

COHO HOME

SILT LAKE SOUTH 2G-21

9211-C54-1-1



Canada Oil and Gas
Lands Administration

Administration du pétrole
et du gaz des terres du Canada

E.A. # 173

D.A. # 1303

Nova Scotia
Newfoundland
Gulf of St. Lawrence

☐ West Coast
☒ Northern
☐ Hudson Bay

☐ Exploratory
☒ Development
☐ Delineation
Service

8
□
□
□

AUTHORITY TO DRILL A WELL

APPLICATION

This application is submitted with Section 82 of the Canada Oil and Gas Drilling Regulations. When approved under Section 83 of the Regulations, it is the requisite authority for the commencement of drilling operations.

Well Name in Full Coho Home Silt Lake South 20-21
Operator Coho Resources Limited Drilling Program No.
Contractor SDS Drilling - Calgary Permit or Lease No: EA#173
Drilling Rig or Unit #4 Estimated Well Cost \$448,000
Location Unit G Section 21 Grid Area 60-10 - 118-45
Coordinates Lat 60°00'27.906" Long 118°49'22.609"
Area Cameron Hills W. (N.W.T.) Field/Pool Wildcat
Elevation KB 623.02 m (ASL) Grounds 622.02 m (ASL)
Approx Spud Date January 29, 1986 Estimated Days on Location 7
Anticipated Total Depth 400 m KB Target Horizon(s)
UNIT: 3025216010118450

EVALUATION PROGRAM

Ten metre sample intervals Not Required
Five metre sample intervals Surface - Total Depth
Canned sample intervals Not required
Conventional cores at Prospective oil shows. All core to be plastic sleeved.
Logs and Tests DIL, CDL-CNS-GR-CALIPER - 100 m - surface
DIL, CDL-CNS-GR-CALIPER - Total Depth (400m) - Surface casing

CASING AND CEMENTING PROGRAM

O.D.	Weight	Grade	Setting Depth (mFB)	Cementing Program (Volumetric)
177.8 mm	25.30 kg/m	K-55	100 m	2.6 T 0:1:0 "A" + 3% CaCl ₂
114.3 mm	14.14 kg/m	J-55	400 m	T.D. - Surface

B.O.P. Equipment 6" Regan Annular Hydril

Other Information Nitrogen bottle and Baker pump

Signed *KH Lambert*
Date January 7, 1986

Title President
Company Coho Resources Limited

APPROVAL

An approved copy of this notice is to be posted at each wellsite

Signed *L. D. Thomas*
Engineering Branch

Date 23 Jan 86

File 9211-C54-1-1

Department of Energy,
Mines and Resources

Ministère de l'Énergie
des Mines et des Ressources

Department of Indian Affairs
and Northern Development

Ministère des Affaires indiennes
et du Nord canadien

Canada

DRILLING AUTHORITY NO.: 1303

REGION: NORTHERN

WELL BULLETIN
CANADA OIL AND GAS LANDS ADMINISTRATION
ENGINEERING BRANCH

DATE APPROVED: 86 01 23

COMPANY: Coho Resources Limited

E. A. NO.: #173

WELL NAME: Coho Home Silt Lake South 2G-21

LOCATION: UNIT G SECTION 21 GRID: 60-10-118-45

LATITUDE: 60° 00' 27.906" N. LONGITUDE: 118° 49' 22.609" W

UNIQUE WELL IDENTIFIER: 3020216010118450

LATITUDE: 60.00775° N LONGITUDE: 118.82294° W

CLASSIFICATION: Exploratory

ELEVATION: GROUND: 622.02 m K.B.: 623.02 m

APPROVED FINAL DEPTH: 400 m KB

CONTRACTOR: SDS Drilling

RIG NO.: #4

For further information contact

M. D. Thomas

M. D. Thomas, Manager
Northern Region
Engineering Branch

Nova Scotia ☐
Newfoundland ☐
Gulf of St. Lawrence ☐West Coast ☐
Northern ☒
Hudson Bay ☐Well Status
Suspended ☐
Completed ☐
Abandoned ☒

WELL TERMINATION RECORD

This record is submitted in triplicate in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

WELL DATA

Well Name: **Coho Mine Silt Lake South 30-31** Area: **Cameron Mills W. (N.W.T.)**
Grid Area: **60 -10 -118 -43** Field/Pool: **Wildcat**
Permit or Lease No.: **HA #173** Final Coordinates: Lat. **60° 00' 27.906"N** Long **118° 49' 22.609"W**
Drilling Unit: **SDS Drilling Unit #4** Elevations: **625.31m** SFGL: **624.31m**
Spud Date: **86-01-29** Rig Released: **86-02-11** Total Depth: **410m K.B.**

CASING AND CEMENTING

O.D.	Weight	Grade	Depth Set	Cement and Additives
177mm	25.30kg/m	N-40	103.7m KB	3.8 tonnes of 0:1:0
				Class "A" cement + 3% CaCl ₂

PLUGGING PROGRAM

Approval of the following program was obtained by (person) **Mr. Len Monteith** from
(person) **Mr. Ken Singh** of the Canada Oil and Gas Lands Administration by means of
Mobile on **February 9th** 19 **86**

Type of Plug	Interval	Felt	Cement and Additives
Cement (1)	410-310m	Not Felt	2.6t Class "A" 0:1:0
Cement (2)	117- 87m	71m	2.0t Class "A" 0:1:0
Cement (3)	10m- surface	-	.25t Class "A" 0:1:0

Lost Circulation/Overpressure Zones **Not encountered**

Equipment left on Seafloor (Describe):

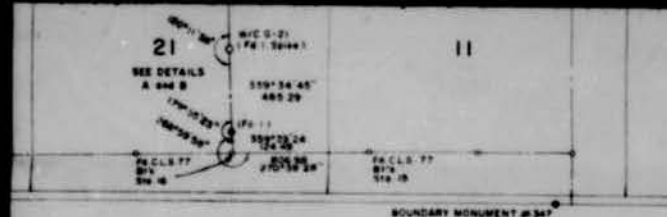
Provision for Re-entry (Describe and attach sketch) **Not anticipated**Cores Type **Wireline** Intervals **Attached**

Other Downhole Completion/Suspension Equipment:

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: *R.J. Tiefenbach* P. Eng
Name: **R.J. Tiefenbach**Title: **Operations Manager**Date: **March 21/86**Acknowledged by: *Ken Singh*
Engineering BranchDate: **June 03, 1986**File: **9211-C54-1-1**



GRID AREA 60° 10', 118° 45'
NORTHWEST TERRITORIES
CANADA OIL AND GAS LAND REGULATIONS

Scale 1:20 000



SURVEYED FOR COHO RESOURCES LIMITED

BY J. MARIE SATRA, C.L.S.

LEGEND

UTM coordinates are computed for Zone 11, Central Meridian 117° W. Bearings were derived from the bearing 91° 38' 12" 77 computed between Boundary Monuments No's 351 and 347 and are referred to Meridian 117° W.

Distances are expressed in metres and decimals thereof. Distances shown in inverse are measured distances reduced to the horizontal at general ground level.

For the computation of coordinates measured distances have been reduced to the UTM plane by multiplying them by an average combined scale factor of 0.9996304. Coordinates were then adjusted to fit the control (Sea Level Factor = 0.9990302; Scale Factor = 0.99972735).

Distances shown on grid area subdivisions are UTM plane. Boundary Monuments found shown thus: Monuments planted shown thus: Traverse lines and stations shown thus: Mar. denotes metal marker post 20m long planted 0.3m W. Elevations were derived from Boundary Monument No. 351, Elev. = 617.32.

Survey was completed prior to drilling, therefore well as drilled may not necessarily agree with proposed location.

Area required = 0.240 ha.

Angles shown are mean of four or more measurements.

I, J. Marie Satra, of the City of Edmonton, Alberta, Canada Lands Surveyor, make oath and say that I have in my own proper person, according to the law and the instructions of the Surveyor General of Canada Lands, faithfully and correctly executed the survey shown by this plan and field notes, and that the said plan and field notes are correct and true to the best of my knowledge and belief.

SO HELP ME GOD

Sworn before me at Edmonton
the 5th day of January, 1986

Canada Lands Surveyor

Commissioner of Oaths in and for
the Province of Alberta
(Antonio Radovanovic - commission expires 16/11/87)

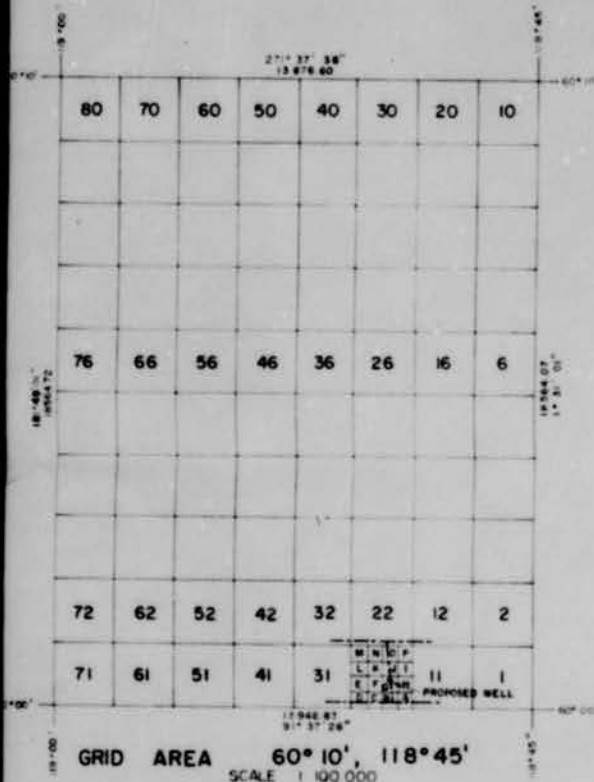
THIS SURVEY WAS EXECUTED DURING THE PERIOD OF
December 27, 1985 TO January 1, 1986

COHO RESOURCES LIMITED

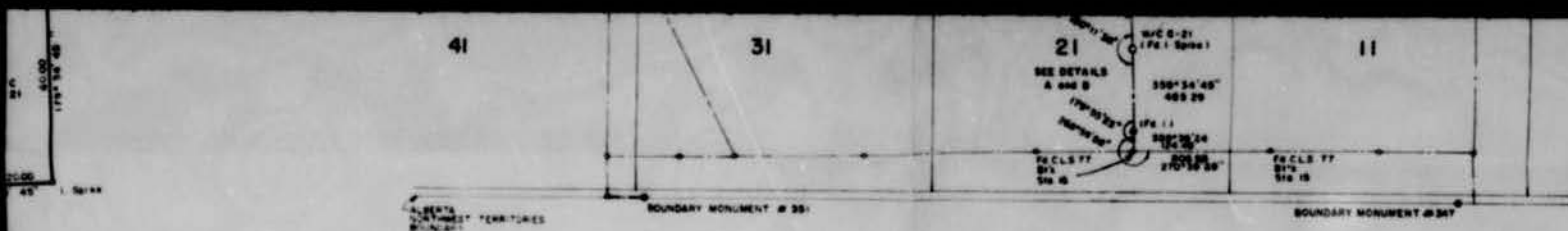
Vice President

Vice President

Etc.



2 of



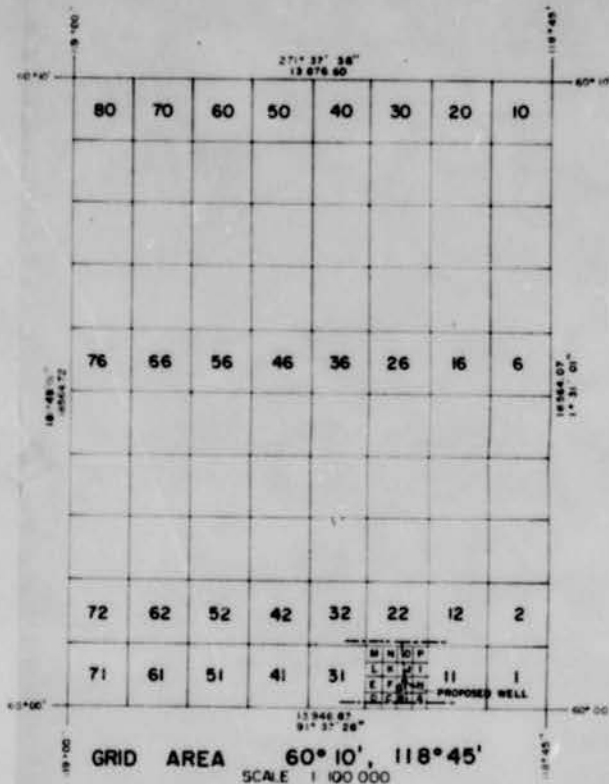
LEGEND

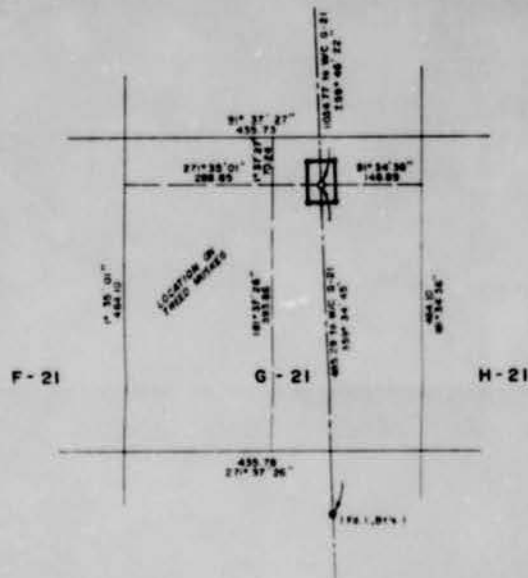
UTM coordinates are computed from the 1927 NAD. Bearings were derived from the Meridian 117° 10' 00" W. Distances are expressed in feet. Distances shown in traverse are the horizontal or ground distances. For the computation of coordinates, the horizontal distances were reduced to the UTM plane by a combined scale factor of 0.999 999 999 to fit the control (Sea Level). Distances shown on grid are the horizontal distances. Boundary Monuments found at the corners of the parcels are shown. Monuments planted shown the traverse lines and stations shown the traverse lines and stations. Elevations were derived from the 1927 NAD. Survey was completed prior to 1927. Area required = 0.240 ha. Angles shown are mean of 1927 and 1983.

GEOGRAPHIC AND UTM COORDINATES (1927 NAD)

STATION	LATITUDE	LONGITUDE	NORTHING	EASTING
CONTROL MONUMENTS				
# 351	59°59' 58" 744	118°52' 26" 796	6 652 646 469	595 470 794
GRID AREA				
NE	60°10'	118°45'	6 671 093 21	402 894 28
NW	60°10'	118°50'	6 671 447 18	389 019 27
SE	60°00'	118°45'	6 652 890 24	388 451 82
SW	60°00'	118°45'	6 652 405 69	402 590 85
O-21 NE	60°00' 15" 172	118°49' 15" 128	6 653 534 71	399 497 42
O-21 NW	60°00' 30" 183	118°49' 41" 255	6 653 547 06	399 061 06
O-21 SE	60°00' 15" 172	118°49' 15" 128	6 653 070 78	399 484 85
O-21 SW	60°00' 15" 183	118°49' 41" 255	6 653 085 18	399 049 04
TRAVERSE STATIONS				
Sta. 16	60°00' 05" 216	118°49' 21" 247	6 652 859 10	399 352 96
Sta. 17	60°00' 12" 236	118°49' 21" 516	6 652 965 11	399 352 22
Sta. 18	60°01' 01" 522	118°49' 24" 716	6 654 503 06	399 344 55
PROPOSED WELL				
W.C. C-21	60°01' 27" 908	118°49' 22" 609	6 653 488 86	399 348 86

COORDINATES ARE BASED ON PROVISIONAL VALUE FOR MONUMENT # 351

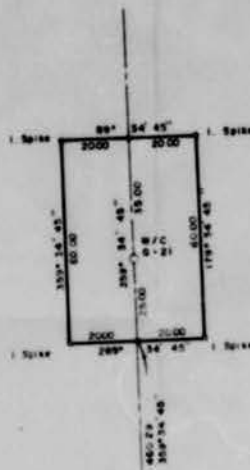




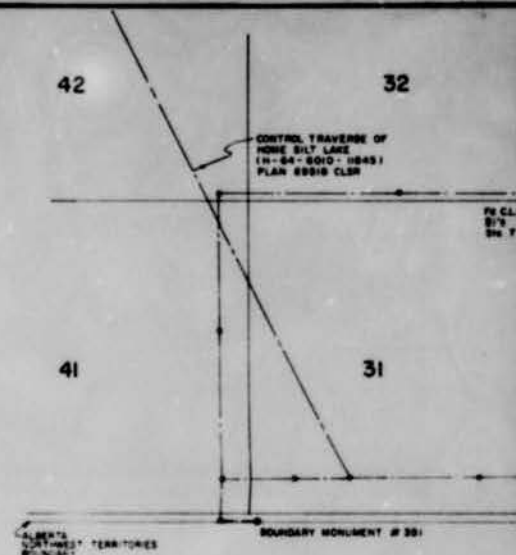
DETAIL A
UNIT G, SECTION 21
SCALE 1:5000

ELEVATIONS:

WELL CENTRE = 622.02
 CORNERS: NE = 622.29
 NW = 622.20
 SE = 621.68
 SW = 621.81



DETAIL B
SCALE 1:1000



GEOGRAPHIC AND UTM COORDINATES (1927 NAD)

STATION	LATITUDE	LONGITUDE	NORTHING	EASTING
CONTROL MONUMENTS				
# 101	59°59' 58" 734	118°52' 24" 786	6 655 646 463	350 470 784
GRID AREA				
NE	60°10'	118°45'	6 671 053 21	402 894 28
NW	60°10'	118°00'	6 671 447 16	359 013 87
SE	60°00'	118°00'	6 658 890 34	358 451 82
SW	60°00'	118°45'	6 658 495 68	402 308 89
G-21 NE	60°30' 50" 172	118°49' 13" 128	6 653 334 71	398 497 42
G-21 NW	60°30' 30" 183	118°49' 41" 253	6 653 847 06	398 081 86
G-21 SE	60°00' 15" 172	118°49' 13" 128	6 653 070 78	398 464 85
G-21 SW	60°30' 15" 183	118°49' 41" 253	6 653 083 13	398 048 04
TRAVERSE STATIONS				

F-21

G-21

H-21

435.75
271° 37' 26"

176.1, 81% 1

DETAIL A
UNIT G, SECTION 21
SCALE 1:5000

ELEVATIONS :

WELL CENTRE = 622.02
 CORNERS : NE = 622.29
 NW = 622.20
 SE = 621.68
 SW = 621.81

DETAIL B
SCALE 1:1000

GEOGRAPHIC AND UTM COORDINATES (1927 NAD)

STATION	LATITUDE	LONGITUDE	NORTHING	EASTING
CONTROL MONUMENTS				
# 151	59°59' 58" 744	118°52' 26" 790	6 552 546 489	395 470 794
GRID AREA				
NE	60° 10'	118° 45'	6 571 053.25	402 884.28
NW	60° 10'	118° 50'	6 571 447.18	389 013.27
SE	60° 00'	118° 50'	6 552 890.34	388 431.62
SW	60° 00'	118° 48'	6 552 495.68	402 392.95
G-21 NE	60°00'30" 172	118°49' 13" 128	6 553 534.71	398 497.42
G-21 NW	60°00'30" 183	118°49' 41" 293	6 553 547.06	398 061.96
G-21 SE	60°00' 13" 172	118°49' 13" 128	6 553 070.78	398 484.65
G-21 SW	60°00' 19" 183	118°49' 41" 293	6 553 063.15	398 049.04
TRAVERSE STATIONS				
T10 16	60°00'08" 218	118°49' 21" 247	6 552 859.10	398 352.98
T2 1 81% 1	60°00'12" 236	118°49' 21" 318	6 552 983.95	398 352.22
T10 8	60°01' 01" 322	118°49' 24" 714	6 554 503.06	398 344.55
PROPOSED WELL				
W/C T-21	60°00'27" 306	118°49' 22" 609	6 553 488.66	398 348.66

COORDINATES ARE BASED ON PROVISIONAL VALUE FOR MONUMENT # 351

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31

ALBERTA
SOUTHWEST
TERMINAL

BOUNDARY MONUMENT # 351

CofC

9211-C54-1-1

FINAL WELL REPORT

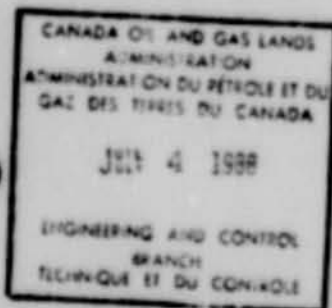
2G-21 WELL

CAMERON HILLS, N.W.T.
(June 23, 1988)

Prepared by
KERI CLARKE

COHO RESOURCES LIMITED

OTTAWA COPY



FINAL WELL REPORT
2G-21 Well

Summary

Coho Home Siltlake South 2G-21 was drilled to evaluate oil shows and log responses from 1-410m as encountered in the 1985 Home G-21 well. The 1985 G-21 well recorded oil show on the shaker screens from surface to 484m. Several sand zones with good SP responses and corresponding high resistivities were noted. Based on these results, a drilling program of up to 5 wells was undertaken just north of the Alberta-N.W.T. border.

A wireline coring rig capable of pulling core on wireline (eliminating the need to trip out of the hole to retrieve core) was contracted from SDS Drilling in Calgary. This wireline capability was considered an important point as the contract called for 150m of core to be cut.

It was hoped that the oil shows and resistive sands indicated from logs would prove to be saturated with heavy oil in a similar manner to the Athabasca Tar Sands or the heavy oil sands at Lloydminster. To evaluate the sands and the depositional environment, cores were cut beginning just above, through, and below the prospective zones as determined from Home G-21.

The type of drilling unit used was a Rotary Gardner Denver 1700 Rig #601-04

Locality Map

See attached map for reference

General Data

- 1) Well Name and Number:
Coho Home Silt Lake S. 2G-21
Grid Area: 60-10'-118-45'
- 2) Well Location:
See well location Survey Plan for details.
Coordinates: Latitude 60 00' 27.906" N
Longitude 118 49' 22.609" W
- 3) Unique Well Identifier:
Not applicable
- 4) Operator and Drilling Contractor:
Operator: Coho Resources Limited
3700, 700 - 2nd Street S.W.
Calgary, Alberta T2P 2W2

Contractor: SDS Drilling
4636 - 1st Street S.E.
Calgary, Alberta T2G 2L3

- 5) Drilling Unit:
Rotary Gardner Denver 1700
- 6) Position Keeping:
Not applicable
- 7) Support Craft:
Not applicable
- 8) Drilling Unit Performance:
Not applicable
- 9) Difficulties and Delays:
Not applicable

Summary of Drilling Operations

- 1) Elevations:
G.L. 623.02m K.B. 625.02m
(Difference 2.0m)
- 2) Total Depth: 400m
Plugged back: 410m
- 3) Date and Hour Spudded:
2100 hours, January 29, 1986
- 4) Date Drilling Completed:
February 9, 1986
- 5) Date of Rig Release:
February 11, 1986
- 6) Well Status:
Abandoned
- 7) Hole Sizes and Depths:
222mm down to 106m
159mm to 410m
- 8) Casing and Cementing Record:
17 joints of 177mm 25.3kg/m J55 ST & C loaded at 103.7m K.B.
Cement with 3.8 T of 0:1:0 Class G and 3% CaCl₂
P.D. 1325 hours February 1, 1986
- 9) Sidetracked Hole:
Not applicable
- 10) Drilling Fluid:
Gel Chemical System
- 11) Fishing Operations:
Not applicable

- 12) Well Kicks:
Not applicable
- 13) Formation Leak-Off Tests (FLOT):
Not applicable
- 14) Time Distribution:
See attached Drilling Reports for information
- 15) Deviation Survey:
Not applicable
- 16) Abandonment Plugs:
Plug #1 410-310m 2.6T of 0:1:0 Class
A cement P.D. 1830 hours February 10, 1986
Plug #2 117-87m 2.0T of 0:1:0 Class A
Cement P.D. 2100 hours February 10, 1986
Plug #3 10m - surface 0.25T of 0:1:0
Class A cement P.D. 0400 hours
February 11, 1986
- 17) Composite Well Record:
Not applicable

Geology

Due to the nature of the operation being shallow and slim hole, a complete drill cutting and core exercise was not conducted. Samples of the drill cuttings were provided at the time of drilling, and a further set is available at Coho's office for further inspection if necessary.

- 1) Drill Cuttings & Cores: - See attached summary
Location of storage for any remaining
Cores - I.S.P.G., Calgary
- 2) Geological Summaries:
See attached summary
- 3) Lithology:
See attached summary
- 4) Stratigraphic Column:
Not applicable

Well Evaluation

- 1) Downhole Logs:
DIL 104.3 to 10.8m - January 31, 1986
CDL-CNS 104.3 to 9.2m - January 31, 1986
DIL/SP 407.8 to 103.7m - February 9, 1986
CDL-CNS-GR 407.8 to 103.7m - February 9, 1986
DI Electric Log 406.3 to 103.7m - February 9, 1986

- 2) Other Logs:
As above
- 3) Velocity Surveys:
Not applicable
- 4) Formation Stimulation:
Not applicable
- 5) Formation and Production Testing:
No testing conducted

Environment Well Report

Not applicable

Appendices to Well History Report

See attached copies of documents for details

DRILL CUTTINGS & CORES

Samples of flowline cuttings were caught at 1 metre intervals while coring in case no core was recovered, and at 1 or 2 metre intervals when drilling zones of interest. The sample and core program is tabulated below:

Depth Interval (m)	Sample Interval (m)	Cored Interval (m)	Core Cut (m)	Core Recovered (m)
0- 30	5	-	-	-
30- 50	2	-	-	-
50- 60	5	59.5- 59.5	-	-
60-140	2	123.1-126.4	3.3	0.5
140-160	5	148.0-262.4	14.4	4.89
160-180	2	176.0-192.2	16.2	3.085
180-204	1	192.5-202.7	10.2	3.21
204-214	2			
214-320	5			
320-334	1	320.0-360.9	40.9	15.18
334-410	2			

TOTAL CUTTINGS SAMPLES CAUGHT AND LOGGED:	177
TOTAL CORE CUT:	85.0m
TOTAL CORE RECOVERED:	26.8m
CORE RECOVERY AS A PERCENTAGE OF CORE CUT:	31.5%

COHO HOME SILTLAKE S 2G-21
SAMPLE DESCRIPTIONS

<u>DEPTH (m)</u>	<u>DESCRIPTION</u>
The glacial deposits to 400m are virtually identical except for the varying composition of the lithic fragments themselves and the percentage of sand that occurs in some paleochannels. Since the composition of the lithic fragments varies only on a small (1-2m) scale and the composition of the fragments is only incidental to the search for oil, sample descriptions will be given only for gross intervals as opposed to each sample looked at.	
0-131	TILLITE; dark grey, clay matrix, plastic when wet, sand varicoloured, quartzose, cherty, coarse to very coarse grained and occasionally granule sized, subrounded to round, poorly sorted (unsorted), unconsolidated, lithic fragments (lithoclasts) of granite, limestone, dolomite, shale, mafic igneous silicates and metamorphic rocks; schists mainly, traces of limonitic shale and limestone. Lithoclasts range in size from medium sand grains to boulders. Limestone lithic fragments, orange-yellow mineral fluorescence, rare brown oil stain, bright yellow fluorescence, slow bleeding cut, common crushed cut. Description includes that taken from core at 123.1-126.4m
131-134	SAND; white, pink, yellow, quartzose, fine to medium grained, angular to subrounded, moderately sorted, friable to consolidated in part (lithic fragments (?)), clean, trace silica (?) and clay cement, several varieties interbedded.
134-136	No returns, cellophane lost circulation material with scattered sand grains.
136-161	TILLITE; dark grey clay matrix, plastic when wet, lithoclasts; quartzose sand grains, granite and granite-derived feldspar, chert, limestone, shale, mafic igneous silicates, dolomite, sandstone and pyrite silt to very fine grained sand and coarse to very coarse grained, subrounded to round poorly sorted (unsorted), unconsolidated, lacks any internal structure or stratification.
161-165	TILLITE; dark grey clay matrix with silt sand and cobble sized quartz grains or chert with lithic fragments dispersed throughout, quartz grains and granitic lithic fragments most

COHO HOME SILTLAKE S 2G-21
SAMPLE DESCRIPTIONS

<u>DEPTH (m)</u>	<u>DESCRIPTION</u>
161-165 cont'd	common with chert, limestone, mafics, shale, metamorphic sandstone, dolomite and pyrite as the other lithoclasts. This interval interpreted as a boulder or cobble horizon due to the low Rate of Penetration and excessive rig bounce while drilling this interval.
165-308	TILLITE: dark grey clay matrix, compact, water sensitive, becoming plastic when wet, lithoclasts of granite, chert, quartz sand grains, limestone, shale, mafics, metamorphics, with traces of dolomite, no stain, fluorescence or cut excepting the limestone erratics with bright yellow fluorescence, rare slow bleeding yellow cut or occasional crushed yellow cut.
308-400	TILLITE: dark grey clay matrix with lenses of clean, varicoloured medium to coarse and very coarse grained quartzose sand, round, moderately sorted, unconsolidated, no stain, fluorescence or cut, probably water-wet with interpreted porosities of 30% or greater.
400-410	SHALE; grey to black, fine texture, subfissile to mainly fissile, firm. Cretaceous in age.

FORMATION TOPS

KB 625.02m

<u>FORMATION</u>	<u>SAMPLE</u>		<u>LOG</u>	
	<u>DEPTH (m)</u>	<u>SUBSEA (m)</u>	<u>DEPTH (m)</u>	<u>SUBSEA (m)</u>
Pleistocene	0	0	-	-
Cretaceous	400	+225	398.5	226.5m

COHO HOME SILTLAKE S 2G-21CORE RECOVERYRIG #4

Run	Interval	Cut (m)	Time	Recov- ery (m)	Remarks
<u>CORE #1</u>					
1					Attempted core @ 59.5m, hole bridged off @ 5m, POOH
<u>CORE #2</u>					
2	123.1-124.1	1.0	3.5	0.5	TILLITE: clay, dk gy, hd, slt-sd, lithic fragments. Pull bit & inspect, rec. 0.5m/ 3/3m cut
3	124.1-125.9	1.8	3.0	0.0	
4	125.9-126.4	0.5	3.5	0.0	
<u>CORE #3</u>					
5	148.0-150.5	2.5	7	0.24	TILLITE: most sample lost due to rocks jamming off in barrel recoveries of tillite with lithic fragment, silt, sand and rocks
6	150.5-153.5	3.0	5	0.30	
7	153.5-155.0	1.5	5	0.85	
8	155.0-156.4	1.4	3.5	0.26	
9	156.4-159.4	3.0	9.	1.83	
10	159.4-162.4	3.0	15	1.41	Recovered 4.89/14.4 cut
<u>CORE #4</u>					
11	176.0-178.8	2.8	17	0.00	1 rock Some sand in bbl. TILLITE TILLITE TILLITE TILLITE, rec. 3.085/16.2 cut
12	178.8-180.8	2.0	4	0.00	
13	180.8-182.8	3.0	3	0.00	
14	183.8-185.3	1.5	1.5	0.00	
15	185.3-186.9	1.6	5	0.185	
16	186.9-189.9	3.0	10	0.38	
17	189.9-191.4	1.5	7	1.70	
18	191.4-192.2	0.8	4.5	0.82	
	Drill 0.3m				
<u>CORE #5</u>					
19	192.5-194.5	2.0	6	1.01	Sand (no fluor) gravel/clay
20	194.5-196.5	2.0	16	0.30	TILLITE
21	196.5-199.1	2.6	90	0.55	TILLITE
22	199.1-201.1	2.0	30	1.20	TILLITE
23	201.1-202.7	1.6	35	0.15	TILLITE, rec. 3.21/10.2 cut

Run	Interval	Cut (m)	Time	Recovery (m)	Remarks
<u>CORE #6</u>					
24	320.0-321.1	1.1	3	0.18	TILLITE: clay, gy, gran lithic
25	321.1-323.1	2.0	8	1.5	fragments
26	323.1-325.1	2.0	12	0.0	As above
27	325.1-326.1	1.0	5	3.0	As above
28	326.1-327.2	1.1	9	0.85	As above
29	327.2-330.2	3.0	10	2.80	As above
30	330.2-333.2	3.1	9	0.75	As above
31	333.2-333.5	0.3	1	0.0	
32	333.5-335.5	2.0	3	0.25	As above
33	335.5-337.5	2.0	2	0.10	As above
34	337.5-339.4	1.9	2	0.0	
35	339.4-342.4	3.0	11	1.1	As above
36	342.4-344.6	2.2	10	0.60	As above
37	344.6-345.5	0.9	18	0.85	As above
38	345.5-348.5	3.0	5	1.8	As above
39	348.5-350.5	2.0	11	0.8	As above
40	350.5-351.6	1.1	40	0.15	As above
41	351.6-353.6	2.0	9	0.0	
42	353.6-354.6	1.0	3	0.0	
43	354.6-355.6	1.0	3	0.05	Chert cobble + 4x3 cm gran.
44	355.6-357.7	2.1	65	0.0	rocks
45	357.7-360.7	3.0	9	0.4	9 cobble sized ign. rocks
46	360.7-360.9	0.2	40	0.0	Rec. 15.18/40.9 cut

Total recovered - 26.87m

Total cut 85.0m

Recovered 32%

GEOLOGICAL SUMMARY

Coho Home Siltlake South 2G-21 penetrated glacial till (tillite) to a depth of 400m where Cretaceous grey shales were encountered. Drilling was completed at 400m.

The Tillite was composed of dark grey with quartzose silt, sand and pebble, cobble and boulder size lithic fragments scattered throughout in a random distribution. Water-wet unconsolidated fine grained quartzose sands occurred sporadically throughout the section, but no core was obtained from these intervals. Samples obtained while coring the sands indicate that lithic fragments may be found even in the sands. Porosities within the sands would appear to be in the 30% range due to their unconsolidated nature. It is unclear how much (if any) clay matrix remains in the sands as wireline logs indicate that the sands are not as clean as they appear in samples.

The Cretaceous shales are dark grey to black, finely textured, occasionally subfissile, but usually fissile, and firm.

The Pleistocene-Cretaceous contact may actually occur as shallow as 397m as that is the base of sand which may represent some form of a basal lag above the unconformity.

When drilling from 397 to 400 metres, the Rate of Penetration dropped dramatically to 40 minutes per metre at 398m, but this was interpreted as the bit drilling on boulders due to the noticeable rig bounce. At 400m, the Smith F2 bottom bit was pulled due to low Rate of Penetration and was found to be balled up with a very fine subwaxy clay which was almost mylonitic in texture. This was interpreted as glacial scour of the underlying Cretaceous shales.

Oil shows were noted from surface to 400m, derived from the medium brown oil stained limestone erratics. The limestone is buff to white, cryptocrystalline, dense and occasionally bioclastic in part. Light to medium brown oil stain is occasionally noted in samples (and nearly always when oil-bearing). Fluorescence is bright yellow to lime-yellow, commonly with a slow bleeding cut, rarely with instant streaming cut, commonly with a crushed cut. One single piece of tarry oil stained sand was noted at 128m, but no further samples were obtained until 136-138m, due to lost circulation.



CONO HOME SILT LAKE SOUTH 2C-21

LATITUDE 60-00-27

LONGITUDE 118-49-22

HEAVY OIL ANALYSIS REPORT

prepared for
CONO RESOURCES LTD.

File 86-GC-200

March 07, 1986

GEOTECHnical resources ltd.

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128
TELEX 03-825879

PAGE: 1

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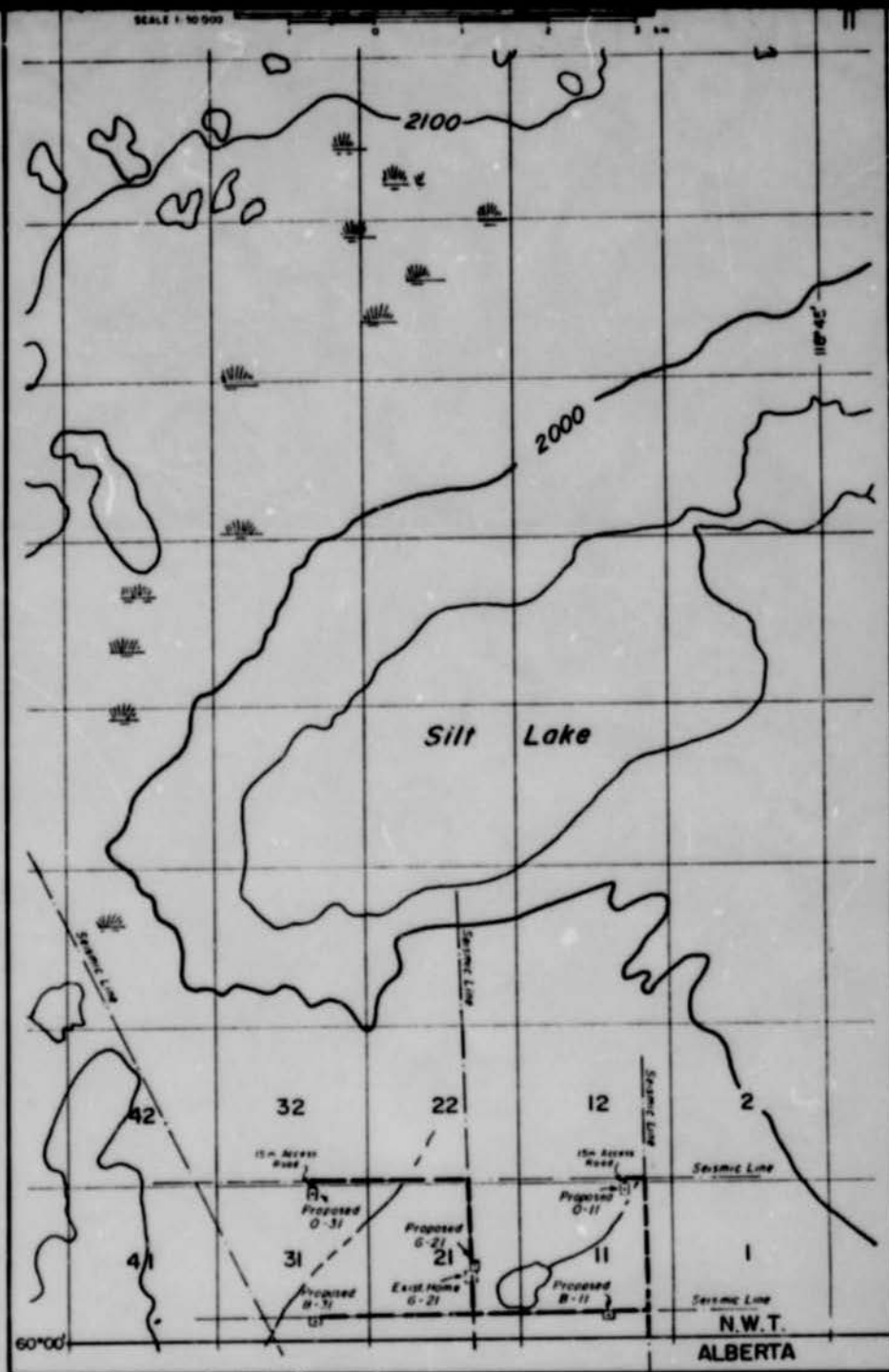
ROAD WIDTH 8 m.
ROAD LENGTH 9.4 km
AREA REQ'D 7.52 ha

WELL SITE 60 x 40 m
AREA REQ'D. 1.20 ha

SCALE 1: 50 000

2004, 2005, 2006





2 of 2

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OFFICIAL DAILY DRILLING REPORT FORM

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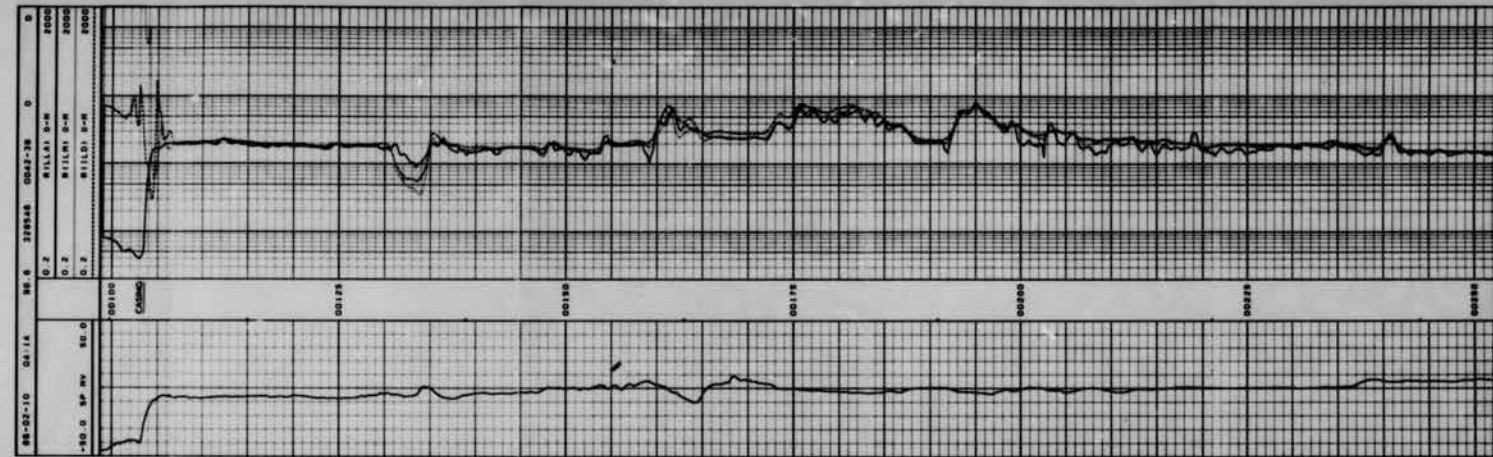
LEADS ☐ **TRAFFIC REPORT** ☐ **NOTES TO THE REPORTING OFFICE**

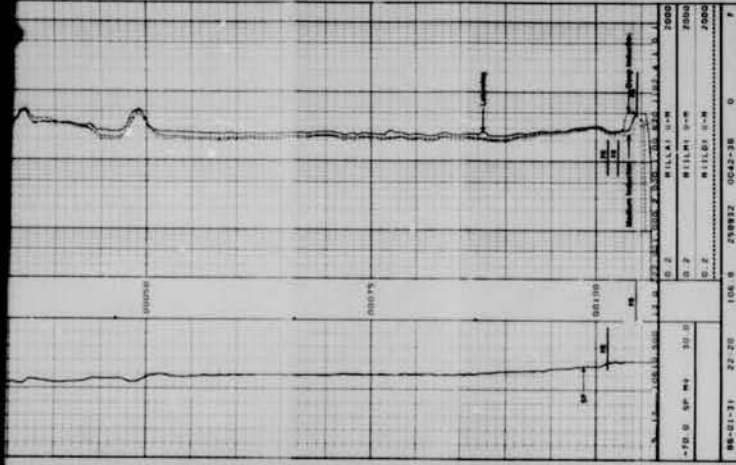
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 2. ☐ I am a faculty member of the University of the Pacific
 3. ☐ I am a staff member of the University of the Pacific
 4. ☐ I am a member of the University of the Pacific
 5. ☐ I am a graduate of the University of the Pacific
 6. ☐ I am a former student of the University of the Pacific
 7. ☐ I am a former faculty member of the University of the Pacific
 8. ☐ I am a former staff member of the University of the Pacific
 9. ☐ I am a former member of the University of the Pacific
 10. ☐ I am a former graduate of the University of the Pacific
 11. ☐ I am a former former student of the University of the Pacific
 12. ☐ I am a former former faculty member of the University of the Pacific
 13. ☐ I am a former former staff member of the University of the Pacific
 14. ☐ I am a former former member of the University of the Pacific
 15. ☐ I am a former former graduate of the University of the Pacific

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COMPUTALOG

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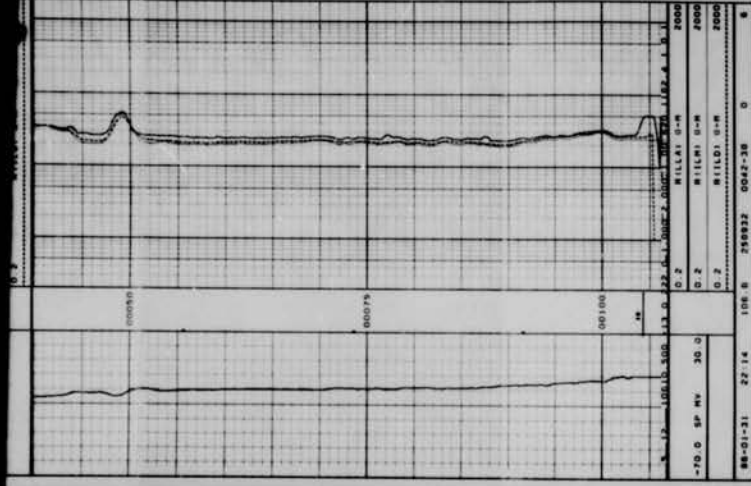




REPEAT SECTION



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DUAL INDUCTION AFTER SURVEY TOOL CHECK						
ILD ILM LL RES LL COND	READ		CAL		UNITS	
	BEFORE	AFTER	BEFORE	AFTER	MMHO-M	
	0.0	0.1	402.8	404.5	MMHO-M	
	0.0	-0.3	471.6	474.5	MMHO-M	
	20.0	20.0	1500.0	1501.2	OHM-M	
LL COND		0.261	0.266	20.0	20.0	OHM-M
LL SONDE ERROR CORRECTION 2.4 MMHO-M						
ILM SONDE ERROR CORRECTION 3.0 MMHO-M						
86-01-31	21-07	8.0	258932	0042-30	0	0
DUAL INDUCTION BEFORE SURVEY CALIBRATION						
MEASURED			CALIBRATED			



86-01-31	22-27	0 0	256322	0042-33	0	9
DUAL INDUCTION AFTER SURVEY TOOL CHECK						
				CAL		
	BEFORE	AFTER		BEFORE	AFTER	UNITS
ILD	0 0	0 1		402 8	404 5	MHO/M
ILM	0 0	-0 3		471 6	474 5	MHO/M
LL RES	29 0	29 0		1500 0	1501 2	DHR-M
LL COND.	0.263	0.266		20 0	20 0	DHR-M
ILD SONDE ERROR CORRECTION: 2.4 MHO/M						
ILM SONDE ERROR CORRECTION: 3.0 MHO/M						

86-01-31	21-07	6.6	259932	0042-38	0	0
DUAL INDUCTION BEFORE SURVEY CALIBRATION						
	MEASURED		CALIBRATED		UNITS	
	ZERO	CAL	ZERO	CAL		
ILD	0.9	404.4	0.0	402.8	MMHO/M	
ILW	5.4	489.8	0.0	471.8	MMHO/M	
LL RES	12	1425.0	20.0	1500.0	OHMM	
LL COND	0.264	19.7	0.267	20.0	OHMM	
ILD SONDE ERROR CORRECTION: 2.4 MMHO/M						
ILW SONDE ERROR CORRECTION: 3.8 MMHO/M						

88-01-07		11:31	2.0	0	0042-36	0	0
DUAL INDUCTION SHOP CALIBRATION							
DATE PERFORMED: 88-01-07				TOOL NO: 94002			
TEST LOOP CALIBRATION				INTERNAL CALIBRATION			
MEASURED		CALIBRATED		MEASURED		CALIBRATED	
ZERO	CAL	ZERO	CAL	ZERO	CAL	ZERO	CAL
IL0	-4.0	399.3	0.0	400.0	-1.4	404.7	0.0
ILM	-2.2	459.3	0.0	464.0	1.3	470.7	0.0
IL0 SENSE ERROR CORRECTION: 2.4 MMHO/M				ILM SENSE ERROR CORRECTION: 3.8 MMHO/M			

COMPANY		NAME		ADDRESS		CITY		STATE		ZIP	
NAME		ADDRESS		CITY		STATE		ZIP		COUNTRY	
PHONE		FAX		E-MAIL		WEBSITE		TELEPHONE		FACSIMILE	



2 of



125	CAL Y (MM) 375		80	#ICMS-SD1
86-01-31	23.32	106.8	258932	0047-46 0 0 2

REPEAT SECTION



304

86-01-14	14.34	0.0	0	0047-46 0 0 0
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GAMMA RAY BEFORE SURVEY CALIBRATION				
TOOL TYPE: GRT-MA SERIAL NO: 03141				
BACKGROUND	CALIBRATION	STANDARD	UNITS	
271.0	744.8	940.0	9401	
DELTA COUNTS PER SEC: 473.8 CPS/API = 2.385				

86-01-14	13.19	0.0	0	0047-46 0 0 0
----------	-------	-----	---	---------------

CALIPER BEFORE SURVEY CALIBRATION				
TOOL TYPE: CDT-8A SERIAL NO: 02248				
MEASURED	CALIBRATED			
SMALL LARGE	SMALL LARGE	UNITS	UNITS	
CALC 191.6 334.5	MM 177.8 355.8	MM	MM	

86-01-14	13.22	0.0	0	0047-46 0 0 0
----------	-------	-----	---	---------------

CALIPER BEFORE SURVEY CALIBRATION				
TOOL TYPE: CNT-8A SERIAL NO: 09512				
MEASURED	CALIBRATED			
SMALL LARGE	SMALL LARGE	UNITS	UNITS	
CALC 199.1 373.4	MM 177.8 355.8	MM	MM	

86-01-14	14.39	0.0	0	0047-46 0 0 0
----------	-------	-----	---	---------------

COMPENSATED NEUTRON SHOP CALIBRATION				
TOOL TYPE: CNT-8A SERIAL NO: 08512				
VERIFIER NO: 00089 SOURCE NO: 06040				
TANK RATIO:	LQU - #	HEO - #	HIGH - #	UNITS
TANK POROSITY:	0.560	0.927	1.263	SS/LS
LS DETECTOR	885.5	393.8	181.7	LM-PU
SS DETECTOR	884.0	317.7	198.2	CPS
TOOL RATIO:	0.972	0.807	1.213	SS/LS
TOOL POROSITY:	3.61	13.62	32.09	LM-PU

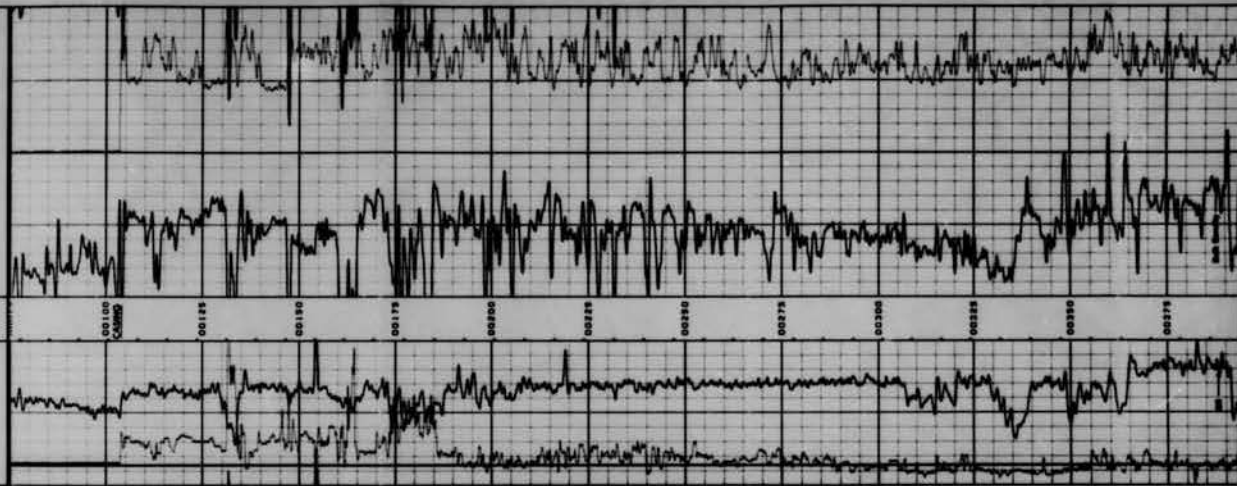
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9211-654-1-1

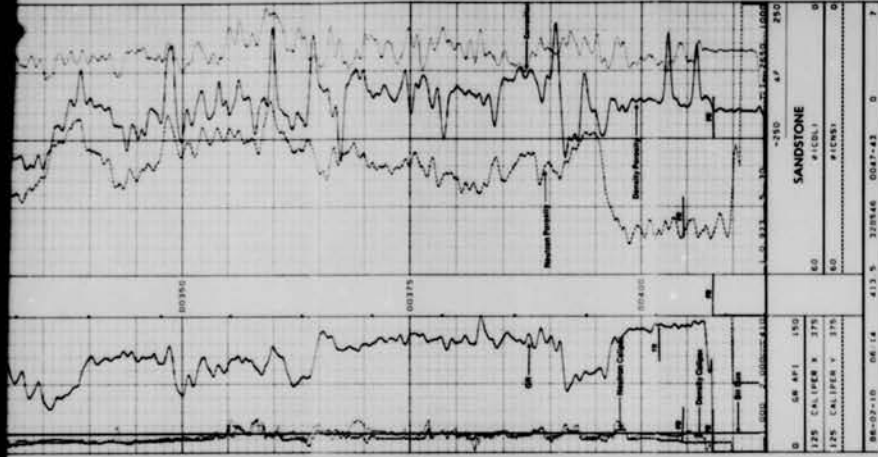
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WELL TYPE		WELL STATUS		WELL DATE		WELL TIME		WELL LOCATION		WELL LOCATION	

WELL NAME		WELL TYPE		WELL STATUS		WELL DATE		WELL TIME		WELL LOCATION	
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0	GR API	150
125	CAL IPER	375

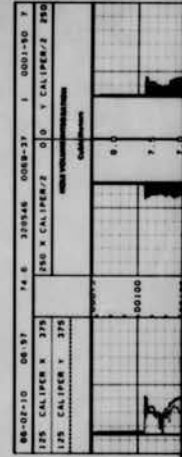
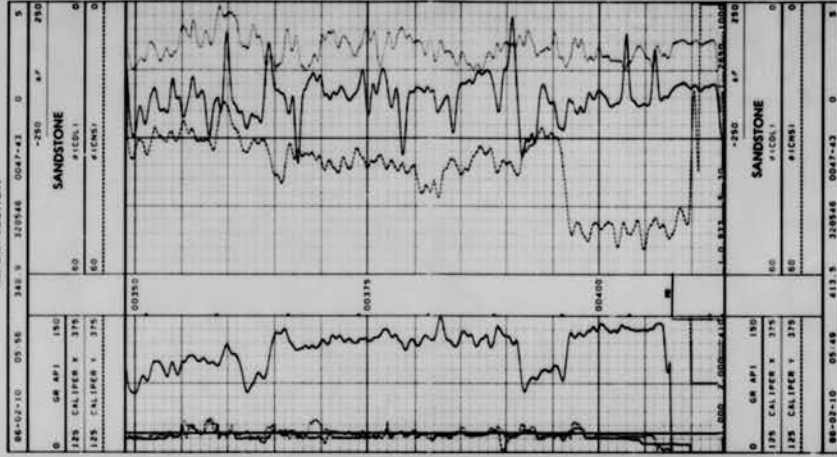


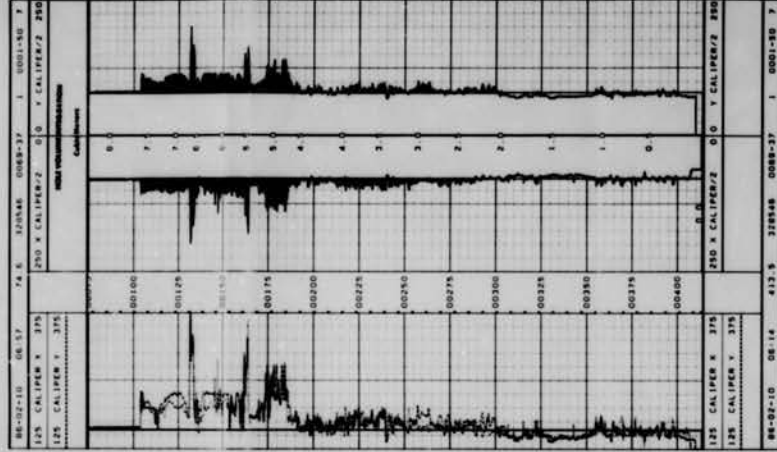
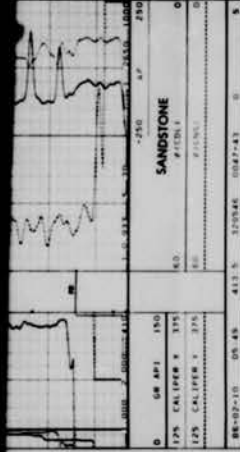




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REPEAT SECTION



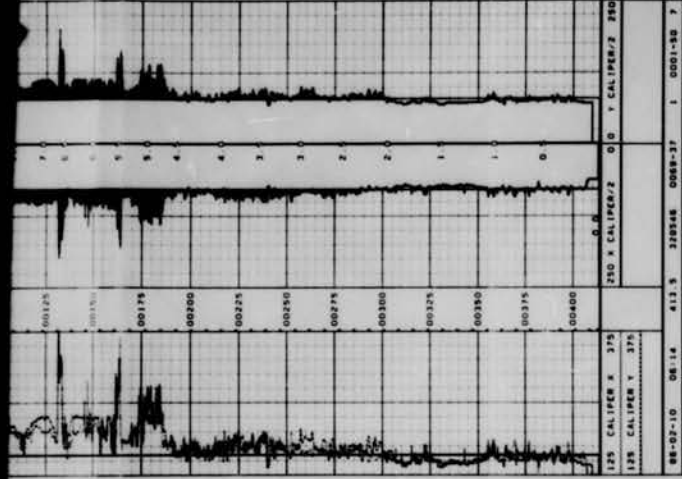


86-02-10	07:25	12.3	328546	0047-43	0	0
SANDRA RAY						
BACKGROUND CALIBRATION STANDARD UNITS						
254.1 700.3 140.0 GAPI						
DELTA COUNTS PER SEC. 454.2 CPS/API = 2.244						

86-02-10	07:25	12.3	328546	0047-43	0	0
CALIPER						
MEASURED CALIBRATED						
SMALL LARGE UNITS SMALL LARGE UNITS						
CAL X 3838 7534 MV 177.8 355.8 MM						
CAL Y 2849 6137 MV 177.8 355.8 MM						

86-02-10	07:25	12.3	328546	0047-43	0	0
COMPENSATED NEUTRON SHOP CALIBRATION						
PROGRAM NO: 03-0047-43						
TOOL TYPE: CNT-BA						
DATE PERFORMED: 86-01-29						
NEUTRON DETECTOR						
TANK RATIO: 0.574 MED - # HIGH - # UNITS						
TANK POROSITY: 3.14 0.842 1.328 55/LS						
LS DETECTOR 991.7 358.5 150.8 CPS						
SS DETECTOR 991.7 324.6 202.7 CPS						
TOOL RATIO: 0.802 1.345 55/LS						
TOOL POROSITY: 2.69 14.31 32.82 LM-PU						
TOOL CONSTANT: 0.933						
SURFACE TEMPERATURE: 22° C						
DEPTH: 0.0 M						
BIT SIZE: 188.9 MM						
FIELD STANDARD						
SS DETECTOR LS DETECTOR RATIO POROSITY						
201.2 CPS 228.3 CPS 0.881 13.48						

86-02-10	07:25	12.3	328546	0047-43	0	0
COMPENSATED DENSITY SHOP CALIBRATION						
DATE PERFORMED: 86-01-29						
DENSITY DETECTOR						



88-02-10	07.25	12.3	228546	0047-43	0	0
GAMMA RAY						
BACKGROUND		CALIBRATION		STANDARD		UNITS
254.1		700.3		140.0		SAPI
DELTA COUNTS PER SEC: 454.2				CPS/API = 3.244		

88-02-10	07.25	12.3	328546	0047-43	0	0
CALIPER						
MEASURED UNITS						
SMALL	LARGE	UNITS	CALIBRATED	SMALL	LARGE	UNITS
2030	7534	MV	177.0	355.8	MM	MM
2649	6157	MV	177.0	355.8	MM	MM

88-02-10	07.25	12.3	328546	0047-43	0	0
COMPENSATED NEUTRON SHOP CALIBRATION						
PROGRAM NO: 03-0047-43						
TOOL TYPE: CNT-8A						
DATE PERFORMED: 88-01-29						

NEUTRON DETECTOR						
LOW - #	MED - #	HIGH - #	UNITS			
TANK RATIO: 0.574	0.842	1.229	SS-LS			
TANK POROSITY: 3.14	14.31	31.42	LM-PU			
LS DETECTOR 981.7	359.5	150.6	CPS			
SS DETECTOR 591.7	324.6	202.7	CPS			
TOOL RATIO: 0.602	0.802	1.348	SS/LS			
TOOL POROSITY: 2.89	14.31	32.82	LM-PU			

TOOL CONSTANT: 0.933						
SURFACE TEMPERATURE: 22° C						
DEPTH: 0.0 M						
BIT SIZE: 189.8 MM						

FIELD STANDARD						
SS DETECTOR	LS DETECTOR	RATIO	POROSITY			
201.2 CPS	228.2 CPS	0.881	13.48			

88-02-10	07.25	12.3	328546	0047-43	0	0
COMPENSATED DENSITY SHOP CALIBRATION						
DATE PERFORMED: 88-01-29						
DENSITY DETECTOR						
MAG SLICPSI		ALUM BLKICPSI		SPINE	DEM/SPINE	
1373.3		312.8		ANGLE	RATIO	
LS DETECTOR		686.3		75	0.576	
SS DETECTOR		477.5				

COMPANY: CONCRETE CONCRETE

WELL: CONCRETE CONCRETE

FIELD: CONCRETE CONCRETE

PROVINCE: CONCRETE CONCRETE

DATE: 01-29-88

TIME: 07:25

DEPTH: 0.0

BIT SIZE: 189.8

TOOL TYPE: CNT-8A

DATE PERFORMED: 88-01-29

PROGRAM NO: 03-0047-43

TOOL CONSTANT: 0.933

SURFACE TEMPERATURE: 22° C

DEPTH: 0.0 M

BIT SIZE: 189.8 MM

FIELD STANDARD

SS DETECTOR: 201.2 CPS

LS DETECTOR: 228.2 CPS

RATIO: 0.881

POROSITY: 13.48

DENSITY DETECTOR

MAG SLICPSI: 1373.3

ALUM BLKICPSI: 312.8

SPINE: 75

DEM/SPINE: 0.576

SS DETECTOR: 686.3

477.5

COMPUTALOG

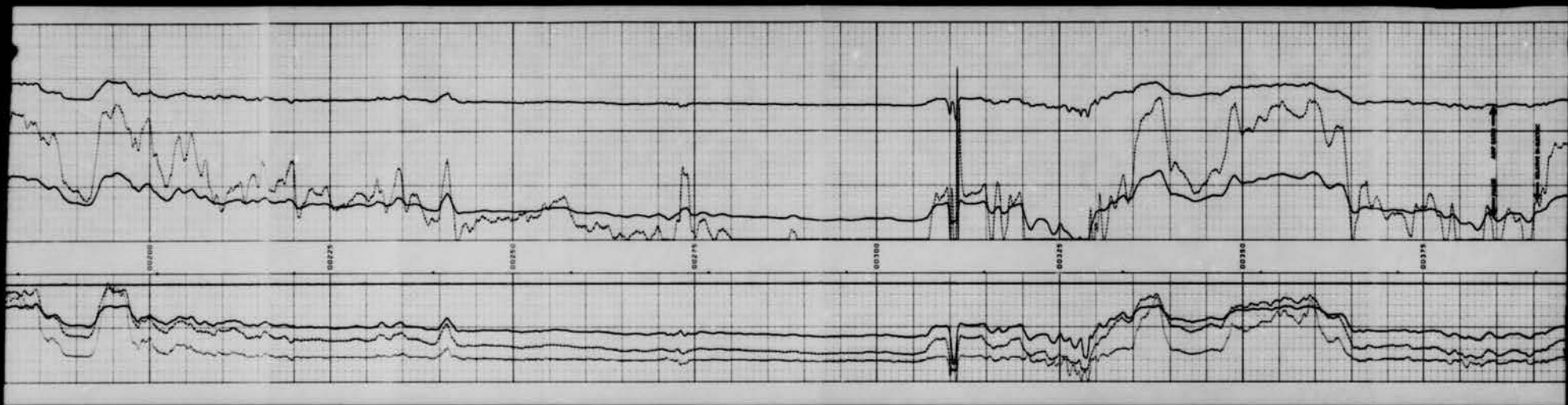
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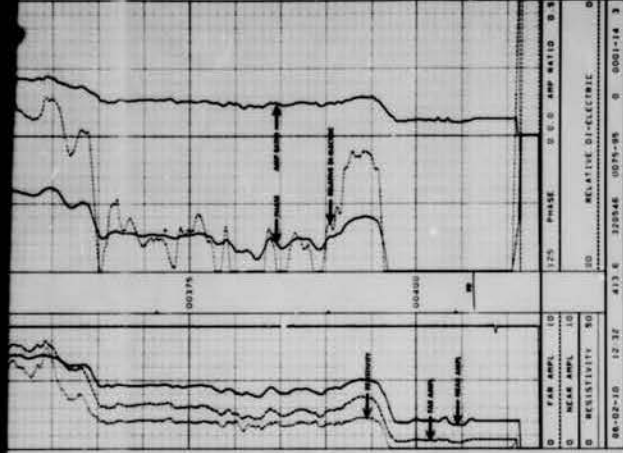
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WELL LOG		WELL LOG		WELL LOG		WELL LOG		WELL LOG	

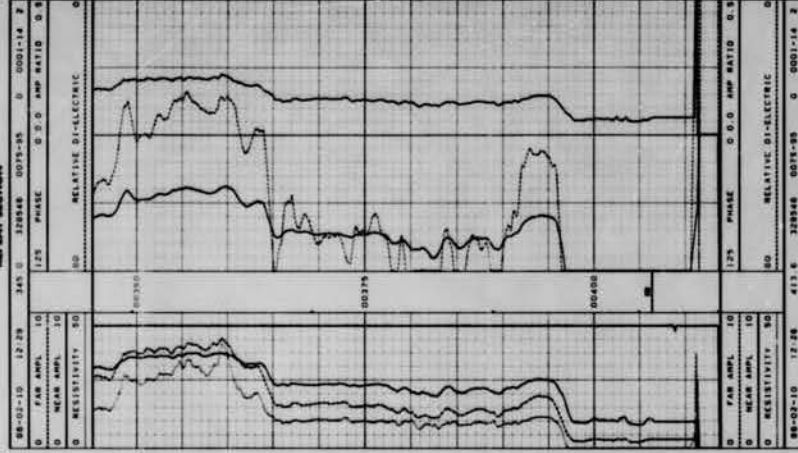
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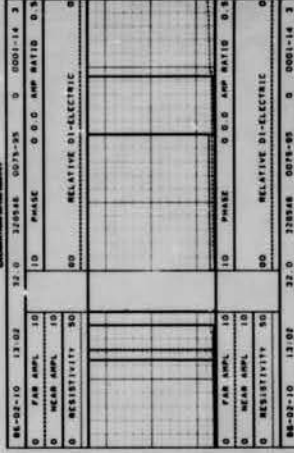




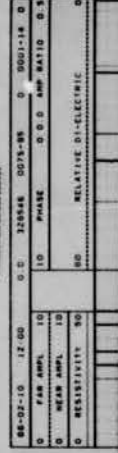
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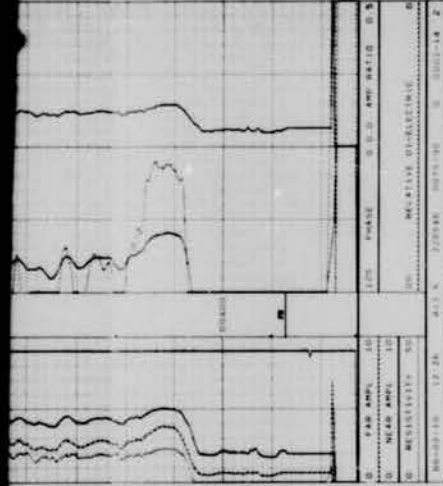


CALIBRATION JUNE 1997



CALIBRATION JUNE 1997





CO-MAGNETIC AFTER SUBJECT

86-02-10	12:00	32.0	32048	0075-95	0	0001-14	3
0	FAR AMPL	10					
0	NEAR AMPL	10					
0	RESISTIVITY	50					
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
86-02-10	12:00	32.0	32048	0075-95	0	0001-14	3

CALIBRATION BEFORE SUBJECT

86-02-10	12:00	32.0	32048	0075-95	0	0001-14	3
0	FAR AMPL	10					
0	NEAR AMPL	10					
0	RESISTIVITY	50					
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
86-02-10	12:00	32.0	32048	0075-95	0	0001-14	3

86-02-10	11:57	32.0	32048	0075-95	0	0001-14	3
0	FAR AMPL	10					
0	NEAR AMPL	10					
0	RESISTIVITY	50					
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
10	PHASE	0.0.0	AMP RATIO	0.5			
80	RELATIVE DI-ELECTRIC						
86-02-10	11:57	32.0	32048	0075-95	0	0001-14	3

COMPANY

DATE

TIME

LOCATION

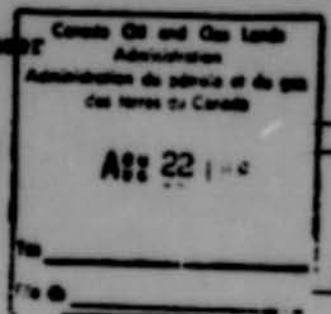
PROVINCE

COMPUTALOG

100-100

TO: Paul Simard
Supervising Liaison Engineer
COGLA
Ottawa, Ontario

FROM: Manager, Northern Region
Engineering Branch
COGLA
Yellowknife, N.W.T.



SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N / RÉFÉRENCE
D.A. 1303
YOUR FILE - V / RÉFÉRENCE
9211-C54-1-1
DATE
88-08-19

SUBJECT: Coho Home Silt Lake South 20-21
20-21 60-10-118-45

The Final Well Report for the above well has been reviewed by this office and the following discrepancies were noted:

- The Unique Well Identifier (302G216010118450) should be entered in the report.
- The elevations do not correspond with the Well Termination Record. The Well Termination Record indicates: 625.31 m K.B., 624.31 m G.L. and the Final Well Report indicates: 625.02 m K.B., 623.02 m G.L.
- The total depth of 400 m is incorrect and should be corrected to 410 m K.B.
- The plugged back depth is not applicable as the correct plug back depths are shown on the plugs that were run.
- The type of casing used does not correspond with the information on the Final Well Report and the Well Termination Record. The Well Termination Record indicates a H-40 type casing, the Final Well Report indicates a J-55 type casing and the tour sheets show a K-55 type casing.
- There is not time distribution table in the report that should indicate the total hours for each type of operation.

M. D. Thomas

Maurice D. Thomas

BK/jr