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GEOLOGICAL WELLSITE REPORT

for

PARA ET AL SWEDE A-52

Prepared for

PARAMOUNT RESOURCES LTD.

by

Robert J. Adamowicz, BSc Geol.

Date: March 01, 1991

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INTRODUCTION

The Paramount et al Swede A-52 well situated at 60° 20 latitude and 117° 30 longitude in the North West Territories of Canada, was spudded on February 10th. 1991 @ 21:00 HRS. The G-21 well was drilled to a depth of 1610.0 metres driller depth and 1612 metres logger depth. The well took 14 days to drill, and 18 days total time to rig release, which was February 28th, 1991 @ 20:00 HRS.

Surface casing was set and cemented at 398.0 metres. The main hole, 222mm diameter, was drilled with air from surface casing to 1283.0 metres with no problems as the hole kept relatively dry. The hole was drilled with gelchem mud from 1283.0 metres to 1612.0 metres, total depth (logger).

Two cores were cut in the Sulphur Point formation, with 100% recovery on both. and then a drillstem test was run (as the Sulphur Point represented the primary zone of interest). A core was also cut in the Keg River formation (100% recovery) and drillstem test # two was preformed (secondary zone of interest), upon penetration.

The well data indicated poor Sulphur Point oil potential and poor Keg River oil potential, and the well was plugged and abandoned.

WELL SUMMARY

WELL NAME	:	Para et al Swede A-52
LOCATION	:	60° 20 Lat. 117° 30 Long.
ELEVATIONS	:	Grnd. 692.6m K.B. 697.1m
OPERATOR	:	Paramount Resources Ltd.
CONTRACTOR	:	Command Drilling Ltd., Rig # 2
SUPERVISION	:	Tool push - Bud Matier Engineer - Gerry Sanders Geologist - Rob Adamowicz
WELL SPUDDED	:	10-02-91 @ 21:00 HRS
DRILLING COMPLETED	:	25-02-91 @ 02:15 HRS
RIG RELEASE	:	28-02-91 @ 20:00 HRS
HOLE SIZE	:	Surface 349mm Intmd. 222mm Main 216mm
CASING SIZE	:	Surface 244.5mm @ 398m Production nil.
TOTAL DEPTH	:	Driller 1610.0m Logger 1612.0m
BOTTOM HOLE FORMATION	:	Precambrian Granite
LOGS	:	Phasor DISFL-GR 1:600 & 1:240 scale 398-1612m BHC Sonic GR-Cal " " " " CNL-LDT-Pef-XYCal " " " " 1:120 scale (LST) 1300-1612m 1:120 scale (DOL) 1300-1612m Microlog-GR 1:240 & 1:120 1300-1612m
CORES	:	Core #1 1363-1381m (Sulphur Pt.) Rec.18.0m Core #2 1381-1391.0m (Sulph.Pt./Musk) Rec.10.0m Core #3 1478-1496.2m (Keg River) Rec.18.2m
DRILL STEM TESTS	:	DST #1 (On Penetration) 1366-1382.5m(Sulph.Pt) DST #2 (On Penetration) 1475-1486.0m (Keg R.)
WELL STATUS	:	Dry and Abandoned

CASING SUMMARY

Surface Casing

Ran 33 joints 244.5mm 53.6 kg/m J55 8 RD LTC ERW IPSCO 398.68m surface casing. Cemented by FRACMASTER with 22.7 m3 1900 kg/m3 0-1-0 "G" + 2% CaCl2 w/ 3 m3 water preflush. Landed at 398.0m KB. Plug down at 20:02 91-02-12. Circulated out 3.5 m3 cement returns to surface.

SURVEY RECORD

20m 1/4 , 50m 1/16 , 78m 1/2 , 106m 1 , 135m 1/4 , 162m 3/4 ,
190m 1/8 , 218m 1/8 , 247m 3/4 , 266m 3/4 , 295m 1/2 , 324m 1/8 ,
353m 1/8 , 398m 1/4 , 470m 1/4 , 538m 1/8 , 615m 1/8 , 682m 3/4 ,
759m 1 1/4 , 807m 1 3/4 , 827m 1 , 855m 1 1/4 , 865 1 1/4 ,
885m 1 1/4 , 925m 1 1/2 , 963m 1 1/4 , 1002m 2 , 1031m 2 1/4 ,
1137m 1 , 1186m 1 , 1234m 7/8 , 1283m 1/2 , 1329m 1/2 ,1387m 1/4
1478 1 , 1532m 3/4 , 1581m 3/4

PARA ET AL SWEDE A-52

FORMATION TOPS

G.L.: 692.6m
K.B.: 697.1m

Formation	Sample Top	(S.S.)	Log Top	(S.S.)
WABAMUN	458.8m	+238.3m	459.0m	+238.1m
JEAN MARIE	680.0	+ 17.1	681.0	+ 16.1
FORT SIMPSON	687.0	+ 10.1	687.0	+ 10.1
TWIN FALLS	798.0	-100.9	798.0	-100.9
HAY RIVER SHALE	945.0	-247.9	943.0	-245.9
BEAVER HILL LAKE	1278.0	-580.9	1279.0	-581.9
MUSKWA	1282.0	-584.9	1284.0	-586.9
SLAVE POINT	1310.0	-612.9	1310.3	-613.2
FORT VERMILLION	1338.0	-640.9	1340.5	-643.4
WATT MOUNTAIN	1358.0	-660.9	1360.1	-663.0
SULPHUR POINT Lst.	1364.0	-666.9	1365.5	-668.4
Dol.	1371.3	-674.2	1372.0	-674.9
MUSKEG	1383.0	-685.9	1385.1	-688.0
KEG RIVER	1477.0	-779.9	1476.7	-779.6
CHINCHAGA	1545.0	-847.9	1546.1	-849.0
GRANITE WASH	1572.0	-874.9	1565.6	-868.5
QUARTZITE	1575.0	-877.9	1572.8	-875.7
PRECAMBRIAN	1590.0	-892.9	1592.0	-894.9
TOTAL DEPTH	1610.0	-912.9	1612.0	-914.9

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DRILL STEM TEST REPORT

GENERAL DATA

WELL NAME: PARA ET AL SWEOE A-52 DATE: 91-02-20

TEST No.: 1 FORMATION: SULPHUR POINT INTERVAL: 1366 - 1382.4 m

TESTING COMPANY: BAKER TESTER: LOUIS BOULET

TEST TYPE: INFLATE STRADDLE PACKER OD.: 178 mm No. OF PACKERS: 2

HOLE SIZE: 216 mm WELL DEPTH: 1390 m DRILL PIPE SIZE: 114 mm OD x 97 mm ID

DRILL COLLAR SIZE (1): 165 mm OD x 70 mm ID x 141.2 m (2): _____ mm OD x _____ mm ID x _____ m

PRESSURE RECORDERS

No. 1714 DEPTH 1368 m IN/OUT-SIDE CUSHION: _____ AMOUNT: _____ m

No. 13832 DEPTH 1368 m IN/OUT-SIDE EQUIPMENT USED: (YES/NO)

No. 21155 DEPTH 1360 m IN/OUT-SIDE JARS YES PUMP OUT SUB YES

No. 12705 DEPTH 1354 m IN/OUT-SIDE SAMPLE CHAMBER YES SAFETY JT YES

No. _____ DEPTH _____ m IN/OUT-SIDE BY-PASS ASSEMBLY YES.

TESTING TIMES

PREFLOW 10 mins.

INITIAL SHUT IN 60 mins.

VALVE OPEN 120 mins.

FINAL SHUT IN 240 mins.

FLOW DESCRIPTION

PREFLOW WEAK TO STRONG AIR IN 5 MIN STEADY THROUGHOUT. N. G.T.S.

VALVE OPEN WEAK TO STRONG AIR IN 2½ MIN G.T.S IN 90 MIN T.S.T.M.

GAS FLOW RATES

TIME HRS	ORIFICE SIZE, mm	PRESSURE kPa	RATE m3/d
		T.S.T.M.	

RECOVERY

D. C. (1): _____ m x _____ m3/m = _____ m3

D. C. (2): _____ m x _____ m3/m = _____ m3

D. P. : _____ m x _____ m3/m = _____ m3

TOTAL FLUID RECOVERY = _____ m3

TOTAL FLUID 563 m CONSISTING OF:

400 m of BRACKISH GASIFIED OIL CUT SALT WATER.

163 m of SALT WATER 111500 PPM.

_____ m of _____

_____ m of _____

SUBSURFACE PRESSURE DATA

IHP 15241

IPFP 2465 FPFP 2258

ISIP 9655

IFP 2206 FFP 5034

FSIP 9603

FHP 15051

COMMENTS

BOTTOM HOLE TEMP. _____ °C MAX. H2S READING _____ ppm

BUILD UP COMPLETE IN _____ mins. / INCOMPLETE ✓

REMARKS: _____

REPORTED BY: G SAUDERS

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DRILL STEM TEST REPORT

GENERAL DATA

WELL NAME: PARA ET AL SWEGE A52 DATE: 91-02-23

TEST No.: 2 FORMATION: KEG RIVER INTERVAL: 1475 - 1486 m

TESTING COMPANY: BAKER TESTER: GLEN MCLAREN

TEST TYPE: STRADDLE PACKER OD.: 178 No. OF PACKERS: 2

HOLE SIZE: 216 mm WELL DEPTH: 1496 m DRILL PIPE SIZE: 114 mm OD x 94 mm ID

DRILL COLLAR SIZE (1): 165 mm OD x 70 mm ID x ____ m (2): ____ mm OD x ____ mm ID x ____ m

PRESSURE RECORDERS

No. D12 DEPTH 1477 m IN/(OUT)-SIDE CUSHION: ____ AMOUNT: ____ m

No. 20619 DEPTH 1469 m (IN)/OUT-SIDE EQUIPMENT USED: (YES/NO)

No. 7548 DEPTH 1477 m IN/(OUT)-SIDE JARS YES PUMP OUT SUB YES

No. 13462 DEPTH 1462 m (IN)/OUT-SIDE SAMPLE CHAMBER YES SAFETY JT YES

No. ____ DEPTH ____ m IN/OUT-SIDE BY-PASS ASSEMBLY YES

TESTING TIMES

PREFLOW 10 mins.

INITIAL SHUT IN 60 mins.

VALVE OPEN 120 mins.

FINAL SHUT IN 240 mins.

FLOW DESCRIPTION

PREFLOW WEAK Air Blow INCREASING TO STRONG IN 2½ MIN

VALVE OPEN WEAK Air Blow INCREASE TO STRONG IN 2½ mins N.G.T.S.

GAS FLOW RATES

TIME HRS	ORIFICE SIZE, mm	PRESSURE kPa	RATE m3/d
	N.G.T.S		
	Nil		

RECOVERY

D. C. (1): ____ m x ____ m3/m = ____ m3

D. C. (2): ____ m x ____ m3/m = ____ m3

D. P. : ____ m x ____ m3/m = ____ m3

TOTAL FLUID RECOVERY = ____ m3

TOTAL FLUID 1020 m CONSISTING OF:

1020 m of SALT WATER . 130000 PPM

____ m of ____

____ m of ____

____ m of ____

____ m of ____

SUBSURFACE PRESSURE DATA

IHP 16918

IPFP 202 FPFP 3664

ISIP 10689

IFP 3310 FFP 10687

FSIP 10689

COMMENTS

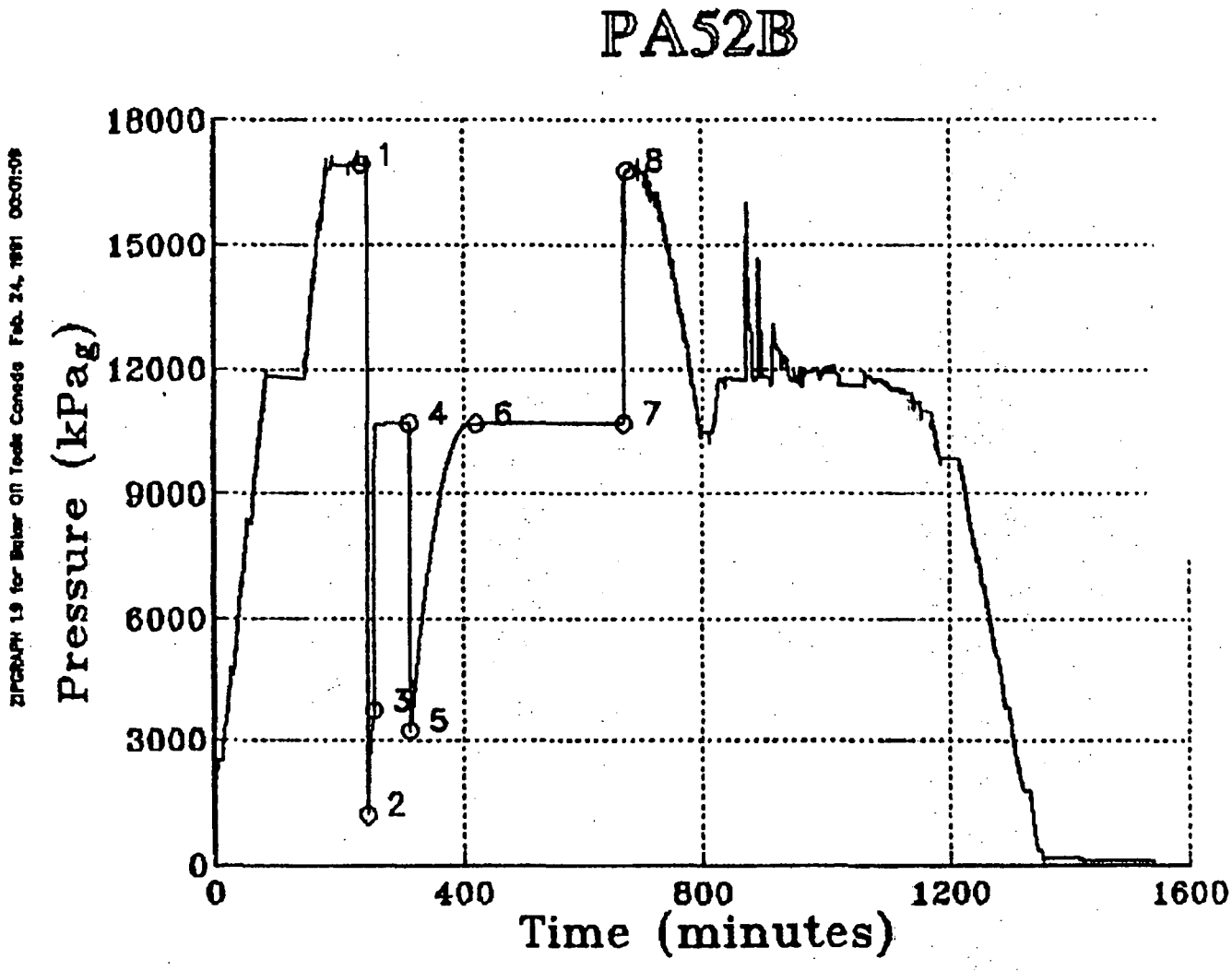
BOTTOM HOLE TEMP. 55 °C MAX. H2S READING 1500 ppm

BUILD UP COMPLETE IN 240 mins. / INCOMPLETE ____

REMARKS: REVERSE CIRCULATED FLUID OUT OF DRILL PIPE AND DRILL COLLARS

DST #2

PARAMOUNT ET AL SWEOC A52



LOGGING PROGRAM

WELL NAME	:	Para et al Swede A-52
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HOLE SIZE	:	Surface 349mm Intmd. 222mm Main 216mm
CASING SIZE	:	Surface 244.5mm @ 398m
TOTAL DEPTH	:	Driller 1610.0m
BOTTOM HOLE FORMATION	:	Precambrian Granite
FORMATIONS	:	(Attached)
LOGS	:	

1) Phasor DISFL-GR

1:600	T.D. to surface casing S.P. -120 to 15mV, GR 0-150 Resistivity ILD 0-150 ohms&SFL A 0-50 linear Conductivity 1000-0 mhos/m
1:240	T.D. to surface casing SP -120 to 15 mV, GR 0-150 Resistivity 0.2-2000 ohm-m logarithmic scale

2) BHC Sonic-GR-Cal

1:600	T.D. to surface casing
1:240	T.D. to surface casing GR 0-150 T.D. to top of Slave Point 300-100 us/m Top of Slave Pt.to surf.csg.500-100 us/m

3) CNL-LDT-Pef-GR-XYCal

1:600	T.D. to surface casing GR 0-150 Bulk Density 2000-3000 kg/m3
1:240	T.D. to surface casing GR 0-150 Limestone matrix 45 to -15 Dolomite matrix 45 to -15,TD to top Sl.Pt. Display and integrate X-Y Calipers for Cement bond volume log
1:120	High resolution - LST - TD to top of Sl.Pt. High resolution - DOL - TD to top of Sul.Pt.

4) Microlog-GR

1:240	TD to top of Slave Point Resistivity 0-40 ohm-m linear scale
1:120	TD to top of Slave Point Resistivity 0-40 ohm-m linear scale

5) Cement Volume Log

1:600	Compute and fax to Paramount office

6) LOGNET

1:240	Phasor, Sonic, Microlog - TD to 50m above Slave Point
1:240	Neutron/Density - TD to 50m above Slave Pt. Limestone presentation
1:120	High resolution - LST - TD to top of Sl.Pt. High resolution - DOL - TD to top of Sul.Pt

LOGGING COMPANY : Schlumberger Engineer-D.Stephanson Ph#926-2551
Peter(High Level) Ph#926-2841

PRINTS : 2 Field (wellsite) and 8 Field (office)

DIRECTIONS : 1 km south of Indian Cabins turn left off HWY 35, go 9 km, take right at "Y", follow main road to Cameron River for 60 km, cross river and follow road for 2 km to "T", turn left and go 9 km to "T", turn left, go 10 km to Rig.

PARA ET AL SWEDE A-52

LITHOLOGICAL DESCRIPTIONS

1285 SHALE light to medium grey, brittle, dolomitic, flat

1290 SHALE medium to dark grey to black, A/A, minor SHALE, light to medium grey, A/A

1295 A/A

1300 A/A SHALE light to medium grey, brittle, dolomitic, A/A

1305 A/A minor LIMESTONE light grey to grey brown to white, cryptocrystalline, trace microcrystalline, tight, packstone, no shows

1309 SLAVE POINT

1310 LIMESTONE A/A, light grey to grey brown to white, medium brown, wackstone in part

1312.5 A/A LIMESTONE abundant chocolate brown, trace broken calcite crystal fragments

1315 LIMESTONE cream to dark brown, cryptocrystalline, tight, SHALE light to medium to dark grey to black

1320 A/A LIMESTONE A/A, occasional microcrystalline, tight, trace SHALE, black, carbonaceous

1325 A/A cream to light to medium brown, tight, mottled in part, fair petro odor on heating sample, dull yellow orange and bright yellow fluorescence and weak white streaming cut

1330 A/A

1332.5 A/A fair petro odor on heating sample

1335 A/A predominantly microcrystalline, mottled, predominantly tight, trace pinpoint and intercrystalline porosity, dull yellow orange to bright yellow fluorescence and weak white streaming cut

1340 A/A trace to fair intercrystalline and pinpoint porosity (3-5%) in part

1345 A/A LIMESTONE predominantly cryptocrystalline, tight, SHALE, light to medium grey green to grey

1350 A/A LIMESTONE pelletoidal in part, predominantly tight

1355 A/A

1358 WATT MOUNTAIN

1360 A/A trace SHALE light green to occasionally chocolate brown, brittle, siliceous, hard in part

1362.7 SHALE light grey green to light green, greasy appearance, conchoidal habit, abundant fine black specks

CORE DESCRRIPTIONS

CORE #1 1363.0 - 1381.0m
(Cut 18.0m, Rec. 18.0m)

1363.0 to 1364.0m
SHALE light to medium green, dolomitic, crumbly, waxy, hard to soft

1364.0 to 1364.6m
LIMESTONE light brown to grey brown, breccia, angular pebbles up to 12 centimetre diameter, any size possible, cryptocrystalline, tight, abundant SHALE matrix, A/A, between pebbles

1364.6 to 1370.0m
LIMESTONE A/A, light to dark brown, massive, tight, moderately abundant fractures in any direction, often lined with SHALE A/A, predominantly closed fractures, occasional fracture filled with ANHYDRITE white, crystalline, occasional large pebble, angular, up to 15 centimeters diameter near base interval, thin SHALE intercalations around 1367.0 metres, A/A, between pebbles, occasional ANHYDRITE filled vug present around 1367 metres and 1369 metres, SHALE interlaminations, chocolate brown or light to medium green A/A, occasional diagonal fracture, slickensides, minor bleeding oil from fracture in intreval 1369 to 1370 metres

1370.0 to 1371.2m
LIMESTONE A/A, light to dark brown, cryptocrystalline, A/A, dolomitic in part, brecciated, ocassional bed with fair to poor intercrystalline and pinpoint porosity in part, with abundant bleeding oil (light brown light sour oil), up to 4 centimetre thick band, heavy H2S odor from bleeding oil, dull yellow green fluorescence, and immediate lime green cut

1371.2 to 1380.0m
DOLOMITE light to medium brown, cryptocrystalline to very fine crystalline, minor to abundant bleeding oil in beds (0.2 to 0.5 metre diameter), occasional thin SHALE laminations in top half metre, fluorescence and cut A/A, minor bleeding oil, fluorescence and cut A/A and occasional SHALE laminations or intercalations in intreval 1372 to 1373m, occasional fracture SHALE or ANHYDRITE filled A/A in 1373 to 1374m intreval, minor bleeding oil fluorescence and cut A/A and strong H2S odor in intrevals 1374.2 to 1374.5m and 1376.8 to 1377.2m, DOLOMITE breccia abundant SHALE interlaminations A/A, in intreval 1377.2 to 1377.6m, fair oil stain with fluorescence and cut A/A and fair H2S odor in intreval 1379.2 to 1379.6m

1380.0 to 1381.0m
DOLOMITE A/A, top half metre of intreval Algal Mat appearance, and bottom half meter DOLOMITE fine crystalline, fair intercrystalline porosity, abundant infill of vugular porosity with ANHYDRITE A/A, up to 4 centimetre diameter

CORE #2 1381.0 - 1391.0m
(Cut 10.0m, Rec. 10.0m)

1381.0 to 1382.4m
DOLOMITE light to dark brown, cryptocrystalline to microcrystalline, predominantly tight, abundant bleeding oil in bands throughout, minor Algal Mat appearance, very thin SHALE laminations, 0.2 metre thick maximum occasional fair pinpoint and intercrystalline porosity bands (less than 5% porosity), and occasional ANHYDRITE filled fracture present in any direction, complete infill of ANHYDRITE in part

1383.0 MUSKEG

1382.4 to 1383.2m
DOLOSTONE cryptocrystalline, tight, brecciated, occasional SHALE bands, dark grey green, waxy, (less than 2 centimetres thick), DOLOMITE pebbles, up to 15 centimetre diameter, angular

1383.2 to 1384.6m
ANHYDRITE yellow to white to light grey on surface, dark grey brown to white on fresh surface, occasioal SHALE bed, dark grey to grey brown, carbonaceous, less than 4 centimetres thick

1384.6 to 1386.0m
DOLOMITE medium to dark brown, micro to cryptocrystalline predominantly tight, occasional fair to poor intercrystalline porosity bands, occasionally good bleeding oil bands (2 to 30 centimetres thick)

1386.0 to 1387.8m
ANHYDRITE A/A, moderately abundant fractures in any direction, SHALE filled, occasional tight DOLOMITE band, up to 20 centimeters thick, bottom 20 centimeters of intreval shows SHALE laminations, A/A, less than 0.25 centimeters thick

1387.8 to 1389.5m
DOLOSTONE A/A, predominantly with laminations, thin SHALE laminations, fair bleeding oil from laminations (half a metre below top of intreval), 0.3 metres thick, top 1/2 metre abundant ANHYDRITE clasts, up to 10 centimetre diameter, flame structure at base intreval, brecciated

1389.5 to 1390.7m
ANHYDRITE A/A, moderately abundnt fractures, SHALE filled

1390.7 to 1391.0m
DOLOSTONE A/A, tight, no oil staining, abundant thin SHALE laminations, A/A

SAMPLE DESCRIPTIONS CONTINUED

1395 DOLOMITE A/A light to dark brown to cream to white, cryptocrystalline to microcrystalline, tight, no shows, SHALE A/A, ANHYDRITE cream to medium brown, well rounded chips, translucent, waxy, tight, trace bryozoan fossil fragments

1400 A/A

1405 A/A ANHYDRITE A/A, also angular chips present

1410 SHALE light to dark grey, soft to moderately hard, dull to slightly metallic, dolomitic, minor LIMESTONE cream to dark brown, cryptocrystalline, tight, trace ANHYDRITE A/A

1415 A/A trace to minor DOLOMITE A/A

1420 A/A DOLOMITE light to medium brown, micro to cryptocrystalline, trace pinpoint porosity

1425 A/A

1430 A/A DOLOMITE light to dark brown, predominantly micro crystalline, tight, trace poor intercrystalline porosity, trace dead oil stain

1435 A/A poor intercrystalline and pinpoint porosity in part, fair petro odor on heating sample, dull yellow brown fluorescence, no cut

1440 A/A abundant ANHYDRITE A/A, minor DOLOMITE A/A, fair petro odor on heating sample

1445 DOLOMITE light to medium brown, micro to fine crystalline, predominantly microcrystalline, poor to fair intercrystalline porosity, minor dull yellow green dry cut, and weak white streaming cut in part, fair petro odor, ANHYDRITE A/A

1450 ANHYDRITE A/A, minor DOLOMITE predominantly tight to poor porosity

1455 A/A trace DOLOMITE A/A

1460 DOLOMITE light to dark brown, A/A, as in 1445 sample, predominantly poor intercrystalline porosity, ANHYDRITE A/A

1465 ANHYDRITE A/A, minor DOLOMITE light to medium brown, A/A, micro to cryptocrystalline, trace pinpoint porosity to tight

1470 ANHYDRITE A/A, DOLOMITE A/A, predominantly micro to cryptocrystalline, tight

1475 A/A minor ANHYDRITE A/A, DOLOMITE A/A

1477 KEG RIVER

1477 DOLOMITE light to dark brown, micro to fine crystalline, predominantly micro crystalline, friable, good intercrystalline porosity, fair vugular porosity (3-6%) DOLOMITE dark brown, cryptocrystalline, tight, red brown fluorescence, no cut

CORE DESCRIPTION

CORE #3 1478.0 - 1496.2m
(Cut 18.2m, Rec. 18.2m)

1478.0 to 1482.5m
DOLOMITE light to medium brown to grey brown, predominantly cryptocrystalline, predominantly tight, occasional patchy pinpoint porosity bands (5 centimeter thick band), moderately abundant SHALE partings (less than 0.25 centimetres thick), medium to dark grey, carbonaceous, trace spotty black bleeding oil, bleeding at SHALE partings (stylolitic surface), occasional bleeding fracture and pinpoint, occasional vug (less than 3 centimeter diameter), fair black bleeding oil, (occasional Brachiopod shaped vug), fair fracture porosity in part connecting vugular porosity, moderately abundant calcite crystals lining on vugs (occupy from 10 to 30 percent of porosity), top 0.25 meters of intreval has a wet appearance, grainstone to packstone, dull yellow green dry fluorescence and bright lime green cut

1482.5 to 1487.0m
DOLOMITE A/A, occasional fist sized vugs (predominantly 1 to 2 centimeters diameter, moderately abundant vugs with abundant lining of calcite crystals A/A (less than 10 percent porosity), minor large pinpoint vugs (less than 1 centimeter diameter), minor bleeding oil from vugs, good vugular porosity in part, grainstone, fluorescence and cut A/A, moderately abundant SHALE partings A/A and occasional well developed vug (1-2 centimeters diameter) with calcite crystal lining in intreval 1485.5 to 1486.5m, predominantly poor porosity in intreval 1486 to 1487m

1487.0 to 1491.4m
DOLOMITE A/A, occasional vugular porosity or pinpoint porosity zone, minor SHALE partings, A/A, occasional vug less than 2 centimeters diameter A/A 1487.5m, generally a lack of fracture porosity, some evidence of minor broken shell fragments where dolomitization obliterates fossil evidence, moderately abundant vugs present with calcite crystal lining A/A in intreval 1490-1490.2m, minor evidence oil staining from 1490 1492m, occasional SHALE clasts present A/A. 2 to 5 centimeter diameter 1490 to 1492m intreval, around 1491m some vugs indicate brachiopod shapes

1491.4 to 1496.2m
DOLOMITE A/A, wackstone to packstone, occasional band fair to good pinpoint porosity (1 metre and 0.5 metre thick), abundant AMPHIPORA , dolomite replacement forms abundant pinpoint and minor intercrystalline porosity in part, SHALE partings, A/A, moderately abundant, occasional ANHYDRITE filled vugs (less than 1 centimeter diameter) around 1494 amd 1496m. trace to minor poor to fair vugular and pinpoint porosity in part. occasional spotty bleeding oil in part, dull yellow dry fluorescence and bright yellow immediate cut

SAMPLE DESCRIPTIONS CONTINUED

1500 DOLOMITE light to dark brown, micro to fine crystalline, trace pinpoint and intercrystalline porosity, trace broken calcite crystal fragments, minor light oil staining, trace to minor dull yellow green fluorescence, no cut, fair petro odor on heating sample

1502.5 DOLOMITE A/A, light to medium grey and light grey brown to medium brown, occasional dark brown to black, micro to fine crystalline, predominantly very fine crystalline, poor intercrystalline porosity and trace good vugular porosity, some good dolomite crystals developed, shows, A/A, fair petro odor on heating sample

1505 DOLOMITE A/A, light to dark brown to black, minor fair pinpoint, intercrystalline and vugular porosity

1510 A/A DOLOMITE light to dark brown to white, fair petro odor on heatingsample

1515 A/A

1520 A/A

1525 A/A predominantly trace to minor pinpoint to vugular porosity, minor broken dolomite crystal fragments present

1530 A/A

1535 A/A predominantly dark brown

1540 A/A

1545 A/A trace pinpoint and vugular porosity

1545 CHINCHAGA

1550 ANHYDRITE light grey brown to brown, mottled, rounded to sub-rounded chips, tight, DOLOMITE light to dark brown, cryptocrystalline, tight, no shows, SHALE light to dark grey, dolomitic, brittle

1555 A/A ANHYDRITE and DOLOMITE A/A, cream

1560 A/A

1565 A/A

1570 A/A DOLOMITE microcrystalline in part, tight, no shows, trace SHALE light green, dolomitic, brittle, conchoidal habit

1572 GRANITE WASH

1575 QUARTZITE

1575 SANDSTONE trace, medium to very coarse grained, white to clear, round to sub-rounded to angular grains, moderately to poorly sorted, fair to poor porosity, no shows, QUARTZITE dark red brown to maroon to pink, hard, glassy, angular chips, breccia with GRANITE well weathered, pink to red orange to white, resistant to soft, feldspar and quartz grains, medium to coarse grained, reddish orange feldspar base soft clays turn drilling mud red instantly, silty in part, well fractured in part

1580 A/A SANDSTONE angular quartz grains, SILTSTONE light green, glassy, siliceous, tight, (olivine rich ?), trace to minor fractures present

1585 A/A abundant CLAY matrix, white to light grey, occasional angular or rounded quartz grains, medium to very coarse grained, slightly dolomitic in part

1590 A/A CLAY white to light pink, speckled black, breccia with QUARTZITE and SILTSTONE and feldspar and quartz and white mica fragments, A/A

1590 PreCAMBRIAN

1595 A/A QUARTZITE A/A, massive, very resistant

1600 A/A QUARTZITE dark red brown to brown, greasy to metallic appearence, trace to minor feldspar and clay, more quartz than above

1605 A/A QUARTZITE dark red brown to dark brown to black

1610 A/A

(TOTAL DEPTH : 1610m (25-02-91 @ 02:15 HRS.)

BIT RECORD

COMPANY PARAMOUNT RESOURCES LTD.

NAME OF WELL PARA ET AL SWEDE A-52

BIT No.	DEPTH FROM	DEPTH TO	SIZE (mm)	MAKE	TYPE	SERIAL No.	BIT METRES	BIT HOURS	JETS	T-B-G	WEIGHT (d Na)	RPM	TOTAL HOURS	REMARKS
1A	0	108	311		J2	P0441	108	10 1/2	3-12.7	8-8-0	3/6K	160	10.5	
2A	108	330	311		J2	LK205	222	10 3/4	3-14.3	8-8-	6/10k	160	21.25	
3A	330	398	311		DSJ	PA3767	68	3 1/2	3-11.9	3-1-1	110/12k	160	24.75	
1	398	1254	222		HP43A	D69723	856	55 1/2	OPEN	2-2-1	2/10k	80/120	55.5	
1RR	1254	1363	222		HP43A	D69723	109	22 1/4	3-10.3	---	10/12k	65/80	77.75	
1C	1363	1381	216		RC476	0601760	18	4 3/4	---	GOOD	4/7k	70/90	81.5	
1CRR	1381	1390.6	216		RC476	0601760	9.6	1 3/4	---	GOOD	6k	80	83.25	
2	1390.6	1478	216		HP51A	LH3020	88	28 3/4	3-8.7	---	14k	55/85	112	
3C	1478	1496	216		RC476	06017802	18	9 1/2	---	GOOD	2/7k	100	121.5	
2RR	1496	1547	216		HP51A	LH3020	51	18 1/4	3-8.7	7-7-BT	12/14k	60/65	139.75	
3RR	1547	1610	216		HP53A	TW2459	63	21 1/2	3-8.7	---	12/14k	60/65	161.25	

PARAMOUNT ET AL SWEDE A-52

DAILY SUMMARY

DATE	DEPTH	STATUS	MUD VISCOSITY	WEIGHT	PH	WL	OTHER
91-02-11	101m	DRLG	52	1100	--	--	GELCHEM
91-02-12	398m	DRLG	65	1200	9.5	--	GELCHEM
91-02-13	398m	NIPPLE UP BOP	45	1160	10	--	GELCHEM
91-02-14	497m	DRLG	45	1100	10	9.0	GELCHEM
91-02-15	846m	DRLG	45	1010	11	--	GELCHEM
91-02-16	1108m	DRLG	45	1100	11	8.5	GELCHEM
91-02-17	1283m	DRLG	46	1030	10	8.0	GELCHEM
91-02-18	1363m	POHtoCORE	52	1100	10.5	7.0	GELCHEM
91-02-19	1390m	DST#1	52	1120	11	8.0	GELCHEM
91-02-20	1390m	RUN IN	52	1120	11	8.0	GELCHEM
91-02-21	1452m	DRLG	57	1125	11	8.0	GELCHEM
91-02-22	1488m	CORE#3	44	1140	11.5	7.5	GELCHEM
91-02-23	1496m	DST#2	49	1140	10	8.5	GELCHEM
91-02-24	1508m	DRLG	52	1135	10	8.4	GELCHEM
91-02-25	1556m	DRLG	50	1125	10.5	8.0	GELCHEM
91-02-26	1610m	TRIP TO LOG	53	1145	10.5	7.5	GELCHEM
91-02-27	1610m	RUN PLUGS	--	--	--	--	GELCHEM
91-02-28	1610m	RELEASE RIG					

CANADA OIL AND GAS LANDS ADMINISTRATION
ADMINISTRATION DU PÉTROLE ET DU GAZ DES TERRES DU CANADA
MAR 18 1991
ENGINEERING AND CONTROL BRANCH
TECHNIQUE ET DU CONTROLE

9211-P33-6-2
CALGARY COPY

GEOLOGICAL WELLSITE REPORT

for

PARA ET AL SWEDE A-52

Prepared for

PARAMOUNT RESOURCES LTD.

by

Robert J. Adamowicz, BSc Geol.

Date: March 01, 1991

TABLE OF CONTENTS

INTRODUCTION

The Paramount et al Swede A-52 well situated at 60° 20 latitude and 117° 30 longitude in the North West Territories of Canada, was spudded on February 10th, 1991 @ 21:00 HRS. The G-21 well was drilled to a depth of 1610.0 metres driller depth and 1612 metres logger depth. The well took 14 days to drill, and 18 days total time to rig release, which was February 28th, 1991 @ 20:00 HRS.

Surface casing was set and cemented at 398.0 metres. The main hole, 222mm diameter, was drilled with air from surface casing to 1283.0 metres with no problems as the hole kept relatively dry. The hole was drilled with gelchem mud from 1283.0 metres to 1612.0 metres, total depth (logger).

Two cores were cut in the Sulphur Point formation, with 100% recovery on both, and then a drillstem test was run (as the Sulphur Point represented the primary zone of interest). A core was also cut in the Keg River formation (100% recovery) and drillstem test # two was preformed (secondary zone of interest), upon penetration.

The well data indicated poor Sulphur Point oil potential and poor Keg River oil potential, and the well was plugged and abandoned.

WELL SUMMARY

WELL NAME	:	Para et al Swede A-52
LOCATION	:	60° 20 Lat. 117° 30 Long.
ELEVATIONS	:	Grnd. 692.6m K.B. 697.1m
OPERATOR	:	Paramount Resources Ltd.
CONTRACTOR	:	Command Drilling Ltd., Rig # 2
SUPERVISION	:	Tool push - Bud Matier Engineer - Gerry Sanders Geologist - Rob Adamowicz
WELL SPUDDED	:	10-02-91 @ 21:00 HRS
DRILLING COMPLETED	:	25-02-91 @ 02:15 HRS
RIG RELEASE	:	28-02-91 @ 20:00 HRS
HOLE SIZE	:	Surface 349mm Intmd. 222mm Main 216mm
CASING SIZE	:	Surface 244.5mm @ 398m Production nil.
TOTAL DEPTH	:	Driller 1610.0m Logger 1612.0m
BOTTOM HOLE FORMATION	:	Precambrian Granite
LOGS	:	Phasor DISFL-GR 1:600 & 1:240 scale 398-1612m BHC Sonic GR-Cal " " " " CNL-LDT-Pef-XYCal " " " " 1:120 scale (LST) 1300-1612m 1:120 scale (DOL) 1300-1612m Microlog-GR 1:240 & 1:120 1300-1612m
CORES	:	Core #1 1363-1381m (Sulphur Pt.) Rec.18.0m Core #2 1381-1391.0m (Sulph.Pt./Musk) Rec.10.0m Core #3 1478-1496.2m (Keg River) Rec.18.2m
DRILL STEM TESTS	:	DST #1 (On Penetration) 1366-1382.5m(Sulph.Pt) DST #2 (On Penetration) 1475-1486.0m (Keg R.)
WELL STATUS	:	Dry and Abandoned

CASING SUMMARY

Surface Casing

Ran 33 joints 244.5mm 53.6 kg/m J55 8 RD LTC ERW IPSCO 398.68m surface casing. Cemented by FRACMASTER with 22.7 m3 1900 kg/m3 0-1-0 "G" + 2% CaCl2 w/ 3 m3 water preflush. Landed at 398.0m KB. Plug down at 20:02 91-02-12. Circulated out 3.5 m3 cement returns to surface.

SURVEY RECORD

20m 1/4 , 50m 1/16 , 78m 1/2 , 106m 1 , 135m 1/4 , 162m 3/4 ,
190m 1/8 , 218m 1/8 , 247m 3/4 , 266m 3/4 , 295m 1/2 , 324m 1/8 ,
353m 1/8 , 398m 1/4 , 470m 1/4 , 538m 1/8 , 615m 1/8 , 682m 3/4 ,
759m 1 1/4 , 807m 1 3/4 , 827m 1 , 855m 1 1/4 , 865 1 1/4 ,
885m 1 1/4 , 925m 1 1/2 , 963m 1 1/4 , 1002m 2 , 1031m 2 1/4 ,
1137m 1 , 1186m 1 , 1234m 7/8 , 1283m 1/2 , 1329m 1/2 , 1387m 1/4
1478 1 , 1532m 3/4 , 1581m 3/4

PARA ET AL SWEDE A-52

FORMATION TOPS

G.L.: 692.6m
K.B.: 697.1m

Formation	Sample Top	(S.S.)	Log Top	(S.S.)
WABAMUN	458.8m	+238.3m	459.0m	+238.1m
JEAN MARIE	680.0	+ 17.1	681.0	+ 16.1
FORT SIMPSON	687.0	+ 10.1	687.0	+ 10.1
TWIN FALLS	798.0	-100.9	798.0	-100.9
HAY RIVER SHALE	945.0	-247.9	943.0	-245.9
BEAVER HILL LAKE	1278.0	-580.9	1279.0	-581.9
MUSKWA	1282.0	-584.9	1284.0	-586.9
SLAVE POINT	1310.0	-612.9	1310.3	-613.2
FORT VERMILLION	1338.0	-640.9	1340.5	-643.4
WATT MOUNTAIN	1358.0	-660.9	1360.1	-663.0
SULPHUR POINT Lst.	1364.0	-666.9	1365.5	-668.4
Dol.	1371.3	-674.2	1372.0	-674.9
MUSKEG	1383.0	-685.9	1385.1	-688.0
KEG RIVER	1477.0	-779.9	1476.7	-779.6
CHINCHAGA	1545.0	-847.9	1546.1	-849.0
GRANITE WASH	1572.0	-874.9	1565.6	-868.5
QUARTZITE	1575.0	-877.9	1572.8	-875.7
PRECAMBRIAN	1590.0	-892.9	1592.0	-894.9
TOTAL DEPTH	1610.0	-912.9	1612.0	-914.9

PARAMOUNT RESOURCES LTD

DRILL STEM TEST REPORT

GENERAL DATA

WELL NAME: PARA ETAL SWEOE A-52 DATE: 91-02-20

TEST No.: 1 FORMATION: SULPHUR POINT INTERVAL: 1366 - 1382.5 m

TESTING COMPANY: BAKER TESTER: LOUIS BOULET

TEST TYPE: INFLATE STRADDLE PACKER OD.: 178 mm No. OF PACKERS: 2

HOLE SIZE: 216 mm WELL DEPTH: 1390 m DRILL PIPE SIZE: 114 mm OD x 97 mm ID

DRILL COLLAR SIZE (1): 165 mm OD x 70 mm ID x 141.21 m (2): _____ mm OD x _____ mm ID x _____ m

PRESSURE RECORDERS

No. 1714 DEPTH 1368 m IN/OUT-SIDE CUSHION: _____ AMOUNT: _____ m

No. 13832 DEPTH 1368 m IN/OUT-SIDE EQUIPMENT USED: (YES/NO)

No. 21155 DEPTH 1360 m IN/OUT-SIDE JARS YES PUMP OUT SUB YES

No. 12705 DEPTH 1356 m IN/OUT-SIDE SAMPLE CHAMBER YES SAFETY JT YES

No. _____ DEPTH _____ m IN/OUT-SIDE BY-PASS ASSEMBLY YES.

TESTING TIMES

PREFLOW 10 mins.

INITIAL SHUT IN 60 mins.

VALVE OPEN 120 mins.

FINAL SHUT IN 240 mins.

FLOW DESCRIPTION

PREFLOW WEAK TO STRONG AIR IN 5 MIN

STEADY THROUGHOUT. N.G.T.S.

VALVE OPEN WEAK TO STRONG AIR IN 2½ MIN

G.T.S IN 90 MIN T.S.T.M.

GAS FLOW RATES

TIME HRS	ORIFICE SIZE, mm	PRESSURE kPa	RATE m3/d
		T.S.T.M.	

RECOVERY

D. C. (1): _____ m x _____ m3/m = _____ m3

D. C. (2): _____ m x _____ m3/m = _____ m3

D. P. : _____ m x _____ m3/m = _____ m3

TOTAL FLUID RECOVERY = _____ m3

TOTAL FLUID 563 m CONSISTING OF:

400 m of BRACKISH GASIFIED OIL CUT SALT MUD WATER.

163 m of SALT WATER 111500 PPM.

_____ m of _____

_____ m of _____

SUBSURFACE PRESSURE DATA

IHP 15241

IPFP 2465 FPFP ~~2258~~ 2258

ISIP 9655

IFP 2206 FFP 5034

FSIP 9603

FHP 15051

COMMENTS

BOTTOM HOLE TEMP. _____ °C MAX. H2S READING _____ ppm

BUILD UP COMPLETE IN _____ mins. / INCOMPLETE ✓

REMARKS: _____

REPORTED BY: G SANDERS

PARAMOUNT RESOURCES LTD

DRILL STEM TEST REPORT

GENERAL DATA

WELL NAME: PARA ET AL SWEGE A-52 DATE: 91-02-23

TEST No.: 2 FORMATION: KEG RIVER INTERVAL: 1475 - 1486 m

TESTING COMPANY: BAKER TESTER: GLEN MCLAREN

TEST TYPE: STRADDLE PACKER OD.: 178 No. OF PACKERS: 2

HOLE SIZE: 216 mm WELL DEPTH: 1496 m DRILL PIPE SIZE: 114 mm OD x 94 mm ID

DRILL COLLAR SIZE (1): 165 mm OD x 70 mm ID x _____ m (2): _____ mm OD x _____ mm ID x _____ m

PRESSURE RECORDERS

No. 012 DEPTH 1477 m IN/(OUT)-SIDE CUSHION: _____ AMOUNT: _____ m

No. 20619 DEPTH 1469 m (IN)/OUT-SIDE EQUIPMENT USED: (YES/NO)

No. 7548 DEPTH 1477 m IN/(OUT)-SIDE JARS YES PUMP OUT SUB YES

No. 13462 DEPTH 1462 m (IN)/OUT-SIDE SAMPLE CHAMBER YES SAFETY JT YES

No. _____ DEPTH _____ m IN/OUT-SIDE BY-PASS ASSEMBLY YES

TESTING TIMES

PREFLOW 10 mins.

INITIAL SHUT IN 60 mins.

VALVE OPEN 120 mins.

FINAL SHUT IN 240 mins.

FLOW DESCRIPTION

PREFLOW WEAK AIR BLOW INCREASING TO STRONG IN 2½ MIN

VALVE OPEN WEAK AIR BLOW INCREASE TO STRONG IN 2½ MINS N.G.I.S.

GAS FLOW RATES

TIME HRS	ORIFICE SIZE, mm	PRESSURE kPa	RATE m3/d
	N.G.I.S		
	Nil		

RECOVERY

D. C. (1): _____ m x _____ m3/m = _____ m3

D. C. (2): _____ m x _____ m3/m = _____ m3

D. P. : _____ m x _____ m3/m = _____ m3

TOTAL FLUID RECOVERY = _____ m3

TOTAL FLUID 1020 m CONSISTING OF:

1020 m of SALT WATER . 130000 PPM

_____ m of _____

_____ m of _____

_____ m of _____

_____ m of _____

SUBSURFACE PRESSURE DATA

IHP 16918

IPFP 1202 FPFP 3664

ISIP 10689

IFP 3310 FFP 10687

FSIP 10689

COMMENTS

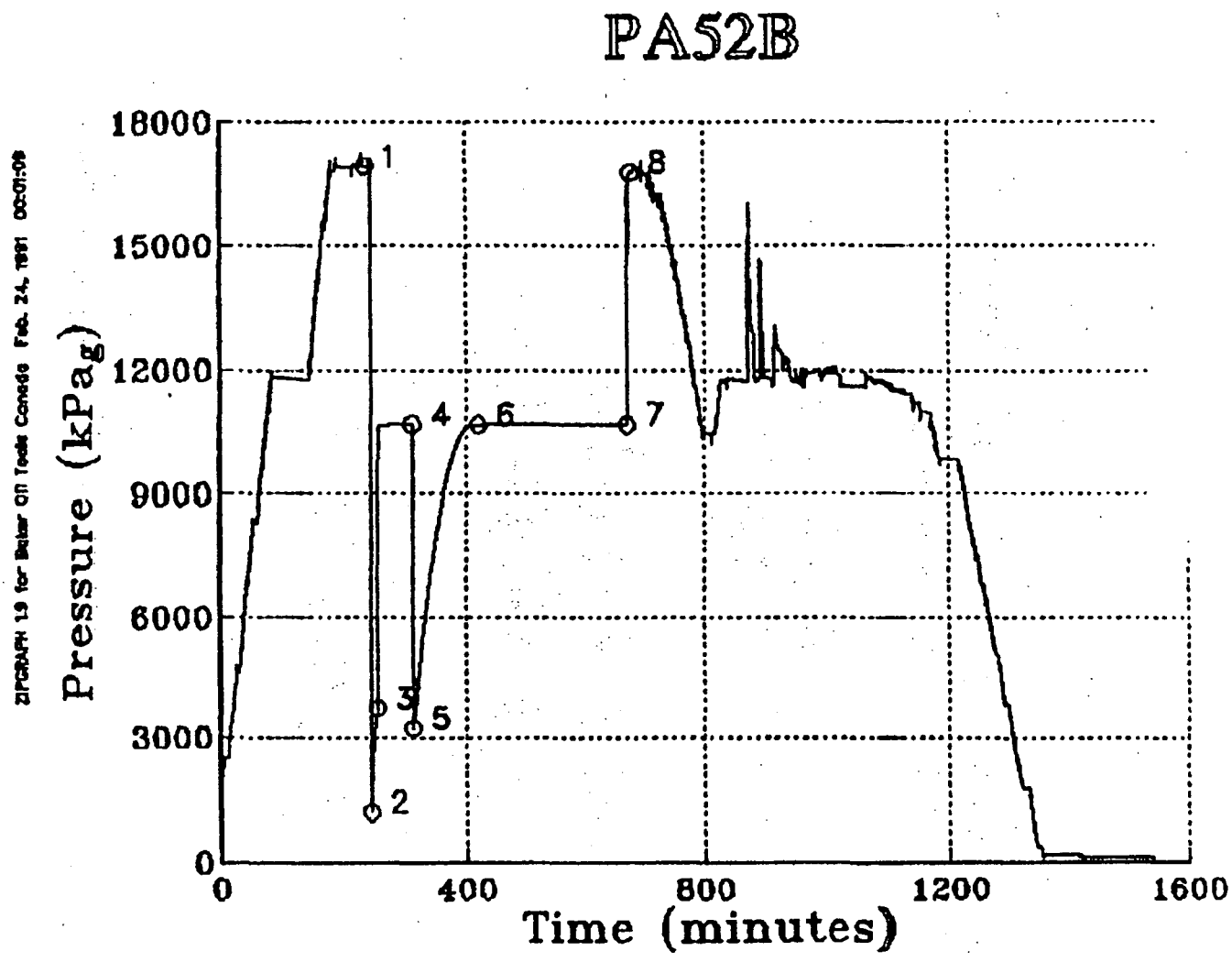
BOTTOM HOLE TEMP. 55 °C MAX. H2S READING 1500 ppm

BUILD UP COMPLETE IN 240 mins. / INCOMPLETE _____

REMARKS: REVERSE CIRCULATED FLUID OUT OF DRILL PIPE AND DRILL COLLARS

DST #2

PARAMOUNT ET AL SWCOC A52



LOGGING PROGRAM

WELL NAME	:	Para et al Swede A-52
LOCATION	:	60° 20 Lat. 117° 30 Long.
ELEVATIONS	:	Grnd. 692.6m K.B. 697.1m
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RIG RELEASE	:	28-02-91 @ 20:00 HRS
HOLE SIZE	:	Surface 349mm Intmd. 222mm Main 216mm
CASING SIZE	:	Surface 244.5mm @ 398m
TOTAL DEPTH	:	Driller 1610.0m
BOTTOM HOLE FORMATION	:	Precambrian Granite
FORMATIONS	:	(Attached)
LOGS	:	

1) Phasor DISFL-GR

1:600	T.D. to surface casing S.P. -120 to 15mV, GR 0-150 Resistivity ILD 0-150 ohms&SFL A 0-50 linear Conductivity 1000-0 mhos/m
1:240	T.D. to surface casing SP -120 to 15 mV, GR 0-150 Resistivity 0.2-2000 ohm-m logarithmic scale

2) BHC Sonic-GR-Cal

1:600	T.D. to surface casing
1:240	T.D. to surface casing GR 0-150 T.D. to top of Slave Point 300-100 us/m Top of Slave Pt.to surf.csg.500-100 us/m

3) CNL-LDT-Pef-GR-XYCal

1:600	T.D. to surface casing GR 0-150 Bulk Density 2000-3000 kg/m3
1:240	T.D. to surface casing GR 0-150 Limestone matrix 45 to -15 Dolomite matrix 45 to -15,TD to top Sl.Pt. Display and integrate X-Y Calipers for Cement bond volume log
1:120	High resolution - LST - TD to top of Sl.Pt. High resolution - DOL - TD to top of Sul.Pt.

4) Microlog-GR

1:240	TD to top of Slave Point Resistivity 0-40 ohm-m linear scale
1:120	TD to top of Slave Point Resistivity 0-40 ohm-m linear scale

5) Cement Volume Log

1:600	Compute and fax to Paramount office

6) LOGNET

1:240	Phasor, Sonic, Microlog - TD to 50m above Slave Point
1:240	Neutron/Density - TD to 50m above Slave Pt. Limestone presentation
1:120	High resolution - LST - TD to top of Sl.Pt. High resolution - DOL - TD to top of Sul.Pt

LOGGING COMPANY : Schlumberger Engineer-D.Stephanson Ph#926-2551
Peter(High Level) Ph#926-2841

PRINTS : 2 Field (wellsite) and 8 Field (office)

DIRECTIONS : 1 km south of Indian Cabins turn left off HWY 35, go 9 km, take right at "Y", follow main road to Cameron River for 60 km, cross river and follow road for 2 km to "T", turn left and go 9 km to "T", turn left, go 10 km to Rig.

PARA ET AL SWEDE A-52

LITHOLOGICAL DESCRIPTIONS

1285 SHALE light to medium grey, brittle, dolomitic, flat

1290 SHALE medium to dark grey to black, A/A, minor SHALE, light to medium grey, A/A

1295 A/A

1300 A/A SHALE light to medium grey, brittle, dolomitic, A/A

1305 A/A minor LIMESTONE light grey to grey brown to white, cryptocrystalline, trace microcrystalline, tight, packstone, no shows

1309 SLAVE POINT

1310 LIMESTONE A/A, light grey to grey brown to white, medium brown, wackstone in part

1312.5 A/A LIMESTONE abundant chocolate brown, trace broken calcite crystal fragments

1315 LIMESTONE cream to dark brown, cryptocrystalline, tight, SHALE light to medium to dark grey to black

1320 A/A LIMESTONE A/A, occasional microcrystalline, tight, trace SHALE, black, carbonaceous

1325 A/A cream to light to medium brown, tight, mottled in part, fair petro odor on heating sample, dull yellow orange and bright yellow fluorescence and weak white streaming cut

1330 A/A

1332.5 A/A fair petro odor on heating sample

1335 A/A predominantly microcrystalline, mottled, predominantly tight, trace pinpoint and intercrystalline porosity, dull yellow orange to bright yellow fluorescence and weak white streaming cut

1340 A/A trace to fair intercrystalline and pinpoint porosity (3-5%) in part

1345 A/A LIMESTONE predominantly cryptocrystalline, tight, SHALE. light to medium grey green to grey

1350 A/A LIMESTONE pelletoidal in part, predominantly tight

1355 A/A

1358 WATT MOUNTAIN

1360 A/A trace SHALE light green to occasionally chocolate brown, brittle, siliceous, hard in part

1362.7 SHALE light grey green to light green, greasy appearance, conchoidal habit, abundant fine black specks

CORE DESCRRIPTIONS

CORE #1 1363.0 - 1381.0m
(Cut 18.0m, Rec. 18.0m)

1363.0 to 1364.0m
SHALE light to medium green, dolomitic, crumbly, waxy, hard to soft

1364.0 to 1364.6m
LIMESTONE light brown to grey brown, breccia, angular pebbles up to 12 centimetre diameter, any size possible, cryptocrystalline, tight, abundant SHALE matrix, A/A, betweem pebbles

1364.6 to 1370.0m
LIMESTONE A/A, light to dark brown, massive, tight, moderately abundant fractures in any direction, often lined with SHALE A/A, predominantly closed fractures, occasional fracture filled with ANHYDRITE white, crystalline, occasional large pebble, angular, up to 15 centimeters diameter near base interval, thin SHALE intercalations around 1367.0 metres, A/A, between pebbles, occasional ANHYDRITE filled vug present around 1367 metres and 1369 metres, SHALE interlaminations, chocolate brown or light to medium green A/A, occasional diagonal fracture, slickensides, minor bleeding oil from fracture in intreval 1369 to 1370 metres

1370.0 to 1371.2m
LIMESTONE A/A, light to dark brown, cryptocrystalline, A/A, dolomitic in part, brecciated, ocassional bed with fair to poor intercrystalline and pinpoint porosity in part, with abundant bleeding oil (light brown light sour oil), up to 4 centimetre thick band, heavy H2S odor from bleeding oil, dull yellow green fluorescence, and immediate lime green cut

1371.2 to 1380.0m
DOLOMITE light to medium brown, cryptocrystalline to very fine crystalline, minor to abundant bleeding oil in beds (0.2 to 0.5 metre diameter), occasional thin SHALE laminations in top half metre, fluorescence and cut A/A, minor bleeding oil, fluorescence and cut A/A and occasional SHALE laminations or intercalations in intreval 1372 to 1373m, occasional fracture SHALE or ANHYDRITE filled A/A in 1373 to 1374m intreval, minor bleeding oil fluorescence and cut A/A and strong H2S odor in intrevals 1374.2 to 1374.5m and 1376.8 to 1377.2m, DOLOMITE breccia abundant SHALE interlaminations A/A, in intreval 1377.2 to 1377.6m, fair oil stain with fluorescence and cut A/A and fair H2S odor in intreval 1379.2 to 1379.6m

1380.0 to 1381.0m
DOLOMITE A/A, top half metre of intreval Algal Mat appearance, and bottom half meter DOLOMITE fine crystalline, fair intercrystalline porosity, abundant infill of vugular porosity with ANHYDRITE A/A, up to 4 centimetre diameter

CORE #2 1381.0 - 1391.0m
(Cut 10.0m, Rec. 10.0m)

1381.0 to 1382.4m
DOLOMITE light to dark brown, cryptocrystalline to microcrystalline, predominantly tight, abundant bleeding oil in bands throughout, minor Algal Mat appearance, very thin SHALE laminations, 0.2 metre thick maximum occasional fair pinpoint and intercrystalline porosity bands (less than 5% porosity), and occasional ANHYDRITE filled fracture present in any direction, complete infill of ANHYDRITE in part

1383.0 MUSKEG

1382.4 to 1383.2m
DOLOSTONE cryptocrystalline, tight, brecciated, occasional SHALE bands, dark grey green, waxy, (less than 2 centimetres thick), DOLOMITE pebbles, up to 15 centimetre diameter, angular

1383.2 to 1384.6m
ANHYDRITE yellow to white to light grey on surface, dark grey brown to white on fresh surface, occasional SHALE bed, dark grey to grey brown, carbonaceous, less than 4 centimetres thick

1384.6 to 1386.0m
DOLOMITE medium to dark brown, micro to cryptocrystalline predominantly tight, occasional fair to poor intercrystalline porosity bands, occasionally good bleeding oil bands (2 to 30 centimetres thick)

1386.0 to 1387.8m
ANHYDRITE A/A, moderately abundant fractures in any direction, SHALE filled, occasional tight DOLOMITE band, up to 20 centimeters thick, bottom 20 centimeters of intreval shows SHALE laminations, A/A, less than 0.25 centimeters thick

1387.8 to 1389.5m
DOLOSTONE A/A, predominantly with laminations, thin SHALE laminations, fair bleeding oil from laminations (half a metre below top of intreval), 0.3 metres thick, top 1/2 metre abundant ANHYDRITE clasts, up to 10 centimetre diameter, flame structure at base intreval. brecciated

1389.5 to 1390.7m
ANHYDRITE A/A, moderately abundnt fractures, SHALE filled

1390.7 to 1391.0m
DOLOSTONE A/A, tight, no oil staining, abundant thin SHALE laminations, A/A

SAMPLE DESCRIPTIONS CONTINUED

1395 DOLOMITE A/A light to dark brown to cream to white, cryptocrystalline to microcrystalline, tight, no shows, SHALE A/A, ANHYDRITE cream to medium brown, well rounded chips, translucent, waxy, tight, trace bryozoan fossil fragments

1400 A/A

1405 A/A ANHYDRITE A/A. also angular chips present

1410 SHALE light to dark grey, soft to moderately hard, dull to slightly metallic, dolomitic, minor LIMESTONE cream to dark brown, cryptocrystalline, tight, trace ANHYDRITE A/A

1415 A/A trace to minor DOLOMITE A/A

1420 A/A DOLOMITE light to medium brown, micro to cryptocrystalline, trace pinpoint porosity

1425 A/A

1430 A/A DOLOMITE light to dark brown, predominantly micro crystalline, tight, trace poor intercrystalline porosity, trace dead oil stain

1435 A/A poor intercrystalline and pinpoint porosity in part, fair petro odor on heating sample, dull yellow brown fluorescence, no cut

1440 A/A abundant ANHYDRITE A/A, minor DOLOMITE A/A, fair petro odor on heating sample

1445 DOLOMITE light to medium brown, micro to fine crystalline, predominantly microcrystalline, poor to fair intercrystalline porosity, minor dull yellow green dry cut, and weak white streaming cut in part, fair petro odor, ANHYDRITE A/A

1450 ANHYDRITE A/A, minor DOLOMITE predominantly tight to poor porosity

1455 A/A trace DOLOMITE A/A

1460 DOLOMITE light to dark brown, A/A, as in 1445 sample, predominantly poor intercrystalline porosity, ANHYDRITE A/A

1465 ANHYDRITE A/A, minor DOLOMITE light to medium brown, A/A, micro to cryptocrystalline, trace pinpoint porosity to tight

1470 ANHYDRITE A/A, DOLOMITE A/A, predominantly micro to cryptocrystalline, tight

1475 A/A minor ANHYDRITE A/A, DOLOMITE A/A

1477 KEG RIVER

1477 DOLOMITE light to dark brown, micro to fine crystalline, predominantly micro crystalline, friable, good intercrystalline porosity, fair vugular porosity (3-6%) DOLOMITE dark brown, cryptocrystalline, tight, red brown fluorescence, no cut

CORE DESCRIPTION

CORE #3 1478.0 - 1496.2m
(Cut 18.2m, Rec. 18.2m)

1478.0 to 1482.5m
DOLOMITE light to medium brown to grey brown, predominantly cryptocrystalline, predominantly tight, occasional patchy pinpoint porosity bands (5 centimeter thick band), moderately abundant SHALE partings (less than 0.25 centimetres thick), medium to dark grey, carbonaceous, trace spotty black bleeding oil, bleeding at SHALE partings (stylolitic surface), occasional bleeding fracture and pinpoint, occasional vug (less than 3 centimeter diameter), fair black bleeding oil, (occasional Brachiopod shaped vug), fair fracture porosity in part connecting vugular porosity, moderately abundant calcite crystals lining on vugs (occupy from 10 to 30 percent of porosity), top 0.25 meters of intreval has a wet appearance, grainstone to packstone, dull yellow green dry fluorescence and bright lime green cut

1482.5 to 1487.0m
DOLOMITE A/A, occasional fist sized vugs (predominantly 1 to 2 centimeters diameter, moderately abundant vugs with abundant lining of calcite crystals A/A (less than 10 percent porosity), minor large pinpoint vugs (less than 1 centimeter diameter), minor bleeding oil from vugs, good vugular porosity in part, grainstone, fluorescence and cut A/A, moderately abundant SHALE partings A/A and occasional well developed vug (1-2 centimeters diameter) with calcite crystal lining in intreval 1485.5 to 1486.5m, predominantly poor porosity in intreval 1486 to 1487m

1487.0 to 1491.4m
DOLOMITE A/A, occasional vugular porosity or pinpoint porosity zone, minor SHALE partings, A/A, occasional vug less than 2 centimeters diameter A/A 1487.5m, generally a lack of fracture porosity, some evidence of minor broken shell fragments where dolomitization obliterates fossil evidence, moderately abundant vugs present with calcite crystal lining A/A in intreval 1490-1490.2m, minor evidence oil staining from 1490 1492m, occasional SHALE clasts present A/A. 2 to 5 centimeter diameter 1490 to 1492m intreval, around 1491m some vugs indicate brachiopod shapes

1491.4 to 1496.2m
DOLOMITE A/A, wackstone to packstone, occasional band fair to good pinpoint porosity (1 metre and 0.5 metre thick), abundant AMPHIPORA , dolomite replacement forms abundant pinpoint and minor intercrystalline porosity in part, SHALE partings, A/A, moderately abundant, occasional ANHYDRITE filled vugs (less than 1 centimeter diameter) around 1494 amd 1496m, trace to minor poor to fair vugular and pinpoint porosity in part, occasional spotty bleeding oil in part, dull yellow dry fluorescence and bright yellow immediate cut

SAMPLE DESCRIPTIONS CONTINUED

1500 DOLOMITE light to dark brown, micro to fine crystalline, trace pinpoint and intercrystalline porosity, trace broken calcite crystal fragments, minor light oil staining, trace to minor dull yellow green fluorescence, no cut, fair petro odor on heating sample

1502.5 DOLOMITE A/A, light to medium grey and light grey brown to medium brown, occasional dark brown to black, micro to fine crystalline, predominantly very fine crystalline, poor intercrystalline porosity and trace good vugular porosity, some good dolomite crystals developed, shows, A/A, fair petro odor on heating sample

1505 DOLOMITE A/A, light to dark brown to black, minor fair pinpoint, intercrystalline and vugular porosity

1510 A/A DOLOMITE light to dark brown to white, fair petro odor on heatingsample

1515 A/A

1520 A/A

1525 A/A predominantly trace to minor pinpoint to vugular porosity, minor broken dolomite crystal fragments present

1530 A/A

1535 A/A predominantly dark brown

1540 A/A

1545 A/A trace pinpoint and vugular porosity

1545 CHINCHAGA

1550 ANHYDRITE light grey brown to brown, mottled, rounded to sub-rounded chips, tight, DOLOMITE light to dark brown, cryptocrystalline, tight, no shows, SHALE light to dark grey, dolomitic, brittle

1555 A/A ANHYDRITE and DOLOMITE A/A, cream

1560 A/A

1565 A/A

1570 A/A DOLOMITE microcrystalline in part, tight, no shows, trace SHALE light green, dolomitic, brittle, conchoidal habit

1572 GRANITE WASH

1575 QUARTZITE

1575 SANDSTONE trace, medium to very coarse grained, white to clear, round to sub-rounded to angular grains, moderately to poorly sorted, fair to poor porosity, no shows, QUARTZITE dark red brown to maroon to pink, hard, glassy, angular chips, breccia with GRANITE well weathered, pink to red orange to white, resistant to soft, feldspar and quartz grains, medium to coarse grained, reddish orange feldspar base soft clays turn drilling mud red instantly, silty in part, well fractured in part

1580 A/A SANDSTONE angular quartz grains, SILTSTONE light green, glassy, siliceous, tight, (olivine rich ?), trace to minor fractures present

1585 A/A abundant CLAY matrix, white to light grey, occasional angular or rounded quartz grains, medium to very coarse grained, slightly dolomitic in part

1590 A/A CLAY white to light pink, speckled black, breccia with QUARTZITE and SILTSTONE and feldspar and quartz and white mica fragments, A/A

1590 PreCAMBRIAN

1595 A/A QUARTZITE A/A, massive, very resistant

1600 A/A QUARTZITE dark red brown to brown, greasy to metallic appearence, trace to minor feldspar and clay, more quartz than above

1605 A/A QUARTZITE dark red brown to dark brown to black

1610 A/A

(TOTAL DEPTH : 1610m (25-02-91 @ 02:15 HRS.)

BIT RECORD

COMPANY: PARAMOUNT RESOURCES LTD.

NAME OF WELL: PARA ET AL SWEDE A-52

BIT No.	DEPTH FROM	DEPTH TO	SIZE (mm)	MAKE	TYPE	SERIAL No.	BIT METRES	BIT HOURS	JETS	T-B-G	WEIGHT (d Na)	RPM	TOTAL HOURS	REMARKS
1A	0	108	311		J2	P0441	108	10 1/2	3-12.7	8-8-0	3/6K	160	10.5	
2A	108	330	311		J2	LK205	222	10 3/4	3-14.3	8-8-	6/10k	160	21.25	
3A	330	398	311		DSJ	PA3767	68	3 1/2	3-11.9	3-1-1	10/12k	160	24.75	
1	398	1254	222		HP43A	D69723	856	55 1/2	OPEN	2-2-1	2/10k	80/120	55.5	
1RR	1254	1363	222		HP43A	D69723	109	22 1/4	3-10.3	---	10/12k	65/80	77.75	
1C	1363	1381	216		RC476	0601760	18	4 3/4	---	GOOD	4/7k	70/90	81.5	
1CRR	1381	1390.6	216		RC476	0601760	9.6	1 3/4	---	GOOD	6k	80	83.25	
2	1390.6	1478	216		HP51A	LH3020	88	28 3/4	3-8.7	---	14k	55/85	112	
3C	1478	1496	216		RC476	06017802	18	9 1/2	---	GOOD	2/7k	100	121.5	
2RR	1496	1547	216		HP51A	LH3020	51	18 1/4	3-8.7	7-7-BT	12/14k	60/65	139.75	
3RR	1547	1610	216		HP53A	TW2459	63	21 1/2	3-8.7	---	12/14k	60/65	161.25	

PARAMOUNT ET AL SWEDE A-52

DAILY SUMMARY

DATE	DEPTH	STATUS	MUD VISCOSITY	WEIGHT	PH	WL	OTHER
91-02-11	101m	DRLG	52	1100	--	--	GELCHEM
91-02-12	398m	DRLG	65	1200	9.5	--	GELCHEM
91-02-13	398m	NIPPLE UP BOP	45	1160	10	--	GELCHEM
91-02-14	497m	DRLG	45	1100	10	9.0	GELCHEM
91-02-15	846m	DRLG	45	1010	11	--	GELCHEM
91-02-16	1108m	DRLG	45	1100	11	8.5	GELCHEM
91-02-17	1283m	DRLG	46	1030	10	8.0	GELCHEM
91-02-18	1363m	POHtoCORE	52	1100	10.5	7.0	GELCHEM
91-02-19	1390m	DST#1	52	1120	11	8.0	GELCHEM
91-02-20	1390m	RUN IN	52	1120	11	8.0	GELCHEM
91-02-21	1452m	DRLG	57	1125	11	8.0	GELCHEM
91-02-22	1488m	CORE#3	44	1140	11.5	7.5	GELCHEM
91-02-23	1496m	DST#2	49	1140	10	8.5	GELCHEM
91-02-24	1508m	DRLG	52	1135	10	8.4	GELCHEM
91-02-25	1556m	DRLG	50	1125	10.5	8.0	GELCHEM
91-02-26	1610m	TRIP TO LOG	53	1145	10.5	7.5	GELCHEM
91-02-27	1610m	RUN PLUGS	--	--	--	--	GELCHEM
91-02-28	1610m	RELEASE RIG					

CANADA OIL AND GAS LANDS
ADMINISTRATION
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GAZ DES TERRES DU CANADA

MAR 18 1991

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