.

TABLE 6

PARAMOUNT ET AL CAMERON L-47

MUD DATA

TABLE 6

PARAMOUNT ET AL CAMERON L-47

MUD DATA

DATE	DEPTH	WT. (KG/M ³)	VIS.	W.L.	pH	COMMENTS
1989-02-12	137	1040	44			
1989-02-13	306	1160	52			
1989-02-14	390	1160	93			
1989-02-15	390					
1989-02-16	392					
1989-02-17	819	1110	50			
1989-02-18	992	1100	51			
1989-02-19	1165	1100	50	9.0	11.5	
1989-02-20	1238	1130	60	7.6	10.0	
1989-02-21	1338	1150	54	9.0	11.0	
1989-02-22	1375	1160	60	8.5	11.0	
1989-02-23	1430	1170	68	7.0	11.0	
1989-02-24	1430	1170	68	7.0	11.0	
1989-02-25	1480	1120	115	7.6	10.5	
1989-02-26	1532	1140	55	7.6	11.0	
1989-02-27	1565	1150	70	9.0	11.0	
1989-02-28	1565	1150	70	9.0	11.0	
1989-03-01	1565	1150	70	9.0	11.0	
1989-03-02	1565	1150	70	9.0	11.0	
1989-03-03	1565	1165	65	7.0	10.5	
1989-03-04	1565	1165	65	7.0	10.5	
1989-03-05	1565	1165	65	7.0	10.5	

SECTION E, 1.

PARAMOUNT ET AL CAMERON L-47

DOWNHOLE LOGS

SECTION E, 1.

PARAMOUNT ET AL CAMERON L-47

DOWNHOLE LOGS

WELL CARD

DEPARTMENT OF ENERGY, MINES AND RESOURCES
RESOURCE MANAGEMENT AND CONSERVATION BRANCH

WELL NAME: Paramount et al Cameron L-47				STATUS: Suspended		AAPG CLASS:		EMR CLASS:		
PROJECT NUMBER: 9211-P33-4-2				U.W.I.: 300L476010117300		TD: 1565 m KB		ELEVATIONS-RT/KB: 723.00 SF/GL: 719.32		
OPERATOR: Paramount Resources Ltd.				PERMIT OR LEASE NO. (STATE IF INTERIM): 312						
AREA: Cameron Hills, NWT				FIELD/POOL:		REPORT REC'D: 90-06-06		COMPLETE: RELEASED:		
SPUD DATE: 89-02-11				DRLG COMPLETE: 89-02-27		RIG RELEASED: 89-03-06				
LOCATION-LATITUDE: 60° 06' 31.55"				LONGITUDE: 117° 39' 18.63"		SIDE TRACK: No				
				WELL KICK: None						
CONTRACTOR: Sierra Drilling Ltd.				RIG: 2		LOST CIRCULATION: No				
RIG TYPE: Single				REGISTRY:		FISHING JOBS: None				
STATION KEEPING: N/A				DEVIATED HOLE: 2 1/2° max @ 1270						
				MUD TYPE: Gel/Chem		TD/WT: 1150				
DAYS-TOTAL: 23				ROB: 169.25/172.25 hrs. not clearly known		WOW: None		AVG. PROPERTIES – VIS: 65 WL: 8.0 or less pH: 10.5		
WELL COST:				RIG COST:		390-1156 drilled with air.				
WELL COST/DAY:				RIG COST/DAY:						
REMARKS (e.g. Casing, Cementing, Deviation, Hole Problems, Equipment left in hole, Accidents) Production casing cemented in two stages, first stage plug did not bump. Recemented with service rig.				CASING	SIZE	DEPTH (RT)	CASING AND CEMENTING DETAILS		ABANDONMENT PLUGS	
									TYPE	INTERVAL
				Surface	224.5	390.05	53.6 kg/m - J55 LT&C cemented with 31 tonnes class 'G' + 3% CACL ₂	None		
				Prod.	139.7	1562.50	20.83 kg/m J-55 ST&C cemented in two stages. First stage 12.0 tonnes 0-1-0 + 1.0% NFL + 0.1% SPC 12000. Second stage 41.0 tonnes 0.1/8 + 0.75% T-10			
				EQUIPMENT LEFT ON SEA FLOOR:						

Geological Province

LOGS		FLOW TESTS (Test type & no., interval, flow times, produced fluids and rates, stimulation)	CORES							
TYPE	INTERVAL		NÖ.	INTERVAL	REC.	LITHOLOGY				
Phasor	390 - 1560.7	<u>DST #1</u> 1408 - 1430 Times 8-69-57-121 No gas to surface. ISI 10,112 kPa FSI 10,103 kPa. Recovered 187 m of mud cut water. <u>DST #2</u> 1486 - 1510 Times 45-365 min. Gas to surface. 11 min. Oil to surface in 40 min. <u>DST #3</u> 1510 - 1534 m Times 20-50-115-120. Weak air blow increasing to steady air blow. No gas to surface. Recovered 45 m oil contaminated mud and 45 m brackish/oil. ISI pressure 5,454 kPa FSI 7,030 kPa. <u>DST #4</u> Misrun 1335 - 1359 <u>DST #5</u> 1335 - 1359 m Times 10-55-60-120. Weak air blow. No gas to surface. Recovered 85 m of inhibitor cut mud. ISI pressure 9,852 kPa. FSI pressure 10,459 kPa. An extended flow test was done Feb. 17/90 - March 15/90. Interval 1496 - 1499. 810.50 m³ oil and 151.40 m³ water was produced.				None were cut.				
SFI	390 - 1560.7									
SP	390 - 1560.7									
GR	390 - 1560.7									
BHC	390 - 1551.2									
SONIC	390 - 1551.2									
GR	390 - 1551.2									
CAL-TEN	390 - 1551.2									
CNL	390 - 1562.5									
LDT	390 - 1562.5									
GR	390 - 1562.5									
MICROLOG	390 - 1556.2									
VELOCITY	390 - 1563.5									
CYBERLOOK	1310 - 1562.5				390 - 1156 m drilled with air/foam.					
FORMATION INTERVAL TESTS*			MUD DATA							
TOTAL NO.	INTERVAL	DEPTH	306		1338	1430	1565			
		WEIGHT kg/m	1160		1150	1170	1150			
#1	1408 - 1430	STIMULATION					FRACTURE TESTS			
#2	1486 - 1510	TYPE	INTERVAL		AMOUNT USED PROPPING AGENT		DEPTH	Equivalent MUD WEIGHT		
#3	1510 - 1534	HCL 28%	1509 - 1525		8 m ³ N ₂		392	22.1 kPa/m		
#4 & #5	1335 - 1359	HF	1496.5 1499		3 m ³ N ₂					
* IF NO OTHER TESTS, EXPAND RESULTS UNDER "FLOW TESTS"		FRACTURE								
							INITIALS	GR		
							DATE	91-01-31		