

N.E.B. COPY



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NATIONAL ENERGY BOARD
ENGINEERING BRANCH

JUL 22 1994

FINAL WELL REPORT
FOR
PARAMOUNT
et al
CAMERON I - 74
60° 10' 117° 15'

PREPARED BY: N. E. B. Roman

APPROVED BY: P. G. Besler, P. Eng.



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A. INTRODUCTION

1. SUMMARY

The well, Paramount et al Cameron I-74, was drilled by Paramount Resources Ltd. during the first quarter of 1994 to explore for reserves of oil and natural gas in the Slave Point, Sulphur Point and Keg River Formations. The drilling contractor was Phelps Drilling International Ltd. utilizing their Rig #4E which is a conventional triple stand jack knife with diesel electric power.

The rig was moved in and rigged up from January 25 to 27, 1994. The well spud on January 27, 1994 at 22:15 hours. The 311.2 mm surface hole was drilled to 396 mKB. and a string of 244.5 mm casing was run and cemented. A 222.2 mm main hole was drilled to 1407 m. Two full hole cores were cut in the Sulphur Point Formation from 1407.00 to 1441.00 mKB. The Sulphur Point interval 1409.00 to 1441.00 mKB was drill stem tested on penetration. It recovered approximately 410 m of gasified oil flecked mud.

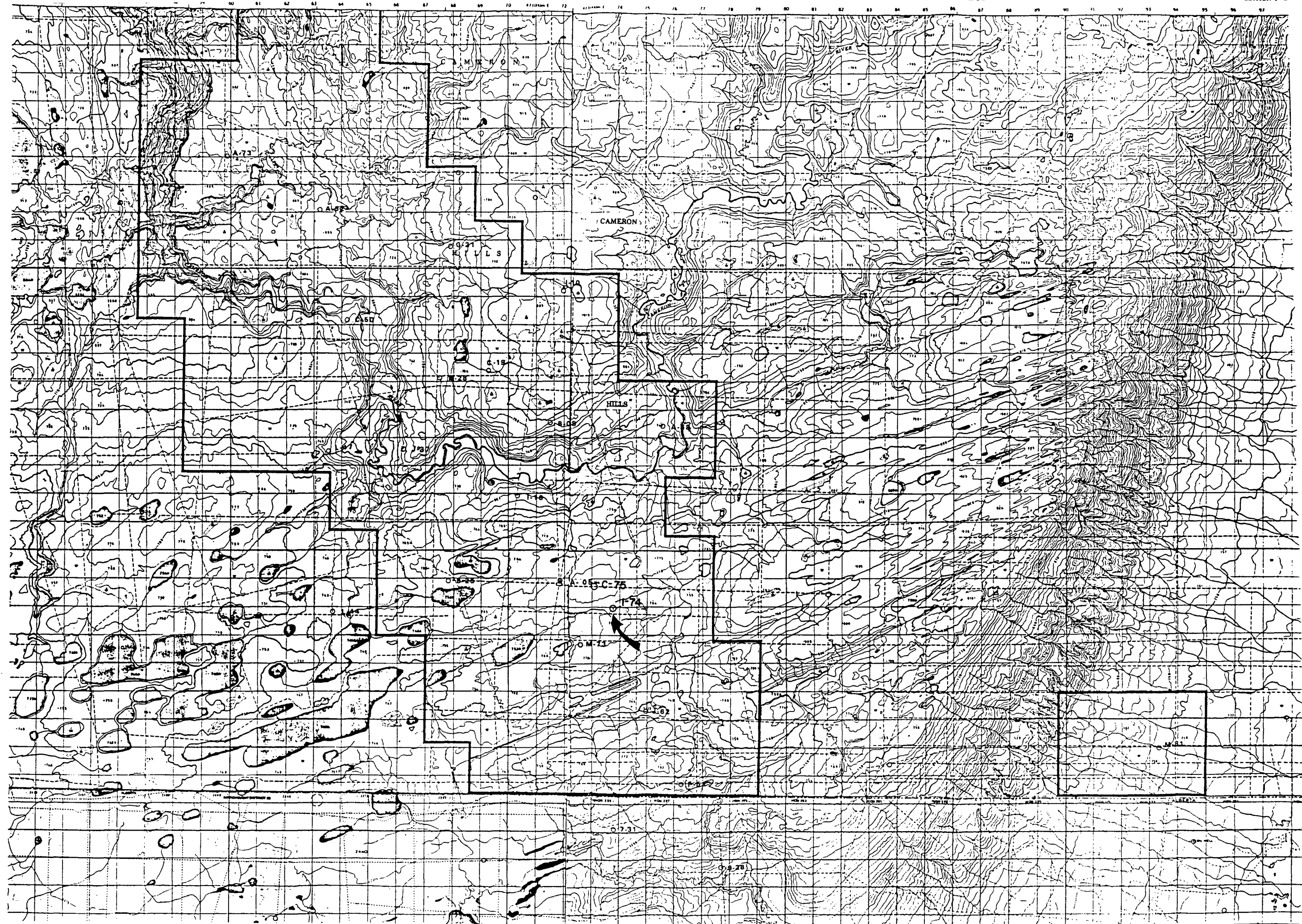
Drilling continued to total depth of 1644 mKB on February 11, 1994. The open hole was logged by Schlumberger. The well was cased with 177.8 mm production casing and cemented. Problems occurred while cementing and full displacement was not achieved. The drilling rig was released on February 14, 1994 at 12:00 hours.

A service rig, Flint Rig (Calgary) Ltd., Rig #718, moved onto the well from February 20 to March 22, 1994 for completion operations. The cement was tagged in casing at 981 m and drilled out to 1465 mKB. A cement bond log was run and indicated cement could be to the base of the surface casing and is covering all hydrocarbon bearing zones.

The Sulphur Point interval, 1409.00 to 1414.00 mKB was perforated and stimulated with 5.5 m³ of 15% Nowferr 3000 acid blend. The interval produced gas. The perforations were cemented off and casing drilled out. The Sulphur Point interval, 1418.50 to 1423.90 mKB was perforated and stimulated with 6.0 m³ of 15% Nowferr 3000 acid blend. The interval was swabbed in and briefly flow tested. It flowed fluid with approximately 50 to 60% oil cut at an approximate rate of 5 - 6 m³/day.

The service rig was released on March 22, 1994. A plug was set in the tubing on March 29, 1994 and the well suspended.

2. LOCALITY MAP (See Figure 1, Following Page)



B. GENERAL DATA

1. WELL NAME

Paramount et al Cameron I-74
 Significant Discovery Licence #009
 Grid Area 60° 10' 117° 15'

2. WELL LOCATION

Surveyed by conventional ground traverse methods to determine final position.
 UTM Reference 117°
 Coordinates North 6,657,979.94
 East 473,719.78
 Lat. 60° 03' 35.977"
 Long. 117° 28' 19.197"

3. UNIQUE WELL IDENTIFIER

300I746010117150

4. OPERATOR, DRILLING AND SERVICING CONTRACTORS

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

Drilling Contractor: Phelps Drilling International Ltd.
 Suite 1450, 101 - 6th Avenue S.W.
 Calgary, Alberta
 T2P 3P4

Servicing Contractor: Flint Rig (Calgary) Ltd.
 1100, 550 - 11th Avenue S.W.
 Calgary, Alberta
 T2R 1M8

5. DRILLING UNIT Phelps #4E

SERVICING UNIT Flint #718

- 6. POSITION KEEPING (N/A)
- 7. SUPPORT CRAFT (N/A)
- 8. DRILLING UNIT PERFORMANCE (N/A)
- 9. DIFFICULTIES AND DELAYS (N/A)
- 5. DRILLING UNIT Phelps #4E

C. SUMMARY OF OPERATIONS

1. ELEVATIONS

Kelly Bushing	782.62 m
Ground	777.77 m

2. DEPTHS

Drilled	1644.00 mKB
Logged	1643.00 mKB
PBTD	1465.00 mKB
PBD	1465.00 mKB

3. DATE AND HOUR SPUDDED

1994-01-27 @ 22:15 hours

4. DATE DRILLING COMPLETED

1994-02-11

5. DATE OF RIG RELEASE

1994-02-14 @ 12:00 hours

6. WELL STATUS

Suspended Sulphur Point Oilwell

7. HOLE SIZES AND DEPTH

Surface 311.2 mm to 396.00 mKB
 Main 222.2 mm to 1644.00 mKB
 (See Table 1 for Bit Record, Below)

TABLE 1

BIT RECORD

Paramount et al Cameron I-74

NO.	SIZE mm	MAKE	TYPE	DEPTH OUT, m	METRES DRILLED	HOURS	METRES PER HOUR	ACCUM. HOURS
1A	311.2	Retip	ST	165	165	14 3/4	11.18	14.75
2A	311.2	Retip	HP11J	396	231	13 1/2	17.11	28.25
1	222.2	Reed	HP43A	1407	1011	60 3/4	16.64	89.00
1C	221.0	Chris	C201	1422	15.8	26	0.61	115.00
2C	221.0	Chris	RC476	1441	18.2	8 3/4	2.08	123.75
2	222.2	Smith	F27	1602	161	51	3.16	174.75
3	222.2	Smith	F3H	1644	42	14 1/4	2.95	189.00

8. CASING AND CEMENT RECORDS (See Casing And Cementing Report, Section C, 8.)

9. SIDETRACKED HOLE (N/A)

10. DRILLING FLUID

Surface Hole 0 - 396 m, gel - chemical

Main Hole 396 - 1088 m, floc water
 1088 - 1644 m, gel - chemical
 (See Table 2 for Mud Data, Below)

TABLE 2**MUD DATA****Paramount et al Cameron I-74**

DATE	DEPTH	DENSITY	VISCOSITY	FLUID LOSS	pH
1994-01-28	100	1090	33	-	9.5
1994-01-29	319	1140	38	-	9.5
1994-01-30	396	1150	100	-	9.5
1994-01-31	396	1135	42	-	9.5
1994-02-01	474	1000	-	-	-
1994-02-02	901	1000	-	-	10.0
1994-02-03	1279	1100	40	10.0	10.0
1994-02-04	1407	1160	47	8.0	10.5
1994-02-05	1414	1150	48	7.0	10.0
1994-02-06	1423	1160	48	8.0	10.0
1994-02-07	1441	1160	55	8.0	9.0
1994-02-08	1444	1135	55	8.5	8.5
1994-02-09	1499	1140	65	9.5	10.0
1994-02-10	1592	1155	59	7.5	9.0
1994-02-11	1639	1150	58	13.0	8.0
1994-02-12	1644	1170	60	15.0	8.0
1994-02-13	1644	1170	61	15.0	8.0

11. FISHING OPERATIONS (N/A)

12. WELL KICKS None Encountered

13. FORMATION LEAK OFF TEST

Gradient @ 401 m = 22 KPa/m, no break down (See Section C, 13. Following Pages)

14. TIME DISTRIBUTION (See Table 3, Section C, 14. Following Pages)

15. DEVIATION SURVEY (N/A)

16. ABANDONMENT PLUGS (N/A)

17. COMPOSITE WELL RECORD (See Section G, 14.)

SECTION C, 8.

CASING AND CEMENTING REPORTS

FOR

PARAMOUNT ET AL CAMERON I-74



PARAMOUNT RESOURCES LTD.

CASING AND CEMENTING REPORT

Date Run: 940212

WELL NAME: PARAMOUNT ETAL CAMERON I 74 TOTAL DEPTH: 1644 m
 Surveyed Ground Elevation: 776.77 m ASL ~~0~~ (FIB) 1.0 m Actual Ground Elevation: 777.77 m
 Dist. GRD. to KB: 4.25 m KB Elev.: 782.62 m KB to CF, Dist. "H": 4.36 m CF Elev.: 778.26 m

TYPE C. S. I. P	JTS RUN	SIZE mm OD	WEIGHT kgm	GRADE	THREAD & COUPLING	ERW	MAKE	TALLY m thru on	TALLY m thru off
<u>D</u>	<u>128</u>	<u>177.8</u>	<u>34.2</u>	<u>LS-65</u>	<u>LTFC</u>	<u>ERW</u>	<u>LAUE STAR</u>	<u>1663.78</u>	<u>1644.58</u>

LINER TOP @: _____ mKB
 STAGE TOOL @: _____ mKB

CENTRALIZERS: Make LOOC IMPORT
 Type: Bow Qty.: 12
 @: 1640, 1630, 1604, 1578, 1524
1466, 1435, 1396, 1388, 1357
1331, 1279

TURBOLIZERS: Make IMPORT
 Type: ALUM R/L Qty.: 6
 @: 1425, 1418, 1415
1408, 1403, 1390

SCRATCHERS: Make IMPORT
 Type: WIRE BRADF Qty.: 13
 @: 1430, 1428, 1426, 1424, 1417
1416, 1417, 1405, 1401, 1399
1397, 1392, 1388

SHOE: Make D.L Type FLOAT ~~THRD~~ THRD

COLLAR: Make DL Type FLOAT

STAGE CMT. COLLAR: Make _____

LINER HANGER ASSY.: Make _____

DRILL PIPE OR LANDING JOINT IF USED _____

OVERALL TALLY OF STRING ... (a+b → i+j) ...

STICK UP ABOVE KB _____

DEPTH LANDED @, ... mKB... (k-l) _____

SHOE JOINT OVERALL TALLY ... (g+f+csg jts) ...

EST. PBTD TO FLOAT COLLAR ... (n-o) _____

LENGTH OF CASING CUTOFF _____

NET CASING TALLY LEFT ... (a+b+c+d+e-q) ...

CASING HEAD: Make WKM SN: C 778-85345
52 mm SO/ ~~100~~ x 224 mm 26 MPa

Circulated mud 8 hrs after casing on bottom at 1000 litre/min. Mud density 1170 kg/m3
 Reciprocated casing in 3 m strokes for 480 mins prior to cementing. Viscosity 60 s/l YP B Pa
 Reciprocated casing in _____ m strokes for _____ mins while cementing. PV 17 mPa-sec Gels 2.5/15

LEAD/1st STAGE CEMENT from 1200 m to 396 m TAIL/2nd STAGE CEMENT from 1644 m to 1200 m

Preflush with 1.6 m3 of WATER at .7 m3/min.
 Amount & Blend: 18.47 T, 0:1:0 CLASS "G"
+33.30% MICROCIL + 0.5% T-10
+ 9% CACL2 (? 28.47 t ?)

Slurry Volume: 39.91 m3. Density: 1400 kg/m3
 Start mix at 19:15 hrs. Finish mix at 20:40 hrs.
 Plug down at _____ hrs on _____
 Displ. with _____ m3 of _____ at _____ m3/min
 Maximum pumping pressure _____ kPa
 Bumped plug with _____ kPa, floats held yes/no.
 If not, held _____ kPa back pressure for _____ hrs.

Preflush with 1 m3 of _____ at _____ m3/min.
 Amount & Blend: 20.04 TONNE THIR MIX "G"
+ 0.40% D-23 + 1.0% CACL2 + 0.10%
SPS 1200

Slurry Volume: 18 m3. Density: 1845 kg/m3
 Start mix at 20:40 hrs. Finish mix at 21:12 hrs.
 Plug down at 21:58 hrs on 940213
 Displ. with 12.5 m3 of MUD/H2O at .7 m3/min.
 Maximum pumping pressure 22.000 kPa
 Bumped plug with 22.000 kPa, floats held yes/no.
 If not, held _____ kPa back pressure for _____ hrs.

Returns while cementing GOOD UNTIL PLUG DOWN Circulated out 0 m3 of slurry. Slips set in 42.000 daN.
 Witnessed by R. CAMPBELL for Paramount, REN ZEHAR for contractor, _____ for cementers.

REMARKS: ATONNE LEAD SLURRY @ 1200 kg/m3 FOR SCAUBERGER
NO MUD RETURNS ON DISPLACEMENT

TOTAL DISPLACEMENT 33.44 m3, 17.5 m3 FLUID MAY NOT BE ACCURATE
 DUE TO NAWSCO TANKS EQUALIZING, BCL COUNTER SHOWS 37 m3 PUMPED
 HAD TO DISPLACE w/ MUD/H2O. DUE TO TOO MUCH H2O USED TO MIX ?



PARAMOUNT RESOURCES LTD.

CASING AND CEMENTING REPORT

Date Run: 94-01-30

WELL NAME: Para et al Cameron I-74 TOTAL DEPTH: 396 m
 Surveyed Ground Elevation: 776.77 m ASL Cut/Fill: 1.0 m Actual Ground Elevation: 777.77 m
 Dist. GRD. to KB: 9.85 m KB Elev.: 782.62 m KB to CF, Dist. "H": 4.36 m CF Elev.: 778.26 m

TYPE C. S. I. P	JTS RUN	SIZE mm OD	WEIGHT kg/m	GRADE	THREAD & COUPLING	SMLS ERW	MAKE	TALLY m third on	TALLY m third off
<u>Surf</u>	<u>32</u>	<u>244</u>	<u>53.6</u>	<u>J55</u>	<u>Rd LTC</u>	<u>ERW</u>	<u>EPSCO</u>		<u>396.65</u> a
									b
									c
									d
									e

LINER TOP @: _____ mKB
 STAGE TOOL @: _____ mKB

CENTRALIZERS: Make Gemaco & Weatherford
 Type: bowspring Qty.: 11
 @: mid shoe joint

TURBOLIZERS: Make _____
 Type: _____ Qty.: _____
 @: _____

SCRATCHERS: Make _____
 Type: _____ Qty.: _____
 @: _____

SHOE: Make Baker Type Guide SO / THRD

COLLAR: Make Baker Type Float

STAGE CMT. COLLAR: Make _____

LINER HANGER ASSY.: Make _____

DRILL PIPE OR LANDING JOINT IF USED _____

OVERALL TALLY OF STRING (a + b → i + j)

STICK UP ABOVE KB _____

DEPTH LANDED @, ... mKB... (k - l) _____

SHOE JOINT OVERALL TALLY ... (g + f + csg jts)

EST. PBTD TO FLOAT COLLAR ... (n - o) _____

LENGTH OF CASING CUTOFF _____

NET CASING TALLY LEFT ... (a + b + c + d + e - q) ...

CASING HEAD: Make WKM S/N: C 378-8539-53
32 mm SO / THRD x 32 mm 21 MPa

Circulated mud 4 hrs after casing on bottom at 1.1 litre/min. Mud density 1135 kg/m3
 Reciprocated casing in 2 m strokes for 240 mins prior to cementing. Viscosity 43 s/l YP _____ Pa
 Reciprocated casing in 1.5 m strokes for 33 mins while cementing. PV _____ mPa-sec Gels _____ / _____

LEAD / 1st STAGE CEMENT from _____ m to _____ m TAIL / 2nd STAGE CEMENT from _____ m to _____ m

Preflush with 5 m3 of water at .9 m3/min.
 Amount & Blend: 30 tonnes Class "G" + 270 CACls
+ 2 sacks Celloflake

Slurry Volume: 13 m3 Density: 1900 kg/m3
 Start mix at 19:57 hrs. Finish mix at 20:30 hrs.
 Plug down at 20:56 hrs on 94-01-30
 Displ. with 15.5 m3 of Water at .9 m3/min.
 Maximum pumping pressure 6000 kPa.
 Bumped plug with 3500 kPa, floats held yes no.
 If not, held _____ kPa back pressure for _____ hrs.

Preflush with _____ m3 of _____ at _____ m3/min.
 Amount & Blend: _____

Slurry Volume: _____ m3 Density: _____ kg/m3
 Start mix at _____ hrs. Finish mix at _____ hrs.
 Plug down at _____ hrs on _____
 Displ. with _____ m3 of _____ at _____ m3/min.
 Maximum pumping pressure _____ kPa.
 Bumped plug with _____ kPa, floats held yes / no.
 If not, held _____ kPa back pressure for _____ hrs.

Returns while cementing partial, then no, then full Circulated out 4 m3 of slurry. Slips set in _____ daN.
 Witnessed by G.P. Sachs for Paramount, D. Carol for contractor, G. Cherniak for cementers.

REMARKS: partial returns while mixing, then no returns, stop mixing, restart with partial
then full returns, full returns while displacing, cement top held.

SECTION C, 13.

**FORMATION LEAK OFF TEST
(Excel Pressure Testing)**

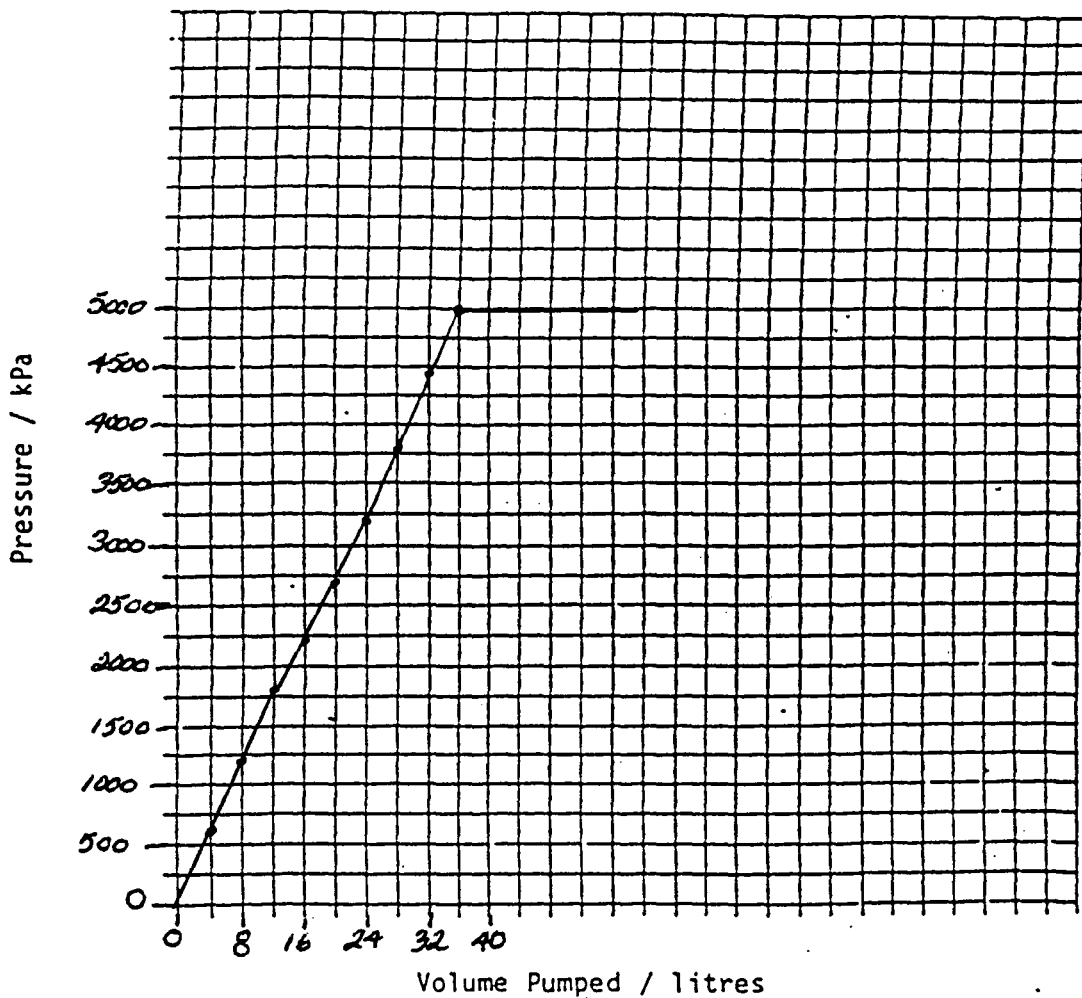
FOR

PARAMOUNT ET AL CAMERON I-74

EXCEL PRESSURE TESTING
FORMATION LEAK OFF TEST

WELL: PARAMOUNT CAMERON 1-74-60-10-117-15' DATE: JAN. 31ST 94

MAXIMUM TEST PRESSURE: 8884 Kps



VOL PUMPED litres	PRESSURE kPa
4	600
8	1200
12	1800
16	2200
20	2700
24	3200
28	3800
32	4400
36	5000
40	

Depth of casing	a)		<u>396</u>	m
Mud gradient	b)	($\rho_{\text{mud}} \times 0.00981$)	<u>981</u>	kPa/m
Hydrostatic pressure	c)	(a $\times$ b)	<u>3884</u>	kPa
Leak-off pressure	d)		<u>5000</u>	kPa
Total pressure (at shoe)	e)	(c + d)	<u>8884</u>	kPa
Formation gradient	f)	(e $\div$ a)	<u>22.4</u>	kPa/m
Maximum allowable	g)	(f $\div$ 0.00981)	<u>2286</u>	kg/m ³

mud density with no annulus pressure

REMARKS: PUMPED AT A RATE OF 4 LPM MAXIMUM PRESSURE REACHED 5000 Kpa.
STOPPED PUMP HELD PRESSURE FOR 5 MINUTES. NO LOSS.
END OF TEST.

FORMATION LEAK-OFF TESTDATE: JAN. 31ST 94

Well Name : PARAMOUNT ETAL CAMERON T-74-60°-10'-117°-15'
Operator : PARAMOUNT RESOURCES
Testing Company : EXCEL PRESSURE TESTING
Test conducted by (title) : MARC McRAE - TESTER

Size of pump and pumping rate : 1" x 3"

1. Depth drilled out : 401 m
2. Surface casing setting depth : 396 m
3. Gradient of fluid in hole during test : 9.81 kPa/m
4. Hydrostatic pressure at casing shoe (2x3) : 3884 kPa
5. Leak-off pressure (surface) : 5000 kPa
6. Total pressure at shoe (4+5) : 8884 kPa
7. Leak-off pressure gradient (6+2) : 22.4 kPa/m

Projected total depth : _____ m
Depth of intermediate casing (if applicable) : _____ m
Maximum BHP gradient expected : _____ kPa/m
Zone and depth where encountered : _____ m
Gradient of drilling fluid to be used when
penetrating hydrocarbon bearing strata : _____ kPa/m

Please submit a copy of Leak-off test data, including
the Pressure vs. Volume plot, to :

Energy Resources Conservation Board
Development Department
640 Fifth Avenue S.W.
Calgary, Alberta
T2P 3G4

SECTION C, 14.

TABLE 3

DRILLING RIG TIME DISTRIBUTION

FOR

PARAMOUNT ET AL CAMERON I-74

DRILLING RIG TIME DISTRIBUTION

PARAMOUNT AT AL CAMERON I - 74

Well Spud: 1994-01-27 @ 2215 hrs.
Rig Released: 1994-02-14 @ 1200 hrs.

DATE	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb	3-Feb	4-Feb	5-Feb	6-Feb	7-Feb	8-Feb	9-Feb
Days from Spud	1	2	3	4	5	6	7	8	9	10	11	12	13
RU & TO	14.00												
DRILLING	6.75	17.25	5.25		3.25	22.00	21.75	13.75				2.25	22.75
REAMING													
CORING									12.25	13.75	8.75		
CIRC & COND			2.25	4.25	0.25			3.25	0.50	0.75	1.75	2.00	
TRIPPING		2.75	6.00	2.00	2.50			4.75	6.25	6.00	5.50	6.50	
RIG SERVICE	0.25	0.25	0.25			0.75		0.25	0.50	0.50	0.50	0.50	0.25
RIG REPAIRS		2.00											
SLIP & CUT									0.75				
SURVEY	0.75	1.75	1.00			1.25	1.50	1.00					0.75
LOGGING													
CSG. & CMT.			8.00	8.50									
WOC				4.00									
NU BOP				2.25	6.00								
TEST BOP					8.50								
DST												7.50	
PLUG BACK													
FISHING													
DIR. WORK													
HDL. TOOLS											4.75	5.00	
WAITING TIME	2.00						0.75				2.75		
OTHER	0.25		1.25	3.00	3.50			1.00	3.75	3.00		0.25	0.25
DAILY TOTALS	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00

DRILLING RIG TIME DISTRIBUTION

PARAMOUNT AT AL CAMERON I-74

DATE	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	DATE	TOTAL
Days from Spud	14	15	16	17	18	19	Days from Spud	19
RU & TO	23.00	15.25	2.00			6.00	RU & TO	14.00
CORING		1.00	3.00	1.50	8.00		DRILLING	115.00
		7.00	5.75	3.00			REAMING	0.00
	0.25	0.75	0.25	0.50			CORING	34.75
RIG REPAIRS							CIRC & COND	15.00
SLIP & CUT							TRIPPING	42.25
SURVEY	0.75						RIG SERVICE	4.00
LOGGING			13.00				RIG REPAIRS	2.00
CSG. & CMT.				7.50	8.50		SLIP & CUT	0.75
WOC							SURVEY	8.00
NU BOP							LOGGING	0.00
TEST BOP							CSG. & CMT.	16.50
PLUG BACK							WOC	4.00
FISHING							NU BOP	8.25
DIR. WORK							TEST BOP	8.50
				8.00			DST	7.50
WAITING TIME							PLUG BACK	0.00
OTHER				3.50	7.50		FISHING	0.00
							DIR. WORK	0.00
							HDL. TOOLS	9.75
							WAITING TIME	5.50
							OTHER	16.25
DAILY TOTALS	24.00	24.00	24.00	24.00	24.00	6.00	TOTALS	312.00

D. GEOLOGY

1. DRILL CUTTINGS

(See Wellsite Geological Report which was submitted separately on February 17, 1994.)

Sample Distribution - Washed Cuttings, 5 m intervals
One Set Of Samples - N.E.B., Calgary
One Set Of Samples - I.S.P.G., Calgary
One Set Of Samples - Paramount, Calgary

Sample Distribution - Unwashed Cuttings, 10 m intervals
One Set Of Samples - I.S.P.G., Calgary

2. CORES

No. 1: Sulphur Point, 1407.00 to 1422.80 mKB, cut 15.8 m / recovered 15.8 m
No. 2: Sulphur Point, 1422.80 to 1441.00 mKB, cut 18.2 m / recovered 18.2 m

(See Core Analysis Report which was submitted separately on March 22, 1994.)

3. LITHOLOGY

(See Wellsite Geological Report which was submitted separately on February 17, 1994.)

4. STRATIGRAPHIC COLUMN

(See Figure 2, Following Page)

5. BIOSTRATIGRAPHIC COLUMN (N/A)

TABLE OF FORMATIONS

FIGURE 2 (Section D. 4.)

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
Ft. Vermilion		Limestone	
MIDDLE DEVONIAN	Upper Elk Pt.	Watt Mountain	shales - bituminous
		Sulphur Point	Limestone & Dolomite
		Muskeg	anhydrite & dolomite / Dolomite
	Lower Keg River	Lower Keg River	organic rich limestone & dolomite
		Chinchaga	anhydrite
			Granite Wash
	EARLY DEVONIAN		
PRE DEVONIAN			

E. WELL EVALUATION

1. DOWN HOLE LOGS (Copies of each were submitted separately on February 15, 1994.)

TABLE 4

OPEN HOLE SUMMARY (Schlumberger)

DATE	RUN	TYPE	SCALE	INTERVAL
1994-02-11	1	Phasor SFL - GR	1 - 600	396 - 1642 m
			1 - 240	396 - 1642 m
1994-02-11	1	CNL - LDT - DAC - GR	1 - 600	396 - 1640 m
			1 - 240	396 - 1640 m
1994-02-11	1	BHC Sonic - GR	1 - 600	396 - 1643 m
			1 - 240	396 - 1643 m
1994-02-11	1	ML - GR - XY	1 - 600	1300 - 1636 m
			1 - 240	1300 - 1636 m
1994-02-11	1	FMS		

2. OTHER LOGS (Copies of each were submitted separately on March 11, 1994.)

TABLE 5

CASED HOLE SUMMARY (Norwest)

DATE	TYPE	SCALE	INTERVAL
1994-03-01	CBL - VDL - GR - CCL	1 - 240	345 - 1462 m
1994-03-02	CCL - Perf	1 - 240	1360 - 1461 m
1994-03-07	CCL - Perf	1 - 240	1385 - 1463 m

3. SYNTHETIC SEISMOGRAMS (N/A)

4. FORMATION STIMULATION

(See Newsco Treatment Report, Following Pages)

5. FORMATION AND PRODUCTION TEST RESULTS

(See McAllister Drill Stem Test Report which was submitted separately on February 15, 1994 and the Daily Completion Reports submitted separately on April 12, 1994.)

6. TEST PRESSURE DATA READINGS

(See Z.I. Probe Pressure Test Reports submitted separately on April 6, 1994.)

F. ENVIRONMENTAL WELL REPORT (N/A)

G. APPENDICES TO WELL HISTORY REPORT

1. OIL, GAS, AND WATER ANALYSES

(Copies of each were submitted separately on April 7, 1994.)

2. RESERVOIR ENGINEERING DATA (N/A)

3. PETROLOGICAL REPORTS (N/A)

4. DETAILS OF FORMATION AND PRODUCTION TESTING

(See the Subsurface Pressure Measurements which were submitted separately on March 31, 1994.)

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 (N/A)

11. DEVIATION RECORD

(See Table 6, Following Pages)

12. GAS DETECTOR LOG OR MUD LOG RECORDS

(See Wellsite Geological Report which was submitted separately on February 17, 1994.)

13. COMPLETION INFORMATION

(See Following Pages: a) Completion Summary
b) Completion Schematic)

14. COMPOSITE WELL RECORD

(See Wellsite Geological Report which was submitted separately on February 17, 1994.)

15. FINAL SURVEY PLAT

(Copies were submitted separately on December 30, 1993.)

16. MUD LOGGER DATA (N/A)

SECTION E, 4.

FORMATION STIMULATION
(NowSCO)

FOR

PARAMOUNT ET AL CAMERON I-74

Page #1

TYPE OF TREATMENT Acid wash and squeeze		DATE 94-03-02	JOB # 44058	SERVICE ORDER # D1700
CUSTOMER Paramount Resources Ltd.		MAILING ADDRESS 4100 Firs Canadian Centre 350-7th Ave. SW Calgary, AT2P 3W5		
WELL NAME Paramount et al Cameron Hills	LOCATION I-74	FORMATION Sulphur Point	PROVINCE NWT	CUSTOMER P.O. #

TUBULAR TYPE	SIZE (mm)	LINEAR DENSITY (kg/m)	DEPTH (m)	VOLUME (m3)	ALLOWABLE PRESSURE (MPa)	ARRIVED LOCATION: 1200	LEFT LOCATION: 0330
Casing	177.8	34.2	1466	23.2			
Tubing	73.0	9.67	1420	4.3			

DOWNHOLE EQUIPMENT	DEPTH (m)	COMMENTS

O.H./PERF/SANDJET	O.H. SIZE (mm)	SHOTS/m or # of SLOTS	FROM (m)	TO (m)	TREATING FLUID		TREATING FLUID	
perfs			1409	1414	15% Nowferr 3000	6.5 m3		m3
					ADDITIVES		ADDITIVES	
					Nowferr #1	15kg /m3		/m3
					Nowferr #2	10L /m3		/m3
					Nowferr #3	20L /m3		/m3
					Nowferr #5	3L /m3		/m3
					Nowferr #6	1L /m3		/m3
					Nowferr #12	7L /m3		/m3
						/m3		/m3

INJECTION RATES (m3/min.)	TREATING MINIMUM	TREATING MAXIMUM
	DISPLACING	AVERAGE

PRESSURES (MPa)	BREAKDOWN	MINIMUM	MAXIMUM	INSTANTANEOUS SHUT IN
	AVERAGE	DISPLACING MINIMUM	DISPLACING MAXIMUM	15 MINUTE SHUT IN

TIME	PRESSURE (MPa)		m3 OF FLUID					N2 or CO2 RATIO (m3/m3)	COMMENTS
	CASING	TUBING	OUT OF TANKS	PER READING	IN FORMATION	PER MINUTE	MAX RATE PER MINUTE		
2115									safety meeting
2130	0	0							fill hole
2134	0	1.25	1.0	1.0		.25			hole full
2145	14.0								pressure test casing
2211		14.0							pressure test tubing
2221		21.0							pressure test lines
2226	1.0	1.0							start 1m ³ acid
2318	1.0	1.0	5.2	4.2		.08			stop pumping
2318	1.0								start backwash
2338	.5		10.2	5.0		.25			finish backwash
2340									drop FCV & add pipe
0016	1.0	3.0							start pumping acid
0030	1.75	1.0	14.6	4.4		.32			stop-acid spotted .10m ³ wash
0036	1.5	1.0	14.7	.10					wash .10m ³
0041	1.0	0	14.8	.10					wash .10m ³
0047	4.0	4.0	14.9	.10					wash .10m ³
0051	5.0	5.0	15.0	.10					wash .10m ³
0105	0	0							squeeze setting #1
0107	4.0	8.0	15.1	.10	.10	.05			stop
0111	0	0							squeeze setting #1
0116	7.5	9.0	15.2	.10	.20	.02			stop

REMARKS:

NOWSCO REPRESENTATIVE: Fred Biberdorf

CUSTOMER REPRESENTATIVE: Russ Campbell

TYPE OF TREATMENT		Acid wash and squeeze		DATE	94-03-02	JOB #	44058	SERVICE ORDER #	D1700
CUSTOMER				MAILING ADDRESS					
 Paramount Resources Ltd.									
WELL NAME		LOCATION		FORMATION		PROVINCE		CUSTOMER P.O. #	
Paramount et al Cameron Hills		I-74		Sulphur Point		NWT			

TUBULAR TYPE	SIZE (mm)	LINEAR DENSITY (kg/m)	DEPTH (m)	VOLUME (m3)	ALLOWABLE PRESSURE (MPa)

ARRIVED LOCATION: 1200

LEFT LOCATION: 0330

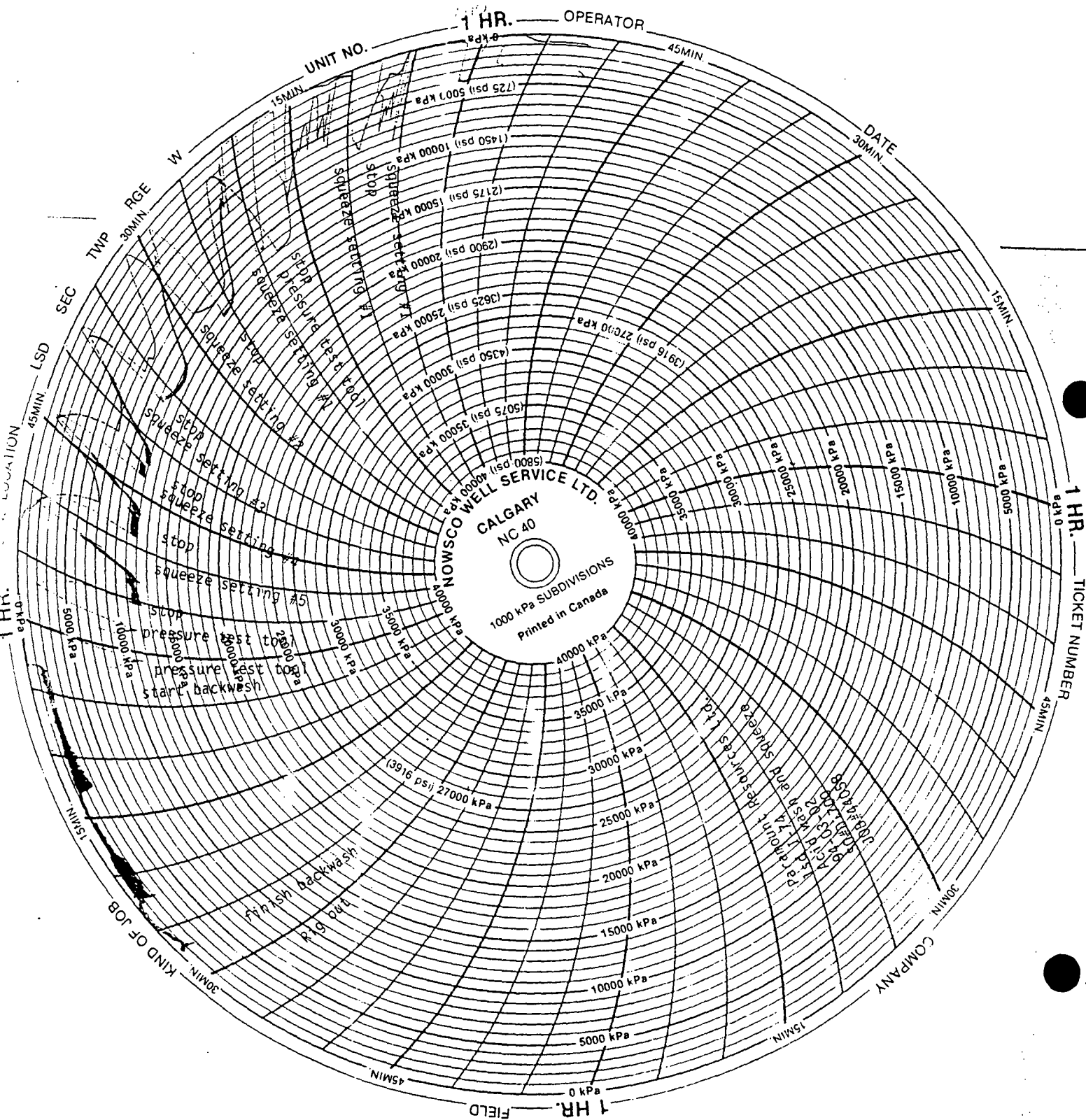
DOWNHOLE EQUIPMENT	DEPTH (m)	COMMENTS

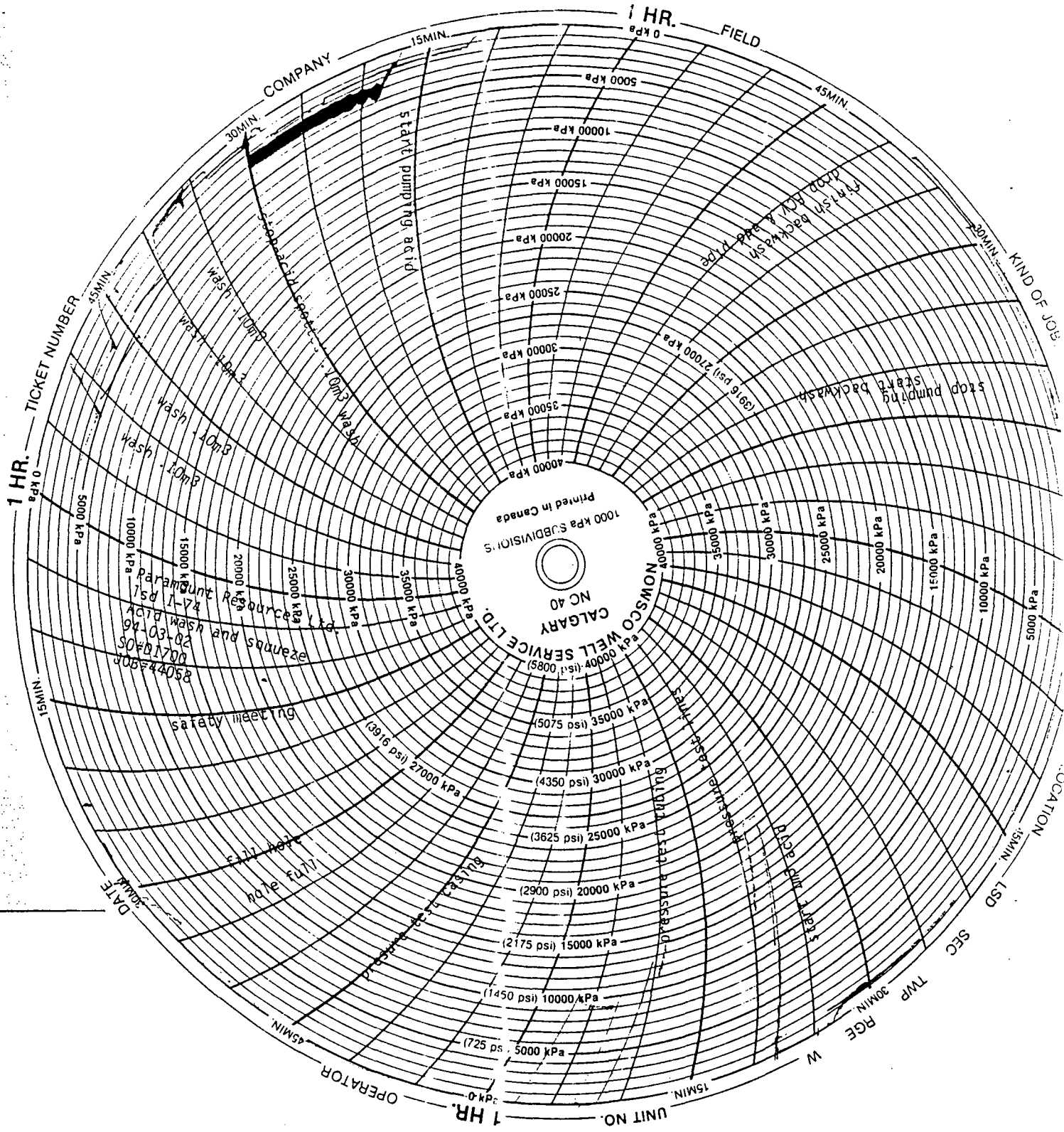
[illegible]

PRESSURES (MPa)	BREAKDOWN	MINIMUM	MAXIMUM	INSTANTANEOUS SHUT IN
	AVERAGE	DISPLACING MINIMUM	DISPLACING MAXIMUM	15 MINUTE SHUT IN

[illegible]

REMARKS:





TYPE OF TREATMENT Selective Acid Squeeze		DATE 94-03-07	JOB # 44271	SERVICE ORDER # D3876
CUSTOMER Paramount Resources Ltd.		MAILING ADDRESS 4100 First Canadian Centre, 350-7th Ave.SW. Calgary, T2P 3W5		
WELL NAME Paramount et al Cameron	LOCATION I-74	FORMATION Sulphur Point	PROVINCE NWT	CUSTOMER P.O. #

TUBULAR TYPE	SIZE (mm)	LINEAR DENSITY (kg/m)	DEPTH (m)	VOLUME (m3)	ALLOWABLE PRESSURE (MPa)	ARRIVED LOCATION: 1230	LEFT LOCATION: 1700
Tubing	73.0	9.67	1421	4.29	10.5		
Casing	177.8	34.24	1424+	23.00	10.5		

DOWNHOLE EQUIPMENT	DEPTH (m)	COMMENTS
tool	1421	Cardium
cups	1424	

O.H./PERF/SANDJET	O.H. SIZE (mm)	SHOTS/m or # of SLOTS	FROM (m)	TO (m)
perfs			1418	1423.9

TREATING FLUID	ACID	
15%HCL	Nowferr3000	6.0 m3
ADDITIVES		
Nowferr #1	15kg	/m3
Nowferr #2	10L	/m3
Nowferr #3	20L	/m3
Nowferr #5	5L	/m3
Nowferr #6	1L	/m3
Nowferr #12	7L	/m3
AFA-2	2L	/m3

TREATING FLUID	
ADDITIVES	
<i>J. C. Coker</i>	/m3
	/m3
	/m3
	/m3
	/m3
	/m3
	/m3

INJECTION RATES (m3/min.)	TREATING MINIMUM	TREATING MAXIMUM
	DISPLACING	AVERAGE

PRESSURES (MPa)	BREAKDOWN	MINIMUM	MAXIMUM	INSTANTANEOUS SHUT IN
	AVERAGE	DISPLACING MINIMUM	DISPLACING MAXIMUM	15 MINUTE SHUT IN

TIME	PRESSURE (MPa)		m3 OF FLUID					N2 or CO2 RATIO (m3/m3)	COMMENTS
	CASING	TUBING	OUT OF TANKS	PER READING	IN FORMATION	PER MINUTE	MAX RATE PER MINUTE		
1300									rig up and safety meeting
1419	0	0	.3	.3		.20			fill hole
1421	.1	16.0							pressure test lines
1425	2.0	3.5	1.0	.7	.70	.30			establish circulation
1425	2.0	3.5							pump main acid
1439	2.0	3.0	5.3	4.3					stop pump
1442	1.0	.5				.05			stage #1
1442	1.0	9.0				.05			broke
1459	9.5	10.0				.10			max pressure
1500	9.5	10.0	6.3	1.0	1.0				stop pump
1503	2.5	3.5				.10			stage #2
1508	8.7	10.0				.10			max pressure
1512	7.8	8.5	7.3	1.0	2.0				stop pump
1513	4.0	4.5				.10			stage #3
1514	4.0	9.0				.10			max pressure
1523	6.0	8.5	8.3	1.0	3.0				stop pump
1524	4.0	4.0				.10			stage #4
1528	5.0	8.5				.10			max pressure
1533	5.0	8.0	9.3	1.0	4.0				stop
1534	4.0	4.5				.10			stage #5
1534	3.5	9.0				.10			max pressure

REMARKS:

NOWSCO REPRESENTATIVE: Darwin Bilida

CUSTOMER REPRESENTATIVE: Al Larson

TYPE OF TREATMENT	DATE	JOB #	SERVICE ORDER #
Selective Acid Squeeze	94-03-07	44271	D3876

CUSTOMER	MAILING ADDRESS
Paramount Resources Ltd.	

WELL NAME	LOCATION	FORMATION	PROVINCE	CUSTOMER F.O. #
Paramount et al Cameron	I-74	Sulphur Point	NWT	

TUBULAR TYPE	SIZE (mm)	LINEAR DENSITY (kg/m)	DEPTH (m)	VOLUME (m ³)	ALLOWABLE PRESSURE (MPa)

ARRIVED LOCATION: 1230 LEFT LOCATION: 1700

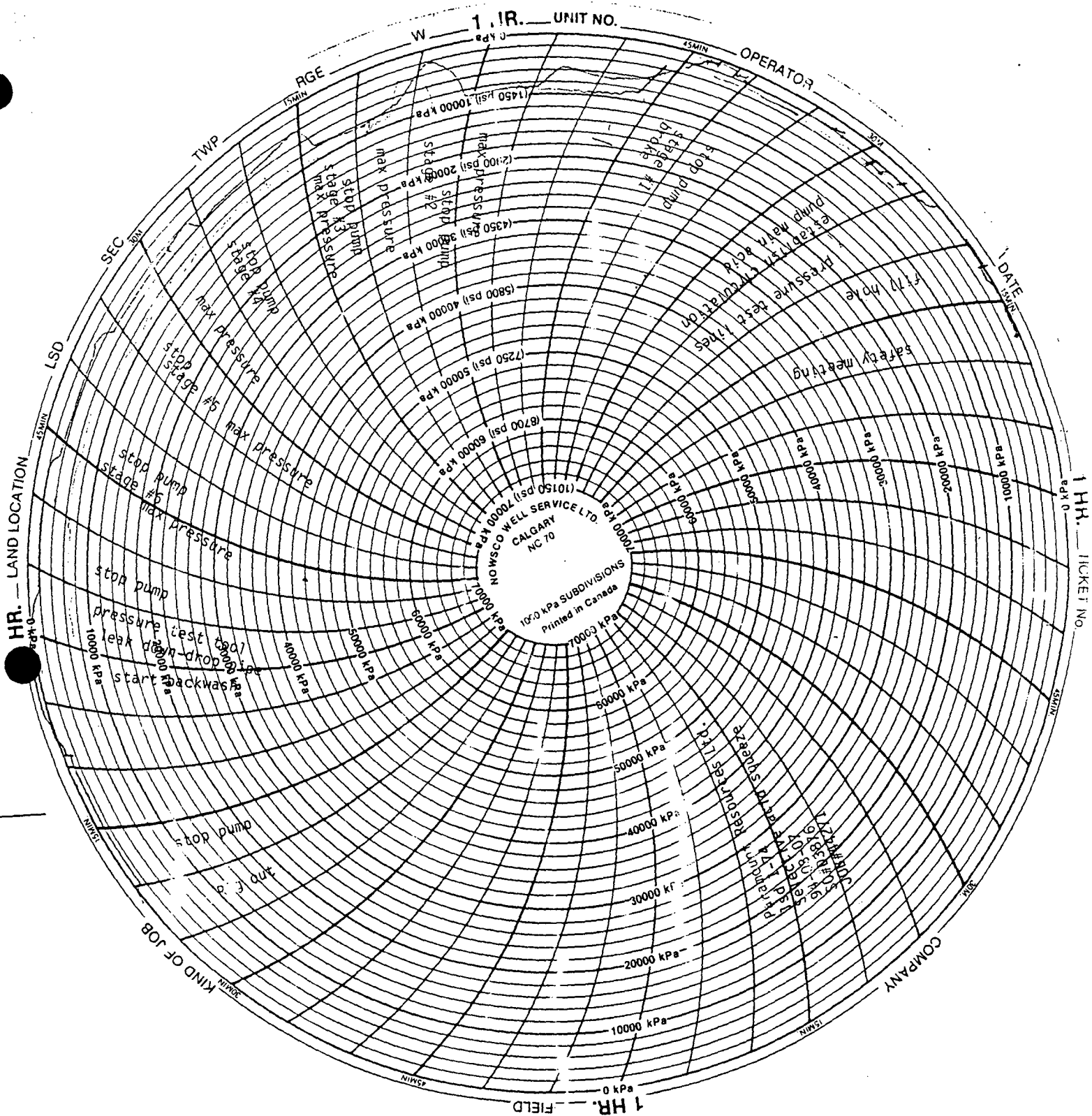
DOWNHOLE EQUIPMENT	DEPTH (m)	COMMENTS

[illegible]

PRESSURES (MPa)	BREAKDOWN	MINIMUM	MAXIMUM	INSTANTANEOUS SHUT IN
	AVERAGE	DISPLACING MINIMUM	DISPLACING MAXIMUM	15 MINUTE SHUT IN

[illegible]

REMARKS:



SECTION G, 11.

TABLE 6

DEVIATION RECORD

FOR

PARAMOUNT ET AL CAMERON I-74

TABLE 6

DEVIATION RECORD

Paramount et al Cameron I-74

DEPTH, m	DEVIATION, °
31	3/4
59	1 1/4
89	1/2
118	1/2
145	3/4
178	1/2
198	3/4
224	3/4
251	1/4
308	1/4
339	1/2
368	3/4
387	3/4
487	1/2
586	1/4
687	1
772	1/4
870	3/4
971	1
1066	3/4
1164	1/2
1270	1/4
1369	1/2
1468	1
1577	1 1/4

SECTION G, 13.

WELL COMPLETION SUMMARY / SCHEMATIC

FOR

PARAMOUNT ET AL CAMERON I-74

WELL INFORMATION

PARAMOUNT et al CAMERON

I - 74

60°10' 117°15'

G. L. E. :	777.77 m	SPUD :	1994-01-27 @ 2215 hrs
K. B. E. :	782.62 m	R. R. :	1991-02-14 @ 1200 hrs
Tbg. Dist. "h" :	m	DAYS :	17.5
T. F. E. :	m		
Dist. "H" :	4.36 m	ADW :	?
C. F. E. :	778.26 m	CLASSIFICATION :	Development
		UWI :	3001746010117150
P. B. T. D.:	1465.00 m	FIELD :	n/a
T. D. :	1644.00 m		

Working Interest Owners : (OP) Paramount 88.0%
Tarragon 12.0%

SURFACE CASING : Drilled 311.2 mm to 396 m.
Set 32 jts of 244.5 mm OD., 53.6 kg/m, J-55, 8-rd LT&C, ERW., IPSCO at 396.0 mKB.
Cement with 30 tonnes 0:1:0 Class "G" + 2% CaCl₂ (50% excess). Had 4 m³ returns
FLOT @ 401 m = 22 kPa/m, no breakdown.

MAIN HOLE : Drilled 222.2 mm to 1644 m.
Mud system : 396 - 1088 m, floc water
1088 - 1644 m, gel-chem

CORES :
#1: Sulphur Point, 1407.0 to 1422.8 m Cut 15.8 m / rec. 15.8 m.
#2: Sulphur Point, 1422.8 to 1441.0 m Cut 18.2 m / rec. 18.2 m.

LOGS : 1994-02-11 Schlumberger Phasor SFL - GR
CNL - LDT - DAC - GR
BHC Sonic - GR
ML - GR - XY
FMS

D. S. T. 's : DST #1 : SULPHUR POINT - 1409.0 to 1441.0 mKB, on penetration
Times : 10 / 60 / 90 / 180
PF : WAB incr to SAB. GTS in 10 min.
VO : GTS immediately, 2 m lazy flare, TSTM.
Rec. : ~410 m gassified oil flecked mud.
T = 49.5°C @ 1410.0 m
IHP : 15857 kPa PFP : 1183 kPa
FPFP : 1271 kPa ISIP : 9487 kPa
IFP : 850 kPa
FHP : 15808 kPa FFP : 1619 kPa FSIP : 9521 kPa

PRODUCTION CSG. : Set 128 jts of 177.8 mm OD., 34.2 kg/m, LS-65, 8rd LT&C (LoneStar) @ 1644.0 mKB.

Cemented 1200 to 390 m with 28.47 t 0:1:0 Class G + 33.3% Microsil (@ 1400 kg/m³) + 0.5% T-10 + 9.00% CaCl₂. and 1644 to 1200 m with 20.04 t Thix-Mix G + 1.0% CA-2 + 0.40% D-23 + 0.10% SPC-12000. Lost returns and had problems with displacement, may not have complete displacement of cement. Nowsco shipped 10 t extra lead cement in error resulting in excess water being mixed and causing confusion over volumes.

WELLHEAD :

WKM

244.5 mm SOW x 279.4 mm 20.7 MPa Type "S" casing head with 52.4 mm EFSO's (S/N C 778-85)

279.4 mm 20.7 MPa x 179.4 mm 20.7 MPa WKM Type "U" tubing head with 2 - 52.4 mm SSO's (S/N C-421-83). 2 - 52.4 mm 20.7 MPa WKM gate valve w/T-37 trim (S/N 1A-16888-1 & 1A-19480-1).

179.4 mm x 73.0 mm EUE WKM Type "UMH" tubing hanger (S/N ME8661-01)

179.4 mm 20.7 MPa x 65.1 mm 34.5 MPa SSU WKM Type "US" tubing head adapter (S/N ?)

2 - 65.1 mm 20.7 MPa WKM gate valve w/T-37 trim (S/N 1A19369-1, & 1A19370-1))

65.1 mm 34.5 MPa x 52.4 mm 34.5 MPa FFT w/ 73.0 mm EUE Lift Thread

52.4 mm 34.5 MPa WKM gate valve w/T-37 trim (S/N 1A17792-1)

PRODUCING ZONE : SULPHUR POINT - oil

PERFORATIONS : Correlated to Schlumberger CNL - LDT - GR - DAC Main Pass of 1994-02-11 :

SULPHUR POINT

(1409.0 - 1414.0 mKB)

1418.5 - 1423.9 mKB

CASED HOLE LOGS :	1994-03-01	NORWEST	CBL-VDL-GR-CCL
	1994-03-02	NORWEST	GR-CCL-Perf
	1994-03-07	NORWEST	GR-CCL-Perf

WORKOVERS :

Initial Completion

1994-03

Drilled out cement.

Bond log and perforate upper Sulphur Point interval.

Acidized. Brief flow test yielded gas.

Cemented off and drilled out.

Perforated lower Sulphur Point interval.

Acidized and flowed briefly, flowed oil with water.

PRODUCTION TUBING :

1.35 m	1 jt	- 73.0 mm, 9.67 kg/m, J-55, 8 rd EUE tubing with collar on bottom, bottom at 1417.41 mKB
1.21 m	1	- 177.8 mm x 73.0 mm CARDIUM Model DGP retrievable packer (?? mm bore). Set in 2500 daN compression. top @ 1414.85 mKB center element @ 1415.03 mKB
0.59 m	1	- 177.8 mm x 73.0 mm CARDIUM Model NFT On-Off seal assembly with 57.15 mm 'VR profile and 55.8 mm NoGo. set @ 1414.26 mKB
9.59 m	1 jt	- 73.0 mm tubing

0.30	m	1	-	73.0 mm 'VF' nipple with 58.7 mm profile set @ 1404.37 mKB
1397.31	m	148	jts	- 73.0 mm tubing
2.56	m	1	-	73.0 mm pup jt.



PARAMOUNT RESOURCES LTD.

PARAMOUNT et al CAMERON I - 74 60° 10' 117° 15'

1994-06-07
Rev. 0.0

KBE: 782.60 m
GLE: 777.77 m

Tbg. "h" : - m TFE: m
Csg. "H" : 4.36 m CFE: 778.26 m

311.2 mm hole to 396 mKB.

Set 244.5 mm, 53.6 kg/m,
J-55, LT&C ERW casing
@ 396 mKB.

Cemented to surface with
30.0 t Class G + 2% CaCl₂.

Set 177.8 mm, 34.2 kg/m, LS-65, LT&C,
ERW casing @ 1644 mKB.

Cemented from 1644 to ~1200 mKB with
20.0 t 0:1:0 Thix-Mix G + 1.0% CA-2 +
0.40% D-23 + 0.1% SPC-12000 and
1200 to ~390 mKB with 28.47 t 0:1:0
Class G + 33.3% Microsil + 0.50% T-10
+ 9.0% CA-2.

Tubing as follows from top:

1 jt - 73.0 mm tubing pup jt; 2.56 m

148 jts - 73.0 mm, 9.67 kg/m, J-55, EUE tbg

1 - 73.0 mm 'VF' nipple w/ 58.7 mm profile,
set @ 1404.37 mKB

1 jt - 73.0 mm, 9.67 kg/m, J-55, EUE tbg

1 - 73.0 mm CARDIUM On-Off Seal Unit
w/ 57.1 mm 'VR' profile & 55.8 mm NoGo
@ 1414.26 mKB

w/ 44.7 mm 'RZG' plug in place

1 - 177.8 x 73.0 mm CARDIUM Model DGP
Dbl. Grip Retrieveable Packer (?? mm
bore). Set in 2500 daN compression.
@ 1414.85 mKB to top

@ 1415.03 mKB to center element

1 jt - 60.3 mm tubing pup with reentry guide,
bottom @ 1417.41 mKB.

1409.0 - 1414.0 mKB

1418.5 - 1423.9 mKB SULPHUR POINT
perforations

PBTD 1465 mKB

222.2 mm hole to 1644 mKB.

