

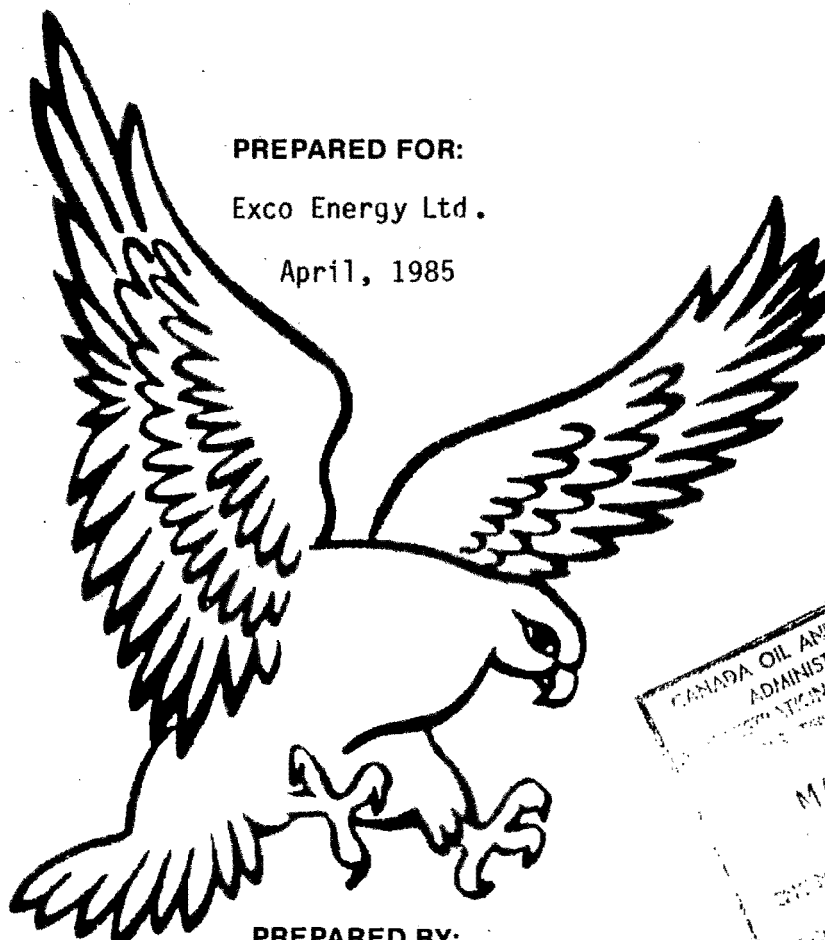
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EXCO ET AL WEST PARKIN Y.T.
D-54
66°13' 09.73"N 137°26' 10.40"W
FINAL DRILLING SUMMARY

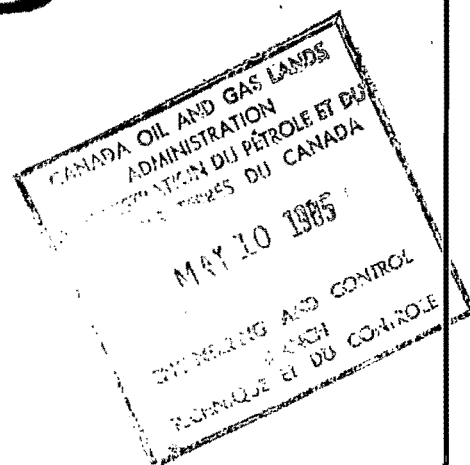
PREPARED FOR:

Exco Energy Ltd.

April, 1985



PREPARED BY:



EXCO ET AL WEST PARKIN Y.T.
D-54
66°13' 09.73"N 137°26' 10.40"W
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April, 1985

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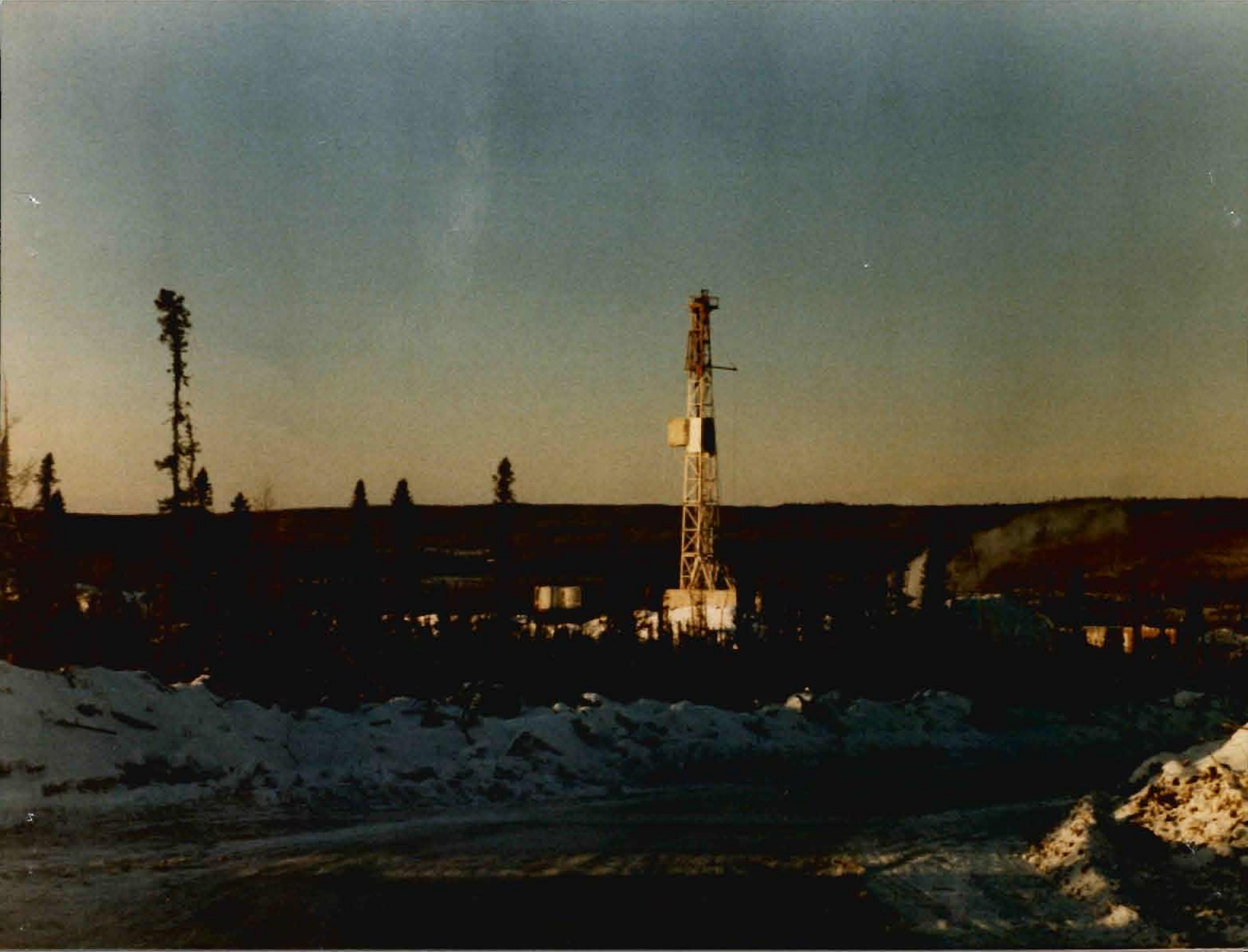
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SECTION I

SUMMARY - GENERAL DATA

EXCO ET AL WEST PARKIN Y.T. D-54

INTRODUCTION

In May of 1984 Exco Energy Ltd. concluded an Exploration Agreement with Westmin Resources Limited. Pursuant to the terms of the agreement, Exco was committed to conduct seismic activity and to drill two (2) wells within a specified grid area prior to April 30, 1985. By drilling these wells in furtherance of the agreement, Exco would earn a share of Westmin's interest in the lands; and, in so doing, would be entitled to earn additional acreage if they chose to exercise their option.

The first of the two wells to be drilled was Exco et al West Parkin Y.T. D-54. Both wells were to be drilled to a maximum depth of 1825 metres, measured distance, and to require approximately forty (40) days to complete.

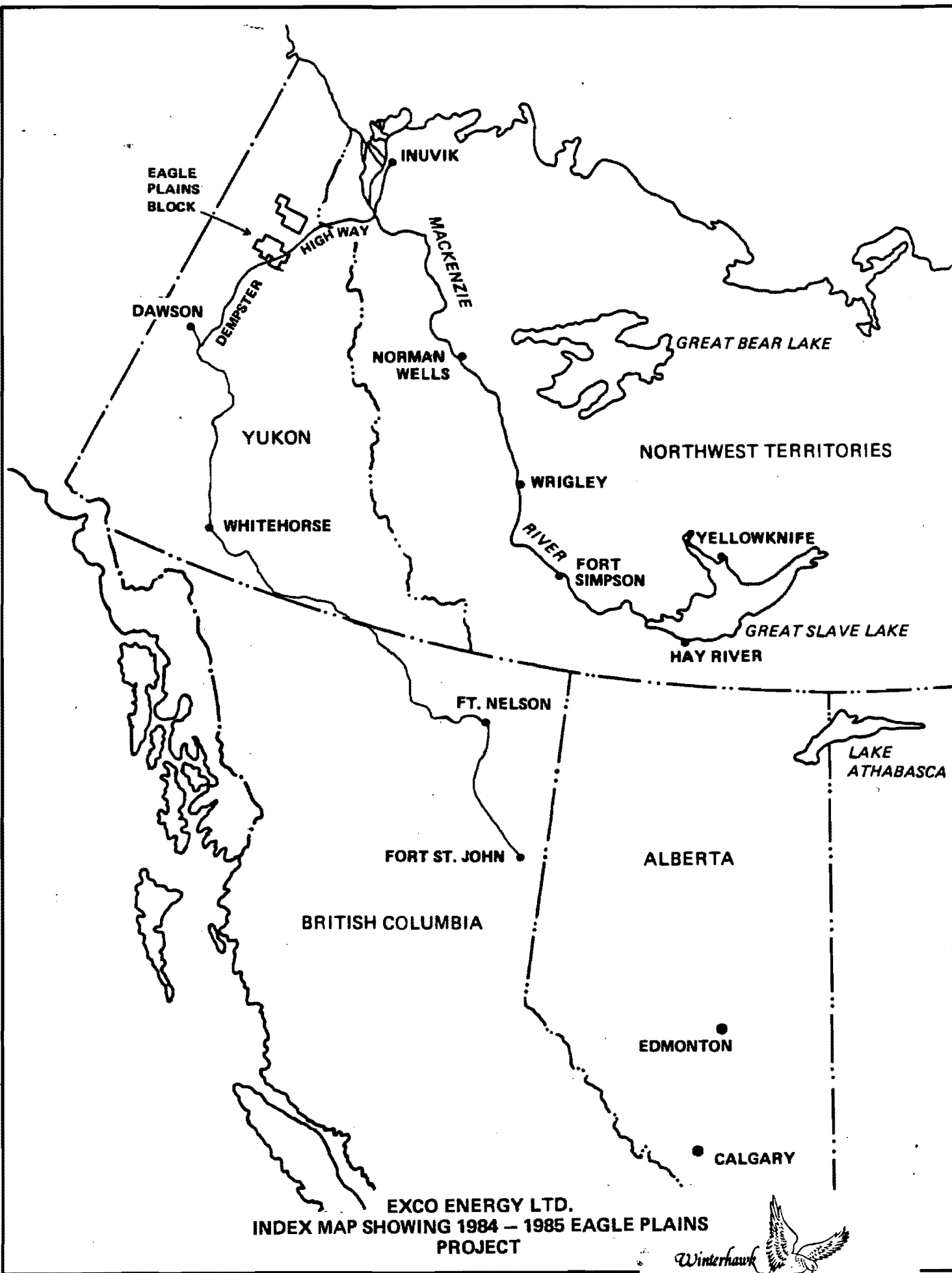
Construction of the access route began in late November, 1984 after approval had been granted from Land Use. By December 10, 1984 the heavy equipment was on location and in the process of preparing the sump.

The rig, together with supplies and support services for the project were transported north in early December. With reference to the enclosed area maps, all equipment gained access to the location by travelling the Dempster Highway, which runs north from Dawson City, Yukon. As required, additional supplies were flown into the site airstrip (Parkins Airstrip), via DC-3's.

Although minor delays were experienced in rigging up, the well was spudded only a few days behind schedule, namely, on December 20, 1984. Total depth was reached February 9, 1985 and, following evaluation procedures, the well was cased and suspended, with the rig being released February 19, 1985.

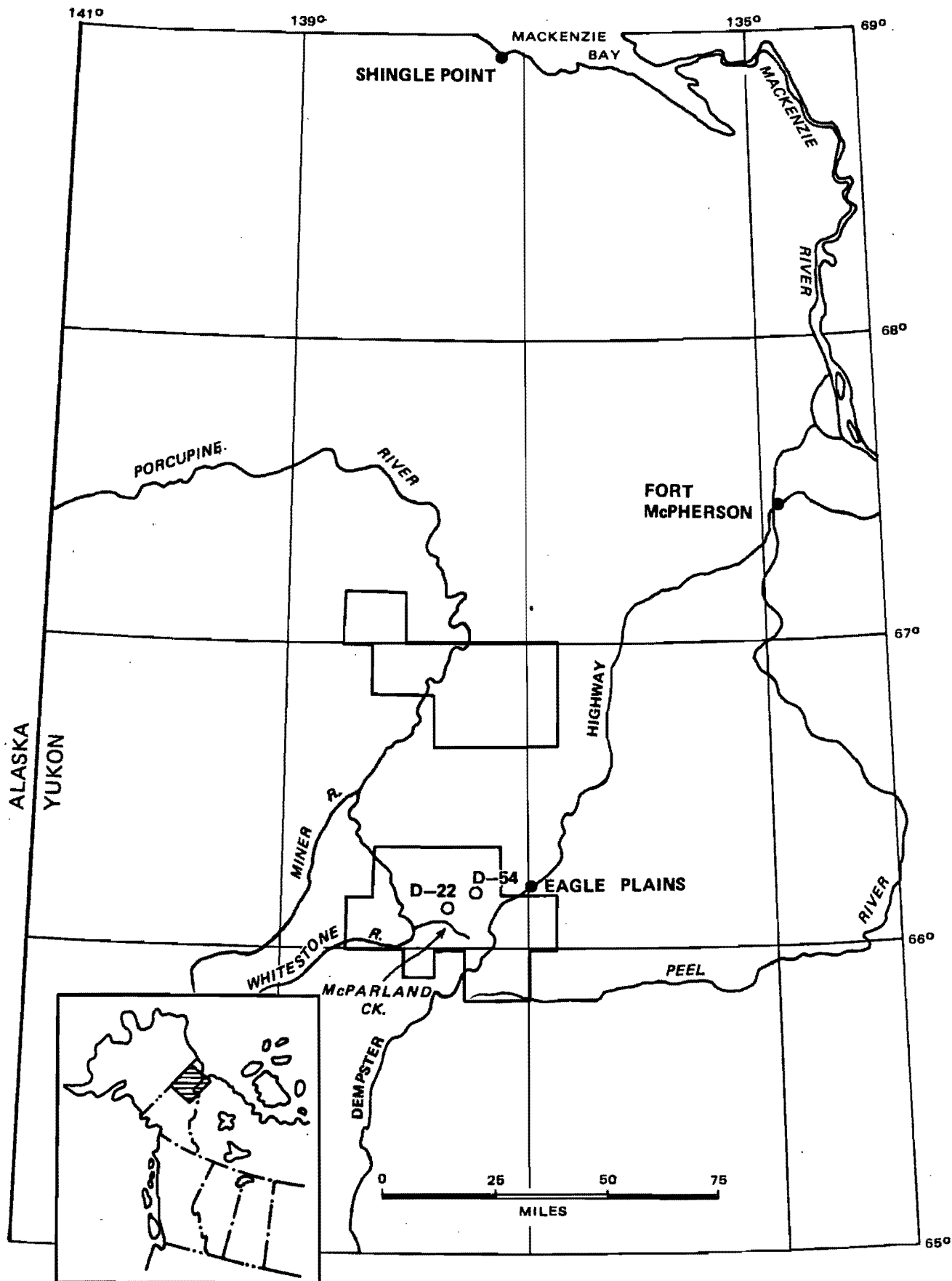
At that time the rig, auxillary equipment and supplies were transported to the second commitment well, Exco et al N. Chance Y.T. D-22.

Exco hereby gives notice that the enclosed report is to be considered the final drilling summary for Exco et al West Parkin Y.T. D-54.



EXCO ENERGY LTD.
INDEX MAP SHOWING 1984 - 1985 EAGLE PLAINS
PROJECT





EXCO ENERGY LTD.
1984 - 1985 EAGLE PLAINS PROJECT



GENERAL WELL INFORMATION

WELL NAME: Exco et al West Parkin Y.T. D-54

LESSOR: Westmin Resources Limited
farm out to Exco Energy Ltd.

OPERATOR: Exco Energy Ltd.
6th Floor, 700 - 4th Avenue S.W.
Calgary, Alberta
T2P 3J4

GRID AREA: 66-20-137-15; Unit D; Section 54

CO-ORDINATES: 66° 13' 09.73"N
137° 26' 10.40"W

UNIQUE WELL IDENTIFIER: 300 D54 6620 137 150

EXPLORATION AGREEMENT: No. 231

DRILLING AUTHORITY: No. 1208 issued 84-12-14

DRILLING CONTRACTOR: Gray Mountain Drilling Ltd.
P.O. Box 4998
Whitehorse, Yukon
Y1A 4S2

2000 - 425 - 1st Street S.W.
Calgary, Alberta
T2P 3L8

DRILLING RIG: Custom Drilling Rig #94

CLASSIFICATION: New Field Exploratory (Northern)

ELEVATIONS: G.L. 502.50m
K.B. 506.85m

SPUD DATE: 1984-12-20 @ 1200 hrs.

COMPLETED DRILLING DATE: 1985-02-09 @ 0730 hrs.

RIG RELEASE: 1985-03-01 @ 2000 hrs.

WELL STATUS: Cased & Suspended



WELL SUMMARY

DATE 1985-02-19

Well Exco et al West Parkin Y.T. D-54 Location

Elevations: KB 506.85 m GL 502.50 m CF 502.92 m

History: Spud Date 84-12-20 R.R. Date 85-02-19 TD 1811 m

Status Suspended Gas Well Producing Zone(s) Mississippian (Hart River)

A. DRILLING DETAILS

Hole Size 444.5mm Depth 53 m Logs Nil

Hole Size 311.2mm Depth 460 m Logs Nil

Hole Size 215.9mm Depth 1811 m Logs DIL/GR, CDL/CNS/GR, BHS/GR/CAL, MEL/GR

Hole Size Depth Logs

Casing Size 339.7mm Grade K-55 Depth 53 m Cement Vol. 7 m³Casing Size 244.5mm Grade N-80 Depth 460 m Cement Vol. 17.31 m³Casing Size 139.7mm Grade K-55 Depth 1097 m Cement Vol. 31.40 m³

Casing Size Grade Depth Cement Vol.

DST No. 1 Int 1060 m - 1065 m Zone Mississippian (Hart River)

DST No. 2 Int 700 m - 750 m Zone Misrun - Orange Marker

DST No. 3 Int 742 m - 747 m Zone Orange Marker

DST No. 4 Int 1042 m - 1047 m Zone Mississippian (Hart River) Misrun

DST No. 5 Int 1038 m - 1048 m Zone Mississippian (Hart River) Misrun

Core No. Int Zone Rec.

Core No. Int Zone Rec.

Core No. Int Zone Rec.

Plug No. 1 Int 1811 m - 1711 m Cement Vol. 4.3 m³ Felt NoPlug No. 2 Int 1150 m - 1090 m Cement Vol. 3.1 m³ Felt Yes

Plug No. Int Cement Vol. Felt

Plug No. Int Cement Vol. Felt

B. COMPLETION DETAILS

COMPLETION DATE:

Perforations: Int N/A Zone Type

Int N/A Zone Type

Int N/A Zone Type

Stimulations: Formation N/A

N/A

Tubing Details: N/A

Anchor/Packer Details: N/A

Pumping Equipment:

Remarks:

See specific forms for more detail.

ENGINEER J. Reilly

DOWNHOLE PROBLEMS ENCOUNTERED

SUMMARY

For the most part the Exco et al West Parkin Y.T. D-54 well was drilled to total depth without encountering any major downhole problems. However, there were several mechanical, or rig related problems, which seriously delayed operations.

From spud to rig release, the rig was plagued with minor equipment failures including repairs to the clutches, air lines, mud pumps and the mixing pump. These repairs were numerous in number and contributed to a general slowdown in activity. In total, there were 87.75 hours lost due to repairs.

Aside from mechanical problems, lost circulation was noted at the 12 metre, 36 metre and 69 metre depth while drilling both conductor and surface hole. For the most part, these thief zones presented little difficulty. Standard additions of lost circulation material were used to plug the potentially troublesome zones. Although six (6) days were required to treat this problem, in fairness, the majority of the time was lost waiting on a circulating pump. The remainder of the down time can be attributed to waiting on lost circulation material. In review, the urgently required circulating pump and lost circulation materials should have been expedited to the rig location in short order, regardless of the cost.

At the 742 metre depth, while pulling out of the hole, the well was swabbed in. The time involved from when the well first began to flow, to the point at which drilling activity continued again, was nearly 24 hours. If proper tripping practices had been followed (including flow checks) this unfortunate situation would have been avoided.

From this point on no other downhole problems were noted. The hole was drilled to total depth and then production casing was run to the 1078 metre depth. With the exception of some difficulty experienced in obtaining packer seats on drill stem tests, the hole was trouble free.

Outlined on the following page is a synopsis of the delays and resultant lost time on the West Parkin well.

SYNOPSIS

<u>DRILLING DAY</u>	<u>PARTICULARS</u>	<u>LOST TIME</u>
1	Lost circulation at 12 ^m , 36 ^m Rig repairs	4 hours - mix and condition mud 2.5 hours - shock hose
4	Rig repair Lost circulation at 69 ^m	12 hours - thaw out rig, repair mixing pump, flow line, clutch pads 2 hours - mix and condition mud
5	Mix and Condition Mud Rig Repair	16.75 hours - build volume, wait on circulating pump 3 hours - thaw rig
6	Mix and Condition Mud Rig Repair	13.75 hours - lost circulation at 80 ^m , build volume, wait on circulating pump 3.5 hours - thaw out rig
7	Mix and Condition Mud Rig Repair	19.25 hours - mix mud and wait on circulating pump 4 hours - change out mixing pump and motor
8	Mix and Condition Mud Waiting	10 hours - build volume 14 hours - on sawdust - install mud agitators
9	Waiting	13.50 hours - on lost circulation material
10	Rig Repair	2 hours - thaw out rig
12	Rig Repair	8.75 hours - repair clutch and rod packing
17	Rig Repair	11.75 hours - repairs to rig in compliance with COGLA
18	Rig Repair	4 hours - repair steam leaks to mud tanks

SYNOPSIS

<u>DRILLING DAY</u>	<u>PARTICULARS</u>	<u>LOST TIME</u>
24	Circulate Kick	24 hours - strip in hole, mix barite, circulate
27	Rig Repair	2.25 hours - repair air line
28	Rig Repair	5.5 hours - repair pumps, change clutches
29	Rig Repair	4.75 hours - place liner gasket in pump, repair trip tank pump, replace clutch on floor motor
30	Rig Repair	4.75 hours - work on mud pump, work on motor clutches, repair rubber on suction valve
32	Rig Repair	1.25 hours - work on pumps - discharge frozen
33	Rig Shutdown	20.25 hours - failure to comply with COGLA regulations re safety
39	Rig Repair	5 hours - clutch slipping - change clutch, thaw out Kelly
49	Rig Repair	5.5 hours - repair tongs, repair clutch
52	Rig Repair	2 hours - repair clutch
58	Rig Repair	1.25 hour - replace break out line

SECTION II
GEOLOGICAL SUMMARY

Geological Wellsite Report

FORWARD ET AL WEST PARKIN YT D 54
Unit D, Section 54, Grid 66 20 137 15

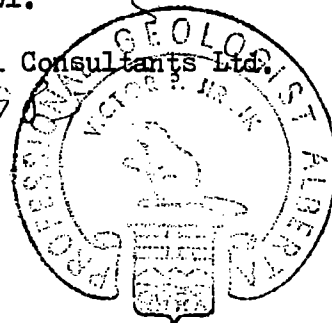
Lat. $66^{\circ} 13' 9.73''$ N
Long. $137^{\circ} 26' 10.4''$ W

Report prepared and submitted by:

Victor P. Jircik
Victor P. Jircik, P. Geol.

International Geological Consultants Ltd.

april 3 1981



- 1165 Limestone as above ; 50% Marl as above
- 1170 Marl, brown, calcareous, siliceous ; 30% Limestone, brown, cryptocrystalline, very argillaceous, siliceous
- 1175 Limestone, buff, cryptocrystalline, very siliceous grading to chert, very argillaceous grading to marl ; 40% Marl as above ; 20% Chert, light brown calcareous
- 1180 Limestone as above, part brown ; 30% Shale, dark brown, very calcareous ; 20% Marl as above ; 10% Chert as above
- 1185 Shale, dark gray-brown, black, slightly bituminous, very calcareous, part siliceous, trace pyrite ; 30% Marl, buff-brown, calcareous, siliceous ; 20% Chert, gray-brown, argillaceous, calcareous ; 20% Limestone, buff, brown, cryptocrystalline, very argillaceous grading to marl, siliceous
- 1190 Shale as above ; 30% Chert as above ; 30% Limestone, buff, cryptocrystalline, very siliceous, argillaceous, silty
- 1195 Shale, dark gray-brown, black, slightly bituminous streaks, slightly siliceous, very calcareous, trace slickensides ; 30% Marl, buff-brown, calcareous, slightly siliceous ; 20% Limestone, buff, as above ; 10% Chert, light brown-gray, calcareous, argillaceous
- 1195-1200 Shale as above, slightly fissile, no slickensides ; 40% Marl, brown, calcareous ; 30% Limestone, light brown, very argillaceous grading to marl, trace fractures with calcite crystals and pyrobitumen
- 1205 Limestone, buff, cryptocrystalline, siliceous, very argillaceous grading to marl, very fine sandy, silty streaks ; 30% Marl, brown, calcareous, grading to shale ; 20% Chert, brown, argillaceous, calcareous ; 20% Sandstone, light brown, fine to medium grained, salt and pepper, calcareous, clean, subround, poorly sorted
- 1210 Limestone, brown, cryptocrystalline, very siliceous, very sandy grading to sandstone, very argillaceous grading to marl ; 30% Shale, dark gray-brown, very calcareous, siliceous ; 20% Chert, brown-gray, argillaceous, calcareous
- 1215 Chert, light brown-gray, calcareous ; 20% Marl, brown, calcareous, grading to shale ; 20% Limestone, buff, cryptocrystalline, very sandy, argillaceous siliceous ; 20% Sandstone, light gray, dark gray, fine to medium grained, salt and pepper, very argillaceous streaks, calcareous, subangular, poorly sorted, part with light oil stain
- 1220 Chert, light brown-gray, calcareous, few fractures and calcite veining ; 30% Limestone, buff, cryptocrystalline, very argillaceous and siliceous streaks, sandy ; 20% Marl, gray-brown, calcareous
- 1225 Limestone, buff, cryptocrystalline, very siliceous grading to chert, sandy, argillaceous ; 30% Chert, light brown-gray, buff, calcareous ; 20% Shale, brown, very siliceous grading to chert, sandy
- 1230 Chert, light brown-gray, calcareous, trace pyrite, trace fracture with light oil stain ; 20% Limestone as above ; 20% Shale as above
- 1235 Chert as above, trace pyrobitumen ; 20% Shale, brown, very siliceous, calcareous
- 1240 Chert light brown-gray, calcareous, trace pyrite, trace fracture with light oil stain ; 30% Chert conglomerate, varicolored chert, dark gray, very argillaceous, siliceous, trace pyrite, subround, light oil stain
- 1245 Chert, light gray-buff, dark gray-brown, calcareous, trace pyrite ; 30% Chert conglomerate, dark gray, varicolored chert and clear quartz grains, subround, very argillaceous, siliceous, pyritic

- 1090 Limestone, buff, brown, cryptocrystalline, argillaceous streaks, part very siliceous grading to chert ; 30% Shale, dark gray-brown, calcareous ; 30% Chert, light gray-brown, trace fracture porosity with oil stain
- 1095 Chert, light brown, dark gray-brown, argillaceous streaks ; 30% Marl, dark gray-brown, calcareous ; 30% Limestone, buff, gray-brown, cryptocrystalline, few medium pellet shadows, part very siliceous, very argillaceous streaks grading to marl
- 1095-1100 Limestone, dark gray-brown, buff, part very siliceous, part very argillaceous grading to marl ; 30% Marl as above ; 30% Chert as above
- 1105 Limestone, light and dark brown, cryptocrystalline, very argillaceous streaks ; 30% Marl, gray-brown, calcareous ; 20% Chert, gray-brown, trace fractures with pyrobitumen
- 1110 Limestone, buff, gray-brown, cpyptocrystalline, very argillaceous streaks part siliceous ; 30% Chert, light gray-brown, gray-brown ; 30% Marl dark gray-brown, calcareous
- 1115 Limestone, buff, brown, cryptocrystalline, few very argillaceous streaks grading to marl, trace fracture porosity with oil stain ; 30% Chert, gray-brown ; 20% Marl, dark gray-brown, calcareous
- 1120 Limestone, buff, cryptocrystalline, very argillaceous streaks grading to marl ; 30% Marl, buff, gray-brown, calcareous ; 20% Chert, light brown, gray-brown, few fractures with calcite crystals, light oil stain and cut
- 1125 Limestone, very fine sandy and silty streaks ; 30% Chert as above, trace fractures and pyrite ; 30% Marl as above
- 1130 Chert, buff, trace pyrite, few fractures with calcite veining and pyrobitumen ; 20% Limestone, buff, cryptocrystalline, very argillaceous streaks slightly silty ; 20% Marl, gray-brown, calcareous ; trace chert pebble conglomerate, very argillaceous, trace pyrite
- 1135 Chert, buff, dark gray-brown, very argillaceous streaks, trace pyrite, trace fractures with heavy oil stain, pyrobitumen and slight cut ; 20% Marl, dark brown, calcareous, very siliceous ; trace varicolored chert pebble conglomerate, very argillaceous, siliceous, calcareous, heavy oil stain
- 1140 Chert, buff, light gray, argillaceous streaks, trace pyrite, few streaks earthy porosity with heavy oil stain, trace fracture porosity with oil stain ; 30% Limestone, buff, cryptocrystalline, part sandy with very fine quartz sand, very argillaceous streaks grading to marl ; 20% Sandstone, dark gray-brown, fine to coarse grained, salt and pepper, very argillaceous silty, angular, poorly sorted, trace pyrite, slightly calcareous, streaks 5% intergranular porosity, abundant pyrobitumen, heavy oil stain, fair cut
- 1145 Limestone as above, part siliceous ; 30% Chert, buff, gray-brown, few fractures with oil stain ; 20% Marl, gray-brown, calcareous ; 10% Sandstone as above
- 1150 Marl, buff, very siliceous, sandy, silty, very calcareous grading to limestone ; 30% Limestone, buff, cryptocrystalline, very argillaceous and siliceous, silty, sandy ; 30% Chert, light brown-gray, trace fractures with pyrobitumen ; 10% Shale, dark brown, very siliceous, calcareous
- 1155 Marl, dark brown, calcareous, trace pyrite and white calcite veining ; 30% Limestone, dark brown, cryptocrystalline, very argillaceous grading to marl ; 10% Chert, light brown-gray
- 1160 Limestone, dark brown, cryptocrystalline, slightly siliceous, sandy and silty, trace white calcite veining, very argillaceous grading to marl ; 40% Marl, dark brown, slightly sandy and silty

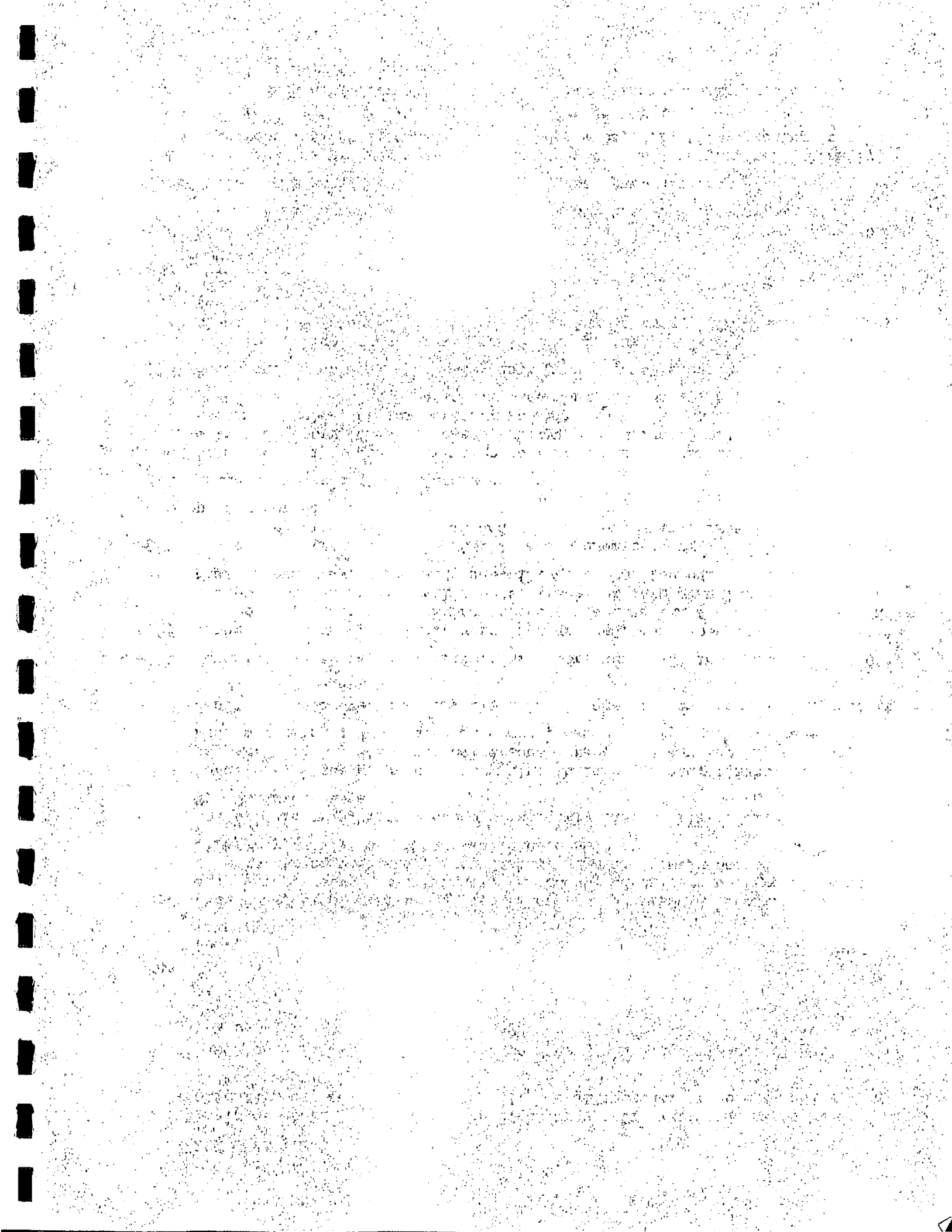
- 1030 Chert, light gray-brown, trace fractures with slight oil stain, fluorescence and cut ; 30% Limestone, buff, cryptocrystalline, very sandy ; 20% Marl, light brown-gray, calcareous
- 1035 Sandstone, light gray, fine to coarse grained, varicolored chert and clear quartz grains, clean, very calcareous, trace slight oil stain, subround, poorly sorted ; 30% Chert, gray, light gray, trace pyrite ; 20% Sandstone, light gray, very fine to fine grained, salt and pepper, clean, very calcareous grading to sandy limestone, angular, poorly sorted ; 20% Limestone, buff, cryptocrystalline, clean, very sandy
- 1040 Limestone, buff, cryptocrystalline, clean, slightly dolomitic, very sandy with very varicolored chert grains grading to sandstone ; 30% Sandstone, buff, fine to coarse grained, salt and pepper, clear quartz and varicolored chert grains, clean, very calcareous, angular, poorly sorted ; 20% Chert, light brown-gray
- 1045 Sandstone as above ; 30% Limestone, buff, light brown, cryptocrystalline, part slightly argillaceous ; 20% Sandstone, gray, very fine to medium grained, salt and pepper, clear quartz and varicolored chert grains, clean, slightly siliceous, angular, poorly sorted, abundant pyrobitumen, 8% intergranular porosity, slight oil stain, fluorescence and cut ; 20% Chert, light gray
- 1050 Chert, light brown-gray, part spicular, trace mottled oil stain ; 40% Limestone, buff, cryptocrystalline and brown, very fine crystalline, very silty and very fine sandy streaks, trace crinoid (?), clean, trace mottled oil stain
- 1055 Chert, light gray, trace pyrite and mottled oil stain ; 30% Sandstone, light brown-gray, fine to medium grained, salt and pepper, very calcareous, clean, angular, poorly sorted ; 30% Limestone, buff, brown, cryptocrystalline, very sandy streaks, trace mottled oil stain
- 1060 Chert as above ; 30% Limestone, brown, cryptocrystalline, slightly argillaceous and silty, trace pinpoint porosity, oil stained with slight fluorescence and cut, part light gray, cryptocrystalline, clean, very sandy grading to sandstone ; 20% Sandstone, light gray, very fine to fine grained salt and pepper, very calcareous, clean, angular, poorly sorted
- 1065 Limestone, brown, cryptocrystalline, very argillaceous streaks grading to marl, oil stained with slight cut ; 30% Sandstone, light gray, fine to medium grained, salt and pepper, clean, calcareous, trace pyrite, streaks of 20% porosity part with pyrobitumen, subangular, poorly sorted ; 20% Chert light gray, few fractures with oil stain
- 1070 Chert, light brown-gray, trace pyrite and mottled oil strain ; 30% Sandstone, light gray-buff, medium to coarse grained, salt and pepper, clean, calcareous, trace pyrobitumen and pyrite, subangular, poorly sorted ; 30% Limestone, brown and buff, cryptocrystalline, sandy, very argillaceous streaks
- 1075 Chert, brown, brown-gray, argillaceous, calcareous ; 40% Limestone, buff, brown, cryptocrystalline, very argillaceous streaks ; 20% Marl, brown, calcareous, very siliceous
- 1080 Chert, brown, gray-brown, argillaceous, calcareous streaks, trace fracture porosity with pyrobitumen ; 40% Limestone, buff, dark gray-brown, cryptocrystalline, siliceous, very argillaceous streaks grading to marl ; 20% Marl as above
- 1085 Chert, brown, gray-brown, slightly calcareous streaks, trace fracture porosity with pyrobitumen ; 30% Limestone as above ; 30% Marl as above

- flakes, pyrite and ironstone ; 20% Sandstone as above
- 925 Shale as above ; 30% Siltstone, dark gray, very argillaceous grading to shale, slightly calcareous, very sandy, slightly micaceous
 - 930 Shale, dark gray, slightly calcareous, micaceous, very sandy and silty streaks, very glauconitic, trace pyrite and carbon flakes ; 40% Siltstone, dark gray, very argillaceous, sandy, slightly calcareous, trace pyrite, glauconitic, slightly micaceous
 - 935 Shale as above, few brown, very calcareous streaks grading to marl
 - 940 Shale, dark gray, slightly micaceous and calcareous, glauconitic, very silty grading to siltstone, trace pyrite ; 30% Siltstone, dark gray-brown, very argillaceous grading to shale, very sandy, slightly calcareous, trace mica and glauconite
 - 945 Shale as above ; 20% Siltstone as above
 - 950 Shale as above ; 40% Siltstone as above
 - 955 Shale as above ; 40% Siltstone as above
 - 960 Shale as above ; 50% Siltstone as above
 - 965 Shale, dark gray, slightly micaceous and calcareous, glauconitic, trace pyrite, very silty streaks ; 30% Siltstone as above
 - 970 Shale as above ; 30% Siltstone as above
 - 975 Shale as above ; 30% Siltstone as above
 - 980 Shale as above ; 20% Siltstone as above
 - 985 Shale, dark gray, slightly micaceous, very sandy and silty streaks, few floating medium quartz sand grains, slightly calcareous, glauconitic, trace Inoceramus fragments
 - 990 Shale, dark gray, very pyritic streaks, part very calcareous, part very sandy and silty, glauconitic
 - * ** Hart River 993 (-486) **
 - 995 Limestone, buff cryptocrystalline, very argillaceous and silty, trace pyrite and stylolites ; 40% Shale as above ; 20% Chert, light gray-brown, calcareous streaks, trace pyrite, trace fractures with very light oil stain and light fluorescence and cut
 - 995-1000 Limestone, light gray, cryptocrystalline, very sandy with very fine quartz sand grading to sandstone, slightly argillaceous to very argillaceous grading to marl ; 20% Marl, tan, calcareous, very sandy ; 10% Chert, light gray-brown, sandy
 - 1005 Limestone, light gray-buff, cryptocrystalline, very sandy grading to sandstone, clean ; 10% Chert, light gray, sandy
 - 1010 Sandstone, light gray-buff, light brown-buff, very fine grained, quartzose, very argillaceous and very silty streaks, very calcareous grading to sandy limestone ; 30% Limestone as above ; 20% Marl light brown, calcareous, very sandy, traces pinpoint porosity with light oil stain, slight fluorescence and cut ; 10% Chert light gray
 - 1015 Sandstone as above ; 20% Limestone as above ; 20% Marl, brown, calcareous ; 10% Chert, light gray, trace fracture porosity with light oil stain, good fluorescence and cut
 - 1020 Marl, brown, buff, calcareous, sandy ; 20% Chert, oil stained as above
 - 1025 Chert, light gray, light gray-brown, traces fracture porosity with heavy oil stain, good fluorescence ; 30% Marl, gray-brown, very siliceous, sandy calcareous

- 765 Shale as above, trace ironstone
- 770 Shale as above, part slightly calcareous
- 775 Shale, dark gray, slightly fissile, calcareous and micaceous, very silty streaks, trace carbon flakes and slickensides
- 780 Shale as above, trace pyrite
- 785 Shale as above, trace ironstone
- 790 Shale, dark gray, slightly fissile, calcareous and micaceous, few very silty streaks, trace carbon flakes, ironstone, pyrite and slickensides
- 795 Shale as above
- 795-800 Shale, dark gray, slightly fissile, calcareous and micaceous, trace pyrite and ironstone, few silty streaks
- 805 Shale as above
- 810 No sample
- 815 Shale, dark gray, slightly fissile, calcareous and micaceous, trace pyrite and ironstone, silty streaks
- 820 Shale as above
- 825 Shale, dark gray, slightly fissile, calcareous and micaceous, trace pyrite and ironstone, few silty streaks
- 830 Shale as above
- 835 Shale as above
- 840 Shale as above
- 845 Shale as above
- 850 Shale as above
- 855 Shale as above
- 860 Shale as above
- 865 Shale, dark gray, slightly fissile, calcareous and micaceous, trace pyrite few silty streaks
- 870 Shale as above
- 875 Shale as above
- 880 Shale as above ; 10% Siltstone dark gray, very argillaceous, slightly calcareous, sandy, trace pyrite
- 885 Shale as above ; 10% Siltstone as above
- 890 Shale as above
- 895 Shale as above
- 895-900 Shale as above
- 905 Shale as above
- * ** Basal Silt 910 (-403) **
- 910 Shale, dark gray, slightly micaceous and calcareous, very fine sandy and silty streaks, trace glauconite, pyrite and ironstone
- 915 Shale as above ; 20% Sandstone, dark gray, very fine grained, quartzose, slightly calcareous, very argillaceous grading to shale, very silty grading to siltstone, glauconitic, angular, poorly sorted
- 920 Shale, dark gray, slightly micaceous and calcareous, very sandy streaks with very fine to fine sand, very silty streaks, very glauconitic trace carbon

* ** Lower Shale Member 630 (-123) **

- 630 Shale, dark gray, fissile, slightly micaceous ; 40% Sandstone as above
- 635 Shale as above, few silty streaks ; 20% Sandstone, light gray, very fine grained, salt and pepper, very silty grading to siltstone ; 10% Siltstone light gray-brown, argillaceous, sandy
- 640 Shale, very dark gray, fissile, slightly micromicaceous, very slightly calcareous, trace slickensides
- 645 Shale as above ; 20% Siltstone, dark gray-brown, very argillaceous, very slightly calcareous
- 650 Shale, very dark gray, fissile, slightly micromicaceous, part very slightly calcareous, few silty streaks, trace slickensides ; 10% Siltstone as above
- 655 Shale as above ; 10% Siltstone as above
- 660 Shale as above, trace ironstone ; 20% Siltstone as above
- 665 Shale, very dark gray, fissile, part micromicaceous to micaceous, few silty streaks, trace carbon flakes and slickensides ; 10% Siltstone as above
- 670 Shale as above, trace ironstone ; 20% Siltstone as above
- 675 Shale, very dark gray, fissile and blocky, micromicaceous to micaceous, part very slightly calcareous, few silty streaks, trace slickensides ; 10% Siltstone as above
- 680 Shale as above ; 10% Siltstone as above
- 685 Shale as above ; 10% Siltstone as above
- 690 Shale, very dark gray, fissile, slightly micromicaceous, slightly calcareous, trace silty streaks
- 695 Shale as above
- 695-700 Shale, very dark gray, fissile, trace silty streaks and ironstone, part slightly micromicaceous
- 705 Shale as above
- 710 Shale as above
- 715 Shale as above
- 720 Shale, very dark gray, part slightly fissile, part blocky, trace ironstone, slickensides and pyrite, slightly micromicaceous
- 725 Shale as above
- 730 Shale, very dark gray, part fissile, few silty streaks, part slightly calcareous, part slightly micromicaceous
- 735 Shale, very dark gray, fissile, part very slightly calcareous, part slightly micromicaceous
- 740.5 Shale, very dark gray, blocky few fine sandy streaks
- * ** Orange Marker 742.25 (-235.25)
- 742 Chert pebble conglomerate, varicolored, buff, ironstone cement, argillite, light and dark gray chert pebbles, subround, slightly argillaceous, 12% intergranular porosity, light oil stain, good fluorescence and cut
- 745 Shale, very dark gray, blocky slightly micromicaceous, fine sandy and silty streaks, trace pyrite
- 750 Shale, very dark gray, fissile, slightly micaceous, silty, very fine sandy streaks, trace pyrite and ironstone
- 755 Shale as above, no slickensides
- 760 Shale, very dark gray, slightly micaceous and fissile, very silty streaks trace pyrite



- 420 Shale, dark gray, fissile, few sandy streaks, slightly micaceous
- 425 Shale as above ; 30% Sandstone, light gray, very fine grained, salt and pepper, very argillaceous and silty, angular, poorly sorted
- 430 Shale as above, trace ironstone
- 435 Sandstone, light gray, slightly salt and pepper, very silty grading to siltstone, argillaceous, angular, poorly sorted ; 30% Shale, dark gray, few silty streaks, slightly micaceous
- 440 Shale, dark gray, few silty streaks, slightly micaceous ; 30% Sandstone as above
- 445 Shale, dark gray, very fine sandy and silty streaks, slightly micaceous 20% Sandstone, light gray, very fine to fine grained, salt and pepper, very silty, part calcareous and argillaceous, angular, poorly sorted
- 450 Shale as above, trace ironstone ; 20% Sandstone as above
- 455 Shale, dark gray, silty and very fine sandy streaks, slightly micaceous, trace ironstone ; 20% Sandstone, light gray, very fine grained, argillaceous, trace mica, part slightly calcareous, very silty grading to siltstone
- 460 Shale as above ; 20% Sandstone as above
- 465 Shale, dark gray, few very fine sandy and silty streaks, slightly micaceous trace carbon flakes ; 30% Sandstone, gray-brown, very fine to fine grained, salt and pepper, very silty and argillaceous, siliceous, angular, poorly sorted
- 470 Shale, dark gray, slightly fissile and micaceous, few silty streaks, trace carbon flakes and slickensides
- 475 Shale as above
- 480 Shale as above, trace coal
- 485 Shale, dark gray, few silty streaks, slightly micaceous, calcareous and fissile, trace slickensides
- 490 Shale, dark gray, few silty streaks, slightly micaceous and calcareous ; 40% Sandstone, light gray, very fine to fine grained, quartzose and slightly salt and pepper, very silty, calcareous, angular, poorly sorted
- 495 Shale, dark gray, part micromicaceous, part slightly calcareous, trace slickensides
- 495-500 Shale as above, slightly fissile, few silty streaks, trace carbon flakes
- 505 Shale, dark gray, few silty streaks, slightly fissile and micaceous, trace slickensides ; 20% Siltstone, light gray, quartzose, slightly calcareous
- 510 Shale, dark gray, silty, poor sample
- 515 Shale, dark gray, few silty streaks, fissile, part slightly calcareous, trace mica ; 20% Sandstone, light gray, very fine grained, quartzose and slightly salt and pepper, clean, slightly calcareous, very silty grading to siltstone, angular, poorly sorted
- 520 Shale as above ; 20% Sandstone as above
- 525 Shale, dark gray, very fine sandy and silty streaks, very micaceous streaks slightly calcareous, part fissile ; 20% Sandstone, light gray-brown, very fine to fine grained, slightly salt and pepper, very silty, slightly argillaceous, siliceous and calcareous, trace mica, angular, poorly sorted ; 20% Siltstone, light gray, sandy, siliceous, argillaceous
- 530 Shale, dark gray, fissile, few carbon flakes, part slightly calcareous ;

20% Coal ; 20% Sandstone as above

- 535 Shale as above ; 30% Sandstone, light gray-buff, very fine grained, quartzose, slightly salt and pepper, very silty, argillaceous, trace mica and carbon flakes, angular, poorly sorted
- 540 Sandstone, light gray, very fine to fine grained, quartzose, slightly salt and pepper, very silty, argillaceous, trace mica, few carbon flakes, angular, poorly sorted ; 30% Shale, dark gray-brown, very silty and sandy, slightly micaceous
- 545 Sandstone, gray-brown, very fine grained, quartzose and slightly salt and pepper, very argillaceous and silty, slightly calcareous and siliceous, trace mica, angular, poorly sorted ; 40% Shale as above
- * ** MidSandstone Member 549.5 (-42.5) **
- 550 Sandstone, light gray-brown, very fine to fine grained, quartzose and salt and pepper, very silty, slightly siliceous and calcareous, argillaceous streaks, trace mica and carbon flakes, angular, poorly sorted ; 30% Shale dark gray, sandy, silty streaks, micaceous
- 555 Shale, dark gray, micromicaceous, slightly fissile, trace slickensides ; 30% Sandstone as above
- 560 Sandstone, light gray-buff, very fine to fine grained, slightly salt and pepper, slightly silty and calcareous, trace mica and kaolin, angular, medium sorting ; 40% Shale, dark gray, sandy, silty streaks, trace mica
- 565 Sandstone as above, part friable with streaks of 12% intergranular porosity ; 30% Shale as above
- 570 Sandstone as above, part friable with streaks of 10% intergranular porosity
- 575 Sandstone, light gray-buff, very fine grained, quartzose and slightly salt and pepper, silty, slightly calcareous, trace kaolin and mica, few carbon flakes, part slightly argillaceous, trace 10% intergranular porosity ; 20% Shale, dark gray, very sandy and silty streaks, few carbon flakes
- 580 Shale, dark gray, slightly fissile and micromicaceous ; 30% Sandstone, light gray, very fine grained, salt and pepper, very silty, friable, angular, poorly sorted
- 585 Shale as above ; 30% Sandstone as above
- 590 Sandstone, light gray, very fine to fine grained, quartzose and slightly salt and pepper, friable, clean, silty, part slightly calcareous, trace kaolin, angular, medium sorting, few streaks of 12% intergranular porosity ; 20% Shale, dark gray, slightly micaceous, few silty, sandy streaks
- 595 Sandstone as above ; 40% Shale, dark gray, micromicaceous, fissile
- 595-600 Sandstone, light gray, very fine to fine grained, salt and pepper, friable, clean, silty, trace kaolin, angular, medium sorting ; 30% Shale, dark gray, few silty streaks, slightly micaceous
- 605 Shale, dark gray, few silty streaks, slightly micaceous ; 40% Sandstone as above, part becoming argillaceous
- 610 Sandstone, light gray, very fine to fine grained, salt and pepper, friable, clean, silty, angular, medium sorting ; 30% Shale, dark gray, fissile
- 615 Shale, dark gray, few sandy, silty streaks, part micaceous
- 620 Sandstone, light gray, very fine grained, salt and pepper, part slightly calcareous, slightly argillaceous, trace mica, very silty grading to siltstone, angular, poorly sorted ; 30% Shale as above
- 625 Shale, dark gray, few very sandy and silty streaks, slightly micaceous and fissile ; 30% Sandstone as above

SAMPLE DESCRIPTIONS

(Porosities are estimated from samples)

(Formation Tops are taken from logs)

Note: Questionable samples from 295 to 460m

* ** Upper Shale Member 295 (+212) **

- 295-300m Shale, dark gray, trace carbon flakes and mica, very sandy streaks, very silty grading to siltstone ; 30% Sandstone, light gray, fine to medium grained, salt and pepper, friable, silty, 10% to 15% intergranular porosity, angular, medium sorting
- 305 Shale as above ; 20% sandstone as above
- 310 Sandstone, light gray, fine to medium grained, salt and pepper, few pink grains, slightly siliceous and friable, trace coal fragments and varicolored chert pebbles, trace pyrite, few argillaceous and silty streaks, streaks of 15% to 20% intergranular porosity, angular, poorly sorted
- 315 Shale, dark gray, fissile, micromicaceous, few silty streaks
- 320 Shale as above, very silty and very micaceous streaks
- 325 Shale as above
- 330 Shale as above ; 30% Siltstone, gray, very sandy, argillaceous, slightly micaceous
- 335 Shale as above ; 30% Siltstone as above
- 340 Shale, dark gray, few silty streaks, slightly micaceous, trace slickensides
- 345 Shale as above
- 350 Shale, dark gray, few silty streaks, slightly micaceous
- 355 Shale as above
- 360 Shale as above ; 20% Sandstone, gray, very fine to fine grained, very sandy, argillaceous, slightly calcareous, angular, poorly sorted
- 365 Shale as above ; 10% Sandstone as above, very silty grading to siltstone
- 370 Shale as above, trace ironstone
- 375 Shale, dark gray, few silty streaks, slightly fissile, part micromicaceous
- 380 Shale as above
- 385 Shale as above
- 390 Shale as above, trace pyrite and ironstone, very silty grading to siltstone
- 395 Shale as above, trace ironstone
- 395-400 Shale as above
- 405 Shale, dark gray, few silty streaks, slightly micaceous, trace ironstone and pyrite ; 30% Sandstone, dark gray, very fine grained, salt and pepper friable, very argillaceous and silty, angular, poorly sorted
- 410 Shale, dark gray, few silty streaks, trace mica, ironstone and slickensides
- 415 Shale as above

GEOLOGICAL FORMATIONS AND MARKERS

Formation or marker	Depth(Logs)	Subsea
CRETACEOUS		
Lower Cretaceous Upper Shale Member	295m	+212m
Lower Cretaceous Mid-Sandstone Member	549.5	-42.5
Lower Cretaceous Lower Shale Member	630	-123
Orange Marker	742.25	-235.25
Basal Silt	910	-403
CARBONIFEROUS		
Hart River	993	-486
DEVONIAN		
Unit One Shale/Silt	1650	-1143
Tuttle Sandstone	1750	-1243
Total Depth - Driller	1811	-1304

- 1250 Chert, buff gray, trace fractures with slight oil stain ; 20% Conglomerate as above ; 10% Marl, brown, calcareous, siliceous ; Very poor sample
- 1255 Chert as above ; 20% Shale, brown, very siliceous grading to chert
- 1260 Chert as above ; 20% Shale as above
- 1265 Chert, light gray, dark gray, very argillaceous, calcareous, trace pyrite, few fractures with oil stain, slight fluorescence ; 30% Shale, dark gray-brown, trace pyrite, slightly calcareous, very siliceous grading to chert ; 20% Limestone, light brown, cryptocrystalline, very argillaceous streaks very siliceous grading to chert
- 1270 Limestone, light brown, cryptocrystalline, very argillaceous grading to marl, very siliceous grading to chert ; 40% Shale, dark gray-brown, very calcareous grading to marl ; 10% Chert as above
- 1275 Limestone, brown, cryptocrystalline, slightly siliceous, very argillaceous grading to marl, trace white calcite veining ; 30% Marl, brown, calcareous ; 20% Chert, dark brown, calcareous
- 1280 Limestone as above ; 30% Marl as above ; 30% Chert as above
- 1285 Limestone, brown, cryptocrystalline, few siliceous streaks, very argillaceous grading to marl ; 30% Marl, brown, calcareous
- 1290 Marl, brown, calcareous ; 30% Limestone, brown, cryptocrystalline, few fractures with calcite crystals, very argillaceous grading to marl ; 20% Shale, black, very calcareous, slightly bituminous ; 20% Chert, brown, calcareous
- 1295 Shale, dark gray-brown, very calcareous ; 30% Limestone, brown, light brown, cryptocrystalline, part slightly siliceous, part very argillaceous grading to marl, trace coral fragment (?), trace calcite veining with calcite crystals and pyrobitumen ; 20% Chert, dark gray-brown, calcareous
- 1295-1300 Shale, dark gray-brown, very calcareous grading to marl ; 40% Limestone, brown, light brown, very argillaceous grading to marl
- 1305 Limestone as above ; 40% Marl, brown, calcareous ; 10% Chert, dark brown, calcareous
- 1310 Marl, brown, buff, calcareous, slightly siliceous ; 30% Shale as above, slightly siliceous ; 30% Conglomerate, varicolored chert, very pyritic and siliceous, argillaceous, calcareous
- 1315 Marl, brown, calcareous ; 30% Limestone, brown, light brown, cryptocrystalline, very argillaceous, siliceous ; 20% Chert, brown, calcareous
- 1320 Marl as above ; 30% Limestone as above ; 5% Chert as above
- 1325 Marl, dark gray-brown, calcareous ; 10% Chert, dark brown, argillaceous, calcareous
- 1330 Shale, dark gray-brown, very calcareous, trace fracture with pyrobitumen
- 1335 Shale as above with trace fractures and pyrobitumen
- 1340 Limestone, light brown, cryptocrystalline, very siliceous and argillaceous slightly sandy, trace white calcite veining ; 30% Shale, brown, very calcareous, siliceous ; 30% Chert, dark brown, calcareous, trace calcite veining
- 1345 Marl, brown, calcareous, siliceous ; 30% Shale, brown, black, very calcareous, part bituminous ; 30% Limestone, brown, cryptocrystalline, very argillaceous, siliceous, few streaks fine to medium grained quartz sand
- 1350 Limestone, buff, cryptocrystalline, argillaceous, slightly siliceous and sandy ; 30% Chert, light brown, calcareous

- 1355 Limestone, buff, cryptocrystalline, slightly argillaceous and siliceous, silty, few fine to medium pellet shadows ; 30% Chert as above, few fractures ; 20% Marl, brown, calcareous
- 1360 Chert, light brown-gray, calcareous, few fractures with pyrobitumen ; 30% Limestone, buff, cryptocrystalline, argillaceous, siliceous, trace pyrite ; 20% Shale, brown, very siliceous, calcareous
- 1365 Limestone, buff, cryptocrystalline, slightly argillaceous and siliceous, trace very fine quartz sand, few fine pellet shadows ; 30% Chert, light gray-buff, calcareous, trace white calcite veining
- 1370 Limestone, buff, brown, cryptocrystalline, very argillaceous, siliceous, very fine sandy streaks grading to sandstone ; 20% Chert, gray-brown, calcareous
- 1375 Limestone as above ; 20% Marl, brown, calcareous, very sandy grading to very fine sandstone ; 20% Chert, light gray-brown, calcareous
- 1380 Limestone, brown, cryptocrystalline, slightly siliceous, argillaceous and sandy, very fine sand, trace pyrite, few very argillaceous streaks grading to marl ; 20% Chert, brown, gray-brown, calcareous, argillaceous ; 20% Shale, gray-brown, calcareous, very siliceous grading to chert
- 1385 Chert, brown, dark brown, argillaceous, calcareous, trace pyrite and fracture with pyrobitumen ; 30% Limestone, light brown, cryptocrystalline, very siliceous, argillaceous, very sandy with very fine sand, trace pyrite and calcite veining ; 20% Shale, dark gray-brown, very siliceous grading to chert, calcareous, sandy
- 1390 Chert, brown, light brown, very calcareous streaks, few fractures and calcite veining ; 30% Limestone, light brown, cryptocrystalline, very siliceous grading to chert, very argillaceous, very fine sandy streaks ; 20% Shale, gray-brown, calcareous, very siliceous grading to chert
- 1395 Chert, brown, dark brown, very calcareous streaks, trace white calcite veining ; 20% Limestone as above ; 20% Shale as above
- 1395-1400 Chert as above ; 20% Marl, light brown, calcareous, very siliceous, silty ; 10% Shale, dark gray-brown, calcareous, very siliceous, sandy
- 1405 Chert, light brown-gray, calcareous, trace pyrite and calcite veining ; 40% Limestone, light brown, cryptocrystalline, very argillaceous and siliceous, very fine sandy streaks ; 20% Marl, brown, calcareous, siliceous, sandy
- 1410 Chert as above, no pyrite ; 30% Limestone as above ; 30% Shale, brown, calcareous, very siliceous
- 1415 Limestone, brown, cryptocrystalline, very argillaceous grading to marl, siliceous, very fine sandy streaks, few fractures with calcite crystals ; 40% Chert, light brown-gray, calcareous, trace calcite veining ; 20% Marl brown, calcareous, siliceous, sandy
- 1420 Limestone as above ; 40% Chert as above, trace pyrite ; 20% Marl as above
- 1425 Chert, light brown-gray, calcareous, few fractures with calcite crystals and trace pyrobitumen ; 30% Limestone, light brown, cryptocrystalline, few very argillaceous streaks, slightly siliceous and silty trace calcite veining ; 30% Marl, brown, calcareous, very siliceous
- 1430 Chert, dark gray-brown, light brown-gray, calcareous, argillaceous streaks trace white calcite veining ; 40% Limestone as above ; 20% Shale, brown, very siliceous, silty, slightly calcareous, good oil stain, fluorescence and cut

- 1435 Chert as above ; 40% Limestone as above, very argillaceous grading to marl ; 20% Shale, gray-brown, calcareous, very siliceous
- 1440 Chert, brown, light brown-gray, calcareous, few fractures and calcite veining ; 30% Limestone, light brown, cryptocrystalline, very argillaceous and siliceous, slightly sandy ; 20% Marl, brown, calcareous, siliceous, slightly sandy ; 20% Shale, black, bituminous, very calcareous
- 1445 Limestone, buff, cryptocrystalline, slightly sandy, very argillaceous grading to marl ; 30% Chert, light gray-buff, calcareous, trace calcite veining ; 20% Shale, dark gray-brown, very calcareous, slightly siliceous
- 1450 Chert, dark brown, light brown-gray, calcareous ; 30% Shale, very dark gray, black, fissile, calcareous, bituminous streaks ; 30% Marl, brown, calcareous
- 1455 Marl, brown, calcareous, trace fractures with calcite crystals and pyrobitumen ; 40% Shale, dark gray-brown, very calcareous, slightly fissile
- 1460 Marl, dark gray-brown, calcareous, sandy, trace slickensides
- 1465 Marl as above, slightly bituminous, trace pyrite, no slickensides
- 1470 Shale, dark gray-brown, very calcareous, very sandy streaks, part slightly fissile ; 30% Sandstone, gray, light gray, very fine grained, slightly salt and pepper, very calcareous and silty, argillaceous, angular, poorly sorted
- 1475 Shale as above, trace crinoid ; 30% Sandstone as above ; 20% Sandstone, light gray, fine to medium grained, salt and pepper with varicolored chert and clear quartz grains, very calcareous, slightly argillaceous and silty, angular, poorly sorted
- 1480 Marl, light brown, very calcareous and silty, siliceous, very sandy grading to 10% Sandstone, very fine, as above ; 30% Shale, dark gray-brown, part fissile, very calcareous, siliceous and sandy grading to chert ; 20% Sandstone, medium grained as above ; 10% Chert, brown, light brown, calcareous
- 1485 Shale, black, slightly calcareous, fissile, slightly bituminous, trace pyrite, very fine sandy streaks ; 20% Marl, brown, calcareous, very siliceous, sandy ; 20% Chert, brown, light brown, calcareous, argillaceous, sandy, trace white calcite veining
- 1490 Shale, very dark gray, black, slightly calcareous, bituminous and fissile, sandy ; Sandstone, light gray, gray, very fine grained, salt and pepper, very calcareous and silty, siliceous and argillaceous streaks, angular, poorly sorted ; 20% Chert, brown, calcareous, trace fractures with calcite crystals
- 1495 Shale, brown, slightly calcareous and siliceous, silty, trace white calcite veining, trace fractures with calcite crystals, good oil stain, fluorescence and cut ; 30% Chert, light brown-gray, calcareous, trace calcite veining ; 20% Sandstone, light gray, very fine to fine grained, salt and pepper, very calcareous, clean, silty, trace kaolin, angular, poorly sorted
- 1495-1500 Chert, light gray-brown, calcareous, few fractures with calcite crystals ; 40% Shale as above ; 10% Marl, brown, calcareous
- 1505 Shale as above ; 20% Chert as above, few fractures with oil stain ; 20% Marl, brown, calcareous, very siliceous and silty ; 10% Sandstone, light gray, fine to medium grained, salt and pepper, varicolored chert and clear quartz grains, very calcareous, siliceous, clean, angular, poorly sorted
- 1510 Shale, brown, slightly calcareous, silty, good oil stain, fluorescence and cut ; 20% Chert, light gray-brown, calcareous, trace calcite veining

- 1515 Chert, light gray-brown, calcareous, argillaceous, few calcite veins ; 40% Shale as above ; 20% Marl, light brown, calcareous, siliceous, slightly sandy and silty
- 1520 Chert as above ; 20% Shale as above ; 20% Marl as above
- 1525 Chert, gray-brown, calcareous, argillaceous, few calcite veins ; 20% Shale as above ; 20% Marl as above
- 1530 Shale, very dark gray, black, slightly fissile, calcareous, sandy, silty, part slightly bituminous ; 20% Sandstone, light gray, very fine grained, salt and pepper, calcareous, very silty, trace kaolin, angular, poorly sorted ; 20% Marl, light brown, very calcareous grading to limestone, silty
- 1535 Shale, very dark gray, black, very calcareous, part slightly bituminous, very silty, slightly fissile
- 1540 Shale as above ; 40% Chert, light brown-gray, calcareous ; 10% Marl, brown, calcareous, sandy
- 1545 Sandstone, light gray, light brown, very fine to fine grained, salt and pepper, silty, calcareous, siliceous, slightly argillaceous, angular, poorly sorted, part very argillaceous with oil stain ; 30% Shale, as above ; 20% Chert as above ; 10% Marl as above
- 1550 Shale, very dark gray, very calcareous and sandy ; 20% Sandstone, light gray, very fine to fine grained, salt and pepper, very silty, argillaceous calcareous, angular, poorly sorted ; 20% Chert, light brown-gray, calcareous ; 10% Marl as above
- 1555 Shale as above ; 40% Sandstone, light gray, light brown-gray, very fine to fine grained, salt and pepper, very siliceous and silty, argillaceous, slightly calcareous, angular, poorly sorted, part with good oil stain, fluorescence and cut
- 1560 Shale, very dark gray-brown, very sandy and silty, siliceous streaks, calcareous, slightly fissile ; 50% Sandstone, dark gray, light gray, very fine to fine grained, salt and pepper, siliceous, calcareous, very silty, very argillaceous streaks, angular, poorly sorted
- 1565 Shale as above ; 30% Sandstone as above, very argillaceous ; 20% Shale, black, bituminous, slightly calcareous, fissile
- 1570 Shale, very dark gray, black, fissile, slightly bituminous, part slightly calcareous
- 1575 Shale, black, fissile, calcareous, bituminous
- 1580 Shale as above, slightly calcareous
- 1585 Shale, very dark gray-brown, black, slightly calcareous, trace slickensides ; 20% Marl, brown, calcareous
- 1590 Shale, dark gray, dark gray-brown, few to abundant crinoids, calcareous, slightly fissile ; 20% Marl as above ; 20% Limestone, gray-brown, medium to coarse crinoidal, very argillaceous
- 1595 Limestone, light brown, 60% medium to coarse pellet and crinoid fragmental very argillaceous, slightly sandy ; 20% Shale as above ; 20% Shale, black, very dark gray-brown, slightly calcareous, fissile, trace crinoids, few slightly bituminous streaks
- 1595-1600 Shale, black very dark gray-brown, calcareous, trace crinoids, few slightly bituminous streaks
- 1605 Shale as above, very silty streaks, very calcareous grading to marl
- 1610 Shale as above ; 40% Limestone, light brown, 60% fine to medium pellet

- crinoid fragmental, very argillaceous, sandy
- 1615 Shale, black, bituminous, fissile, slightly calcareous, trace slickensides
 - 1620 Shale as above, slightly calcareous to noncalcareous
 - 1625 Shale as above
 - 1630 Shale as above, trace pyrite ; 30% Limestone, brown, cryptocrystalline to very fine crystalline, very argillaceous grading to marl, very siliceous and sandy, trace crinoids
 - 1635 Shale, black, fissile, noncalcareous, trace pyrite and slickensides ; 20% Sandstone, brown, quartzose, fine grained, very siliceous grading to quartzite, calcareous, angular, poorly sorted ; 20% Marl, brown, calcareous, siliceous
 - 1640 Shale as above, slightly pyritic
 - 1645 Shale as above
 - * ** Unit One Shale 1650 (-1143) **
 - 1650 Shale, black, slightly bituminous, fissile, few silty streaks, trace pyrite, noncalcareous
 - 1655 Shale as above, part very dark gray, fissile, noncalcareous
 - 1660 Shale, very dark gray, dark gray, fissile, noncalcareous, trace pyrite and carbon flakes ; 30% Marl, brown, calcareous
 - 1665 Shale as above, few silty streaks ; 20% Marl as above
 - 1670 Shale, very dark gray, black, fissile, noncalcareous, slightly silty, trace carbon flakes and pyrite
 - 1675 Shale as above ; 20% Sandstone, light gray, very fine to fine grained, salt and pepper, very siliceous, dolomitic, silty, trace pyrite, angular, poorly sorted
 - 1680 Shale, dark gray, fissile, noncalcareous, trace pyrite and carbon flakes 20% Sandstone, light gray, very fine to fine grained, slightly salt and pepper, siliceous, dolomitic, very silty, argillaceous streaks, angular, poorly sorted
 - 1685 Shale, dark gray, very dark gray, fissile, few silty streaks, trace pyrite and carbon flakes
 - 1690 Shale as above
 - 1695 Shale as above ; 20% Marl, brown, calcareous
 - 1695-1700 Shale as above
 - 1705 Shale as above
 - 1710 Shale, dark gray, fissile, few silty streaks, trace carbon flakes and pyrite
 - 1715 Shale as above ; 20% Sandstone, gray, very fine to fine grained, quartzose, very argillaceous, silty and siliceous, slightly calcareous, angular, poorly sorted
 - 1720 Shale as above
 - 1725 Shale as above, trace ironstone ; 20% Sandstone, light brown, fine to medium grained, salt and pepper, very siliceous, dolomitic, clean, silty, slight oil stain, angular, poorly sorted
 - 1730 Shale, dark gray, fissile, splintery, trace carbon flakes and pyrite, few very fine sandy and silty streaks, trace ironstone
 - 1735 Shale as above, no ironstone
 - 1740 Shale as above, trace ironstone

- 1745 Shale as above
- 1750 * Shale, dark gray, fissile, splintery, trace ironstone and pyrite ; 30% Sandstone, light brown, fine to medium grained, salt and pepper, gray-brown chert and clear quartz grains, quartzitic, slightly dolomitic and calcareous, silty, clean, trace pyrite, angular, poorly sorted, slight oil stain, fluorescence and cut
- 1755 Sandstone, light brown, fine to medium grained, salt and pepper, gray-brown chert and clear quartz grains, quartzitic, clean, slightly dolomitic and calcareous, silty, trace pyrite, angular, poorly sorted, slight oil stain, fluorescence and cut ; 50% Shale as above, trace slickensides
- 1760 Shale as above, trace slickensides ; 20% Sandstone as above
- 1765 Shale, dark gray, fissile, splintery, trace pyrite and ironstone
- 1770 Shale as above ; 10% Sandstone, light brown, fine to medium grained, salt and pepper, very siliceous, calcareous, dolomitic, silty, clean, angular, poorly sorted, light oil stain
- 1775 Shale as above, trace slickensides ; 10% Sandstone as above
- 1780 Shale as above ; 10% Sandstone, light gray-brown, fine to medium grained, salt and pepper, quartzitic, slightly dolomitic and calcareous, angular, poorly sorted
- 1785 Shale, dark gray, splintery, fissile, trace pyrite and ironstone ; 10% Sandstone as above
- 1790 Shale as above abundant slickensides
- 1795 Shale, dark gray, fissile, splintery, trace pyrite, slickensides, few carbon flakes
- 1795-1800 Shale as above, trace ironstone
- 1805 Shale as above
- 1811 Shale, dark gray, fissile, trace pyrite and ironstone, few carbon flakes

SECTION III
ENGINEERING SUMMARY

DRILL STEM TESTS

The Mississippian (Hart River) formation and the Lower Cretaceous Orange Marker were selectively tested for hydrocarbon determination. Of the five (5) drill stem tests attempted, three (3) were misruns. This was due, in part, to a combination of poor packer seats and downhole tool problems. One successful test was run across both of the above noted formations.

A. WELL DATA FIELD DRILL STEM TEST REPORT

DATE 85-02-12

Well: Exco et al West Parkin Y.T. D-54 Location _____

DST No. 1 Interval 1062 m - 1064 m Formation Hart River

Last Casing: Size 244mm Depth 460 m Open Hole: Size 215.9mm Depth 1811 m

Hole Troubles: Deviation at bottom Caliper at Packer(s) 240 m

Mud: Wt. 1186 kg/m³ Vls 70 W.L. 7.0 % Oil - ppm Cl 8

B. TEST STRING DATA

Testing Company Halliburton Type of Test Inflate

Type and Number of Packers 2 - Inflate Gates Size 178mm

DP Size 114mm Wt 24.7 kg/m Length 862.94 m

DC Size 159/171mm Wt 123/150 kg/m I.D. 57/71mm Length 184.03 m

Tail Pipe Size N/A Wt N/A Length N/A Perfs N/A m

T.D. String _____ Recorder Depth 1046/1048 m Water Cushion Inhibitor BH Choke 19.04mm

Packer Depth(s) 1060/1065 m Weight on Packer(s) 30,000 daN

Other Equipment Temperature Gauge 1049 m. Two Bottom Hole Samplers

C. TEST RESULTS

Times: PF 15 ISI 60 Flow 60 SI 120 Flow - FSI -

Pressures: PF 916 kPa IH 11,936 kPa ISI 3195 kPa IF 1826 kPa

TEMP - °C FH 12,086 kPa FSI 4257 kPa FF 3042 kPa

Flow Descriptions:

Preflow: Very slow start, building slowly, to strong and building at ISI (AIR)

Valve Open Flow: Slow starting, to very strong air, dying to 4" in bubble pail.
(No gas to surface).

Recoveries: Salt water gas cut H₂S 6%, 305 m salt.

D. SAMPLE DETAILS:

Sample caught top and middle tool.

Sent to: _____ Via: _____ Date Sent: _____

E. REMARKS:

Difficulty opening valve on flow - 1 1/4 hours.

Very cold.

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER Stu Cameron

TESTERS

L. Bruneau

VESNESS

S. Cameron

DRILLING CONTRACTOR

Gray Mountain



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO.

44 899

DATE OF TEST

85-02-12

TEST No.

1

JOB TYPE

Hydroflate Straddle

PRESSURE SUMMARY kPa						
GAUGE NUMBER	2326	2620	545	1853		
GAUGE DEPTH	1045.28	1046.53	1066.76	1068.62		
BLANKED OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	48	48	24	24		
INITIAL HYDROSTATIC	12 153	12 165	12 324	12 320		
FIRST FLOW	INITIAL	410	411	724	780	
	FINAL	1 168	1 216	1 321	1 402	
FIRST CLOSED IN	9 793	9 823	9 953	10 023		
SECOND FLOW	INITIAL	1 563	1 590	1 826	1 864	
	FINAL	4 069	4 077	4 261	4 296	
SECOND CLOSED IN						
THIRD FLOW	INITIAL					
	FINAL					
THIRD CLOSED IN						
FINAL HYDROSTATIC	12 234	12 230	12 464	12 454		

TIME PERIODS					
	FIRST	SECOND	THIRD		TIME
FLOW	15	60		TESTER VALVE OPENED	10:25
CLOSED IN	60	120		PACKER UNSEATED	16:10

LIQUID RECOVERY DATA	
METRES	DESCRIPTION OF LIQUID
305	Sour gas cut water.
305	TOTAL LIQUID RECOVERY

FORMATION TESTED

Hart River

TEMP. REC. No.

TE70

DEPTH

1047.78

MAX. TEMP.

37

NET PRODUCTIVE THICKNESS

m

MUD TYPE

Gel Chemical

Ground ELEVATION

502.5

MUD DENSITY

kg/m³ 1190

MUD VISC

s/L 70

ALL DEPTHS MEASURED FROM:

☐ KB ☒ GROUND

CASING OR HOLE SIZE

216

PACKER TOP DEPTHS

1060

PACKER BOTTOM DEPTHS

1065

RATHOLE SIZE

mm

DEPTH OF TESTER VALVE

1039.34

DRILL PIPE

OD mm 114.3

kg/m 24.7

CASING PERFORATED INTERVAL

N/A

DRILL COLLARS ABOVE TESTER VALVE

ID mm 71

LENGTH m 184.03

TOTAL DEPTH

1811

SURFACE CHOKE

25.4

mm

AMOUNT AND TYPE CUSHION

Nil

BOTTOM CHOKE

19.05

mm

SAMPLE DATA

OIL GRAVITY

@

°C

3% OIL RATIO

REFRACTOMETER/RELATIVE DENSITY

RECOVERY WATER

@

°C

CHLORIDE CONTENT

mg/L

SAMPLE SHIPPED TO LABORATORY

YES

NO

SAMPLER No.

706, 1002

GAS SAMPLE BOTTLE No.

LABORATORY

REMARKS

Charts indicate that tool opened for Final Flow at 11:40 but did not close in at 14:10 as indicated in the job log. This resulted in an extended (270 minute) flow period with no Final Closed In period. First Closed In period does not have sufficient closure for an accurate Horner Extrapolation.

COMPANY

EXCO ENERGY LTD.

LEGAL DESCRIPTION

Lat. 66-13-9.73N Long. 137-26-10.4W

PROVINCE OR TERRITORY

YUKON

FIELD OR AREA

WEST PARKIN

TEST NUMBER

1

TESTED INTERVAL

1060 - 1065

WELL NAME AND NUMBER

FORWARD ET AL WEST PARKIN D-54

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (mm)	SURFACE PRESSURE (kPa)	GAS RATE (m ³ /day)	LIQUID RATE (m ³ /day)	REMARKS
85-02-11					
20:15					Load 4 pressure recorders and 1 temperature recorder.
20:45					Thaw out test tools.
20:50					Rig finished pulling out of hole and then ran in with casing plug to test casing, rams, hydryl, and manifold.
23:00					Pull out of hole.
23:30					Pick up bottom section of test tools and make up.
					Pick up top section, load recorders, samplers, etc.
02:30					Strap and run in collars.
04:15					Slip and cut line.
06:15					Strap pipe and run in.
08:45					Head up surface equipment.
10:00					Rotate tool at 45 RPM. String weight 40 000 daN.
10:20					Pick up 4000 daN over string weight. O.K.
10:21					Put 7000 daN on tool.
10:23					Put total of 14 000 daN on tool.
10:25					Tool Opened: Very weak air blow increasing to strong in 12 minutes. To bottom of pail in 8 minutes. No gas to surface.
10:40					Tool closed.
11:40					Tried to open tool, would no open.
					Pull all weight on tool, did not open, no indication tool opening. Worked pipe up and down still wouldn't open.
13:10					Tool Open: Strong blow, slowly decreasing to approximately 4" in water bucket.
14:10					Shut In tool.
16:10					Tried to open tool in 6 minutes with 40 000 daN. Could not. Pull out of hole.
19:15					Got to fluid at 305 m above tool. Sour gas readings.
20:00					Safety meeting with new crew.

PRODUCTION TEST DATA

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 85-02-12

TICKET # 44899

```

-----
* Gauge Number      :      1853.      *
* Gauge Depth       :      1069.      m  *
* Time of Flow      :           15.0 min. *
* Final Pressure    :      1401.7 kPa. *
-----

```

Initial Hydrostatic Pressure = 12320.0 kPa

Final Hydrostatic Pressure = 12454.3 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	780.4
2.	0.0160	5.0	841.0
3.	0.0320	10.0	1144.1
4.	0.0481	15.0	1401.7

HALLIBURTON SERVICES LIMITED

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0067	2.0	0.9313	3797.6
2.	0.0134	4.0	0.6784	4637.1
3.	0.0203	6.0	0.5425	5191.7
4.	0.0268	8.0	0.4600	5553.9
5.	0.0338	10.0	0.3969	5963.0
6.	0.0403	12.0	0.3528	6296.4
7.	0.0504	15.0	0.3015	6735.9
8.	0.0674	20.0	0.2429	7424.8
9.	0.0840	25.0	0.2044	7969.5
10.	0.1009	30.0	0.1762	8484.4
11.	0.1177	35.0	0.1550	8879.9
12.	0.1346	40.0	0.1384	9215.7
13.	0.1514	45.0	0.1250	9484.4
14.	0.1683	50.0	0.1140	9700.8
15.	0.1852	55.0	0.1047	9893.3
16.	0.2020	60.0	0.0969	10023.1

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 85-02-12

TICKET # 44899

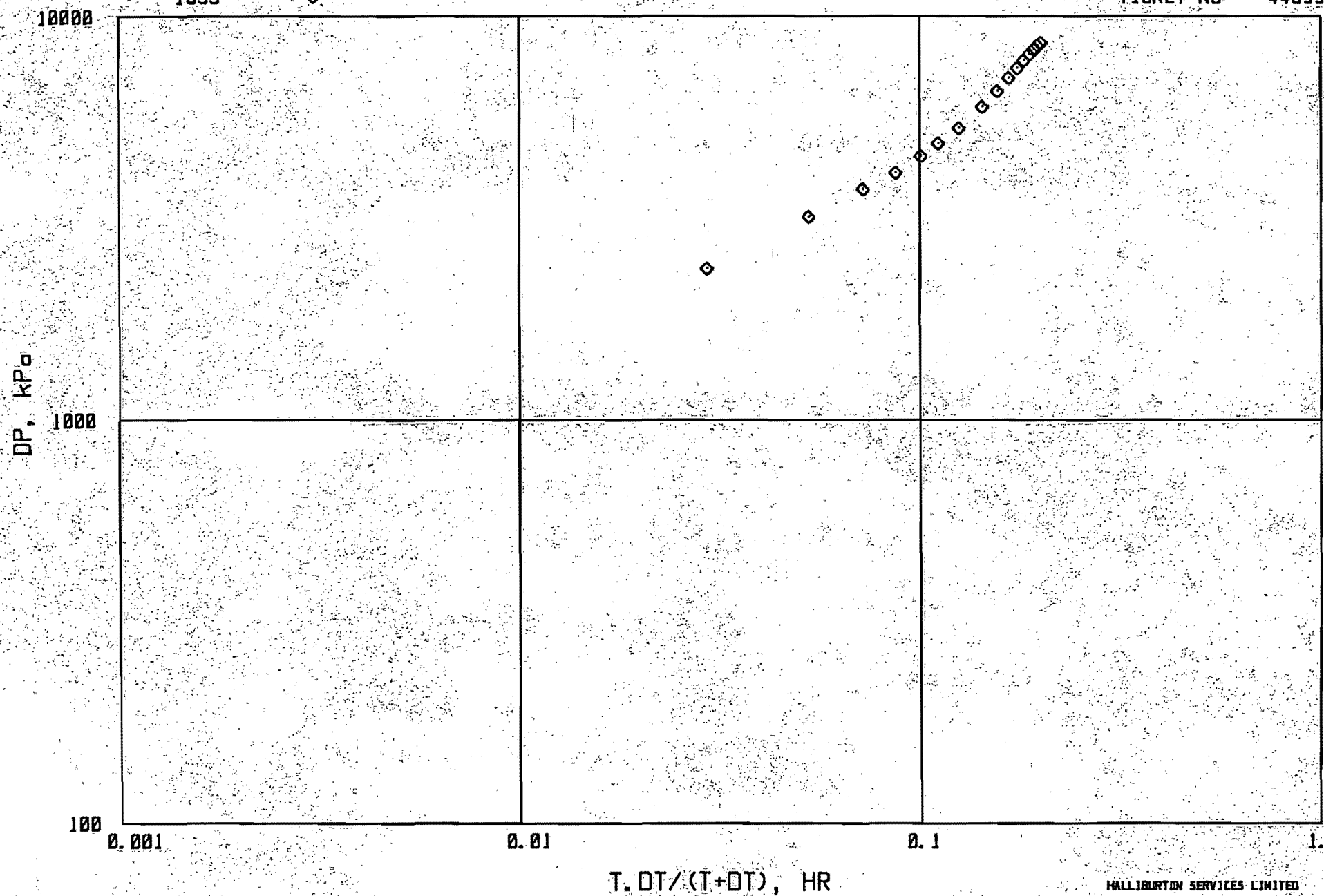
* Gauge Number : 1853. *
* Gauge Depth : 1069. m *
* Time of Flow : 270.0 min. *
* Final Pressure : 4296.1 kPa. *

GAUGE 1, FLOW 2

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	1863.9
2.	0.0338	10.0	2220.0
3.	0.0673	20.0	2394.3
4.	0.1012	30.0	2538.3
5.	0.1347	40.0	2659.5
6.	0.1686	50.0	2786.8
7.	0.2023	60.0	2894.4
8.	0.2358	70.0	3000.5
9.	0.2696	80.0	3071.7
10.	0.3032	90.0	3180.8
11.	0.3369	100.0	3250.5
12.	0.3708	110.0	3332.3
13.	0.4043	120.0	3408.1
14.	0.4382	130.0	3477.8
15.	0.4718	140.0	3553.6
16.	0.5055	150.0	3621.8
17.	0.5392	160.0	3697.5
18.	0.5728	170.0	3767.2
19.	0.6067	180.0	3833.9
20.	0.6403	190.0	3887.0
21.	0.6742	200.0	3947.6
22.	0.7078	210.0	4000.6
23.	0.7415	220.0	4053.7
24.	0.7752	230.0	4109.7
25.	0.8088	240.0	4159.7
26.	0.8425	250.0	4212.8
27.	0.8763	260.0	4273.4
28.	0.9100	270.0	4296.1

GAUGE NO CIP 1 2
1853

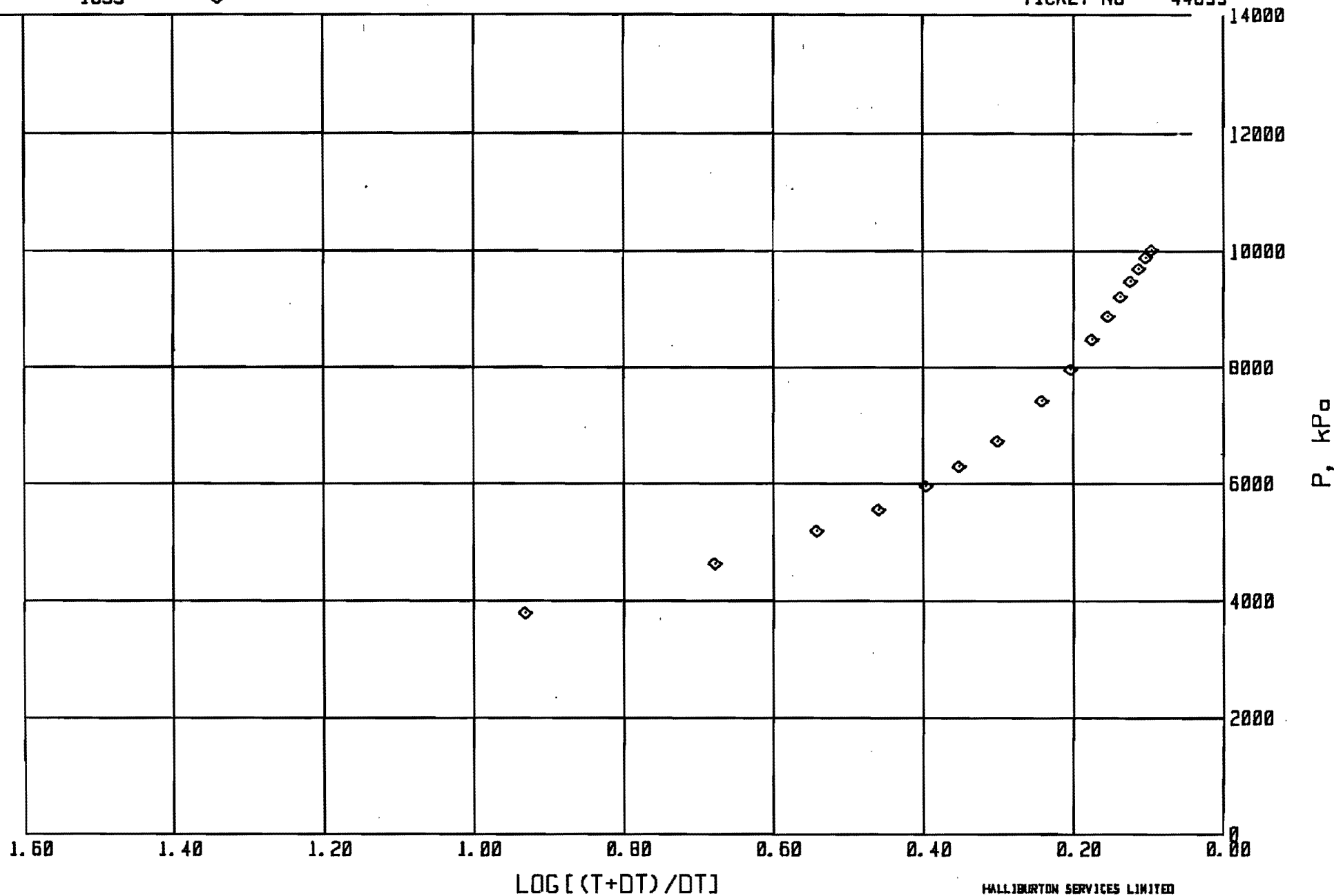
TICKET NO 44899



HALLIBURTON SERVICES LIMITED

GAUGE NO CIP 1 2
1853

TICKET NO 44899

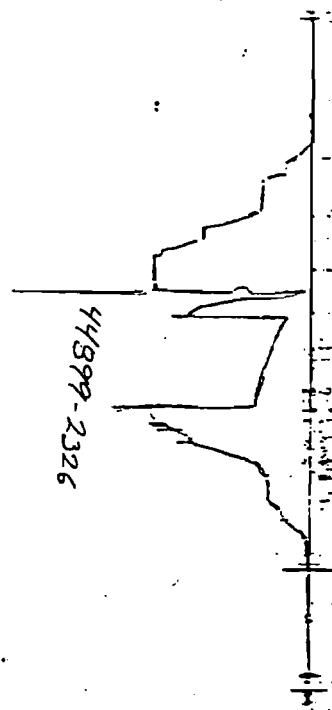
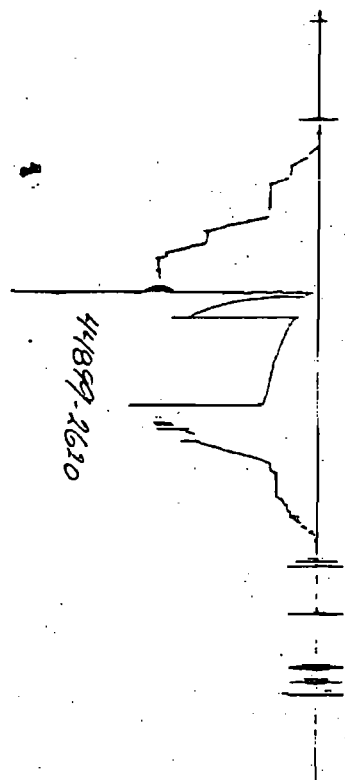
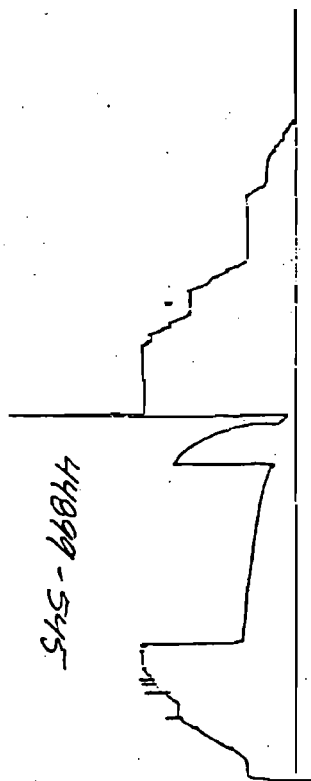


HALLIBURTON SERVICES LIMITED

		O.D. (mm)	I.D. (mm)	LENGTH(m)	DEPTH(m)
3	DRILL COLLARS.....	159.0	71.0	165.80	
50	IMPACT REVERSING SUB.....	155.5	76.2	0.31	
3	DRILL COLLARS.....	159.0	71.0	18.23	
5	CROSSOVER.....	155.5	76.2	0.31	
60	HYDROSPRING TESTER.....	127.0	19.1	3.78	1039.34
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1045.28
80	AP RUNNING CASE.....	127.0	57.2	1.25	1046.53
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.15	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.52	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1060.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	2.57	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1065.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1066.76
5	CROSSOVER.....	127.0	57.2	0.31	
81	BLANKED-OFF RUNNING CASE.....	127.0	57.2	1.25	1068.62
23	BLANK SUB.....	127.0		0.31	

EQUIPMENT DATA

45 Bot A



← PRESSURE

ALGARY, ALBERTA



CHEMEX LABS (ALBERTA) LTD.

GRANDE PRAIRIE, ALBERTA

EDMONTON, ALBERTA

GAS ANALYSIS

CONTAINER IDENTITY

BHS#706

LABORATORY NUMBER

84-201-6329

LICENCE NO.

OPERATOR NAME AND ADDRESS

EXCO RESOURCES LTD.

CPA NUMBER

WELL NAME

FORWARD ET AL WEST PARKIN D-54

KB

ELEVATIONS METERS

GRD

NONE

502.5

FIELD OF AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

WEST PARKIN

HART RIVER

HALLIBURTON

TEST RECOVERY

NIL

SAMPLING POINT

BOTTOM HOLE SAMPLER #706

AMT & TYPE OF CUSHION

MUD RESISTIVITY

@25° C

TEST TYPE NO.

DST 1

MULTIPLE RECOVERY

TEST INTERVAL FROM

1060.0 m

TO

1065.0 m

PERFORATIONS FROM

m

TO

m

GAUGE PRESSURE - KPa

SEPARATOR

TREATER

AS RECEIVED

48

SEPARATOR

TREATER

AS RECEIVED

20

DATE SAMPLED

DATE RECEIVED

DATE REPORTED

ANALYST

Y M D H:M

85-03-NA

Y M D

85-03-04

Y M D

85-03-04

ES

COMP.	MOL FRACTION AIR FREE AS REC'D	MOL FRACTION AIR FREE ACID GAS FREE	LIQUID VOLUME ml. m ⁻³ AIR FREE AS REC'D
H ₂	0.0019	0.0020	
He	0.0000	0.0000	
N ₂	0.2543	0.2682	
CO ₂	0.0517	0.0000	
H ₂ S	0.0000	0.0000	
C ₁	0.2269	0.2393	
C ₂	0.2167	0.2285	
C ₃	0.1297	0.1368	474.46
iC ₄	0.0196	0.0207	85.19
nC ₄	0.0486	0.0512	203.60
iC ₅	0.0165	0.0174	80.25
nC ₅	0.0059	0.0062	28.41
C ₆	0.0149	0.0157	80.12
C ₇	0.0133	0.0140	79.89
C ₈			
C ₉			
C ₁₀			
TOTAL	1.0000	1.0000	031.92

GROSS HEATING VALUE

MJ. m⁻³ @ 15° C AND 101.325 KPa

(MOISTURE AND ACID GAS FREE)

MEASURED

CALCULATED 55.488

DEW POINT

VAPOUR PRESS

PENTANES PLUS

69.509

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED

MEASURED

CALCULATED 1.157

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED 1.137

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED

pPc

4329.1

pTc

259.5

ACID GAS FREE

pPc

4162.5

pTc

257.0

REMARKS

RECOVERED GAS + 300 CC WATER FROM TOOL

GAS SAMPLE WAS BADLY AIR CONTAMINATED

DETERMINATIONS TO C7+ ONLY

A. WELL DATA

FIELD DRILL STEM TEST REPORT

DATE 85-02-13

Well: Exco et al West Parkin Y.T. D-54 Location _____

DST No. 2 Interval 700 m - 750 m Formation Orange Marker

Last Casing: Size 244mm Depth 460 m Open Hole: Size 215.9mm Depth 1811 m

Hole Troubles: Deviation at bottom Caliper at Packer(s) 254/235mm

Mud: Wt. 1186 kg/m³ Vis 70 W.L. 7.0 % Oil - ppm Cl 8

B. TEST STRING DATA

Testing Company Halliburton Type of Test Inflate

Type and Number of Packers 2 Inflate Gates Size 178mm

DP Size 114mm Wt 24.7 kg/m Length N/A

DC Size 159/171mm Wt 123/150 kg/m I.D. 57/71mm Length 137.27 m

Tail Pipe Size _____ Wt _____ Length _____ Perfs _____ m

T.D. String _____ Recorder Depth 748/750 m Water Cushion -- BH Choke 19.04mm

Packer Depth(s) 700 m - 750 m Weight on Packer(s) No Seat

Other Equipment Temperature Gauge, Bottom Hole Samplers

C. TEST RESULTS Misrun - Screen and pump full of sand

Times: PF _____ ISI _____ Flow _____ SI _____ Flow _____ FSI _____

Pressures: PF _____ IH _____ ISI _____ IF _____

TEMP _____ °C FH _____ FSI _____ FF _____

Flow Descriptions:

Preflow: _____

Valve Open Flow: _____

Recoveries: _____

D. SAMPLE DETAILS:

Sent to: _____ Via: _____ Date Sent: _____

E. REMARKS:

Tool would not open, move down 5m, No seat.

POOH. Change interval and pump.

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER Stu Cameron

COMPANY	EXCO ENERGY LTD.		FIELD OR AREA	WEST PARKIN	WELL NAME AND NUMBER	FURKWARD E1 AL WESI PARKIN D-54
LEGAL DESCRIPTION	Lat Long	66-13-9.73N 137-26-10.4W	PROVINCE OR TERRITORY	YUKON	TEST NUMBER	2
					TESTED INTERVAL	700 - 750

[illegible]

PRODUCTION TEST DATA

		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	159.0	71.0	165.80	
50	IMPACT REVERSING SUB.....	155.5	76.2	0.31	
3	DRILL COLLARS.....	159.0	71.0	18.23	
5	CROSSOVER.....	155.5	76.2	0.31	
60	HYDROSPRING TESTER.....	127.0	19.1	3.78	679.34
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	685.28
80	AP RUNNING CASE.....	127.0	57.2	1.25	686.53
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.15	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.52	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	700.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	47.57	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	750.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	751.76
5	CROSSOVER.....	127.0	57.2	0.31	
81	BLANKED-OFF RUNNING CASE.....	127.0	57.2	1.25	753.62
23	BLANK SUB.....	127.0		0.31	

EQUIPMENT DATA

A. WELL DATA FIELD DRILL STEM TEST REPORT

DATE 85-02-12

Well: Exco et al West Parkin Y.T. D-54 Location _____
 DST No. 3 Interval 742 m - 747 m Formation L.C. Orange Marker
 Last Casing: Size 244mm Depth 460 m Open Hole: Size 215.9mm Depth 1811 m
 Hole Troubles: Deviation at bottom Caliper at Packer(s) 254-235mm
 Mud: Wt. 1186 kg/m³ Vis 70 W.L. 7.0 % Oil - ppm Cl 8

B. TEST STRING DATA

Testing Company Halliburton Type of Test Inflate
 Type and Number of Packers 2 Inflate Gates Size 178mm
 DP Size 114mm Wt 24.7 kg/m Length 546.46 m
 DC Size 159/171mm Wt 150 kg/m I.D. 71mm Length 184.03 m
 Tail Pipe Size N/A Wt N/A Length N/A Perfs N/A m
 T.D. String Refer to enclosed reports Recorder Depth _____ Water Cushion Inhibitor BH Choke 19.04mm
 Packer Depth(s) 742 m - 747 m Weight on Packer(s) 10,000 daN
 Other Equipment Temperature Gauge, Bottom Hole Samplers

C. TEST RESULTS

Times: PF 15 ISI 60 Flow 72 SI 120 Flow - FSI -
 Pressures: PF 640 IH 8483 ISI 8227 IF 264
 TEMP - °C FH 8535 FSI 8227 FF 829

Flow Descriptions:

Preflow: Very strong gas blow, air on rig down.

Valve Open Flow: Strong gas blow, building to 600 kPa in one hour
1005m³/d 3.2mm orifice.

Recoveries: _____

D. SAMPLE DETAILS:

Sent to: _____ Via: _____ Date Sent: _____

E. REMARKS:

On P.F. Rig air down testing, head not open immediately,
approximately 6 mins. after tool opened.
Very cold

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER Stu Cameron

TESTERS
L. Bruneau
WITNESS
S. Cameron
DRILLING CONTRACTOR
Grey Mountain



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO. 60 851
DATE OF TEST 85-02-14
TEST No. 3
JOB TYPE
Hydroflate Straddle

PRESSURE SUMMARY kPa						
GAUGE NUMBER	2326	2620	1853	545		
GAUGE DEPTH	727.28	728.53	748.76	750.62		
BLOWN OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	48	48	24	24		
INITIAL HYDROSTATIC	8495	8483	8699	8834		
FLOW	INITIAL	630	640			
	FINAL	319	315	CLOCK	CLOCK	
FIRST CLOSED IN	8255	8227	RAN	RAN		
SECOND FLOW	INITIAL	258	264	OUT	OUT	
	FINAL	837	829			
SECOND CLOSED IN	8247	8227				
THIRD FLOW	INITIAL					
	FINAL					
THIRD CLOSED IN						
FINAL HYDROSTATIC	8562	8535				

TIME PERIODS					
	FIRST	SECOND	THIRD		TIME
FLOW	15	60		TESTER VALVE OPENED	02:21
CLOSED IN	72	120		PACKER UNSEATED	06:48

LIQUID RECOVERY DATA	
METRES	DESCRIPTION OF LIQUID
Nil	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA			
FORMATION TESTED Orange Marker		TEMP. REC. No. 1E70 DEPTH 729.78 m MAX. TEMP. 37 °C	
NET PRODUCTIVE THICKNESS m		MUD TYPE Gel Chemical	
Ground ELEVATION 502.5 m		MUD DENSITY kg/m³ 1190 MUD VISC s/L 70	
ALL DEPTHS MEASURED FROM: ☐ KB ☒ GROUND		CASING OR HOLE SIZE 216 mm	
PACKER DEPTHS TDP 742 BOTTOM 747 m		RATHOLE SIZE mm	
DEPTH OF TESTER VALVE 721.34 m		DRILL PIPE OD mm 114.3 kg/m 24.7	
CASING PERFORATED INTERVAL N/A m		DRILL COLLARS ABOVE TESTER VALVE ID mm 71 LENGTH m 184.03	
TOTAL DEPTH 1811 m		SURFACE CHOKE 25.4 mm	
AMOUNT AND TYPE CUSHION Nil		BOTTOM CHOKE 19.05 mm	

SAMPLE DATA

OIL GRAVITY _____ @ _____ °C

GAS OIL RATIO _____

REFRACTOMETER/RELATIVE DENSITY _____

RECOVERY WATER _____ @ _____ °C

CHLORIDE CONTENT _____ mg/L

SAMPLE SHIPPED TO LABORATORY YES NO

SAMPLER No. _____ ☐ ☒

GAS SAMPLE BOTTLE No. _____ ☐ ☒

LABORATORY N/A

REMARKS
Final Closed In pressures stabilized at 8227.2 kPa for final minutes (zero slope on Horner Extrapolation).

COMPANY EXCO ENERGY LTD.
LEGAL DESCRIPTION Long. 66-13-9.73N Lat. 137-26-10.4W
PROVINCE OR TERRITORY YUKON
FIELD OR AREA WEST PARKIN
TEST NUMBER 3
WELL NAME AND NUMBER FORWARD ET AL WEST PARKIN D-54
TESTED INTERVAL 742 - 747

[illegible]

HALLIBURTON SERVICES LIMITED

SPECIAL PRESSURE DATA

DATE: 85-02-14

TICKET # 60851

* Gauge Number : 2620. *
* Gauge Depth : 729. m *
* Time of Flow : 15.0 min. *
* Final Pressure : 315.4 kPa. *

Initial Hydrostatic Pressure = 8483.3 kPa

Final Hydrostatic Pressure = 8534.6 kPa

GAUGE 1, FLOW 1

	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	639.6
2.	0.0081	5.0	821.5
3.	0.0163	10.1	491.5
4.	0.0243	15.0	315.4

GAUGE 1, CIP 1

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0033	2.0	0.9313	3176.1
2.	0.0066	4.0	0.6784	5677.4
3.	0.0100	6.0	0.5425	7026.8
4.	0.0132	8.0	0.4601	7605.0
5.	0.0166	10.0	0.3977	7913.9
6.	0.0200	12.1	0.3510	8060.3
7.	0.0248	15.0	0.3017	8152.5
8.	0.0332	20.0	0.2429	8205.2
9.	0.0414	25.0	0.2043	8219.8
10.	0.0497	30.0	0.1762	8208.1
11.	0.0581	35.0	0.1548	8225.7
12.	0.0663	40.0	0.1384	8227.2
13.	0.0747	45.0	0.1248	8227.2
14.	0.0829	50.0	0.1140	8227.2
15.	0.0912	55.0	0.1047	8227.2
16.	0.0994	59.9	0.0970	8227.2
17.	0.1078	65.0	0.0902	8227.2
18.	0.1194	72.0	0.0822	8227.2

SPECIAL PRESSURE DATA

DATE: 85-02-14

TICKET # 60851

* Gauge Number : 2620. *
* Gauge Depth : 729. m *
* Time of Flow : 60.0 min. *
* Final Pressure : 828.9 kPa. *

GAUGE 1, FLOW 2

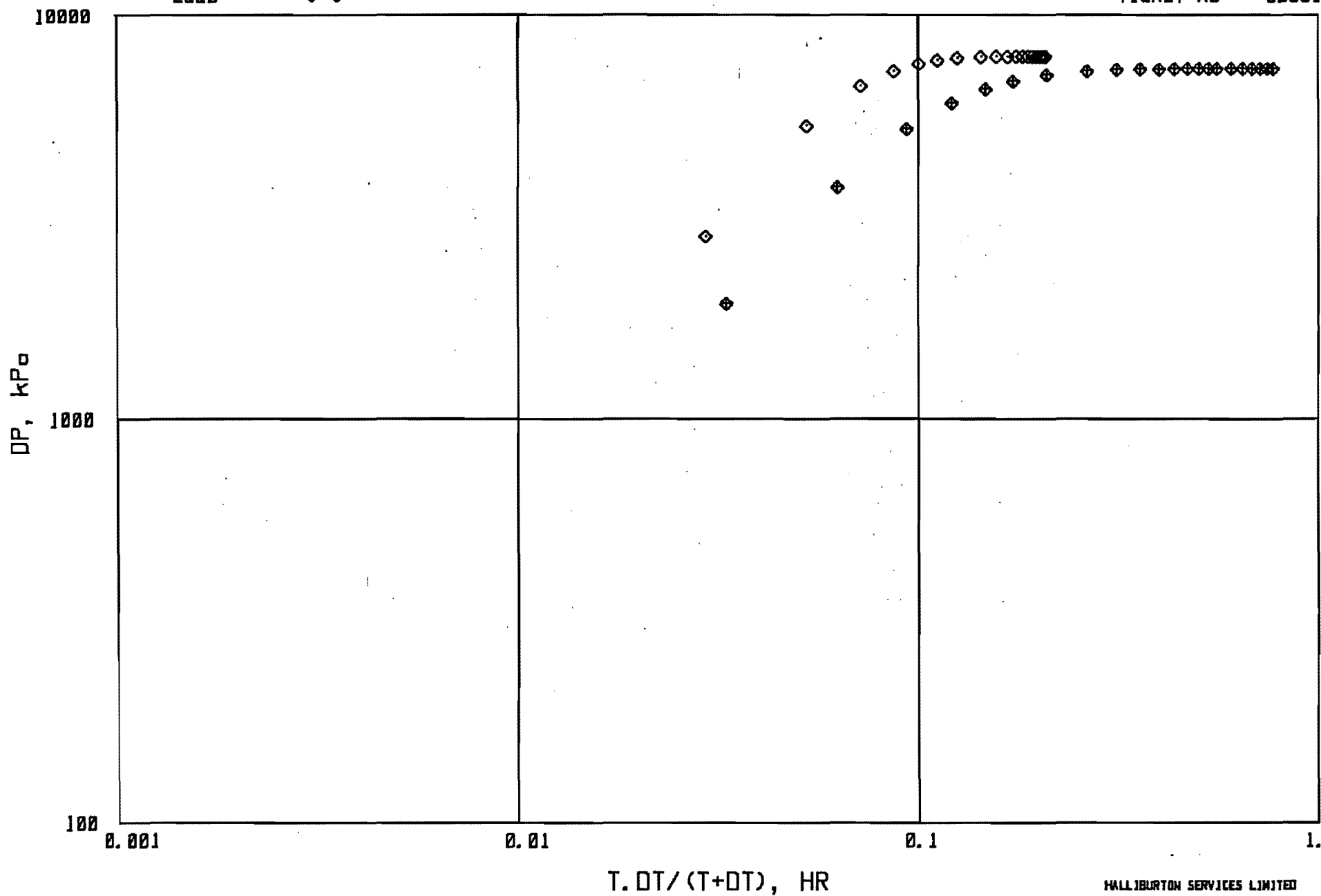
	Time Deflection (in)	Time (minutes)	Pressure (kPa)
1.	0.0000	0.0	264.1
2.	0.0084	5.0	271.4
3.	0.0169	10.0	410.8
4.	0.0254	15.0	553.1
5.	0.0339	20.0	669.0
6.	0.0423	25.0	746.7
7.	0.0508	30.0	786.3
8.	0.0593	35.0	806.9
9.	0.0678	40.0	802.5
10.	0.0763	45.0	828.9
11.	0.0847	50.0	830.3
12.	0.0933	55.0	828.9
13.	0.1017	60.0	828.9

GAUGE 1, CIP 2

	Time Deflection (in)	Time (minutes)	T+dt Log ---- dt	Pressure (kPa)
1.	0.0034	2.0	1.5781	2772.7
2.	0.0066	4.0	1.3007	4621.1
3.	0.0101	6.0	1.1273	6095.5
4.	0.0134	8.0	1.0150	6917.0
5.	0.0167	10.0	0.9296	7420.5
6.	0.0200	12.0	0.8613	7714.8
7.	0.0251	15.0	0.7776	7963.7
8.	0.0334	20.0	0.6769	8118.8
9.	0.0417	25.0	0.6026	8177.4
10.	0.0501	30.0	0.5442	8205.2
11.	0.0585	35.0	0.4972	8193.5
12.	0.0668	40.0	0.4588	8219.8
13.	0.0752	45.0	0.4259	8227.2
14.	0.0836	50.0	0.3978	8227.2
15.	0.0920	55.1	0.3733	8227.2
16.	0.1002	60.0	0.3523	8227.2
17.	0.1170	70.0	0.3162	8227.2
18.	0.1336	80.0	0.2873	8227.2
19.	0.1503	90.0	0.2633	8227.2
20.	0.1670	100.0	0.2431	8227.2
21.	0.1840	110.1	0.2256	8227.2
22.	0.2005	120.0	0.2109	8227.2

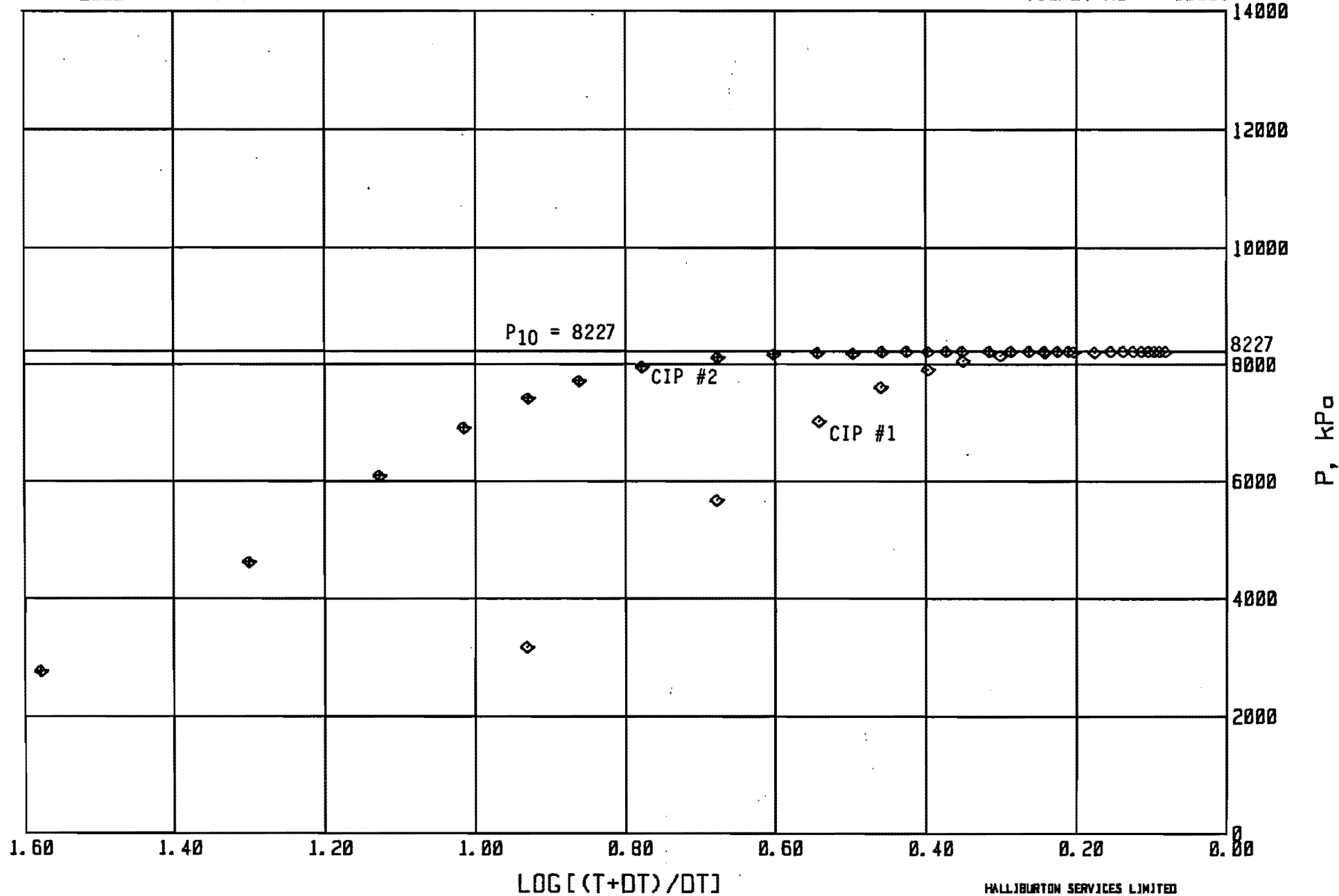
GAUGE NO CIP 1 2
2620 ◇ ◇

TICKET NO 60851



GAUGE NO CIP 1 2
2620

TICKET NO 60851

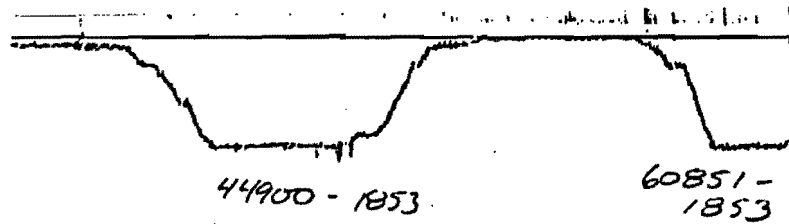
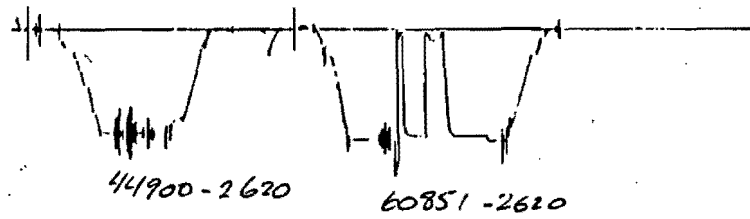


HALLIBURTON SERVICES LIMITED

		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	159.0	71.0	165.80	
50	IMPACT REVERSING SUB.....	155.5	76.2	0.31	
3	DRILL COLLARS.....	159.0	71.0	18.23	
5	CROSSOVER.....	155.5	76.2	0.31	
60	HYDROSPRING TESTER.....	127.0	19.1	3.78	721.34
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	727.28
80	AP RUNNING CASE.....	127.0	57.2	1.25	728.53
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.15	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.52	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	742.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	2.57	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	747.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	748.76
5	CROSSOVER.....	127.0	57.2	0.31	
81	BLANKED-OFF RUNNING CASE.....	127.0	57.2	1.25	750.62
23	BLANK SUB.....	127.0		0.31	

EQUIPMENT DATA

PRESSURE



53 Bot B

A. WELL DATA FIELD DRILL STEM TEST REPORT

DATE 85-02-16

Well: Exco et al West Parkin Y.T. D-54 Location Hart River

DST No. 4 Interval 1042 m - 1047 m Formation Mississippian

Last Casing: Size 244mm Depth 460 m Open Hole: Size 215.9 Depth 1811 m

Hole Troubles: Deviation Bottom Caliper at Packer(s) 217 - 240mm

Mud: Wt. 1190 kg/m³ Vis 80 W.L. 8 % Oil - ppm Cl 200

B. TEST STRING DATA

Testing Company Halliburton Services Ltd. Type of Test Inflate straddle

Type and Number of Packers 2 inflate straddle (Gates) Size 178mm

DP Size 114mm Wt 24.7 kg/m³ Length To Surface

DC Size 171mm Wt 150 kg/m I.D. 71mm Length 184.03 m

Tail Pipe Size N/A Wt Ø Length Ø Perfs - m

T.D. String - Recorder Depth 1027/1028 Water Cushion - BH Choke 19.04mm

Packer Depth(s) 1042 m and 1047 m Weight on Packer(s) No Seat

Other Equipment Temperature Gauge, 2 Bottom Hole Samplers

C. TEST RESULTS MISRUN - Failure to obtain a Packer Seat

Times: PF _____ ISI _____ Flow _____ SI _____ Flow _____ FSI _____

Pressures: PF _____ IH _____ ISI _____ IF _____

TEMP _____ °C FH _____ FSI _____ FF _____

Flow Descriptions:

Preflow: _____

Valve Open Flow: _____

Recoveries: _____

D. SAMPLE DETAILS:

N/A

Sent to: _____ Via: _____ Date Sent: _____

E. REMARKS:

Refer to attached report for details

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER J. Reilly

ALGARY, ALBERTA



CHEMEX LABS (ALBERTA) LTD.

GRANDE PRAIRIE, ALBERTA

CONTAINER IDENTITY

BHS#77

EDMONTON, ALBERTA

GAS ANALYSIS

LABORATORY NUMBER

84-201-6329

LICENCE NO.

OPERATOR NAME AND ADDRESS

EXCO RESOURCES LTD.

CPANUMBER

WELL NAME

FORWARD ET AL WEST PARKIN D-54

KB

ELEVATIONS METERS

GRD

NONE

502.5

FIELD OF AREA

WEST PARKIN

POOL OR ZONE

ORANGE MARKER

NAME OF SAMPLER

COMPANY

HALLIBURTON

TEST RECOVERY

305 M SOUR GAS CUT WATER

SAMPLING POINT

BOTTOM HOLE SAMPLER #77

AMT & TYPE OF CUSHION

MUD RESISTIVITY

@25° C

TEST TYPE NO

DST 3

MULTIPLE RECOVERY

TEST INTERVAL FROM

742.0

TO

747.0

PERFORATIONS FROM

TO

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER m³/d

OIL m³/d

GAS 10³m³/d

GAUGE PRESSURE - KPa

SEPARATOR

TREATER

AS RECEIVED

41

SEPARATOR

TREATER

AS RECEIVED

20

DATE SAMPLED

DATE RECEIVED

DATE REPORTED

ANALYST

Y M D H:M

85-03-NA

Y M D

85-03-04

Y M D

85-03-04

ES

COMP.	MDL FRACTION AIR FREE AS REC'D	MOL FRACTION AIR FREE ACID GAS FREE	LIQUID VOLUME ml. m ³ AIR FREE AS REC'D
H ₂	0.0013	0.0013	
He	0.0002	0.0002	
N ₂	0.1658	0.1663	
CO ₂	0.0028	0.0000	
H ₂ S	0.0000	0.0000	
C ₁	0.7342	0.7362	
C ₂	0.0543	0.0545	
C ₃	0.0245	0.0246	89.62
iC ₄	0.0031	0.0031	13.47
nC ₄	0.0059	0.0059	24.72
iC ₅	0.0019	0.0019	9.24
nC ₅	0.0016	0.0016	7.70
C ₆	0.0019	0.0019	10.22
C ₇	0.0025	0.0025	15.02
C ₈			
C ₉			
C ₁₀			
TOTAL	1.0000	1.0000	169.99

GROSS HEATING VALUE

MJ. m³ @ 15° C AND 101.325 KPa

(MOISTURE AND ACID GAS FREE)

MEASURED

CALCULATED

DEW POINT

VAPOUR PRESS PENTANES PLUS

36.322

65.030

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED

MEASURED

CALCULATED

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED

0.706

0.703

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED

pTc

ACID GAS FREE

pPc

pTc

4421.0

195.5

4412.6

195.1

REMARKS

RECOVERED GAS + 200 CC MUDDY WATER FROM TOOL

DETERMINATIONS TO C7+ ONLY

ALGARY, ALBERTA

CHEMEX LABS (ALBERTA) LTD.

GRANDE PRAIRIE, ALBERTA

EDMONTON, ALBERTA
WATER ANALYSIS

LABORATORY NUMBER

84-201-6329

CONTAINER IDENTITY

BHS#77

LICENCE NO.

OPERATOR NAME AND ADDRESS

EXCO RESOURCES LTD.

CPANUMBER

WELL NAME

FORWARD ET AL WEST PARKIN D-54

KB

ELEVATIONS METERS

GRD

NONE

502.5

FIELD OF AREA

WEST PARKIN

POOL OR ZONE

ORANGE MARKER

NAME OF SAMPLER

COMPANY

HALLIBURTON

TEST RECOVERY

305 M SOUR GAS CUT WATER

SAMPLING POINT

BOTTOM HOLE SAMPLER #77

AMT & TYPE OF CUSHION

MUD RESISTIVITY

@25° C

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

GAUGE PRESSURE - KPa

SEPARATOR

TREATER

AS RECEIVED

41

SEPARATOR

TREATER

AS RECEIVED

20

TEMPERATURES °C

DATE SAMPLED

DATE RECEIVED

DATE REPORTED

ANALYST

Y M O H:M

Y M D

Y M D

85-03-NA

85-03-04

85-03-07

BM

ION	C g. m ⁻³	MASS FRACTION	C mol. m ⁻³
Na	7100		308
K	58		1.48
Ca	210		5.24
Mg	55		2.26
Ba			
Sr			
Fe	11		.197

ION	C g. m ⁻³	MASS FRACTION	C mol. m ⁻³
Cl	11500		324
Br			
I			
HCO ₃	1020		16.7
SO ₄	5.0		.052
CO ₃	0.0		0.0
OH			
H ₂ S	ABSENT		

TOTAL SOLIDS C/g. m⁻³

BY EVAPORATION

BY EVAPORATION,

@ 110° C

@ 180° C

AT IGNITION

CALCULATED

19500

RELATIVE DENSITY

REFRACTIVE INDEX

1.014 @ 15° C

1.338 @ 25° C

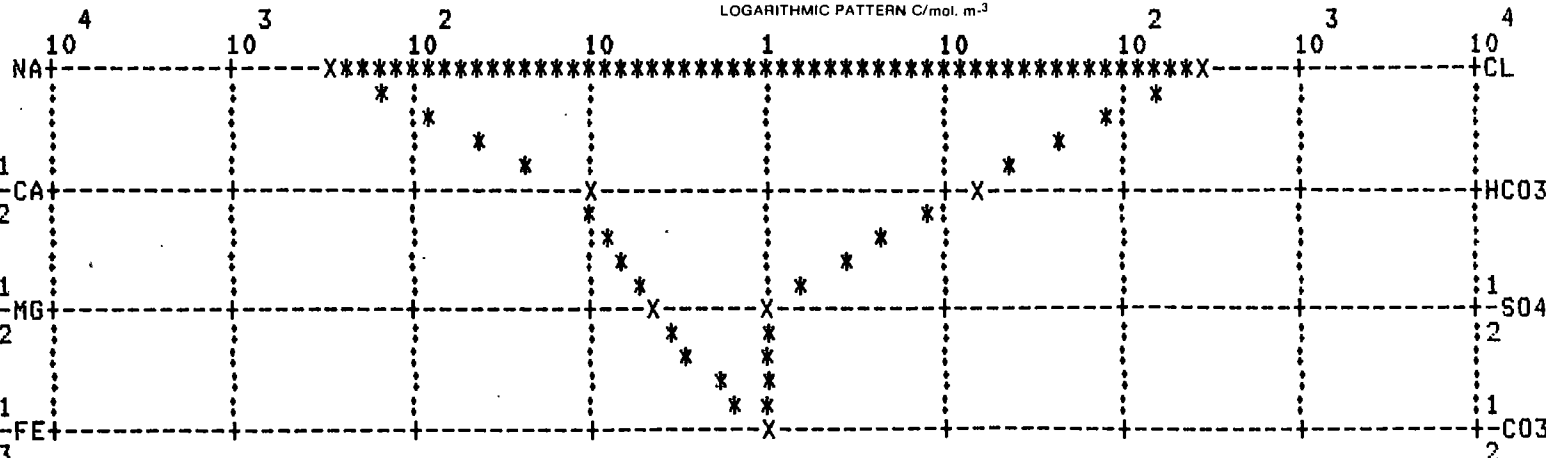
OBSERVED PH

RESISTIVITY Ω m

6.8 @ 25° C

0.340 @ 25° C

LOGARITHMIC PATTERN C/mol. m⁻³



REMARKS

RECOVERED GAS + 200 CC MUDDY WATER FROM TOOL
IRON DONE ON FILTERED SAMPLE

TESTERS	L. Bruneau
WITNESS	J. Rielly
DRILLING CONTRACTOR	Grey Mountain



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO.	60 852
DATE OF TEST	85-02-16
TEST No.	4
JOB TYPE	Hydroflate Straddle

PRESSURE SUMMARY kPa

GAUGE NUMBER	2326	2620	3163	545		
GAUGE DEPTH	1021.34	1028.53	1029.78	1048.76		
BLOCKED OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOUR CLOCK TRAVEL	48	24	24	48		
INITIAL HYDROSTATIC						
FLUID INITIAL						
FLUID FINAL						
FIRST CLOSED IN						
SECOND CLOSED IN						
THIRD CLOSED IN						
FINAL HYDROSTATIC						

TIME PERIODS

	FIRST	SECOND	THIRD	TESTER VALVE OPENED	TIME
CLOSED IN				PACKER UNSEATED	

LIQUID RECOVERY DATA

METRES	DESCRIPTION OF LIQUID
Nil	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED	TEMP. REC. No. DEPTH MAX. TEMP.	N/A
NET PRODUCTIVE THICKNESS	MUD TYPE	Ge1 Chemical
Ground ELEVATION	MUD DENSITY	kg/m ³ 1180 MUD VISC s/L 102
ALL DEPTHS MEASURED FROM:	☐ KB ☒ GROUND	CASING OR HOLE SIZE 216 mm
PACKER DEPTHS TOP 1042 BOTTOM 1047	RATHOLE SIZE	mm
DEPTH OF TESTER VALVE	DRILL PIPE	OD mm 114.3 kg/m 24.7
CASING PERFORATED INTERVAL	DRILL COLLARS ABOVE TESTER VALVE	ID mm 71 LENGTH m 184.03
TOTAL DEPTH	SURFACE CHOKE	25.4 mm
AMOUNT AND TYPE CUSHION	BOTTOM CHOKE	138 L Inhibitor 19.05 mm

SAMPLE DATA

OIL GRAVITY @ °C

GAS OIL RATIO

REFRACTOMETER/RELATIVE DENSITY

RECOVERY WATER @ °C

CHLORIDE CONTENT mg/L

SAMPLE SHIPPED TO LABORATORY	YES	NO
SAMPLER No.	☐	☒
GAS SAMPLE BOTTLE No.	☐	☒
LABORATORY	N/A	

Misrun. No packer seat.

COMPANY	EXCO ENERGY LTD.
LEGAL DESCRIPTION	Lat 66-13-9.73N Long 137-26-10.4W
PROVINCE OR TERRITORY	YUKON
FIELD OR AREA	WEST PARKIN
WELL NAME AND NUMBER	FORWARD ET AL WEST PARKIN D-54
TEST NUMBER	4
TESTED INTERVAL	1042 - 1047

[illegible]

			O.D. (mm)	I.D. (mm)	LENGTH(m)	DEPTH(m)
3		DRILL COLLARS.....	159.0	71.0	19.12	
50		IMPACT REVERSING SUB.....	155.5	76.2	0.31	
3		DRILL COLLARS.....	159.0	71.0	19.14	
5		CROSSOVER.....	155.5	76.2	0.31	
80		AP RUNNING CASE.....	127.0	57.2	1.25	1021.34
60		HYDROSPRING TESTER.....	127.0	19.1	3.78	1022.59
14		EXTENSION JOINT.....	127.0	25.4	2.16	
80		AP RUNNING CASE.....	127.0	57.2	1.25	1028.53
80		AP RUNNING CASE.....	127.0	57.2	1.25	1029.78
82		TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15		JAR.....	127.0	44.5	1.52	
16		VR SAFETY JOINT.....	127.0	25.4	1.06	
26		PUMP ASSEMBLY.....	127.0	22.3	2.15	
27		SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11		HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.52	
13		HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74		TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1042.00
28		PORT ASSEMBLY.....	127.0		1.03	
22		BLANK ANCHOR.....	127.0	57.2	2.57	
75		LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1047.00
97		BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1048.76
5		CROSSOVER.....	127.0	57.2	0.31	
23		BLANK SUB.....	127.0		0.31	

EQUIPMENT DATA

← PRESSURE

60852-2346

60852-2630

60852-3163

2620

A. WELL DATA **FIELD DRILL STEM TEST REPORT**

DATE 85-02-18

Well: Exco et al West Parkin Y.T. D-54 Location _____
 DST No. 5 Interval 1039 m - 1049 m Formation Mississippian (Hart River)
 Last Casing: Size 244mm Depth 460 m Open Hole: Size - Depth -
 Hole Troubles: Failure to obtain a packer seat Caliper at Packer(s) 217/240mm
 Mud: Wt. 1185 kg/m³ Vis 80 W.L. 8 % Oil - ppm Cl 200

B. TEST STRING DATA

Testing Company Halliburton Type of Test Inflate straddle
 Type and Number of Packers 2 Inflate straddle gates Size 178mm
 DP Size 114mm Wt 24.7 kg/m Length To surface
 DC Size 171mm Wt 150 kg/m I.D. 71 Length 38.26 m
 Tail Pipe Size N/A Wt N/A Length N/A Perfs N/A m
 T.D. String _____ Recorder Depth 1026/1027 Water Cushion - BH Choke 19.04mm
 Packer Depth(s) 1038m - 1048 m Weight on Packer(s) -
 Other Equipment Temperature Gauge, 2 Bottom Hole Samplers

C. TEST RESULTS Misrun - Failure to obtain a packer seat.

Times: PF _____ ISI _____ Flow _____ SI _____ Flow _____ FSI _____
 Pressures: PF _____ IH _____ ISI _____ IF _____
 TEMP _____ °C FH _____ FSI _____ FF _____

Flow Descriptions:

Preflow: _____

Valve Open Flow: _____

Recoveries: _____

D. SAMPLE DETAILS:

Sent to: _____ Via: _____ Date Sent: _____

E. REMARKS:

Permission by COGLA to cease testing after 3 attempts. Pumped
20, 40, 60 min. Lowered interval 2 m for final attempt - for
details refer to attached report.

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER J. Reilly

TESTERS

L. Bruneau

WITNESS

J. Rielly

DRILLING CONTRACTOR

Custom 94



FORMATION TESTING
DATA SHEET

REFER TO INVOICE NO.

60 853

DATE OF TEST

85-02-18

TEST No.

5

JOB TYPE

Hydroflate Straddle

PRESSURE SUMMARY kPa						
GAUGE NUMBER	1853	2326	3163	545		
GAUGE DEPTH	1017.34	1024.53	1025.78	1049.76		
PACKED OFF	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
HOURLY CLOCK TRAVEL	48	24	24	24		
INITIAL HYDROSTATIC						
TEST VALVE INITIAL						
TEST VALVE FINAL						
FIRST CLOSED IN						
SECOND TEST VALVE INITIAL						
SECOND TEST VALVE FINAL						
SECOND CLOSED IN						
THIRD TEST VALVE INITIAL						
THIRD TEST VALVE FINAL						
THIRD CLOSED IN						
FINAL HYDROSTATIC						

TIME PERIODS					
	FIRST	SECOND	THIRD		TIME
TEST VALVE OPENED				TESTER VALVE OPENED	
PACKER UNSEATED				PACKER UNSEATED	

LIQUID RECOVERY DATA	
METRES	DESCRIPTION OF LIQUID
Nil	TOTAL LIQUID RECOVERY

EQUIPMENT AND WELL DATA

FORMATION TESTED

TEMP. REC. No.

DEPTH

MAX. TEMP.

N/A

NET PRODUCTIVE THICKNESS

m

MUD TYPE

Gel Chemical

Ground ELEVATION

502.5

m

MUD DENSITY

1180

kg/m³

MUD VISC

102

s/L

ALL DEPTHS MEASURED FROM:

☐ KB

☒ GROUND

CASING OR HOLE SIZE

216

mm

PACKER DEPTHS

TOP

1038

BOTTOM

1048

m

RATHOLE SIZE

mm

DEPTH OF TESTER VALVE

1018.59

m

DRILL PIPE

114.3

OD mm

24.7

kg/m

CASING PERFORATED INTERVAL

N/A

m

DRILL COLLARS ABOVE TESTER VALVE

71

ID mm

38.26

LENGTH m

TOTAL DEPTH

1811

m

SURFACE CHOKE

25.4

mm

AMOUNT AND TYPE CUSHION

138 L Inhibitor

BOTTOM CHOKE

19.07

mm

SAMPLE DATA

OIL GRAVITY

@

°C

GAS OIL RATIO

REFRACTOMETER/RELATIVE DENSITY

RECOVERY WATER

@

°C

CHLORIDE CONTENT

mg/L

SAMPLE SHIPPED TO LABORATORY

YES

NO

SAMPLER No.

☐

☒

GAS SAMPLE BOTTLE No.

☐

☒

LABORATORY

N/A

Misrun. No packer seat, heavy mud build up.

COMPANY

EXCO ENERGY LTD.

LEGAL DESCRIPTION

Lat. 66-13-9.73N

Long. 137-26-10.4W

PROVINCE OR TERRITORY

YUKON

FIELD OR AREA

WEST PARKIN

TEST NUMBER

5

TESTED INTERVAL

1038 - 1048

WELL NAME AND NUMBER

FORWARD ET AL WEST PARKIN D-54

[illegible]

PRODUCTION TEST DATA

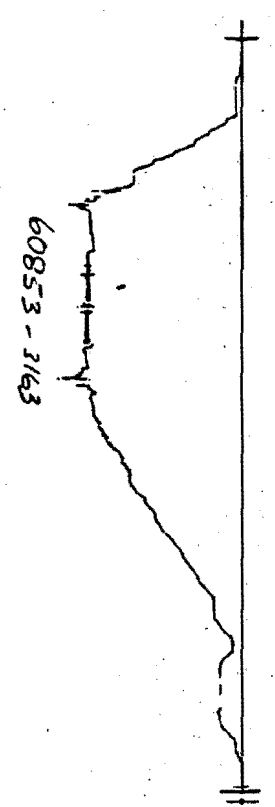
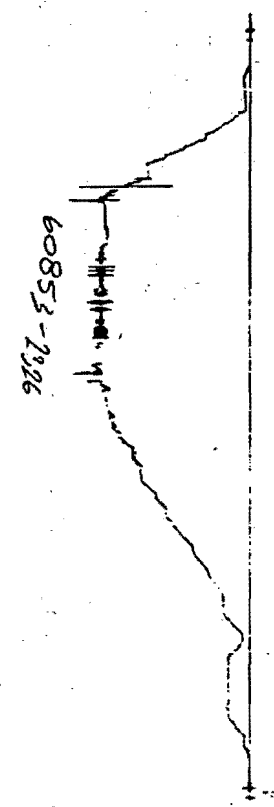
		O.D. (mm)	I.D. (mm)	LENGTH (m)	DEPTH (m)
3	DRILL COLLARS.....	159.0	71.0	19.12	
50	IMPACT REVERSING SUB.....	155.5	76.2	0.31	
3	DRILL COLLARS.....	159.0	71.0	19.14	
5	CROSSOVER.....	155.5	76.2	0.31	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1017.34
60	HYDROSPRING TESTER.....	127.0	19.1	3.78	1018.59
14	EXTENSION JOINT.....	127.0	25.4	2.16	
80	AP RUNNING CASE.....	127.0	57.2	1.25	1024.53
80	AP RUNNING CASE.....	127.0	57.2	1.25	1025.78
82	TEMPERATURE RUNNING CASE.....	127.0	57.2	1.25	
15	JAR.....	127.0	44.5	1.52	
16	VR SAFETY JOINT.....	127.0	25.4	1.06	
26	PUMP ASSEMBLY.....	127.0	22.3	2.15	
27	SCREEN ASSEMBLY.....	127.0	25.4	1.34	
11	HYDROFLATE PRESSURE LIMITER.....	127.0	25.4	1.52	
13	HYDROFLATE SAFETY JOINT.....	127.0	25.4	1.62	
74	TOP HYDROFLATE PACKER.....	177.8	26.9	2.55	1038.00
28	PORT ASSEMBLY.....	127.0		1.03	
22	BLANK ANCHOR.....	127.0	57.2	7.57	
75	LOWER HYDROFLATE PACKER.....	177.8	50.8	2.37	1048.00
97	BELLY SP W/ BLANKED OFF RECORDER		57.2	1.55	1049.76
5	CROSSOVER.....	127.0	57.2	0.31	
23	BLANK SUB.....	127.0		0.31	

EQUIPMENT DATA

← PRESSURE



mid 1853



CASING SUMMARY

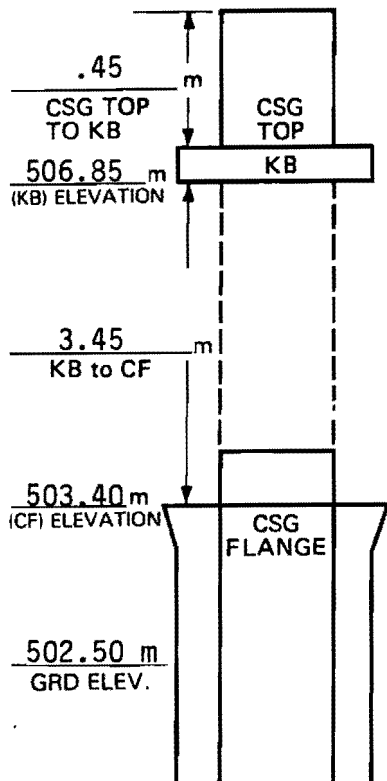
Enclosed are casing summaries for conductor, surface and production casing.

339mm CONDUCTOR CASING

CASING SUMMARY

WELL Exco et al West Parkin Y.I LOCATION D-54 DATE 84-12-21
 Conductor Casing SIZE 339.7mm KB 506.85 m KB to CF 3.45 m
 New/Used _____ Inspected By: Visual Drifted To: N/A API diam. _____

NO.	DESCRIPTION	MEASURED LENGTH	KB DEPTH
1	Davis Guide	.90	52.66
4	Jts 339.7mm 81.10 kg/m K-55	53.11	+ 0.45
	Scratchers		
3	Centralizers Gem Latch		
	Total String	54.01	Cut-off Jt. Length
	minus KB to Csg Top (STICK UP)	.45	
	Landed Depth KB	53.56	
	Hole Depth KB	53.70	
	Distance Csg Landed Off Bottom	.14	



Cementing Company Halliburton Services Ltd.

Wash - Type: Water Volume .2 m³

Cement Type - Lead Slurry Permafrost 9.4 T Volume: 7 m³

Additives None Volume: _____

Cement Type - Tail Slurry _____ Volume: _____

Additives _____ Volume: _____

Cement Type - Above Stage Collar _____ Volume: _____

Additives _____ Volume: _____

Displacement Rate: Max. .44 Avg. .44 (m³/min)

Calculated Cement Top(s) Surface KB _____ KB

Returns: Mud Continuous m³ Cement 4.4 m³

String Wt. in a mud wt. of: 1070 kg/m³ = _____ daN

Wt. set on Slips: N/A daN

Remarks: Cement yield .74 m³/tonne

Water ratio .39 m³/tonne

Density 1880 kg/m³

Engineer: J. Reilly

PIPE TALLY SHEET

PAGE _____ OF _____

WELL Exco et al West Parkin Y.T. D-54 LOCATION _____

SIZE 339.7mm WT. 81.1 kg/m GRADE K-55 COUPLING LT&C THRD 8 RD

DATE 84-12-20

JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH	
1	13	41	11			21			31			41		
2	13	15	12			22			32			42		
3	13	53	13			23			33			43		
4	13	02	14			24			34			44		
5			15			25			35			45		
6			16			26			36			46		
7			17			27			37			47		
8			18			28			38			48		
9			19			29			39			49		
10			20			30			40			50		
A	53	11	B			C			D			E		
51			61			71			81			91		
52			62			72			82			92		
53			63			73			83			93		
54			64			74			84			94		
55			65			75			85			95		
56			66			76			86			96		
57			67			77			87			97		
58			68			78			88			98		
59			69			79			89			99		
60			70			80			90			100		
F			G			H			I			J		

A					Shoe <u>.90</u> Float _____ Collar _____ Other _____ PAGE TOTAL BROUGHT FWD GRAND TOTAL JOINTS ON LOCATION _____	JOINTS	LENGTH
B						4	53.11
C							-
D						4	53.11
E							
F							
G							
H							
I							
J							
TOTAL							

Remarks: _____

ENGINEER J. Reilly

NOTE: Use a new page for each casing type. Number joints in order of running.
 Indicate joints not run by * and do not include in total length.

244mm SURFACE CASING



CASING SUMMARY

WELL Exco et al West Parkin Y.T LOCATION D-54 DATE 85-01-03
SURF/INT/PROD/LINER SIZE 244.5mm KB 506.85 m KB to CF 3.93 m
New/Used _____ Inspected By: Visual Drifted To: 8-5/8 API diam. _____

NO.	DESCRIPTION	MEASURED LENGTH	KB DEPTH
1	Davis Guide	.49	460.27
1	244.5 csg. N80 64.73 kg/m	11.95	448.32
1	Davis Float	.54	447.78
38	244.5 csg. N80 64.73 kg/m	448.48	+ 0.70
	Scratchers		
3	Centralizers 455.32, 443.55, 421.72		
	Total String	461.46	Cut-off Jt. Length
	minus KB to Csg Top (STICK UP)	.70	
	Landed Depth KB	460.76	
	Hole Depth KB	460.86	
	Distance Csg Landed Off Bottom	.10	

Diagram labels:
CSG TOP TO KB: .70 m
CSG TOP
KB
506.85 m (KB) ELEVATION
KB to CF: 3.93 m
502.92 m (CF) ELEVATION
CSG FLANGE
502.50 m GRD ELEV.

Cementing Company Halliburton Services Ltd.Wash - Type: Water Volume 1.6 m³Cement Type - Lead Slurry Permafrost 6.1 tonnes Volume: 4.5 m³Yield: 7.5 m³/T Wt: 1880 kg/m³ Volume: _____Cement Type - Tail Slurry Class "G" 16.85 T Volume: 12.81 m³Additives 2% CaCl₂ Yield: .75 Wt: 1895 Volume: _____

Cement Type - Above Stage Collar _____ Volume: _____

Additives _____ Volume: _____

Displacement Rate: Max. _____ Avg. .54 (m³/min)Calculated Cement Top(s) Surface KB 5.35 KBReturns: Mud Continuous m³ Cement 2 m³String Wt. in a mud wt. of: 1120 kg/m³ = 30,000 daNWt. set on Slips: N/A daNRemarks: Bump plug w/1000 kPa @ 0817 85-01-03Bleed back pressure. Float held.Displace w/17.43 m³ mud.Engineer: Derry Lodder

PIPE TALLY SHEET

PAGE _____ OF _____

WELL Exco et al West Parkin Y.T. D-54 LOCATION _____

SIZE 244.4mm WT. 64.7 kg/m GRADE N80 COUPLING LT&C THRD 8 RD

DATE 85-01-01

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	11 95	11	11 96	21	11 48	31	11 82	41	
2	11 77	12	12 05	22	11 94	32	12 05	42	
3	11 91	13	11 87	23	11 93	33	11 69	43	
4	11 77	14	11 93	24	11 86	34	11 70	44	
5	11 83	15	11 94	25	11 74	35	11 79	45	
6	11 91	16	11 87	26	11 99	36	11 18	46	
7	11 80	17	11 67	27	11 80	37	12 07	47	
8	11 78	18	11 13	28	11 94	38	11 58	48	
9	11 70	19	11 85	29	11 90	39	12 00	49	
10	11 76	20	11 71	30	11 85	40		50	
A	118 18	B	117 94	C	118 43	D	105 88	E	
51		61		71		81		91	
52		62		72		82		92	
53		63		73		83		93	
54		64		74		84		94	
55		65		75		85		95	
56		66		76		86		96	
57		67		77		87		97	
58		68		78		88		98	
59		69		79		89		99	
60		70		80		90		100	
F		G		H		I		J	

	JOINTS	LENGTH
A	118	18
B	117	94
C	118	43
D	105	88
E		
F		
G		
H		
I		
J		
TOTAL	460	43

Shoe .49

Float .54

Collar _____

Other _____

PAGE TOTAL _____

BROUGHT FWD _____

GRAND TOTAL _____

JOINTS ON LOCATION _____

REMARKS: Shoe and float thread locked and welded.

Centralizers on shoe jt, 3rd jt & 5th jt.

ENGINEER D. Lodder

NOTE: Use a new page for each casing type. Number joints in order of running. Indicate joints not run by * and do not include in total length.

HALLIBURTON

CEMENTING AND/OR SPECIAL TOOLS
SERVICE REPORTATTACH TO
INVOICE No. _____HALLIBURTON DISTRICT
FrontierJOB
DATE 1985 01 03
YEAR MONTH DAY

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER Gray Mountain Drilling				FIELD OR AREA West Parkin				WELL No. AND LEASE West Parkin D-54			
DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	
85-01-01	85-01-03	06:43	08:12	Yukon							

TYPE OF JOB	WELL OR HOLE DATA										PRODUCTS	
SURFACE											EQUIPMENT	QUAN
INTERMEDIATE											BASKETS	
PRODUCTION											CENTRALIZERS	
INNER											CLAMPS	
SQUEEZE											FLOAT COLLAR	X
PLUG											FLOAT SHOE	X
PUMP											GUIDE SHOE	
PRESSURE TEST											INSERT FLOAT	
OTHER											SCRATCHERS	
OTHER												

EQUIPMENT			
PACKER		CEMENT HEAD	
TYPE	SIZE	TOP PLUG TYPE	CONTINUOUS ☐ KNOCK OFF ☐ SWAGE ☒
DEPTH	TAIL	BOTTOM PLUG TYPE	OTHER
SET	PIPE		

CEMENT DATA							
TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m ³	m ³ /tonne
6.1	G	Inland	Sacked	Permafrost Oilwell		1880	0.74
16.85	G	Inland	Sacked	Oilwell	2% CaCl ₂	1894	0.76

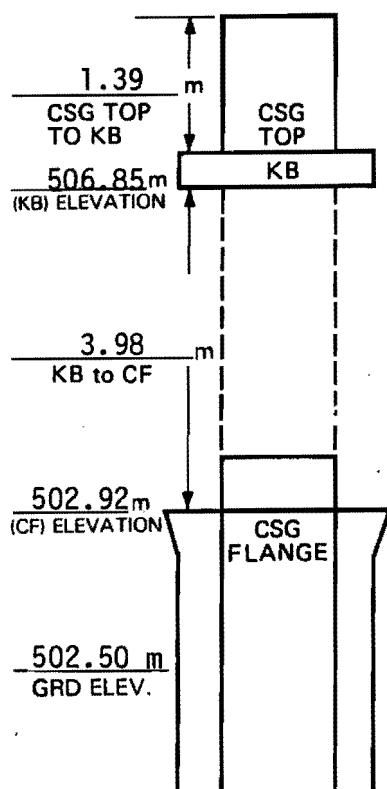
HALLIBURTON OPERATOR R. Drader CUSTOMER REP.

TREATING LOG								
CHART POSITION	TIME	RATE m ³ /min	VOLUME PUMPED IN m ³			PRESSURE MPa		REMARKS
			STAGE	TOTAL	IN FORMATION	TUBING	CASING	
								Release bottom wiper plug.
1	06:43 06:45	0.75						Pump 1.6 m ³ H ₂ O ahead.
2	06:45 07:40	0.3						Mix and pump 4.5 m ³ Permafrost slurry. Mix and pump 12.81 m ³
								Neat + 2% CaCl ₂ .
3	07:40 07:45							Release top wiper plug.
4	07:45 08:17	0.54					1.0	Displace with mud and bump plug.
								Returns 2 m ³ slurry.

139.7mm PRODUCTION CASING

CASING SUMMARY

WELL Exco et al West Parkin Y.I LOCATION D-54 DATE _____
 PROD/ SIZE 139.7mm KB 506.85 m KB to CF 3.98 m
 New/Used Inspected By: Visual Drifted To: N/A API diam. _____



NO.	DESCRIPTION	MEASURED LENGTH	KB DEPTH
1	Float Shoe	.49	1096.41
1	jt 139.7mm K-55	11.33	1085.08
1	Float Collar	.54	1084.54
97	jts 139.7mm K-55	1085.93	+ 1.39
11	Scratchers		
8	Centralizers		
Total String		1098.29	Cut-off Jt. Length 5.3 m
minus KB to Csg Top (STICK UP)		1.39	
Landed Depth KB		1096.90	
Hole Depth Plugged Back		1105.50	
Distance Csg Landed Off Bottom		8.60	

Cementing Company Halliburton Services Ltd.

Wash - Type: SAAP Volume 1.3 m³

Cement Type - Lead Slurry Permafrost 11.0T Volume: 9.44 m³

Additives CFR-2 0.75% Volume: 0.74 m³/tonne

Cement Type - Tail Slurry Class "G" 36.0T Volume: 31.4 m³

Additives CFR-2 0.75% Volume: 0.76 m³/tonne

Cement Type - Above Stage Collar - Volume: _____

Additives - Volume: _____

Displacement Rate: Max. 1.1 m³/m Avg. 0.65 m³/m (m³/min)

Calculated Cement Top(s) Permafrost - Surface KB G - 150 m KB

Returns: Mud 34 m³ m³ Cement 3.5 m³

String Wt. in a mud wt. of: _____ kg/m³ = _____ daN

Wt. set on Slips: _____ daN

Remarks: Caliper log (w/volume integration) appeared to derive volume somewhat higher than actual volume, leading to excessive cement returns.

Engineer: J. Reilly

PIPE TALLY SHEET

PAGE _____ OF _____

WELL Exco et al West Parkin Y.T. D-54 LOCATION _____

SIZE 139.7mm WT. 23.07 kg/m GRADE K-55 COUPLING LT&C THRD 8RD

DATE _____

JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH		JOINT	LENGTH	
1	11	33	11	11	10	21	11	42	31	11	24	41	11	05
2	11	36	12	11	11	22	11	26	32	11	10	42	11	14
3	11	21	13	11	26	23	11	16	33	11	36	43	11	31
4	11	45	14	11	32	24	11	11	34	11	27	44	11	30
5	11	38	15	10	70	25	11	20	35	11	26	45	11	26
6	11	43	16	10	66	26	11	44	36	11	40	46	11	10
7	11	32	17	11	45	27	11	34	37	11	36	47	11	21
8	11	37	18	11	09	28	11	36	38	11	30	48	11	20
9	11	37	19	11	34	29	11	21	39	11	34	49	11	17
10	11	34	20	11	26	30	11	37	40	11	22	50	11	13
A	113	56	B	111	29	C	112	87	D	112	85	E	111	87
51	11	19	61	11	36	71	11	05	81	11	21	91	11	10
52	11	11	62	11	39	72	10	94	82	11	15	92	11	04
53	11	13	63	10	73	73	11	29	83	11	00	93	11	03
54	11	18	64	11	21	74	11	37	84	11	14	94	10	96
55	11	10	65	11	19	75	11	06	85	11	32	95	11	10
56	11	36	66	11	13	76	11	10	86	11	21	96	11	22
57	11	35	67	11	09	77	10	42	87	11	11	97	11	21
58	11	04	68	11	24	78	11	11	88	11	10	98	11	12
59	11	05	69	11	22	79	11	32	89	11	19	99	11	21
60	11	25	70	11	12	80	11	19	90	11	32	100	11	12
F	111	76	G	111	68	H	110	85	I	111	75	J	111	11

	SUB TOTAL	
A	113	56
B	111	29
C	112	87
D	112	85
E	111	87
F	111	76
G	111	68
H	110	85
I	111	75
J	111	11
TOTAL	1119	59

Shoe 49
Float Collar .54
Other _____
(1.03)

PAGE TOTAL
BROUGHT FWD
GRAND TOTAL

JOINTS	LENGTH
100	1119.59
less	22.33
	1097.26

JOINTS ON LOCATION 150

Remarks: Casing landed at 1096.9 m.

Float shoe, float collar thread-locked.

ENGINEER J. Reilly

NOTE: Use a new page for each casing type. Number joints in order of running.
Indicate joints not run by * and do not include in total length.

HALLIBURTON

CEMENTING AND/OR SPECIAL TOOLS
SERVICE REPORT

ATTACH TO

INVOICE No. _____

HALLIBURTON DISTRICT

Frontier

JOB DATE 1985 02 19
YEAR MONTH DAY

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER Gray Mountain Drilling		FIELD OR AREA West Parkin		WELL No. AND LEASE West Parkin D-54	
CALLER OUT DATE TIME	ON LOCATION 85-02-19 DATE TIME	JOB STARTED 85-02-19 DATE TIME 10:12	JOB COMPLETED 85-02-19 DATE TIME 13:40	PROVINCE Yukon	SEC
		LSD	TWP	RANGE	MERIDIAN W

TYPE OF JOB ✓	WELL OR HOLE DATA										PRODUCTS	
											EQUIPMENT	QUAN
SURFACE											BASKETS	
INTERMEDIATE											CENTRALIZERS	
PRODUCTION ✓											CLAMPS	
INNER											FLOAT COLLAR	
SQUEEZE											FLOAT SHOE	
PLUG											GUIDE SHOE	
PUMP											INSERT FLOAT	
PRESSURE TEST											SCRATCHERS	
OTHER											OTHER	

EQUIPMENT

PACKER		TOP PLUG TYPE		CEMENT HEAD	
TYPE	SIZE	5W Rubber		CONTINUOUS ☐ KNOCK OFF ☐ SWAGE ☒	
DEPTH	TAIL	BOTTOM PLUG TYPE		OTHER	
SET	PIPE	5W Rubber			

CEMENT DATA

TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m ³	m ³ /tonne
11	G	Inland	Bulk	Permafrost		1880	0.74
36	G	Inland	Bulk	Oilwell	0.75% CFR-2	1895	0.76

HALLIBURTON OPERATOR L. Mastel CUSTOMER REP.

TREATING LOG

CHART POSITION	TIME	RATE m ³ /min	VOLUME PUMPED IN m ³			PRESSURE MPa		REMARKS
			STAGE	TOTAL	IN FORMATION	TUBING	CASING	
1	10:10 10:15	0.954				Max Min	4.0 1.0	Pump 1.59 m ³ H ₂ O wash.
2	10:15 13:15	0.477					5.0 1.0	Mix and pump cement.
3	13:15 13:20							Release 139 mm plug.
4	13:20 13:40	0.67					15.0 2.0	Displace with 13.4 m ³ H ₂ O.
5								Bump plug at 17 MPa.

BIT RECORD



BIT RECORD

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

Contractor Gray Mountain Drilling Rig No. 1 (Custom 94) Field Eagle Plains Y.T.

Spud Date 84-12-20 1200 hours T.D. Date 85-02-09 0730 hours Rig Release Date 85-02-19 2400 hours

BIT NO.	SIZE mm	MAKE & TYPE	DEPTH OUT	METRES DRLD	ROT. HOURS		WEIGHT ON BIT – daN	BIT RPM	JETS - mm			PUMP PRESS kPa or MPa	PUMP OUT - PUT m3/min	DULL COND.			
									1	2	3			T	B	G	
1A	311.2	S21G-J	53	53	6.50	8.15	7	100	15	16	18	5000	.977	2	2	I	
1A	444.5	DSJ	53	Ream rat hole	-	-	7	100	12.7	12.7	12.7	4500	1.37	2	2	I	
1B	311.2	XDV	142	89	17.00	5.24	10	80/100	0	P	E	N	1000	1.41	6	4	I
2B	311.2	SDG	396	254	42.25	6.01	6 - 12	80/100	9.5	9.5	OPEN	5000	1.38	4	3	I	
3B	311.2	XI6	460	64	13.00	4.92	7	100	7.9	10.3	OPEN	5000	1.34	4	2	I	
1	215.9	S44	518	58	12.75	4.55	7 - 10	60/80	8.7	9.5	9.5	8000	1.086	8	7	I	
2	215.9	F2	673	155	40.75	3.80	6	60	8.7	9.5	9.5	8000	1.086	4	2	I	
3	215.9	F2	810	137	34.25	4.00	10	65	8.7	9.5	9.5	7000	1.086	4	5	I	
4	215.9	F2	1001	191	56.75	3.37	14 - 15	60	7.9	9.5	9.5	6000	1.310	3	5	3	
5	215.9	J33	1029	28	18.75	1.49	12	42	7.1	7.1	7.9	8000	0.760	8	8	1.5	
6	215.9	M84F	1077	48	29.00	1.65	14	55	8.7	8.7	9.5	8000	0.96	8	8	1.5	
7	215.9	M89F	1123	46	23.75	1.94	15	60	8.7	8.7	9.5	6000	1.086	4	3	1.5	
8	215.9	M89TF	1167	44	25.50	1.73	15	55	8.7	8.7	9.5	7800	1.014	7	8	3	
9	215.9	J55	1245	78	33.50	2.33	16	55	8.7	8.7	9.5	8000	1.104	8	8	3	
10	215.9	FP64J	1285	40	19.25	2.08	14	56	8.7	8.7	9.5	8000	1.104	8	3	3	
11	215.9	FP63J	1376	91	50.50	1.80	14 - 16	55	8.7	8.7	8.7	8000	1.104	8	6	3	

REMARKS Bit #9 - 3 cones left on bottom, successfully drilled up with Bit #10.

MUD REPORT

MUD ADDITIVES

Well: Exco et al West Parkin Y.T. D-54

Drilling Day	Gel	Sawdust	Lime	Caustic	Kwikseal	Bicarb	Polyguard	Polysec	SAPP	CMC	Cypan	Barite
1	51	50	2	2								
2	15		1									
3												
4	27	75	2	4	5							
5	54	160	3	7	4							
6	59	93	3	2	23							
7	90	30		4								
8	60											
9	11	48			3							
10	47			1								
11	53			3								
12	51			3								
13	37			2								
14	49			2								
15												
16												
17	80	210		3		3						
18												
19	26	15				6	20	4	1	2		
20	22			2				2		1		
21	12	5					10	2		1		
22	6	70						1		1	1	
23	22			1			10					
24												85
25	12			2				2		1	1	
26	10	20		3			10	2		1	1	50
27	27							4		1	1	
28	6			1			10	1				
29												
30	35			1			10	6				
31	26			4				5		2	1	50
32	26	30					10	5				65
Totals	914	806	11	47	35	9	80	34	1	10	5	250

MUD ADDITIVES

Well: Exco et al West Parkin Y.T. D-54

Drilling Day	Gel	Sawdust	Lime	Caustic	Kwikseal	Bicarb	Polyguard	Polysec	SAPP	CMC	Cypan	Barite
33												
34	21	10					10	4		1	1	90
35	10			2				2				40
36	22			2				2				80
37		30					10					
38	16	30	3	1				3		1	1	40
39	4	30					10	4				75
40	44	30						9				18
41	28						10	5				56
42	10			1				5		1	1	78
43			2	2			10					145
44	12							2		1	1	60
45	51			2			10	12				200
46	39			2				7				120
47	20			1			10	4		1	1	80
48	24			1				4				80
49												
50	27			2			10	5				60
51	18	50		1				3				
52							10			1	1	
53												
54	22	20		1			6	5				40
55												
56												
57	20			1								30
58	45			3			20					97
59												
60												
61												
62												
Totals	433	200	5	22	--	--	116	76	--	6	6	1389
Total Used	1347	1006	16	69	35	9	196	110	1	16	11	1639

DIRECTIONAL SURVEY

Enclosed is the directional survey report for Exco et al West Parkin Y.T. D-54 with the bottom hole co-ordinates calculated as:

Total Depth:	1791.00m
True Vertical Depth:	1784.75m
Latitude:	67.84m N
Departure:	93.18m E
Closure:	115.26m N 53.94m E

Note: The last survey point was taken at 1791.00 metres measured depth while total depth was drilled to 1811 metres.

A directional completion plot is enclosed in the pocket enclosure located inside the back cover.

DIRECTIONAL SERVICES DIVISION

DIRECTIONAL SURVEY REPORT

FOR

EXCO ET AL. WESTPARKIN D54

EXCO ENERGY LTD.

DATE: 19850327

COMPLETED DIRECTIONAL SURVEY

19850327

EXCO ET AL WESTPARKIN D54
EXCO ENERGY LTD.

STA NO.	TOTAL DEPTH	DRIFT ANGLE	VERT. DEPTH	DRIFT DIRECT	LATITUDE	DEPARTURE	VERT. SECTION	DOG LEG
0	0.00	0.00	0.00	N 00 E	0.00 N	0.00 E	0.00	0.00
1	464.90	0.00	464.90	N 00 E	0.00 N	0.00 E	0.00	0.00
2	484.07	2.00	484.07	N 55 E	0.19 N	0.27 E	0.33	3.13
3	503.24	2.50	503.22	N 55 E	0.62 N	0.89 E	1.09	0.78
4	522.41	2.25	522.37	N 54 E	1.08 N	1.54 E	1.88	0.40
5	541.58	3.00	541.52	N 61 E	1.55 N	2.28 E	2.76	1.27
6	560.75	3.00	560.67	N 63 E	2.02 N	3.17 E	3.75	0.16
7	579.92	3.60	579.81	N 63 E	2.52 N	4.15 E	4.84	0.94
8	599.09	3.60	598.94	N 66 E	3.04 N	5.24 E	6.02	0.30
9	618.26	3.90	618.07	N 64 E	3.57 N	6.37 E	7.25	0.51
10	637.43	3.90	637.19	N 65 E	4.13 N	7.55 E	8.53	0.11
11	656.60	4.10	656.32	N 62 E	4.73 N	8.74 E	9.85	0.45
12	675.77	4.50	675.43	N 71 E	5.29 N	10.06 E	11.25	1.23
13	694.94	4.25	694.55	N 75 E	5.72 N	11.46 E	12.63	0.62
14	714.11	4.25	713.66	N 72 E	6.13 N	12.82 E	13.97	0.35
15	733.28	4.60	732.78	N 75 E	6.55 N	14.24 E	15.36	0.66
16	752.45	4.90	751.88	N 69 E	7.04 N	15.74 E	16.87	0.91
17	771.62	5.00	770.98	N 74 E	7.56 N	17.31 E	18.45	0.69
18	790.79	5.25	790.07	N 69 E	8.11 N	18.93 E	20.08	0.80
19	809.96	5.75	809.16	N 75 E	8.67 N	20.68 E	21.82	1.19
20	829.13	5.90	828.23	N 74 E	9.19 N	22.55 E	23.64	0.28
21	848.30	6.00	847.29	N 72 E	9.77 N	24.45 E	25.52	0.36
22	867.47	5.75	866.36	N 71 E	10.39 N	26.32 E	27.39	0.42
23	886.64	5.60	885.44	N 70 E	11.02 N	28.10 E	29.21	0.28
24	905.81	5.75	904.51	N 67 E	11.72 N	29.87 E	31.04	0.52
25	924.98	5.75	923.59	N 65 E	12.50 N	31.62 E	32.92	0.31
26	944.15	6.00	942.66	N 71 E	13.23 N	33.44 E	34.82	1.04
27	963.32	5.75	961.73	N 69 E	13.90 N	35.28 E	36.71	0.51
28	982.49	5.50	980.80	N 69 E	14.58 N	37.04 E	38.52	0.39
29	1001.66	6.00	999.88	N 68 E	15.28 N	38.82 E	40.38	0.80
30	1020.83	5.80	1018.95	N 67 E	16.03 N	40.64 E	42.29	0.35
31	1040.00	6.00	1038.01	N 64 E	16.85 N	42.43 E	44.22	0.58
32	1059.17	6.00	1057.08	N 62 E	17.76 N	44.22 E	46.20	0.33
33	1078.34	5.90	1076.15	N 68 E	18.60 N	46.02 E	48.15	0.99
34	1097.51	6.25	1095.21	N 68 E	19.36 N	47.90 E	50.12	0.55
35	1116.68	6.00	1114.27	N 70 E	20.10 N	49.81 E	52.09	0.51
36	1135.85	5.90	1133.34	N 72 E	20.74 N	51.69 E	53.99	0.36
37	1155.02	6.00	1152.40	N 71 E	21.37 N	53.57 E	55.89	0.23
38	1174.19	5.20	1171.48	N 62 E	22.11 N	55.29 E	57.71	1.86
39	1193.36	5.25	1190.57	N 69 E	22.83 N	56.87 E	59.41	1.00
40	1212.53	5.75	1209.65	N 68 E	23.50 N	58.58 E	61.19	0.80
41	1231.70	5.75	1228.73	N 75 E	24.11 N	60.40 E	63.02	1.10
42	1250.00	5.75	1246.94	N 47 E	24.97 N	61.95 E	64.79	4.55
43	1309.00	5.50	1305.66	N 38 E	29.22 N	65.86 E	70.44	0.47
44	1353.00	5.30	1349.46	N 42 E	32.39 N	68.51 E	74.45	0.29

PAGE 2

COMPLETED DIRECTIONAL SURVEY

19850327

EXCO ET AL WESTPARKIN D54
EXCO ENERGY LTD.

STA NO.	TOTAL DEPTH	DRIFT ANGLE	VERT. DEPTH	DRIFT DIRECT	LATITUDE	DEPAR- TURE	VERT. SECTION	DOG LEG
45	1420.00	2.80	1416.29	N 23 E	36.20 N	71.23 E	78.89	1.26
46	1510.00	3.00	1506.18	N 15 E	40.49 N	72.69 E	82.60	0.15
47	1567.00	3.50	1563.09	N 37 E	43.33 N	74.13 E	85.43	0.70
48	1625.00	6.75	1620.85	N 38 E	47.43 N	77.29 E	90.40	1.68
49	1654.00	10.00	1649.53	N 38 E	50.75 N	79.89 E	94.46	3.36
50	1683.00	10.50	1678.07	N 44 E	54.64 N	83.28 E	99.48	1.22
51	1702.00	10.00	1696.77	N 49 E	56.97 N	85.73 E	102.83	1.61
52	1744.00	8.75	1738.21	N 38 E	61.88 N	90.44 E	109.54	1.56
53	1759.00	7.75	1753.06	N 24 E	63.70 N	91.56 E	111.51	4.47
54	1791.00	8.25	1784.75	N 19 E	67.84 N	93.18 E	115.26	0.80

COMPLETED DIRECTIONAL SURVEY

DATE: 19850327

COMPANY: EXCO ET AL WESTPARKIN D54

WELLNAME: EXCO ENERGY LTD.

THE DRIFT DIRECTION IS EXPRESSED IN QUADRANT DIRECTION.

ALL ANGLES ARE EXPRESSED IN DECIMAL DEGREES

ALL DISTANCES ARE EXPRESSED IN METRES

A DECLINATION OF 34 DEGREES EAST HAS BEEN APPLIED.

VERTICAL SECTION WAS CALCULATED ALONG N 53.94 E

CLOSURE IS 115.26 METRES N 53.94 E

DOGLEG SEVERITY IS IN DEGREES PER 30 METRES.

MINIMUM CURVATURE METHOD OF CALCULATION

PRESSURE TESTS

Enclosed is a record of the pressure test performed on the 244mm casing and Blow Out Preventors.

[illegible]



CEMENTING AND/OR SPECIAL TOOLS
SERVICE REPORT

ATTACH TO
INVOICE No. _____

HALLIBURTON DISTRICT
Frontier

JOB DATE 1985 01 06
YEAR MONTH DAY

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER Gray Mountain Drilling			FIELD OR AREA West Parkin			WELL No. AND LEASE West Parkin D-54				
DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	
85-01-06	20:30	85-01-06	23:00	Yukon						

TYPE OF JOB	WELL OR HOLE DATA								PRODUCTS	
TYPE OF JOB									EQUIPMENT	QUAN
TYPE OF JOB									BASKETS	
TYPE OF JOB									CENTRALIZERS	
TYPE OF JOB									CLAMPS	
TYPE OF JOB									FLOAT COLLAR	
TYPE OF JOB									FLOAT SHOE	
TYPE OF JOB									GUIDE SHOE	
TYPE OF JOB									INSERT FLOAT	
TYPE OF JOB									SCRATCHERS	
TYPE OF JOB									OTHER	

EQUIPMENT		
PACKER	CEMENT HEAD	
TYPE	SIZE	TOP PLUG TYPE
DEPTH	TAIL	BOTTOM PLUG TYPE
SET	PIPE	

CEMENT DATA									
TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m³	m³/tonne		

HALLIBURTON OPERATOR	R. Drader	CUSTOMER REP.
----------------------	-----------	---------------

TREATING LOG									
CHART POSITION	TIME	RATE m³/min	VOLUME PUMPED IN m³			PRESSURE MPa		REMARKS	
			STAGE	TOTAL	IN FORMATION	TUBING	CASING		
								Pressure test: BOP's	
								Pipe rams, hydril, inner and outer	
								kill valve, keey cock and stabling	
								valve.	



CEMENTING AND/OR SPECIAL TOOLS SERVICE REPORT

ATTACH TO
INVOICE No.

HALLIBURTON DISTRICT
Frontier

JOB DATE 1985 01 07
YEAR MONTH DAY

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER Gray Mountain Drilling				FIELD OR AREA West Parkin				WELL No. AND LEASE West Parkin D-54											
CALLED OUT		ON LOCATION		JOB STARTED 85-01-07		JOB COMPLETED 85-01-07		PROVINCE		LSD		SEC		TWP		RANGE		MERIDIAN	
DATE TIME		DATE TIME		DATE TIME		DATE TIME		Yukon										W	

TYPE OF JOB ☒		WELL OR HOLE DATA								PRODUCTS	
										EQUIPMENT	QUANTITY
☐ SURFACE										BASKETS	
☐ INTERMEDIATE										CENTRALIZERS	
☐ PRODUCTION										CLAMPS	
☐ LINER										FLOAT COLLAR	
☐ SQUEEZE										FLOAT SHOE	
☐ PLUG										GUIDE SHOE	
☐ JUMP										INSERT FLOAT	
☒ PRESSURE TEST	☒									SCRATCHERS	
☐ OTHER										OTHER	

EQUIPMENT				
PACKER				CEMENT HEAD
TYPE _____	SIZE _____ mm	TOP PLUG TYPE _____	CONTINUOUS ☐ KNOCK OFF ☐ SWAGE ☐	
DEPTH _____ m	TAIL _____ m	BOTTOM PLUG TYPE _____	OTHER _____	
SET _____	PIPE _____			

CEMENT DATA							
TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m³	m³/tonne

HALLIBURTON OPERATOR R. Drader CUSTOMER REP. _____

[illegible]

PLUGGING BACK PROCEDURE

The well was plugged back from 1811 metres total depth to 1097 metres, plug back depth. Subsequently, 139.7mm production casing was run from surface to the 1097 metre depth.

ABANDONMENT REPORT

DATE 85-02-17

Well Exco et al West Parkin V.T. D-54 Location _____

A. WELL DATA

KB Elevation 506.85 m KB to CF 3.98 m FTD 1811 m

Hole Size	Hole Depth	Casing Size	Casing Depth	Cement Top(s)	Perfs
444.5	53	339.7	53	Surface	N/A
311.2	460	244.5	460	Surface	N/A
215.9	1811	139.7	1097	Surface	N/A

B. ABANDONMENT DATA

Fluid in Hole Drilling mud Abandonment Company Halliburton Services Ltd.

Cementing Company Halliburton Services Ltd. Gov't Official John Hamilton

Plug	Interval	Formation	Cem Vol	Cem Type	Cem Wt.	Plug Down	Felt Plug Time	Felt Plug Depth
1	1711 - 1811	Devonian	7.70	Class "G" + 2% CaCl ₂	1895	85-02-17	1600 hrs.	not felt
2	1090 - 1150	Carboniferous	5.40	Class "G" + 2% CaCl ₂	1895	85-02-17	85-02-18	1200 hrs.
Plug #2 was run and set to facilitate the setting of 139.7mm production casing. The plug was drilled from 1105 m to 1097 m, plug back depth.								

Method of Feeling Plugs Open ended

Surface Casing Cut N/A Surface Plug N/A Plate Welded On top of casing bowl

C. SALVAGE DATA

Casing Salvaged N/A

D. REMARKS

ENGINEER J. Reilly

[illegible]

Gray Mountain Drilling
West Parkin D-54

PLUG BACK JOB DATA

PLUG NO.	TOP	DEPTH BOTTOM	TONNE	DISPLACEMENT (m ³)	TIME (min)
1	1711	1811	5.6	11.4	13:30
2	1100	1130	1.43	7.8	18:30

SECTION IV
LOGGING SUMMARY

SECTION IV

LOGGING SUMMARY

JANUARY 14, 1985

- DIL/ BCS-GR-CL/ CDL-CNS-GR-CL4/ WEL
- MUD LOG - refer to pocket enclosure
- LITHOLOGY - refer to pocket enclosure

1985

DIL-GR/ CDL-CNS-GR-CAL/ BCS-GR-CAL/ MEL-GR-CAL

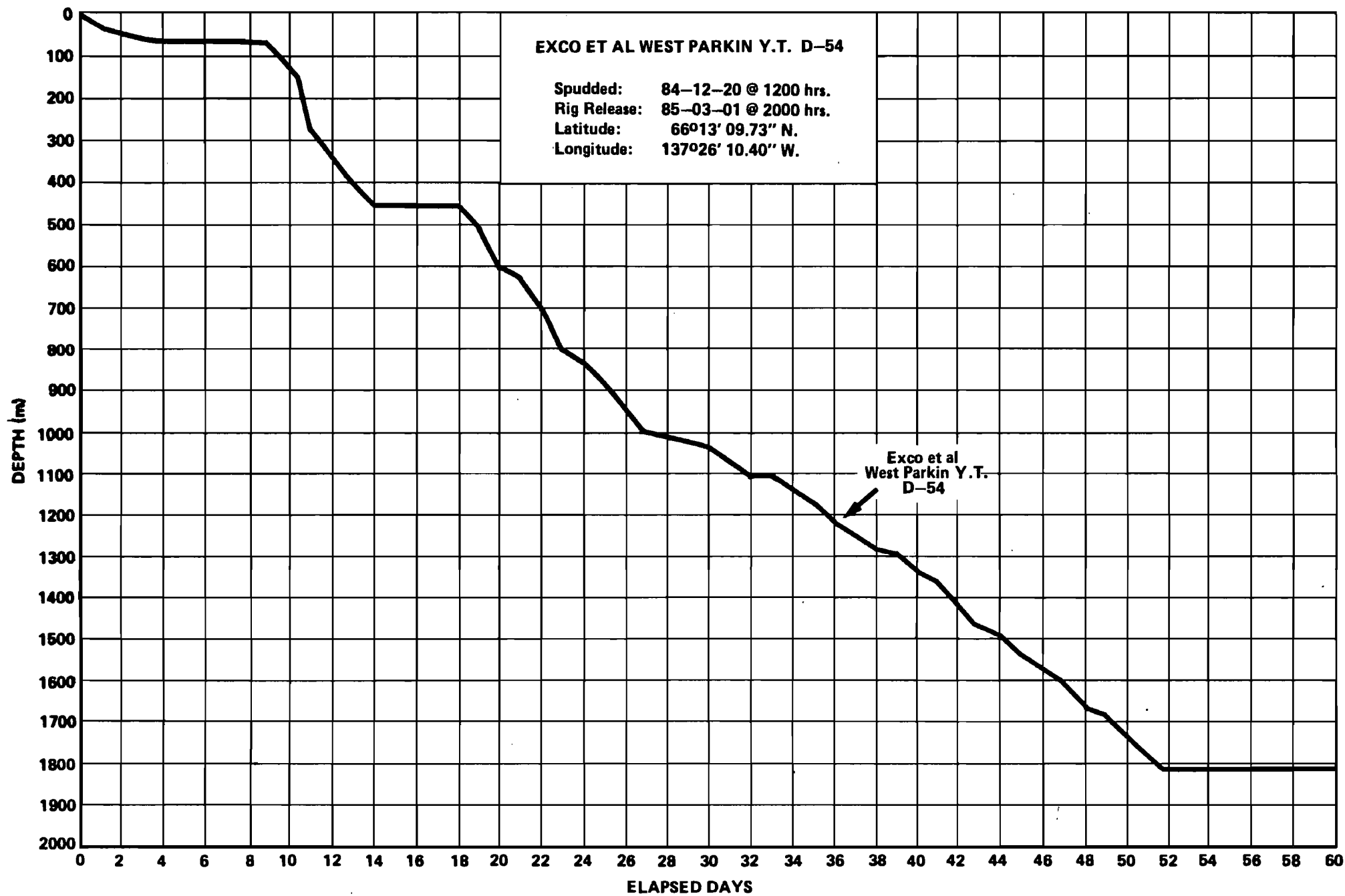
FEBRUARY 10, 1985

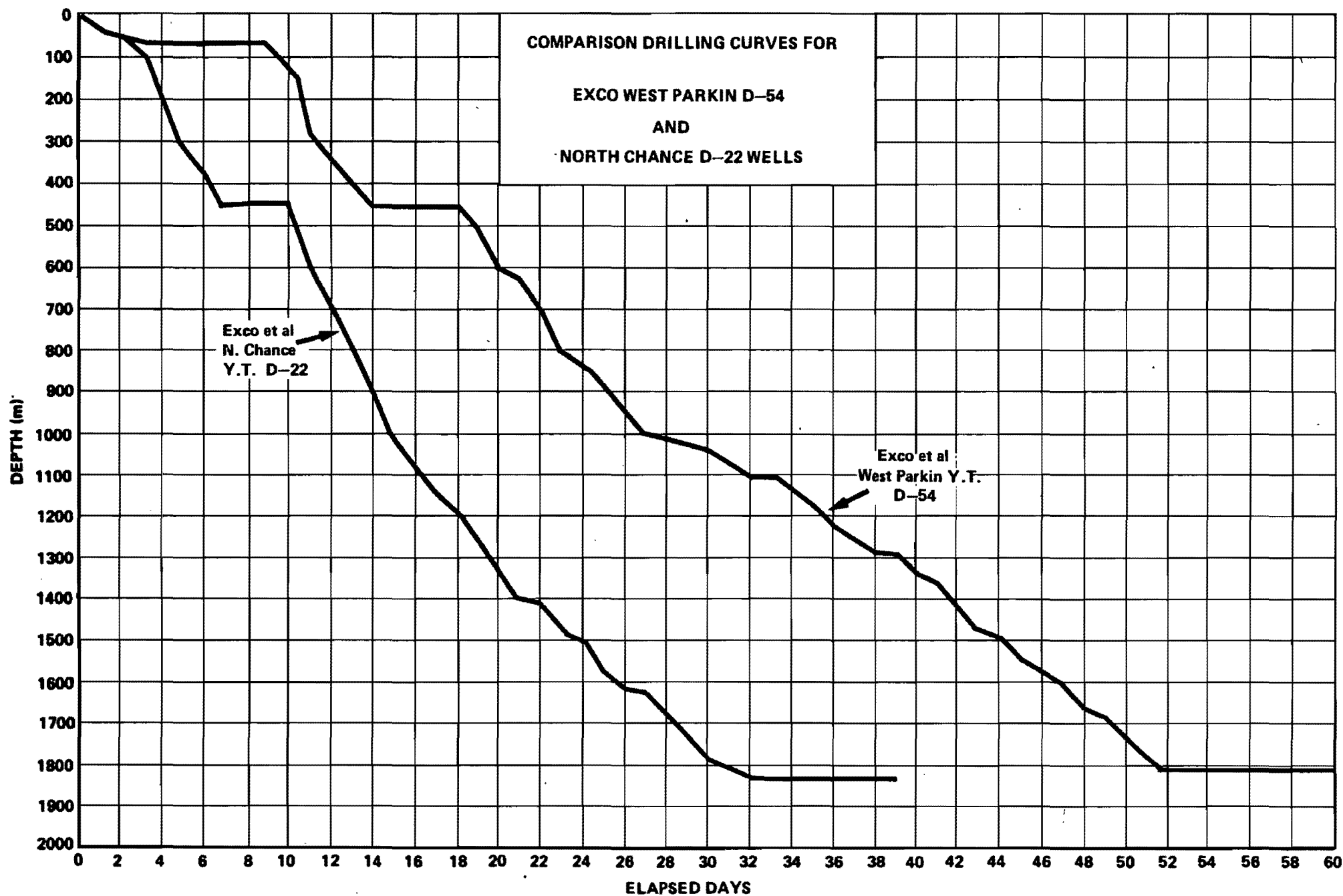
460.2^m - 1804.5^m

MUD LOG

LITHOLOGY LOG

SECTION V
DRILLING CURVE





SECTION VI
DAILY DRILLING REPORTS

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 20 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 1 DEPTH 40 METRES LAST 24 HRS. 40 ROTATING HRS. 4.75

ACTIVITY AT REPORT TIME Circulate to run casing

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1040 VIS 40 WL. _____ GELS _____ % SOLIDS _____ PV 7 YP 5.2 pH 9.5

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1	311.2	S21G	FH2046	2-7	100	40	40	40	4.75	4.75	8.4		IN	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1	15	16	18	356	54	140	.977					5,000

DEVIATION SURVEYS

1/4 ° at 34 _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 51 sx _____
Sawdust 50 sx _____
Lime 2 sx _____
Caustic 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.32	
Bit Sub	73	227	.89	
3 Drill Collars	73	228	28.24	
X/O	74	228/170	.77	
X/O	72	170	.54	
X/O	73	170	.34	

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	4.75	4.75
2. TRIPS		
3. RIG SERVICE	.25	.25
4. DEVIATION SURVEY	.50	.50
5. REAM & COND. HOLE		
6. MIX & COND. MUD	4.00	4.00
7. CIRCULATING		
8. RIG REPAIR	2.50	2.50
9. RUN CASING & CEMENT		
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		
16. DRILLING OUT		
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT	12.00	12.00
21.		
TOTALS	24.00	24.00

COSTS

DAILY

CUM.

SUPERVISOR: Derry Lodder

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 20 2400

Year - Month - Day - Time

Spud at 1200 hours.

0000 - 1200 Rig up

1200 - 1215 Spud in

1215 - 1415 Lost circulation at 12 m - mix LCM pill

1415 - 1600 Drill 311.2 mm pilot hole

1600 - 1615 Rig service

1615 - 1700 Change over to #2 pump

1700 - 1900 Drill 311.2 mm pilot hole

1900 - 1930 Survey at 34 m

1930 - 2015 Drill 311.2 mm pilot hole

2015 - 2215 Lost circulation at 36 m - mix LCM

2215 - 2400 Change out union on #2 pump shock hose

WANT LIST: _____

WEATHER Clear -25°C

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 21 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 2 DEPTH 53 m METRES LAST 24 HRS. 13 ROTATING HRS. 1.75

ACTIVITY AT REPORT TIME Weld on 339 mm casing bowl

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1070 VIS 36 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 9.5

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1A	311	S21G	FH2046	7000	100	40	13	53	1.75	6.50	8.15	2	2	I
2A	444.5	DSJ	FH406	7000	100	53	Ream	rathole						

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1A	15	16	18	356	54	140	0.98					4000
2A	12.7	12.7	12.7	356	76	140	1.37					4500

DEVIATION SURVEYS

3/4 ° at 43 resurvey after reaming

1/2 ° at 19 ° at _____

° at _____ ° at _____

° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 15 sx _____

Lime 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			0.32	
Bit sub	73	227	1.05	
3 - 228 DCs	73	228	28.24	
X/O	74	228/170	0.77	
1 DC	73	171	9.55	
X/O	73	170	0.54	
X/O	73	170	0.34	

COSTS

DAILY

CUM.

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	1.75	6.50
2. TRIPS	3.00	3.00
3. RIG SERVICE	.50	.75
4. DEVIATION SURVEY	.75	1.25
5. REAM & COND. HOLE	6.25	6.25
6. MIX & COND. MUD		4.00
7. CIRCULATING		
8. RIG REPAIR		2.50
9. RUN CASING & CEMENT	11.75	11.75
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		
16. DRILLING OUT		
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		
TOTALS	24.00	48.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 21

Year - Month - Day - Time

Drill to 53 m and took one survey at 43 m. Lay down DCs and make up 444 mm bit. Open hole to 444 mm hole (0400 hours - 0800 hours); circulate and work tight hole. Dummy trip and POH to run casing. Ran 4 joints of 339 mm, K-55, 81.1 kg/m, ST&C landed at 53.59 mKB. Cemented with 9.4 T permafrost cement (100% excess) 4.4 m³ cement returns. Plug bumped at 2215 hours - held. Wait on cement.
3 bags of sawdust were included in the cement.

Spot welded shoe and collars etc.

WANT LIST: _____

WEATHER _____ -37° C Clear

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 22 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 3 DEPTH 53 m METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Pressure test diverter and valves

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY _____
 CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM.
1. DRILLING		6:50
2. TRIPS		3.00
3. RIG SERVICE		.75
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE		6.25
6. MIX & COND. MUD		4.00
7. CIRCULATING		
8. RIG REPAIR		2.50
9. RUN CASING & CEMENT	12.50	24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	11.50	11.50
16. DRILLING OUT		
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____		
TOTALS	24.00	72.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 22

Year - Month - Day - Time

0000 hours - 0615 hours - Wait on cement

0615 hours - 1230 hours - Cut conductor - weld on casing bowl.

1230 hours - 2400 hours - Nipple up BOPs

WANT LIST: _____

WEATHER ⁰-38 C clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 23

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____
 DAY 4 DEPTH 72 METRES LAST 24 HRS. 19 m ROTATING HRS. 2.75
 ACTIVITY AT REPORT TIME POH - Unplug drill collars and bit

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1040 VIS 33 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10.0
 % OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	10-15	80/100	IN	19	19	2.75	2.75	6.9	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1B	O	P	E	N	356	74/76	140	2.715	77			2500
					(both pumps)							

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 27 sx Lime 2 sx
 Caustic 4 sx
 Kwikseal 5 sx
 Sawdust 75 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			0.32	
Bit sub	73	227	1.05	
3 DCs	73	228	28.24	
X/O	74	228/170	0.77	
3 DCs	73	176	28.46	
X/O	73	170	0.54	
X/O	73	170	0.34	
	wt	19000		

COSTS

DAILY

CUM.

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	2.75	9.25
2. TRIPS	1	4
3. RIG SERVICE		.75
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE		6.25
6. MIX & COND. MUD	2	6.00
7. CIRCULATING		
8. RIG REPAIR	12	14.50
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	4.75	16.25
16. DRILLING OUT	1.50	1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		
TOTALS	24.00	96.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 23

Year - Month - Day - Time

0000 hours - 0200 hours - Nipple up

0200 hours - 0300 hours - RIH with bit 1B

0300 hours - 0600 hours - Thaw out rig. Kelly hose and suction line frozen.

0600 hours - 0845 hours - Pressure test annular and valves to 1500 kPa for 5 minutes - OK

0845 hours - 1000 hours - Rig repair - mixing pump

1000 hours - 1130 hours - Drill out cement and shoe with 2500 daN's and 80 rpm

1130 hours - 1330 hours - Drill 311 mm hole

1330 hours - 1415 hours - Rig repair, fix flow line

1415 hours - 1500 hours - Drill

1500 hours - 1700 hours - Mix LCM slug, lost at 69 m (no returns). (Drilling
with almost straight water).

1700 hours - 2400 hours - Rig repair. Change out clutch pads on #1 floor motor.

WANT LIST: _____

WEATHER -20° C Light snow

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 24 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 5 DEPTH 74 m METRES LAST 24 HRS. 2 ROTATING HRS. 1

ACTIVITY AT REPORT TIME Mix LCM at 80 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1050 VIS 46 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10.5

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	10000	100	IN	2	21	1	3.75	5.6		I	N

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1B	O	P	E	N	356	76	140	1.37	40			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Sawdust 160 sx Kwikseal 4 sx
 Gel 54 sx _____
 Caustic 7 sx _____
 Lime 3 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			0.32	
Bit sub	73	227	1.05	
3 DCs	73	228	28.24	
X/O	73	228/170	0.77	
3 DCs	73	176	28.46	
X/O	73	170	0.54	
X/O	73	170	0.34	

COSTS

DAILY

CUM.

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	1	10.25
2. TRIPS	2.75	6.75
3. RIG SERVICE	0.50	1.25
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE		6.25
6. MIX & COND. MUD	16.75	22.75
7. CIRCULATING		
8. RIG REPAIR	3.00	17.50
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		
TOTALS	24.00	120.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 24

Year - Month - Day - Time

0000 hours - 0445 hours - Mix LCM pill

0445 hours - 0545 hours - Drill 311 mm hole

0545 hours - 0730 hours - Build volume, mix LCM

0730 hours - 0900 hours - Blow kelly, POH to unplug DC

0900 hours - 0915 hours - Service rig

0915 hours - 1945 hours - Mix and pump LCM and gel

1945 hours - 2100 hours - RIH - bridge at 30 m (LCM material)

2100 hours - 2400 hours - Thaw put standpipe and kelly hose.

NOTE: Rig waiting on circulating pump.

WANT LIST: _____

WEATHER -30° C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 25

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54

LOCATION _____

DAY 6 DEPTH 81 m METRES LAST 24 HRS. 7 ROTATING HRS. 1.50

ACTIVITY AT REPORT TIME Mixing mud - Waiting on mixing motor and LCM

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1030 VIS 50 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10.5

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH 2041	10000	100	-	7	28	1.50	5.25	5.33	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 59 Caustic 2
 Lime 3
 Sawdust 93
 Kwikseal 23

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			0.32	
Bit sub	73		1.05	
3 DCs	73	228	28.24	
X/O	73	228/170	0.77	
3 DCs	73	176	28.46	
1 DC	73	171	9.55	
X/O	73	170	0.54	
X/O	73	170	0.32	

COSTS

DAILY

CUM.

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	1.50	11.75
2. TRIPS	1.25	8.00
3. RIG SERVICE	.50	1.75
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE	3.50	9.75
6. MIX & COND. MUD	13.75	36.50
7. CIRCULATING		
8. RIG REPAIR <u>Thaw out</u>	3.50	21.00
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		
TOTALS	24.00	144.00

PLEASE TURN OVER

84 12. 25
Year - Month - Day - Time

2245 hours - 2400 hours - Blow kelly and hoist DCs.

WANT LIST:

WEATHER. -35⁰ C Clear

ROAD Fair

DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 26 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54

LOCATION _____

DAY 7 DEPTH 81 m METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Attempt to mix mud to raise viscosity

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1030 VIS 35 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10.5

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	-	-	-	-	28	0	5.25	5.33	I	N	

CIRCULATION RECORD

BIT NO.	JETS — mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 90 _____
Caustic 4 _____
Sawdust 30 _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		11.75
2. TRIPS		8.00
3. RIG SERVICE	.75	2.50
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE		9.75
6. MIX & COND. MUD	19.25	55.75
7. CIRCULATING		
8. RIG REPAIR	4.00	25.00
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		12.00
20. RIG UP — TEAR OUT		
21.		
TOTALS	24.00	168.00

COSTS

DAILY _____

CUM. _____

SUPERVISOR: Derry Lodder

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 26

Year - Month - Day - Time

0000 hours - 0800 hours - Mix mud

0800 hours - 1600 hours - Mix mud

1600 hours - 2000 hours - Mix mud

2000 hours - 2400 hours - Change out mixing pump and motor

Waiting on circulating pump.

WANT LIST: _____

WEATHER -30° C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 27 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 8 DEPTH 81 m METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Wait on sawdust and LCM materials

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1030 VIS 70 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10.5

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	-	-	-	-	28	-	5.25	5.33	I	N	

CIRCULATION RECORD

BIT NO.	JETS — mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1B	O	P	E	N	356	-	140		-			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 60 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			0.32	
Bit sub	73		1.05	
3 DCs	73	228	28.24	
X/O	73	228/170	0.77	
3 DCs	73	176	28.46	
1 DC	73	171	9.55	
X/O	73	170	0.54	
X/O	73	170	0.32	

COSTS

DAILY	N/A
CUM.	

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		11.75
2. TRIPS		8.00
3. RIG SERVICE		2.50
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE		9.75
6. MIX & COND. MUD	10.00	65.75
7. CIRCULATING		
8. RIG REPAIR		25.00
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON: <u>sawdust</u>	14.00	14.00
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP — TEAR OUT		12.00
21.		
TOTALS	24.00	192.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 27 2400

Year - Month - Day - Time

0000 - 1000 hours - Mix mud (gel)

1000 - 2400 hours - Waiting on sawdust (installed mud agitators and mud pump motor
871 Detroit Diesel).

WANT LIST: _____

WEATHER _____ -33⁰ C Clear

ROAD _____ Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 28 2400

Year · Month · Day · Time

WELL NAME Forward et al W. Parkin Y.T. D-54

LOCATION _____

DAY 9 DEPTH 86 METRES LAST 24 HRS. 5 ROTATING HRS. 1.25

ACTIVITY AT REPORT TIME Drilling at 120 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1080 VIS 49 WL. _____ GELS 4.8/5.3 % SOLIDS _____ PV 15 YP 4.8 pH 10.5

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	10	80	IN	5	33	1.25	6.5	5.08	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1B	O	P	E	N	356	78	140	1.41	28			1,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 11 sx _____
Sawdust 48 sx _____
Kwikseal 3 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.32	
Bit Sub	73		1.05	
3 D.C.'s	73	228	28.24	
X/O	73	228/170	.77	
3 D.C.'s	73	177	28.46	
2 D.C.'s	73	172	19.11	
X/O	73	170	.54	
X/O	73	170	.32	

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	1.25	13.00
2. TRIPS	1.75	9.75
3. RIG SERVICE	.50	3.00
4. DEVIATION SURVEY		1.25
5. REAM & COND. HOLE	2.75	12.50
6. MIX & COND. MUD	1.75	67.50
7. CIRCULATING		
8. RIG REPAIR		25.00
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON: LCM	13.50	27.50
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Thawing out rig	2.50	2.50
TOTALS	24.00	216.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 28 2400

Year - Month - Day - Time

0000 - 0015	Rig service - check diverter; bag closed in 18 seconds
0015 - 1200	Wait on sawdust
1200 - 1215	Rig service - BOP drill
1215 - 1400	Wait on cement
1400 - 1500	Mix LCM - drop LCM down the hole
1500 - 1515	Run in drill collars - bridged off at 18 m
1515 - 1600	Circulate, close diverter and squeeze plug down
1600 - 1730	Run in hole - bridge at 72 m
1730 - 2000	Thaw out kelly
2000 - 2245	Ream 9 m to bottom
2245 - 2400	Drill 311.2 mm hole

WANT LIST: _____

WEATHER -36°C and clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 29 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 10 DEPTH 151 METRES LAST 24 HRS. 65 ROTATING HRS. 12

ACTIVITY AT REPORT TIME Drilling at 197 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1090 VIS 45 WL. 12 GELS 1/2 % SOLIDS .056 PV 17 YP 3.8 pH 9.5

% OIL _____ %SAND .0025 CAKE 1 PPMCL 350 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1B	311	XDV	FH2041	10	80/100	142	56	89	10.5	17.0	5.2	6	4	I
2B	311	SDG	FH2042	10	80	IN	9	9	1.5	1.5	6.0	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1B	0	P	E	N	356	78	140	1.41	40.4			1,000
2B	9.5	9.5	OPEN	356	72	140	1.30		37.2			2,000

DEVIATION SURVEYS

1 ° at 91 ° at _____
1 ° at 114 ° at _____
1 ° at 124 ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 47 sx _____
Caustic 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.32	
Bit Sub	73		1.05	
3 D.C.'s	73	228	28.24	
X/O	73	228/170	.77	
3 D.C.'s	73	177	28.46	
2 D.C.'s	73	172	19.11	
X/O	73	170	.54	
X/O	73	170	.32	

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.00	25.00
2. TRIPS	7.50	17.25
3. RIG SERVICE	.25	3.25
4. DEVIATION SURVEY	1.50	2.75
5. REAM & COND. HOLE		12.50
6. MIX & COND. MUD		67.50
7. CIRCULATING		
8. RIG REPAIR	.75	25.75
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Thaw out rig	2.00	4.50
TOTALS	24.00	240.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 29 2400

Year - Month - Day - Time

0000 - 0100	Drill 311 mm hole
0100 - 0115	Rig service - check annular
0115 - 0200	Survey at 91 m
0200 - 0645	Drill 311 mm hole
0645 - 0715	Survey at 114 m
0715 - 0800	Drill 311 mm hole
0800 - 1000	Thaw out mousehole sock
1000 - 1200	Drill ahead
1200 - 1215	Survey at 124 m
1215 - 1415	Drill ahead
1415 - 2145	Blow kelly and trip - pick up shock and run in hole
2145 - 2230	Drill ahead
2230 - 2315	Work on pump - flush LCM from valves
2315 - 2400	Drill ahead

WANT LIST: _____

WEATHER -33°C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 12 30 2400

Year · Month · Day · Time

WELL NAME Forward et al W. Parkin Y.T. D-54 LOCATION _____

DAY 11 DEPTH 282 METRES LAST 24 HRS. 131 ROTATING HRS. 19.50

ACTIVITY AT REPORT TIME Repair rig at 310 m (problems with clutch)

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1110 VIS 41 WL. 9.8 GELS 1/1.4 % SOLIDS .07 PV 13 YP 1.9 pH 9

% OIL _____ % SAND .0005 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
2B	311	SDG	FH2042	10-12	80/100	IN	131	140	19.5	21.0	6.66	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
2B	9.5	9.5	8.7	356	74	140	1.34	19	38			5,000

DEVIATION SURVEYS

3/4 ° at 155 1 ° at 263
1 ° at 173 ° at _____
1/2 ° at 200 ° at _____
1/2 ° at 227 ° at _____

MUD & CHEMICALS ADDED

Gel 53 sx _____
Caustic 3 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.32	
Bit Sub	73		.89	
3 D.C.'s	73	228	28.24	
X/O	73	228/177	.77	
3 D.C.'s	73	177	28.47	
1 D.C.	73	171	9.55	
1 S.S.	73	171	3.98	
1 D.C.	73	171	9.56	
1 Jar	73	171	4.34	
3 D.C.'s	73	171	28.66	
X/O	73	171	.54	
17 D.C.'s	73	159	154.61	
X/O	73		.32	

COSTS

DAILY N/A

CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	19.50	44.50
2. TRIPS		17.25
3. RIG SERVICE	.50	3.75
4. DEVIATION SURVEY	3.25	6.00
5. REAM & COND. HOLE	.25	12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		
8. RIG REPAIR	.50	26.25
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	264.00

OPERATIONS DETAILS: PERIOD ENDING _____

84 12 30 2400

Year - Month - Day - Time

Drill in 311 mm hole. Work tight hole at 182 m. 1/2 repair air line to #1 pump clutch. Drill ahead and survey.

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

1984 12 31

Year - Month - Day - Time

00 00 - 02 00 Work on pump
02 00 - 05 45 Drill and survey
05 45 - 12 45 Work on drawworks, clutches
12 45 - 15 00 Drill ahead
15 00 - 16 45 Check annular, work on pumps
16 45 - 24 00 Drill and survey

WANT LIST: _____

WEATHER -20° C overcast

ROAD Poor

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

1985 01 01 2400 hrs

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 13 DEPTH 411 METRES LAST 24 HRS. 53 ROTATING HRS. 11

ACTIVITY AT REPORT TIME Drilling at 446 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1130 VIS 41 WL. 13 GELS .48/1.9 % SOLIDS .078 PV 13 YP 2.9 pH 10.0

% OIL _____ %SAND .0025 CAKE 2 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
2B	311	SDG	FH2042	6/8	80/100	396	38	254	8.00	42.25	6.01	4	3	I
3B	311	XIG	FH2043	5/6	100	IN	15	15	3.00	3.00	5.00		IN	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
2B	9.5	9.5	8.7	356	76	140	1.38	20.9	39.4	-	-	5000
3B	10.3	7.9	open	356	74	140	1.34	20.4	38.3	-	-	5000

DEVIATION SURVEYS

1 3/4 ° at 367 m _____ ° at _____
 1 1/4 ° at 386 m _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 37 sks _____
 Caustic 2 sks _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
S A M E				

COSTS

DAILY _____
 CUM. N/A

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	11.00	68.75
2. TRIPS	11.75	29.00
3. RIG SERVICE	0.25	4.50
4. DEVIATION SURVEY	1.00	8.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		
8. RIG REPAIR		35.00
9. RUN CASING & CEMENT		24.25
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	312.00

OPERATIONS DETAILS: PERIOD ENDING _____

1985 01 01 2400 hours

Year - Month - Day - Time

00 00 - 09 15 hrs. Drill ahead and survey.

09 15 - 20 00 hrs. Blow kelly - pull out of hole - hit mud ring at 305 m -
change bits - run in hole.

20 00 - 21 00 hrs. Blow kelly and clean to bottom.

21 00 - 24 00 hrs. Drill ahead.

WANT LIST: _____

WEATHER -5° C overcast

ROAD poor

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 02 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 14 DEPTH 460 METRES LAST 24 HRS. 49 ROTATING HRS. 10

ACTIVITY AT REPORT TIME Cementing with Howco

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1120 VIS 51 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH 10

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
3B	311	X1G	FH2043	7	100	460	49	64	10	13	4.92	4	2	I

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
3B												

DEVIATION SURVEYS

2 ° at 415 _____ ° at _____
2 ° at 434 _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 49 sx _____
 Caustic 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A

CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	10.00	78.75
2. TRIPS	3.50	32.50
3. RIG SERVICE	.50	5.00
4. DEVIATION SURVEY	1.00	9.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING	.25	.25
8. RIG REPAIR		35.00
9. RUN CASING & CEMENT	8.75	33.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		16.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	336.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 02 2400

Year - Month - Day - Time

0000 - 1115	Drill and survey
1115 - 1600	Circulate sample, dummy trip, circulate and condition hole
1600 - 1930	Pull out of hole to run casing, lay down 7" and 9" drill collars
1930 - 2400	Rig to run casing, ran 244.5 mm, N-80, 64.7 kg/m, 19 joints, thread lock and weld shoe and float collar.

WANT LIST: _____

WEATHER _____ -10°C Clear

ROAD _____ Poor

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 03 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54

LOCATION _____

DAY 15 DEPTH 460 METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Nipple up BOPs

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A

CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		78.75
2. TRIPS		32.50
3. RIG SERVICE		5.00
4. DEVIATION SURVEY		9.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR		35.00
9. RUN CASING & CEMENT	21.00	54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	3.00	19.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	360.00

OPERATIONS DETAILS: PERIOD ENDING 85 01 03 2400 hours
Year - Month - Day - Time

0000 - 0630 hours - Run 244 mm - 39 joints, N-80, 64.7 kg/m, length 461.46 m. Bridge off at 376 m. Circulate and work casing past point, once on bottom circulate for 1 hour prior to cementing.

0630 - 0830 hours - Cement casing, pump 1.6 m³ H₂O preflush, mixing and pump 6.1 T permafrost. Yield 0.75 m³/T, mix and pump 16.85 T Class G with 2% CaCl₂. Yield 0.76 m³/T, weight 1895 kg/m³, displace with 17.4 m³ mud (40 second/L viscosity); approximately 2 m³ cement returns. Bump plug with 1000 kPa, bleed off, float held (casing landed off bottom 0.3 m).

0830 - 2199 hours - Weight on cement

2100 - 2400 hours - Cut off conductor casing and weld on 244 mm bowl. Nipple up BOPs.

WANT LIST: _____

WEATHER -10° C ROAD fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 04 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 16 DEPTH 460 METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Nipple Up

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN.

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		78.75
2. TRIPS		32.50
3. RIG SERVICE		5.00
4. DEVIATION SURVEY		9.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR		35.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	24.00	43.25
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	384.00

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 04 2400

Year - Month - Day - Time

0000 - 2400 Nipple up BOP's. Had to turn stack as the line from HCR to manifold
was resting against the sub-structure.
Mix mud and prepare to drill out (after cleaning tanks).

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 05 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 17 DEPTH 460 METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Pressure test BOP's

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1035 VIS 35 WL. 13.2 GELS 1/1.5 % SOLIDS .02 PV 6 YP 1.5 pH 10

% OIL _____ %SAND _____ CAKE 2 PPMCL 150 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 80 sx _____
 Caustic 3 sx _____
 Sawdust 210 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		78.75
2. TRIPS		32.50
3. RIG SERVICE	.50	5.50
4. DEVIATION SURVEY		9.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR (for insp)	11.75	46.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	11.75	55.00
16. DRILLING OUT		1.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	408.00

OPERATIONS DETAILS: PERIOD ENDING

85 01 05 2400

Year - Month - Day - Time

0000 - 1200

Nipple Up

1200 - 2400

Work on rig

WANT LIST:

WEATHER -12°C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 06 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 18 DEPTH 460 METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Drilling at 480 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1040 VIS 36 WL. 13.6 GELS 5/2.5 % SOLIDS .02 PV 6 YP 1 pH 10
 % OIL _____ % SAND _____ CAKE 2 PPMCL 200 PPMCa 20

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

bicarb 3 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A

CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		78.75
2. TRIPS		32.50
3. RIG SERVICE	.25	5.75
4. DEVIATION SURVEY		9.50
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR	4.00	50.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	16.25	71.25
16. DRILLING OUT	3.50	5.00
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____		4.50
TOTALS	24.00	432.00

OPERATIONS DETAILS: PERIOD ENDING

85 01 06 2400
Year - Month - Day - Time

0000 - 0400 Rig up mud tanks and fix steam leaks.
0400 - 0415 Check engine kills, OK.
0415 - 1700 Rig up Halliburton. Pressure test all rams and casing and valves to 10,000 kPa high, 2000 kPa low. Repair all leaks (one outside manifold valve is leaking by the stem).
1700 - 2000 Make up bit, BHA. Run in hole to 350 m and break circulation.
2000 - 2330 Pressure test hydril, inside and outside valves on kill line, pipe rams, upper kelly cock, stabbing valve and stand pipe valve 10,000 kPa high and 2000 kPa low, OK except stand pipe valve began to leak later - requires repair kit.
2330 - 2400 Pick up drill pipe and ran in hole.

Passed COGLA inspection.

WANT LIST:

WEATHER -15°C Clear ROAD Fair

DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 07 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 19 DEPTH 522 METRES LAST 24 HRS. 62 ROTATING HRS. 13.75

ACTIVITY AT REPORT TIME Drilling at 560 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1070 VIS 42 WL. 8.2 GELS 1/3.5 % SOLIDS .04 PV 15 YP 4.5 pH 10

% OIL _____ %SAND Trace CAKE 1.5 PPMCL 250 PPMCa 20

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
1	215.9	S44	FH302	7-10	60-80	518	58	58	12.75	12.75	4.5	8	7	I
2	215.9	F2	LA774	7	120		4	4	1.00	1.00	4	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
1	8.7	8.7	8.7	356	60	140	1.08	57	38	74	142	8,000
2	8.7	9.5	9.5	356	60	140	1.08	57	38	74	142	

DEVIATION SURVEYS

1-3/4 ° at 499 ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Sawdust 15 sx Gel 26 sx
 Polyguard 20 sx Polysec 4 sx
 Bicarb 6 sx CMC 2 sx
 SAPP 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.25	
Stab. IBS			1.28	
Short DC			3.05	
SS			3.98	
1 DC			8.67	
Stab.			1.30	
2 DC's			19.11	
Stab.			1.28	
2 DC's			19.10	
Jars			4.34	
DC			9.56	
X/O			.54	
14 DC's			126.67	

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	13.75	92.50
2. TRIPS	4.25	36.75
3. RIG SERVICE	.50	6.25
4. DEVIATION SURVEY	.25	9.75
5. REAM & COND. HOLE		12.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR		50.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	.50	71.75
16. DRILLING OUT	4.75	9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	456.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 07 2400

Year - Month - Day - Time

0000 - 0200	Rig service, run in hole, pick up drill pipe
0200 - 0500	Drill out float, cement and shoe
0500 - 0530	Drill 215.9 mm hole
0530 - 0600	Run leak off test, no break down with 5600 kPa surface pressure, used 18 kPa/m pressure gradient
0600 - 0845	Drill ahead and rig service, check BOP's
0845 - 1145	Drill
1145 - 1200	Survey at 499 m
1200 - 1845	Drill
1845 - 2300	Blow kelly and trip for bit
2300 - 2400	Drill

Geology:

460 - 522 m Shale with sandy and silty streaks, 10% sandstone, very fine to fine,
Upper background gas .6%
Cretaceous

WANT LIST:

WEATHER -20°C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 08 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 20 DEPTH 614 METRES LAST 24 HRS. 92 ROTATING HRS. 20.25

ACTIVITY AT REPORT TIME Drilling at 638 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1080 VIS 45 WL. 8.4 GELS 1/3 % SOLIDS .05 PV 12 YP 4 pH 10

% OIL _____ % SAND .001 CAKE 1.5 PPMCL 250 PPMCa 20

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
2	215.9	F2	LA774	6-10	65/100	IN	92	96	20.25	21.25	4.5	R	U	N

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
2	8.7	9.5	9.5	356	60	140	1.086	38	64	89	86	8,000

DEVIATION SURVEYS

3 ° at 576 ° at _____
 4 ° at 604 ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 22 sx _____
 Polysec 2 sx _____
 Caustic 2 sx _____
 CMC 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	20.25	112.75
2. TRIPS		36.75
3. RIG SERVICE	.50	6.75
4. DEVIATION SURVEY	.75	10.50
5. REAM & COND. HOLE	2.00	14.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR	.50	51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	480.00

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Derry Lodder

OPERATIONS DETAILS: PERIOD ENDING 85 01 08 2400
Year - Month - Day - Time

Year - Month - Day - Time

0000 - 0030	Drill 215 mm hole
0030 - 0045	Rig service, check BOP's
0045 - 0430	Drill 215 mm hole
0430 - 0500	Work on kelly bushings, broken roller
0500 - 1045	Drill 215.9 mm hole
1045 - 1100	Survey at 576 m
1100 - 1315	Drill 215.9 mm hole
1315 - 1515	Work tight hole, coal seam at 580 m
1515 - 1730	Drill ahead
1730 - 1745	Rig service, check BOP's
1745 - 2030	Drill 215.9 mm hole
2030 - 2100	Survey at 604 m
2100 - 2400	Drill 215.9 mm hole

Geology:

522 - 530	Shale, sandy and silty, trace of coal, 10% sandstone, very fine to fine
530 - 614	Sandstone, very fine to fine grained, fair porosity 565 -570 m and at 590 m, 40% shale, trace of coal

Lower cretaceous, mid sandstone top at 534 m, background gas

WANT LIST: 522 - 614 m was .4%, formation gas at 534 m was 2%, attributed to coal].

WEATHER -15°C Clear ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 09 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 21 DEPTH 673 METRES LAST 24 HRS. 59 ROTATING HRS. 19.50

ACTIVITY AT REPORT TIME Drilling ahead

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1080 VIS 42 WL. 9.4 GELS 1/3.5 % SOLIDS .05 PV 11 YP 5.5 pH 10.5

% OIL Nil %SAND .0025 CAKE 1.5 PPMCL 300 PPMCa 20

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
2	215.9	F2	LA774	6	100	673	59	155	19.5	40.75	3.80	4	2	I

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
2	8.7	9.5	9.5	356	60	140	1.086	38	64	89	86	8,000

DEVIATION SURVEYS

3-3/4 ° at 614 4 ° at 662
3-1/2 ° at 623 3-3/4 ° at 671
3-1/2 ° at 633 ° at _____
3-3/4 ° at 652 ° at _____

MUD & CHEMICALS ADDED

Bentonite (Gel) 12 sx Sawdust 5 sx
Polysec 2 sx _____
Polyguard 10 sx _____
CMC 1 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	19.50	132.25
2. TRIPS	1.75	38.50
3. RIG SERVICE	.25	7.00
4. DEVIATION SURVEY	2.50	13.00
5. REAM & COND. HOLE		14.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	504.00

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: J. Reilley

85 01 09 2400

Year - Month - Day - Time

0000 - 0015	Survey at 614 m - 3-3/4 ⁰
0015 - 0030	Rig service, check BOP's
0030 - 0330	Drill 215.9 mm hole, fan at 6000 daN's
0330 - 0345	Survey at 623 m - 3-1/2 ⁰
0345 - 0615	Drill 215 mm hole
0615 - 0645	Survey at 633 m - 3-3/4 ⁰
0645 - 0800	Drill 215 mm hole
0800 - 0815	Survey
0815 - 1200	Drill 215 mm hole
1200 - 1230	Survey
1230 - 1615	Drill 215 mm hole
1615 - 1645	Survey - no details
1645 - 2015	Drill 215 mm hole
2015 - 2030	Survey at 671 m - 3-3/4 ⁰
2030 - 2215	Drill 215 mm hole
2215 - 2400	Trip for bit and to change BHA

Geology:

614 - 631 m	Shale
631 - 673 m	Shale with soapstone, background gas .4%, formation gas 623 - 630 m 1.4%

WANT LIST:

Formation top - lower cretaceous, lower shale, member at 631 m

WEATHER -12°C Clear

ROAD Fair

N DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 10 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 22 DEPTH 710 METRES LAST 24 HRS. 37 ROTATING HRS. 17.00

ACTIVITY AT REPORT TIME Drilling ahead, deviation 5-1/4°

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1105 VIS 44 WL. 10.4 GELS 1.9/6.7 % SOLIDS .065 PV 14 YP 6.2 pH 10

% OIL Nil %SAND .0025 CAKE 1.5 PPMCL 320 PPMCa 4

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
3	215.9	F-2	LW459	3	100	IN	37	37	17	17.00	2.18	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
3	8.7	9.5	9.5	356	64	140	1.158	43	69	95	146	8,000

DEVIATION SURVEYS

4 °at 682 4-1/4 °at 720
4-1/4 °at 691 4-1/4 °at 730
4-1/2 °at 701 °at _____
4-1/4 °at 710 °at _____

MUD & CHEMICALS ADDED

Sawdust 70 sx
Gel 6 sx
Polysec 1 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.35	
Reamer			1.88	
SS			3.98	
1 DC (Short)		171	3.05	
1 DC		171	8.67	
1 IBS			1.30	
2 DC's		171	19.11	
1 IBS			1.28	
2 DC's		171	19.10	
1 Jar			4.34	
1 DC		171	9.56	
1 X/O			.54	
14 DC's		159	126.67	
1 X/O			.34	199.82

COSTS

DAILY N/A
 CUM. _____

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.00	149.25
2. TRIPS	3.25	41.75
3. RIG SERVICE	.50	7.50
4. DEVIATION SURVEY	3.25	16.25
5. REAM & COND. HOLE		14.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		.25
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	528.00

SUPERVISOR: Jim Reilly

OPERATIONS DETAILS: PERIOD ENDING _____ 85 01 10 2400
Year - Month - Day - Time

Year - Month - Day - Time

0000 - 0315	Hoist drill collars, change BHA, run in
0315 - 0500	Break circulation and drill 215 mm hole
0500 - 0515	Survey
0515 - 0530	Rig service, BOP check
0530 - 0715	Drill 215 mm hole
0715 - 0745	Survey 619 m 4-1/4 ⁰
0745 - 0930	Drill 215 mm
0930 - 1000	Survey 701 m 4-1/2 ⁰
1000 - 1200	Drill 215 mm
1200 - 1400	Drill 215 mm
1400 - 1430	Survey
1430 - 1445	Rig service
1445 - 1715	Drill 215 mm hole
1715 - 1745	Survey at 720 m 4-1/4 ⁰
1745 - 2000	Drill 215 mm hole
2000 - 2030	Survey at 730 m 4-1/4 ⁰
2030 - 2300	Drill
2300 - 2330	Survey at 739 m 2 ⁰
2330 - 2400	Drill 215 mm hole

WANT LIST: Geology:

673 - 740 m	Sandy shale	.1% background gas; formation gas 13.5%
740.5 - 741 m	Conglomerate - 12% porosity, background	
	Formation top - orange marker - 740.5 m	

WEATHER -9°C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

[illegible][illegible]



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 11 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin D-54 LOCATION _____

DAY 23 DEPTH 810 m METRES LAST 24 HRS. 100 m ROTATING HRS. 17.25

ACTIVITY AT REPORT TIME Changing BHA

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1110 VIS 47 WL. 8.1 GELS 2.4/5.7 % SOLIDS .068 PV 16 YP 8.1 pH 10.0

% OIL nil %SAND .0025 CAKE 1.5 PPMCL 320 PPMCa 8

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
3	215.9	F2	LW459	10	65	IN	100	137	17.25	34.25	4.00	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
3	8.7	9.5	9.5	356	60	1.40	1.086	41	65	90	121	8000

DEVIATION SURVEYS

5 1/4 ° at 749 m 5° ° at 787 m
 4 1/2 ° at 759 m 5 1/2° ° at 797 m
 4 1/2 ° at 768 m 6° ° at 806 m
 4 1/2 ° at 778 m ° at _____

MUD & CHEMICALS ADDED

Gel 22 sk Polyguard 10 sk
 Cypan 1 sk _____
 CMC 1 sk _____
 Caustic 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.25	166.50
2. TRIPS		41.75
3. RIG SERVICE	.50	8.00
4. DEVIATION SURVEY	4.00	20.25
5. REAM & COND. HOLE	1.00	15.75
6. MIX & COND. MUD		67.50
7. CIRCULATING	1.25	1.50
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		4.50
TOTALS	24.00	552.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 11 2400

Year - Month - Day - Time

0000 - 0115 Took gas kick at 742 m, circulate through poor boy degasser. Weak air blow at pit. Gas out of hole in 50 minutes.

0115 - 2400 Drill and survey every kelly down, work tight pipe for 1 hour.

Geology

740.5 - 742 m Conglomerate - estimated 12% porosity

742.0 - 810 m Shale; background gas 740.5 - 810 m - .4%,
survey gas 6-8%

2400 - 0800 Pull out of hole to change bit. Blowout situation. Mud blowing out through the ID of drill pipe. Stabbed in with kelly. Snubbed back into the hole and circulated out the kick.

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING
85 01 12 2400
Year · Month · Day · Time

WELL NAME Forward et al West Parkin D-54 LOCATION _____
DAY 24 DEPTH 810 m METRES LAST 24 HRS. 0 ROTATING HRS. 0
ACTIVITY AT REPORT TIME Re-commenced drilling at 1600 hours, drilling at 820 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1140 VIS 50 WL. 7.8 GELS 1.9/3.8 % SOLIDS .09 PV 20 YP 8.1 pH 9.5
% OIL 0 %SAND .0025 CAKE 1.0 PPMCL 320 PPMCa 16

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
			NOT DRILLING											

CIRCULATION RECORD

BIT NO.	JETS – mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
	Circulate at reduced pump rate - weight up											2000

DEVIATION SURVEYS

NONE

_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 85 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		166.50
2. TRIPS		41.75
3. RIG SERVICE		8.00
4. DEVIATION SURVEY		20.25
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD		67.50
7. CIRCULATING		1.50
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21 weighted up -circ	24.00	28.50
kick out TOTALS	24.00	576.00

DETAILS: PERIOD ENDING _____

85 01 12 2400

Year - Month - Day - Time

0015 Rig service

0800 Hoist to change BHA, took kick with collars at rotary table. Shut
off flow with stabbing valve. Change over to internal BOP. Strip in
8 stands. Well appeared dead, circulate at this depth.

0930 Continue to strip in hole. Well flowing

1030 RIH with 10 singles

1045 Pick up kelly - blow down

1145 Circulate at 35 strokes/m

1200 Well flowing. Mix barite at 2 1/2 min/sk

1415 Mix barite - 2 1/2 min/sk

1715 Mix barite - 5 min/sk 30 sx

1800 Circulate over strokes - close HCR

1815 Rig service - BOP check

1845 Observe well for flow, blow manifold lines

1900 Blow kelly

2400 POH - hole tight at bottom change BHA.

ROAD _____

MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 13 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin D-54 LOCATION _____

DAY 25 DEPTH 872 m METRES LAST 24 HRS. 62 m ROTATING HRS. 1800

ACTIVITY AT REPORT TIME Drilling ahead at 895 m at 4.5 m/hour

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1145 VIS 47 WL. 8.4 GELS 1.9/4.8 % SOLIDS .085 PV 17 YP 6.7 pH 10.0

% OIL 0 %SAND .003 CAKE 1.0 PPMCL 210 PPMCa nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
3	215.9	F2	LW459	10	65	810	0	137	0	34.25	4.00	4	5	I
4	215	F2	BD3149	12/15	60		62	62	18	18	3.44			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
4	7.9	9.5	9.5	356	60	140	1.086	41	65/79	95	138.7	7000
3												

DEVIATION SURVEYS

6 °at 818 °at _____
 6 °at 828 °at _____
 6 °at 837 °at _____
 6 1/4 °at 856 °at _____

MUD & CHEMICALS ADDED

Gel 12 Caustic 2
 CMC 1
 Cypan 1
 Polysec 2

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Reamer	73	215	1.88	
Stabilized	73	215	1.30	
Shock sub	52	145	3.98	
Stabilized	73	215	1.28	
Drill Collar	73	171	3.05	
Stabilized	73	215	1.14	
Drill collar	73	171	8.67	
Stabilized	73	215	1.19	
4 Drill collars	73	171	38.21	
Jars	73	145	4.34	
Drill collar	73	171	9.56	
1 X/O	73	171	.54	

14 Drill collars 73 169 126.67
 1 X/O COSTS 159 .74 202.55

DAILY N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	18	184.50
2. TRIPS	2.25	44.00
3. RIG SERVICE	.50	8.50
4. DEVIATION SURVEY	2	22.25
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD	.75	68.25
7. CIRCULATING		1.50
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Cut off drill line	.5	29.00
TOTALS	24.00	600.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 13 0800

Year - Month - Day - Time

- 0 - 0015 - Rig service
- 0130 - Run in stiffened bottom hole assembly
- 0200 - Slip 1.4 m D line
- 0300 - Run in with bit
- 0345 - Blow kelly and break circulation, clean 10 m to bottom
- 2400 - Drill and survey each kelly down.

Slow speed pump pressure 2000 kPa at 35 spm.

810 - 872 m shale

Background gas .1 - .2%

Top gas 13%

Survey gas .2 - .4%

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 14 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 26 DEPTH 948 METRES LAST 24 HRS. 76 ROTATING HRS. 21.75

ACTIVITY AT REPORT TIME Drilling ahead at 975 m, 6° deviation

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1160 VIS 45 WL. 8.4 GELS 1.9/4.8 % SOLIDS .09 PV 18 YP 6.7 pH 10

% OIL Nil %SAND .002 CAKE 1.5 PPMCL 250 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
4	215.9	F2	BD3149	10-15	60	IN	76	138	21.75	39.75	3.47			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
4	7.9	9.5	9.5	356	72	140	1.3	49	78	113	242	6.000

DEVIATION SURVEYS

6 ° at 885 ° at _____
6 ° at 914 ° at _____
6 ° at 943 ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 10 sx Caustic 3 sx
 Polysec 2 sx Sawdust 20 sx
 CMC 1 sk Polyguard 10 sx
 Cypan 1 sk Barite 50 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A

CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	21.75	206.25
2. TRIPS		44.00
3. RIG SERVICE	.50	9.00
4. DEVIATION SURVEY	1.50	23.75
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD		68.25
7. CIRCULATING		1.50
8. RIG REPAIR		51.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. BOP Drill	.25	29.25
TOTALS	24.00	624.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 14 2400

Year - Month - Day - Time

0000 - 1600	Drill 215.9 mm hole and survey every 3rd kelly down
1600 - 1615	BOP drill with drill string on bottom and drilling
1615 - 2400	Drill 215.9 mm hole and survey every 3rd kelly down

Geology:

872 - 910 m	Shale
910 - 948 m	Shale, 20% sandstone, 20% siltstone

Background gas 872 - 948 m .06% - .1%

Survey gas .14%

Top - Basal Silt at 910 m

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 15 2400

Year - Month - Day - Time

WELL NAME Forward et al W. Parkin Y.T. D-54 LOCATION _____

DAY 27 DEPTH 1001 METRES LAST 24 HRS. 53 ROTATING HRS. 17

ACTIVITY AT REPORT TIME 0800: Run in with new bit

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1162 VIS 52 WL. 6.8 GELS 3.3/5.3 % SOLIDS .09 PV 25 YP 12 pH 9.75

% OIL _____ % SAND .002 CAKE 1.5 PPMCL 250 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
4	216	F2	BD3149	14	60	1001	53	191	17	56.75	3.37	3	5	1/8

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
4	7.9	9.5	9.5	356	72	140	1.3	49	78/95	114	243	6,000

DEVIATION SURVEYS

6 ° at 972 _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 27 sx _____
Polysec 4 sx _____
CMC 1 sk _____
Cypan 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.00	223.25
2. TRIPS	3.25	47.25
3. RIG SERVICE	.50	9.50
4. DEVIATION SURVEY	.50	24.25
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD	.50	68.75
7. CIRCULATING		1.50
8. RIG REPAIR	2.25	53.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		29.25
TOTALS	24.00	648.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 15 2400

Year - Month - Day - Time

0000 - 1300 Drill and survey every 3rd kelly down

1300 - 1315 Rig service, BOP, service pump motor

1315 - 1800 Drill ahead

1800 - 1830 Circulate

1830 - 2045 Circulate and work on air line

2045 - 2400 Pull out of hole to change bit

Geology:

948 - 993 m Shale, 30% siltstone

993 - 1001 m Limestone, 10% chert

Background Gas 948 - 1001 m .06 - .1%

Hart River 993 m

WANT LIST:

WEATHER

ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 16 2400

Year - Month - Day - Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 28 DEPTH 1017 METRES LAST 24 HRS. 16 ROTATING HRS. 10.25

ACTIVITY AT REPORT TIME Drilling at + 1.5 mph

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1168 VIS 61 WL. 7 GELS 2.9/4.8 % SOLIDS .1 PV 26 YP 10.5 pH 10
% OIL _____ % SAND .002 CAKE 1.5 PPMCL 250 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
5	215.9	H-J33	57488	12	60		16	16	10.25	10.25	1.54			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
5	7.1	7.1	7.9	356	42	140	.76	29	45/56	99	107	8,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Polyguard 10 sx _____
Caustic 1 sk _____
Gel 6 sx _____
Polysec 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Rielley

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	10.25	233.50
2. TRIPS	6.50	53.75
3. RIG SERVICE	.25	9.75
4. DEVIATION SURVEY		24.25
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD	1.50	70.25
7. CIRCULATING		1.50
8. RIG REPAIR	5.50	59.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		29.25
TOTALS	24.00	672.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 16 2400

Year - Month - Day - Time

0000 - 0100 Strap out bit #4
0100 - 0400 Change clutches on floor motors
0400 - 0930 Hoist BHA, change bit, run in hole
0930 - 1200 Work on pumps
1200 - 1330 Break circulation, wash to bottom
1330 - 1400 Drill
1400 - 1415 Rig service, BOP
1415 - 2400 Drill

Geology:

1001 - 1017 m Limestone dense - 30% siltstone tight, 20% chert with traces
of fracture porosity and light oil stain

Background Gas 1001 - 1017 m .04% - .06%

Trip Gas .2%

Connection Gas .08%

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 17 2400

Year · Month · Day · Time

WELL NAME Forward et al West Parkin Y.T. D-54 LOCATION _____

DAY 29 DEPTH 1029 METRES LAST 24 HRS. 12 ROTATING HRS. 8.5

ACTIVITY AT REPORT TIME Ream to bottom

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS 51 WL. 7.6 GELS 2.8/4.8 % SOLIDS .05 PV 23 YP 10.5 pH 10

% OIL _____ %SAND .002 CAKE 1.5 PPMCL 220 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
5	215.9	J33	57488	12	60	1029	12	28	8.5	18.75	1.5	8	8	1.5
6	215.9	M84F	859785											

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
5	7.1	7.1	7.9	356	60	140	.76	29	45/56	99	107	8,000

DEVIATION SURVEYS

6 ° at 1020 _____ ° at _____
 _____ ° at _____ _____ ° at _____
 _____ ° at _____ _____ ° at _____
 _____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Ream		215	1.88	
Stabilizer		215	1.30	
Shock Sub		145	3.98	
Stabilizer		215	1.28	
Drill Collar		171	3.05	
Stabilizer		215	1.14	
Monel D.C.			7.35	
Drill Collar		171	8.67	
Stabilizer		215	1.19	
4 D.C.		171	38.21	
Jars		145	4.34	
Drill Collar		171	9.56	
X/O		171	.54	
14 D.C.		159	126.67	
X/O		159	.34	209.50

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	8.50	242.00
2. TRIPS	7.50	61.25
3. RIG SERVICE	.25	10.00
4. DEVIATION SURVEY	.50	24.75
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD		70.25
7. CIRCULATING	1.50	3.00
8. RIG REPAIR	4.75	63.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		71.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. COGLA	1.00	30.25
TOTALS	24.00	696.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 17 2400

Year - Month - Day - Time

0000 - 0630	Drill 219.9 mm hole and survey
0630 - 0715	Put liner gasket in pump
0715 - 1000	Drill
1000 - 1030	Circulate for trip
1030 - 1200	Work on pump
1200 - 1300	COGLA rig inspection
1300 - 1330	Observe well
1330 - 1400	Rig and pull out of hole
1400 - 1430	Repair trip tank pump
1430 - 1800	Trip for bit
1800 - 2000	Pick up Monel DC and change BHA
2000 - 2130	Run in with enough pipe for potential kill
2130 - 2200	Blow kelly and break circulation
2200 - 2400	Replace clutch on #1 floor motor while circulating

Geology:

1017 - 1029 m Chert with traces oil stained fractures
30% marl calcareous

Background Gas .06%

WANT LIST:

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

PLEASE TURN OVER

Year - Month - Day - Time

[illegible]



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 19 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 31 DEPTH 1077 METRES LAST 24 HRS. 26 ROTATING HRS. 14.75

ACTIVITY AT REPORT TIME Drilling ahead at 1088 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1130 VIS _____ WL. 7.2 GELS 2.4/3.8 % SOLIDS .08 PV 20 YP 7.7 pH 10

% OIL Nil %SAND .002 CAKE 1 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
6	215.9	M84F	859785			1077	26	48	14.75	29	1.65	8	8	0

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
7	8.7	8.7	9.5	356	60	140	1.086	41	65	79	140	8,000

DEVIATION SURVEYS

6 °at 1075 °at _____
°at _____ °at _____
°at _____ °at _____
°at _____ °at _____

MUD & CHEMICALS ADDED

Gel 26 sx CMC 2 sk
Barite 50 sx Cypan 1 sk
Caustic 4 sx
Polysec 5 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit sub with				
float substituted				
for near bit				
reamer 1.32 m				
from BHA				

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	14.75	271.00
2. TRIPS	7.75	70.50
3. RIG SERVICE	1.00	11.75
4. DEVIATION SURVEY	.50	25.25
5. REAM & COND. HOLE		15.75
6. MIX & COND. MUD		70.25
7. CIRCULATING		5.50
8. RIG REPAIR		68.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP		72.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		30.25
TOTALS	24.00	744.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 19 2400

Year - Month - Day - Time

0000 - 0230	Drill 215.9 mm hole
0230 - 0245	BOP check, hydril, pipe rams, motor kill
0245 - 1345	Drill 215.9 mm hole
1345 - 1400	Rig service
1400 - 1430	Survey
1430 - 1545	Drill 215.9 mm hole
1545 - 2000	Trip for bit, blow kelly
2000 - 2145	Change BHA, run in hole to drill collar
2145 - 2215	Slip 6.4 m drilling line
2215 - 2400	Run in hole with Bit #7

Geology:

1051 - 1077 Chert 30%, limestone 20%, sandstone, coarse grained, trace porosity
Background gas .02% - .04%

WANT LIST: _____

WEATHER -12°C

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 20 2400

Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 32 DEPTH 1116 METRES LAST 24 HRS. 39 ROTATING HRS. 20.00

ACTIVITY AT REPORT TIME Operation - waiting on orders

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1140 VIS 50 WL. 8.2 GELS 2.4/3.8 % SOLIDS .08 PV 18 YP 7.2 pH 10

% OIL Nil %SAND .002 CAKE 1.5 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
7	215.9	M89F	840818	14	65		39	39	20	20	1.95	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
7	8.7	8.7	9.5	356	30	140	.393	15	23	35		4,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 65 sx Polyguard 10 sx
 Gel 26 sx _____
 Polysec 5 sx _____
 Sawdust 30 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	20.00	291.00
2. TRIPS		70.50
3. RIG SERVICE	.50	12.25
4. DEVIATION SURVEY		25.25
5. REAM & COND. HOLE	2.00	17.75
6. MIX & COND. MUD		70.25
7. CIRCULATING		5.50
8. RIG REPAIR	1.25	69.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		27.50
15. NIPPLE UP & TEST BOP	.25	72.25
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		30.25
TOTALS	24.00	768.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 20 2400

Year - Month - Day - Time

0000 - 0030	Break circulation, no gas
0030 - 0200	Ream 1076 -1077 m
0200 - 0415	Drill 215 mm hole
0415 - 0430	Rig service, BOP check, hydril, HCR, pipe rams
0430 - 1015	Drill 215 mm hole, no drag on connection
1015 - 1130	Work on pump, switch pumps, discharge frozen
1130 - 1700	Drill 215 mm hole
1700 - 1715	Rig service
1715 - 1730	BOP check, accurate hydril, HCR, pipe rams and motor shut-offs
1730 - 2400	Drill 215 mm hole

Geology:

1077 - 1116	Limestone, dense, 30% chert, 30% marl, formation gas .04% - .06%
	Trip gas 1%

WANT LIST:

WEATHER -10°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 21 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 33 DEPTH 1123 METRES LAST 24 HRS. 7 ROTATING HRS. 3.75

ACTIVITY AT REPORT TIME Running in hole with Bit #8

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1140 VIS 49 WL. 8.4 GELS 1.9/3.8 % SOLIDS .08 PV 17 YP 7.2 pH 10

% OIL Nil % SAND .002 CAKE 1.5 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
7	215.9	M89F	840818	15	60	1123	7	46	3.75	23.75	1.9	4	3	0

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
7	8.7	8.7	9.5	356	60	140	1.086	41	65	95	140	6,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	3.75	294.75
2. TRIPS		70.50
3. RIG SERVICE		12.25
4. DEVIATION SURVEY		25.25
5. REAM & COND. HOLE		17.75
6. MIX & COND. MUD		70.25
7. CIRCULATING		5.50
8. RIG REPAIR		69.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON: Orders	20.25	47.75
15. NIPPLE UP & TEST BOP		72.25
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____		30.25
TOTALS	24.00	792.00

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 21 2400

Year - Month - Day - Time

0000 - 2015 Operations, waiting on orders

2015 - 2400 Drill 215.9 mm hole

Geology:

1116 - 1123 m Limestone, dense, 30% chert, few fractures, 20% marl, calcareous
Background gas .02% - .1%

WANT LIST: _____

WEATHER -4°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 22 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 34 DEPTH 1149 METRES LAST 24 HRS. 26 ROTATING HRS. 13.5

ACTIVITY AT REPORT TIME Drilling ahead at 1156 m, mud weight raised to 1160 kg/m³

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS 54 WL. 6.8 GELS 2.4/4.3 % SOLIDS .09 PV 23 YP 8.6 pH 9.5

% OIL Nil %SAND .003 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
8	215.9	M89TF	840818	15	50		26	26	13.5	13.5	1.93	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
8	8.7	8.7	9.5	356	42	140	.76	29	45	56	67	7,500

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 21 sx Polysec 4 sx
 Barite 90 sx CMC 1 sk
 Sawdust 10 sx Cypan 1 sk
 Polyguard 10 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.24	
Reamer	73	215	1.88	
Shock Sub	52	145	3.98	
Stabilizer	73	215	1.28	
1 D.C.	73	171	3.05	
Stabilizer	73	215	1.14	
1 Monel	73	171	7.35	
1 D.C.	73	171	8.67	
1 Stabilizer	73	215	1.19	
4 D.C.'s	73	171	38.21	
1 Jar	52	145	4.34	
1 D.C.	73	171	9.56	
1 X/O	73	171	1.54	
14 159 D.C.'s	73	159	126.67	
X/O	73	159	1.34	208.44
COSTS				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	13.50	308.25
2. TRIPS	8.50	79.00
3. RIG SERVICE	.50	12.75
4. DEVIATION SURVEY		25.25
5. REAM & COND. HOLE		17.75
6. MIX & COND. MUD	.75	71.00
7. CIRCULATING		5.50
8. RIG REPAIR		69.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		72.25
16. DRILLING OUT		9.75
17. LOSS CIRC.		.
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.	.75	31.00
TOTALS	24.00	816.00

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

85 01 22 2400
Year - Month - Day - Time

85 01 22 2400

Year - Month - Day - Time

Geology:

Background gas 1123 - 1149 m .8%

Trip gas at 1125 m 2.5%

Approaching chance sandstone

Formation gas at 1140 m .5%

WANT LIST:

WEATHER -10°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 23 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 35 DEPTH 1167 METRES LAST 24 HRS. 18 ROTATING HRS. 12ACTIVITY AT REPORT TIME Drilling ahead at 1185 m at +3 m/hour

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS 59 WL. 7.2 GELS 2.4/4.8% SOLIDS .09 PV 18 YP 8.6 pH 10.5% OIL Nil %SAND .003 CAKE 1 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
8	215.9	M89TF	840420	15	55	1167	18	44	12	25.5	1.73	7	8	3

CIRCULATION RECORD

BIT NO.	JETS -- mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
8	8.7	8.7	8.7	356	56	140	1.014	38	60	89	114	7,800

DEVIATION SURVEYS

6 ° at 1160 ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 40 sx _____
Caustic 2 sx _____
Gel 10 sx _____
Polysec 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.00	320.25
2. TRIPS	6.50	85.50
3. RIG SERVICE	.50	13.25
4. DEVIATION SURVEY	.75	26.00
5. REAM & COND. HOLE		17.75
6. MIX & COND. MUD	.50	71.50
7. CIRCULATING		5.50
8. RIG REPAIR		69.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP	2.50	74.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. COGLA Inspection	1.25	32.25
TOTALS	24.00	840.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 23 2400
Year - Month - Day - Time

0000 - 0500	Drill 215.9 mm hole
0500 - 0515	Rig service, BOP check, hydril, pipe rams and HCR
0515 - 0900	Drill 215.9 mm hole
0900 - 0945	Survey - 6 ⁰
0945 - 1300	Drill 215.9 mm hole
1300 - 1330	Circulate up sample, flow check 10 minutes
1330 - 1345	Rig service
1345 - 1500	COGLA inspection, BOP drill
1500 - 2000	Blow kelly, trip for bit, flow check, OK
2000 - 2230	BOP pressure test, casing pressure test
2230 - 2400	Run in hole

Geology:

1149 - 1167 m	Limestone, dense, 40% marl, 10% chert
	Background gas .08% - .1%
	Trip gas 1.4%

WANT LIST:

WEATHER Clear -15⁰C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 24 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 36 DEPTH 1216 METRES LAST 24 HRS. 49 ROTATING HRS. 21

ACTIVITY AT REPORT TIME Drilling ahead at 1230 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS. 52 WL. 7.4 GELS 1.9/4.3 % SOLIDS .09 PV 19 YP 7.6 pH 10.5

% OIL Nil %SAND .0025 CAKE 1 PPMCL 20 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
9	215.9	J55	Retip	16	55	IN	49	49	21	21	2.33	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
9	8.7	8.7	9.5	356	56	140	1.14	38	60/75	91	115	8,000

DEVIATION SURVEYS

Nil ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 80 sx _____
Gel 22 sx _____
Caustic 2 sx _____
Polysec 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	21.00	341.25
2. TRIPS	2.00	87.50
3. RIG SERVICE	.50	13.75
4. DEVIATION SURVEY		26.00
5. REAM & COND. HOLE		17.75
6. MIX & COND. MUD	.50	72.00
7. CIRCULATING		5.50
8. RIG REPAIR		69.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		74.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		32.25
TOTALS	24.00	864.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 24 2400

Year - Month - Day - Time

0000 - 0200	Run in hole with bit #9
0200 - 0215	Rig service, check BOP's
0215 - 0245	Break circulation and wash to bottom
0245 - 1200	Drill 215.9 mm hole
1200 - 1215	Rig service
1215 - 2400	Drill 200 mm hole

Geology:

1167 - 1179 m	Marl, calcareous; 40% limestone; 20% chert
1179 - 1200 m	Shale; 30% limestone; 20% chert; 20% marl and calcareous
1200 - 1216 m	Limestone; 30% marl and shale; 20% chert; 10% sandstone; medium grained tight

Background gas 1167 - 1216 m .1%

WANT LIST:

WEATHER Clear -18°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 25 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 37 DEPTH 1245 METRES LAST 24 HRS. 29 ROTATING HRS. 12.50

ACTIVITY AT REPORT TIME Drilling ahead with tooth bit at 1255 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS 54 WL. 7.2 GELS 2.3/4.3 % SOLIDS .09 PV 20 YP 7.2 pH 10.5
 % OIL Nil %SAND .0025 CAKE 1 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
9	215.9	J-55	J2288	16	55	1245	29	78	12.5	33.5	2.34	8	8	3
			Retip											

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
9	8.7	8.7	9.5	356	56	140	1.014	38	60	75	91	8,000

DEVIATION SURVEYS

5-3/4 ° at 1216 _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Polyguard 10 sx _____
Sawdust 30 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.50	353.75
2. TRIPS	6.75	94.25
3. RIG SERVICE	.50	14.25
4. DEVIATION SURVEY	.25	26.25
5. REAM & COND. HOLE		17.75
6. MIX & COND. MUD		72.00
7. CIRCULATING	1.00	6.50
8. RIG REPAIR	.50	70.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		74.75
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____	2.50	34.75
TOTALS	24.00	888.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____ 85 01 25 2400
Year - Month - Day - Time

Year - Month - Day - Time

Geology	
1216 - 1237	Chert 30% limestone, 30% shale
1237 - 1245	Chert 30% chert conglomerate, shaly, background gas 0.1%

WANT LIST:

WEATHER -15° C ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 26 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 38 DEPTH 1285 m METRES LAST 24 HRS. 40 ROTATING HRS. 19.25ACTIVITY AT REPORT TIME Repair clutch on floor motor

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS. 62 WL. 7.6 GELS 1.9/9.5 % SOLIDS .09 PV 16 YP 5.7 pH 11.0% OIL nil % SAND .004 CAKE 1 PPMCL 250 PPMCa nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
10	215.9	FP64	Retip	14000	50	1285	40	40	19.25	19.25	2.08	8	3	3

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
10	8.7	8.7	9.5	356	56	140	1.014	38	60/75	88	83	8000

DEVIATION SURVEYS

5 3/4 ° at 1250 ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Lime 3 sx CMC 1 sk
Barite 40 sx Cypan 1 sk
Sawdust 30 sx Polysec 3 sx
Gel 16 sx Caustic 1 sk

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	16.25	370.00
2. TRIPS	1.75	96.00
3. RIG SERVICE	.50	14.75
4. DEVIATION SURVEY	.50	26.75
5. REAM & COND. HOLE	3.00	20.75
6. MIX & COND. MUD	1.00	73.00
7. CIRCULATING		6.50
8. RIG REPAIR	.75	71.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP	.25	75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		34.75
TOTALS	24.00	912.00

COSTS

DAILY N/A

CUM.

SUPERVISOR: Jim Reilly

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 26 2400

Year - Month - Day - Time

0000 - 0100	Run in hole with bit #10
0100 - 0115	Break circulation
0115 - 0130	Rig service
0130 - 0430	Work by cones on bottom
0430 - 1130	Drill 215 mm hole
1130 - 1145	Rig service
1145 - 1230	Work on pump
1230 - 1615	Drill 215.9 mm hole
1615 - 1645	Directional survey, Computalog
1645 - 2215	Drill 215.9 mm hole, reduced rate pump pressure 3200 kPa at 28 spm
2215 - 2300	Circulate up sample
2300 - 2315	Flow check
2315 - 2400	Blow down kelly, hoist bit #10

Deviation Survey - direction N75°E

Measured depth 1231.7 m

TVD 1228.73 m

Latitude 24.11 m north

Departure 60.40 m east

Dog leg Severity 1.1°/30 m

WANT LIST: Geology:

1245 - 1260 m Chert; 20% shale, 20% chert conglomerate shally

1260 - 1285 m Limestone; dense; 20% chert; 20% shale & marl

1245 - 1285 m Background gas .04% - .1%

WEATHER -18°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 27 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54

LOCATION _____

DAY 39 DEPTH 1299 METRES LAST 24 HRS. 14

ROTATING HRS. 10

ACTIVITY AT REPORT TIME Drilling at 1315 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1150 VIS 52 WL. 7.4 GELS 1.4/3.3 % SOLIDS .09 PV 21 YP 5.2 pH 10.5
 % OIL _____ % SAND .003 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT.m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
11	215	FP63J	123894	14	55		14	14	10	10	1.4	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
11	8.7	8.7	9.5	356	56	140	1.0136	38.4	60/75	88	82	8,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 75 sx Sawdust 30 sx
 Polyguard 10 sx
 Polysec 4 sx
 Bentonite 4 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.24	
Junk Sub			.66	
Reamer	71.4	215	1.88	
SS	52	145	3.98	
DC - 171	71.4	171	3.05	
Stabilizer	71.4	215	1.14	
Monet	71.4	171	3.75	
DC - 17	71.4	171	8.67	
Stabilizer	71.4	215	1.19	
DC - 4 (171)	71.4	171	32.21	
Jars	52	145	4.34	
DC - 171	71.4	171	9.56	
X/O	71.4	171	.54	
DC - 14 (159)	71.4	159	126.67	
X/O	71.4	159	.34	207.82

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	10.00	380.00
2. TRIPS	7.75	103.75
3. RIG SERVICE	.75	15.50
4. DEVIATION SURVEY		26.75
5. REAM & COND. HOLE	.50	21.25
6. MIX & COND. MUD		73.00
7. CIRCULATING		6.50
8. RIG REPAIR	5.00	76.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		34.75
TOTALS	24.00	936.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 27 2400

Year - Month - Day - Time

0000 - 0300	Hoist bit #10, clutch slipping
0300 - 0445	Pick up junk sub and run in kill string
0445 - 0530	Slip 6.4 m drilling line
0530 - 0930	Change clutch on #2 floor motor
0930 - 1230	Run in with bit #11
1230 - 1330	Thaw out kelly
1330 - 1400	Unplug jets and wash 9 m to bottom
1400 - 2400	Drilling ahead

Geology:

1285 - 1299 m Shale, 40% limestone, 10% chert

Trip Gas 4.2%

Background Gas .05 - .1%

C Gas 1.24 - 1.92%

Recycle Gas 12%

Note: Mill extra cutters magnet now in area. Mill on magnet on loan to Mr. Ben rig.

WANT LIST: _____

WEATHER -20°C Overcast

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 28 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 40 DEPTH 1337 METRES LAST 24 HRS. 38 ROTATING HRS. 22.75ACTIVITY AT REPORT TIME Drilling ahead at 1355 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1070 VIS 53 WL. 7.1 GELS 1.4/2.9% SOLIDS .1 PV 23 YP 6.2 pH 10.5% OIL Nil %SAND .0025 CAKE 1 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
11	215.9	FP63J	123894	16	55	IN	38	52	22.75	32.75	1.45	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
11	8.7	8.7	9.5	356	55	140	1.013	38	60/75	88		8,000

DEVIATION SURVEYS

5-1/2 ° at 1309 ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 18 sx _____
Gel 44 sx _____
Polysec 9 sx _____
Sawdust 30 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	22.75	402.75
2. TRIPS		103.75
3. RIG SERVICE	1.00	16.50
4. DEVIATION SURVEY	.25	27.00
5. REAM & COND. HOLE		21.25
6. MIX & COND. MUD		73.00
7. CIRCULATING		6.50
8. RIG REPAIR		76.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		34.75
TOTALS	24.00	960.00

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 28 2400

Year - Month - Day - Time

0000 - 0215	Drill 215.9 mm hole
0215 - 0230	Rig service
0230 - 0900	Drill 215.9 mm hole
0900 - 0930	Rig service, BOP check, hydril, pipe rams, held H ₂ S talk
0930 - 2030	Drill 215.9 mm hole
2030 - 2100	Survey, 5-1/2 ⁰ at 1309 m
2100 - 2115	Rig service
2115 - 2400	Drill 215 mm hole

Geology:

1299 - 1337 m	Marl and shale; 20% limestone, 5% chert; trace of chert conglomerate at 1309 m
	Background Gas .6 - 1%
	Connection Gas 9.6%

WANT LIST:

WEATHER -20°C

ROAD Good

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 29 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 41 DEPTH 1376 METRES LAST 24 HRS. 39 ROTATING HRS. 17.75

ACTIVITY AT REPORT TIME Drilling at 1378

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1180 VIS 54 WL. 6.8 GELS 2.4/3.3 % SOLIDS .1 PV 24 YP 6.2 pH 10

% OIL _____ %SAND .004 CAKE 1 PPMCL 250 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
11	215.9	FP63J	123894	14	55	1376	39	91	17.75	50.5	1.8	8	6	3

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
11	8.7	8.7	9.5	356	56	140	1.104	38	60/75	88	82.5	8,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 56 sx _____
 Polyguard 10 sx _____
 Gel 28 sx _____
 Polysec 5 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY _____
 CUM. N/A

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.75	420.50
2. TRIPS	4.50	108.25
3. RIG SERVICE	.25	16.75
4. DEVIATION SURVEY		27.00
5. REAM & COND. HOLE		21.25
6. MIX & COND. MUD		73.00
7. CIRCULATING	1.00	7.50
8. RIG REPAIR	.50	76.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		34.75
TOTALS	24.00	984.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 29 2400

Year - Month - Day - Time

0000 - 1115	Drill
1115 - 1130	Rig service
1130 - 1415	Drill
1415 - 1445	Repair broken air line driller's consol
1445 - 1830	Drill
1830 - 1930	Circulate up sample at 1376 m
1930 - 1945	Flow check, blow down kelly
1945 - 2400	Pull out of hole with bit #11, float check at 5 stands, 30 stands and top of collar. Pulled tight 1070 - 1080 m and 860 - 870 m.

Geology:

1337 - 1376 m Limestone, 30% chert, 10% marl, calcareous

Background Gas .4 - .8%

Connection Gas .7 - 1.4%

Trip Gas 4%

WANT LIST:

WEATHER -12°C Overcast

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 30 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 42 DEPTH 1412 METRES LAST 24 HRS. 36 ROTATING HRS. 17.5

ACTIVITY AT REPORT TIME Drilling ahead at 1428 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1185 VIS 60 WL. 6.5 GELS 2.8/4.3 % SOLIDS .1 PV 26 YP 9.5 pH 10
 % OIL Nil %SAND .005 CAKE 1 PPMCL 250 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
12	215.9	J55	52256	16	55		36	36	17.5	17.5	2.06	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
12	7.1	7.9	14.2	356	56	140	1.03	38	60/76	68	83	7,500

DEVIATION SURVEYS

5-1/4 ° at 1376 ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 78 sx Cypan 1 sk
Bentonite 10 sx Polysec 5 sx
Caustic 1 sx _____
CMC 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same except junk sub has been removed .66 m				
Total BHA remaining 207.16 m				

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.50	438.00
2. TRIPS	2.75	111.00
3. RIG SERVICE	1.50	18.25
4. DEVIATION SURVEY	.50	27.50
5. REAM & COND. HOLE	.50	21.75
6. MIX & COND. MUD	.50	73.50
7. CIRCULATING		7.50
8. RIG REPAIR		76.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.	.75	35.50
TOTALS	24.00	1008.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 30 2400

Year - Month - Day - Time

0000 - 0015	Rig service, BOP check
0015 - 0100	Weld in jet
0100 - 0145	Run in with bit #12
0145 - 0300	Slip and cut line
0300 - 0500	Run in hole with bit #12, remainder
0500 - 0530	Blow kelly and break circulation
0530 - 0600	Ream 6 m to bottom
0600 - 1715	Drill 215.9 mm hole
1715 - 1745	Survey
1745 - 2400	Drill 215.9 mm hole

Geology:

1376 - 1412 m	Chert; 30% limestone; siliceous; 20% shale and siliceous
	Background Gas .2 - .5%
	Connection Gas .5 - 1%
	Survey Gas 3.3%

WANT LIST:

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE; WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 01 31 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 43 DEPTH 1466 METRES LAST 24 HRS. 54 ROTATING HRS. 23.5ACTIVITY AT REPORT TIME Drilling 1483 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1082 VIS 50 WL. 8 GELS 1.9/2.9% SOLIDS .11 PV 19 YP 5.7 pH 10% OIL _____ %SAND .0025 CAKE 1.5 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
12	215.9	J55	52256	16	55		54	90	23.5	41	2.2			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
12	7.1	11.9	14.2	356	60	140	1.086	41	55/80	72	82.5	7,500

DEVIATION SURVEYS

_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 145 sx _____
Polyguard 10 sx _____
Lime 2 sx _____
Caustic 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY	N/A
CUM.	

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	23.50	461.50
2. TRIPS		111.00
3. RIG SERVICE	.50	18.75
4. DEVIATION SURVEY		27.50
5. REAM & COND. HOLE		21.75
6. MIX & COND. MUD		73.50
7. CIRCULATING		7.50
8. RIG REPAIR		76.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		35.50
TOTALS	24.00	1032.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 01 31 2400

Year - Month - Day - Time

0000 - 0245	Drill
0245 - 0300	Rig service, BOP check and drill
0300 - 1900	Drill
1900 - 1915	Rig service, check hydril and pipe rams
1915 - 2400	Drill

Geology:

1448 m	Bituminous shale
1412 - 1448 m	Chert, 40% limestone siliceous, 20% shale
1448 - 1466 m	Shale, black, part bituminous, 40% marl calcareous

Background Gas .2% - .7%

Connection Gas .8%

Formation Gas 1453 m - 1%

1455 m - 3%

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 01 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____
DAY 44 DEPTH 1489 METRES LAST 24 HRS. 23 ROTATING HRS. 12.00
ACTIVITY AT REPORT TIME Drilling ahead at 1510 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 61 WL. 7 GELS 2.4/4.8 % SOLIDS .11 PV 27 YP 8.6 pH 10
% OIL Nil %SAND .0025 CAKE 1 PPMCL 200 PPMCa Nil

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
12	215.9	J55	52256	16	55	1479	13	103	7.5	48.5	2.12	8	8	3
13	215.9	J55	84637	16	55	IN	10	10	4.5	4.5	2.22	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
13	8.7	9.5	9.5	356	56	140	1.01	38	60/74	84	105	7,500

DEVIATION SURVEYS

2-7/8 ° at 1443 ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 60 sx Cypan 1 sk
Gel 12 sx
Polysec 2 sx
CMC 1 sk

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.00	473.50
2. TRIPS	8.00	119.00
3. RIG SERVICE	.25	19.00
4. DEVIATION SURVEY	.75	28.25
5. REAM & COND. HOLE	1.00	22.75
6. MIX & COND. MUD	1.00	74.50
7. CIRCULATING		7.50
8. RIG REPAIR	.50	77.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Flow check	.50	36.00
TOTALS	24.00	1056.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 01 2400

Year - Month - Day - Time

0000 - 0015	Rig service
0015 - 0100	Survey 2-7/8 ⁰ N23 ⁰ E
0100 - 0830	Drill 215.9 mm hole
0830 - 0900	Circulate
0900 - 1000	Pulled out of hole with Bit #12
1000 - 1030	Work on trip tank pump, shale plugged
1030 - 1230	Pulled out of hole
1230 - 1300	Flow check
1300 - 1400	Pulled out of hole
1400 - 1500	Change pins on reamer
1500 - 1800	Run in hole with Bit #13
1800 - 1830	Break circulation, wash to bottom, no shale
1830 - 1930	Ream 1 m to 1479 m
1930 - 2400	Drill 215.9 mm hole with Bit #13

Geology:

1466 - 1489 m	Shale; very sandy; 30% sandstone; very fine and fine to medium grained; 30% marl
	Formation Gas 8-14%
	Background Gas .16-.5%

WANT LIST: _____

WEATHER -5⁰C Partly OvercastROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 02 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54

LOCATION _____

DAY 45 DEPTH 1542 METRES LAST 24 HRS. 53 ROTATING HRS. 22.50ACTIVITY AT REPORT TIME 1552 m, drilling ahead

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1175 VIS 56 WL. 7.6 GELS 1.9/.4 % SOLIDS .08 PV 24 YP 5.7 pH 10% OIL Nil % SAND .02 CAKE 1.5 PPMCL 200 PPMCa 0

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
13	216	J55	084637	16	60	IN	52	63	22.5	27.0	2.3	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
13	8.7	9.5	9.5	356	56	140	1.01	37	60/74	89.9	128	8,000

DEVIATION SURVEYS

3 ° at 1510 ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 200 sx Caustic 2 sx
Gel 51 sx
Polysec 12 sx
Polyguard 10 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	22.50	496.00
2. TRIPS		119.00
3. RIG SERVICE	.50	19.50
4. DEVIATION SURVEY	.75	29.00
5. REAM & COND. HOLE		22.75
6. MIX & COND. MUD		74.50
7. CIRCULATING		7.50
8. RIG REPAIR		77.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. BOP drill	.25	36.25
TOTALS	24.00	1080.00

PLEASE TURN OVER

85 02 02 2400
Year - Month - Day - Time

85 02 02 2400

Year - Month - Day - Time

Geology:

1510 m - 4 - 5%

WANT LIST:

WEATHER -12°C Partly Cloudy

ROAD _____ Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 03 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 46 DEPTH 1569 METRES LAST 24 HRS. 27 ROTATING HRS. 17.75

ACTIVITY AT REPORT TIME Ran in hole with Bit #14

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1185 VIS 60 WL. 8.2 GELS 1.9/4.8 % SOLIDS .09 PV 23 YP 7.7 pH 10

% OIL _____ % SAND .0025 CAKE 1.5 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
13	216	J55	084637	17	50	1569	27	90	17.75	44.75	2.01	2	2	I
14	216	J44	40802											

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
13	8.7	9.5	9.5	356	60	140	1.086	41	64	84.9	129	8,000
14	8.7	8.7	7.9									

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 120 sx _____
 Gel 39 sx _____
 Polysec 7 sx _____
 Caustic 2 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	17.75	513.75
2. TRIPS	5.00	124.00
3. RIG SERVICE	.50	20.00
4. DEVIATION SURVEY		29.00
5. REAM & COND. HOLE		22.75
6. MIX & COND. MUD		74.50
7. CIRCULATING	.50	8.00
8. RIG REPAIR		77.00
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Flow Check	.25	36.50
TOTALS	24.00	1104.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 03 2400
Year - Month - Day - Time

0000 - 0030	Drill
0030 - 0045	Rig service
0045 - 1800	Drill
1800 - 1830	Circulate bottoms up
1830 - 1845	Rig service
1845 - 1900	Flow check
1900 - 2400	Pull out of hole with Bit #13 SLM

Geology:

1542 - 1564 m	40% sandstone, very fine to fine, 40% shale, 20% chert
1564 - 1569 m	Shale, black and bitumous, in part slightly calcareous

Background Gas .6% - 1.2%

Connection Gas 1% - 10%

WANT LIST:

WEATHER -5°C

ROAD Good

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 04 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 47 DEPTH 1602 METRES LAST 24 HRS. 33 ROTATING HRS. 14.25

ACTIVITY AT REPORT TIME Drilling at 1628 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1180 VIS 60 WL. 7.3 GELS .4/4.8 % SOLIDS .07 PV 26 YP 9.1 pH 10

% OIL _____ % SAND .0025 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
14	216	J44	40802	17	50		33	33	14.25	14.25	2.31	IN		

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
14	8.7	8.7	7.9	356	50	140	.905	34.2	54/66	89.8	106	7,000

DEVIATION SURVEYS

3-1/2 ° at 1567 N37E _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 80 sx Caustic 1 sk
 Gel 20 sx CMC 1 sk
 Polyguard 10 sx Cypan 1 sk
 Polysec 4 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION.	TODAY	CUM
1. DRILLING	14.25	528.00
2. TRIPS	6.50	130.50
3. RIG SERVICE	.25	20.25
4. DEVIATION SURVEY	.50	29.50
5. REAM & COND. HOLE		22.75
6. MIX & COND. MUD		74.50
7. CIRCULATING	1.00	9.00
8. RIG REPAIR	.75	77.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Stop	.75	37.25
TOTALS	24.00	1128.00

PLEASE TURN OVER

85 02 04 2400

Year - Month - Day - Time

0000 - 0100	Pull out of hole with Bit #13
-------------	-------------------------------

0100 - 0300 Change bit, run in hole with BHA

0300 - 0345 Slip 6 m drilling line

0345 - 0415 Run in hole with Bit #14

0415 - 0500 Work on motors

0500 - 0800 Run in hole with Bit #14

~~0800 - 0900 Break circulation, unplug jets, clean 1 m fill~~

0900 - 1800 Drill

1800 - 1815 Rig service

1815 - 1845 Survey

1845 - 2400 Drill

Geology:

1569 - 1602 m 90% black shale, 10% chert and limestone, calcareous, carbonaceous,
firm

Background Gas 1.2 - 1.6%

Connection Gas 2.8 - 3.1%

Trip Gas 10.24%

WANT LIST:

WEATHER _____ -12°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

[illegible]



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 05 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 48 DEPTH 1672 METRES LAST 24 HRS. 70 ROTATING HRS. 22.50ACTIVITY AT REPORT TIME Repair clutch #1 at 1685 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1186 VIS 70 WL. 7.2 GELS 3.3/5.3 % SOLIDS .08 PV 33 YP 12.9 pH 10% OIL _____ % SAND .0025 CAKE _____ PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
14	216	J44	40802	13	80		70	103	22.50	36.75	2.80			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
14	8.7	8.7	9.5	356	50	140	.905	34	54			8,500

DEVIATION SURVEYS

6-3/4 ° at 1625 N38E _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 80 sx _____
Gel 24 sx _____
Polysec 4 sx _____
Caustic 1 sk _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	22.50	550.50
2. TRIPS		130.50
3. RIG SERVICE	.50	20.75
4. DEVIATION SURVEY	1.00	30.50
5. REAM & COND. HOLE		22.75
6. MIX & COND. MUD		74.50
7. CIRCULATING		9.00
8. RIG REPAIR		77.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1152.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 05 2400

Year - Month - Day - Time

0000 - 0300 Drill
 0300 - 0315 Rig service
 0315 - 1015 Drill
 1015 - 1030 Rig service
 1030 - 1100 Survey, misrun
 1100 - 1345 Drill
 1345 - 1415 Survey
 1415 - 2400 Drill

Geology:

1604 - 1658 m Shale, black, bitumous becoming non-calcareous, 20% limestone with crinoids, 20% marl, calcareous, traces of sandstone, lime and silicious

1658 - 1672 m Shale, dark grey, non-calcareous

1658 m Unit 1 shale

Background Gas 1.6% - 3%

Connection Gas 2.6% - 4.7%

WANT LIST: _____

WEATHER -15°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 06 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 49 DEPTH 1688 METRES LAST 24 HRS. 16 ROTATING HRS. 6.75

ACTIVITY AT REPORT TIME Drilling ahead at 1706 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 63 WL. 7.3 GELS 2.9/4.8 % SOLIDS .09 PV 30 YP 8.6 pH 10

% OIL _____ %SAND .0025 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
14	215.9	J44	40802	13	80	1685	13	116	5.25	42.0	2.76	8	8	1/8
15	215.9	F2RR	LW459	10	60	IN	3	3	1.50	1.5	2.00	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
14	8.7	8.7	9.5	356	50	140	.905	34	54/66	89.8	105	8,500
15	7.1	7.1	8.7	356	42	140	.760	29	45/55	91.4	93	8,000

DEVIATION SURVEYS

10 ° at 1675 _____ ° at _____
 _____ ° at _____ _____ ° at _____
 _____ ° at _____ _____ ° at _____
 _____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

None _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit				
Bit Sub w/ Float				
1 SS				
1 DC		171		
1 Monel DC				
4 DC's		171		
1 IBS				
1 DC		171		
1 Jar				
1 DC				
1 X/O				
14 DC's		159		

COSTS

DAILY N/A
 CUM. _____
 SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	6.75	557.25
2. TRIPS	9.50	140.00
3. RIG SERVICE		20.75
4. DEVIATION SURVEY	.75	31.25
5. REAM & COND. HOLE	.50	23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	1.00	10.00
8. RIG REPAIR	5.50	83.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1176.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 06 2400

Year - Month - Day - Time

0000 - 0215	Drill 216 mm hole
0215 - 0300	Survey at 1654 m 10°N 38°E
0300 - 0600	Drill 216 mm hole
0600 - 1100	Repair clutch
1100 - 1200	Circulate, drop survey at 1675 m - 10°
1200 - 1600	Pull out of hole with Bit #14
1600 - 2100	Change bit, BHA, run in hole with Bit #15
2100 - 2130	Repair tongs
2130 - 2200	Run in hole with Bit #15
2200 - 2230	Clean 10 m to bottom
2230 - 2400	Drill 216 mm hole

Geology:

1672 - 1688 m Shale, dark grey, non calcareous, 10% limestone, very fine, siliceous

Background Gas 1%

WANT LIST:

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 07 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 50 DEPTH 1756 METRES LAST 24 HRS. 68 ROTATING HRS. 21.75

ACTIVITY AT REPORT TIME Pull out of hole with Bit #15 at 1763 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1198 VIS 75 WL. 7 GELS .9/4.8 % SOLIDS .09 PV 32 YP 12.4 pH 10

% OIL _____ %SAND .0025 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
15	216	F2RR	LW459	15	50		68	71	21.75	23.25	3.05			

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
15	7.1	7.1	8.7	356	44	140	.796	30	47/58	95.7	108	8,000

DEVIATION SURVEYS

10-1/2 ° at 1583 N44E ° at _____
 10 ° at 1702 N49E ° at _____
 8-3/4 ° at 1744 N38E ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 27 sx Caustic 2 sx
 Barite 60 sx
 Polysec 5 sx
 Polyquard 10 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	21.75	579.00
2. TRIPS		140.00
3. RIG SERVICE	.50	21.25
4. DEVIATION SURVEY	1.75	33.00
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		10.00
8. RIG REPAIR		83.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1200.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 07 2400
Year - Month - Day - Time

0000 - 0730	Drill
0730 - 0800	Survey
0800 - 1400	Drill
1400 - 1415	Rig service, check BOP
1415 - 1445	Survey
1445 - 1715	Drill
1715 - 1730	Rig service, check BOP
1730 - 2200	Drill
2200 - 2245	Survey
2245 - 2400	Drill

Geology:

1688 - 1756 m Shale, 20% sandstone, medium grained, very silicious

Background Gas .7% - 1.5%

Connection Gas 1.5% - 2%

WANT LIST:

WEATHER -20°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 08 2400

Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 51 DEPTH 1790 METRES LAST 24 HRS. 34 ROTATING HRS. 11.25

ACTIVITY AT REPORT TIME Drilled to TD at 1811 m (0730 hours), wiper trip

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1200 VIS 82 WL. 6.8 GELS 3.8/6.7 % SOLIDS .09 PV 39 YP 19 pH 10

% OIL _____ %SAND .0025 CAKE 1 PPMCL 200 PPMCa 16

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
15	215.9	F2RR	LW495	15	70	1763	7	78	2	25.25	3.09	3	2	I
16	215.9	F2	1A774	15	55	IN	27	27	9.25	9.25	2.91	I	N	

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
15	7.1	7.1	8.7	356	44	140	.796	30	47/58	95.7	108	8,000

DEVIATION SURVEYS

7-3/4 ° at 1759 N24°W ° at _____
8-1/4 ° at 1791 N19°E ° at _____
 ° at _____ ° at _____
 ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 18 sx _____
Caustic 1 sk _____
Polysec 3 sx _____
Sawdust 50 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

COSTS

DAILY N/A
 CUM. _____
 SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	11.25	590.25
2. TRIPS	9.25	149.25
3. RIG SERVICE	.25	21.50
4. DEVIATION SURVEY		34.00
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	2.25	12.25
8. RIG REPAIR		83.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1224.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 08 2400

Year - Month - Day - Time

0000 - 0200	Drill 215.9 mm hole
0200 - 0300	Circulate sample
0300 - 0630	Pull out of hole with bit #15
0630 - 0645	Flow check at collars
0645 - 0800	Pull out of hole with bottom hole assembly
0800 - 1230	Run in hole with bit #16
1230 - 1315	Blow kelly, break circulation
1315 - 1330	Rig service, check BOP
1330 - 2015	Drill
2015 - 2030	Circulate
2030 - 2130	Survey at 1759 m, 7-3/4° N24°W
2130 - 2400	Drill

Geology:

1756 - 1790 m Shale, 20% sandstone, fine to medium, very silicious

Trip Gas 5.9%

Connection Gas 1.2 - 1.6%

Background Gas .6 - .8%

WANT LIST:

WEATHER -25°C High Cloud

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 09 2400

Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 52 DEPTH 1811 METRES LAST 24 HRS. 21.00 ROTATING HRS. 7.25ACTIVITY AT REPORT TIME Logging

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 72 WL. 6.7 GELS 3.3/6.7 % SOLIDS .085 PV 34 YP 12.9 pH 10.0
% OIL nil % SAND .002 CAKE 1 PPMCL 200 PPMCa 16

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
16	215.9	F2	LA774	10	65	1811	21	48	7.25	16.5	2.91	6	5	I

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
16	7.1	7.1	8.7	356	44	140	.796	30	47/58	95.7	107.8	8,000

DEVIATION SURVEYS

8-1/4 ° at 1791 N19°E ° at _____
° at _____ ° at _____
° at _____ ° at _____
° at _____ ° at _____

MUD & CHEMICALS ADDED

Cypan 1 sk _____
CMC 1 sk _____
Polyguard 10 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	7.25	597.50
2. TRIPS	10.50	159.75
3. RIG SERVICE	.25	21.75
4. DEVIATION SURVEY	.75	34.75
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	2.75	15.00
8. RIG REPAIR	2.00	85.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING	.50	.50
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		47.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1248.00

COSTS

DAILY N/A
CUM.SUPERVISOR: Stu Cameron

PLEASE TURN OVER

85 02 09 2400

Year - Month - Day - Time

0000 - 0400	Drill
0400 - 0415	Rig service, check BOP's
0415 - 0730	Drill
0730 - 0830	Circulate sample
0830 - 0915	Survey at 1791 m - 8-1/4 ⁰
0915 - 1115	Wiper trip, 15 stands
1115 - 1300	Circulate and condition mud
1300 - 1500	Repair clutch
1500 - 2100	Blow kelly, pull out of hole to log, strapped out
2100 - 2130	Flow check at collars
2130 - 2330	Pull out of hole with bottom hole assembly, lay down stabilizer, monel, shock sub
2330 - 2400	Rig up loggers

Geology:

1790 - 1811 m	Shale, dark grey
	Background Gas .4% - .8%
	Connection Gas .9%
	Unit One Shale 1650 m, logger top

Strap 1809.59

WANT LIST: Loggers 1805.00

WEATHER

ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

[illegible]

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 10 2400
 Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 53 DEPTH 1811 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Ream 20 m fill

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 58 WL. 7.6 GELS 2.4/5.8% SOLIDS .09 PV 29 YP 8.6 pH 9.5
 % OIL _____ % SAND .002 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
16	216	F2RR	LW459											

CIRCULATION RECORD

BIT NO.	JETS – mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa	
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC				
16	0	P	E	N	356	50	140	.905	34	53/66	13.3	2.2	5,000

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit				
B.S. w/ float				
5 D.C.'s	171			
Jars				
D.C.	171			
X/O				
14 D.C.'s	159			
X/O				

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	1.00	160.75
3. RIG SERVICE		21.75
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		15.00
8. RIG REPAIR		85.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING	21.00	21.50
12. CORING		
13. FORMATION TESTING		
14. WAITING ON: Orders	2.00	49.75
15. NIPPLE UP & TEST BOP		75.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1272.00

85 02 10 2400
Year - Month - Day - Time

Year - Month - Day - Time

TOPS:

Carboniferous - Heart River	993 m
Devonian Unit 1 Shale	1650 m
Turtle Sandstone	1750 m
TD	1811 m

Trip Gas 3.2%

WANT LIST:

WEATHER

ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 11 2400
 Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 54 DEPTH 1811 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Run in hole with DST #1 1061 - 1065 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 70 WL. 7 GELS .9/6.2 % SOLIDS .09 PV 32 YP 13.4 pH 10
 % OIL _____ % SAND .002 CAKE 1 PPMCL 800 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
16	215.9	F2RR	LW459	2	50	1811	20	20	5	5		3	3	I

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
16	O	P	E	N	356	50	140	.905	34	53	66	2,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 22 sx Barite 40 sx
Caustic 1 sk Sawdust 20 sx
Polyguard 6 sx _____
Polysec 5 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	11.00	171.75
3. RIG SERVICE		21.75
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	12.00	27.00
8. RIG REPAIR		85.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	.50	.50
14. WAITING ON:		49.75
15. NIPPLE UP & TEST BOP	.50	75.50
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1296.00

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 11 2400

Year - Month - Day - Time

0000 - 0230	Run in hole with RR 16
0230 - 0300	Blow kelly, break circulation
0300 - 0800	Wash 20 m to bottom
0800 - 1430	Circulate and wait on orders
1430 - 1930	Blow kelly, pull out of hole, flow check at collars
1930 - 2130	Run in hole to shoe with testing plug
2130 - 2200	Pressure test 2500 kPa, OK, casing, rams, hydril and manifold
2200 - 2330	Pull out of hole with testing plug
2330 - 2400	Make up DST #1

BOP drill was held 1 minute, 37 seconds to alert crews

Gas in mud 1.2%

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 12 2400
 Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____
 DAY 55 DEPTH 1811 TD _____ METRES LAST 24 HRS. _____ ROTATING HRS. _____
 ACTIVITY AT REPORT TIME Run in hole with DST #2

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 70 WL. 7 GELS .9/6.2 % SOLIDS .09 PV 32 YP 13.4 pH 10
 % OIL _____ % SAND .002 CAKE 1 PPMCL 200 PPMCa 8

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
DST #1				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	11.00	182.75
3. RIG SERVICE	1.00	22.75
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		27.00
8. RIG REPAIR		85.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	12.00	12.50
14. WAITING ON:		49.75
15. NIPPLE UP & TEST BOP		75.50
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____		37.25
TOTALS	24.00	1320.00

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Stu Cameron

OPERATIONS DETAILS: PERIOD ENDING 85 02 12 2400
Year - Month - Day - Time

Year - Month - Day - Time

DST #1 Preflow (15 minutes): ISI 60; FF 60; FSI 120

Preflow Weak air blow building slowly. very strong at ISI

Valve Open _____ Slow air blow building gradually, no gas to surface

Recovery Salt water, gas cut with 6% H_2S , 305 m recovery

WANT LIST:

WEATHER -45°C Clear

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 13 2400

Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 56 DEPTH 1811 TD METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Pull out of hole with DST #3

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY _____
 CUM. N/A

SUPERVISOR: Stu Cameron

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	7.75	190.50
3. RIG SERVICE	.25	23.00
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		23.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		27.00
8. RIG REPAIR		85.25
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	14.50	27.00
14. WAITING ON:		49.75
15. NIPPLE UP & TEST BOP	1.50	77.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. _____		37.25
TOTALS	24.00	1344.00

OPERATIONS DETAILS.. PERIOD ENDING 85 02 13 2400
Year - Month - Day - Time

Year - Month - Day - Time

Year - Month - Day - Time

0000 - 0100	Break down DST #1
0100 - 0230	Run in hole to 450 m with testing plug
	Pressure test casing to 3000 and 10,000 kPa
0230 - 0800	Make up DST #2, 50 m interval
0800 - 1100	Run in hole with DST #2
1100 - 1400	Head up DST #2, no packer seat
1400 - 1730	Hoist DST #2
1730 - 1930	Retrieve by-pass pipe
1930 - 2200	Make up DST #3
2200 - 2230	Run in hole with drill collar
2230 - 2245	Check BOP
2245 - 2400	Run in hole with DST #3, 742 - 747 m, Orange marker

Preflow	Very strong gas blow and building
Valve Open	Strong gas blow, 600 kPa in 1 hour
	105 m ³ gas/day

WANT LIST:

WEATHER -45°C

ROAD Fair

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 14 2400

Year · Month · Day · Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 57 DEPTH 1811 TD METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Reaming to bottom for conditioning hole for DST #4 at 1750 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1130 VIS 55 WL. 8 GELS 1.9/3.4% SOLIDS .074 PV 24 YP 7.7 pH 9.5

% OIL _____ %SAND .002 CAKE 1 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
16RR	215	F2	LA774	3	55	Run in hole -	Reaming							

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
16RR	No	Jets		356	35	140	.63	24	38/46			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Gel 20 sx _____
Caustic 1 sk _____
Barite 30 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Bit			.25	
Bit Sub			.68	
DC's - 5		171	46.83	
Jars			4.39	
DC's - 1		171	9.56	
X/O			.70	
DC's - 14		159	126.67	
X/O			.34	188.72

COSTS

DAILY N/A

CUM.

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	7.50	198.00
3. RIG SERVICE		23.00
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE	2.50	25.75
6. MIX & COND. MUD		74.50
7. CIRCULATING		27.00
8. RIG REPAIR	1.25	86.50
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	9.50	36.50
14. WAITING ON: Orders	3.25	53.00
15. NIPPLE UP & TEST BOP		77.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1368.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 14 2400

Year - Month - Day - Time

0000 - 0130	Steam and make up test head
0130 - 0215	Set packers 742 - 747 m
0215 - 0645	Tool open at 0221 hours, gas to surface in 1 minute
	PF 15 minutes, ISI 60 minutes, FF 60 minutes, FSI 120 minutes
0645 - 0730	Unseat packers, pulled 5000 daN's over string weight
0730 - 1000	Pull out of hole with DST #1
1000 - 1200	Recover recorder, wait on orders
1200 - 1515	Wait on orders, rig down, lay down test tool
1515 - 1630	Run in for clean out conditioning trip
1630 - 1700	Repair spinning chain
1700 - 2130	Continue running in hole, repair chain
2130 - 2230	Thaw out kelly, break circulation
2230 - 2300	Circulate
2300 - 2400	Pressure build up (pump), sloughing shale, pull up and lay down 1 single

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 15 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 58 DEPTH 1811 TD METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Run in with DST #4

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1195 VIS 85 WL. 7.8 GELS 4.8/8.6% SOLIDS .08 PV 37 YP 18.7 pH 10

% OIL _____ %SAND .0025 CAKE 1.5 PPMCL 200 PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G
16	RR 215.9	F2	LA774	3	55	Reaming	to bottom,	14.50	hours	reaming		1	1	I

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
16	0	P	E	N	356	55	140	.995	38	59/73		4,000

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

Barite 97 sx _____
 Gel 45 sx _____
 Polyguard 20 sx _____
 Caustic 3 sx _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
Same				

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	6.00	204.00
3. RIG SERVICE		23.00
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE	14.50	40.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	2.25	29.25
8. RIG REPAIR	1.25	87.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING		36.50
14. WAITING ON:		53.00
15. NIPPLE UP & TEST BOP		77.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1392.00

COSTS

DAILY _____
 CUM. N/A

SUPERVISOR: Jim Reilly

OPERATIONS DETAILS: PERIOD ENDING 85 02 15 2400
Year - Month - Day - Time

Year - Month - Day - Time

0330 - 0445	Break circulation, circulate out air and gas
-------------	--

1200 - 1915 Continue reaming and clean out to bottom for test

2015 - 2130 Blow kelly and hoist for DST, torqued pipe

2245 - 2400 Hoist for DST #4

WEATHER.

ROAD

[illegible][illegible]



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 16 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 59 DEPTH 1811 TD _____ METRES LAST 24 HRS. _____ ROTATING HRS. _____ACTIVITY AT REPORT TIME On bottom set to run plug #1

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1190 VIS 85 WL. 7.8 GELS 4.8/8.6% SOLIDS .08 PV 37 YP 18.7 pH 10

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND			
				WT.	RPM							T	B	G	
	O P E N D R I L L P I F E														

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			
				No circulation past 24 hours								

DEVIATION SURVEYS

_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____
_____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

None _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
DP Open Ended				

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	13.50	217.50
3. RIG SERVICE		23.00
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		40.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		29.25
8. RIG REPAIR		87.75
9. RUN CASING & CEMENT		54.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	8.50	45.00
14. WAITING ON: Orders	1.00	54.00
15. NIPPLE UP & TEST BOP	1.00	78.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21.		37.25
TOTALS	24.00	1416.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 16 2400

Year - Month - Day - Time

0000 - 0500	Hoist for DST #4, flow check at 41 stands and drill collar
0500 - 0600	Pick up and make up bull plug, test casing, BOP, manifold, high and low pressure, 15 minutes
0600 - 0800	Pick up test tool and make up for DST #4 (inflate straddle 1042 to 1047 m)
0800 - 1200	Run in hole with DST #4
1200 - 1245	Rig up surface equipment, inflate packers
1245 - 1530	No packer seat after 3 inflate, COGLA approval to discontinue testing
1530 - 1600	Rig out and lay down surface equipment
1600 - 2015	Pull out of hole with DST #4
2015 - 2215	Lay down DST tool, recover recorders
2215 - 2315	Wait on orders
2315 - 2400	Lay down DST tool on pallet

WANT LIST: _____

WEATHER _____

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 17 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 60 DEPTH 1811 TD METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME On bottom, prepare to inflate packers DST #5

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1180 VIS 80 WL. 8 GELS 4.6/8 % SOLIDS .07 PV 35 YP 18 pH 10

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at
 _____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A
 CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	8.75	226.25
3. RIG SERVICE	.25	23.25
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		40.25
6. MIX & COND. MUD		74.50
7. CIRCULATING	3.75	33.00
8. RIG REPAIR		87.75
9. RUN CASING & CEMENT	2.00	56.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING		45.00
14. WAITING ON:		54.00
15. NIPPLE UP & TEST BOP	1.00	79.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS	5.25	5.25
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Strap and pick up	3.00	40.25
DST TOTALS	24.00	1440.00

85 02 17 2400

Year - Month - Day - Time

0000 - 0045	Run in with drill collar
0045 - 0330	Lay down extra drill collar
0330 - 0800	Run in remainder of drill string for bottom hole plug
0800 - 1100	Strap and pick up drill pipe off rack
1100 - 1115	BOP check
1115 - 1200	Blow kelly and mud line
1200 - 1500	Circulate to run cement and plug
1500 - 1600	Mix cement (100 m) 1711 - 1811 m
1600 - 1800	Pull up to run plug #2
1800 - 1900	Mix cement for plug #2 1150 - 1090 m
1900 - 2030	Pull out of hole 55 stands in derrick
2030 - 2300	Lay down 69 joints drill pipe
2300 - 2400	Pressure test prior to running DST #5 1038 - 1048 m

WANT LIST:

WEATHER.

ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

[illegible]

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 18 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____

DAY 61 DEPTH 1105 PBT D METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME 139 mm casing on bottom, prepare to cement

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1175 VIS 80 WL. 8 GELS 4.3/8.1 % SOLIDS .07 PV 36 YP 18 pH 10

% OIL _____ % SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____
 _____ ° at _____ ° at _____

MUD & CHEMICALS ADDED

None

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS	14.75	241.00
3. RIG SERVICE	.50	23.75
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		40.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		33.00
8. RIG REPAIR		87.75
9. RUN CASING & CEMENT		56.00
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	7.00	52.00
14. WAITING ON:		54.00
15. NIPPLE UP & TEST BOP	1.00	80.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		5.25
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		12.00
21. Slip Line	.75	41.00
TOTALS	24.00	1464.00

COSTS

DAILY

N/A

CUM.

SUPERVISOR: Jim Reilly

85 02 18 2400
Year - Month - Day - Time

85 02 18 2400
Year - Month - Day - Time

0000 - 0100	Pressure test BOP, blow down manifold
0100 - 0115	Rig service
0115 - 0430	Make up tool for DST #5, run in part string
0430 - 0515	Slip drilling line
0515 - 0800	Run in remainder string injection inhibitor, DST #5 misrun, 3 attempts to seat, pump up 20-40-60 minutes, 2nd attempt increase 2000 daN over string weight, phoned COGLA for approval to cease testing
0800 - 1200	Rig down DST surface equipment
1200 - 1430	Run down 2 stands and tag plug firm cement at 1105 m, strap out of hole
1430 - 2200	Lay down drill pipe and drill collar
2200 - 2400	Break out DST tools and lay down

WANT LIST: _____

ROAD _____

[illegible]



DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

85 02 19 2400

Year - Month - Day - Time

WELL NAME Exco et al West Parkin Y.T. D-54 LOCATION _____DAY 62 DEPTH 1105 PB METRES LAST 24 HRS. _____ ROTATING HRS. _____ACTIVITY AT REPORT TIME Rig release at 2400 hours, tear out rig

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1175 VIS 80 WL. 8 GELS 4.3/8.1% SOLIDS .07 PV 36 YP 19 pH 10

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT		DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND		
				WT.	RPM							T	B	G

CIRCULATION RECORD

BIT NO.	JETS - mm			PUMP				ANN. VEL.		JET VEL	H.H.P.	SURF PRESS kPa
	1	2	3	STROKE	SPM	LINER	m ³ /min	DP	DC			

DEVIATION SURVEYS

_____ ° at _____ ° at
_____ ° at _____ ° at
_____ ° at _____ ° at
_____ ° at _____ ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY N/A
CUM. _____

SUPERVISOR: Jim Reilly

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		597.50
2. TRIPS		241.00
3. RIG SERVICE		23.75
4. DEVIATION SURVEY		34.75
5. REAM & COND. HOLE		40.25
6. MIX & COND. MUD		74.50
7. CIRCULATING		33.00
8. RIG REPAIR		87.75
9. RUN CASING & CEMENT	10.50	66.50
10. FISHING		
11. LOGGING		21.50
12. CORING		
13. FORMATION TESTING	1.50	53.50
14. WAITING ON: Cement	8.00	62.00
15. NIPPLE UP & TEST BOP		80.00
16. DRILLING OUT		9.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		5.25
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT	4.00	16.00
21. _____		41.00
TOTALS	24.00	1488.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING _____

85 02 19 2400

Year - Month - Day - Time

0000 - 0130	Break out and lay down test tools from DST #5
0130 - 0230	Change pipe ram 114 to 139 mm
0230 - 0730	Rig up to run casing and run 139.7 mm, 23.07 kg/m, K-55, NKK, LT&C, 98 joints (1097.27 m), landed at 1096.8 m
0730 - 0800	Circulate for cementing casing
0800 - 1100	Continued circulating while rigging water line to cementer to supplement warm water from water truck
1100 - 1345	Cement production casing complete with lead slurry, 11 T permafrost, tail in 36 T neat "G" 1850 kg/m ³ + .75% CFR-2, 3.5 m ³ estimated cement returns, plug down at 1340 hours, 2 mPa over pumping pressure
1345 - 2400	Wait on cement and begin rig out, slips set at 2145 hours, rig release at 2400 hours 85 02 19

WANT LIST: _____

WEATHER -35°C

ROAD _____

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

SECTION VII

POCKET ENCLOSURE

- CDL/ CNS BCS DIL MEL
- MUD
- LITHOLOGY
- SURVEY PLOT (DIRECTIONAL)