

2604

BP ET AL LOSH LAKE G-22

WELL HISTORY REPORT

G. F. Chapman for G. Chapman

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BC/AFB/bac

April 24, 1975

BP. ET AL LOSH LAKE G-22

WELL HISTORY REPORT

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SUMMARY OF WELL DATA

I. SUMMARY OF WELL DATA

- (a) Name: BP et al Losh Lake G-22
- (b) Permittee: Atlantic Richfield Canada Ltd.
- (c) Operator: BP Exploration Canada Limited
- (d) Location:
 - Unit G Section 22
 - Grid System 66-00-123-15
 - Univ. Well Loc. Ref. # Lat. 65.85806°N, Long. 123.32639°W
 - Unique Well Identifier 300G226600123150
- (e) Co-Ordinates: Latitude 65°51'29"N
Longitude 123°19'35"W
- (f) Permit: 6386
- (g) Drilling Contractor: Regent Drilling Ltd. Rig #11
- (h) Drilling Authority: No. 806, issued 4th March 1975
- (i) Classification: Exploratory
- (j) Elevations: Ground 948' K.B. 962'
- (k) Date Spudded: March 14th, 1975 Date shown on tour sheets
- (l) Date Finished Drilling: April 7th, 1975
- (m) Total Depth: 4020'
- (n) Well Status: Dry and abandoned
- (o) Date Rig Released: April 12th 1975
- (p) Hole Sizes: 17-1/2" to 48' K.B.
12-1/4" to 640' K.B.
7-7/8" to 4020' K.B.
- (q) Casing: 14" O.D. conductor set at 44' K.B.
8-5/8" O.D. J-55 24 lb. surface casing at 647' K.B.

GEOLOGICAL SUMMARY

II. GEOLOGICAL SUMMARY

(a) Formation Tops

<u>Formation</u>	<u>Log Depth</u>	<u>Sample Depth</u>
Cretaceous		
Lower Cretaceous Deltaic Sequence	880(+82)	-
Basal Cretaceous Sand	1212(-250)	1200
Silurian/Ordovician		
Ronning	1226(-264)	1226
Cambrian		
Saline River	2675(-1713)	2674
Salt	2850(-1888)	2852
Mount Cap	3516(-2554)	3514
Old Fort Island	3732(-2770)	-
Pre-Cambrian	3945(-2983)	3945
Total Depth		4020

(b) Cored Intervals

No. 1	1193' - 1231'	Recovered 28'	Basal Cretaceous Sand
No. 2	1231' - 1238'	Recovered 7'	Bear Rock
No. 3	3718' - 3740'	Recovered 22'	Cambrian

(c) Core Descriptions

Included with this report.

(d) Sample Descriptions

Included with this report.

(e) Paleontological Determinations

Results not yet received.

B P EXPLORATION CANADA LTD.

CORE DESCRIPTION

B P et al Losh Lake J - 22

Described by C. Pederson

CORE # 1 (1193-1231) Rec. 29'

Coring times: 5, 5, 7, 5, 6, 8, 4, 9, 9, 7, 2, 3, 4, 5, 6, 5, 4, 6, 6, 5, 3, 2, 2, 2, 2, 2, 4, 4, 2, 9, 17, 15, 15, 24, 28, 25, 25, 30.

- | | | |
|-----------|------------|--|
| 1193-1199 | Sandstone; | grey, very fine to fine grained, silty, loosely consolidated, good intergranular porosity, calcareous, well sorted. |
| 1199-1204 | Siltstone; | and interbedded Shale; micromicaceous, sandy in part, becoming sandstone as above. |
| 1204-1208 | Sandstone; | very fine grained, silty, moderately sorted, carbonaceous material minor, pyrite nodules, siltstone in part. |
| 1208-1214 | Siltstone; | darker grey, siliceous in part, moderate to poorly sorted, sandstone in part, quartz granules, grading to sandstone, fine grained, fair intergranular porosity, shale streaks and laminations, coarse grained and poorly sorted sandstone near base. |

Basal Sandstone

- | | | |
|-----------|------------|---|
| 1214-1220 | Sandstone; | clear quartz, medium to coarse grained, poorly consolidated, good porosity, scattered siliceous material and chert, calcareous in part. |
| 1220-1222 | Sandstone; | grey, silty, fair porosity, slightly silty, trace Ka., quartz granules, very calcareous in part. |

CORE # 2 (1231-1238) Rec. 8'

Coring Times: 27, 18, 21, 21, 19, 20, 28.

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|-----------|--|
| Dolomite; | light brown, anhydritic, slightly silty, quartz inclusions cherty in part, vertical fractures with pyrite. |
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B P EXPLORATION CANADA LTD

CORE DESCRIPTION

B P et al Losh Lake J - 22

Described by B.I. Chi

CORE # 3 (3718-3740) Rec. 22'

Coring times: 28, 77, 63, 15, 18, 21, 16, 22, 22, 19, 19, 18, 19, 20, 22, 16, 24,
25, 15, 17, 32, 63.

- 3718-3721.3 Sandstone; milky white, no porosity, very fine grained,
(3.3') clear quartz, well sorted, subangular,
cemented with silica, hard, trace of green
waxy shale stringers, bottom 3" slightly
rusty red color.
- 3721.3-3722.6 Sandstone: green, gray, no porosity, very fine grained,
(1.3') abundant horizontal burrowing, quartz, rock
fragments, glauconite grains, interbed of
dark gray shale ($\frac{1}{2}$ ").
- 3722.6-3732 Shale; Dark gray, silty, well bedded, scattered
(9.4') pyrite, glauconitic, scattered horizontal
burrowing; interbeds of thin silstone and
very fine sandstone, glauconitic, quartz.
- 3732-3740 Sandstone; mainly milky white color with patches of
(8') rusty red and pale green, no porosity, very
fine to fine grained, subangular, poor to
moderately sorted, cemented with silica, hard,
trace of green and red shale stringers at
middle 2 feet, trace of horizontal and vertical
burrowing.

SAMPLE DESCRIPTIONS

for

BP et al Losh Lake J-22

Logged by C. Pederson

0 - 30'	Conductor hole drilled/auger - gravel and sand.
30 - 170'	Granit boulders, gravel, coarse grained sandstone, ironstone and Limestone, dark grey shale and siliceous siltstone.
	*note - large mesh screen used on surface hole - no sand in samples.
170 - 210'	Gravel; with increasing shale and siltstone.
210 - 240'	Shale; soft, grey, trace sand, micaceous, gravel cavings.
240 - 580'	Shale; grey, soft, micromicaceous laminated in part, slightly silty in part, Siltstone, grey, micaceous, argillaceous, slightly sandy, trace pyrite and inoceramus.
580 - 720'	Shale; grey, fissile, silty in part, occassional ironstone nodules, scattered siltstone interbeds.
720 - 770'	Shale; mainly same/with interbedded siliceous, argillaceous siltstone.
770 - 880'	Shale; scattered ironstone nodules and occassional plant remains.
880 - 910'	Siltstone; grey, argillaceous, trace glauconite, interbedded with very fine grained sandstone and silty shale, scattered carbonaceous material.
910 - 930'	Sandstone; very fine to fine grained, siliceous in part, silty, argillaceous siltstone laminations, slightly carbonaceous, trace glauconite.
930 - 940'	Siltstone; mainly same, very calcareous, less shale, Sandstone; grey, silty, argillaceous.
940 - 970'	Siltstone; increasing argillaceous, abundant shale and silty shale, laminations, micmica.
970 - 1030'	Shale; grey, micromicaceous, silty/with some interbedded siltstone.

1030 - 1040'	Shale;	mainly same/with interbeds of grey siltstone, and very fine grained sandstone, trace pyritic.
1040 - 1060'	Sandstone;	grey, very fine grained, well sorted to moderate, silty, argillaceous, slightly calcareous, finely pyritic in part, shale streaks, dense.
1060 - 1090'	Siltstone;	grey, very fine grained, well sorted to moderate, silty, argillaceous, slightly calcareous, finely pyritic in part, shale streaks, dense.
1060 - 1090'	Siltstone;	grey, micromicaceous, argillaceous/sandstone, mainly as above, well sorted.
1090 - 1100'	Sandstone;	grey, very fine to fine grained, some medium slightly dolomitic, argillaceous and silty in part, siliceous in part, carbonaceous material, pyritic wood fragments.
1100 - 1120'	Sandstone;	mainly same, very fine to fine grained, sideritic in part, scattered pyrite, becoming silty/shale streaks.
1020 - 1040'	Siltstone;	grey, argillaceous, trace sandstone, very fine grained, free rounded quartz grains, mainly well sorted.
1140 - 1150'	Sandstone;	grey to clear quartz, siliceous in part, fine to medium grained, siltstone in part, medium sorted, scattered intercrystalline porosity, pyritic.
1150 - 1160'	Sandstone;	grey to clear quartz, scattered porosity, slightly dolomitic.
1160 - 1190'	Sandstone;	grey to clear quartz, very fine to medium grained, increasing pyrite, fair intergranular porosity in part.
1190 - 1193	Sandstone;	clear quartz, medium to coarse grained, slightly siliceous, good porosity.
1193 - 1238		See Core Descriptions.

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B P EXPLORATION CANADA LTD

Sample Description

B P et al Losh Lake G-22

Logged by B.I. Chi.

<u>Intervals</u>	<u>Descriptions</u>
1238-1240	Dolomite, light brown, trace of intercrystal and pinpoint vuggy porosity, cryptocrystal to very fine crystal, slightly calcareous, trace of bituminous stringers.
1240-1250	Dolomite, as above with interbeds of dolomite micro crystal, no porosity, slightly calcareous, sucrosic.
1250-1260	Dolomite, light brown, no porosity, microcrystalline, slightly calcareous, waxy, some fractured porosity infilled by secondary calcite cement, trace of pyrite.
1260-1270	Dolomite, dark green gray, no porosity, micro to very fine crystal, calcareous, very argillaceous, trace of pyrite with interbeds of dolomite, light brown, trace of intercrystalline porosity, very fine crystal, slightly calcareous.
1270-1280	Dolomite, light to medium brown, no porosity, cryptocrystal to very fine crystal, slightly calcareous, trace of pyrite.
1280-1290	Dolomite, light brown, no porosity, cryptocrystal, waxy, calcareous, trace of pyrite.
1290-1300	Dolomite, light brown, trace of intercrystal and pinpoint vuggy porosity, micro to very fine crystal trace of pyrite crystal, interbeds of thin, green, waxy shale stringers.
1300-1310	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous, scattered argillaceous materials with pyrite crystal.
1310-1320	Dolomite, as above with increasing argillaceous materials and pyrite, trace of chert.

<u>Intervals</u>	<u>Descriptions</u>
1320-1330	Dolomite, light brown, no porosity, cryptocrystal to micro crystal, waxy, calcareous, trace of argillaceous materials, trace of green waxy shale, trace of pyrite.
1330-1340	Dolomite, light brown, no porosity, cryptocrystal to micro crystalline, waxy, calcareous, anhydritic.
1340-1350	Dolomite, as above, with interbeds of dolomite, light brown, trace of inter crystalline porosity, micro crystal, trace of bituminous material.
1350-1360	Dolomite, light brown, no porosity, cryptocrystal, anhydritic.
1360-1380	Dolomite, light brown, trace of intercrystalline porosity, cryptocrystal to microcrystal, calcareous, anhydritic, trace of bituminous materials and pyrite.
1380-1400	Dolomite, light brown, no porosity, dark, dolomitic, calcareous, trace of pyrite.
1400-1410	Dolomite, light brown, no porosity, cryptocrystal, anhydritic, calcareous, scattered reddish patches of secondary color.
1410-1420	Dolomite, light brown, trace of intercrystal and pinpoint vuggy porosity, cryptocrystal to microcrystal, anhydritic, calcareous, scattered reddish patches.
1420-1460	Dolomite, light brown, no porosity cryptocrystalline anhydritic, calcareous, trace of pyrite.
1460-1470	Dolomite, light gray, no porosity, cryptocrystalline, calcareous, anhydritic, trace of bituminous materials and pyrite.
1470-1490	Dolomite, light brownish gray, no porosity, cryptocrystal calcareous anhydritic.
1490-1500	Dolomite, dark gray, no porosity, cryptocrystal, argillaceous, anhydritic, calcareous, trace of pyrite.

<u>Intervals</u>	<u>Descriptions</u>
1500-1520	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, anhydritic, calcareous, trace of Chert.
1520-1530	Dolomite, light creamy brown, trace of intercryptocrystal porosity, fine to medium crystal, calcareous, intercrystalline porosity infilled by argillaceous and calcareous mud; interbeds of greenish waxy shale, soft slightly calcareous, pyritic.
1530-1540	Dolomite as above, dolomite with patches of reddish color.
1540-1550	Dolomite, light creamy crown, no porosity, fine to medium crystal, calcareous argillaceous, intercrystalline porosity infilled by green waxy clay, scattered patches of reddish color, trace of pyrite.
1550-1560	Dolomite as above with interbeds of red dolomite, fine to medium crystal, no porosity.
1560-1570	Dolomite, light creamy green, no porosity, micro to fine crystal, trace of very light reddish color, slightly calcareous, intercrystalline porosity infilled by green waxy clay.
1570-1580	Dolomite, light green-brown, no porosity, micro to very fine crystal, calcareous, slightly anhydritic, trace of anhydrite, porosity infilled by green clay matrix.
1580-1590	Dolomite, varicolored, light creamy green, light brown and red, no porosity, probably intervals of varicolored dolomites; micro crystalline to fine crystalline, most porosity infilled by clay matrix, calcareous, anhydritic.
1590-1600	Dolomite, light green, trace of intercrystalline porosity infilled by green waxy clay, calcareous, trace of pyrite crystal.
1600-1610	Dolomite, light green, no porosity, cryto crystal to microcrystalline, very anhydritic, calcareous, interbeds of light brown dolomite with trace of reddish color.

<u>Intervals</u>	<u>Descriptions</u>
1610-1620	Dolomite, light brown, no porosity, microcrystalline, anhydritic, calcareous.
1620-1630	Dolomite, light greenish gray, no porosity, cryptocrystalline to microcrystalline, calcareous, anhydritic and argillaceous, trace of pyrite.
1630-1640	Dolomite, as above with slightly decreasing in crystal size.
1640-1650	Dolomite, light greenish brown, no porosity, cryptocrystal to micro crystal, very anhydritic, calcareous, trace of pyrite.
1650-1660	Dolomite, light greenish brown, no porosity, cryptocrystalline, anhydritic, calcareous, trace of pyrite.
1660-1670	Dolomite, light brown, no porosity, as above.
1670-1680	Dolomite, light brown, no porosity, cryptocrystalline to very fine crystal, slightly calcareous.
1680-1690	Dolomite , light brown, trace of intercrystalline porosity, micro to very fine crystal, calcareous, trace of pyrite.
1690-1700	Dolomite, light brown, no porosity, cryptocrystalline, calcareous, anhydritic, with interbed of dolomite - light creamy brown, trace of intercrystalline porosity, micro to very fine crystal, trace of pyrite.
1700-1710	Dolomite, light brown, trace of intercrystal and pinpoint vuggy porosity, very fine to fine crystal, intercrystalline porosity infilled by green, waxy or creamy white clay, slightly calcareous, trace of pyrite.
1710-1730	Dolomite, light brown, no porosity, cryptocrystalline to micro crystalline, slightly calcareous.
1730-1740	Dolomite, light brown, no porosity, cryptocrystalline, calcareous, anhydritic.
1740-1750	Dolomite, light brown, no porosity, cryptocrystalline to micro crystalline, calcareous, trace of pyrite.

<u>Intervals</u>	<u>Descriptions</u>
1750-1760	Dolomite, same as above.
1760-1770	Dolomite, light brown, no porosity, cryptocrystalline, calcareous, anhydritic.
1770-1780	Dolomite, light brown, no porosity, micro to very fine crystal, calcareous.
1780-1800	Dolomite, light brown, no porosity, cryptocrystalline, calcareous, chalky, trace of argillaceous materials.
1800-1810	Dolomite, light brown, no porosity, cryptocrystalline to micro crystalline, calcareous, trace of white chert, argillaceous materials, and pyrite.
1810-1820	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous, anhydritic, trace of white chert.
1820-1830	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, calcareous trace of milky white chert, silicified oolites, slightly argillaceous; trace interbeds of green, waxy, shale.
1830-1850	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous, anhydritic.
1850-1860	Dolomite, light brown, trace of pinpoint and intercrystal porosity, micro to very fine crystal, trace of silicified oolites, trace of pyrite.
1860-1870	Dolomite, light brown, trace of pinpoint and intercrystal-line porosity, very fine crystal; interbeds of chert, milky white, trace oolites.
1870-1880	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous, trace of chert.
1880-1890	Dolomites as above with interbeds of dolomite, medium gray, cryptocrystal, argillaceous - trace of pyrite and chert.
1890-1900	Dolomite, medium to dark gray, no porosity, cryptocrystal-line, waxy, calcareous, slightly argillaceous.

<u>Intervals</u>	<u>Descriptions</u>
1900-1910	Dolomite, light brown, trace of pinpoint porosity, micro crystalline, slightly calcareous, interbeds of dolomite, medium gray, no porosity, cryptocrystalline.
1910-1920	Dolomite, light brown, some pinpoint and intercrystalline very fine to fine crystalline, slightly calcareous, trace of milky white chert.
1920-1950	Dolomite, dark brownish gray, no porosity, cryptocrystalline to micro crystalline, calcareous, argillaceous with interbeds of dolomite, light gray-green, no porosity, cryptocrystalline, waxy, calcareous, trace of chert.
1950-1960	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, calcareous.
1960-1970	Dolomite, medium brownish gray, no porosity, cryptocrystalline to microcrystalline, calcareous, argillaceous, trace of bituminous materials.
1970-1980	Dolomite, light brown, no porosity, cryptocrystalline, waxy, Calcareous,
1980-1990	Dolomite, medium to dark brown, no porosity, cryptocrystalline, waxy, calcareous, trace of pyrite.
1990-2000	Dolomite, light gray-green, no porosity, cryptocrystalline waxy, with interbeds of dolomite, medium brown, trace of pinpoint porosity, very fine to fine crystalline, scattered brown chert.
2000-2010	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous with interbeds of dolomite, light brown, trace of intercrystalline porosity, very fine crystal, trace of green waxy shale.
2010-2020	Dolomite, light brown, no porosity, cryptocrystalline, waxy, slightly calcareous trace of pyrite.
2020-2030	Dolomite, milky white no porosity, cryptocrystalline to micro crystalline, calcareous, sucrosic.

<u>Intervals</u>	<u>Descriptions</u>
2030-2050	Dolomite, dark brownish-gray, no porosity, microcrystalline, calcareous, argillaceous, trace of pyrobitumen, trace of brown chert.
2050-2060	Dolomite, light milky brown, no porosity, cryptocrystalline, waxy, sucrosic, calcareous.
2060-2070	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous.
2070-2080	Dolomite, as above with interbeds of medium to dark brown dolomite, no porosity, cryptocrystalline to microcrystalline.
2080-2090	Dolomite, milky light brown, no porosity, cryptocrystalline to very fine crystal, calcareous, with interbeds of shale, green, waxy, soft.
2090-2100	Dolomite, milky light brown, trace of intercrystalline porosity, cryptocrystalline to very fine crystalline, calcareous, trace of white chert. silicified oolites.
2100-2110	Dolomite, milky light brown, no porosity, cryptocrystalline to micro crystalline, waxy, calcareous, interbeds of green, waxy shale, interbeds of light brown dolomite, trace of intercrystalline porosity, very fine crystal.
2110-2120	Dolomite, dark brown, no porosity, microcrystalline, argillaceous, calcareous, interbeds of light brown dolomite, no porosity, cryptocrystalline to microcrystalline.
2120-2130	Dolomite, milky light brown, no porosity, cryptocrystalline to microcrystalline, waxy, calcareous, interbeds of green, waxy shale.
2130-2150	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, calcareous, waxy, argillaceous.
2150-2160	Dolomite, milky light brown, no porosity, micro to very fine crystal, calcareous, sucrosic.

<u>Intervals</u>	<u>Descriptions</u>
2160-2170	Dolomite, milky light brown, no porosity, cryptocrystalline, waxy, calcareous with interbeds of green waxy shale.
2170-2190	Dolomite, as above with interbeds of light brown, micro to very fine crystalline dolomite, trace of intercrystalline porosity.
2190-2210	Dolomite, milky, light brown, trace of intercrystalline porosity, cryptocrystalline to very fine crystal, calcareous sucrosic.
2210-2220	Dolomite, milky light brown, no porosity, cryptocrystalline waxy, calcareous.
2220-2230	Dolomite, milky light brown, scattered intercrystalline and pinpoint porosity, micro to fine crystal.
2230-2240	Dolomite, light brown, trace of intercrystalline and pinpoint vuggy porosity, micro to very fine crystal, slightly calcareous, some pore spaces infilled by green waxy clay.
2240-2250	Dolomite, light brown, no porosity, cryptocrystalline, waxy, calcareous,
2250-2280	Dolomite, light brown, no porosity, micro crystalline, slightly calcareous, sucrosic, trace of argillaceous materials.
2280-2290	Dolomite as above with interbeds of dolomite, light brown no porosity, micro to very fine crystal, sucrosic.
2290-2300	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, argillaceous calcareous.
2300-2310	Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, waxy, calcareous, trace of silicified oolites.

<u>Intervals</u>	<u>Descriptions</u>
2310-2320	Dolomite as above with interbeds of dolomite, medium to dark brown, cryptocrystalline to microcrystalline calcareous, slightly argillaceous, trace of bituminous materials, dark gray shale stringers.
2320-2340	Dolomite, medium to dark brown, no porosity, cryptocrystalline to very fine crystal, waxy, calcareous, slightly argillaceous, with interbeds of dark green, bituminous shale stringers.
2340-2360	Dolomite, medium to dark brown, no porosity, cryptocrystalline to very fine crystalline, slightly calcareous, argillaceous with interbeds of dark green, bituminous shale stringers.
2360-2370	Dolomite, medium to dark brown, no porosity, cryptocrystalline, slightly calcareous, argillaceous with interbeds of dolomite, light brown no porosity, cryptocrystalline, waxy, calcareous.
2370-2380	Dolomite, dark brownish gray. no porosity. cryptocrystalline to microcrystalline, calcareous, argillaceous with interbeds of dolomite, light green, no porosity, cryptocrystalline, waxy, calcareous.
2380-2390	Dolomite, dark brown, no porosity, cryptocrystalline to microcrystalline, slightly calcareous, argillaceous, with interbeds of dolomite, light brown, no porosity cryptocrystalline, waxy, calcareous.
2390-2400	Dolomite, dark brown, no porosity, cryptocrystalline to microcrystalline, argillaceous with interbeds of dolomite, milky light brown, trace of porosity, cryptocrystalline soft, sucrosic.
2400-2410	Dolomite, medium brown, no porosity, cryptocrystalline to microcrystalline, slightly calcareous, argillaceous, trace of pyrite, trace of brown chert.
2410-2420	Dolomite as above with interbeds of dolomite, light chalky brown intercrystalline porosity, microcrystalline, sucrosic, soft, trace of silicified oolite.

<u>Intervals</u>	<u>Descriptions</u>
2420-2450	Dolomite light to medium brown, no porosity, cryptocrystalline, waxy, slightly calcareous, trace of pyrite, with interbeds of dolomite, light chalky brown intercrystalline porosity, microcrystalline, sucrosic.
2450-2460	Dolomite light brown, no porosity, cryptocrystalline, slightly calcareous, siliceous, hard, trace of pyrite, trace of argillaceous stringers with interbeds of dolomite, light chalky brown, intercrystalline porosity, microcrystalline sucrosic, soft.
2460-2470	Dolomite, , dark brown, no porosity, cryptocrystalline to microcrystalline, waxy, slightly argillaceous, calcareous.
2470-2480	Dolomites as above with interbeds of shale, green waxy trace of pyrite.
2480-2490	Dolomite, medium brown, no porosity, cryptocrystalline to microcrystalline, waxy slightly calcareous with interbeds of shale, green hard, dolomitic trace of pyrite.
2490-2500	Dolomite light brown, no porosity, cryptocrystalline slightly calcareous, hard, slightly siliceous with interbeds of shale, green waxy, slightly pyritic and dolomite, no porosity, cryptocrystalline chalky, sucrosic, soft.
2500-2510	Dolomite light brown, no porosity, cryptocrystalline calcareous, hard slightly siliceous with interbeds of dolomite trace of porosity, intercrystalline, microcrystalline, sucrosic, soft.
2510-2540	Dolomite medium to dark brown, some intercrystalline pinpoint vuggy porosity, micro to very fine crystalline, slightly argillaceous, calcareous with interbeds of dolomite, light brown, trace of porosity, microcrystalline, sucrosic.
2540-2560	Dolomite, dark brown, trace of intercrystalline pinpoint vuggy porosity, microcrystalline, slightly argillaceous, calcareous with interbeds of shale, green waxy trace of pyrite.

<u>Intervals</u>	<u>Descriptions</u>
2560-2580	Dolomite, dark brown, no porosity, cryptocrystalline to microcrystalline, slightly calcareous, trace of bituminous stringers, slightly argillaceous, with interbeds of shale, green, waxy, pyritic.
2580-2590	Dolomite, dark brown, trace of good intercrystalline and vuggy porosity, very fine crystal with interbeds of dolomite, dark brown, no porosity, cryptocrystalline, slightly calcareous, and shale, green, waxy, trace of pyrite.
2590-2600	Dolomite dark brown, no porosity, cryptocrystalline, waxy, calcareous, slightly argillaceous with interbeds of shale, green, waxy, trace of pyrite.
2600-2610	Dolomite dark brown gray, no porosity, cryptocrystalline, waxy, slightly calcareous, trace of pyrite.
2610-2640	Dolomite as above with interbeds of shale, green, waxy, trace of pyrite.
2640-2650	Dolomite medium to dark brown, no porosity, microcrystalline, slightly calcareous, argillaceous, trace of pyrite, trace of light brown chert.
2650-2674	Dolomite dark brown, no porosity, microcrystalline, slightly calcareous, argillaceous, trace of pyrobitumen, trace of pyrite.

Top of Cambrian 2674' (Saline River Formation)

2674-2680	Shale, green, waxy, slightly dolomitic trace of pyrite.
2680-2700	Shale, green, waxy slightly dolomitic, trace of pyrite; Dolomite, dark brown, no porosity, cryptocrystalline, waxy, argillaceous, slightly calcareous.
2700-2710	Shale as above: Dolomite, light brown to light pale green, no porosity, cryptocrystalline to micro crystalline, slightly argillaceous, calcareous.

<u>Intervals</u>	<u>Descriptions</u>
2710-2720	As above with also interbeds of shale, dark gray, waxy, slightly calcareous, trace of pyrite.
2720-2730	Shale, green, waxy, slightly dolomitic, trace of pyrite; dark gray waxy slightly calcareous; red, soft.
2730-2740	Shale, green, dark grey, red, waxy trace of pyrite; Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, waxy, some chalcky, slightly argillaceous.
2740-2810	Shale, green, waxy, slightly calcareous, trace of pyrite; Shale, red, well laminated, trace of pyrite; Dolomite, light brown, no porosity, cryptocrystalline, chalky, sucrosic, slightly calcareous.
2810-2820	Shale green, waxy trace pyrite slightly calcareous with interbeds of shale (10%) red, slightly silty, slightly dolomitic.
2820-2830	Shale, red, waxy, slightly calcareous, slightly silty with interbed of shale (20%) green, waxy, trace of pyrite.
2830-2840	Sample extremely poor after tripping, probably lithologies same as above.
2840-2850	Shale, green, waxy, dolomitic, slightly calcareous, trace pyrite; Shale, red, very dolomitic slightly silty; Dolomite, light brown, no porosity, cryptocrystalline, anhydritic, slightly argillaceous, waxy.
2850-2852	Shale, green, waxy, dolomitic, slightly calcareous, trace pyrite; Siltstone, light pink, dolomitic, slightly calcareous, anhydritic.
2852	Top of Salt.
2852-3334	Salt, no samples recovered, locally interbeds of shales, green, anhydrite dolomite and anhydrite, white to light brown, slightly argillaceous.
3334-3340	Shale, dark gray, waxy, anhydritic, slightly dolomitic, trace of pyrite.

<u>Intervals</u>	<u>Descriptions</u>
3340-3350	Shale, as above with interbeds of dolomite, light to medium brown, no porosity, cryptocrystalline to microcrystalline, anhydritic.
3350-3360	Shale, green, waxy, trace of pyrite, dolomitic; Shale, dark gray waxy, slightly dolomitic; Dolomite, light brown, no porosity, cryptocrystalline to microcrystalline anhydritic.
3360-3370	Shale dark brown gray, waxy, very dolomitic, anhydritic, bituminous.
3370-3380	As above with interbeds of thin dolomite, light brown, no porosity, cryptocrystalline.
3380-3390	Shale, dark gray, waxy, dolomitic, anhydritic, trace of pyrite, bituminous.
3390-3400	Shale as above with interbeds of thin dolomite, dark gray no porosity, cryptocrystalline, very argillaceous, anhydritic.
3400-3410	Shale (80 %) as above with interbed of dolomite, light to medium brown, no porosity, microcrystalline, slightly anhydritic.
3410-3420	Shale and dolomite as above.
3420-3430	Shale (40%), dark green, gray, waxy, very dolomitic, anhydritic, trace of pyrite. Shale (20%) rusty red, dolomitic, slightly silty. Dolomite (40%) light brown, no porosity, cryptocrystalline to microcrystalline, anhydritic.
3430-3440	Shale (60%) dark green-gray. Shale (40%) rusty red.
3440-3460	As above with interbeds of dolomite, light brown, no porosity, cryptocrystalline to microcrystalline, anhydritic.

<u>Intervals</u>	<u>Descriptions</u>
3460-3470	Dolomite (30%) light to medium brown, no porosity very fine to fine crystal, scattered rounded grains (dolomitized crinoid or oolites?) slightly anhydritic. Shale (70%) dark gray, waxy, bituminous anhydritic. Shale (20%) green, waxy, slightly silty, trace of pyrite.
3470-3480	Shale (70%) dark gray, anhydritic, bituminous, mica. Shale (30%) green, waxy, slightly silty trace of pyrite.
3480-3490	Shale (50%) rusty red, waxy, trace of mica. Shale (50%) green, waxy, slightly dolomitic, slightly silty.
3490-3500	Shale (80%) Dark green-gray, waxy, micaceous, slightly silty, slightly dolomitic. Dolomite (20%) light brown, no porosity, cryptocrystalline to very fine crystalline, slightly argillaceous, trace of pyrite.
3500-3514	Shale, dark green-gray waxy, micaceous, well bedded slightly silty.
<u>Top of Mountain Cap Formation 3514</u>	
3514-3520	Dolomite, green-gray, no porosity, very fine to fine grained dolomite, glauconitic, poorly sorted, sub-angular
3520-3530	Shale (80%) green waxy thinly bedded, Sandstone (Dolomite) micaceous (20%) green-gray, no porosity, very fine to fine grained dolomite, poorly sorted, subangular, glauconitic.

<u>Intervals</u>	<u>Descriptions</u>
3530-3540	Shale, green gray, waxy, thinly bedded micaceous
3540-3550	Dolomite (50%) medium brown no porosity, very fine' to fine crystalline, very abundant fine grained glauconite some very fine to fine grained reworked dolomite. Shale (50%) green, waxy, thinly bedded, micaceous, glauconitic.
3550-3560	Dolomite, medium to dark brown, no porosity, very fine to fine crystalline, scattered dolomitized fine to medium grained oolite, trace of very fine glauconitic grains, slightly argillaceous, a few bituminous stringers, trace of pyrite.
3560-3570	Shale, dark green, slightly waxy, bituminous, dolomitic micaceous.
3570-3580	Dolomite, medium to dark gray brown, no porosity very fine to fine crystalline, scattered dolomitized fine to medium grained oolite, trace of glauconite, slightly argillaceous, trace of pyrite, slightly bituminous.
3580-3590	Siltstone, gray-green, no porosity, dolomitic, glauconitic, micaceous with interbeds of gray green glauconitic shale.
3590-3600	as above (20%) Shale (80%) gray green, waxy, slightly silty glauconitic, micaceous.
3600-3610	Shale (80%) gray-green, waxy, slightly silty glauconitic, micaceous. Dolomite (20%) dark gray brown, no porosity, micro to very fine crystalline, argillaceous bituminous, trace glauconite.
3610-3620	Shale, Gray-green, waxy, slightly silty, glauconitic, micaceous.

<u>Intervals</u>	<u>Descriptions</u>
3620-3630	Shale (50%) gray-green as above with more silt. Shale (50%) slightly reddish brown, dolomitic micaceous, thinly bedded.
3630-3640	Shale (70%) gray-green, waxy, slightly silty, glauconitic. Shale (30%) medium brown, waxy dolomite mica.
3640-3650	Sandstone, medium to dark brown-gray, no porosity, reworked, very fine grained dolomite, silty micaceous, argillaceous glauconitic.
3650-3660	Sandstone as above with interbeds of dolomite, no porosity, light brown reworked very fine grain dolomite, slightly silty, trace of glauconite.
3660-3670	Sandstone, dark brown, gray, no porosity, micro to very fine cryptocrystalline and grained, reworked very fine dolomite grains, silty very argillaceous glauconitic micaceous.
3670-3680	Sandstone as above with interbeds of sandstone. pinkish light brown, no porosity, very fine grained quartz mica, glauconite.
3680-3690	Sandstone dark gray-green, no porosity, very fine grained silty, very argillaceous, glauconitic, mica quartz.
3690-3700	Sandstone (50%) as above. Sandstone (50%) light creamy brown, no porosity, silt to very fine grained quartz, dolomitic, trace of glauconite.
3700-3710	Sandstone (80%) as above. Sandstone (20%) light milky brown, no porosity, very fine to medium grained, most fine grained, subangular to rounded, well sorted, quartz, trace of glauconite, clay (Kaoline) matrix.
3710-3720	Sandstone, light milky white, no porosity, very fine grained, subangular to rounded, well sorted, quartz, trace of glauconite clay matrix.

Cored Interval 3718 - 3740

- 3740-3750 extremely poor sample, all caving.
Sandstone, light pink, no porosity, very fine to fine;
orthoquartzite.
Shale, gray (?)
- 3750-3760 Sandstone, light whitish pink, trace of intergranular
porosity, fine to medium grained, subrounded, moder-
ately sorted, weakly cemented with silica, friable,
quartz, iron stained.
- 3760-3770 Sandstone (50%) white, trace of intergranular porosity,
fine to medium grained, subrounded moderate to poorly'
sorted, weakly cemented with silica, friable, quartz.
Sandstone (50%) light pink, trace of intergranular
porosity, fine to medium grained, subangular to subrounded,
medium to poorly sorted, weakly cemented with silica,
friable, quartz, iron stained; trace of mica.
- 3770-3780 Sandstones as above with more porosity (10% ?) and becomes
more friable.
- 3780-3790 Sandstone light pink, intergranular porosity (25%?)
very fine to medium grained, subrounded to subangular
poorly sorted, weakly cemented with silica, friable,
quartz, iron stained.
- 3790-3800 Sandstone as above with decrease in porosity (20%?)
and fine to coarse grained.
- 3800-3810 Sandstone, light pink, intergranular porosity (15%?)
very fine to medium grained, scattered coarse grained,
subangular to subrounded, moderately sorted, weakly
cemented with silica, friable, quartz, iron stained.
- 3810-3820 Sandstone light pink, trace of intergranular porosity, very
fine to medium grained, scattered coarse grains, sub-
angular to subrounded, moderately sorted, well cemented
with silica, quartz, iron stained.

<u>Intervals</u>	<u>Descriptions</u>
3820-3830	Sandstone light pink, intergranular porosity (15%?) very fine to medium grained, scattered coarse grains subangular to to subrounded moderate to poorly sorted, weakly cemented with silica, friable, quartz, iron stained, trace of red clay matrix.
3830-3860	Sandstone , light pink, intergranular porosity (20%?) medium grained, scattered, fine and coarse grains moderately sorted, subrounded, weakly cemented with silica, friable, quartz, iron stained.
3860-3890	Sandstone, light pink intergranular porosity (15%?) very fine to medium grained, scattered coarse grains, moderate to poorly sorted, subangular to subrounded, weakly cemented with silica, friable, quartz, iron stained.
3890-3900	Sandstone as above with increasing silica cement and decreasing porosity.
3900-3910	Sandstone, light pink, intergranular porosity (5%) fine to coarse grained, scattered very coarse grains poorly sorted, subangular to subrounded, cemented with silica, friable, quartz, iron stained.
3910-3920	Sandstone, same as above with grain size very fine to medium.
3920-3930	Sandstone, light pink, trace of intergranular porosity (?), very fine to medium grained, scattered coarse grains, poorly sorted, subangular to subrounded, well cemented with silica, probably hard, quartz, iron stained.
3930-3945	Sandstone, light pink, intergranular porosity (10 ?) very fine to medium grained, scattered coarse grains as above.

Top of Precambrian 3945'

<u>Intervals</u>	<u>Descriptions</u>
3945-3970	Shale (80%) brick red, soft, trace of very fine grains, calcaceous. Siltstone (20%) brick red, calcaceous, micaceous, very argillaceous, scattered very fine grains quartz.
3970-3980	Siltstone (60%) brick red, slightly calcaceous, micaceous, scattered very fine grained quartz; Shale (20%) brick red, thinly bedded; micaceous. Siltstone (20%) orange pink, slightly calcaceous, mainly consists of quartz grains, hard, cemented with silica, trace of pyrobitumen.
3980-4000	Siltstone (50%) brick red, slightly calcaceous, micaceous, scattered very fine grained quartz. Shale (50%) brick red, thinly bedded, micaceous with interbeds of dolomite (10%) brick red, slightly calcaceous, cryptocrystalline to microcrystalline, slightly silty.
4000-4010	Siltstone (30%) orange pink, slightly calcaceous, mainly consists of quartz grains, hard, cemented with silica, trace of pyrobitumen. Siltstone (30%) brick red as above; Shale, (30%) brick red as above; Dolomite (10%) brick red as above.

TOTAL DEPTH 4020'

ENGINEERING SUMMARY

III. ENGINEERING SUMMARY

(a) Report of Drill Stem Tests

DST #1 1160' - 1238' Basal Cretaceous Sand

PF 10, ISI 60, VO 60, FSI 90

Strong air blow on pre-flow, good air blow on second flow, dead in 30 minutes. No gas to surface.

Recovered 830' salt water.

IHP 550 ISIP 350 IFP 350

FHP 544 FSIP 350 FFP 350

Temperature not taken.

Copies of drill stem test chart previously submitted.

DST #2 3720' - 3955' Cambrian Sand

PF 7, ISI 54, VO 88, FSI 127

Strong air blow throughout test, no gas to surface.

Recovered 3180' salt water.

IHP 1665 ISIP 1557 IFP 1384 FHP FFP 1551 FSIP 1558 FHP 1665

Copies of drill stem test chart previously submitted.

(b) Casing Record

Conductor 14" O.D. conductor set at 44' K.B. Cemented with 45 sacks cold set cement. Conductor washed out - recemented with 100 sacks.

Surface 8-5/8" O.D. J-55 24 lb. surface casing set at 617' K.B. Cemented with 763 sacks cement. Recemented from surface with 120 sacks.

(c) Bit Record

<u>Bit No.</u>	<u>Size</u>	<u>Type</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Hours</u>	<u>Wt.</u>	<u>RPM</u>
-	17-1/2	-	48	48	-	-	-
1A	12-1/4	XDV	221	173	11-1/2	A11	100
2A	12-1/4	XIG	565	344	12	10	100
3A	12-1/4	XIG	640	75	3	10	100
1	7-7/8	X3A	1193	553	10	20	100
2	7-27/32	Diamond	1238	45	8-3/4	15	70
3	7-7/8	J-44	2003	765	96	20	50
4	7-7/8	J-55	2838	835	101	25	50
5	7-7/8	J-33	3494	656	50-1/2	25	50

(c) Bit Record . continued

<u>Bit No.</u>	<u>Size</u>	<u>Type</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Hours</u>	<u>Wt.</u>	<u>RPM</u>
6	7-7/8	J-44	3718	324	40-3/4	28	50
7	7-27/32	Diamond	3740	22	12-1/2	12	70
8	7-7/8	J-55	3973	233	34-1/4	25	70
9	7-7/8	JD8	4020	47	6-1/2	25	70

(d) Mud Report

Gel - water system.

Quantities of mud used in drilling are as follows:

<u>Chemical</u>	<u>Quantity</u>
Gel	38,100 lb.
Caustic	1,250 lb.
Soda Ash	1,050 lb.
Bi-Carb	200 lb.
Sawdust	47 sacks
Kwik Seal	5 sacks

(e) Deviation Record

76'	3/4°	1623'	1-1/2°
100'	3/4°	1809'	1-3/4°
193'	3/4°	2003'	2-1/8°
464'	1-1/2°	2215'	1-1/2°
565'	1-3/4°	2526'	1-1/8°
720'	2°	2830'	1-1/8°
780'	1-1/2°	3271'	1-1/8°
968	1°	3490'	3/4°
1153	3/4°	3970	3/4°
1300	3/4°		

(f) Abandonment Plugs

No. 1	4020' - 3680'	with 130 sacks cement. Plug down 4:30 P.M., April 10th, 1975. Felt at 3672' at 12:30 P.M., April 11.
No. 2	1250' - 1100'	with 70 sacks cement. Plug down 1:45 A.M., April 11th. Felt at 1102' at 9:45 A.M., April 11.
No. 3	665' - 565'	with 45 sacks cement. Plug down 11:00 A.M., April 11. Felt at 558' at 7:00 A.M. April 11.

(f) Abandonment Plugs continued

Cut casing 3' below ground level, cemented in top with 5 sacks cement. Welded on steel plate and installed identifier.

(g) Lost Circulation Zones

Lost approximately 300 barrels of mud at 3768'.

(h) Report of blowouts

None to report.

(i) Fishing Operations

None to report.

LOGS

IV. Logs

<u>Date</u>	<u>Log</u>	<u>Interval</u>	<u>Run No.</u>
April 9, 1975	Dual Induction Laterolog	4011' - 614'	1
April 9, 1975	Borehole Compensated Sonic-Gamma-Caliper	4014' - 614'	1
April 9, 1975	Compensated Neutron-Density Gamma-Caliper	4015' - 614'	1

Note: Depth of permafrost indicated to be 230' K.B., based on continuous monitoring of mud return temperature.

ANALYSES

V. ANALYSES

(a) Core Analysis

Previously submitted

(b) Water Analysis

Previously submitted

Lab. No. 7021-5517
F75-1024-3

(c) Gas Analysis

None

(d) Oil Analysis

None

VI. COMPLETION SUMMARY

(a) Tubing Record

None

(b) Perforation Record

None

(c) Cementation Record

<u>Date</u>	<u>Abandonment Plug No.</u>	<u>Position Ft. - K.B.</u>	<u>Geological Formation</u>	<u>Sacks Cement</u>	<u>Depth Felt</u>
April 10/75	1	4020' - 3680'	Cambrian	130	3672'
April 11/75	2	1250' - 1100'	Basal Cre- taceous	70	1102'
April 11/75	3	665' - 565'	Casing shoe	45	558'

Cut off casing 3' below ground level and cemented with 5 sacks cement. Welded on plate and installed identifier.

(d) Acidization and Fracturing Report

None

(e) Back Pressure and Production Tests

None

COMPANY BP EXPLORATION CANADA LIMITED
WELL BP ET AL LOSH LAKE G-22
FIELD WILDCAT - LOSH LAKE, NORTHWEST TERRITORIES
LOCATION 65° 51' 29.00" N. LAT.
123° 19' 35.00 W. LONG.

FORMATION BASAL CRETACEOUS
DRILLING FLUID WATER BASE MUD
ANALYSIS FULL DIAMETER
REMARKS



APR 21 75 AM 02 3
7004-5183
DATE REPORT APR. 16/75
ANALYSTS CC BK

AST - APPARENT SIMILAR TO
* - BROKEN CORE
1800 - USED FOR SUMMARY PURPOSES
** - PERMEABILITY 3000 MD
FS - FINE SAND

MS - MEDIUM SAND
CS - COARSE SAND
CONG - CONGLOMERATE
DOL - DOLOMITE
SH - SHALE

LMY - LIMY
SHY - SHALY
/BK - BREAK
BIT - PYROBITUMEN
CARB - CARBONACEOUS

A - ANHYDRITE
FOSF - FOSSILIFEROUS
NLN - CRYSTALLINE
LAM - LAMINATIONS
V - VUGULAR

LV - LARGE VUGS
SV - SMALL VUGS
PPV - PIN POINT VUGS
I - INTERGRAANULAR
STV - STYOLITIC

HF - HORIZONTAL FRACTURE
VF - VERTICAL FRACTURE
SS - SMALL SAMPLE
SLJ - SLIGHTLY
VY - VERY
W - WITH

D.I.A.N.D.
N.N.R.E.B.
YELLOWKNIFE, N.W.

SAMPLE NUMBER	INTERVAL REPRESENTED FEET		PERMEABILITY TO AIR MILLIDARCYS			PERMEABILITY FEET	POROSITY %	POROSITY FEET	DENSITY		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K90°	KV				BULK	GRAIN	

CORED INTERVAL 1193' - 1239'

CORE NO. 1 1193' - 1228' (REC. 28') (6 BOXES)

1	1193.0-94.0	1.0	302.00	283.00	213.00	302.00	22.4	22.40	2.07	2.66	FS MS W/SH/BKS
2	1194.0-94.9	0.9	256.00	246.00	148.00	230.40	22.1	19.89	2.06	2.64	FS MS W/SH/BKS
3	1194.9-95.5	0.6	287.00	280.00	21.50	172.20	19.4	11.64	2.14	2.66	FS W/SH/BKS PYRITE
4	1195.5-96.3	0.8	198.00	186.00	245.00	158.40	21.2	16.96	2.08	2.65	FS W/SH/BKS PYRITE
5	1196.3-97.4	1.1	189.00	170.00	143.00	207.90	21.9	24.09	2.07	2.65	FS W/SH/BKS PYRITE
SS6	1197.4-98.2	0.8	78.40	-	-	62.72	23.0	18.40	-	-	FS W/SH/BKS
7	1198.2-98.9	0.7	0.77	0.62	-0.01	0.54	9.4	6.58	2.40	2.65	FS SHY
8	1198.9-99.4	0.5	258.00	177.00	25.70	129.00	19.9	9.95	2.11	2.64	FS W/SH/BKS
-	1199.4-02.2	2.8	-	-	-	-	-	-	-	-	SH & SHY
9	1202.2-03.2	1.0	43.90	43.90	7.20	43.90	22.7	22.70	2.03	2.63	FS SHY
10	1203.2-04.2	1.0	41.00	33.20	3.24	41.00	21.6	21.60	2.06	2.63	FS SHY
11	1204.2-05.3	1.1	82.30	80.10	10.80	90.53	21.4	23.54	2.07	2.63	FS SHY W/SH/BKS
12	1205.3-06.1	0.8	33.50	19.20	0.02	26.80	19.7	15.76	2.14	2.66	FS W/SH & CARB/BKS PYRITE
SS13	1206.1-06.3	0.2	8.80	-	-	1.76	19.4	3.88	-	-	FS W/CARB/BKS
SS14	1206.3-06.8	0.5	2.83	-	-	1.42	19.2	9.60	-	-	FS W/SH & CARB/BKS
15	1206.8-07.6	0.8	10.50	9.11	0.06	8.40	15.2	12.16	2.23	2.63	FS W/SH & CARB/BKS & PYRITE
16	1207.6-08.4	0.8	21.70	18.00	3.50	17.36	16.0	12.80	2.20	2.62	FS W/SH & CARB/BKS
17	1208.4-09.2	0.8	15.30	13.30	0.61	12.24	15.4	12.32	2.22	2.63	FS W/SH & CARB/BKS
18	1209.2-10.2	1.0	34.30	32.10	0.06	34.30	15.2	15.20	2.23	2.63	FS MS W/SH & CARB/BKS
19	1210.2-11.3	1.1	0.13	0.09	-0.01	0.14	9.8	10.78	2.38	2.64	FS SHY
20	1211.3-12.5	1.2	1.11	0.60	-0.01	1.33	7.4	8.88	2.45	2.65	FS MS SHY
21	1212.5-13.3	0.8	22.50	18.90	2.52	18.00	10.2	8.16	2.38	2.65	FS CS W/CARB/BKS
22	1213.3-14.2	0.9	1640.00	944.00	277.00	1476.00	20.1	18.09	2.10	2.63	FS CS
23	1214.2-15.4	1.2	8340.00	7380.00	2990.00	10008.00	23.8	28.56	2.00	2.63	FS CS
24	1215.4-15.8	0.4	158.00	122.00	42.30	63.20	17.0	6.80	2.19	2.64	FS CS W/CARB/BKS

COMPANY BP EXPLORATION CANADA LIMITED
WELL BP ET AL LOSH LAKE G-22

PAGE 2 of 3
FILE 7004-5183

SAMPLE NUMBER	INTERVAL REPRESENTED FEET		PERMEABILITY TO AIR MILLIDARCVS			PERMEABILITY FEET	POROSITY %	POROSITY FEET	DENSITY		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K90°	KV				BULK	GRAIN	

CORE NO. 1 (Cont'd)

25	1215.8-16.4	0.6	136.00	125.00	167.00	81.60	18.9	11.34	2.14	2.64	FS CS
26	1216.4-17.1	0.7	13000.00	12700.00	3810.00	9100.00	23.1	16.17	2.02	2.63	FS CS PYRITE
27	1217.1-17.8	0.7	1120.00	1070.00	301.00	784.00	8.8	6.16	2.44	2.68	FS CS LMY
28	1217.8-18.6	0.8	176.00	157.00	41.00	140.80	10.0	8.00	2.40	2.67	FS CS LMY
29	1218.6-19.1	0.5	149.00	137.00	210.00	74.50	16.8	8.40	2.20	2.64	FS CS SL/LMY
30	1219.1-19.7	0.6	138.00	128.00	204.00	82.80	18.8	11.28	2.15	2.66	FS CS LMY
31	1219.7-20.2	0.5	159.00	155.00	155.00	79.50	18.8	9.40	2.16	2.67	FS CS SL/LMY
32	1220.2-21.0	0.8	51.70	41.70	1.88	41.36	13.0	10.40	2.30	2.65	FS CS
-	1221.0-28.0	7.0	-	-	-	-	-	-	-	-	LOST CORE
-	1228.0-31.0	3.0	-	-	-	-	-	-	-	-	DRILLED

CORE NO. 2 1231' - 1238' (REC. 8') (2 BOXES)

-	1231.0-39.0	8.0	-	-	-	-	-	-	-	-	DENSE
---	-------------	-----	---	---	---	---	---	---	---	---	-------

WELL: BP ET AL LOSH LAKE G-22

PAGE: 3 of 3

FORMATION: BASAL CRETACEOUS

FILE: 7004-5183

SUMMARY INTERVAL: 1193.0 0- 1239.0

TOTAL FOOTAGE: 46.0

FOOTAGE ANALYZED 25.2

FOOTAGE NOT ANALYZED: TOTAL: 20.8 DENSE 10.8 LOST 7.0 DRILLED 3.0 *NABR .0 RUBBLE .0

SUMMARY
OF
ANALYZED CORE:

TOTAL

BY
PERM
RANGES:

LESS THAN 0.10 Md.

0.10 0.49 Md.

0.50 0.99 Md.

1.00 9.99 Md.

GREATER THAN 9.99 Md.

FOOTAGE	% OF ANALYZED CORE	WEIGHTED AVERAGE POROS. %	POROSITY FEET	WEIGHTED AVERAGE PERM. MD.	PERM. FEET	WEIGHTED AVERAGE RESID. OIL %	WEIGHTED AVERAGE TOT. WATER %
25.2	100.00	17.54	441.89	932.23	23492.10	.00	.00
.0	.00	.00	.00	.00	.00	.00	.00
1.1	4.37	9.80	10.78	.13	.14	.00	.00
.7	2.78	9.40	6.58	.77	.54	.00	.00
1.9	7.54	11.77	22.36	2.37	4.51	.00	.00
21.5	85.31	18.71	402.17	1092.41	23486.91	.00	.00

*NOT ANALYZED BY REQUEST



CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering

COMPANY BP EXPLORATION
CANADA LIMITED FIELD WILDCAT, LOSH LAKE FILE 7004-5183

WELL BP ET AL LOSH LAKE G-22 DATE _____

LOCATION 65° 51' 29.00" N
123° 19' 35.00" W PROV NORTHWEST TERRITORIES ELEV. _____

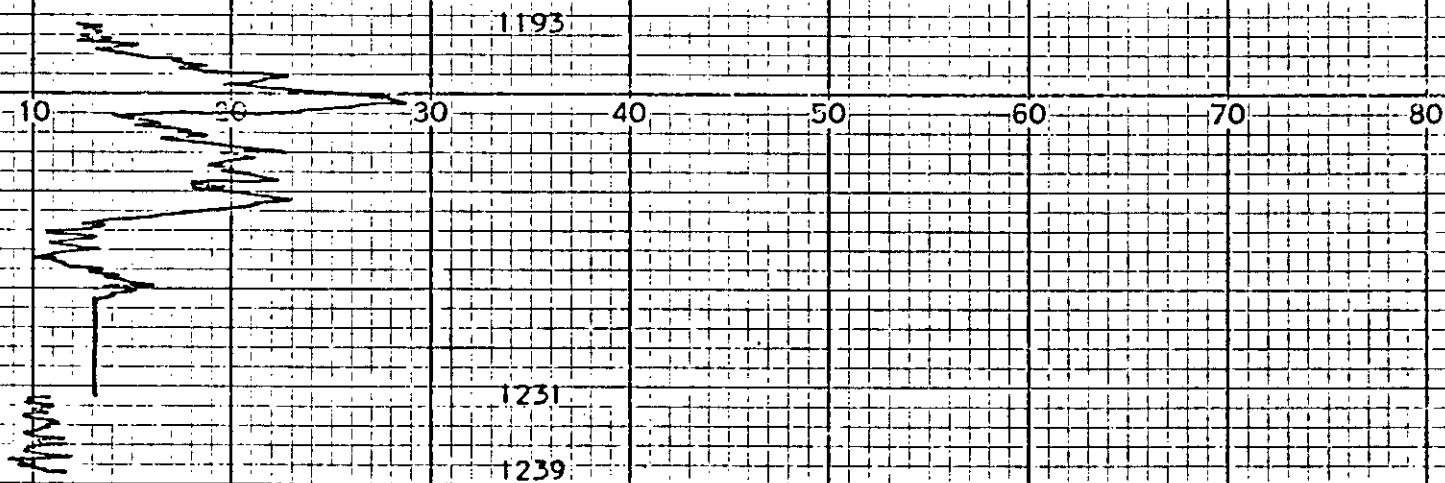
CORE-GAMMA CORRELATION

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T.C. 11 SECS.

VERTICAL SCALE: 5" = 100'

SENS. 5000 CPM.



CORE ANALYSIS REPORT

FOR

BP EXPLORATION CANADA LIMITED

BP ET AL LOSH LAKE G-22
WILDCAT — LOSH LAKE
NORTHWEST TERRITORIES

CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering

CALGARY - EDMONTON - REGINA

CORE LABORATORIES – CANADA, LTD.
CALGARY, ALBERTA

COMPANY	BP EXPLORATION CANADA LIMITED	FORMATION		PAGE	1 of 2
WELL	BP ET AL LOSH LAKE G-22	DRILLING FLUID	WATER BASE MUD	FILE	7004-5225
FIELD	WILDCAT – LOSH LAKE, NORTHWEST TERRITORIES	ANALYSIS	FULL DIAMETER	DATE REPORT	MAY 8/75
LOCATION	65° 51' 29.00" N. LAT. 123° 19' 35.00" W. LONG.	REMARKS		ANALYSTS	CC

AST – APPEARS SIMILAR TO * – BROKEN CORE K90 – USED FOR SUMMARY PURPOSES ** – PERMEABILITY 30000 MD FS – FINE SAND	MS – MEDIUM SAND CS – COARSE SAND CONG – CONGLOMERATE DOL – DOLomite SH – SHALE	LMY – LIMY SHY – SHALY /BK – BREAK BIT – PYROBITUMEN CARB – CARBONACEOUS	A – ANHYDRITE FOS – FOSSILIFEROUS XLN – CRYSTALLINE LAM – LAMINATIONS V – VUGULAR	LV – LARGE VUGS SV – SMALL VUGS PPV – PIN POINT VUGS I – INTERGRANULAR STY – STYOLITIC	HF – HORIZONTAL FRACTURE VF – VERTICAL FRACTURE SS – SMALL SAMPLE SLI – SLIGHTLY V/ – VERY W/ – WITH
--	---	--	---	--	---

SAMPLE NUMBER	INTERVAL REPRESENTED FEET		PERMEABILITY TO AIR MILLIDARCYs			PERMEABILITY FEET	POROSITY %	POROSITY FEET	DENSITY		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K90°	KV				BULK	GRAIN	

CORED INTERVAL 3718' – 3740'

CORE NO. 3 3718' – 3740' (REC. 22') (5 BOXES)

33	3718.0-18.6	0.6	0.36	0.26	-0.01	0.22	9.6	5.76	2.40	2.65	FS
34	3718.6-19.8	1.2	0.06	0.04	-0.01	0.07	4.1	4.92	2.54	2.65	FS
35	3719.8-21.0	1.2	0.04	-0.01	-0.01	0.05	5.3	6.36	2.51	2.65	FS
36	3721.0-21.4	0.4	0.16	-0.01	-0.01	0.06	6.0	2.40	2.49	2.65	FS
37	3721.4-22.2	0.8	0.06	0.06	-0.01	0.05	5.7	4.56	2.53	2.68	FS SHY
38	3722.2-22.7	0.5	0.03	-0.01	-0.01	0.02	3.0	1.50	2.60	2.68	FS SHY
-	3722.7-32.5	9.8	-	-	-	-	-	-	-	-	DENSE SH & SHY
39	3732.5-32.9	0.4	0.04	0.04	-0.01	0.02	5.9	2.36	2.49	2.65	FS
40	3732.9-33.6	0.7	0.34	0.23	0.08	0.24	8.5	5.95	2.42	2.64	FS
41	3733.6-34.3	0.7	1.06	0.95	0.50	0.74	11.2	7.84	2.35	2.65	FS
42	3734.3-35.0	0.7	0.37	0.23	-0.01	0.26	8.2	5.74	2.41	2.63	FS
43	3735.0-36.1	1.1	0.11	0.09	-0.01	0.12	11.7	12.87	2.33	2.64	FS
44	3736.1-37.3	1.2	0.05	-0.01	-0.01	0.06	8.4	10.08	2.45	2.67	FS
45	3737.3-38.2	0.9	0.09	0.07	-0.01	0.08	10.1	9.09	2.38	2.65	FS
46	3738.2-39.2	1.0	2.77	0.53	7.74	2.77	5.9	5.90	2.49	2.65	FS VF
47	3739.2-40.0	0.8	18.40	13.70	33.40	14.72	5.6	4.48	2.50	2.64	FS VF



CORE LABORATORIES – CANADA, LTD.

Petroleum Reservoir Engineering

WELL: BP ET AL LOSH LAKE G-22

PAGE: 2 OF 2

FORMATION:

FILE: 7004-5225

SUMMARY INTERVAL: 3718.0 - 3740.0

TOTAL FOOTAGE: 22.0

FOOTAGE ANALYZED 12.2

FOOTAGE NOT ANALYZED: TOTAL: 9.8 DENSE 9.8 LOST 0.0 DRILLED 0.0 *NABR 0.0 RUBBLE 0.0

SUMMARY
OF
ANALYZED CORE:

FOOTAGE	% OF ANALYZED CORE	WEIGHTED AVERAGE POROS. %	POROSITY FEET	WEIGHTED AVERAGE PERM. MD.	PERM. FEET	WEIGHTED AVERAGE RESID. OIL %	WEIGHTED AVERAGE TOT. WATER %
12.2	100.0	7.4	89.81	1.60	19.47	0.0	0.0
6.2	50.8	6.3	38.87	0.05	0.34	0.0	0.0
3.5	28.7	9.3	32.72	0.26	0.90	0.0	0.0
0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
1.7	13.9	8.1	13.74	2.07	3.51	0.0	0.0
0.8	6.6	5.6	4.48	18.40	14.72	0.0	0.0

*NOT ANALYZED BY REQUEST



CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering

COMPANY BP EXPLORATION
CANADA LIMITED FIELD WILDCAT, LOSH LAKE FILE 7004-5225
WELL BP ET AL LOSH LAKE G-22 DATE _____
65° 51'29.00" N
LOCATION 123° 19'35.00" W PROV NORTHWEST TERRITORIES ELEV. _____

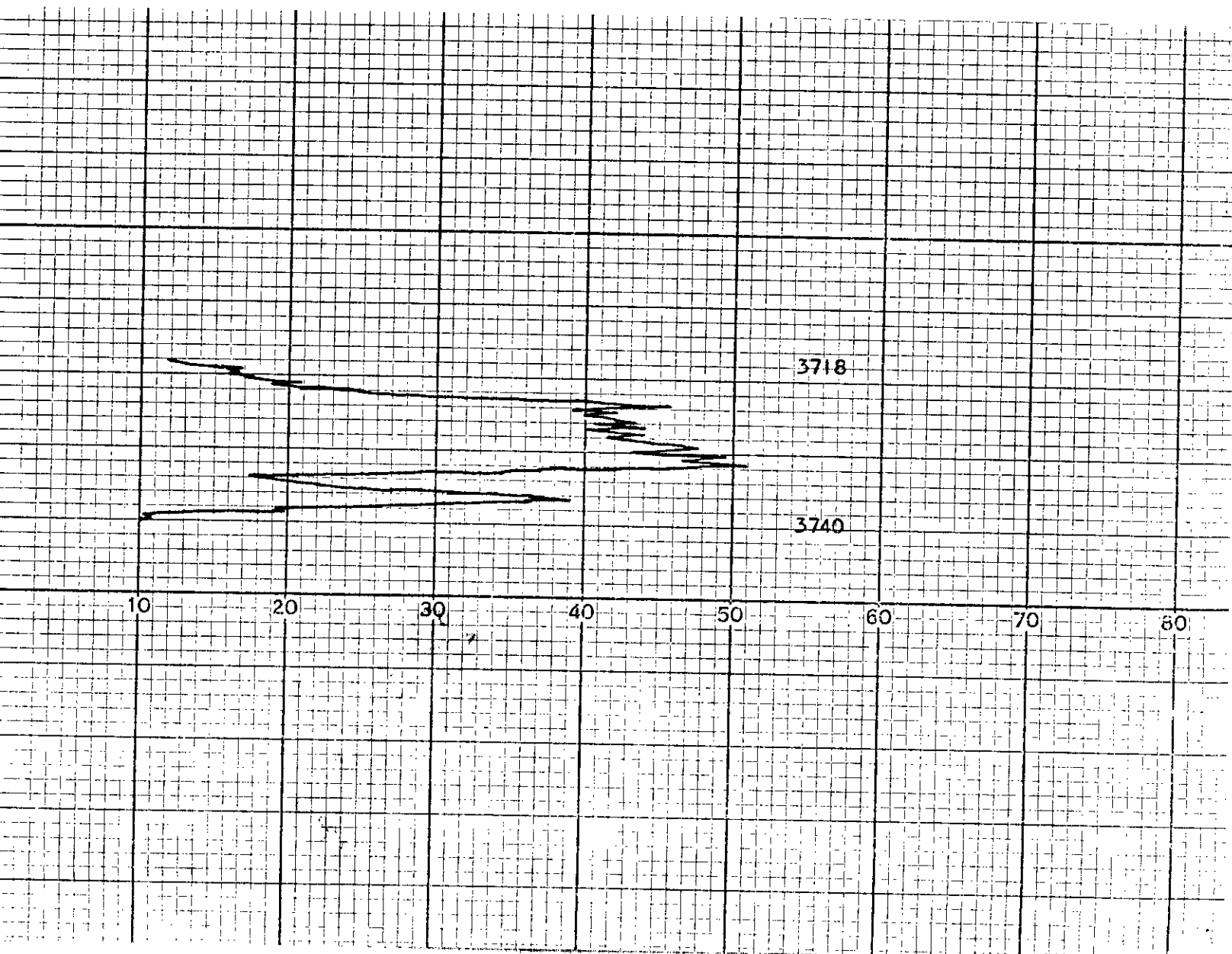
CORE-GAMMA CORRELATION

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T.C. 11 SECS.

VERTICAL SCALE: 5" = 100'

SENS. 5000 CPM.





DRILL STEM TEST DATA

TICKET NO. T-2822
DATE MARCH 22, 1975WELL NAME BP ET AL LOSH LAKE
WELL NUMBER G-22
COMPANY BP EXPLORATION CANADA LTD.
COMPANY REP. HERB GLENN
TESTER BUDVARSONTest No. 1 Type SINGLE BOTTOM HOLE
Interval 1160 To 1238 TD 1238
Formation Tested Net Pay Temp °F
Prewell 10 Min. ISI 60 Min. Flow 60 Min. FSI 90 Min.

Recorder Number	6889	2016	3851	
Ins. or outs.	IN	OUT	OUT	
Rec. Range (PSI)	3100	5450	5700	
Clock Range (hrs)	12	12	24	
Recorder Depth	1149	1169	1174	
Initial Hydro. Press.	568	550	555	
Initial Shut-in Press.	325	350		
Initial Flow Press.	325	350		
Final Flow Press.	325	350		
Final Shut-in Press.	351	350		
Final Hydro. Press.	560	544	551	

Fluid Recovery Total Feet 830
830 Ft. of SALT WATER (1925 PPM)
..... Ft. of
..... Ft. of
..... Ft. of
..... Ft. of

Gas Recovery

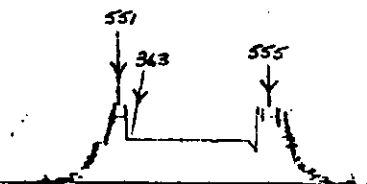
Mins	Temp °F	Press (PSI)	Orifice Size	MCF Day

Orifice Well Tester ☐ Pitot tube ☐
Critical Flow Prover ☐ Side Static ☐ Riser Size
Gas Cont. No. Chem & Geo Lab ☐ Core Lab ☐Main Hole Size 7.875 Packer Size 6.625
Rat hole Size Ft. of Rat Hole
Dr. Pipe Size 4.5 PH Wt. 16.60
Dr. Collar I.D. 2.875 Ft. Run above tool 446
Surface Choke Size CLOSED Bottom Choke Size 0.5
Cushion Amount Type
Mud Drop NIL Fluid Loss Viscosity 65 Mud Wt. 9.0Remarks: STRONG AIR BLOW ON PREFLOW. GOOD
AIRBLOW ON FLOW, SLOWLY DECREASING
UNTIL DEAD IN 30 MINUTES.P.O. Sub 1.00
Co Sub 1.00
Shut-in Tool 5.20
RFS No. 101 3.35
RFS No.
HNV 7.15
Jars 6.00 90' ABOVE
Rec. No. 6889 5.00 Depth 1149
Rec. No. Depth
Temp Recorder
Safety Joint 1.75
By-Pass Sub
Packer
Packer 5.00 Depth 1160
..... 1.00
Anchor 7.00
By-Pass Sub
Rec. No. 2016 5.00 Depth 1169
Rec. No. 3851 1.00 Depth 1174
Blank off Sub
Co Sub
Dr. Collars
Co Sub
Packer Depth
Packer
Anchor
Rec. No. Depth
Anchor
Co Sub
Dr. Pipe or
Dr. Collars 60.00
Co Sub 1.00
Anchor
Bullnose 3.00 T.D. 1238
Total Test Tool 78.00
Total Interval 78.00
Total Tailpipe 53.45
Weight of Tool 22. M
Wt. Indicator Reading
Prior to setting Packers 44. M



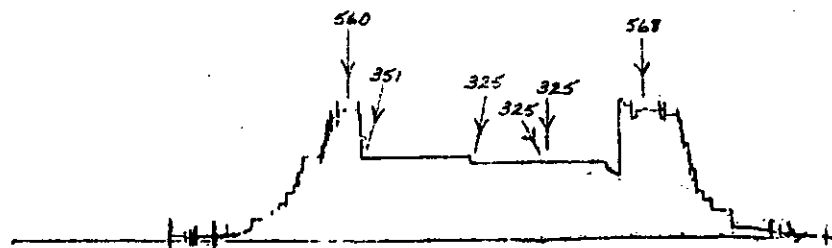
DST RECORDER CHARTS

BP ET AL LOSH LAKE G-22
DST NO. 1
OUTSIDE REC. NO. 3851
DEPTH 1174

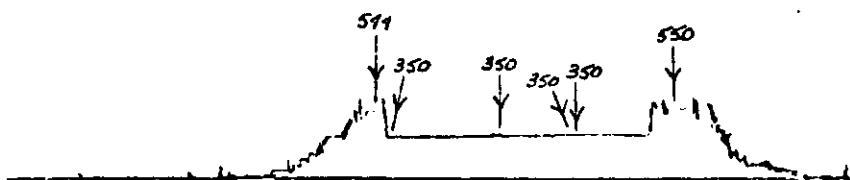


DST RECORDER CHARTS

BP ET AL LOSH LAKE G-22
DST NO. 1
INSIDE REC. NO. 6889
DEPTH 1149



BP ET AL LOSH LAKE G-22
DST NO. 1
OUTSIDE REC. NO. 2016
DEPTH 1169





DRILL STEM TEST DATA

TICKET NO. T-2824

DATE APRIL 9, 1975

WELL NAME BP ET AL LOSH LAKE
WELL NUMBER G-22
COMPANY BP EXPLORATION CANADA LTD.
COMPANY REP. HERR GLENN
TESTER BUDVARSON

Test No. 2 Type SINGLE STRADDLE BY-PASS
Interval 3720 To 3955 TD 4020
Formation Tested Net Pay Temp OF
Preflow 7 Min. ISI 54 Min. Flow 88 Min. FSI 127 Min.

Recorder Number	6889	2016	3851	
Ins. or outs.	IN	OUT	BTM	
Rec. Range (PSI)	3100	5450	5700	
Clock Range (hrs)	12	12	24	
Recorder Depth	3708	3738	3987	
Initial Hydro. Press.	STYLUS	1665	STYLUS	
Initial Shut-in Press.		1557		
Initial Flow Press.	KICKED	1384	KICKED	
Final Flow Press.		1551		
Final Shut-in Press.	OUT	1558	OUT	
Final Hydro. Press.		1665		

Fluid Recovery Total Feet 3180
TOP Ft. of SALT WATER CUT DRILLING MUD
MIDDLE Ft. of SALT WATER
TOOL Ft. of SALT WATER-8.0-55,400 PPM
Ft. of
Ft. of

Gas Recovery

Mins	Temp OF	Press (PSI)	Orifice Size	MCF Day

Orifice Well Tester ☐ Pitot tube ☐
Critical Flow Prover ☐ Side Static ☐ Riser Size
Gas Cont. No. Chem & Geo Lab ☐ Core Lab ☐

Main Hole Size 7.875 Packer Size 6.625
Rat hole Size 4.5 FH Ft. of Rat Hole
Dr. Pipe Size 2.875 Wt. 16.60
Dr. Collar I.D. 2.875 Ft. Run above tool 446
Surface Choke Size CLOSED Bottom Choke Size 0.5
Cushion Amount Type
Mud Drop NIL Fluid Loss Viscosity 7.5 Mud Wt. 8.8

Remarks: STRONG BLOW ON PREFLOW. STRONG
BLOW ON FLOW PERIOD - REMAINING CONSTANT
THROUGHOUT TEST.

P.O. Sub 1.00 - 90' ABOVE
Co Sub 1.00
Shut-in Tool 5.20
RFS No. 25 3.35
RFS No.
HNV 7.15
Jars & C.O. 9.45 - 90' ABOVE
Rec. No. 6889 5.00 Depth 3708
Rec. No. Depth
Temp Recorder
Safety Joint 1.75
By-Pass Sub 1.00
Packer
Packer 5.00 Depth 3720
Anchor 15.00
By-Pass Sub 1.00
Rec. No. 2016 1.00 Depth 3738
Rec. No. Depth
Blank off Sub
Co Sub
Dr. Collars 214.00
Co Sub
Packer 3.00 Depth 3955
3.00
Packer
Anchor 28.00
Rec. No. 3851 1.00 Depth 3987
Anchor
Co Sub
Dr. Pipe or
Dr. Collars 30.00
Co Sub
Anchor
Bullnose 3.00 T.D. 4020
Total Test Tool 235.00
Total Interval 65.00
Total Tailpipe 96.00
Weight of Tool 4.000
Wt. Indicator Reading
Prior to setting Packers 70.000



WELL NAME: BP ET AL LOSH LAKE
WELL LOCATION: G-22
FORMATION: -----

REC NO. 2016
DST NO. 2
DEPTH 3738

TIME - PRESSURE INCREMENTS

REMARKS -----	TIME MIN. -----	PRESSURE PSIG -----	T+DELTA(T)/ DELTA(T) -----
RUN IN HOLE	0.	0.	
	101.0	1665.3	
INITIAL HYDRO PRESSURE	127.0	1665.3	
INITIAL PREFLOW PRESSURE	0.	1365.0	
	1.0	1552.3	
	6.0	1553.7	
FINAL PREFLOW PRESSURE	7.0	1393.9	
START INITIAL SHUT-IN	0.	1393.9	
	1.0	1553.7	
	5.0	1556.5	
	10.0	1556.5	
	20.0	1556.5	
	30.0	1556.5	
	40.0	1556.5	
	50.0	1556.5	
INITIAL SHUT-IN PRESSURE	54.0	1556.5	
START FLOW PERIOD	0.	1556.5	
INITIAL FLOW PRESSURE	1.0	1384.3	
	10.0	1416.0	
	20.0	1450.4	
	30.0	1471.1	
	40.0	1497.2	
	50.0	1520.7	
	60.0	1531.7	
	70.0	1541.3	
	80.0	1546.8	
FINAL FLOW PRESSURE	88.0	1551.0	



WELL NAME: BP ET AL LOSH LAKE
WELL LOCATION: G-22
FORMATION: -----

REC NO. 2016
DST NO. 2
DEPTH 3738

TIME - PRESSURE INCREMENTS

REMARKS -----	TIME MIN. -----	PRESSURE PSIG -----	T+DELTA(T)/ DELTA(T) -----
START FINAL SHUT-IN	0.	1551.0	
	1.0	1556.5	
	5.0	1557.9	
	10.0	1557.9	
	20.0	1557.9	
	30.0	1557.9	
	40.0	1557.9	
	50.0	1557.9	
	60.0	1557.9	
	70.0	1557.9	
	80.0	1557.9	
	90.0	1557.9	
	100.0	1557.9	
	110.0	1557.9	
	120.0	1557.9	
FINAL SHUT-IN PRESSURE	127.0	1557.9	
RUN OUT OF HOLE	0.	1557.9	
FINAL HYDRO PRESSURE	1.0	1665.3	
	23.0	1665.3	
OUT OF HOLE	195.0	0.	

DST RECORDER CHARTS

BP ET AL LOSH LAKE G-22

DST NO. 2

INSIDE REC. NO. 6889

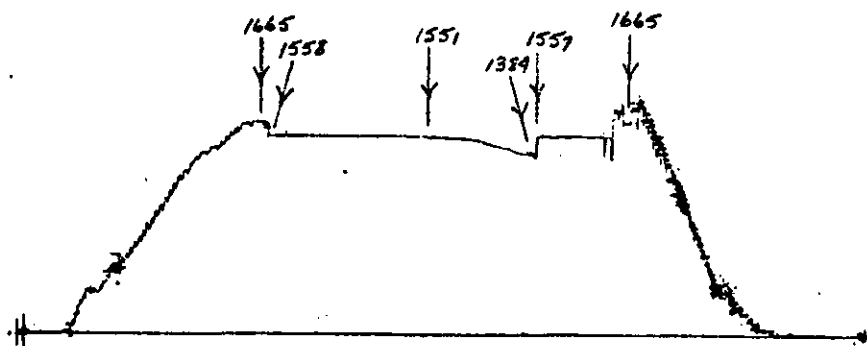
DEPTH 3708

BP ET AL LOSH LAKE G-22

DST NO. 2

OUTSIDE REC. NO. 2016

DEPTH 3738



The analysis of this test is based upon calculations of the data contained in this report. Some assumptions with regard to reservoir properties may have been made if the information was not supplied. The most up to date methods were utilized to determine the results, ensuring a complete and accurate report.

Any questions regarding the procedure or results should be directed to:

PETCO SERVICES (1973) LTD.

#912 Charter Towers

614 - 5 Avenue S.W.

Calgary, Alberta

403 - 269 - 8291

confidential to
22/02/99

ISPG CORE & SAMPLE REPOSITORY:

The following is a list of core or samples, and the results of a pyrolysis and palynology study performed by Chevron Canada Resources in February 1990:

<u>Well</u>	<u>Location</u>	<u>Depth (ft)</u>	<u>S1</u>	<u>S2</u>	<u>TOC</u>	<u>HI</u>	<u>Micro-organic Analysis</u>
Aquit. Old Ft. Pt. E-30	64° 50' N 124° 45' W	2570, 2582	0.00	0.00	0.00	0	100% amorphous
		2571.5	0.01	0.00	0.06	0	
		2573	0.00	0.01	0.00	0	
Candel Police Is. L-66	64° 50' N 125° 00' W	4287	0.13	0.08	0.50	16	100% amorphous
Candel Ft. Norman K-14	65° 00' N 125° 15' W	2805.5, 2808	0.03	0.03	0.08	37	70% amorphous
							30% bitumin
Imp. Vermilion Ridge #1 N-28	65° 10' N 126° 00' W	2660, 2665	0.11	0.06	0.10	60	100% bitumin
		2806	0.03	0.15	0.16	93	100% amorphous
		2807.5	0.09	0.20	0.37	54	
		5955	0.02	0.35	0.04	875	
		5962	0.07	0.48	0.05	960	no recovery
Aquit. Dodo Canyon K-03	65° 02' N 126° 46' W	8863, 8870	0.04	0.00	0.03	0	no recovery
Imp. Loon Creek #2 G-78	65° 10' N 126° 15' W	4587, 4589, 4592	0.02	0.00	0.10	0	100% bitumin
	66° 00' N 123° 15' W	3725	0.01	0.49	0.13	376	80% cellular matter
Mobil Ontadek Lake N-39	66° 20' N 128° 15' W	5882	0.09	0.00	0.03	0	?
Atl. Colar Manitou Lake L-61	66° 30' N 128° 45' W	5572.5	0.67	1.09	0.16	681	no recovery

The thin sections from the palynology study are also enclosed.

BRIAN GRANT
Chevron Canada Resources

LC511 4K. G 22

ISPG CORE AND SAMPLE REPOSITORY

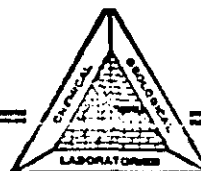
NOTE: ADDITIONAL GEOCHEMICAL DATA EXIST ~~✓~~ FOR THIS WELL BUT IS
CONFIDENTIAL UNTIL Feb 22 / 90.

AT THIS TIME THE DATA WILL BE INCORPORATED INTO THE WELL FILE.

IF THIS DATE HAS PASSED AND THE MATERIAL DOES NOT APPEAR TO BE HERE IN
THE FILE, PLEASE ASK ONE OF THE STAFF FOR IT SO THAT IS MAY BE
INCORPORATED.

THANK YOU.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



Date Reported: May 5, 1975

LABORATORY REPORT NUMBER: E75-7690

BP EXPLORATION CANADA LIMITED

SAMPLE LOCATION: BP ETAL LOSH LAKE G-22

CONTAINER IDENTITY: RES25

TEST TYPE & NO. DST 2

TEST RECOVERY: SALT WATER CUT DRILLING
MUD AND SALT WATER

TEST INTERVAL: 3720' - 3955'

DATE SAMPLED: APRIL 1975

DATE RECEIVED: APRIL 10, 1975

DATE ANALYZED: MAY 2, 1975

ANALYST: R.J. MALONEY

A BJ Service downhole sampler was received under atmospheric pressure and contained 2960 mls water only.

RESISTIVITY OF THE WATER: 0.099 OHM/METERS @ 25°C

2604

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



DATE REPORTED: May 5, 1975

LABORATORY REPORT NUMBER: E75-7574

B.P. EXPLORATION CANADA LIMITED

WELL: B.P. ET AL LOCH LAKE G-22

FIELD: LOCH LAKE, N.W.T.

SAMPLED BY: B.J. SERVICE

TEST TYPE & NO. D.S.T. 1

TEST INTERVAL: 1160'-1230'

TEST RECOVERY: 830' SALT WATER

DATE SAMPLED: March 22, 1975

DATE RECEIVED: March 31, 1975

DATE ANALYZED: April 23, 1975

ANALYST: R.J. Maloney

A B.J.Services down hole sampler was received under atmospheric pressure and contained 2890 mls. water. There was no recoverable gas.

2604



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY



CONTAINER IDENTITY

— WATER ANALYSIS —

LABORATORY NUMBER

E75-7574

SAMPLE LOCATION

FIELD OR AREA
LOCH LAKE, N.W.T.

TEST TYPE & NO

DST 1

TEST INTERVAL OR PERFS

1160'-1230'

OPERATOR NAME AND ADDRESS

B.P. EXPLORATION CANADA LIMITED

WELL OR SAMPLE LOCATION NAME

B.P. ET AL LOCH LAKE G-22

POOL OR ZONE

NAME OF SAMPLER

ELEVATIONS

KB GRD

948

COMPANY

B.J. SERVICE

TEST RECOVERY

830' SALT WATER

POINT OF SAMPLE

AMT & TYPE OF CUSHION

MUD RESISTIVITY

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBLS/D OIL

BBLS/D GAS

MCF/D

PRESSURES - PSIG

TEMPERATURES (°F)

CONTAINER

WHEN SAMPLED WHEN RECEIVED

CONTAINER

WHEN SAMPLED WHEN RECEIVED

SEPARATOR TREATER

RESERVOIR

SEPARATOR TREATER

DATE SAMPLED (D/M/Y) DATE RECEIVED (D/M/Y) DATE ANALYZED (D/M/Y)

22/03/75

31/03/75

23/04/75

ANALYST

R.J. MALONEY

REMARKS

ION	MG/L	MG %	MEQ/L	ION	MG/L	MG %	MEQ/L
Na	2046	31.36	89.02	Cl	2130	32.65	60.07
K				Br			
Ca	180	2.76	8.99	I			
Mg	58	0.89	4.80	HCO ₃	271	4.15	4.44
Bo				SO ₄	1834	28.11	38.14
Sr				CO ₃	5	0.08	0.16
Fe	PRESENT			OH	NIL		
				H ₂ S	NIL		

LOGARITHMIC PATTERN MEQ PER LITER

Na

Ca

Mg

Fe

Cl

HCO₃

SO₄

CO₃

TOTAL SOLIDS Mg/L

BY EVAPORATION

7000

@ 110°C

BY EVAPORATION

@ 180°C

AT IGNITION

5690

CALCULATED

6524

ORGANIC MATTER: PRESENT

SPECIFIC GRAVITY

1.006

@ 60°C

REFRACTIVE INDEX

1.3340

@ 25°C

OBSERVED PH

8.4

@ 70 °F

RESISTIVITY (Ohm/meters)

1.21

@ 25°C

Remarks and Conclusions

The sample consisted of clear, colourless water with a trace of sediment.



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY



CONTAINER IDENTITY

— WATER ANALYSIS —

LABORATORY NUMBER

F75-1024-3

OPERATOR NAME AND ADDRESS

B.P. EXPLORATION CANADA LIMITED

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

BP ET AL LOSH LAKE G-22

ELEVATIONS

948

FIELD OR AREA

LOSH LAKE

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE & NO.

DST 2

TEST RECOVERY

SW CUT DRLG. MUD AND SW

TEST INTERVAL OR PERFS

3720'-3955'

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 SAMPLED

WHEN RECEIVED

SEPARATOR TREATER

CONTAINER

WHEN SAMPLED

WHEN RECEIVED

DATE SAMPLED (D/M/Y)

9/04/75

DATE RECEIVED (D/M/Y)

15/04/75

DATE ANALYZED (D/M/Y)

15/04/75

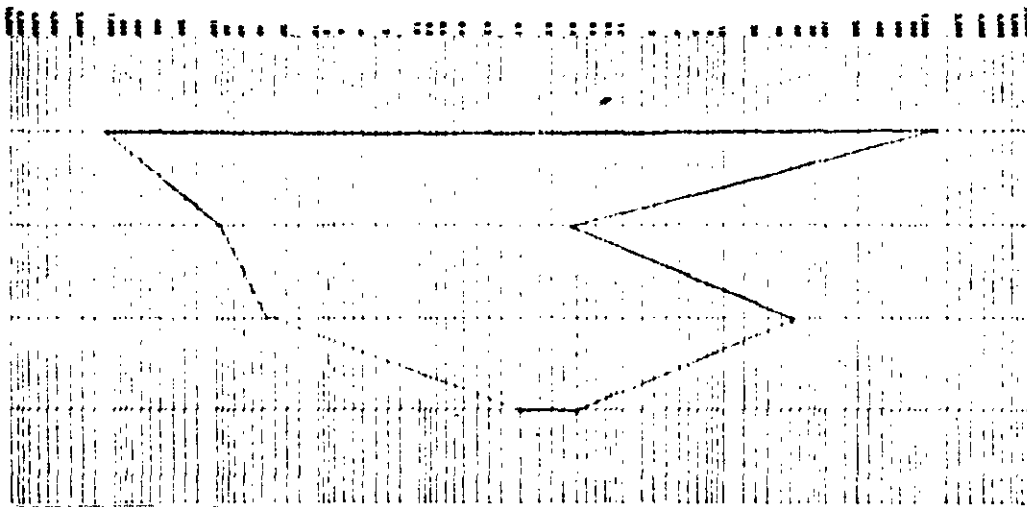
ANALYST

G.G., C.J.

REMARKS

ION	MG/L	MG %	MEQ/L	ION	MG/L	MG %	MEQ/L
Na	28128	35.47	1223.57	Cl	46300	58.39	1305.66
K				Br			
Ca	1922	2.42	95.91	I			
Mg	462	0.58	37.98	HCO ₃	22	0.03	0.36
Ba				SO ₄	2454	3.09	51.04
Sr				CO ₃	12	0.02	0.40
Fe	TRACE			OH	NIL		
				H ₂ S	NIL		

LOGARITHMIC PATTERN MEQ PER LITER



TOTAL SOLIDS Mg/L

BY EVAPORATION

85070 @ 110°C

BY EVAPORATION

@ 180°C

AT IGNITION

77760

CALCULATED

79300

ORGANIC MATTER: TRACE

SPECIFIC GRAVITY

1.056 @ 60°F

REFRACTIVE INDEX

1.3461 @ 25°C

OBSERVED PH

8.9 @ 70 °F

RESISTIVITY (Ohm/meter)

0.097 @ 25°C

Remarks and Conclusions

Sample as received consisted of colourless water with a trace of sediment.

Continued...

B.P. EXPLORATION CANADA LIMITED

LAB. # F75-1024-1 TOP OF FLUID

RESISTIVITY: 0.172 Ohm/meters @25°C.

Analysis determined on colourless water filtered from muddy water.

LAB. # F75-1024-2 MIDDLE OF FLUID

RESISTIVITY: 0.098 Ohm/meters @25°C

Sample as received consisted of colourless water with a trace of sediment.



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON — FORT ST. JOHN — CALGARY



CONTAINER IDENTITY

— WATER ANALYSIS —

LABORATORY NUMBER

F75-1024-3

OPERATOR NAME AND ADDRESS

B.P. EXPLORATION CANADA LIMITED

SAMPLE LOCATION

WELL OR SAMPLE LOCATION NAME

BP ET AL LOSH LAKE G-22

ELEVATIONS GRD.

948

FIELD OR AREA

LOSH LAKE

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE & NO

DST 2

TEST RECOVERY

SW CUT DRLG. MUD AND SW

TEST INTERVAL OR PERFS

POINT OF SAMPLE

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

3720'-3955'

TOP OF TOOL

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

BBLS/D

OIL

BBLS/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

9/04/75

15/04/75

15/04/75

G.G., C.J.

ION	MG/L	MG%	MEQ/L
Na	28128	35.47	1223.57
K			
Ca	1922	2.42	95.91
Mg	462	0.58	37.98
Ba			
Sr			
Fe	TRACE		

ION	MG/L	MG%	MEQ/L
Cl	46300	58.39	1305.66
Br			
I			
HCO ₃	22	0.03	0.36
SO ₄	2454	3.09	51.04
CO ₃	12	0.02	0.40
OH	NIL		
H ₂ S	NIL		

TOTAL SOLIDS Mg/L

BY EVAPORATION
85070 @ 110°C

BY EVAPORATION
@ 180°C

AT IGNITION
77760

CALCULATED
79300

ORGANIC MATTER: TRACE

SPECIFIC GRAVITY

1.056 @ 60°F

REFRACTIVE INDEX

1.3461 @ 25°C

OBSERVED PH

8.9 @ 70 °F

RESISTIVITY (Ohm/meters)

0.097 @ 25°C

LOGARITHMIC PATTERN MEQ PER LITER

Remarks and Conclusions

Sample as received consisted of colourless water with a trace of sediment.

Continued...

Na

Ca

Mg

Fe

Cl

HCO₃

SO₄

CO₃

B.P. EXPLORATION CANADA LIMITED

LAB. # F75-1024-1 TOP OF FLUID

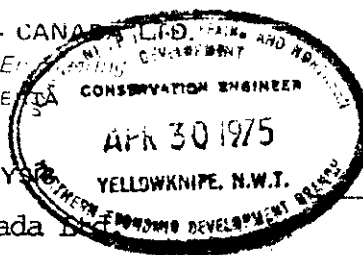
RESISTIVITY: 0.172 Ohm/meters @25°C.

Analysis determined on colourless water filtered from muddy water.

LAB. # F75-1024-2 MIDDLE OF FLUID

RESISTIVITY: 0.098 Ohm/meters @25°C

Sample as received consisted of colourless water with a trace of sediment.



Plastic

WATER ANALYSIS

7021-5517

BP Exploration Canada Inc.

LABORATORY NUMBER
1 of 2

65° 51' 29.00 N.L.
123° 19' 35.00 W.L.

OPERATOR
BP et al Losh Lake G-22

PAGE
948'

Losh Lake Area, Northwest Territories Basal Cretaceous

FIELD OR AREA

WELL OR SAMPLE LOCATION NAME

KB ELEV. SPD. ELEV.

DST #1 830' Water

TEST TYPE & NO.

TEST RECOVERY

Top of Tool

1160' - 1238'

POINT OF SAMPLE

AMT. & TYPE CUSHION

MUD RESISTIVITY @ OF

PUMPING

FLOWING

GAS LIFT

SWAB

WATER

BBLS/D.

OIL

BBLS/D.

GAS

MFC/D.

TEST INTERVALS OR PERCENT

SEPARATOR RESERVOIR

CONTAINER WHEN SAMPLED @ OF

CONTAINER WHEN RECEIVED @ OF

SEPARATOR

PRESSURES, PSIG

TEMPERATURES, °F

April 11/75

April 23/75

L.S.

DATE SAMPLED (D/M/Y)

DATE RECEIVED (D/M/Y)

DATE ANALYSED (D/M/Y)

ANALYST

REMARKS

ION	MG/L	MG%	MEQ/L
Na+K	1890	32.0	82.2
K			
Ca	161	2.7	8.1
Mg	21	0.3	1.7
Ba			
Sr			
Fe	NOT DETECTED		

ION	MG/L	MG%	MEQ/L
Cl	1703	28.9	48.0
Br			
I			
HCO ₃	54	0.9	0.9
SO ₄	2068	35.1	43.1
CO ₃	0	0.0	0.0
OH	0	0.0	0.0
H ₂ S	NOT DETECTED		

TOTAL SOLIDS MG/L

BY EVAPORATION @ 110°C

BY EVAPORATION @ 120°C

5896

AT IGNITION

CALCULATED

1.0050 @ 60°F

1.3327 @ 23°C

SPECIFIC GRAVITY

REFRACTIVE INDEX

7.5

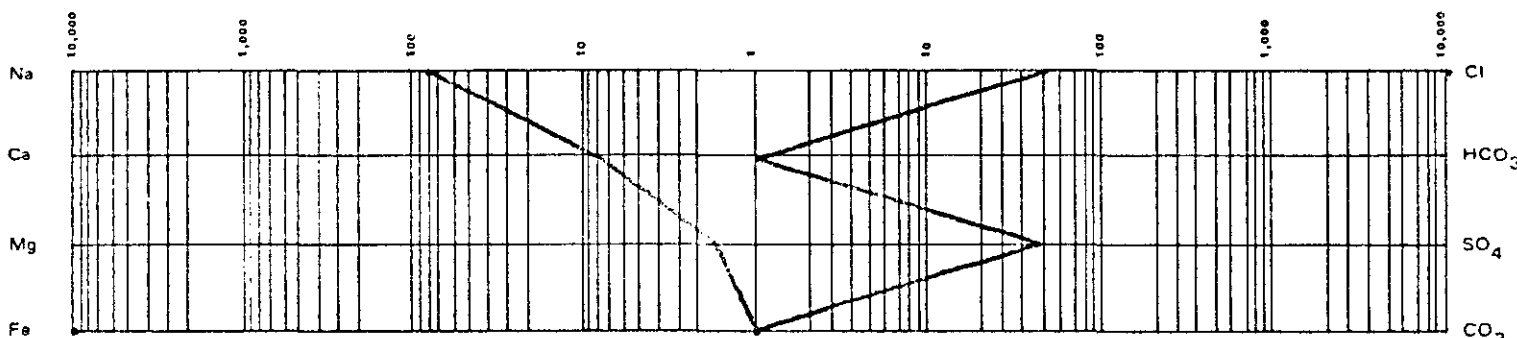
1.22

@ 25°C

pH

RESISTIVITY (OHM/METERS)

LOGARITHMIC PATTERN MEQ PER LITER



REMARKS

NaCl equiv 4835

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
CALGARY ALBERTA

LAB

Plastic

7021-5517

CONTAINER IDENTITY		BP Exploration Canada Ltd.		LABORATORY NUMBER 2 of 2	
65° 51' 29.00 N.L. 123° 19' 35.00 W.L.		BP et al Losh Lake G-22		948'	
LOCATION		WELL OR SAMPLE LOCATION NAME		PAGE	
Losh Lake Area, Northwest Territories		Basal Cretaceous		948'	
FIELD OR AREA		POOL OR ZONE		SAMPLER	
DST #1		830' Water			
TEST TYPE & NO.		TEST RECOVERY			
* See Below					
POINT OF SAMPLE		AMT. & TYPE CUSHION		MUD RESISTIVITY	
1160' - 1238'		PUMPING FLOWING GAS LIFT SWAB			
TEST INTERVALS OR PERFS.		WATER BBLS/D. OIL BBLS/D. GAS MFC/D.			
SEPARATOR RESERVOIR		CONTAINER WHEN SAMPLED		CONTAINER WHEN RECEIVED	
PRESSURES, PSIG		TEMPERATURES, °F			
April 11/75		April 23/75		L.S.	
DATE SAMPLED (D/M/Y)		DATE RECEIVED (D/M/Y)		DATE ANALYSED (D/M/Y)	
				ANALYST	
				REMARKS	

ANALYSIS OF WATER SAMPLES

* Point of Sample	Resistivity (ohm-meters @ 25°C)
Top of Recovery	1.22
Middle of Recovery	1.22