

WELL HISTORY REPORT

ASHLAND ET AL TEDJI LAKE K-24

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On behalf of Ashland Oil Canada Limited, I certify that, to the best of my knowledge and belief, this Well History Report is complete and accurate.

Martin J. Jevans

Martin J. Jevans
Drilling Superintendent
May 22, 1974

WELL HISTORY REPORT

ASHLAND ET AL TEDJI LAKE K-24

ASHLAND OIL CANADA LTD.,
639 - 5 Avenue S.W.
Calgary, Alberta
May, 1974

SECTION I - Summary of Well Data

- (a) Well name and number - Ashland et al Tedji Lake K-24
- (b) Permittee, Licencee or Lessee - Canadian Reserve Oil and Gas Limited. (Lessee)
- (c) Name of Operator - Canadian Ashland Exploration Limited. (Ashland Oil Canada Limited) 639 - 5 Avenue S.W., Calgary.
- (d) Location - Grid: 67-50-126-45. Lat. 67 43' 38" N, Long. 126 49' 56" W. Universal Well Location Reference Lat 67.72722, Long. 126.83222 Unique Well Identifier: 300K246750126450
- (e) Co-ordinates -

The position of each development well relative to the target area shall be precisely determined and shown. No development wells to this date.
- (f) Permit Number - Permit No. 6183
- (g) Drilling Contractor - Regent Drilling. Rig No. 11. Type: Brewster N-4
- (h) Drilling Authority - No. 718. Approved October 16, 1973.
- (i) Classification - Wildcat
- (j) Elevation - G.L. 1124' est., K.B. 1138' est.
- (k) Spudded - Feb. 13, 1974
- (l) Completed drilling - March 23, 1974
- (m) Total Depth - 3980'
- (n) Well Status - Suspended potential gas well - Mount Clarke.
- (o) Date rig released - March 31, 1974
- (p) Hole Sizes to total depth - 13-3/4" 0-258'; 12-14" 258'-645'; 8-3/4" 645'-3980'
- (q) Casing - 9-5/8" set at 627' and cemented to surface. 7" set at T.D., 3980', and cemented to surface. Topmost 2,000' inside 7" casing filled with diesel oil.

SECTION II - Geological Summary

a) Formation Tops

	E-log	Sub-sea	Sample
Quaternary		1124 ft	14 ft
Bear Rock	145 ft	993 ft	145 ft
Ronning	278 ft	860 ft	278 ft
Saline River	3048 ft	-1910 ft	3053 ft
Halite	3216 ft	-2078 ft	3220 ft
Mt. Cap	3466 ft	-2328 ft	3074 ft
Mt. Clarke	3707 ft	-2569 ft	3709 ft
Pre-Cambrian	3764 ft	-2626 ft	3767 ft
Total Depth (Pre-Cambrian)	3976 ft	-2838 ft	3980 ft
Proterozoic			

b) Cored Intervals

None

c) Core Descriptions

Side-wall cores, shot 24 recovered 18

<u>Number</u>	<u>Depth</u>	<u>Description</u>
1	3840 ft	SHALE: dark brown to greyish brown, platy, hard dense, slightly silty
2	3772 ft	SHALE: dark olive brown, medium hard, massive grading earthy, minor white anhydrite filled fractures
3	3764 ft	SANDSTONE: dark greyish brown, possibly oil stained very fine grained grading silty, subangular, translucent quartz grains, no cement, friable, well sorted, excellent porosity, no fluorescence or cut despite oil staining.

c) Cont'd.

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<u>Number</u>	<u>Depth</u>	<u>Description</u>
4	3762 ft	SANDSTONE: dark greyish brown, very fine grained to silty as above. Excellent porosity, little or no cement, but no cut or fluorescence. <u>Brown oil stained quartz grained surfaces.</u> Low recovery due to fractured formation.
5	3760 ft	SANDSTONE: as above
6	3758 ft	SANDSTONE: as above, very fine grained, grading minor silty, well sorted, sub-angular to subrounded, dark brown-oil stained on clear quartz grains, soft, friable, no cut, no fluorescence, soft excellent porosity with no matrix or cement
7	3756 ft	SANDSTONE: very fine grained, minor silty, medium to dark brown, medium hard & brittle no cut, nor fluorescence
8	3754 ft	SANDSTONE: light grey, hard, dense, dolomitic cement, very fine grained to silty
9	3752 ft	SHALE: dark green, blocky, hard, with occasional patches of light grey silty, dolomitic sandstone as above, grades dark bluish grey, occasional light brown dolomite & anhydrite.
10	3750 ft	SILTSTONE: white, hard, dense, slightly dolomitic with banded argillaceous laminations (wavy), trace pyrite grains, fractured
11	3748 ft	SILTSTONE: brown, hard, dense, slight dolomitic cement, tight, grading very fine grained, <u>minor oil</u> staining, slightly argillaceous, no cut, no fluorescence
12	3746 ft	SANDSTONE: brown, medium hard, to friable, very fine grained to silty, white sub-angular to subrounded clear quartz, occasional well rounded floating fine quartz grains, well sorted, oil <u>stain</u> but no cut nor fluorescence

c) Cont'd.

<u>Number</u>	<u>Depth</u>	<u>Description</u>
13	3744 ft	DOLOMITE: light brown to white, micro-crystalline, hard, dense, fractured, minor pyrite, slightly silty
14	3741 ft	SHALE: lime green, soft, fissile grading blocky, and greenish grey, slightly bentonitic, non dolomitic
15	3738 ft	SHALE: lime green as above, no oil stain or fluorescence
16	3734 ft	SHALE: darker greenish grey, slightly harder than above, minor pyrite (as disseminated patches), medium hard, very slightly dolomitic
17	3732 ft	SHALE: dark greenish grey, soft to medium hard yet softer than above, fissile, low recovery due to wash-out of samples from cores
18	3725 ft	DOLOMITE: light to medium brown, mottled, with skeletal dolomitised ghosts, micro-crystalline to cryptocrystalline, yet skeletal grains appeared to have been medium to coarse lath shaped grains. Extremely poor sample due to fracturing. No oil stain, no cut, no fluorescence.

d) Sample Description

- 14' -Claystone; medium grey, with scattered sandstone grains & pebbles to 1 cm., PERMAFROST
- 30' -90% Ss, sand coarse grained, to pebbly, well rounded, frosted
10% Pebbles (Cong) heterogeneous comp., schists, quartzites, pyrite
- 40' -80% Ss coarse grained, loose, friable as above, quartzitic
-20% Pebbly Cong. a/a, heterogeneous comp., quartzites to dolomite
- 50' -70% Ss sand a/a c-very coarse grained, well rounded, friable
30% Pebbly Cong. a/a hetro comp., w red chert & feldspars, pink-white quartzites, minor dolomite & limestone
- 60' -90% Ss sand, a/a med-coarse grained, sub-well rounded
10% Pebbly Cong. a/a including red chert pebbles
- 70' -Pebbly cong. (Glacial Till) heterogeneous comp. coarse to pebbly with pink feldspar, quartz grains, chert, well rounded, grading pebbly minor brown argillaceous, clay matrix
- 80' -30% Ss sand, very coarse to pebbly, quartzitic
70% Pebbly cong (Till) heterogeneous a/a, mainly quartzitic pebbles
- 90' -100% Pebbly Cong. (Till) a/a
- 100' -100% Pebbly Cong. (Till) a/a 70% quartz & quartzite very coarse grained to pebbly, with brown, yellow & red stained, 30% buff limestone pebbles
- 110' -100% Pebbly Cong. (Till) a/a quartz & quartzitic pebbles 60%
40% rounded buff limestone fragments & pebbles
- 120' -100% Pebbly Cong. (Till) -40% sandy, m-cg, well rounded quartz grains
60% heterogeneous pebbles, well rounded-quartz, dolomite, occasional red stained
- 130' -80% Pebbly Cong. (Till) m-c grained to pebbly, well rounded, minor limestone grains
20% Limestone, light brown-buff, micritic limestone pebbles
- 140' -50% Pebbly Cong. (Till) a/a, heterogeneous, red quartz grains (stn)
50% Limestone, medium grey brown, to tan, micritic, hard, platy
- 150' -60% Limestone, medium greyish brown, argillaceous, intramicrite
40% Pebbly Cong. (Till) heterogeneous, pebbly, sandy (cavings)
- 160' -50% Limestone, medium greyish brown, lithographic, micritic, hard, platy hard, tight
-50% Pebbly Cong. (Till) a/a mainly quartz grains & pebbles
- 170' -70% Limestone, medium grey, intramicrite-sparite, slightly argillaceous
10% Limestone, medium greyish brown, minor brown oil stain, minor

d) Sample Description (cont'd)

- intergranular-vugular porosity, 5% dull gold fluorescence
-20% Pebbly Cong. (Till) a/a mainly coarse as Ss grains (cavings)
- 180' -50% Ls lt-med gry, micritic to mottled (intrasparite), hd, plty
30% Ls lt brn, biointrasparite, mottled, minor interclastic vugular porosity, spotted oil stain,
-20% Pebbly Cong. (Till) a/a cavings
- 190' -80% Ls gry/wh, micritic
20% Ls brn, detrital a/a sl recrystallized, intrasparite, oil stained yellow fluorescence, scattered pin point-vuggy porosity
- 200' -100% Ls lt gry to lt brn/gry, micritic oc "spar eyes", hd, plty
grdg sl arg w. arg lam, trace v por, 10% oil stain, yel fluor esp on parting planes. (10% till cavings)
- 220' -100% Ls lt gry, hd, micritic a/a grdg intramicrite & sparite, plty
fair vugular por, scat 10% oil stain, yel fluor
- 230' -100% Ls a/a lt gry-buff, micrite to pelmicrite oc pelsparite, hd plty
trace vug por, minor oil stain, yel fluor in fracs
- 240' -100% Ls a/a micrite to pelmicrite, oc intraspar, scat gd vug por,
scat gold fluor
- 250' -90% Ls buff-grey a/a, scatt yel fluor in oc fracs
10% Marl med brn, lmy, arg, w scatt calc. xlls
- 260' -100% Ls buff to lt gry a/a pelmicrite to micrite w oc "spar eyes", hd
dns, plty, no por, no stain, no fluor
- 270' -80% Ls, lt gry a/a
20% Dol. m brn, microxlln, orig cs g intrasparite-biosparite, gd pp por,
heavy oil stain, no fluor
- 280' -90% Dol a/a m brn, microxlln, oc m crystalline, hvy oil stn com, 5% gold
fluor, bleeding hvy dead oil, gd pp-interxlln por. R
10% Ls a/a (cvg)
- 290' -90% Dol med gry, microcrystalline oc cryptoxlln, hd, dns, oc brn oil stn,
sl lmy, oc cs xlln, pr pp por, 5% gold fluor, oc fracs
10% Marl brn, earthy, oil stain, sft
- 300' -90% Dol med gry-gry/brn, lmy, micxlln grdg mxlln dolie Ls, oc vug
w dol xll lined, pr pp por, scat stn & gold fluor. fxl pyr
- 310' -100% Dol lt gry-lt gry/brn, grdg lmy, rexlln-cs, orig intramicrite
hd, dns, plty, no por, no stn, no fluor, pr sple-20% till cvg
- 320' -100% Dol lt gry-bf, lmy, grdg dolie Ls, hd, plty, dns, micritic,
oc oil stn in scat pp por, tr fluor

d) Sample Description (cont'd)

- 330' -100% Dol, lt gry, lmy, microxlln-cryptoxlln, dol wl fl fracs com,
ex frac por, tr brn oil stn on frac, 10% pale yel min fluor
- 340' -90% Dol, lt gry a/a grd g mnr lt blu/gry, banded lam, oc spar lineations
10% Marl, dark brown to maroon earthy, (lmy Sh) /10% pale yel min fluor
- 350' -100% Dol, lt gry-gry/wh, v. lmy, micritic oc spar lineations, hd, dns,
plty, grd g dolie ls, tr frac por, 20% pale yel min fluor.
- 360' -100% Dol, v lmy, lt gry-lt gry/brn, hd, plty, micxlln oc fxl n, tr vug
por, orig pelmicrite to micrite, mic-cryptoxlln, 4% pale yel min fluor a/a
- 400' -100% Dol, v. lmy, lt gry a/a, no por, 2% scat min fluor
- 410' -95% Dol, v lmy, lt gry a/a 1-2% scat yel min fluor
5% Dol, lmy, maroon (Fe)
- 420' -100% Dol, v lmy, lt gry a/a hd, dns, plty, cryptoxlln, orig-micrite to
pelmicrite, tr yel fluor, tr frac fil w Dol xlls
- 450' -100% Dol, a/a lt gry, lmy, mic & oc vfxlln, orig intrasparite, oc pp por
pr sple due to increase in caving as result of liner change, resulting in
increased annular vel.
- 460' -20% Dol, lt gry a/a, lmy
80% Dol, lt grey-gry/wh, micritic w oc spar "eyes", cryptxlln-micxlln,
hd, dns, plty, mnr frac, mnr pyr
- 470' -90% Dol, lt gry, micxlln a/a, lmy, tr vug por, (20% sand cvg)
10% Dol, lt gry/wh, a/a
- 480' -80% Dol, lt gry, micxlln oc vf-fxl n, pelmicrite to pelsparite, lmy,
tr vug & frac por
20% Dol, lt gry/wh a/a, cryptoxlln, micritic (10% sand cvg)
- 490' -30% Dol, lt gry, lmy micro-vf xlln, a/a tr pyr scat in Dol, oc fracs
70% Dol, lt gry/wh-buff, cryptoxlln, lmy a/a (10% sand cvg)
- 500' -90% Dol, lt gry/wh-bf a/a lmy, cryptoxlln, mnr fracs
10% Marl, med gry, lmy, sft
- 510' -95% Dol, lt gry/brn -bf, cryptoxlln lmy, tr frac por
5% Mar., med gry, a/a
- 520' -95% Dol, lt gry a/a lmy, sft, grd g arg, pr vug & fr por, (20% sand cvg)
5% Marl, med gry, sft, blk y
- 530' -95% Dol, lmy a/a, pr vug & frac por, collapse brec com
5% Marl, a/a grd g arg ls, sft-med hd, v. lmy

d) Sample Description (cont'd)

- 540' -20% Dol, lmy, lt gry/wh a/a, cryptoxlln, hd, dns, v. lmy, vfxlln pyr com
80% Dol, non-lmy, lt brn grdg reddish, micro-vfxlln, hd, dns
- 550' -100% Dol lt brn, grdg med brn/rd, non-lmy, micro-vfxlln a/a, tr interxlln
& vug por-poss lchd foss. (poor samples 60-70% sand cvg)
- 570' -100% Dol lt-med gry/brn, hd, dns. a/a microxlln grdg mnv vfxlln (50% sand)
biomicrite vestiges, tr vug por, lg 1-2 mm vugs w Dol xlls lning
- 580' -100% Dol a/a, scatt ex lg vugs .5-2mm, occ brn stn, no flor, calc&
dol filled vugs (20% sand cvg)
- 590' -100% Dol a/a lt-med gry/brn, hd, dns, oc microvugs, (30% sand caving)
- 600' -100% Dol a/a w scat micvug & interxlln por, tr vfxlln pyr (20% sd cvg)
- 610' -100% Dol a/a lt-med brn to gry/brn, micxlln grdg vfclln, oc saccyroidal
texture, hd, dns, scat god interxlln por (30% sand cvg)
- 620' -100% Dol a/a w scat lg calc filled vugs (40% sd cvg)
- 630' -100% Dol a/a lt-med gry/brn, hd, tight, microxlln grdg vfxlln
- 640' -100% Dol a/a w scat ex interxlln por in oc fxlln Dol, (30% sd cvg)
- 645' -100% Dol a/a med grn to gry/brn, microxlln, hd, dns, mnv frac
- 650' -100% Dol lt-med gry/brn, hd, dns, microcrystalline grdg mnv vfxlln
a/a occ vg fract por in mxlln dol.
- 660' -40% Dol a/a, mnv wh calc filled vugs
60% Dol lt gry, oc lt brn, vfxlln, oc fxlln
- 670' -100% Dol bf, vf-fxlln, softer, mnv frac & micvug por
- 680' -10% Dol med-dk gry, arg, sl lmy (poss cvg) mnv yel flor, frac por com
brec w wh calc filled frac oc microvug por
-90% Dol med brn, micro-vfxlln, frac
- 690' -80% Dol buff, lt brn, micro-vfxlln
- 700' -95% Dol lt brn/buff, hd, dns, micro-vfxlln, 5% scat microvug por min flor
5% Dol dk bluish gry, arg, med hd, mnv fxll pyr
- 710' -100% Dol a/a lt gry/wh-buff, micro-vfxlln, mnv fxlln, saccy tex, scat
micvug & interxlln por, 80% pale yel mineral flor.
- 720' -70% Dol a/a buff to lt gry/brn & wh, mic-vfxlln, scat por a/a
30% Dol lt gry, micxlln, sl arg w pyr xlls

d) Sample Description (cont'd)

- 730' -80% Dol buff to lt brn/wh, vfccln grdg fxlln & oc mxlln, pr-fr ix por
20% Dol lt gry, microxlln-vfxlln oc fxlln pyr xlls
- 740' -70% Dol bf-lt brn a/a vfccln grdg oc f & mxlln, ge ixlln por
20% Dol lt gry, micro-vfccln, sl arg, mnr pry
10% Dol wh, fxlln, saccytext, med hd
- 750' -70% Dol bu-v lt brn, vfccln grdg f-micxlln, hd dns, scatt micvug por
30% Dol wh, saccy text, fxlln med hd, gd interxlln por, grdg above
- 760' -90% Dol lt-med brn/gry, vfxlln grdg micro-fxlln, hd, dns
10% Chert wh, opaque, in part white, hard, vug filling & replacing Dol
- 770' -65% Dol lt brn/bf, micxlln grdg vfxlln hd, nds, oc micvug & ixlln por
30% Dol wh/buff, vf-fxlln, med hd, friable gd intercrystalline por
5% Chert a/a
- 780' -60% Dol lt gry/brn, micxlln grdg vfxlln, hd dns, oc micvug por
40% Dol bf/wh, vfxlln grdg fxlln, saccy text, med hd, sl fri, gd ixlln por
- 790' -80% Dol lt gry/brn a/a, w scat ix & micvug por, mnr dol filled fractures
10% Dol buff/wh a/avfxlln, saccy
10% Dol med gry, arg, microxlln, hd, dns, ptgs.
- 800' -75% Dol lt-med gry, microxlln, hd dns, oc vf-fxlln
20% Dol lt brn/buff, saccy a/a scatt interxlln por
5% Calcite xlls, vug or frac filled
- 810' -100% Dol, lt gry, hd, dns, microxlln
- 820' -100% Dol lt gry a/a oc m gry, hd, dns, micxlln oc vfxlln, oc scat ixlln
por, tr frac filled wh calc.
- 830' -100% Dol lt-med gry/brn, microxlln oc vfxlln, 1% ex scat micvug (bio)
and intercrystalline por
- 840' -100% Dol med gry, micxlln oc arg lam & oc pyr xlls, oc vfxlln - 1% por a/a
- 850' -40% Dol m gry, micxlln a/a
60% Dol lt gry-wh. vfxlln, ex scat micvug & ixlln por, occ micvug - .5mm
- 860' -100% Dol lt gry, vfxlln grdg fxlln, ex intercrystalline por in 25% of
spl. Remainder of Dol xlls are interlocking, pyr com in vugs
- 870' -70% Dol lt gry/brn-of, vfxlln saccy, oc f-m xlln, fr interxlln por, com
30% Dol lt gry, micxlln grdg vfxlln, hd, dns, no por
- 880' - 40% Dol lt brn/bf a/a vfxlln, saccy, scatt ixlln por
60% Dol lt gry mic-vf xlln, pry com w mnr arg lam
- 890' -40% Dol lt gry/bf, vfxlln a/a 60% Dol lt gry, mic-vfxlln a/a
- 900' -60% Dol lt gry, a/a micxlln oc vfxlln, s at ixlln por -40% Dol med gry, micxlln,
hd, dns

d) Sample Description (cont'd)

- 910' -30% Dol med gr, micxlln a/a tr pale yel min fluor
50% Dol lt gry a/a w scat ix por
20% lt gry/bf vfxlln, sl saccy pr-fr ixlln por
- 920' -80% Dol med gry/brn, micxlln, hd, dns, oc ix & mvug por, tr pale yel
20% Dol lt gry/bf, vfxlln sl saccy oc fxlln, scat inxl por/min fluor
- 930' -80% Dol med gry/brn a/a w oc gry arg clasts-vcg, oc min fluor
20% Dol lt gry/buff a/a
- 940' -30% Dol med gry/brn, mic xlln (grdg vf-fxlln-interlocking xlls) hd, tight
70% Dol lt brn/bf, fxlln grdg vfxlln, med hd, interlocking xlls grdg
scat gd interxlln por, oc micvug por-.5mm
(this unit is coarser crystalline than above)
- 950' -40% Dol med gry, micxlln oc vfxlln, hd, tight, interlocking, dns
60% Dol lt brn, vfxlln oc fxlln, w ex intercrystalline por, oc mic vug
- 960' -90% Dol med brn, vfxlln grdg micxlln, hd, dns interlocking xlls
10% Dol lt brn, vfxlln oc fxlln, mnr ix por
- 970' -100% Dol med brn, vfxlln, mnr micxlln a/a hd dns interlocking xlls oc
f & cs xlln, scat ixlln por in fxlln dol
- 980' -100% Dol med brn a/a essentially fxlln, scat ex ixlln por, mnr frac
- 990' -100% Dol med brn a/a fxlln grdg mic-mxlln, scat ixlln por
- 1000' -80% lt brn, fxlln, oc mic-cs xlln
20% Dol lt gry, m-cxlln w frags of grn Sh clasts
- 1010' -90% Dol lt gry a/a oc med gry, vfxlln oc m-cs xlln, scat ixlln por, mnr pyr
8% Chert wh, opaque, hd, dns
2% Sh lt green, thn beds & lam, w oc dol xlls
- 1020' -20% Dol lt gry, micxlln, poss intrasparite
30% Chert wh, opaque, hd, brit
50% Dol wh, hd, dns, silic, grdg cht, appears to be an intrasparite
w silic cmt & silic dol spar (m.g. clasts & oolites)
- 1030' -20% Dol lt gry micxlln, oc vfxlln sl silic
20% Chert wh, oc varved lam, vug filled
60% Dol wh, silic, w clr wh silic cmt, cryptoxlln, silicified intraspar
scat primary vuggy por
- 1040' -40% Dol lt gry-bf, vf-fxlln, sl silic, w interlocking xlls com
10% Chert wh, opaque (vug or frac filling)
50% Dol wh, silic, hd cryptoxlln, silic replacing spardol & vug filled
- 1050' -60% Dol wh, silic a/a
20% Chert wh to translucent a/a
20% Dol buff-lt brn, vfxlln dol a/a
- 1060' -70% Dol silic, micritic, hd, dns, hd, brittle, tight, wh a/a
10% Chert wh, opaque, oc banded lam
20% Dol buff-lt brn, fxlln Dol, sl silic a/a

d) Sample Description (cont'd)

- 1070' -40% Dol wh silic a/a
10% Chert wh a/a
40% Dol lt brn a/a vfxlln grdg fxlln intergrown, tr grn Sh (1-2%) lam
10% Dol wh xlls, vug filled or interformational breccia
- 1080' -30% Dol, wh, silic poss grdg Anhydritic w sft-med hd, mic-vfxlln
50% Chert wh, opaque oc lt blue, oc chalky wh
20% Dol lt brn, vfxlln, scat pr ixlln por
- 1090' -30% Dol wh silic a/a
10% Chert wh a/a
50% Dol lt brn, vfxlln, oc por
10% Dol lt bluish gry
- 1100' -10% Dol wh silic grdg lt gry a/a
10% Chert wh sl translucent a/a
80% Dol lt brn a/a fxlln grdg mxlln, hd, dns, scat ex ixllly por
- 1120' -10% Dol wh silic a/a grdg lt gry/brn
70% Chert wh to lt gry, banded lam
20% Anhy, chalky wh, w mnr Dol lam in Anhy, sl slty
- 1130' -20% Dol wh, silic a/a grdg lt gry/brn, micxlln
60% Chert wh, opaque, poss algal mat w qtz filled vugs, scat vug por
20% Anhy chalky wh, med hd a/a slty text grdg silic
- 1140' -50% Dol lt gry/wh, silic a/a microxlln
10% Dol lt brn, vfxlln, med hd, dns, scat ixlln por
20% Chert a/a lt bluish grey to wh
10% Anhy a/a
- 1150' -100% Dol lt gry/wh, mxlln intergrown, grdg cs xlln, med hd, dns, scat
ixlln por non-silic, w num lt blue/grey (clastic)
- 1160' -90% Dol lt gry/wh a/a mxlln intergrown xlls, oc f-cxlln, md hd, dns
10% Dol dk bluish grey, sl arg, mxlln intergrown a/a
- 1170' -100% Dol intergrown mxlln a/a tr Anhy, mnfr frac (poss Anhy filled)
- 1180' -80% Dol intergrown mxlln a/a oc cs xlln, oc blue grey Dol a/a
20% Dol lt brn/wh, fxlln oc vfxlln w ixlln por-fr
- 1190' -60% Dol lt gry/wh-bf, intergrown mxlln grdg mixlln, tr min flor
10% Dol lt brn/wh, fxlln a/a scat pr-fr ixlln & frac por
30% Dol lt-med gry, mic-cryptoxlln, sl arg lam, mnfr pyr lam

d) Sample Description (cont'd)

- 1200' -90% Dol lt gry/wh oc buf, intergrwn mxlln a/a, scat pr frac por
10% Dol lt brn/wh fxltn, scat ixlln por com, min fluor
- 1210' -100% Dol lt gry, cryptoxlln grdg micxlln, hd dns
- 1230' -60% Dol lt gry a/a
40% Dol lt gry/wh - bf, intrgrwn mxlln oc micxlln
- 1240' -10% Dol med bluish gry, mxlln, vfxlln pyr com tr blk Sh
90% Dol lt gry/wh a/a
- 1250' -100% Dol lt gry/wh a/a intgrwn mxlln grdg cxlln, med hd, dns
- 1270' -95% Dol lt gry/wh a/a, NOTE: intergrown crystals are interlocking with
5% Dol med gry/blue, mxlln very little intercrystalline porosity
- 1280' -90% Dol lt gry/wh a/a, mxlln grdg intgrwon f-cxlln
10% Dol, med gry/blue, mxlln, sl arg.
- 1290' -30% Dol lt gry/wh a/a intgrwn m-cxlln, oc fxltn, pr scat ixlln por
60% Dol wh, silic, w silic filled vugs, hd, dns, cryptoxlln
10% Chert wh, hd
- 1300' -60% Dol wh, silic, micxlln a/a, mnr blk & grn SH clasts in Dol
5% Chert wh tr Anhy poss frac filled, (muc reaction)
35% Dol lt brn/wh-bf, vfxlln, saccy text w pr ix por, tr micvug por,
poss mnr brn oil stain in best por, no fluorescence
- 1310' -50% Dol eh, silic a/a crypto-micxlln a/a
45% Dol lt brn/wh, vfxlln, oc intrgrwn mxlln, saccy w ex ixlln por
5% Chert wh-bluish wh, hd, tr Anhy, frac filled (washed out, mud) ?
- 1320' -55% Dol wh, silic a/a, hd, dns silic vug filled
40% Dol lt brn/wh, fxltn a/a scat ex ixlln & micvug por, poss bio por
5% Chert a/a tr wh Anhy sft wh
- 1330' -25% Dol wh, silic a/a silic filled vugs
75% Dol lt brn/wh, fxltn grdg vf-mxlln, scat por vug & ixlln por, no fluor
5% Chert lt-med gry/blue, hd, tr wh Anhy (frac filled) mnr pyr
- 1340' -50% Dol wh, scoraceous text, silic, silic cmt, leached, excell leached
vug por, poss Anhy filled, intraformational brec?
50% Chert wh, to lt bluish grey, hd, dns, lam
- 1350' -35% Dol wh-lt gry, silic, csat ex vug leached por, mainly silic filled vg
55% Dol wh intergrown mxlln grdg fxltn, w scat ix por, oc pyr xlls
5% Chert wh-blue/grey a/a 5% Anhy wh, hd, granular, frac & vug fill
- 1360' -20% Dol wh, silic crypton-micxlln, hd, dns, brittle
75% Dol buff/wh, wh, mxlln intgrwnxlln oc csxlln, mnr pyr xlls
between the dolxlls, tr Abhy
5% dol med gry, sl arg. tr Chert

d) Sample Description (cont'd)

- 1370- -10% Dol wh, silic a/a vugs filled with qtz xlls & silic Chert cmt.
85% Dol bf/wh, intrgrwn m-fxlln, Anhy, filled vugs & frac
5% Dol med-dk gry, bluish, sl arg lam & clasts
- 1380' -20% Dol wh, silic a/a micxlln, hd, dns
70% Dol wh, anhy, intrgrwn vf-fxlln, w mntr anhy matrix between xlls
5% Chert wh-bluish grey 5% Anhy wh interxlln filled & vug/frac fill
- 1390' -55% Dol wh, silic a/a
20% Dol wh, anhy, vfcxlln, wh grdg lt brn, leached ix por
20% Chert, wh, banded, concretionary, lam 5% Anhy
- 1400' -50% wh dol xlls, brec, grdg clr calc xlls, ex vug, por intraformational
10% Dol, wh, silic a/a
30% Dol fxlln, grdg lt brn, appears leached, anhy.
5% Chert 5% Anhy, vug filled
- 1410' -90% Dol lt gry/wh & wh, micxlln, hd, dns, blk v. dolie
10% Dol, lt-med bluish grey, micxlln, hd, blk
- 1420' -100% Dol wh, micxlln grdg mntr vfintrgrwn xlln, no por, oc drusy vugs
- 1430' -100% Dol wh-bf, intrgrwn fxlln grdg micxlln, hd, dns, pr smpl.
- 1440' Lost Circulation - No samples, complete muc loss @ 1442 & 1451'
Drilling ahead with no returns as bypassing shakers due to lost
circulation material in the mud.
- 1580' -20% Dol wh, intergrwn fxlln, hd, dns, no vis por (poor sample-LC Mat)
80% Dol lt-med gry, micxlln, hd, dns, tr. Chert, tr Anhy
- 1590' -90% Dol wh/bf a/a intrgrwn mxlln, tr. Chert, tr Anhy
10% Dol lt med gry, a/a (small cuttings-poor smple/LC mat)
- 1600' -95% Dol wh a/a intrgrwn mxlln grdg f-cxlln, hd, dns, grdg l-mgy dol
5% Chert wh, silic filled vugs
- 1610' -75% Dol wh -lt gry/wh & bf, intrgrwn mxlln
20% Dol lt-med gry, mxlln 5% Chert, wh tr Anhy
- 1620' -55% Dol lt gry/wh -bf, intrgrwn mxlln a/a tr vug por
40% Dol lt-med gry, micxlln, arg w. arg clasts & blk arg ptgs, pyr com
5% Chert vug filled wh silic cmt filled

d) Sample Description (cont'd)

- 1630' -88% Dol wh & bf a/a intrgrwn m-cxlln, hd, dns
10% Dol lt gry, sl arg, micxlln, scat pyr 2% Chert wh a/a
- 1640' -85% Dol lt gry, sl arg, micxlln, grdg mic-vfxlln
10% Dol lt gry a/a 5% Chert wh, tr Anhy
- 1650' -100% Dol gry/wh-bf, intrgrwn f-micxlln, hd, dns, tr Cht, tr Anhy
- 1660' -95% Dol gry/wh-bf a/a intrgrwn f-mxlln
- 1670' -10% Dol gry/wh a/a, intrgrwn mic-vfxlln 5% wh Anhy frac filled
85% Dol bf, intrgrwn mxlln grdg cxlln, hd, dns
- 1680' -97% Dol lt gry/wh a/a micxlln oc vf-mxlln intrgrwn, hd, dns oc silic
filled vugs, no por, tr Cht 3% wh Anhy a/a
- 1690' -100% Dol lt gry/ wh a/a micxlln oc vfxlln, oc sil qtz xll in vugs,
tr Cht tr Anhy occ silic oolites in clr silic cmt.
- 1700' -10% Dol lt gry/wh a/a
90% Dol lt brn-brn/gry, vfxlln oc mxlln, hd, dns, vestiges of red
Fe stn ie. dolomitised m g intrasparite
- 1710' -30% Dol lt gry/wh a/a intrgrwn vfxlln grdg micxlln, tr Anhy w dol xlls
in chalky wh Anhy (frac filling)
- 1720' -10% Dol lt gry/ wh a/a micxlln oc vfxlln
90% Dol lt gry, grdg m gry, micxlln, hd, dns, sl arg
- 1730' -90% Dol lt gry/wh a.a micxlln oc intrgrwn mxlln, hd, dns, tr Cht, tr Anhy
10% Marl lt gry/grn, sft, mnr blk spks
- 1740' -40% Dol lt gry, micxlln oc intrgrwn cxlln tr Chrt, tr Anhy
57% Dol buff-lt gry/wh, micxlln grdg xfln
3% Marl lt gry/grn a/a
- 1750' -60% Dol lt gry, grdg buff (40%) micxlln grdg vfxlln, hd, dns
- 1760' -100% Dol a/a lt gry grdg bf, micxlln oc vfxlln, hd, dns, scat Anhy & Chert
- 1770' -100% Dol lt gry/wh-bf, micxlln, oc vfxlln, hd, dnse, mnr Anhy (frac fill)
- 1790' -100% Dol lt gry/wh a.a-bf, micxlln grdg vfclln (20%) & saccy scat
pr ix & vug por

d) Sample Description (cont'd)

- 1810' -60% Dol wh & bf vfxlln oc mxlln, saccy, scat pr ix & micvug por, tr pyr
40% Dol lt gry/wh, micxlln, hd, dns
- 1820' -30% Dol bf, vfxlln grdg micxlln, hd, dns
70% Dol lt gry/bf, micxlln a/a poor samples caught from flow line
- 1830' -70% Dol lt gry-med gry, micxlln, more arg, hd, dns.
30% Dol bf a/a micxlln-vfxlln, oc mxlln, tr mvug & ixlln por, tr Cht
- 1840' -80% Dol lt-med gry a/a sl arg, (more arg)
20% Dol micxlln-vfxlln oc mxlln a/a - buff
- 1850' -30% Dol lt-med gry, micxlln a/a
70% Dol bf-lt brn a/a mic-vfxlln, tr Cht fild frac & vugs
- 1860' -85% Dol lt-med gry, micxlln, hd, dns a/a (darker)
10% Dol bf/lt brn a/a grdg vfxlln
5% Dol-brn, micxlln
- 1870' -60% Dol med gry, hd, dns, micxlln
35% Dol lt gry/wh-bf, micxlln grdg vfxlln
5% Chert vug filled w qtz xlls com, scat vug por filled w Dol & qtz xlls
- 1880' -100% Dol lt gry/wh, wh & bf, intrgrwn mxlln grdg fxlln oc cxlln, w grn
sh clasts between dol xlls, dns, hd, tr ix por
- 1890' -100% Dol lt gry/wh, wh & bf a/a mxlln intrgrwn xlls
- 1910' -95% Dol lt gry/wh, wh & bf a/a intrgrwn mxlln grdg cxlln hd, dns
5% Dol lt-med gry, tr pyr in vugs oc waxy lustre, tr Anhy fil vugs
- 1920' -80% Dol lt-med gry, sl arg, micxlln
20% wh-gry/wh, vfxlln, saccy, pr ix por
- 1930' -30% Dol lt-m gry a/a micxlln, tr pyr
70% Dol lt gry/wh & bf, intrgrwn mxlln, hd, dns, tr pale grn Sh
scat vug por (dol xll & Anhyc filled)
- 1940' -10% Dol lt-m gry, mixlln a/a
87% Dol lt gry wh/bf, intrgrwn mxlln, mnr ix por
3% Sh lime green, hd, dns, blk, oft mxlln clasts (dol) in matrix
- 1950' -60% Dol lt-med gry, micxlln grdg fxlln, intrgrwn
40% Dol lt gry/wh-bf, intrgrwn f-mxlln, tr wh Cht
- 1960 -10% Dol m gry, grdg arg-lt bluish grn
90% Dol wh-bf, mxlln, grdg cxll-fxlln intrgrwn, tr ix por

d) Sample Description (cont'd)

- 1970' -50% Dol lt-med gry, micxlln, hd, dns grdg grn/gry w tr pale grn Sh, hd
30% Dol bf, micxlln oc mxlln, a/a
20% Dol dk brn, sl lmy, micxlln arg
- 1980' -20% Dol lt-med gry a/a
80% Dol lt-med brn, micxlln oc vfxlln, oc dk brn arg lam, pyr com
- 1990' -10% Dol med-dk brn, arg, micxlln
90% Dol bf-lt brn, vfxlln oc mxlln, fr ix & vug por
- 2000' -20% Dol m brn a/a
80% Dol dk brn, micxlln oc vfxlln, hd, plty, v arg
- 2010' -40% Dol med-dk brn & gry, micxlln, hd, plty
60% lt gry/wh & buff, micxlln oc vfxlln, in pt saccy
- 2020' -70% Dol med-dk gry and gry/brn, micxlln, hd, plty, arg
30% Dol lt gry, micxlln oc vfxlln oc saccy
- 2030' -80% Dol dk gry/brn, micxlln, arg
20% Dol lt gry, mixlln grdg vfxlln-saccy
- 2040' -70% Dol dk gry/brn a/a w oc dk gry arg lam & m gry Dol lam
30% Dol lt-med gry, & brn, micxlln grdg vfxlln a/a
- 2050' -80% Dol dk brn to gry/brn a/a micxlln, arg ptgs (poor sample from flow line)
20% Dol lt gry, micxlln grdg saccy vfxlln a/a tr Sh-dk gry/blk, hd, plty
- 2060' -60% Dol brn, grdg dk brn, micxlln, sl arg
35% Dol lt gry, oc sh, micxlln-vfxlln - saccy
5% Sh lt grn/gry blk, sptty
- 2070' -100% Dol dk brn micxlln, arg a/a, mnr Sh dk gry/brn, thn lam
(poor samples as caught from flow-line while bypassing shakers)
- 2090' -70% Dol lt-med gry/brn, micxlln oc grdg vfxlln, scat dol fill frac
20% Dol dk brn a/a
10% Dol pale greensih grey, hd, dns, micxlln
- 2100' -75% Dol lt-med gry/brn a/a micxlln
20% Dol lt gry/grn Dol, micxlln
5% Sh, pale grn, arg, hd, dns w grn Dol xlls in matrix
- 2110' -50% Dol lt-gry/brn, micxlln, mnr lt brn Ml
40% Dol lt bry/grn, hd, dnse, plty a/a (non-arg)
10% Dol bf, mixllne grdg mnr wh, saccy, tr ix por w dol xll frac fill
- 2120' -70% Dol bf-lt brn a/a micxlln oc fxltn, hd blk, scat anhyc vfxlln Dol
30% Dol lt gry grdg gry/grn, micxlln a/a

d) Sample Description (cont'd)

- 2130' -90% Dol bf-lt brn a/a micxlln cc vfxlln oc wh anhyc Dol vfxll/saccy
10% Dol lt gry/grn & gry a/a, tr cht & fracs
- 2140' -10% Dol bf-brn, grdg wh, vfxlln grdg mxlln, saccy
10% Dol lt gry/grn a/a
80% Dol bf-brn, micxlln, grdg fxlln, oc m brn tr oolitic brown cht
wh silic matr
- 2160' -20% Dol bf/wh, micxlln
40% Dol lt gry-gry/grn, micxlln a/a
40% Dol lt-m brn, micxlln sl arg, tr fracs (chert & dol filled)
- 2170' -80% Dol lt-m brn, sl arg, micxlln grdg vfxl, pr -ex vug por dol &
cht filled fracs
10% Dol lt gry, micxlln, hd, dns a/a
10% Dol dk brn, micxlln, hd, dns
- 2180' -95% Dol a/a lt-m brn, micxlln oc vfxln, hd, dns
5% Dol tr lt gry/wh, cl arg, vfxlln, m hd, scat intxlln por
- 2190' -100% Dol lt-m gry, and gry/brn, micxlln hd, plty, dns
- 2210' -80% Dol lt gry-bf, micxlln, plty tr lt grn/gry Sh
20% Dol wh, vfxlln, sl anhyc
- 2220' -75% Dol lt gry/grn, buff, mixlln, hd plty
25% Dol wh, vfxlln saccy, sft
- 2230' -20% Dol lt gry/grn, micxlln, plty a/a
30% Dol wh, vf-fxlln, saccy, tr ix por
50% Dol buf-lt brn, mixlln grdg vfxlln, tr Chert, tr Anhy, tr grn Sh
- 2240' -30% Dol lt gry/grn, micxlln hd dns, plty, w grn arg lam
60% Dol bf grdg wh, intrgrwn mic-vxlln
10% Dol wh, vf-fxlln
- 2250' -20% Dol lt gry/gry, mic-vfxlln oc grn Sh lam & ptgs, tr pyr lam
80% Dol wh-bf, vf-fxlln, m hd, pr-fr scat ixlln por
- 2260' -10% Dol lt gry/grn grdg gry/wh, mic-vfxlln, plty, tr Sh interbedded w
90% Dol a/a bf-wh, vf-fxlln, oc mxlln, scat fr ix & micvug por
- 2270' -20% Dol lt gry/grn - gry/wh, mic-vfxlln, plty, tr Cht
80% Dol a/a bf-wh, vf-fxlln, med hd, scat fr ix & micvug por
- 2280' -100% Dol lt gry/grn -bf grdg gry/wh, med hd, vfxlln grdg micxlln,
scat por

d) Sample Description (cont'd)

- 2290' -100% Dol lt gry/wh & wh a/a micxlln grdg vfxlln, hd, dns, plty
- 2310' -65% Dol lt-med gry/brn, micxlln, hd, dns blk (dker than above)
20% Dol lt gry/wh a/a
15% Chert wh opaque, hd oc dol xlls in cht, vug filled, mnr Anhy
- 2320' -85% Dol lt-med gry, oc bf, micxlln, oc f-mxlln, dns blk
10% Dol lt gry/wh, vfxlln
5% Chert wh, w brn oolite vestiges, silic
- 2330' -95% Dol lt gry to gry/wh, micxlln, tr pyr, tr Cht
5% Dol wh, vfxlln, scat vug por
- 2340' -90% Dol lt gry-gry/wh, & bf, micxlln, scat bug por
10% Dol med bluish grey, hd, dns, oc med brn
- 2350' -40% Dol lt gry-grywh, micxlln a/a, pr ixlln por tr pyr
60% Dol bf, mxl, oc fxlln, more xlln than above
- 2360' -30% Dol lt gry/wh-med bluish gry, micxlln a/a
70% Dol mxlln a/a pr ixlln por
- 2370' -90% Dol lt gry/wh - gry/blue micxlln, hd, plty, tr Cht
10% Dol bf, mxlln a/a
- 2380' -10% Dol lt gry/wh a/a
90% Dol bf-wh, vf-micxlln, tr Sh-blk to dk brn lam
- 2390' -20% Dol gy/wh, med gry a/a micxlln oc grn Sh
80% Dol bf-wh, vfxlln grdg mxlln
- 2400' -10% Dol lt gry a/a
90% Dol bf-wh, vf-micxlln oc mxlln dns
- 2410' -60% Dol lt-med gry, micxlln, a/a
40% Dol bf, vfxlln-grdg micxlln, oc pr vug por often dol xl filled
- 2420' -95% Dol bf, lt brn, oc mbrn, micxlln oc vfxlln, hd, dns, blk
5% Sh grn - grn/fry, dol
- 2430' -40% Dol bf-lt brn a/a micxlln
50% Dol lt gry, oc grdg mgrn/gry, micxlln oc lt grn Sh ptgs
10% Dol wh-gry/wh, saccy, vfxlln scat Dol filled frac, oc pry in Sh
- 2440' -40% Dol lt gry/grn, micxlln hd, dns, oc cryptoxlln, plty, hd, dns, tr Cht
60% Dol lt bf, oc wh, micxlln grdg vfxlln, scat frac por, pr vug-frac por

d) Sample Description (cont'd)

- 2450' -30% Dol lt gry/grn, micxlln, oc mxlln, tr Cht -silicified oosparite, pyr lam
70% Dol lt bf, vf-mxlln, sft, scat ex vug por, tr brec, esp in mxlln dol
- 2460' -10% Dol lt gry/grn a/a, tr intraformational brec, wh dol matric, frgs
70% Dol buff-wh, mxlln, grdg vfxlln & micxlln
20% Dol wh. vf-fxlln, saccy tr ex frac & vug por, dolcxlls lining vugs
- 2470' -30% Dol lt gry/grn a/a micxlln, hd, dns, tr Grn SH
65% Dol bf-wh, mxlln grdg micxlln, intergrwn, dns, hd
5% Dol wh, vf-fxlln a/a
- 2480' -10% Dol lt gry grn a/a tr grn Sh
80% Dol bf grdg wh, & lt brn, micxlln oc vfxlln, hd, dns
10% Dol wh, vfxlln, med hd, scat pr vug por
- 2490' -15% Dol lt-med gry/grn micxlln hd dns a/a tr grn Sh tr pyr
70% Dol bf grdg wh, & lt brn a/a micxlln oc vf & fxlln
15% Dol wh a/a vf-fxlln, saccy, mnpr ix por
- 2500' -80% Dol intergrading bf/ lt gry-wh, micxlln oc vfxlln
20% Dol wh a/a vf-fxlln, saccy blk to v thn plty, sft-med hd, frac
- 2510' -60% Dol bf, grdg wh, micxlln to patchy vfxlln grdg wh, tr grn SH
40% Dol wh a/a vfxlln saccy, sft-med hd, sl anhye, friable, brec/frac
- 2540' -80% Dol bf & lt gry, grding wh, micxlln, hd, plty
20% Dol wh a/a vfxlln, saccy, friable, scat vug por
- 2550' -70% Dol bf grdg wh a/a oc gry/wh, micxlln grdg vfxlln, grading to
30% Dol wh, vfxlln, med he-sft, friable, saccy tex
- 2560' -70% Dol bf grdg wh a/a oc gry/wh & lt gry
20% Dol wh a/a, oc frac por (dol xll lined)
10% Dol med brn & med gry, darker, tr pale grn waxy SH
- 2570' -60% Dol bf-lt gry, grdg whm micxlln a/a
10% Dol wh, a/a scat frac por a/a
30% Dol med gry & brn, darker, tr grn SH lam
- 2580' -50% Dol bf-lt gry, micxlln a/a grdg wh
10% Dol wh, vfxlln, saccy
40% Dol med gry-med brn, micxlln a/a, darker than above
- 2590' -10% Dol wh, vfxlln, saccy, sft-med hd grdg lt gry
30% Dol bf-lt gry, grdg wh, micxlln
60% Dol med gry-brn, mixlln grdg cxlln, tr grn SH

d) Sample Description (cont'd)

- 2600' -10% Dol wh a/a
50% Dol bf-lt gry, micxlln grdg wh
40% Dol med gry & brn a/a, oc dk gry, tr grn SH ptgs & lam, tr pyr
- 2610' -15% Dol wh a/a sft, saccy
60% Dol lt be-lt gry, grdg wh a/a, micxlln
25% Dol med gry-brn, grdg lighter gry, hd, plty, mnr grn SH lam, tr pyr
- 2620' -85% Dol bf-lt gry, grdg eh, micxlln, oc cxlln hd, dns
10% Dol med gry-brn, oc arg brn & gry lam
5% Dol wh, saccy, sft a/a, vfxlin scat pr por
(Bypass shakers 2620 poor samples)
- 2630' -5% Dol wh, saccy a/a grdg darker & less xlln
75% Dol lt gry & bf, a/a interbedded w. darker gry-brn Dol
20% Dol med gry oc brn, micxlln w grn SH lam
- 2640' -10% Dol wh, vfxlln, saccy, sft grdg lt gry as follows
45% Dol lt gry-bf a/a, micxlln, hd, blk tr pyr nod.
45% Dol med gry-blue/gry, grdg & interbedded w lighter Dol, Grn SH lam
- 2650' -10% Dol wh, a/a tr pr dol xl filled vugs por
20% Dol med gry/grn, a/a micxlln, w grn SH lam, tr pyr
70% Dol lt gry/brn, a/a micxlln poor sample
- 2660' -20% Dol wh, vfxlln, saccy, grading darker (greater alteration)
70% Dol lt gry-bf, micxlln a/a, tr dol xl filled vugs & fracs, tr wh Cht
10% Dol med gry to bluish gry, micxlln, hd, dns poor sample
- 2670' -5% Dol wh, vfxlln, a/a
75% Dol lt gry, oc bf, micxlln grdg wh vfxlln patches a/a
20% Dol med gry-bluish gry and greenish gry, hd, dns
- 2680' -80% Dol bf, intrgrwn mxlln, grdg wh micxlln, grdg darker Dol scat pyr
20% Dol med gry-bluish gry, micxlln grdg brn, tr grn SH w dolie xlls
- 2690' -20% Dol wh-bf mxlln grdg vfxlln, scat vug ix por
80% Dol lt-m gry, & bf, micxlln, mnr grn SH lam, scat pyr
- 2700' -10% Dol wh-bf, mxlln
95% Dol lt-med gry, fb, micxlln, 5% Dol dk gry, tr grn SH lam
- 2710' -40% Dol wh, vf-mxlln, saccy
35% Dol lt-med gry & bf, micxlln
25% Dol med-dk grn/gry, micxlln oc crypoxll, blocky sl arg
- 2720' -20% Dol wh, vf-mxlln, scat ex ix por & micvug por
70% Dol bf-lt brn, micxlln grdg wh a/a (lighter)
10% Dol med gry/grn, micxlln, arg, grdg mnr grn SH
- 2730' -5% Dol wh, vfxlln, saccy a/a, scat ex micvug oc frac por (bio-vugs com)
95% Dol lt-med brn micxlln, biointramicrite ghosts, clastic

d) Sample Description (cont'd)

- 2740' -100% Dol lt-md brn & bf, mixlln blk, med hd, grdg mn wh vfxlln Dol, mn pyr spheres, bio replacement
- 2760' -10% Dol wh, vfxlln, patchy alteration in Dol, frac por & dol xll fil frac
85% Dol, lt brn/bf, micxlln oc med brn, a/a mn rd pyr bio (spheres)
5% Dol m-gry, micxlln, sl limy, mn pyr in fracs
- 2770' -20% Dol lt brn & bf a/a micxlln
60% Dol med brn, hd, blk, micxlln oc crpxl
20% Dol med-dk, brn & gry, micxlln, w arg lam, poor sample
- 2780' -75% Dol lt gry brn & lt brn, micxlln, oc crpxl, blk
25% Dol med brn a/a micxl
- 2790' -40% Dol lt gry/brn, grdg lt -med gry, micxlln, mn ix por related to fracs
60% Dol lt brn, oc m brn, hd, dns, micxlln grdg, cryptxlln, tr pyr lam
- 2800' -10% Dol wh, vfxlln, saccy
50% Dol bf-lt brn, grding wh, micxlln grdg cryptxlln, oc m brn
40% Dol lt-med gry a/a micxlln tr fracs
- 2810' -40% Dol lt brn micxlln a/a
60% Dol lt-med gry a/a mn dolxll filled fracs, poor sample
- 2820' -70% Dol lt brn, micxlln a/a tr Dol xl filled fracs
30% Dol lt gry, grdg m gry, micxl grdg crpxl, tr grn Sh lam
- 2830' -15% Dol wh, vfxlln, saccy
65% Dol lt brn, bf, grdg wh, micxlngrdg crpxl
20% Dol lt gry, micxl, tr grn sh lam
- 2840' -10% Dol wh, vf-micxl, a/a
45% Dol bf-lt , mic-crpxl, a/a tr pyr in fracs
35% Dol lt gry a/a
- 2850' -10% Dol wh, a/a
50% Dol bf-lt brn, micxl oc vfxl -m brn
40% Dol lt gry, micxl grdg crpxl, hard tight
- 2860' -10% Dol wh, vf-micxl a/a
60% Dol bf-lt brn, grdg brn/gry, micxl a/a
30% Dol lt gry, grdg gry/wh, mic-crpxl, intergrdg w bf Dol
- 2870' -15% Dol wh, a/a
35% Dol bf-lt brn, grdg brn/gry, micxl grdg crpxl, hd, dns, plty
60% Dol lt gry a/a grdg wh, micxl mn pyr lam & pyr in fracs

d) Sample Description (cont'd)

- 2880' -5% Dol wh, vfxl a/a
95% Dol a/a lt bluish gry to gry/brn, micxl grdg crpxl, hd, dns
- 2890' -20% Dol wh, vfxl a/a, saccy reps alteration to a greater detree, fracs ?
80% Dol lt gry/wh -bf grdg wh, platy, micxl oc crpxl, tr grn Sh
tr pyr, tr dol xl filled fracs & vugs
- 2910' -3% Dol wh, vfxl a/a
92% Dol interbedded lt-m gry & lt brn, micxln (no crpxl) darker than above
5% Dol dk grn/gry grdg to dolomitic Sh
- 2920' -60% Dol lt gry-brn, micxl, tr Dol xl filled fracs
40% Dol m-dk gry & gry brn, micxl, hd, dns, arg
- 2930' -20% Dol lt gry & lt grn a/a
80% Dol med-dk grey, and gry/brn a/a micxl, sl arg
- 2940' -10% Dol lt gry - lt brn a/a Intraformational brec com
90% Dol m-dk gry, and gry brn a/a grdg darker sl mottled w intergrading micxl, platy, 5% dk gry, arg
- 2960' -20% Dol bf, micxl dol; tr pyr filled fracs
60% Dol med gry/brn-brn, micxl a/a w arg lam
20% Dol dk gry, arg, grdg w arg lam, blk, tr pyr filled frac
- 2970' -10% Dol wh, vfxl, sft-m hd, saccy, greater alteration
50% Dol lt gry-lt brn, platy, micxl no flor, no stn or show
30% Dol med gry/brn a/a
10% Dol dk gry arg a/a
- 2980' -90% Dol med gry/brn to brn, w darker arg lam com, hd, blk, micxl
10% Dol dk gry, arg a/a, tr calc fl fracs, oc brn Cht (pr spl)
- 2990' -20% Dol lt gry - lt brn, micxl
75% Dol med brn oc m gry/brn, platy, micxl
5% Dol Dk gry - grn/gry, arg
- 3000' -10% Dol lt gry & lt brn a/a
85% Dol med brn, dkr brn & gry lam, micxl, blk
5% Dol dk gry/grn, arg, micxl, hd, blocky
- 3010' -5% Dol lt gry/wh & crm, vfxlm sft, saccy
20% Dol lt brn-bf & lt gry, micxl
70% Dol med brn to gry/brn, micxl a/a
5% Dol dk brn, arg

d) Sample Description (cont'd)

- 3020' -5% Dol lt gry/wh & crm, vfxl, m hd, saccy
 30% Dol lt brn-lt gry, micxl, a/a
 60% Dol med brn-gry/brn, grdg lighter, micxln
 5% Dol dk gry/grn, grdg gry/grn SH, blk, dolc, hd
- 3030' -20% Dol lt gry/wh & crm, bf, vfxl sft-med' hd, (Anhyc?)
 75% Dol lt brn, mmr lt gry, micxl oc bf vfxl
 5% Dol lt grn/wh-grn/gry, md hd, dns, w scat SH clasts, arg grdg
 mmr sft waxy lt grn SH (tr)
- 3040' -5% Dol wh, lt gry-wh, vf, vfxl grdg Anhyc. & Anhy (poss as frac fill) & lam
 70% Dol lt brn, aamicxl plty, grdg lighter
 15% Dol arg, pale grn, micxl
 10% Shale lt-med green, waxy, blocky, med hd, grdg to lighter arg Dol a/a
- 3050' -15% Dol wh, lt gry/wh mic-vfxl, blk, anhyc
 75% Dol arg gry-bf, grdg ltr wh a/a micxl, oc med brn
 10% Sh pale to dark green, grdg dk gry, lam & thn bedded, waxy a/a, tr pyr
- 3060' -5% Dol wh, anhyc a/a
 50% Dol, lt-gry-bf grdg lt grn/gry, micxl
 15% Dol lt grn gry, arg, micxl, med hd, arg lam w pyric, plty
 25% Shale mottled & interbedded brick red to green, med hd, dolc
- 3070' -10% Anhy, dolc, wh, poss lam & bedded in Sh or frac fillings
 55% Dol lt gry to gry/grn & lt brn, micxl, hd, plty sl arg
 35% Shale (brick red) flakey, hd, dns, sl dolc, bedded also as SH lam in
 (mottled w. green) /lt grn/gry Dol a/a, red mud indicates that Shale
 is soft and that pos a greater amount was washed out
- 3080' -10% Anhy, wh, nodular, soft, poss irreg bedding in SH & frac filling
 60% Dol arg, lt-med grn/gry, micxl, hd, plty
 30% Shale red lg fissile flakes, dns, grdg grn, waxy, drilling mud is
 red from Shale, poss greater amt washed out
- 3090' -5% Anhy wh, stf, poss nodular in Sh (poor samples from flow-line)
 65% Dol arg, med greenish grey to red, interbeds of mic & crpxl,
 grading to dolc mottled SH (poor sample)
 30% SH brick red & maroon, to green, med hd, sl dolomic, (washed out)
- 3100' -40% Dol arg, lt-med grn/gry, & red, mottled, banded w red & grn arg lam
 60% SH brick red/maroon and green, sft grdg med hd-dolc,
 (most sft shale appears to have been washed out or crushed by
 harder formation drilling bit)

Samples 2465-3110 were collected from the flow-line as the shakers were by-passed due to continuous lost circulation from the fractured formation, and in order not to screen out the lost circulation material. Good samples were collected over shakers below 3110 feet.

d) Sample Description (cont'd)

- 3110' -30% Dol, lt-med grn, grdg mottled w red, arg, w arg lam, good sample
70% Shale, mottled re-grn, grdg dolc, (red mud com), tr Anhydrite nod.
- 3120' -20% Dol, wh-lt gry, anhy.
50% Dol, arg, red to green, mottled, micxl
30% Shale, mottled red, mngr green, waxy, grdg harder and more dolc (pink mud)
- 3130' -5% Anhy, wh to pink, sft, dense, nodular
40% Dol, wh-lt grn/gry & med gry, micxl
40% Dol, arg, med grn/gry, hd, dns
15% Shale, mainly lt grn, mngr red, sl dolc grdg arg Dol, (gray mud-less Sh)
- 3140' -30% Dol, lt gry to gry-grn oc wh, micxl
50% Dol, arg med greenish gray, grading to lt Dol and Sh
20% Shale, mottled light green & maroon, oc sl dolc
- 3150' -20% Dol, lt gry/wh, micxl, oc wh Anhy frgs, nodules, sft, wh
40% Dol, arg lt-med greenish gray, micxl, plty
40% Shale, green, oc maroon grdg dolc
- 3160' -30% Dol, lt gry-bf a/a, oc Anhy
40% Dol, lt-med greenish gray, mic-crpxl a/a plty, arg
30% Shale, green, oc maroon, grdg dolc
- 3170' -40% Dol, lt gry-bf, micxl oc vfxl
45% Dol, arg, lt-med greenish gray, med gray, micxl grdg bf Dol & to Sh
15% Shale, green a/a
- 3180' -20% Dol, lt gry a/a
60% Dol, med gry-gry/brn, micxl, grdg grn & dk gry, arg
20% Shale, green oc maroon, med hd, waxy, sl mottled, grdg dolc
- 3190' -10% Dol, lt gry/wh a/a
60% Dol, arg med gry-gry brn, a/a
30% Shale, maroon, mottled with green, grdg dolc a/a (red mud)
- 3200' -10% Dol, wh, vfxl, grdg Anhy
40% Dol, lt-med gry, micxl oc vfxl
30% Dol, arg grn/gry, micxl-cptxl a/a
20% Shale, green a/a
- 3216' HALITE Member - the following samples have a high percentage of Dolomite and Anhydrite due to leaching of the massive salt. Actually these lithologies represent a small percentage as thin beds within the salt. Most of the salt was leached out due to the non saturated nature of the drilling mud, and is evidenced as excellent leached porosity in the Dolomite. (leached salt casts)

d) Sample Description (cont'd)

- 3210' -5% Anhy, wh, rose, thin lam
5% Dol, wh, Anhydritic
50% Dol, lt-med gry, micxl
20% Dol, arg, grn/gry, a/a
20% Shale, green, sl dolie a/a
- 3220' -30% Anhy, wh, bf, oc granular, dns
50% Dol, lt-med gry & brn grdg bf, grdg Anhydritic
10% Dol, arg, grn-gry a/a (cvgs?)
10% Shale, green a/a (cvgs?)
- 3230' -10% Anhy, wh a/a poss nod & frac filled
80% Dol, bf-lt gry, sft-med hd, sl anhy mn'r gry arg lam
10% Shale, green, a/a (cvgs?)
- 3240' -10% Anhy, bf-wh, grdg anhydritic dol
80% Dol, bf-lt gry, sft-med hd a/a sl anhy, grdg arg lam, oc ex leached
por, poss reps leached salt casts
10% Shale, green a/a (cvg)
- 3250' -30% Anhy, wh-lt gry, grdg brn/wh, nodular
60% Dol, lt gry-bf, m hd, micxln grdg anhy, sl arg
10% Shale, green (cvg)
- 3260' -40% Anhy, wh-lt gry, oc leached por, ps leached salt casts
50% Dol, lt gry-bf, mhd, micxl, grdg anhy
10% Shale, green a/a (cvg)
- 3270' -30% Anhy, wh, bf, grdg Salt, lt brn, vitreous
65% Dol, lt gry, micxl, grdg anhy sl arg
5% Shale, grn (cvgs)
- 3280' -20% Anhy, wh, sl leached (salt casts?), grdg brn
70% Dol, lt gry-lt brn, grdg anhy, vfxln, scat ex vuggy leached (salt) por
10% Shale, grn grdg lt gry, sft, sl anhy
- 3290' -20% Anhy, wh, rose, lt brn grdg vitreous Salt
75% Dol, lt gry, micxl, hd, plty, oc vfxl, anhy, sl arg
5% Shale, grn, a/a (cvg)
- 3300' -25% Anhy, wh, a/a
65% Dol, bf-lt gry, anhy, grdg med hd, micxl, scat ex leached (salt cast),
por, spongy appear.
10% Shale, grn a/a oc m brn, dolie
- 3310' -30% Anhy, wh, lt gry-lt brn, blocky, vitreous grdg Salt
60% Dol, lt gry-bf a/a med hd oc sft vfxl, anhy
10% Shale, grn, oc maroon, sft (cvg)

d) Sample Description (cont'd)

- 3320' -20% Anhy, a/a
70% Dol, lt gry-bf, grdg anhyc, oc sft, vfxl, mnr gry bentonitic dol, sft, ex leached (salt cast) vuggy por /w Shale inclusions in dol, 10% bentonitic Sh, brn
10% Shale, grn a/a (cvg)
- 3330' -30% Anhy, lt gry-lt brn, oc wh, massive
55% Dol, lt gry/bf a/a oc grdg sf, tr vfxl, anhyc Dol
15% Shale, grn oc maroon a/a
- 3340' -40% Anhy, a/a bf, med hd, bedded, vitreous lustre poss Salt
45% Dol, lt gry, anhyc, med hd-hd, vfxl
15% Shale, a/a pale grn to lt gry, oc dolic (cvg)
- 3350' -20% Anhy, bf-wh, massive
65% Dol, a/a, lt gry/bf, med hd, anhyc, micxl-grdg vfxl
15% Shale, grn a/a (cvg)
- 3360' -25% Anhy, wh-lt gry a/a
55% Dol, lt gry-bf, anhyc a/a
20% Shale, lt grn oc maroon a/a (cvg?) and gry Bentonitic Shale, sft
- 3370' -15% Anhy, wh lt gry, & bf, blocky, bedded sl vitreous (Salt)
55% Dol, lt gry oc gry/grn, bf, sft-med, Anhyc, grdg mnrg arg
25% Shale, lt grn, oc maroon a/a
5% Shale, lt gry sft bentonitic
- 3380' -20% Anhy, wh, gry/wh, dolic, hd, dns
30% Dol, lt gry, micxl, grdg arg & anhyc
50% Shale, lt grn-grn/gry, sft, grdg dolic, Salt tr orange K-salt xls, leached spngy Sh & Dol por
- 3390' -10% Anhy, wh, bf a/a
25% Dol, brn, spngy tx, leached (salt cast) por, scat orange K-salt xls (carnalite)
65% Shale, lt grn, to lt grn/gry, oc maroon, dolic
- Note: higher percentage of Shale with orange K-salt xls may be caving from main Salt unit above 3378'.
- 3400' -10% Anhy, wh/bf, a/a
30% Dol, lt gry, sl arg, sl anhyc a/a
60% Shale, dolic lt grn, gry/grn, w leached salt casts, tr scat orange xls, carnalite K-salt, tr sft gry bentonitic Sh
- 3410' -5% Anhy, wh, bf a/a
25% Dol, lt gry, sl leached (salt cast) por
70% Shale, lt-med grn & gry, dolic (note when dry Sh is lt grn, but darker when wet)
Scat orange carnalite K-salt xls in Sh & Dol

d) Sample Description (cont'd)

- 3420' -30% Dol, lt-med gry and grn grdg arg w. arg lam
70% Shale, dolic, green, maroon, gry, sft-med hd, tr Anhy
- 3430' -30% Dol, lt-med gry, grding grn/gry, arg
65% Shale, dolic grn, maroon, gry, sft-med hd, grdg arg Dol, oc yel-brn
Sh, tr scat orange K-salt xls in shale
5% Anhy, wh, lt gry
- 3440' -40% Dol, lt gry, arg, med hd, plty
50% Shale, dolic grn & gry, sft-med hd, oc maroon
10% Anhy, wh-lt gry a/a
- 3450' -20% Dol, lt gry, micxl med hd, grdg arg
70% Shale, dolic dk grn-lt gry (bentonitic) sft
10% Anhy, a/a
- 3460' -15% Dol, lt gry-brn hd, grdg arg a/a
80% Shale, dk grn, med hd, plty, scat orange K-salt (carnalite) xls
and thin fibrous lam in Sh
5% Anhy, lt gry, nod
- 3470' -10% Dol, a/a lt gry-brn hd, grdg arg
85% Shale, dk grn oc lt gry, sft grdg dolic (cvg) scat blk Sh, scat
orange K-salt (carnalite) xls & lam in Sh, oc transparent
5% Anhy, wh, a/a (cvg)
- 3480' -5% Dol, lt gry-brn a/a oc med gry vfxl dol
90% Shale, dolic, a/a dk grn, grdg med gry oc lt gry (cvg) w scat K-salt
5% Chert, lt brn, semi-transluscent, hd
- 3490' -30% Dol, lt-med brn, gry, mic-vfxl, tr s & p dol, vfxll (wh & blk spotted)
55% Shale, med-dk gry/grn dolic, med hd (cvg) tr orange K-salt xls in Sh
15% Chert, lt-med brn, hd, silic flky, oc wh & lt gry
- 3500' -60% Dol, lt-med brn, arg, vfxln, med hd, blk, grdg med gry-brn
30% Shale, greenish brown, sft-med hd, tr blk Sh
5% Chert, blk-dk brn
5% Dol, lt gry., anhye, micxl (cvg)
- 3510' -80% Dol, arg, med brn, vfxln (slty appearance) grdg friable
10% Shale, lt grn grdg brn
10% Dol, lt gry/wh, anhye (cvg), tr Chert a/a
- 3520' -65% Dol, arg, med brn, bfxl or sft-med hd, friable, tr wh Salt if frac vug
10% Shale, lt-med grn & dk brn
20% Dol, lt gry, mic-crpxl, grdg to 5% Dol, wh, anhye (cvg), tr wh Chert
- 3530' -95% Dol, med gry-brn grdg dk grn/gry, vfxl, arg, hd, dns
5% Chert, wh, milky, lt bluish gray, oc rose

d) Sample Description (cont'd)

- 3540' -85% Dol med gry/brn, vfxl oc fxl, arg, hd, dns, blkyl sl lmy grdg wh dol
xls in brn arg matrix, patchy dol & arg Dol
10% Shale lt-med grn & dk brn, 5% Chert wh, milky (muddy film on sples)
- 3550' -90% Dol med gry/gry/brn, vf-fxl, hd, dns, arg, hd, dns, tr pyr
10% Shale a/a tr Chert eh, rose
- 3560' -90% Dol med gry/brn lt brn & blk, vfxl
10% Shale grn a/a tr Cht tr wh Anhy
- 3570' -40% Dol med gry/brn a/a arg (poor sample)
20% Dol lt gry-bf, sl arg
30% Shale mottled grn & red (slow drilling below 3524, poss Shale)
10% Anhy, wh, dolie (cvg?)
- 3580' -10% Dol med brn/gry vfxl, arg a/a
20% Dol lt-med grn/gry, arg hd, plty
50% Shale green, sft-med hd, oc dk grn
15% Dol wh, anhye, micxl, 1/2 plty (cvg?) 5% Anhy - wh, bf
- 3590' -15% Dol med brn, arg a/a
20% Dol lt grn/gry to bf, oc mbrn, micxl, hd, dns, plty
50% Shale red0dk grn, oc brn...5% Dk grn Sh (high amt washed out of
pulverized shale from hard bit)
15% Dol wh, lt gry, anhye
5% Anhy - wh nodules, poss streaked through Shale
- 3600' -60% Dol brn-gry/brn, arg, micxl oc vfxl, mnr frac
10% Dol dk grn gry, arg, hd, blkyl, grdg grn Sh
10% Shale dk grn to blk, sft, med hd
20% Dol wh-lt gry/bf, sl anhye (cvg)
- 3610' -80% Dol med-dk gry/brn mic-vfxl, hd, blkyl, dns, (orig. cs intrmicrite or
intraformational breccia with Shale & limestone)
10% Shale dk grn/blk a/a grdg dolie
10% Dol wh, lt gry, a/a (cvg)
- 3620' -85% Shale dk grn, med hd, fiss, sl micmica (marked green mud over shakers)
10% Dol bf-wh, hd, blkyl, micxl, grdg anhy (cvg) 5% Dol/brn, arg (cvg)
- 3630' -95% Shale a/a med-dk green (bluish cast), sft-med hd (green mud com)
5% Dol wh-lt grn/wh, sl anhye (cvg)
- 3640' -95% Shale a/a med-dk green, (bluish)
5% Dol wh-bf, anhye a/a (cvg)

d) Sample Description (cont'd)

- 3660' -100% Shale med-dk grn to bluish green, sft-med hd, fiss-blocky, oc sl dolie
sl micmica partings, (very green mud over shakers)
mnr wh Dol, anhye (cvg)
- 3680' -90% Shale med to dk grn a/a
10% Shale dolie, dk grnish gry, grdg micxl, med hd-hd, tr wh Dol a/a (cvg)
- 3690' -70% Shale med - dk grn a/a
20% Shale dolie, gry/grn, mnr frac filled w dol & Anhy
10% Dol brn, f-mxl, intergrown xls, hd, dns tr wh Dol a/a
- 3700' -55% Shale med-dk grn a/a
5% Shale dolie, gry/grn a/a
10% Dol brn, f-mxl, hd, dns a/a
30% Shale yel/brn, to lt gry/brn, sft, oc brn/grn, sl waxy,
(poss sl weathered, limonitic Sh & Dol, erosional surface)
- 3707' ~~Mt. Clarke Formation.~~
- 3710' -90% Dol med brn, grdg lt brn, mxl, skeletal, grdg sl lmy, spotted w wh
dolie spar xls (orig m-vc intrabiosparite) m-cs g pyr nod in Dol
10% Shale green a/a
- 3720' -85% Dol med brn, sl arg, spotted w lt-dk brn xls in Dol, poss orig
skeletal coarse-very coarse grained biosparite)mxl
tr vug por, no fluor, pyr nod-f-mxl within Dol
10% Shale green a/a (cvg)
5% Sltst wh, friable, sl dolie, w scat m g glauconite grains-dk grn
(poss vfxl dol?)
- 3730' -40% Dol med brn, skel, a/a, w. oc glauconite grains, rd-dk grn & pyr nod.
30% Shale med-dk green a/a (interbedded w Dol)
5% Shale dolie, med grn a/a
25% Dol wh, oc buff, micxl, anhye, sl lmy (poss cvg)
- 3744' Fort Creek Sandstone
- 3740' -10% Dol med brn, a/a 15% wh Dol a/a sl lmy, sl anhy (cvg)
15% Shale med-dk grn a/a
40% Sltst lt gry-wh to gry/grn, oc brn w arg matrix, sft-med hd,
w scat glauconite
20% Sandstone lt gry-brn, grdg, slty a/a, mnr pyr nod, oil stn, sl fri
- 3750' -30% Shale med-dk grn a/a grdg sft gry, oc slty & dolie, mnr glau.
10% Dol wh, sl lmy & anhy, micxl, hd, dns (cvg?)
60% Ss lt brn, mnr brn arg matrix, oil stn, vf-fg, silty, well sorted,
oc wh dol cmt, sft-med hd, oc floating mg, wl rd qtz grains fr-ex
ig por, sl fri, no flor

d) Sample Description (cont'd)

- 3760' -20% Shale med gry oc gry/brn, & blk, oc grdg slty, pyric
 20% Ss brn-blk, vfg-fg, slty, sl arg, oil stn,hd, dns, grdg fri, oc f-m
 fltg qtz in ss, mnr brn arg matrix, ex por
 5% Sltst blk, glau?
 55% Dol wh/crm, crpxl, sl lmy, anhye (cvg?)
- 3770' -50% Shale lt-med grn to grn/gry, to gry/brn med hd, fiss blk
 20% Sltst blk, dk gry-blk, arg (poss glauconitic)
 10% Ss brn, vfg, fri, oil stn, tr pyr g, tr silic filled frac, oc
 quartzitic frgs, (ie quartzite pebbles & g), ex ig & frac por. no fluor
 20% Dol wh/crm a/a (cvg)
- 3780' -65% Shale lt-med grn, sft-med hd, waxy
 25% Shale lt gry-maroon, sft, oc red & v sft, mnr orang Anhy
 5% Dol wh a/a (cvg) Ss 5% brn, grdg slty, oil stn
- 3790' -100% Shale (washed sample reps 20% of total spl-most washed out due to soft
 pulverized nature of the softer shale w. hd bit)
Mud over shakers is a diagnostic red, v. sft, plastic
 30% green, lt-med green, interbedded w. red Sh, sft-med hd
 70% lt grey-maroon, brick red, sft-med hd, in pt harder (silic)
- 3800' -15% Shale green a/a
 65% Shale Maroon and brick red, sft-med hd, grdg hd, silty (silic)
 20% Sltst maroon oc grn, arg, grdg Sh, silic, hd, dns
 (Red mud over shakers, poss 80% sft Sh washed out)
- 3810' -5% Shale green, oc dk grn sft-med hd
 50% Shale maroon - red to lt gry, sft, grdg slty (80% washed out of red mud a/a)
 45% Sltst maroon-lt gry, hd, silic, arg
 (poss lower % of sltst due to much Shale wash-out)
- 3820' -30% Shale red-maroon, grdg gry & grn a/a (70% Sh washed out) gry/red mud
 65% Sltst maroon, mnr gry, arg, silic, oc glauconite grains
 5% Ss wh, sl gry/grn, silic cmt, hd, dns, vfg-slty
- 3830' -10% Shale red, maroon 20% Shale green a/a, mottled w red
 20% Sltst red/maroon, arg. 45% Sltst wh-lt gry, to gry/grn, silic, hd, dns,
 5% Dol, wh, crpxl a/a (cvg) / sl arg, grdg mnr sdy vfg
- 3840' -10% Shale grn a/a (grn/gry mud over shakers)
 65% Sltst lt gry & gry/grn, grdg v arg & sdy-vfg, quartzitic, silic
 5% Ss wh, vfg, slty, silic scat glauconite g.
 20% Dol wh-bf & lt gry, hd, dns, crpxl. (Note: The continual presence of this
 dolomite in succeeding samples, may indicate that this Dol is fracture filling,
 in the harder siliceous siltstone)

d) Sample Description (cont'd)

- 3850' -30% Shale lt gry-grn, grdg slty 2-3% wh Dol a/a
50% Sltst lt gry, oc wh, sl arg, quartzitic, hd, dns
20% Ss wh, quartzitic (siliceous cement), oc dol cmt, vfg-slty
- 3860' -25% Shale med-dk gry & black, grdg slty, sl micmica, thn beds & arg ptgs
65% Sltst lt-med gry, sl arg w. gry-blk arg ptgs, oc grdg vfg
10% Ss wh-lt gry a/a vfg-slty, silic
- 3870' -10% Shale med-dk gry & blk ptgs & lam
65% Sltst lt gry a/a arg, grdg vfg, hd, silic
5% Ss wh-lt gry, oc s&p w brn spots, silic, vfg grdg slty
20% Dol wh, grdg gry, grn & bf (cvg?)
- 3880' -20% Shale dk gry-blk grdg slty, micmica
60% Sltst med-dk gry, arg, w arg lam, silic a/a
10% Ss wh-lt gry a/a w blk arg ptgs, vfg-slty, hd, dns, silic
10% Dol wh-bf, crpxl a/a (cvg?)
- 3890' -15% Shale dk gry-blk a/a ptgs, grdg slty
65% Sltst med-dk gry, arg a/a w arg lam, silic
5% Ss wh - lt gry, vfg grdg slty, silic a/a
- 3900' -5% Shale blk ptgs, oc grn a/a
35% Sltst lt med gry, w blk arg ptgs, silic, arg a/a
40% Ss wh-lt gry, vfg-slty, hd, silic
20% Dol wh a/a
- 3920' -20% Shale , dk gry-blk, blk ptgs, grdg slty a/a
35% Sltst a/a dk gry/blk, arg, silic
5% Ss wh-lt gry, silic, a/a
40% Dol wh-bf a/a
- 3930' -10% Shale dk gry grdg sltst, blk ptgs in sltst.
75% Sltst med-dk gry, arg, silic, w blk ptgs, hd, dns
5% Ss wh-lt gry, silic, vfg grdg slty, hd plty
10% Dol wh, micxl, plty (cvg? - frac filling)
- 3940' -10% Shale dk gry-blk, lam, grdg slty
55% Sltst- a/a med-dk gry, arg, grdg slty Sh, hd, dns
30% Ss wh-lt gry, vfg-slty, hd, dns, silic (cmt), no por, tight
5% Dol wh, a/a (cvg)
- 3950' -10% Shale blk, slty, ptgs & lam
70% Sltst arg w. blk arg lam, med-dk gry
20% Ss wh-lt gry, vfg-slty, silic hd (5% -wh) dns

d) Sample Description (cont'd)

- 3960' -10% Shale blk-dk gry, slty & ptgs-lam, oc micmica
70% Sltst, med-dk gry, arg, hd, silic
15% Ss wh-lt gry, vfg-slty a/a, hd, dns, silic
10% Dol wh-lt grn/wh a/a (cavings from Saline fm)
- 3970' -5% Shale dk gry-blk, arg ptgs, slty, hd
75% Sltst med-dk gry & blk, silic hd dns, w blk-dk gry arg lam
15% Ss wh-lt gry a/a, hd, dns, vfg-slty, silic (silic cmt-no por)
5% Dol wh a/a cvg.
- 3980' T.D.

e) Paleontological Determinations - None performed

SECTION III - Engineering Summary

(a) Report of Drill Stem Tests (Copy of each Report already
dispatched on May 14, 1974).

DRILL STEM TESTS

<u>No.</u>	<u>Date</u>	<u>Formation</u>	<u>From</u>	<u>To</u>	<u>VO Mins.</u>	<u>ISI Mins.</u>	<u>FSI Mins.</u>	<u>ISIBHP</u>
1	3/26/74	Mt. Clarke	3727	3777	60	60	120	1511
2	3/28/74	Ronning	1020	1150	60	60	120	420
3	3/29/74	Ronning	1480	1530	60	60	120	482

No.	FS1BHP	IFBHP	FFBHP	IHP	FHP	Remarks
1	1511	707	592	2091	2063	Very strong blow on preflow. G.T.S. Rate 4.4 to 3.5 MCF/D.
2	416	2206	256	561	559	Rec.455' water 239,000 ppm salt.
3	499	482	494	791	774	Rec.920' water 39,300 ppm salt.

<u>Lab. No.</u>	<u>Sample</u>	<u>From</u>	<u>To</u>	<u>Source</u>	<u>Remarks</u>
C 74-2461-2	Water	3727	3777	DST No. 1 Top of Tool	30% Hydrocarbons in Filtrate
C 74-2462-1	Water	1020	1150	DST No. 2 Top of Tool	Gassified muddy water.
C 74-2463-1	Water	1480	1530	DST No. 3 Top of Tool	Gassified muddy water.

(b) Casing Record

<u>Casing Size (Inches)</u>	<u>Grade</u>	<u>Weight</u>	<u>Amount</u>	<u>Set At</u>	<u>Sacks of Cement & Additives</u>	
9-5/8"	Feb. 23/74	K-55	36	627	627'	450 sax + 2% CaCl ₂ + 150 sax from surface.
7"	Mar. 31/74	N-80	23	3980	3980'	700 sax + 1% D-19
(Topmost 2,000' inside 7" filled with diesel fuel)						

(c) Bit Record

<u>NO.</u>	<u>SIZE</u>	<u>MAKE</u>	<u>TYPE</u>	<u>JET SIZE</u>	<u>DEPTH OUT</u>	<u>FEET</u>	<u>HOURS</u>	<u>DULL COND.</u>	<u>REMARKS</u>
1A	13-3/4	HW	OSC-3	3-11	190'	190'	23	3/2/1	
2A	"	Reed	Y11-J	3-11	222'	32'	11 1/4	2/2/1	
3A	"	Smith	DS-J	3-11	258'	36'	5	1/1/1	
4A	12-1/4	Reed	S-13D-J	3-14	414'	156'	25-3/4	3/2/1	
5A	"	Reed	S-13D-J	3-16	566'	152'	22-1/4	4/2/1	
6A	"	Reed	S-13D-J	3-16	645'	79'	23-1/2	4/2/1	
1	8-3/4	H.W.	X3A	2-11 1-12	647'	2'	2	--	Locked
2	"	Smith	F-3	2-11 1-12	1275'	628'	51-1/2	5/3/1	
3	"	Smith	4JS	open	1735'	460'	65-1/4	5/3/1	Pump LCM
4	"	H.W.	J44	1-14 2-16	2386'	651'	107-3/4	3/2/1	
5	"	H.W.	J44	2-14 1-16	2756'	370'	62-1/2	2/2/1	
6	"	Security	S88	3-16	3576'	820'	90-1/2	8/2/1	
7	"	Smith	5JS	3-14	3924'	348'	88-1/4	3/2/1	
8	"	Smith	5JS	3-14	3980'TD	56'	22	1/1/1	5' Tally Correction

(d) Mud Report

ate	Gel	Caustic	Kelzan	Benex	Kwikseal	Sawdust (Mica-m) (Fibretex-f)	Staflow	Salt	Soda Ash
Feb. 13									
14									
15									
16	2700								
17	800	200							
18	1500	25							
19	2800	100							
20	8000								
21	--								
22	3000								
23	3700								
24	--								
26	--								
27	--								100
28	2300	75							
Mar. 1	--								1000
2	500								
3	13200	50		10		45sx			
4	20000				100sx	165sx			
5	500								
6		100		5			125		100
7	800			4					
8	5500	50		20					
9	4100			10		25sx	50		
10	2600			8	40	14sx	50		
11	2100	50		6		50, f-40	25		
12	2000			8	40	1sx	50		
13	1400			5	2sx	150sx			
14		50		8	5sx	10sx	2sx		
15	3000			12	4sx	m-450, 8sx			
16	2900	50		10	13sx	m-1050, 19sx	50		
17	2700	50		12	5sx		50		
18	1100	50			Peltex 250		50		200
19	800	200	35sx		" 1000			3500	400
20	1500	200	50sx		Mylogel 1200			4000	400
21		300	100		Mylogel 800	Peltex-800		4000	400
22		400	100		Mylogel 1600	" 800		3000	600
23		50			" 450			1900	
24		100	50		" 400	" 100		2200	400
25									
26				150 CMC				1000	

NOTE: Daily mud properties are noted on the Geological/Operations/Gas Strip log.

All above values represent lbs, unless noted sacks (sx)

(e) Deviation Record (Wireline surveys during drilling).

<u>Footage</u>	<u>Deviation</u> ^o	<u>Footage</u>	<u>Deviation</u> ^o	<u>Footage</u>	<u>Deviation</u> ^o
60	- 1/4	920	- 1	2008	- 1-3/4
98	- 1/2	980	- 1	2042	- 1-3/4
128	- 1/2	1040	- 3/4	2072	- 2
188	- 1/4	1130	- 1/4	2100	- 2
212	- 1/4	1230	- 1/2	2136	- 2-1/8
283	- 3/4	1310	- 1/2	2164	- 2-3/4
340	- 1/4	1410	- 1/2	2190	- 2-1/8
403	- 3/4	1540	- 1/2	2227	- 2-3/4
430	- 3/4	1630	- 1/2	2258	- 2-3/4
450	- 7/8	1730	- 1	2289	- 2-1/4
528	- 1/2	1790	- 1	2315	- 2-1/2
566	- 3/4	1853	- 1-3/4	2350	- 2-3/4
645	- 3/4	1885	- 1-3/4	2380	- 2-7/8
700	- 1	1915	- 1-3/4	2404	- 2-3/4
770	- 1	1949	- 1-3/4	2435	- 2-7/8
830	- 1/2	1979	- 1-3/4	2460	- 2-1/4
2490	- 2-3/4	3060	- 2-3/4		
2528	- 2-1/2	3150	- 2		
2560	- 2-1/2	3240	- 2		
2590	- 2-7/8	3340	- 2		
2622	- 2-7/8	3430	- 1-1/2		
2650	- 2-7/8	3550	- 1-1/2		
2680	- 2-1/2	3650	- 1-1/2		
2710	- 2-1/4	3775	- 1-3/4		
2740	- 2-1/8	3875	- 1-3/4		
2810	- 2-1/2	3920	- 2-1/2		
2870	- 2-1/2	3980	- 4-3/4		
2935	- 2-3/4				
2990	- 2-3/4				

In addition see readings on print of Dresser Diplog.

(f) Abandonment Plugs - None; well cased.

(g) Lost Circulation Zones - Ronning fm. 1442-1451 ft.
 Lost 250 bbls. mud @ 1442 ft.
 Lost 1250 bbls. mud @ 1451 ft.
 Continual mud loss of 80 - 100 bbls.
 per day. 1451-2450 ft. into fractured
 formation.
 Continual mud loss of 150-300 bbls.
 per day. 2450-2975 ft. into fractured
 formation - (Ronning frm. - Dolomites)
 Kwikseal, mica & sawdust added to mud.

(h) Report of Blow-outs - No Blowouts

SECTION IV -- Logs

<u>Dates Run</u>	<u>Intervals</u>	<u>Type Logs Run</u>
March 24/74	622-3972 ft	Densilog/Caliper/Gamma
	622-3967 ft	Laterlog
March 25/74	622-3964 ft	Acoustilog/Caliper/Gamma (Gamma run 0-TD)
	622-3974 ft	Compensated Neutron/Gamma
March 28/74	684-3958 ft	Dipmeter (4-arm)

NOTE: One copy of the final print of each of the above logs has been already forwarded under separate cover. (Letter of Transmittal dated May 14, 1974 refers).

SECTION V - Analysis

- (a) Core Analysis - No conventional cores cut. Sidewall cores only. See description under Section 11 (c).
- (b) Water Analysis - From Drill Stem Tests; 1, 2, & 3. See next 3 pages.
- (c) Gas Analysis - From Drill Stem Test No. 1. See page following Water Analysis.
- (d) Oil Analysis - No oil production. No analysis.

SECTION V (b)

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab. No. C74-2461-2

Received : April 2, 1974

Well: Ashland et al Tedji Lake K-24

Operator: Ashland Oil Canada Limited

Field or Area: Wildcat, N.W.T.

Elev. K.B. 1138

Grd. 1124

Zone/Formation: Mt. Clarke

Sample Interval: 3727-3777

Method of Production: DST #1

Sample from: Top of Tool

By: Lynes United Date: March 23, 1974

OTHER PERTINENT DATA: Recovery: 75' Gassified muddy water

	<u>Na & K</u>	<u>Ca</u>	<u>Mg</u>	<u>SO₄</u>	<u>Cl</u>	<u>HCO₃</u>	<u>CO₃</u>	<u>OH</u>
Mg./L	108,198	trace	trace	7,236	156,250	Nil	2,570	344
Meq./L	4,663.13	-	-	151.07	4,406.25	-	85.58	20.23
Meq. %	39.18	-	-	2.65	57.10	-	0.94	0.12

Total Solids Mg/L: By Evaporation 282,120 @ 110°C Specific Gravity 1.192 @60°F. Observed pH 11.4 @ 74°F.

Calculated 273,625 At Ignition 273,600 Refractive Index 1.3758 @ 25°C. Resistivity 0.042 ohm/meters @25°F.

Remarks & Conclusions: Analysis determined on a dark brown colored filtrate recovered from brown watery mud containing approximately 30% hydrocarbon.

C74-2461-1: 75' Above Tool

RESISTIVITY: 0.042 ohm meters at 25°C

Resistivity determined on a dark brown colored filtrate recovered from brown watery mud containing approximately 30% hydrocarbon.

SECTION V (b)

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab. No. C74-2462-1

Received: April 2, 1974

Well: Ashland et al Tedji Lake K-24

Operator: Ashland Oil Canada Limited

Field or Area: Wildcat, N.W.T.

Elev. K.B. 1138 Grd. 1124

Zone/Formation: Ronning

Sample Interval: 1020-1150

Method of Production: DST # 2

Sample from: Top of Pool

By: Lynes United Date: March 28, 1974

OTHER PERTINENT DATA: Recovery: 75' Gassified mdddy water

	<u>Na & K</u>	<u>Ca</u>	<u>Mg</u>	<u>SO4</u>	<u>Cl</u>	<u>HCO3</u>	<u>CO3</u>	<u>OH</u>
Mg./L	89,475	trace	trace	5,329	129,750	Nil	3,267	231
Meq./L	3,892.16	-	-	110.84	3,658.95	-	108.79	13.58
Meq. %	39.23	-	-	2.34	56.89	-	1.43	0.10

Total Solids Mg/L: By Evaporation 230,080 @ 110°C

Specific Gravity 1.156 @ 60° F. Observed pH 11.8 @ 74°F.

Calculated 228,052 At Ignition 224,390

Refractive Index 1.3690 @ 25°C. Resistivity 0.046 ohm/meters @250F.

Remarks & Conclusions: Analysis determined on a dark brown colored filtrate recovered from brown watery mud containing a thin layer of hydrocarbon.

C74-2462-2: Middle

RESISTIVITY: 0.050 ohm meters at 25°C

Resistivity determined on a dark brown colored filtrate recovered from brown watery mud containing a layer of hydrocarbon.

C74-2462-3: Top of Tool

RESISTIVITY: 0.077 ohm meters at 25°C

Resistivity determined on a yellow colored filtrate recovered from brown muddy water containing a trace of hydrocarbon.

SECTION V (b)

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab. No. C74-2463-1

Received: April 2, 1974

Well: Ashland et al Tedji Lake K-24

Operator: Ashland Oil Canada Limited

Field or Area: Wildcat, N.W.T.

Elev. K.B. 1138 Grd. 1124

Zone/Formation: Ronning

Sample Interval: 1480-1530

Method of Production: DST #3

Sample from: Top of Tool

By: Lynes United Date: March 28, 1974

OTHER PERTINENT DATA: Recovery: 75' Gassified muddy water

	<u>Na & K</u>	<u>Ca</u>	<u>Mg</u>	<u>SO₄</u>	<u>Cl</u>	<u>HCO₃</u>	<u>CO₃</u>	<u>OH</u>
Mg./L	74,157	trace	trace	4,732	107,250	Nil	2,834	146
Meq./L	3,225.82	-	-	98.42	3,024.45	-	94.37	8.58
Meq.%	39.21	-	-	2.50	56.71	-	1.50	0.08

Total Solids Mg/L: By evaporation 203,260 @ 110°C

Specific Gravity 1.138 @ 60°F. Observed pH 11.8 @ 74°F.

Calculated 189,119

At Ignition 189,100

Refractive Index 1.3648 @ 25°C. Resistivity 0.05 ohm/meters @ 25°F.

Remarks & Conclusions: Analysis determined on a dark brown colored filtrate recovered from brown watery mud containing approximately 10% hydrocarbon.

C74-2463-2: Middle

RESISTIVITY: 0.129 ohm meters at 25°C

Resistivity determined on a yellow colored filtrate recovered from water containing a thin layer of sediment.

C74-2463-3: Top of Tool

RESISTIVITY: 0.129 ohm meters at 25°C

SECTION V (c)

GAS ANALYSIS REPORT

Laboratory Number: C74-2522

Date: April 4, 1974

Date Sampled: March 26, 1974

Date Analysis: April 4, 1974

Sample of: DST #1 3727 - 3777 From flareline 2" riser

<u>Component</u>	<u>Mole. %</u>	<u>Cdn. GPM</u> <u>@ 60°F &</u> <u>14.65 PSIA</u>
Hydrogen	0.15	
Helium	1.67	
Nitrogen	17.36	
Carbon Dioxide	0	
Hydrogen Sulphide	0	
Methane	74.14 = 89.7 %	
Ethane	4.44 = 5.3 %	
Propane	1.39	0.317
Iso-Butane	0.23	0.062
Normal Butane	0.35	0.091
Iso-Pentane	0.10	0.030
Normal Pentane	0.09	0.027
Hexanes	0.05	0.017
Heptanes Plus	0.03	0.011
TOTAL	100.00	0.555

.668 (measured) .667 (calculated)

Pseudo Critical Press 629.8 psia

Pseudo Critical Temp. 335.0 °R

Gross BTU/FT³ @ 60° F & 14.65 PSIA 890 (calculated)

SECTION VI - Completion Summary

- (a) Tubing Record - Tubing not run.
- (b) Perforation Record - 7" casing not perforated.
- (c) Cementation Records - No squeeze or plug backs.
No abandonment plugs. For details of cementation of
9-5/8" surface casing and 7" production casing please
see Section III (b).
- (d) Acidization and Fracturing Record - Not carried out.
- (e) Back Pressure and Production Tests - Not carried out.

DIPLOG RESULTS - DRESSER ATLAS

ASHLAND OIL CO
ASHLAND ETAL TEDJI LAKE K-24
WILDCAT
NORTHWEST TERRITORY CANADA
4-28-74

INTERVAL 680-3972

RUN ONE

ENGINEER MACLEAN

HCC 1034

MAG DEC

38

```
*****
* ASHLAND OIL CO 1034 OPTICAL *
* 4 -0 -0 -0 *
* 1.0 1.0 1.0 1.0 1.0 1.0 1.0 *
* 1.0 1.0 1.0 1.0 1.0 1.0 *
* -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 *
* -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 *
* 600 4000 2 5 10 60 30 1 *
*****
```

DEPTH	WL	**FORMATION DIP**				GRADE	****BOREHOLE****			
		ANG	AZ	BEARING	DA		DAZ	BEARING		
693	1	1.1	60	N 60 E	30	1.1	278	N 82 W		
699	1	1.1	55	N 55 E	30	1.1	273	N 87 W		
701	1	1.1	55	N 55 E	30	1.1	273	N 87 W		
705	1	1.1	62	N 62 E	30	1.1	280	N 80 W		
709	1	1.2	63	N 63 E	30	1.2	281	N 79 W		
713	1	1.2	53	N 53 E	30	1.2	271	N 89 W		
717	1	1.2	60	N 60 E	30	1.2	278	N 82 W		
719	1	1.2	62	N 62 E	30	1.2	280	N 80 W		
723	1	8.1	359	N 1 W	40	1.1	288	N 72 W		
727	1	8.1	360	N 0 W	40	1.2	275	N 85 W		
729	1	1.6	322	N 38 W	40	1.1	273	N 87 W		
731	1	2.2	323	N 37 W	40	1.1	280	N 80 W		
735	1	10.1	15	N 15 E	30	1.1	286	N 74 W		
737	1	15.1	49	N 49 E	30	1.1	278	N 82 W		
741	1	1.1	55	N 55 E	40	1.1	273	N 87 W		
749	1	6.7	27	N 27 E	30	1.1	273	N 87 W		
759	1	12.7	311	N 49 W	30	1.1	273	N 87 W		
763	1	16.0	57	N 57 E	40	1.1	288	N 72 W		
779	1	8.7	42	N 42 E	30	1.0	288	N 72 W		
803	1	5.3	48	N 48 E	40	1.1	293	N 67 W		
809	1	3.5	317	N 43 W	40	1.1	298	N 62 W		
813	1	2.2	33	N 33 E	30	1.1	315	N 45 W		
823	1	2.2	37	N 37 E	30	1.1	278	N 82 W		
826	1	8.6	102	S 78 E	30	1.2	278	N 82 W		
831	1	1.2	70	N 70 E	30	1.2	288	N 72 W		
843	1	1.1	60	N 60 E	30	1.1	278	N 82 W		
850	1	1.1	60	N 60 E	30	1.1	278	N 82 W		
860	1	5.8	344	N 16 W	30	1.0	288	N 72 W		
877	1	2.8	42	N 42 E	30	1.0	278	N 82 W		

ASHLAND OIL CO
 ASHLAND ETAL TEDJI LAKE K-24
 WILDCAT
 NORTHWEST TERRITORY CANADA
 4-28-74

DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
890	1	0.6	335	N 25 W	40	1.1	288	N 72 W
900	1	1.4	261	S 81 W	40	1.0	283	N 77 W
906	1	1.0	153	S 27 E	40	1.0	288	N 72 W
912	1	1.0	70	N 70 E	30	1.0	288	N 72 W
920	1	1.0	60	N 60 E	30	1.0	278	N 82 W
929	1	4.1	37	N 37 E	40	1.0	286	N 74 W
937	1	0.6	97	S 83 E	30	1.0	275	N 85 W
945	1	3.3	125	S 55 E	30	1.1	283	N 77 W
955	1	12.4	56	N 56 E	40	1.1	293	N 67 W
969	1	3.5	43	N 43 E	30	1.0	288	N 72 W
977	1	7.9	57	N 57 E	20	1.0	293	N 67 W
988	1	9.6	52	N 52 E	20	1.0	278	N 82 W
993	1	1.1	65	N 65 E	30	1.1	283	N 77 W
999	1	1.0	70	N 70 E	30	1.0	288	N 72 W
1005	1	4.6	60	N 60 E	30	1.1	278	N 82 W
1011	1	4.6	33	N 33 E	40	1.1	291	N 69 W
1017	1	3.6	23	N 23 E	40	1.0	278	N 82 W
1028	1	5.1	10	N 10 E	40	1.0	283	N 77 W
1035	1	3.0	11	N 11 E	40	1.0	273	N 87 W
1040	1	8.3	55	N 55 E	30	0.9	283	N 77 W
1053	1	4.5	87	N 87 E	30	0.9	278	N 82 W
1061	1	4.2	79	N 79 E	30	0.9	298	N 62 W
1071	1	6.8	140	S 40 E	30	0.8	278	N 82 W
1081	1	7.0	188	S 8 W	30	0.8	288	N 72 W
1091	1	0.9	55	N 55 E	20	0.9	273	N 87 W
1117	1	4.3	193	S 13 W	40	1.0	258	S 78 W
1125	1	8.4	223	S 43 W	40	1.0	268	S 88 W
1129	1	6.6	9	N 9 E	40	1.0	258	S 78 W
1135	1	3.5	348	N 12 W	40	1.0	258	S 78 W
1139	1	4.4	355	N 5 W	40	1.0	268	S 88 W
1142	1	1.0	50	N 50 E	30	1.0	268	S 88 W
1149	1	6.1	12	N 12 E	40	1.0	268	S 88 W
1154	1	10.4	31	N 31 E	40	1.0	288	N 72 W
1163	1	10.1	38	N 38 E	40	1.0	288	N 72 W
1173	1	4.6	225	S 45 W	20	1.0	278	N 82 W
1179	1	4.6	226	S 46 W	30	1.0	273	N 87 W
1183	1	2.2	345	N 15 W	30	1.0	273	N 87 W
1187	1	2.8	338	N 22 W	30	1.0	273	N 87 W
1191	1	2.0	337	N 23 W	40	1.0	278	N 82 W
1198	1	3.6	4	N 4 E	40	1.0	288	N 72 W

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1205	1	4.6	360	N 0 W	40	1.0	278	N 82 W
1207	1	5.3	358	N 2 W	40	1.0	278	N 82 W
1218	1	2.9	49	N 49 E	30	1.0	278	N 82 W
1221	1	4.5	323	N 37 W	20	1.0	288	N 72 W
1229	1	6.6	315	N 45 W	40	1.0	278	N 82 W
1247	1	5.5	311	N 49 W	30	1.0	278	N 82 W
1253	1	4.6	9	N 9 E	30	1.0	288	N 72 W
1262	1	3.7	6	N 6 E	30	1.0	278	N 82 W
1289	1	5.6	302	N 58 W	30	1.0	278	N 82 W
1307	1	3.8	305	N 55 W	40	1.0	298	N 62 W
1313	1	3.5	6	N 6 E	30	0.9	288	N 72 W
1329	1	5.8	13	N 13 E	40	1.0	278	N 82 W
1333	1	4.4	352	N 8 W	30	1.0	278	N 82 W
1338	1	6.8	326	N 34 W	30	1.0	288	N 72 W
1367	1	18.6	135	S 45 E	40	1.0	278	N 82 W
1373	1	16.5	125	S 55 E	40	1.0	268	S 88 W
1383	1	15.8	158	S 22 E	40	0.9	298	N 62 W
1387	1	15.7	172	S 8 E	40	0.9	288	N 72 W
1401	1	5.9	106	S 74 E	40	0.9	288	N 72 W
1411	1	6.2	159	S 21 E	40	0.5	298	N 62 W
1429	1	0.5	70	N 70 E	30	0.5	288	N 72 W
1461	1	4.7	245	S 65 W	40	0.5	278	N 82 W
1467	1	4.6	283	N 77 W	40	0.5	288	N 72 W
1476	1	4.8	19	N 19 E	40	0.9	268	S 88 W
1481	1	4.7	267	S 87 W	40	0.9	268	S 88 W
1484	1	6.6	272	N 88 W	40	0.9	268	S 88 W
1487	1	5.7	260	S 80 W	40	0.9	258	S 78 W
1492	1	3.7	337	N 23 W	40	1.0	273	N 87 W
1499	1	3.9	299	N 61 W	40	0.9	258	S 78 W
1505	1	2.6	298	N 62 W	40	0.9	278	N 82 W
1517	1	2.8	330	N 30 W	40	0.9	298	N 62 W
1521	1	4.9	342	N 18 W	40	0.9	298	N 62 W
1537	1	3.0	75	N 75 E	30	1.0	278	N 82 W
1539	1	4.0	87	N 87 E	30	1.0	288	N 72 W
1543	1	3.7	101	S 79 E	40	1.0	278	N 82 W
1551	1	6.9	50	N 50 E	40	1.0	308	N 52 W
1555	1	5.0	27	N 27 E	40	1.0	298	N 62 W
1562	1	9.2	38	N 38 E	40	1.0	308	N 52 W
1569	1	7.3	53	N 53 E	40	1.0	328	N 32 W
1573	1	6.1	102	S 78 E	40	1.0	308	N 52 W

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1587	1	1.0	80	N 80 E	30	1.0	298	N 62 W
1593	1	6.4	74	N 74 E	40	1.0	308	N 52 W
1599	1	4.2	138	S 42 E	40	1.0	308	N 52 W
1605	1	8.3	79	N 79 E	40	1.0	308	N 52 W
1609	1	6.1	83	N 83 E	30	1.0	308	N 52 W
1624	1	4.5	119	S 61 E	40	1.0	308	N 52 W
1635	1	12.4	46	N 46 E	30	1.0	308	N 52 W
1645	1	10.6	51	N 51 E	30	1.0	308	N 52 W
1669	1	8.2	51	N 51 E	30	1.0	308	N 52 W
1677	1	5.4	33	N 33 E	30	1.0	308	N 52 W
1684	1	6.2	42	N 42 E	40	1.0	328	N 32 W
1691	1	7.8	45	N 45 E	40	1.0	308	N 52 W
1693	1	11.1	39	N 39 E	40	1.0	308	N 52 W
1698	1	10.6	57	N 57 E	40	1.0	328	N 32 W
1701	1	1.4	239	S 59 W	20	1.0	318	N 42 W
1709	1	3.1	292	N 68 W	20	1.0	318	N 42 W
1715	1	4.8	270	N 90 W	20	1.0	318	N 42 W
1723	1	3.0	311	N 49 W	20	1.0	288	N 72 W
1731	1	2.7	260	S 80 W	20	1.5	318	N 42 W
1743	1	1.8	229	S 49 W	20	1.5	298	N 62 W
1754	1	2.7	240	S 60 W	20	1.5	298	N 62 W
1771	1	3.4	31	N 31 E	20	1.5	308	N 52 W
1773	1	2.6	40	N 40 E	20	1.5	308	N 52 W
1782	1	5.2	11	N 11 E	30	1.5	298	N 62 W
1787	1	11.2	29	N 29 E	30	1.5	298	N 62 W
1795	1	10.1	28	N 28 E	30	1.5	308	N 52 W
1801	1	9.6	6	N 6 E	30	1.5	298	N 62 W
1807	1	7.5	18	N 18 E	30	1.5	308	N 52 W
1813	1	5.6	20	N 20 E	30	1.5	303	N 57 W
1819	1	8.6	35	N 35 E	30	2.0	308	N 52 W
1825	1	4.7	49	N 49 E	30	2.0	308	N 52 W
1829	1	9.6	13	N 13 E	30	2.0	298	N 62 W
1843	1	4.6	348	N 12 W	30	2.0	288	N 72 W
1855	1	0.6	114	S 66 E	40	2.5	288	N 72 W
1859	1	1.3	202	S 22 W	40	2.5	298	N 62 W
1881	1	2.4	44	N 44 E	40	2.5	308	N 52 W
1889	1	2.2	170	S 10 E	30	2.5	308	N 52 W
1893	1	4.5	98	S 82 E	40	2.5	308	N 52 W
1913	1	2.5	80	N 80 E	30	2.5	298	N 62 W
1915	1	2.5	90	N 90 E	30	2.5	308	N 52 W

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1927	1	5.1	119	S 61 E	40	2.5	308	N 52 W
1931	1	7.7	104	S 76 E	40	2.5	308	N 52 W
1941	1	3.8	96	S 84 E	40	2.5	308	N 52 W
1947	1	2.7	136	S 44 E	40	2.5	308	N 52 W
1973	1	5.0	219	S 39 W	40	2.5	248	S 68 W
1986	1	2.5	90	N 90 E	30	2.5	308	N 52 W
1994	1	4.9	302	N 58 W	40	2.5	298	N 62 W
2003	1	2.3	329	N 31 W	40	2.5	308	N 52 W
2006	1	3.6	322	N 38 W	40	2.5	313	N 47 W
2011	1	2.5	80	N 80 E	30	2.5	298	N 62 W
2014	1	2.3	329	N 31 W	40	2.5	308	N 52 W
2016	1	1.4	53	N 53 E	40	2.5	298	N 62 W
2021	1	1.3	1	N 1 E	40	2.5	308	N 52 W
2029	1	2.5	100	S 80 E	30	2.5	318	N 42 W
2031	1	0.9	201	S 21 W	40	2.5	308	N 52 W
2037	1	1.7	228	S 48 W	40	2.5	308	N 52 W
2043	1	2.9	80	N 80 E	40	2.9	298	N 62 W
2045	1	5.8	81	N 81 E	20	2.9	308	N 52 W
2054	1	6.7	103	S 77 E	20	2.9	298	N 62 W
2063	1	2.9	80	N 80 E	20	2.9	298	N 62 W
2071	1	10.6	107	S 73 E	20	2.9	308	N 52 W
2160	1	5.9	63	N 63 E	20	3.2	318	N 42 W
2182	1	5.2	146	S 34 E	40	3.2	338	N 22 W
2203	1	0.9	194	S 14 W	40	3.3	348	N 12 W
2218	1	3.3	105	S 75 E	30	3.3	323	N 37 W
2232	1	3.0	34	N 34 E	30	3.3	303	N 57 W
2239	1	3.3	95	S 85 E	30	3.3	313	N 47 W
2258	1	5.3	46	N 46 E	20	3.3	313	N 47 W
2270	1	8.4	36	N 36 E	30	3.4	303	N 57 W
2281	1	16.3	28	N 28 E	30	3.3	298	N 62 W
2291	1	2.4	135	S 45 E	30	3.2	298	N 62 W
2358	1	3.4	120	S 60 E	20	3.4	338	N 22 W
2374	1	3.1	39	N 39 E	30	3.6	328	N 32 W
2379	1	6.3	75	N 75 E	30	3.5	318	N 42 W
2383	1	3.5	105	S 75 E	30	3.5	323	N 37 W
2388	1	3.5	125	S 55 E	30	3.5	343	N 17 W
2410	1	4.5	58	N 58 E	20	3.5	313	N 47 W
2415	1	3.5	105	S 75 E	20	3.5	323	N 37 W
2420	1	3.5	85	N 85 E	20	3.5	303	N 57 W
2431	1	8.7	172	S 8 E	20	3.5	308	N 52 W

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
2454	1	9.8	177	S 3 E	20	3.5	308	N 52 W
2467	1	3.5	125	S 55 E	40	3.5	298	N 62 W
2501	1	4.0	36	N 36 E	40	3.7	298	N 62 W
2545	1	3.5	197	S 17 W	40	3.6	323	N 37 W
2603	1	1.7	72	N 72 E	30	3.5	338	N 22 W
2609	1	1.4	64	N 64 E	40	3.5	338	N 22 W
2629	1	3.5	18	N 18 E	40	3.5	328	N 32 W
2667	1	3.5	90	N 90 E	20	3.5	308	N 52 W
2677	1	8.9	86	N 86 E	20	3.5	318	N 42 W
2684	1	25.1	300	N 60 W	20	3.5	318	N 42 W
2698	1	4.3	72	N 72 E	20	3.5	328	N 32 W
2703	1	3.5	100	S 80 E	30	3.5	318	N 42 W
2724	1	6.5	160	S 20 E	30	3.5	328	N 32 W
2731	1	3.5	90	N 90 E	20	3.5	308	N 52 W
2741	1	2.8	66	N 66 E	20	3.5	318	N 42 W
2751	1	3.5	350	N 10 W	10	3.5	208	S 28 W
2765	1	8.5	58	N 58 E	20	3.5	293	N 67 W
2777	1	3.5	120	S 60 E	10	3.5	338	N 22 W
2785	1	3.5	120	S 60 E	20	3.5	338	N 22 W
2811	1	3.6	100	S 80 E	30	3.6	318	N 42 W
2818	1	4.6	7	N 7 E	30	3.6	298	N 62 W
2826	1	4.3	57	N 57 E	30	3.5	318	N 42 W
2836	1	0.9	41	N 41 E	30	3.5	318	N 42 W
2843	1	2.2	89	N 89 E	30	3.5	318	N 42 W
2849	1	3.5	80	N 80 E	30	3.5	298	N 62 W
2859	1	3.5	90	N 90 E	30	3.5	308	N 52 W
2895	1	5.4	50	N 50 E	30	3.5	298	N 62 W
2902	1	3.5	80	N 80 E	10	3.5	298	N 62 W
2910	1	3.6	50	N 50 E	10	3.6	268	S 88 W
2917	1	3.6	40	N 40 E	10	3.6	258	S 78 W
2924	1	3.6	30	N 30 E	10	3.6	248	S 68 W
2933	1	2.8	356	N 4 W	20	3.5	248	S 68 W
2941	1	3.5	20	N 20 E	30	3.5	238	S 58 W
3037	1	9.1	319	N 41 W	30	3.5	243	S 63 W
3041	1	4.8	339	N 21 W	30	3.5	253	S 73 W
3049	1	3.5	15	N 15 E	30	3.5	233	S 53 W
3075	1	4.5	322	N 38 W	30	3.5	248	S 68 W
3083	1	5.5	333	N 27 W	30	3.5	238	S 58 W
3105	1	2.4	338	N 22 W	30	3.0	238	S 58 W
3112	1	5.7	16	N 16 E	30	3.0	253	S 73 W

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DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
3132	1	5.2	271	N 89 W	30	3.0	238	S 58 W
3146	1	6.0	36	N 36 E	30	3.0	258	S 78 W
3155	1	5.8	262	S 82 W	30	3.0	228	S 48 W
3170	1	7.7	346	N 14 W	30	2.9	243	S 63 W
3175	1	6.1	316	N 44 W	30	2.9	218	S 38 W
3181	1	5.3	301	N 59 W	30	2.9	258	S 78 W
3189	1	2.9	20	N 20 E	10	2.9	238	S 58 W
3195	1	2.9	20	N 20 E	10	2.9	238	S 58 W
3209	1	3.8	318	N 42 W	10	3.0	248	S 68 W
3215	1	6.8	4	N 4 E	10	2.9	238	S 58 W
3219	1	3.0	20	N 20 E	30	3.0	238	S 58 W
3228	1	9.3	25	N 25 E	30	3.0	238	S 58 W
3244	1	4.5	328	N 32 W	30	3.0	258	S 78 W
3253	1	1.1	229	S 49 W	30	3.0	238	S 58 W
3262	1	1.7	332	N 28 W	30	3.0	248	S 68 W
3279	1	0.8	346	N 14 W	30	3.0	228	S 48 W
3288	1	3.0	20	N 20 E	30	3.0	238	S 58 W
3305	1	3.0	30	N 30 E	30	3.0	248	S 68 W
3313	1	1.7	211	S 31 W	30	3.0	238	S 58 W
3317	1	3.5	50	N 50 E	30	3.0	238	S 58 W
3325	1	0.4	88	N 88 E	30	3.0	228	S 48 W
3329	1	3.1	225	S 45 W	30	3.0	238	S 58 W
3335	1	2.5	250	S 70 W	20	3.0	248	S 68 W
3339	1	1.4	299	N 61 W	20	3.0	228	S 48 W
3357	1	2.8	146	S 34 E	30	3.0	228	S 48 W
3367	1	1.3	4	N 4 E	30	3.0	248	S 68 W
3371	1	1.3	3	N 3 E	30	2.5	238	S 58 W
3376	1	0.8	234	S 54 W	30	2.5	238	S 58 W
3385	1	2.0	30	N 30 E	20	2.0	248	S 68 W
3390	1	2.0	20	N 20 E	20	2.0	238	S 58 W
3397	1	2.0	10	N 10 E	20	2.0	228	S 48 W
3403	1	2.5	146	S 34 E	20	2.5	238	S 58 W
3406	1	1.2	62	N 62 E	20	2.5	238	S 58 W
3410	1	1.2	106	S 74 E	20	2.5	238	S 58 W
3419	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3421	1	2.0	10	N 10 E	30	2.0	228	S 48 W
3427	1	4.5	30	N 30 E	20	2.0	238	S 58 W
3431	1	5.1	41	N 41 E	20	2.0	248	S 68 W
3434	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3437	1	2.0	30	N 30 E	30	2.0	248	S 68 W

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DEPTH	WL	**FORMATION DIP**			GRADE	*****BOREHOLE*****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
3439	1	3.2	31	N 31 E	30	2.0	238	S 58 W
3443	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3445	1	2.0	30	N 30 E	30	2.0	248	S 68 W
3449	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3453	1	2.0	30	N 30 E	20	2.0	248	S 68 W
3456	1	2.0	10	N 10 E	30	2.0	228	S 48 W
3464	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3468	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3472	1	3.6	43	N 43 E	30	2.0	238	S 58 W
3477	1	3.0	38	N 38 E	30	2.0	238	S 58 W
3479	1	4.2	47	N 47 E	30	2.0	238	S 58 W
3482	1	2.0	20	N 20 E	30	2.0	238	S 58 W
3486	1	2.0	30	N 30 E	30	2.0	248	S 68 W
3496	1	0.4	92	S 88 E	30	2.0	238	S 58 W
3502	1	2.0	20	N 20 E	20	2.0	238	S 58 W
3509	1	2.5	10	N 10 E	20	2.5	228	S 48 W
3512	1	3.6	55	N 55 E	30	2.5	228	S 48 W
3516	1	2.3	66	N 66 E	40	2.5	228	S 48 W
3525	1	1.9	14	N 14 E	20	2.5	228	S 48 W
3529	1	1.4	30	N 30 E	20	2.5	228	S 48 W
3537	1	2.5	10	N 10 E	30	2.5	228	S 48 W
3539	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3545	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3549	1	2.5	20	N 20 E	20	2.5	238	S 58 W
3553	1	2.5	10	N 10 E	20	2.5	228	S 48 W
3565	1	0.6	283	N 77 W	40	2.5	238	S 58 W
3574	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3579	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3582	1	2.5	25	N 25 E	30	2.5	243	S 63 W
3589	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3606	1	2.5	350	N 10 W	30	2.5	208	S 28 W
3609	1	2.5	350	N 10 W	30	2.5	208	S 28 W
3613	1	2.5	340	N 20 W	30	2.5	198	S 18 W
3617	1	2.5	330	N 30 W	30	2.5	188	S 8 W
3621	1	2.5	340	N 20 W	30	2.5	198	S 18 W
3624	1	2.5	340	N 20 W	30	2.5	198	S 18 W
3647	1	2.5	340	N 20 W	30	2.5	198	S 18 W
3651	1	2.5	30	N 30 E	30	2.5	248	S 68 W
3656	1	2.5	20	N 20 E	30	2.5	238	S 58 W
3659	1	2.5	10	N 10 E	30	2.5	228	S 48 W

ASHLAND OIL CO
 ASHLAND ETAL TEDJI LAKE K-24
 WILDCAT
 NORTHWEST TERRITORY CANADA
 4-28-74

DEPTH	WL	**FORMATION DIP**				GRADE	****BOREHOLE****			
		ANG	AZ	BEARING	DA		DAZ	BEARING		
3663	1	2.5	10	N 10 E	30	2.5	228	S 48 W		
3664	1	2.5	10	N 10 E	30	2.5	228	S 48 W		
3672	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3676	1	2.5	10	N 10 E	30	2.5	228	S 48 W		
3687	1	2.5	10	N 10 E	30	2.5	228	S 48 W		
3691	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3701	1	1.0	64	N 64 E	30	2.5	238	S 58 W		
3704	1	1.3	131	S 49 E	30	2.5	238	S 58 W		
3709	1	1.4	96	S 84 E	30	2.5	238	S 58 W		
3713	1	1.7	60	N 60 E	30	2.5	228	S 48 W		
3717	1	1.8	49	N 49 E	30	2.5	238	S 58 W		
3723	1	2.6	108	S 72 E	30	2.5	248	S 68 W		
3729	1	4.9	71	N 71 E	30	2.5	228	S 48 W		
3733	1	2.8	110	S 70 E	30	2.5	248	S 68 W		
3741	1	2.6	147	S 33 E	30	2.5	228	S 48 W		
3744	1	3.2	171	S 9 E	30	2.5	248	S 68 W		
3755	1	3.1	88	N 88 E	40	2.5	238	S 58 W		
3763	1	0.6	283	N 77 W	30	2.5	238	S 58 W		
3768	1	2.5	30	N 30 E	30	2.5	248	S 68 W		
3771	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3773	1	2.5	30	N 30 E	30	2.5	248	S 68 W		
3776	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3779	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3781	1	2.5	20	N 20 E	30	2.5	238	S 58 W		
3785	1	2.9	20	N 20 E	30	2.9	238	S 58 W		
3787	1	2.9	20	N 20 E	30	2.9	238	S 58 W		
3789	1	2.9	20	N 20 E	30	2.9	238	S 58 W		
3795	1	2.9	30	N 30 E	30	2.9	248	S 68 W		
3799	1	2.9	30	N 30 E	30	2.9	248	S 68 W		
3803	1	3.0	40	N 40 E	30	3.0	258	S 78 W		
3806	1	3.0	20	N 20 E	20	3.0	238	S 58 W		
3809	1	3.0	30	N 30 E	30	3.0	248	S 68 W		
3812	1	3.0	40	N 40 E	30	3.0	258	S 78 W		
3815	1	3.0	40	N 40 E	30	3.0	258	S 78 W		
3819	1	3.5	40	N 40 E	30	3.5	258	S 78 W		
3823	1	3.5	30	N 30 E	30	3.5	248	S 68 W		
3826	1	3.5	20	N 20 E	30	3.5	238	S 58 W		
3829	1	3.5	20	N 20 E	30	3.5	238	S 58 W		
3831	1	3.5	20	N 20 E	30	3.5	238	S 58 W		
3834	1	3.5	20	N 20 E	30	3.5	238	S 58 W		

ASHLAND OIL CO
 ASHLAND ETAL TEDJI LAKE K-24
 WILUCAT
 NORTHWEST TERRITORY CANADA
 4-28-74

DEPTH	WL	**FORMATION DIP**			GRADE	****BOREHOLE****		
		ANG	AZ	BEARING		DA	DAZ	BEARING
3841	1	4.0	20	N 20 E	30	4.0	238	S 58 W
3846	1	4.0	20	N 20 E	30	4.0	238	S 58 W
3848	1	4.0	10	N 10 E	30	4.0	228	S 48 W
3851	1	4.5	10	N 10 E	30	4.5	228	S 48 W
3853	1	4.5	30	N 30 E	30	4.5	248	S 68 W
3857	1	4.5	20	N 20 E	30	4.5	238	S 58 W
3860	1	4.5	30	N 30 E	30	4.5	248	S 68 W
3863	1	4.5	30	N 30 E	30	4.5	248	S 68 W
3866	1	4.5	30	N 30 E	30	4.5	248	S 68 W
3869	1	4.9	10	N 10 E	30	4.9	228	S 48 W
3871	1	5.0	20	N 20 E	30	5.0	238	S 58 W
3873	1	5.0	20	N 20 E	30	5.0	238	S 58 W
3877	1	5.0	30	N 30 E	30	5.0	248	S 68 W
3879	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3883	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3885	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3887	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3889	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3893	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3895	1	5.5	20	N 20 E	30	5.5	238	S 58 W
3898	1	5.9	20	N 20 E	30	5.9	238	S 58 W
3903	1	5.9	20	N 20 E	30	5.9	238	S 58 W
3906	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3909	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3912	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3917	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3919	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3923	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3925	1	6.0	30	N 30 E	30	6.0	248	S 68 W
3928	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3931	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3933	1	6.0	20	N 20 E	30	6.0	238	S 58 W
3937	1	6.5	20	N 20 E	30	6.5	238	S 58 W
3939	1	6.5	10	N 10 E	30	6.5	228	S 48 W
3943	1	6.5	20	N 20 E	30	6.5	238	S 58 W
3945	1	6.5	20	N 20 E	30	6.5	238	S 58 W
3947	1	6.5	20	N 20 E	30	6.5	238	S 58 W
3952	1	6.5	20	N 20 E	30	6.5	238	S 58 W
3955	1	6.5	10	N 10 E	30	6.5	228	S 48 W

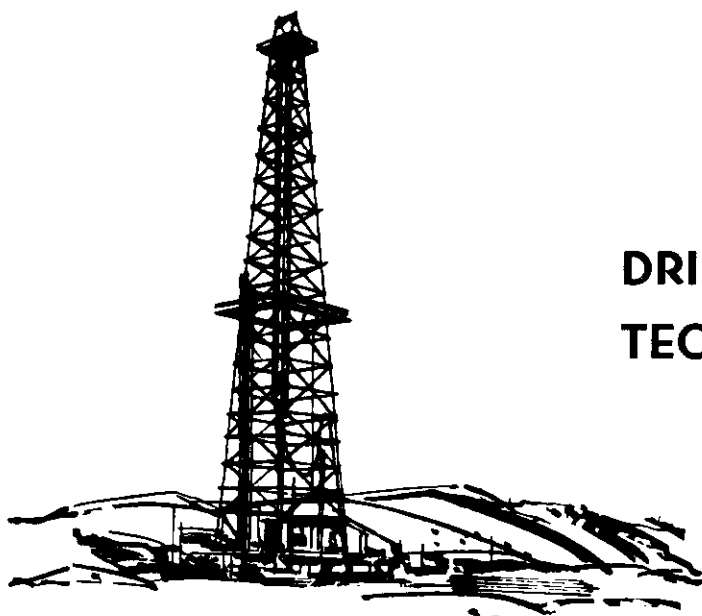
END OF LOG



LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools



**DRILL STEM TEST
TECHNICAL SERVICE REPORT**

LYNES UNITED SERVICES LTD.

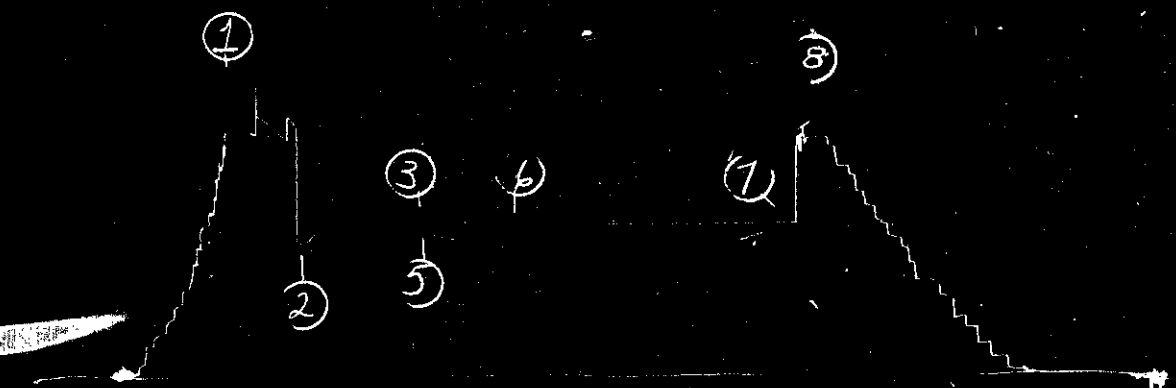
TEST DATA				GENERAL INFORMATION			
Test No. <u>3</u>		Lynes Test <u>3</u>		Company <u>Ashland Oil Canada Ltd.</u>			
Formation <u>Ronning</u>		T.D. <u>3980</u> Ft.		Address _____			
Interval Tested <u>1480</u>		Ft. to <u>1530</u>					
Interval Tested <u>50</u>		Ft. Net Pay Tested _____					
Type of Test <u>Inflate Straddle</u>							
Cushion _____		Amount _____ Ft.		Well Name <u>Ashland Tedji Lake</u>			
Started in Hole at _____ Hrs.		Tool Open at <u>5:20 P.M.</u>		Well Number <u>K-24</u>			
Pre-Flow <u>10</u> Mins.		Initial Shut-in <u>60</u> Mins.		K.B. Elevation <u>1138</u> Sub-Sea Elevation _____			
2nd Flow _____ Mins.		Second Shut-in _____ Mins.		Area <u>Tedji Lake</u> Province <u>Alberta</u>			
Final Flow <u>60</u> Mins.		Final Shut-in <u>120</u> Mins.		Company Rep. <u>Art Hanson</u>			
Remarks: _____				Tester <u>Reinhold Schuett</u>			
				Contractor <u>Regent</u> Rig No. <u>11</u>			
Blow: <u>Strong blow on preflow, decreasing to very weak. A few bubbles on valve open, then dead. No gas to surface.</u>				Ticket No. <u>8890</u> Date <u>March 29, 1974</u>			
				Service Reports To: _____			
				<u>12 - above</u>			
GAS BLOW MEASUREMENTS				MUD AND HOLE DATA			
Measured with _____				Mud Type <u>Polymar</u>			
				Weight <u>10.3</u> Viscosity <u>58</u> Water Loss <u>10.2</u>			
				Filter Cake <u>2/32</u> Bottom Hole Temperature <u>97</u>			
				Drill Pipe Size <u>4 1/2 FH</u> Weight <u>16.60</u>			
				Drill Collars <u>4 1/2 & 5" H90</u> I.D. <u>2 7/8</u> Feet Run <u>540</u>			
				Main Hole or Casing Size <u>8 1/2"</u>			
				Rathole or Liner Size _____ No. of Feet _____			
				Bottom Hole Choke Size <u>1"</u>			
				Surface Choke Size _____			
				Packer Rubber Size <u>7 7/8 x 72"</u>			
				REMARKS			
				<u>Shut-in pressures suggest excellent permeability within the interval tested.</u>			
RECOVERY							
TOTAL FLUID RECOVERED <u>920</u> Ft. Consisting of:							
<u>920</u> Ft. of <u>Muddy salt water</u>							
Ft. of _____							
Ft. of _____							
Ft. of _____							
Test was/was not Reverse Circulated _____							
Oil Recovery A.P.I. _____ Water Specific Gravity _____							
Salinity <u>39,300 PPM Salt</u>							
PRESSURE READINGS							
		Inside _____ Outside <u>X</u>		Inside _____ Outside <u>X</u>		Inside _____ Outside _____	
		Recorder No. <u>4647</u>		Recorder No. <u>9991</u>		Recorder No. _____	
		Capacity <u>3000</u>		Capacity <u>3000</u>		Capacity _____	
		Depth <u>1485</u>		Depth <u>1485</u>		Depth _____	
NUMBER KEY:							
1 - INITIAL HYDROSTATIC		<u>791</u>		<u>785</u>			
2 - PRE-FLOW		<u>433</u>		<u>425</u>			
3 - INITIAL SHUT-IN		<u>482</u>		<u>490</u>			
4a - 2nd INITIAL FLOW							
4b - 2nd FINAL FLOW							
4c - 2nd SHUT-IN							
5 - 3rd INITIAL FLOW		<u>482</u>		<u>490</u>			
6 - FINAL FLOW		<u>494</u>		<u>494</u>			
7 - FINAL SHUT-IN		<u>499</u>		<u>495</u>			
8 - FINAL HYDROSTATIC		<u>774</u>		<u>785</u>			

Ashland Oil Canada Ltd. Company
 Ashland Tedji Lake K-24 Well Name and Description
 3 Test No.
 March 29, 1974 Date of Test

ASHLAND TEDJI LAKE

K-24

4647-3



9991-3

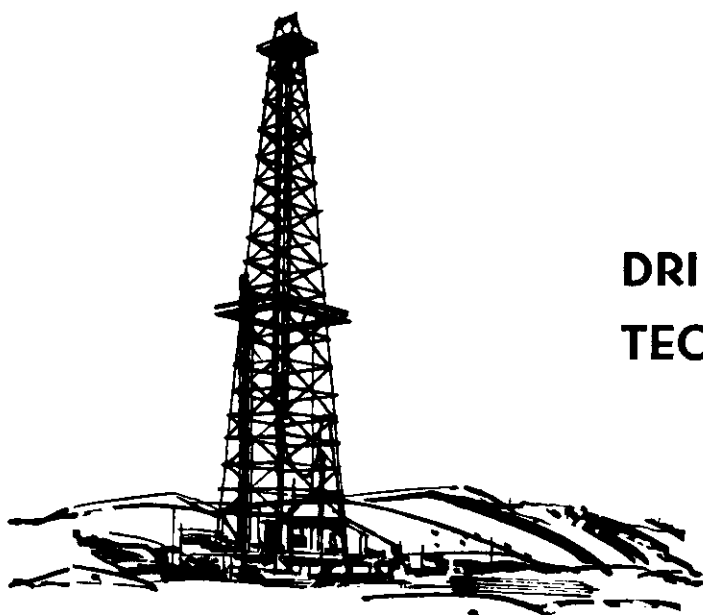




LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools



**DRILL STEM TEST
TECHNICAL SERVICE REPORT**

Ashland Oil Canada Ltd.

Ashland Tedji Lake K-24

Well Name and Description

Test No.

Date of Test

LYNES UNITED SERVICES LTD.

WELL NAME - ASHLAND TEDJI LAKE

LOCATION - K-24

DST NUMBER - 1

INTERVAL TESTED - 3727 TO 3777

RECORDER NO. - 2234

DEPTH - 3758

INITIAL SHUT IN PRESSURE

TIME(MIN) ϕ	$\frac{T + \phi}{\phi}$	PSIG	PSIG**2 /10**6
0	0.0000	754	0.5685
5	3.0000	1529	2.3378
10	2.0000	1532	2.3470
15	1.6667	1533	2.3501
20	1.5000	1533	2.3501
25	1.4000	1533	2.3501
30	1.3333	1533	2.3501
35	1.2857	1533	2.3501
40	1.2500	1534	2.3532
45	1.2222	1534	2.3532
50	1.2000	1534	2.3532
55	1.1818	1534	2.3532
60	1.1667	1534	2.3532

EXTRAPOLATION OF INITIAL SHUT-IN = 1534.61

LYNES UNITED SERVICES LTD.

WELL NAME - ASHLAND TEDJI LAKE

LOCATION - K-24

DST NUMBER - 1

INTERVAL TESTED - 3727 TO 3777

RECORDER NO. - 2234

DEPTH - 3758

SECOND SHUT IN PRESSURE

TIME(MIN) ϕ	$\frac{T + \phi}{\phi}$	PSIG	PSIG**2 /10**6
0	0.0000	614	0.3770
10	8.0000	1525	2.3256
20	4.5000	1528	2.3348
30	3.3333	1530	2.3409
40	2.7500	1531	2.3440
50	2.4000	1532	2.3470
60	2.1667	1532	2.3470
70	2.0000	1532	2.3470
80	1.8750	1533	2.3501
90	1.7778	1533	2.3501
100	1.7000	1533	2.3501
110	1.6364	1533	2.3501
120	1.5833	1533	2.3501

EQU. FITTED LINE IS $\log((T_0 + \phi)/\phi) = -40.28380 \text{ PSIG}^{**2}/10^{**6} + 0.87007$

EXTRAPOLATION OF SECOND SHUT-IN = 1534.61 M= 24823.87

RESERVOIR PARAMETERS:

RESERVOIR TE=	560.000	BTTM HOLE TE=	100.000	SPEC GRAVITY=	0.600
VISCOSITY =	0.017	Z FACTOR =	0.800	DST GAS RATE=	3573.000
WELL RADIUS =	0.365	PAY THICKNES=	16.000	SUBSEA DEPTH=	-2620.000
WATER GRADIE=	0.450				

LYNES UNITED SERVICES LTD.

WELL NAME - ASHLAND TEDJI LAKE

LOCATION - K-24

DST NUMBER - 1

INTERVAL TESTED - 3727 TO 3777

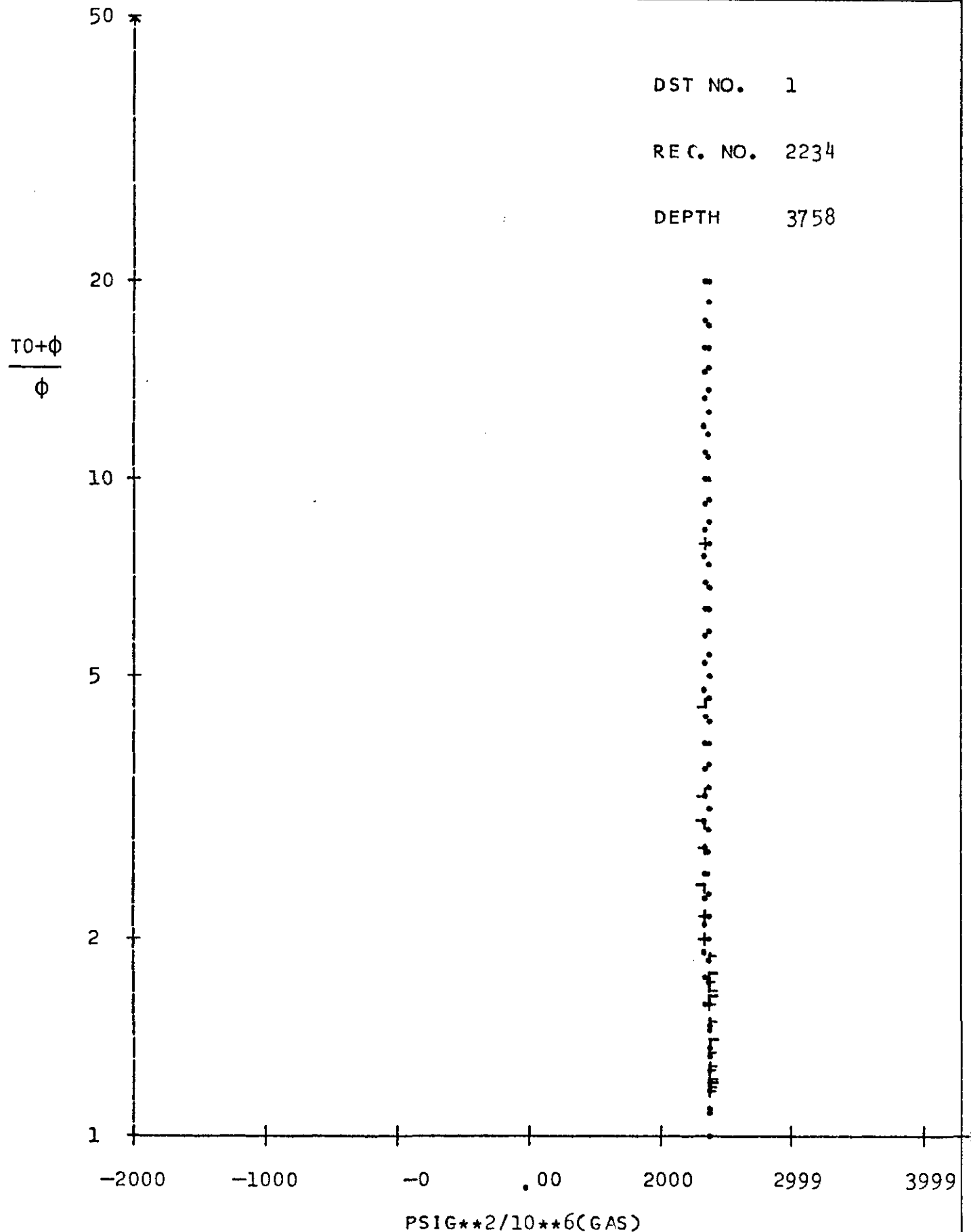
RECORDER NO. - 2234

DEPTH - 3758

CALCULATIONS SECOND SHUT-IN

EXTRAPOLATED RESERVOIR PRESSURE (PSIG)	1534.61
NO. OF POINTS CONSIDERED IN EXTRAPOLATION	11
NO. OF POINTS USED IN EXTRAPOLATION	11
ROOT MEAN SQUARE DEVIATION OF BEST FIT LINE (PSI) .	0.00
TOTAL FLOW TIME (MIN)	70
TRANSMISSIBILITY (MD-FT/CP)	105558.
IN SITU CAPACITY (MD-FT)	1794.48
AVERAGE EFFECTIVE PERMEABILITY (MD)	112.155
RADIUS OF INVESTIGATION (FT)	69.4205
ACTUAL CAPACITY (MD-FT)	87.8626
DAMAGE RATIO	20.4237
ESTIMATED DAMAGE RATIO	17.7267
MAXIMUM AOF (MCF/D)	4253.98
MINIMUM AOF (MCF/D)	3898.65
MAXIMUM AOF DAMAGE REMOVED (MCF/D)	86881.9
MINIMUM AOF DAMAGE REMOVED (MCF/D)	79624.9
DRAWDOWN FACTOR (%)	0
POTENTIOMETRIC SURFACE (FT)	790.254

LYNES UNITED SERVICES LTD.

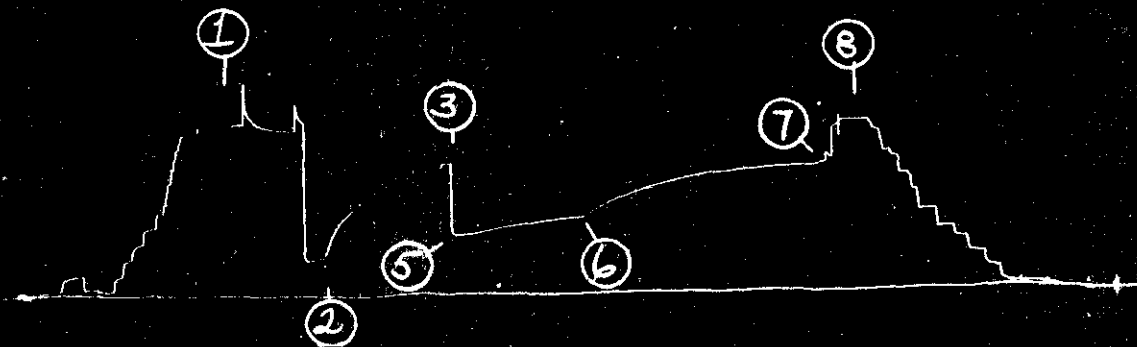


PRESSURE EXTRAPOLATION PLOT

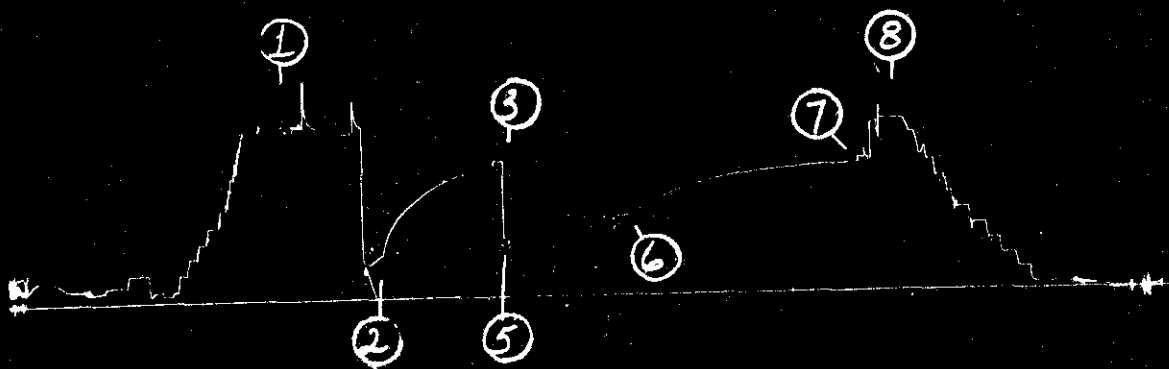
ISLAND TEDI LAKE

K-24

4647-2



9991-2

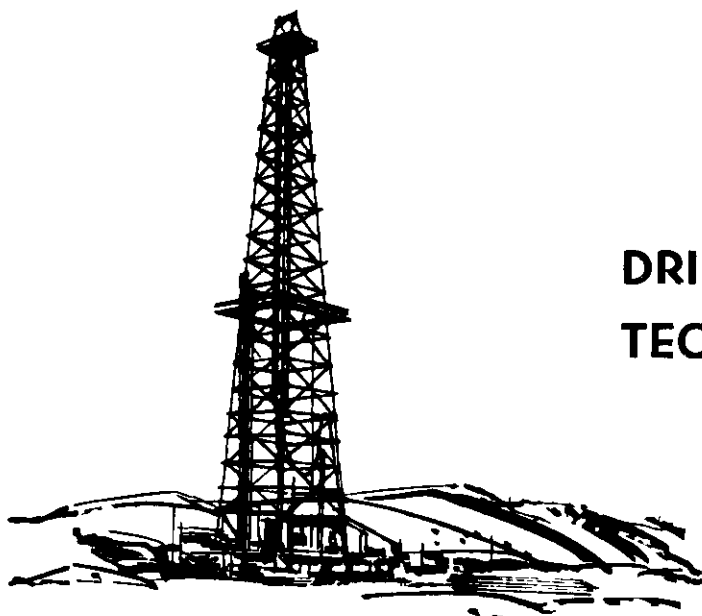




LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools



**DRILL STEM TEST
TECHNICAL SERVICE REPORT**

LYNES UNITED SERVICES LTD.

TEST DATA				GENERAL INFORMATION			
Test No. 2		Lynes Test 2		Company Ashland Oil Canada Ltd.			
Formation Ronning		T.D. 3980 Ft.		Address			
Interval Tested 1020		Ft. to 1150		Interval Tested 130			
Interval Tested 130		Ft. Net Pay Tested		Type of Test Inflate Straddle			
Cushion		Amount		Ft. Well Name Ashland Tedji Lake			
Started in Hole at 4 A.M.		Hrs. Tool Open at 3:50A.M.		Well Number K-24			
Pre-Flow 10		Mins. Initial Shut-in 60		K.B. Elevation 1138 Sub-Sea Elevation			
2nd Flow		Mins. Second Shut-in		Area Tedji Lake Province N.W.T.			
Final Flow 60		Mins. Final Shut-in 120		Company Rep. Art Hanson			
Remarks:				Tester Reinhold Schuett			
Blow: Strong blow on preflow. Decreasing to fair air blow. Fair air blow on valve open decreasing to weak blow. No gas to surface.				Contractor Regent Riq No. 11			
				Ticket No. 8889 Date March 28, 1974			
				Service Reports To: 12 - above			
GAS BLOW MEASUREMENTS				MUD AND HOLE DATA			
Measured with				Mud Type Polymar			
Time	Surface Choke	Reading Inches	Cubic Feet/Day	Weight 10.3	Viscosity 58	Water Loss 10.2	
				Filter Cake 2/32	Bottom Hole Temperature 97		
				Drill Pipe Size 4 1/2 FH	Weight 16.60		
				Drill Collars 4 1/2 & 5" H90	I.D. 2 7/8	Feet Run 486	
				Main Hole or Casing Size 8 1/2"			
				Rathole or Liner Size	No. of Feet		
				Bottom Hole Choke Size 1"			
				Surface Choke Size			
				Packer Rubber Size 7 7/8 x 72			
				REMARKS			
				Shut-in pressures suggest low permeability within the interval tested.			
RECOVERY							
TOTAL FLUID RECOVERED 455				Ft. Consisting of:			
455 Ft. of Muddy salt water							
Ft. of							
Ft. of							
Ft. of							
Ft. of							
Test was/was not Reverse Circulated was not							
Oil Recovery A.P.I. Water Specific Gravity							
Salinity 239,000 PPM Salt							
PRESSURE READINGS							
Inside _____ Outside X		Inside _____ Outside X		Inside _____ Outside _____		Inside _____ Outside _____	
Recorder No. 4647		Recorder No. 9991		Recorder No. _____		Recorder No. _____	
Capacity 3000		Capacity 3000		Capacity _____		Capacity _____	
Depth 1025		Depth 1025		Depth _____		Depth _____	
NUMBER KEY:							
1 - INITIAL HYDROSTATIC		561		558			
2 - PRE-FLOW		141		142			
3 - INITIAL SHUT-IN		420		419			
4a - 2nd INITIAL FLOW							
4b - 2nd FINAL FLOW							
4c - 2nd SHUT-IN							
5 - 3rd INITIAL FLOW		2206		186			
6 - FINAL FLOW		256		259			
7 - FINAL SHUT-IN		416		415			
8 - FINAL HYDROSTATIC		559		553			

Ashland Oil Canada Ltd. Company

Ashland Tedji Lake K-24 Well Name and Description

2 Test No.

March 28, 1974 Date of Test

LYNES UNITED SERVICES LTD.

WELL NAME - ASHLAND TEDJI LAKE

LOCATION - K-24

DST NUMBER - 2

INTERVAL TESTED - 1020 TO 1150

RECORDER NO. - 9991

DEPTH - 1025

INITIAL SHUT IN PRESSURE

TIME(MIN) ϕ	$\frac{I}{\phi} + \phi$	PSIG
0	0.0000	142
5	3.0000	228
10	2.0000	268
15	1.6667	295
20	1.5000	317
25	1.4000	340
30	1.3333	357
35	1.2857	370
40	1.2500	382
45	1.2222	393
50	1.2000	403
55	1.1818	411
60	1.1667	415

EXTRAPOLATION OF INITIAL SHUT-IN = 484.89

LYNES UNITED SERVICES LTD.

WELL NAME - ASHLAND TEDJI LAKE

LOCATION - K-24

DST NUMBER - 2

INTERVAL TESTED - 1020 TO 1150

RECORDER NO. - 9991

DEPTH - 1025

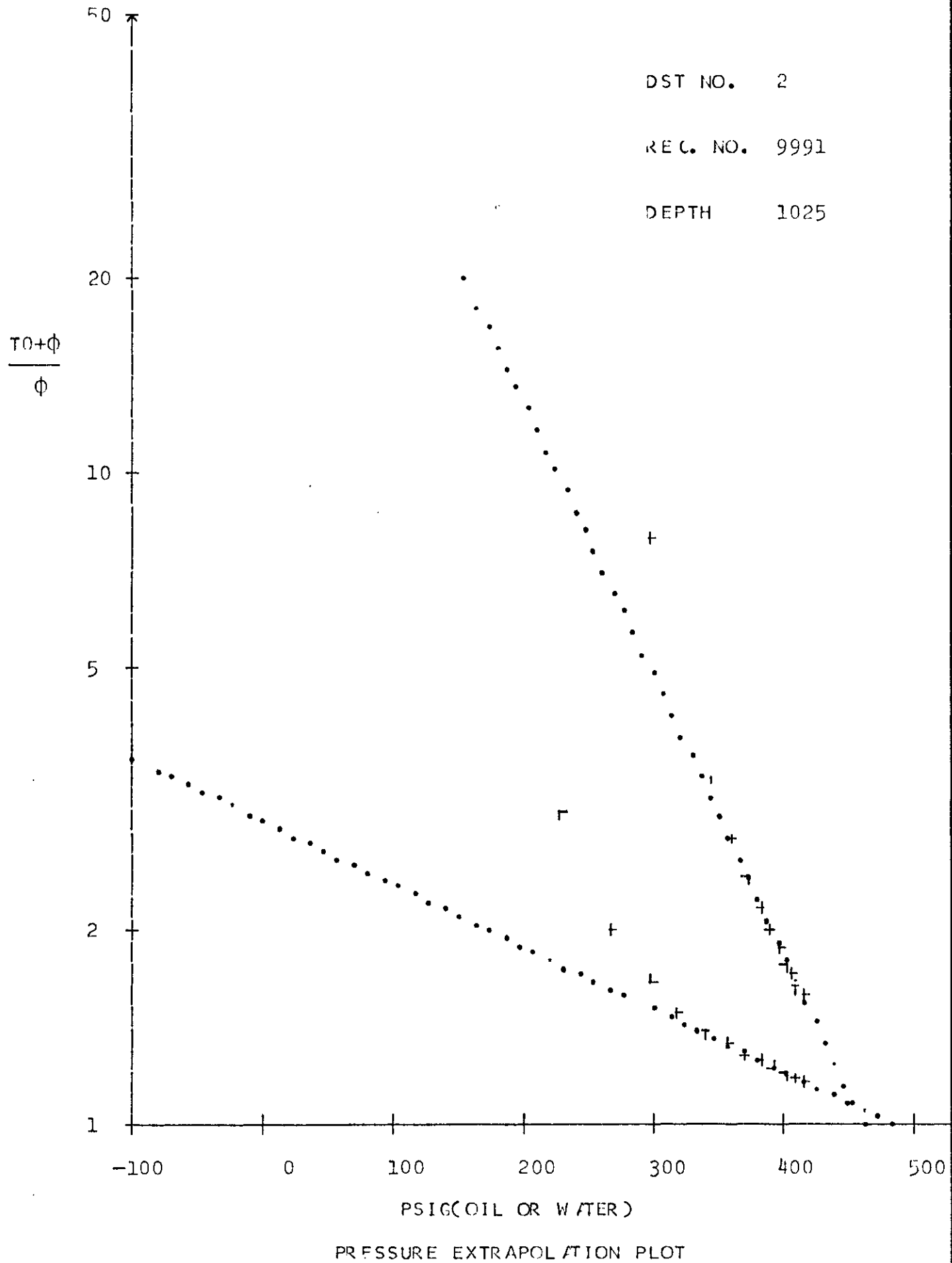
SECOND SHUT IN PRESSURE

TIME(MIN) ϕ	$\frac{T + \phi}{\phi}$	PSIG
0	0.0000	259
10	8.0000	296
20	4.5000	322
30	3.3333	343
40	2.7500	359
50	2.4000	373
60	2.1667	384
70	2.0000	391
80	1.8750	398
90	1.7778	403
100	1.7000	407
110	1.6364	410
120	1.5833	415

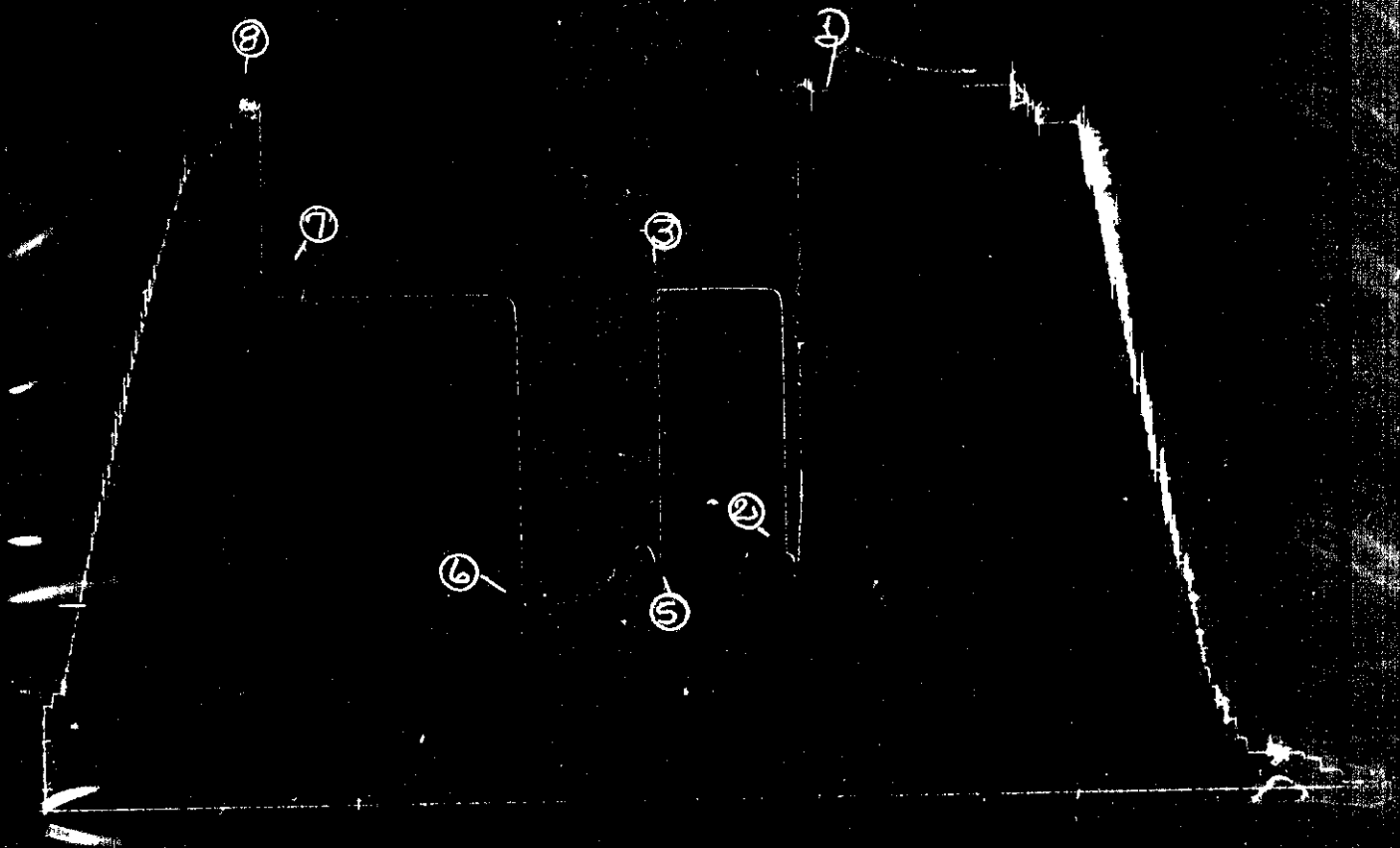
EQU. FITTED LINE IS $\log((T_0 + \phi)/\phi) = -0.00422 \text{ PSIC} + 1.95282$

EXTRAPOLATION OF SECOND SHUT-IN = 462.24 M = 236.70

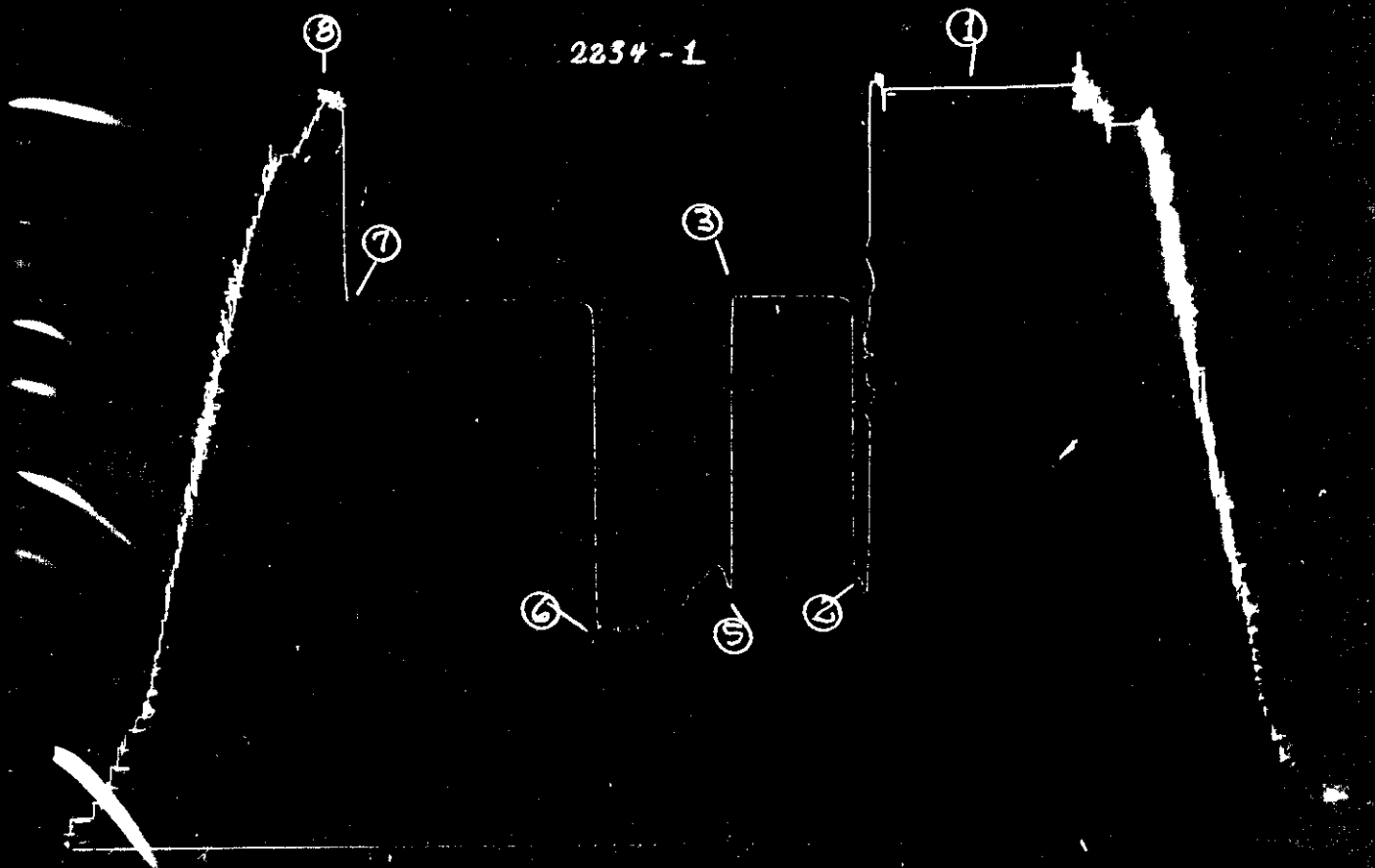
LYNES UNITED SERVICES LTD.



ASHLAND TEDJI LAKE K-24
908-1



2234-1



⑧

1535-1

①

ASHLAND TEDJI LAKE
K-24
BELOW STRADDLE

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON

FORT ST. JOHN

CALGARY

JSPG

Core Lab. C179

— GAS ANALYSIS —

074-2522

OPERATOR NAME AND ADDRESS

ASHLAND OIL CANADA LIMITED, 1800, 639 - 5 Ave., S.W., Calgary.

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

ELEVATION, FT

67 43' 38.00 126 59' 56.00

Ashland et al Tedji Lake K-24

1138'

1124'

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

Tedji Lake

Mt. Clarke

Mr. G. Kokoski

Lynes United

TEST TYPE & NO.

TEST RECOVERY

DST

1

75' fluid

TEST INTERVAL OR PERFS

POINT OF SAMPLE

AMT & TYPE OF CUSHION

WELL RE-LOCATED

3727'-3777'

Flareline 2" Riser

2

F

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBL/D

OIL

BBL/D

GAS

MEF/D

PRESSURES - PSIG

TEMPERATURES (°F)

CONTAINER

CONTAINER

SEPARATOR

TREATER

RESERVOIR

WHEN SAMPLED

WHEN RECEIVED

SEPARATOR

TREATER

WHEN SAMPLED

WHEN RECEIVED

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYZED (D/M/Y)

ANALYST

REMARKS

26/3/74

4/4/74

4/4/74

D. Shewchuk

COMP	MOL % AIR FREE AS RECD	MOL % AIR FREE ACID GAS FREE	CON G/M @ 60° F & 14.65 PSIA AIR FREE AS RECD
H ₂	0.15	0.15	
He	1.67	1.67	
N ₂	17.36	17.36	
CO ₂	0.	0.	
H ₂ S	0.	0.	
C ₁	74.14	74.14	
C ₂	4.44	4.44	
C ₃	1.39	1.39	0.317
IC ₄	0.23	0.23	0.062
NC ₄	0.35	0.35	0.091
IC ₅	0.10	0.10	0.030
NC ₅	0.09	0.09	0.027
C ₆	0.05	0.05	0.017
C ₇	0.03	0.03	0.011
C ₈	TRCE	TRCE	0.
C ₉	0.	0.	0.
C ₁₀	0.	0.	0.
TOTAL	100.00	100.00	0.555

GROSS HEATING VALUE BTU/FT³
@ 60°F AND 14.65 PSIA

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED

DETERMINED
DEW POINTVAPOR PRESS
RENTANES PLUS

SPECIFIC GRAVITY

MOISTURE FREE AS SAMPLED

MOISTURE AND ACID GAS FREE

MEASURED

CALCULATED

MEASURED

CALCULATED

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED

ACID GAS FREE

DPC

DTC

DPC

DTC

629.3 psia

335.0 R

629.3 psia

335.0 R

H₂S Grains per 100 cu. ft. @ 60 F. & 14.65 p.s.i.a

0.

MOL. WT. Total Gas

19.32

C₇+

96.03



CONTAINER IDENTITY

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY

— WATER ANALYSIS —



LABORATORY NUMBER

C74-2461-2

OPERATOR NAME AND ADDRESS

ASHLAND OIL CANADA LIMITED, 1800, 639 - 5th Avenue S.W., CALGARY

SAMPLE LOCATION

K24-67-50-126-45

WELL OR SAMPLE LOCATION NAME

Ashland etal Tedji Lake K-24

ELEVATIONS

KB CRD

1138' 1124'

FIELD OR AREA

Tedji Lake

POOL OR ZONE

Mt. Clarke

NAME OF SAMPLER

Mr. Reinhold/Lynes United Services Ltd.

COMPANY

TEST TYPE & NO.

D.S.T. 1

TEST RECOVERY

75' gassified muddy water

TEST INTERVAL OR PERFS

3727' - 3777'

POINT OF SAMPLE

Top of Tool

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBL/D

OIL

BBL/D

GAS

MCF/D

PRESSURES - PSIG

TEMPERATURES (°F)

SEPARATOR TREATER

RESERVOIR

CONTAINER

WHEN

WHEN

SEPARATOR

TREATER

CONTAINER

WHEN

WHEN

DATE SAMPLED (D/M/Y)

26/3/74

DATE RECEIVED (D/M/Y)

2/4/74

DATE ANALYZED (D/M/Y)

15/4/74

ANALYST

B. Anderson

REMARKS

ION	MG/L	MG%	MEQ/L	ION	MG/L	MG%	MEQ/L
Na	108,198	39.18	4663.13	Cl	156,250	57.10	4406.25
K				Br			
Ca	Trace			I			
Mg	Trace			HCO ₃	Nil		
Na				SO ₄	7,263	2.65	151.07
Sr				CO ₃	2,570	0.94	85.58
Fe	Present			OH	344	0.12	20.23
				H ₂ S	Nil		

TOTAL SOLIDS Mg/L

BY EVAPORATION

282120 @ 110°C

BY EVAPORATION

@ 110°C

AT IGNITION

273,600

CALCULATED

273,625

Organic Matter: Much

SPECIFIC GRAVITY

1.192 @ 60°F

REFRACTIVE INDEX

1.3758 @ 25°C

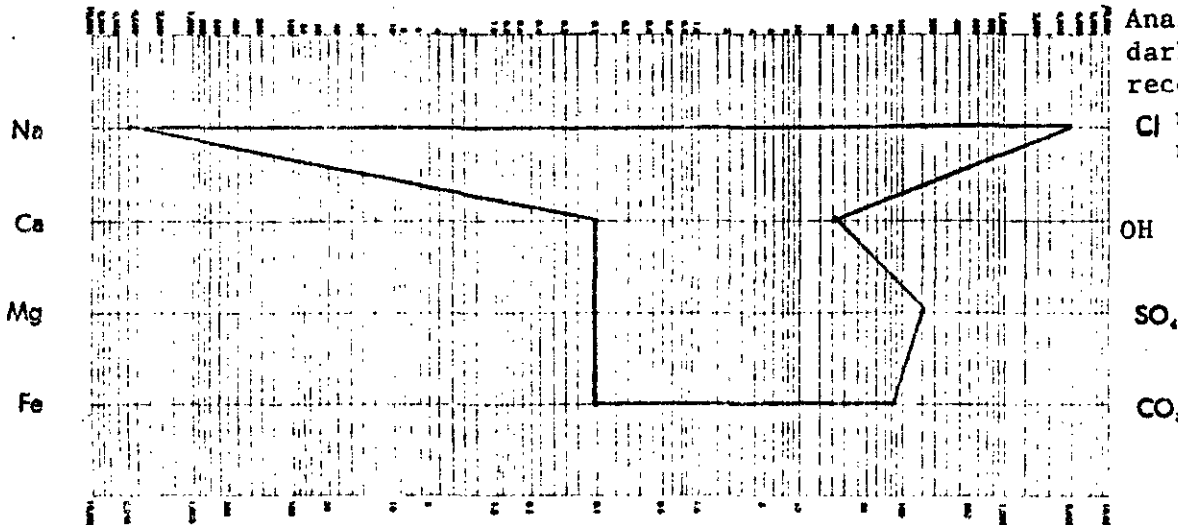
OBSERVED PH

11.4 @ 74 °F

RESISTIVITY (ohm-meters)

0.042 @ 25°C

LOGARITHMIC PATTERN MEQ PER LITER



Remarks and Conclusions

Analysis determined on a dark brown colored filtrate recovered from brown water. Cl mud containing approximately 30% hydrocarbon.

OH

SO₄CO₃

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



Date Reported: April 15, 1974

Laboratory Report No.: C74-2461

ASHLAND OIL CANADA LIMITED

Well: Ashland etal Tedji Lake K-24

Location: K24-67-50-126-45

C74-2461-1 75' Above Tool

RESISTIVITY: 0.042 ohm meters at 25°C.

Resistivity determined on a dark brown colored filtrate recovered from brown watery mud containing approximately 30% hydrocarbon.



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY



CONTAINER IDENTITY

— WATER ANALYSIS —

LABORATORY NUMBER

C74-2462-1

OPERATOR NAME AND ADDRESS

ASHLAND OIL CANADA LIMITED, 1800, 639 - 5th Avenue S.W., CALGARY T2P 0N1

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

ELEVATIONS GRD.

K24-67-50-126-45

Ashland etal Tedji Lake K24

1138' 1124'

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

Tedji Lake

Ronning

Mr. Reinhold/Lynes United Services L

TEST TYPE & NO.

TEST RECOVERY

D.S.T. 2

455' muddy salt water

TEST INTERVAL OR PERFS

POINT OF SAMPLE

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

Top

1020' - 1150'

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBLS/D

OIL

BBLS/D

GAS

MCF/D

PRESSURES - PSIG

TEMPERATURES (°F)

CONTAINER

CONTAINER

SEPARATOR TREATER

RESERVOIR

WHEN SAMPLED

WHEN RECEIVED

SEPARATOR TREATER

WHEN SAMPLED

WHEN RECEIVED

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYZED (D/M/Y)

ANALYST

REMARKS

28/3/74

2/4/74

15/4/74

B.Anderson

ION	MG/L	MG %	MEQ/L	ION	MG/L	MG %	MEQ/L
Na	89,475	39.23	3892.16	Cl	129,750	56.89	3658.95
K				Br			
Ca	Trace			I			
Mg	Trace			HCO ₃	N11		
Ba				SO ₄	5,329	2.34	110.84
Sr				CO ₃	3,267	1.43	108.79
Fe	Present			OH	231	0.10	13.58
				H ₂ S	N11		

TOTAL SOLIDS MG/L

BY EVAPORATION

BY EVAPORATION

230080 @ 110°C

@ 180°C

AT IGNITION

CALCULATED

224,390

228,052

Organic Matter: Much

SPECIFIC GRAVITY

REFRACTIVE INDEX

1.156

@ 60°F

1.3690

@ 25°C

OBSERVED PH

RESISTIVITY (Ohm-meters)

11.8

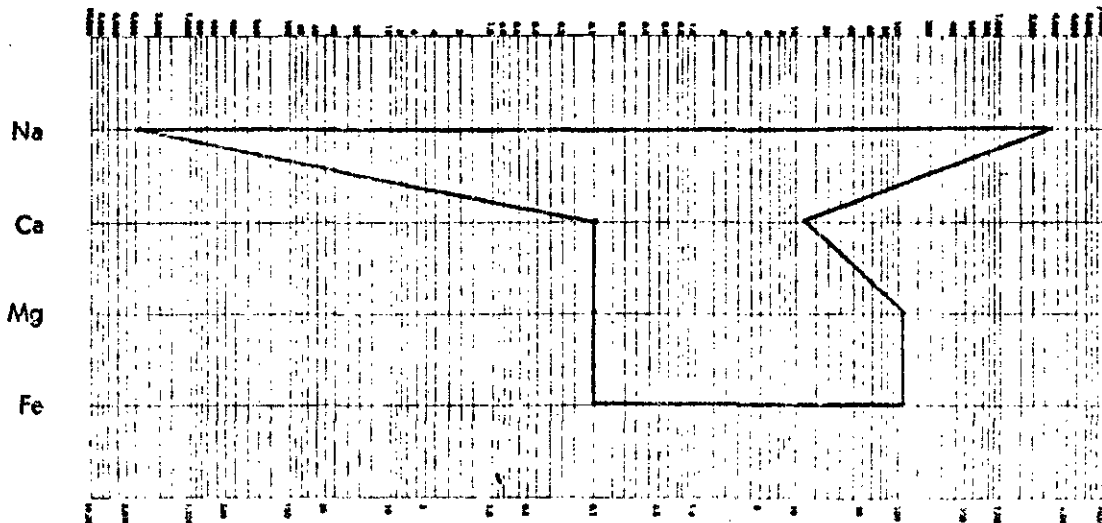
@ 74 °F

0.046

@ 25°C

Remarks and Conclusions

LOGARITHMIC PATTERN MEQ PER LITER



Analysis determined on a dark brown colored filtrate recovered from brown watery CI mud containing a thin layer of hydrocarbon.

OH

SO₄

CO₃

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



Date Reported: April 15, 1974

Laboratory Report No.: C74-2462

ASHLAND OIL CANADA LIMITED

Well: Ashland etal Tedji Lake K-24

Location: K24-67-50-126-45

C74-2462-2 Middle

RESISTIVITY: 0.050 ohm meters at 25°C.

Resistivity determined on a dark brown colored filtrate recovered from brown watery mud containing a layer of hydrocarbon.

C74-2462-3 Top of Tool

RESSITIVITY: 0.077 ohm meters at 25°C.

Resistivity determined on a yellow colored filtrate recovered from brown muddy water containing a trace of hydrocarbon.



CONTAINER IDENTITY

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY

— WATER ANALYSIS —

LABORATORY NUMBER
C74-2463-1

OPERATOR NAME AND ADDRESS

ASHLAND OIL CANADA LIMITED, 1800, 639 - 5th Avenue S.W., CALGARY T2P 0N1

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

ELEVATIONS
KB GRD

K24-67-50-126-45

Ashland etal Tedji Lake K-24

1138' 1124'

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

Tedji Lake

Ronning

Mr. Reinhold/Lynes United Services Lt

TEST TYPE & NO.

TEST RECOVERY

D.S.T. 3

920' muddy salt water

TEST INTERVAL OR PERFS

POINT OF SAMPLE

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

Top

TYPE OF PRODUCTION

1480' - 1530'

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBL/D

OIL

BBL/D

GAS

MCF/D

PRESSURES - PSIG

TEMPERATURES (°F)

SEPARATOR TREATER

RESERVOIR

CONTAINER

WHEN SAMPLED

WHEN RECEIVED

SEPARATOR TREATER

CONTAINER

WHEN SAMPLED

WHEN RECEIVED

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYZED (D/M/Y)

ANALYST

REMARKS

29/3/74

2/4/74

15/4/74

B. Anderson

ION	MG/L	MG %	MEQ/L	ION	MG/L	MG %	MEQ/L
Na	74,157	39.21	3225.82	Cl	107,250	56.71	3024.45
K				Br			
Ca	Trace			I			
Mg	Trace			HCO ₃	Nil		
Ba				SO ₄	4,732	2.50	98.42
Sr				CO ₃	2,834	1.50	94.37
Fe	Present			OH	146	0.08	8.58
				H ₂ S	Nil		

TOTAL SOLIDS Mg/L

BY EVAPORATION

BY EVAPORATION

203260 @ 110°C

@ 180°C

AT IGNITION

CALCULATED

189,100

189,119

Organic Matter: Much

SPECIFIC GRAVITY

REFRACTIVE INDEX

1.138 @ 60°F

1.3648 @ 25°C

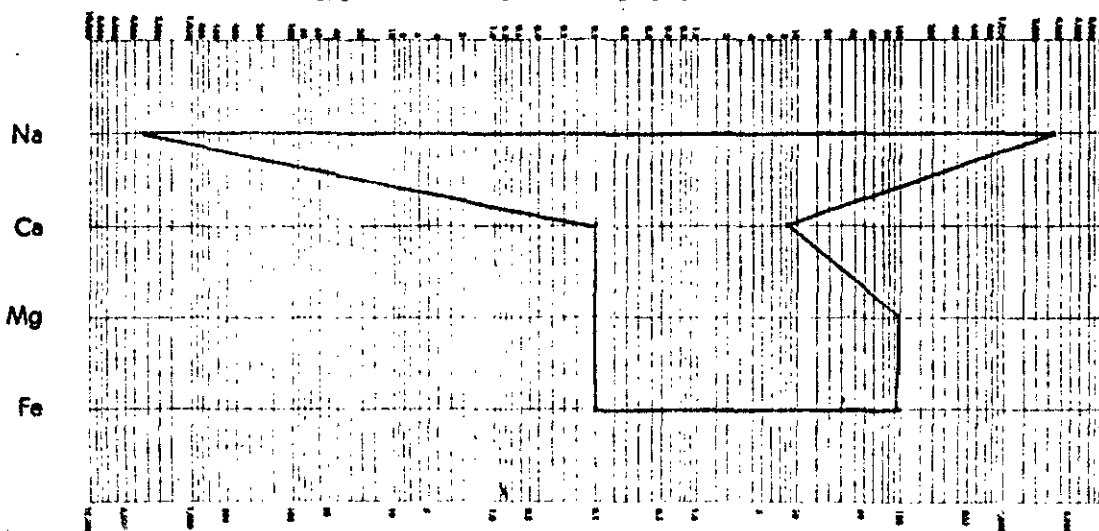
OBSERVED PH

RESISTIVITY (ohm/cm)

11.8 @ 74°F

0.050 @ 25°C

LOGARITHMIC PATTERN MEQ PER LITER



Remarks and Conclusions

Analysis determined on a dark brown colored filtrate recovered from brown watery mud containing approximately 10% hydrocarbon.

OH

SO₄CO₃



Date Reported: April 15, 1974

Laboratory Report No.: C74-2463

ASHLAND OIL CANADA LIMITED

Well: Ashland etal Tedji Lake K-24

Location: K24-67-50-126-45

C74-2463-2 Middle

RESISTIVITY: 0.129 ohm meters at 25°C.

Resistivity determined on a yellow colored filtrate recovered from water containing a thin layer of sediment.

C74-2463-3 Top of Tool

RESISTIVITY: 0.129 ohm meters at 25°C.

Resistivity determined on a yellow colored filtrate recovered from water containing a thin layer of sediment.

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.
À présenter en double dans les trente jours suivant l'achèvement, le remaniement, l'abandon et le reconditionnement de chaque puits, ou après suspension.

Well Name & No. - Nom et n° du puits		Permit No. - N° de permis	Lease No. - N° de concession
ASHLAND ET AL TEDJI LAKE K-24		6183	
(Permittee, Licensee, Lessee) - (Défendeur de permis ou de licence, du concessionnaire)		Exploratory Licence No. - N° de licence de sondage	
Canadian Reserve Oil & Gas Limited			
(Operator) - (Exécutant)		Exploratory Licence No. - N° de licence de sondage	
Canadian Ashland Exploration Limited		2025/ 2065	

LOCATION - EMPLACEMENT				
Unit - Unité	Section	Grid - Étendue quadrillée	Latitude	Longitude
K	24	67-50-126-45	67 43' 38" N	126 49' 56" W
Unique Well Identifier - Code d'ordinateur			Universal Well Location Reference - Références universelles d'emplacement du puits	
300K246750126450			Latitude 67.72722 Longitude 126.83222	

	Date	Depth - Profondeur	Pool(s) Gisement(s)
Spudded Début des travaux	Feb. 13/74		Mount Clarke
Suspended Suspension des travaux	Mar. 31/74	3980	Interval(s) Open to Production Intervalle(s) de production
Resumed Operations Reprise des travaux			NIL
Finished Drilling Forage terminé	Mar. 23/74	3980	(7" casing run and cemented to T.D.)
Deepened Approfondissement			Casing not perforated. Tubing not run.
Complete (Gas/Oil) Achèvement (Gaz/Pétrole)			Top 2000' inside 7" filled with diesel
Abandoned Abandon			fuel).
Rig Released Fin des travaux	Mar. 31/74	3980	Elevation: Gr. K.B. Altitude du sol 1124 est. 1138 est.
			Rig No. 11 Drilling Contractor Regent N° de la tour de forage Entrepreneur en forage
			Contractor's Business Licence No. 10908 N° du permis de l'entrepreneur

CASING RECORD - TUBAGE					
Casing Size (Inches) Diamètre (en pouces)	Grade Qualité	Weight Poids	Amount Longueur	Set at - Fixation à	Sacks of Cement and Additives Sacs de ciment et d'additifs
1. 9-5/8"	K-55	36	627	627'	450 sax + 2% CaCl ₂ + 150 sax from surface.
2. 7"	N-80	23	3980	3980'	700 sax + 1% D-19
5.					
6.					

Geological Tops Sommet des formations	Elevation - Profondeur		Core Record - Carottes					
	Depths Sous le niveau du sol	Sub-Sea Sous le niveau de la mer	From - de	To - à	Rec. Récupérées	From - de	To - à	Rec. Recup.
Quaternary	Surface	+1124'	NIL					
Bear Rock	145'	+ 993'						
Ronning	278'	+ 860'						
Saline River	3048'	-1910'						
Halite	3216'	-2078'						
Mt. Cap	3466'	-2328'						
Mt. Clarke	3707'	-2569'						
Pre-Cambrian	3764'	-2626'	Log Record - Diagrammes					
TD Proterozoic	3980'	-2842'	Run Série	Type of Log Genre de diagramme		From - De		To - À
			1	Densilog/Caliper/Gamma		622		3972'
			1	Laterlog		622		3967'
			1	Acoustilog/Caliper/ Gamma (Gamma run O-TD)		622		3964'
			1	Compensated Neutron/ Gamma		622		3974'
			1	Dipmeter (4-arm)		684		3958'

