

CANSO ET AL GRUMBLER J-13

Drilling Authority No. 411
Date issued 30 January 1970

WELZ NAME Canso et al Grumbler J-13

FIELD	Area:	13	Grid	60-20-116-15
LOCATION: Unit	J	Section		
Latitude	60-12-43	Longitude	116-17-40	
U.W.L.R.	60.21194 — 116.29444			
U.W.I.	300136020116150			

Rig Release Date:

Status:

Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
30-1-70	Application for a Drilling Authority.
	Well Completion Data.
	Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
1/4/70	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well.
	Well History Supplement.
24/3/70	Well Completion Data.
	Work-over Report No.
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells - Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells - Vitter's Method.
	M.P.R. - Oil - Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale..... Small scale.....



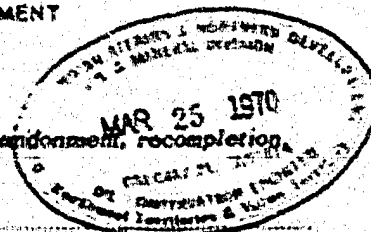
Drilling Authority No. 414

Date Issued January 30, 1970

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion, or suspension of every well.



Well name and number Canso et al Grumbler J-13

Permit No. 4588

Lease No.

Canadian Superior Oil Ltd.
(Permittee, Licensee, Lessee)

Exploratory Licence No. 1248

United Canso Oil & Gas Ltd.
(Operator)

Exploratory Licence No. 1232

Location: Unit J Section 13 Grid 60° 20' N, 116° 15' W

Latitude 60° 12' 43" Longitude 116° 17' 40"

From Established Reference Marker Shot Point #32, Line C-34

Universal Well Location Reference Lat. 60.21194° N, Long. 116.29444° W

	DATE	DEPTH	Pool(s)
			Interval(s) open to production
Spudded	Feb. 23/70		
Suspended			
Resumed Operations			
Finished Drilling	Mar. 7/70	2850' Driller 2854' Logger	
Deepened			Elevation: Gr. 967' K.B. 978'
Complete (gas/oil)			Rig No. 2
Abandoned	Mar. 12/70		Drilling Contractor Tri-City Drilling (1968) Ltd.
Rig released	Mar. 12/70		Contractor's Business Licence No. 0675

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at	Sacks of Cement and Additives
1. 9-5/8"	H-40	32.3	11 jts.	321'	150 sacks + 2% CaCl ₂ . No return
2.					Re-cemented with 170 sacks +
3.					3% CaCl ₂ , pumped down 1" pipe.
4.					Found top at 90'. Mixed 6-bbl
5.					diesel-gel cement plug and
6.					pumped down 1" pipe. Found
					top at 50'. Cemented with
					*50 sacks cement through 1"
					pipe* (+5% gel + 2% CaCl ₂)
					Good returns to surface.

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Surface	From	To	Rec.	From	To	Rec.
Slave Point	1735'	- 757'	None Cat.					
Ft. Vermilion	1872'	- 894'						
Watt Mountain	1940'	- 962'						
Sulfur Point	1945'	- 967'						
Miskeg	2135'	-1157'						
Keg River	2157'	-1179'	LOG RECORD					
Lower Keg River	2532'	-1554'						
Chincha	2623'	-1645'	Run No.	Type of Log		From	To	
Red Beds	2756'	-1778'	1	Dual Ind. Laterolog		341'	2850'	
Precambrian	2817'	-1839'	1	B.H.C. Sonic Log		300'	2852'	
			1	Formation Density		100'	2853'	
			1	Side-scan Neutron Porosity Log		1700'	2853'	
			1	Porosity Overlay		1700'	2853'	

Plug # CEMENTING RECORD (Plug Squeeze, etc.)			PERFORATING RECORD (Bullet, Jet)			SERVICING RECORD (Acidizing, Fracturing, etc.)		
Box	From	To	Remarks	Date	From	To	Date	Remarks
1	1825'	2300'	w/260 sx + 2% CaCl ₂ Felt at 1750'					
2	240'	390'	w/110 sx + 3% CaCl ₂ Felt at 250'					
5-cack cement plug in top of casing and steel plate welded on. Identification marker installed at wellhead.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.L. Mins.	P.S.L. Mins.	I.S.L.B.H.P.	F.S.I.B.H.P.	L.F.B.H.P.	F.F.B.H.P.	L.H.P.	F.H.P.	REMARKS
1	Mar. 9/70	Sulfur Pt.	1905'	2145'	*53 * 1st flow period - 20 mins. 2nd " - 8 " 3rd " - 25 "	60 " " " "	45 " " " "	758 " " " "				1019		Mistun - tool failure. Strong air blow on preflow and strong air blow when valve was opened - died in 10 mins. Raset tool in 20 mins. - good air blow which died in 5 mins. After 8 mins. reset tool and left valve open 25 mins. Closed tool for final shut in (45 mins.). Recovered 625' of slightly gas cut mud.
2	Mar. 9/70	Sulfur Pt.	1905'	2145'	*44 * 1st flow period - 20 mins. 2nd " - 9 " 3rd " - 15 "	60 " " " "	30 " " " "	758 " " " "				1019		Mistun. Strong air blow on preflow and strong air glow on let flow period which died in 10 mins. Raset tool after 20 mins. - good air blow which died in 5 mins. Raset tool after 9 (see attached)

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
Cal-2-1830	Water	2150 Top of tool 1905	2270 2145	D.S.T. #3	
Cal-2-1830	Water	Top of tool		D.S.T. #4	

PRESENT STATUS OF WELL

Oil	(Interval)
Gas	(Interval)
Dry	
Susp.	

Company United Canco Oil & Gas Ltd.

Signed by *W. McPherson*

Title General Operations Superintendent

Date March 24, 1970.

Forms to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.

Drillstem Tests: (cont'd)

Counce et al Grumbler J-11

No.	Date	Formation	From	To	VO	ISI	FSI	ISI	FSI	IPP	FTI	IHP	THP	Remarks
					Mins	Mins								
2	(cont'd)													mins. - good air blow which died in 10 mins. After 15 mins. closed valve and took a final shut in lasting 30 mins. Recovered 625' of drilling mud.
3	Mar. 10/70	Keg River	2150'	2270'	50	30	60	889	881	677	881	1166	1068	Good initial air blow which gradually decreased and died in 45 mins. No gas to surface. Recovered 450' of muddy water and 1400' of black salt water (salinity 46,400 ppm).
4	Mar. 11/70	Sulfur Pt.	1905'	2145'	50	30	60	767	759	726	759	1019	987	Good air blow decreasing to no blow at end of 45 mins. Pulled tester and recovered 720' of watery mud and 700' of salt water (salinity 37,500 ppm).

NOTE: Pressures reported are field pressures.



W. H. Dysch



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well or Suspend Drilling

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling:—

Name and number of well Canco at al Grumbler J-13
Location: Unit I Section 13 Grid 60° 20' N, 116° 15' W
Latitude 60° 12' 43" Longitude 116° 17' 40"
From Established Reference Marker Shot Point 53 Line C-36
Universal Well Location Reference Lat. 20.22194° N; Long. 116.29444° W
Permit No. 4538 Lease No. _____

Canadian Superior Oil Ltd.
(Permitter, Licensee, Lessee)

Date of commencement of proposed program March 11, 1970

OIL, GAS, AND WATER ENCOUNTERED (Depths)

Oil at None
Gas at 1905'-2145' (DET #1 - Inc. 625' gas out mud)
Water at 2150'-2270' (DET #3 - Inc. 1400' black S.W.); 1905'-2145' (DET #4 - Inc. 700' S.W.)
Total Depth 2850' Date of last operations Sig. Balanced 4:00 p.m. Mar. 12/70
Present condition of well Plugged and abandoned

NOTE: Verbal approval for abandonment obtained Mar. 11/70, from Mr. R. Thoms, Dept. of Indian Affairs & Northern Development.

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Seals of Cement and Additives	Amount Palled
1. <u>9-5/8"</u>	<u>32.38</u>	<u>11 jts.</u>	<u>321'</u>	<u>150 wt. + 2% CaCl₂</u>	<u>None</u>
2.	<u>no returns. Documented outside casing with 170 wt. + 3% CaCl₂. No cement to 90'. Run 6-bbl diesel</u>				
3.	<u>cement gel plug. Belt at 50'. Cemented with 50 wt</u>				
4.	<u>cement + 5% gel + 2% CaCl₂</u>				
5.					

PROPOSED ABANDONMENT PROGRAM

No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
<u>1</u>	<u>1825'-2300'</u>		<u>260 wt</u>	<u>+ 2% CaCl₂</u>
<u>2</u>	<u>240'-390'</u>		<u>110 wt</u>	<u>+ 3% CaCl₂</u>
	<u>5-sack cement plug in top of casing and steel plate welded on.</u>			
	<u>Identification marker installed at wellhead.</u>			

The following logs have been run Anal. Ind. Lat., REC Sonic, Formation Density, Sidwell Neutron
Other operations proposed None Porosity.

Operations to be carried out by United Canco Oil & Gas Ltd. Contractor Licence No. 0675 (Tri-City Delg.)
Address 940 - 8th Ave. S.W., Calgary 2 Address 14305 - 120 Ave., Edmonton 42
Responsible Agent in field J. Q. Taylor

Dated at Calgary, this 30th Day of March, 19 70
Signed by [Signature] Company United Canco Oil & Gas Ltd.
Title Area Superintendent Operator's Exploratory Licence No. 1232

Note: The Oil Conservation Engineer's office must be notified before work is commenced.

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Confirming oral approval given by Mr. B.H.J. Thoms
on the 11th March 1970.

Dated 1st April, 19 70

[Signature]
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.



Project No. _____
File No. _____

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION
OIL AND MINERAL

Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill:—

Name and number of well CANSO ET AL GRUMBLEY J-13
Location: Unit J Section 13 Grid 60° 20' N, 116° 15' W
Latitude 60° 12' 43" Longitude 116° 17' 40"
From Established Reference Marker Shot Point #32, Line C-34
Universal Well Location Reference Lat. 60.21194° N., Long. 116.29444° W.
Elevation: Ground 967' K.B. 980 feet above sea-level.
Well is expected to produce from Keg River formation at a depth of about 2550 feet. Expected total final depth 2850 (estimate).
Area assigned to well _____
(For Oil Conservation Engineer's use only)

Permit No. 4588 Lease No. _____ Acreage 63,534
Permittee, licensee, or lessee Canadian Superior Oil Ltd.
Exploratory Licence No. 1248
Surface owned by Crown or CROWN
(If allocated submit name and address of owner and occupant.)
Petroleum and natural-gas rights owned by Crown
We propose to use the following strings of casing, either cementing or landing them as indicated below:—

Casing Size O.D. (Inches)	Weight (Lb./7ft)	Grade	New or Used	Estimated Depth	Sacks of Cement
1. <u>9-5/8"</u>	<u>32.7#</u>	<u>H-40</u>	<u>new</u>	<u>300'</u>	<u>150</u>
2. <u>5 1/2" or 7"</u>	<u>as required</u>				<u>as required</u>
3. _____					
4. _____					
5. _____					

Expected water, gas, and oil horizons and type of control equipment
Slave Point, Sulphur Point and Keg River
Drilling mud and blowout preventers

Well will be drilled with Rotary Rig No. 2 by Tri-City Drilling (1968)
(Drilling Contractor or company)
Edmonton, Alberta

Responsible agent of applicant:— Contractor's Business Licence No. 0675
At well J. O. Telfer At registered office W. H. Dyson, (Phone: 269-3151)
Address Wellsite Address 940 - 8 Ave. S.W., Calgary 2, Alberta
It is understood that if changes become necessary, notice of the change of plan will be submitted.
Dated at Calgary, Alberta, this 29th day of January, 19 70
Signed by W. H. Dyson Company United Canso Oil & Gas Ltd.
Title Gen. Operations Supt. Operator's Licence No. 1232

(For Resource Management Division use only)

APPROVED

- This application has been examined and approved subject to the following conditions:—
1. The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.
 2. During well drilling and testing operations, every effort shall be made to ensure

Dated 30th January 19 70 Please see over page.

Oil Conservation Engineer

Forms to be submitted to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

LAND 52-90-1 (3-57)

UNIQUE WELL IDENTIFIER - 300J136020116150

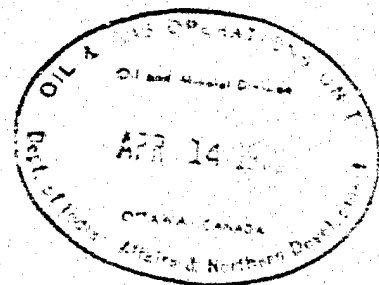
that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent the contamination of adjacent vegetation and surface or sub-surface waters.

3. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
4. Approval must be obtained from the Oil Conservation Engineer in respect to any additional strings of casing.

B.H.J. Thoms

B.H.J. Thoms, Oil Conservation Engineer

CANSO ET AL GRIMBLER J-13



March 30, 1970.

This report includes all information on the well Canso et al Grumbler J-13, and is for the files of the Department of Indian Affairs and Northern Development.

UNITED CANSO OIL & GAS LTD.

W. H. Dyson,
General Operations Superintendent

TABLE OF CONTENTS

SECTION I

Summary of Well Data

SECTION II

Geological Summary

SECTION III

Engineering Summary

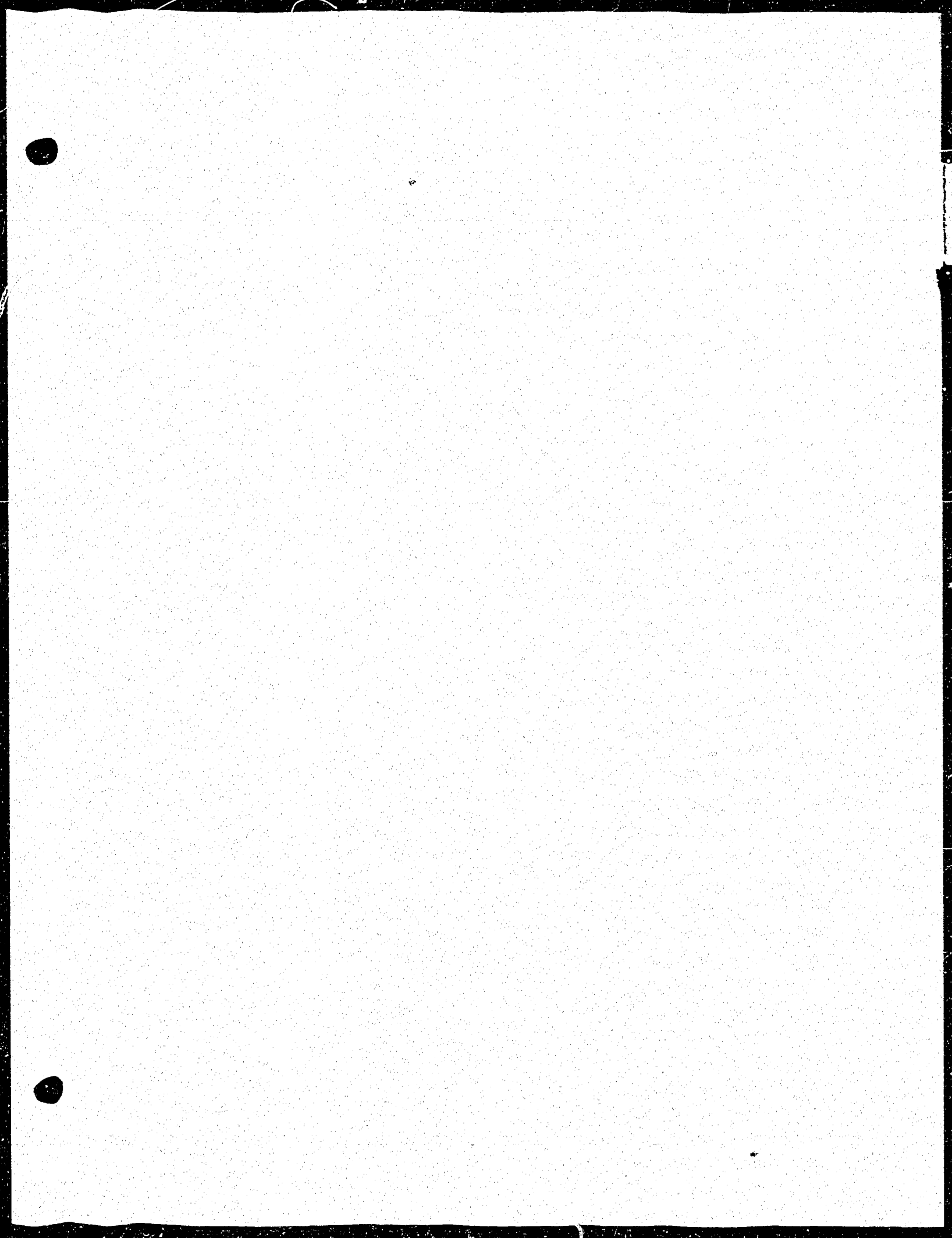
Drillstem Tests
Drilling
Bit Record
Deviation Record
Mud Control Record
Casing Record
Casing Cementation
Abandonment Plugs

SECTION IV

Logs

SECTION V

Analyses



SUMMARY OF WELL DATA

Well: Canso et al Grumbler J-13

Permittee: Canadian Superior Oil Ltd.

Operator: United Canso Oil & Gas Ltd.

Location: Unit J, Section 13, Grid 60°20'N, 116°15'W
Latitude 60°12'47"N; Longitude 116°17'40"W
On Shot Point #32, Line C-34
Unique Well Identifier 300J136020116150
Universal Well Location Reference: Lat. 60.21194° N.
Co-Ordinates: Not applicable Long. 116.29444° W.

Permit No.: 4588

Drilling Contractor: Tri-City Drilling (1968) Ltd. (Rig #2)

Drilling Authority: 414 (January 30, 1970)

Classification: Wildcat

Elevation: Ground - 967'
11' Ground to K.B. Interval
K. B. - 978'

Spudded: 3:00 a.m., February 23, 1970

Completed Drilling: 9:45 p.m., March 7, 1970.

Total Depth: 2850' Driller; 2854' Schlumberger

Rig Released: 4:00 p.m., March 12, 1970

Well Status: Plugged and abandoned

Hole Size: 12-1/4" - Surface to 327'
8-3/4" - 327' to 2850'

Casing: 11 joints (340.6') of 9-5/8", 32.3#, H-40, Rge. 2 seamless casing cemented at 321' with 150 sacks cement plus 2% calcium chloride. (See drilling summary for further information).

Abandonment Plugs:

- #1 1825'-2300' using 260 sacks plus 2% calcium chloride.
- #2 240'-390' using 110 sacks plus 3% calcium chloride.
- #3 Surface using 5 sacks cement. Welded plate on top.

Well Summary

Grumbler J-13

GEOLOGIC SUMMARY

FORMATION TOPS:

K.B. 978'

<u>Marker</u>	<u>Depth</u>	<u>Subsea</u>
Slave Point	1735'	- 757
Fort Vermilion	1872	- 894
Watt Mountain	1940	- 962
Sulfur Point	1945	- 967
Muskeg	2135	-1157
Keg River	2157	-1179
Lower Keg River	2532	-1554
Chinchaga	2623	-1645
Red Beds	2756	-1778
Precambrian	2817	-1839

GEOLOGIC SUMMARYSample Description:

By: G.F. Livraga

K.B. 978'

- 0- 100' Glacial drift.
- 100- 310' LIMESTONE: wh, lt brn-dk brn, sucr, f xln-cryptoxln, sl arg, pyr; ostracods & frags of crin stems.
- 310- 420 LIMESTONE: lt gy, cryptoxln, sl arg, pyr w/ intercalations of gy v arg ls.
- 420- 460 SHALE: gy-grn, sl mic & calc.
- 460- 480 LIMESTONE: lt gy, sucr, f xln, pyr, clean.
- 480- 560 LIMESTONE: lt brn, aphanitic, sl arg; intercalations of gy-grn, sl sil & calc sh; frags of crin stems.
- 560- 670 SHALE: gy-grn, sl sil & calc, pyr; frags of crin stems & unident brachs.
- 670- 690 LIMESTONE: wh-lt brn, cryptoxln to v f xln, sl arg, pyr.
- 690-1710 SHALE: gy-grn, sil, pyr w/ intercalations of v thin beds of dk gy v f xln, arg ls toward bottom; abun frags of crin stems, unident brachs, unident corals, tentaculites, ostracods & blastoids).
- 1710-1740 LIMESTONE: lt gy-wh, aphanitic, arg, pyr, dns w/ intercalations of gy-grn sl calc sh; frags of crin stems & unident brachs.
- 1740-1870 LIMESTONE: lt brn-dk brn, cryptoxln to f xln, pyr, dns; frags of crin stems, unident brachs & gastrs.

Well Summary

Grumbler J-13

Sample Description ... cont'd

- 1870-1940' LIMESTONE: dk brn, aphanitic, dns w/ intercalations of wh-lt brn amorphous anhy & lt gy v arg ls toward bottom.
- 1940-1950 SHALE: apple grn, sl calc.
- 1950-2130 DOLOMITE: wh-lt brn, v crs, xln, calc, large size isol dol xls, yel sulf xls, some rare xls of anhy & gyps toward bottom; vugs lined w/ dol, sulf & anhy xls & some pyrobit, more or less dol sh intercalations disappearing toward bottom; good to fair vug por.
- 2130-2270 DOLOMITE: lt brn-dk brn, crs to v crs xln; vugs lined w/ dol & anhy xls, v good to good vug & interxln por; some rare pyrobit.
- 2270-2430 DOLOMITE: dk brn, med-f xln, clean; vugs filled w/ dol & anhy xls, good to fair vug & interxln por.
- 2430-2450 LIMESTONE: dk, aphanitic, dns, foss (tentaculites), sl dol.
- 2450-2520 LIMESTONE: dk, aphanitic, dns, foss (tentaculites), sl dol, alternating w/ lt gy cryptoxln to v f xln foss (tentaculites), sl dol & arg ls.
- 2520-2620 DOLOMITE: brn-dk brn, f-v f xln, sl arg, calc.
- 2620-2730 ANHYDRITE: lt brn, amorphous.
- 2730-2740 SHALE: gy-grn, sl mic.
- 2740-2760 ANHYDRITE: lt brn, amorphous.
- 2760-2820 SHALE: red & grn, anhy, v silty w/ interbedding of reddish & brn dns dol ls & calc dol; some rded qtz grs.

Well Summary

Grumbier J-13

Sample Description ... cont'd

2820-2850' Pink biotitic granite.

Total Depth - 2850'

GFL/mk
March 19, 1970

DRILLSTEM TESTS

D.S.T. #1 (1905'-2145') Straddle Test (Misrun - Tool Failure)

Preflow 3 mins.; Initial shut-in 60 mins.; Valve Open 20 mins.; 2nd Flow Period 8 mins.; 3rd Flow Period 25 mins.; Final shut-in 45 mins.

Received strong air blow on preflow and strong air blow when valve was opened. Air blow died in 10 minutes.

Reset tool after 20 minutes, received good air blow which died in 5 minutes. After 8 minutes, reset tool and left valve open for 25 minutes. Closed tool for final shut in (45 minutes).

Pulled test tools and recovered 625' of slightly gas cut mud.

Initial Hydrostatic pressure 1019 psi. NOTE Charts not available.
" Shut-in " 758 "

D.S.T. #2 (1905'-2145') Straddle Test (Misrun)

Preflow 3 mins.; Initial shut-in 60 mins.; 1st flow period 20 mins.; 2nd flow period 9 mins.; 3rd flow period 15 mins.; Final shut-in 30 mins.

Received strong air blow on preflow and strong air blow on first flow period which died in 10 minutes.

Reset tool after 20 minutes and received good air blow which died in 5 minutes. Reset tool after 9 minutes and received good air blow which died in 10 minutes. After 15 minutes, closed valve and took a final shut-in lasting 30 minutes.

Pulled tester and recovered 625' of drilling mud.

Initial Hydrostatic pressure 1019 psi
" Shut-in " 758 " Temperature 100°.

NOTE: Charts not available.

D.S.T. #3 (2150'-2270') Straddle Test

Preflow 5 minutes.

Initial shut-in 30 mins.; Valve Open 50 mins.; Final shut-in 60 mins.

Received good initial air blow which gradually decreased and died in 45 mins. No gas to surface.

Pulled tester and recovered 450' of muddy water and 1400' of black salt water (salinity 46,400 ppm).

Drillstem Tests: (cont'd)D.S.T. #3 (cont'd)

Initial Hydrostatic pressure 1166 psi; Final 1068 psi

" Shut-in " 889 " ; " 881 "

" Flowing " 677 " ; " 881 "

Temperature 98°

Reported pressures are Field Pressures.D.S.T. #4

(1905'-2145')

Straddle Test

Prewell 5 minutes.

Initial shut-in 30 mins.; Valve Open 50 mins.; Final shut-in 60 mins.

Received good air blow decreasing to no blow at end of 45 minutes.

Pulled tester and recovered 720' of watery mud and 700' of salt water (salinity 37,500 ppm).

Initial Hydrostatic pressure 1019 psi; Final 987 psi

" Shut-in " 767 " ; " 759 "

" Flowing " 726 " ; " 759 "

Temperature 92°

Reported pressures are Field Pressures.

DRILLING SUMMARYDrilling:

Drilled 12-1/4" hole to 327'.

Cemented 9-5/8" casing at 321'.

Waited on cement 32-3/4 hours and installed E.O. P's.

Drilled 8-3/4" hole from 327' to 2850'.

Bit Record:

<u>Run</u>	<u>Size</u>	<u>Type</u>	<u>Serial No.</u>	<u>From</u>	<u>To</u>	<u>Hours</u>	<u>Footage</u>
1A	12-1/4"	Hughes OWVJ	AR668	0'	155'	20-1/2	155'
2A	"	" OSC-3	Re-tip	155'	327'	15-3/4	172'
1	8-3/4"	" X-1G	20892	327'	1488'	37	1161'
2	"	Security S44	243287	1488'	1931'	31-1/2	443'
3	"	" M&N	248858	Damaged while running in hole			
4	"	Hughes OWVJ	96703	1931'	2141'	17	210'
5	"	" "	97672	2141'	2405'	22-1/2	264'
6	"	" "	2121	2405'	2588'	21-1/2	183'
7	"	" W7J	96738	2588'	2765'	25-1/4	177'
8	"	" WD7	VE391	2765'	2850'	11-1/4	85'
Bit Hours						202-1/4	2850'

Deviation Record:

<u>Run</u>	<u>Date</u>	<u>Depth</u>	<u>Deviation</u>	<u>Run</u>	<u>Date</u>	<u>Depth</u>	<u>Deviation</u>
1	Feb. 23	60'	7/8°	16	Mar. 1	1746'	2-1/2°
2		100'	3/4°	17		1777'	2-3/4°
3		131'	7/8°	18		1809'	2-1/8°
4	Feb. 24	159'	7/8°	19		1840'	2-1/8°
5		210'	7/8°	20	Mar. 2	1870'	1-3/4°
6		279'	3/4°	21		1900'	2°
7	Feb. 25	327'	3/4°	22		1962'	2-1/2°
8	Feb. 27	510'	1/2°	23		1993'	1-1/4°
9		727'	7/8°	24	Mar. 3	2056'	1-1/2°
10	Feb. 28	1251'	1-1/4°	25		2120'	2°
11		1441'	3-1/4°	26		2151'	1-1/4°
12		1472'	3°	27		2244'	1°
13		1529'	2-1/8°	28	Mar. 4	2405'	0°
14	Mar. 1	1589'	2-1/8°	29	Mar. 7	2850'	1/2°
15		1652'	2-1/4°				

Drilling Summary

Grumbler J-13

Mid Control Data: (per 8-hour tour)

<u>From</u>	<u>To</u>	<u>Wt.</u>	<u>Vis.</u>	<u>W.L.</u>	<u>F.C.</u>	<u>pH</u>	<u>Additives</u>
0'	35'						
35'	100'						
100'	140'						
140'	200'						
200'	278'						
278'	327'		32				50# lime; 700# gel; 540 gal. diesel fuel.
327'	336'						
336'	415'	8.4	28				
415'	688'	9.5	28				
688'	1017'	8.7	28				
1017'	1297'	9.1	44	9.8	2/32	10.5	3500# gel; 150# Peltex; 50# CMC; 150# caustic
1297'	1484'	9.6	48	8.8	2/32	11.5	
1484'	1584'	9.9	48	8.0	2/32	9.5	
1584'	1750'	10.2	43	7.6	2/32	11.0	1500# Peltex; 500# caustic
1750'	1798'	11.1	41	6.8	2/32	11.5	1100# gel
1798'	1846'	10.1	34	6.8	2/32	12.0	
1846'	1925'	10.0	60	6.6	2/32	11.5	2000# gel; 100# caustic; 100# Peltex
1925'	1962'	9.8	57	11.0	2/32	12.0	
1962'	2012'	9.3	43	11.4	2/32	11.5	
2012'	2100'	9.3	41	12.4	2/32	11.5	2600# gel; 400# Peltex; 100# caustic
2100'	2151'	9.4	42	13.6	2/32	11.0	50# CMC
2151'	2260'	9.5	48	10.0	2/32	10.0	
2260'	2335'	9.6	42	16.4	2/32	10.0	100# CMC
2335'	2405'	9.7	40	12.0	2/32	10.0	1000# gel; 100# Peltex; 50# CMC 150# caustic
2405'	2455'	9.8	42	9.4	2/32	10.5	
2455'	2520'	9.6	42	9.8	2/32	10.0	500# gel
2520'	2564'	9.5	43	12.0	2/32	10.5	100# CMC; 500# gel; 50# caustic; 50# Peltex
2564'	2592'	9.7	44	12.0	2/32	11.0	
2592'	2638'	9.8	45	9.3	2/32	11.0	
2638'	2700'	9.8	45	8.2	2/32	10.5	
2700'	2760'	9.7	42	9.8	2/32	10.5	
2760'	2788'	10.0	60	9.0	2/32	11.0	
2788'	2840'	10.0	55	11.0	2/32	11.0	100# CMC; 50# caustic; 50# Peltex; 1000# gel
2840'	2850'	10.1	81	10.0	2/32	11.0	3000# gel

Total Additives:

15,900# gel
 50# lime
 1,100# caustic
 2,350# Peltex
450# CMC

19,850#

Plus

540 gallons diesel fuel

Casing Record:

<u>Size</u>	<u>Wt.</u>	<u>Grade</u>	<u>From</u>	<u>To</u>	<u>No. Joints</u>
9-5/8"	32.3#	H-40	Surface	321'	11 (340.6')

Casing Cementation:Surface Casing:

Ran 11 joints (340.6') of 9-5/8", 32.3#, H-40, Rge. 2, seamless casing equipped with Davis Lynch guide shoe, Davis Lynch float collar and two B&W centralizers.

Set guide shoe at 321', float collar at 289' and centralizers at 310' and 251'.

Cemented casing with 150 sacks cement plus 2% calcium chloride. Received no cement returns to surface.

Waited on cement 8 hours and ran 1" pipe down outside of casing. Found top of cement at 90'.

Mixed 170 sacks cement plus 3% calcium chloride and pumped slurry down 1" pipe.

Received watery cement returns at surface.

Waited on cement 7 hours, ran 1" pipe and found top of cement at 90'.

Mixed six barrels of diesel-gel cement plug and pumped plug down through 1" pipe.

After 1-1/2 hours ran 1" pipe and found top of plug at 50'.

Mixed 50 sacks cement plus 5% gel and 2% calcium chloride.

Pumped cement down through 1" pipe and received good cement returns at surface.

Waited on cement 12 hours, installed B.O.P's and made satisfactory test of blind rams to 1200 psi for 15 minutes.

Ran bit and made satisfactory test of pipe rams to 1200 psi for 15 minutes.

Drilled out and made satisfactory test of cement job to 300 psi for 15 minutes.

Abandonment:

Ran Plug #1 from 2300' to 1825' using 260 sacks cement plus 2% calcium chloride.

After 8 hours, felt for Plug #1 and found top of cement at 1750'.

Pulled up and ran Plug #2 from 390' to 240' using 110 sacks cement plus 3% calcium chloride.

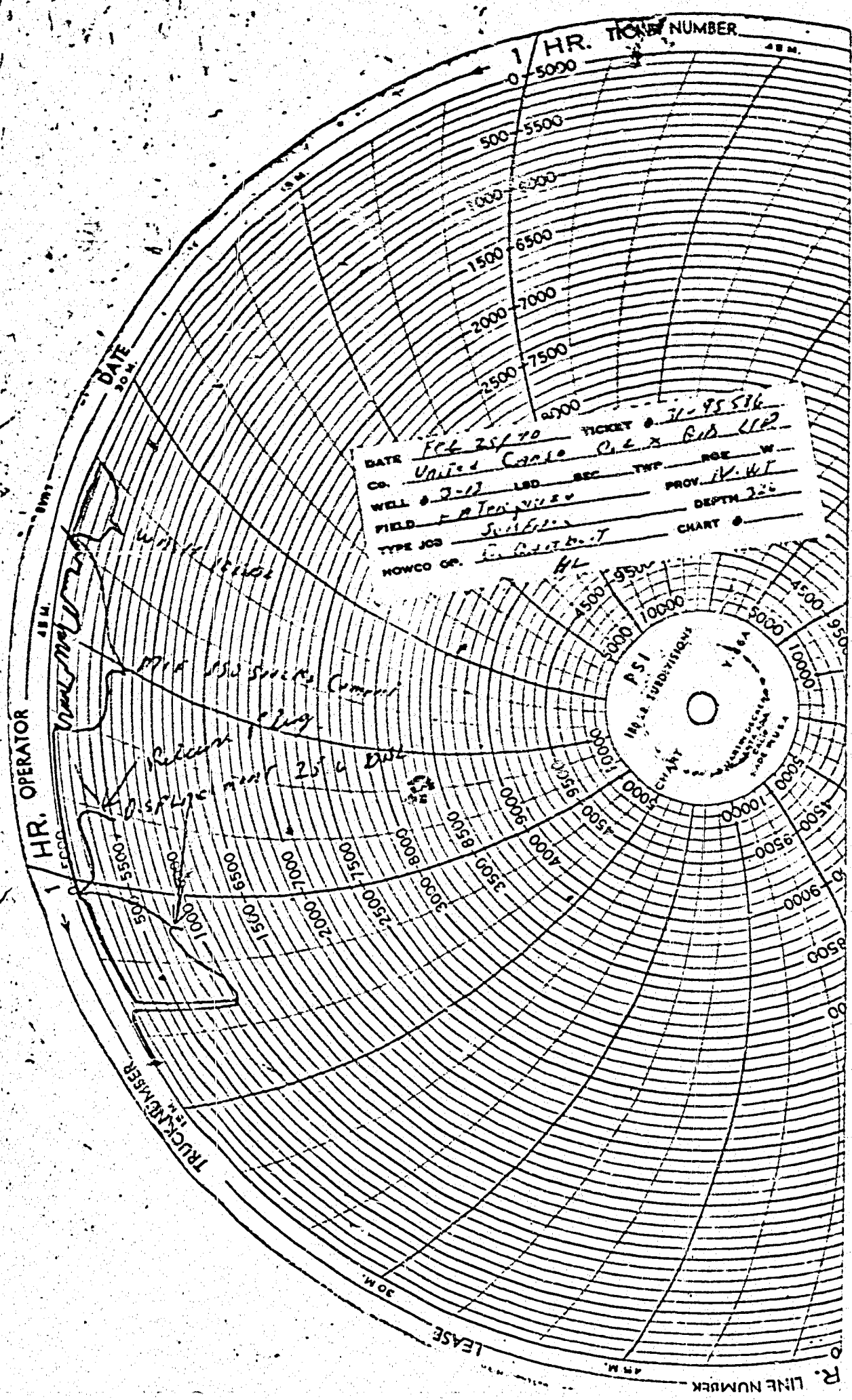
After 8 hours, felt for Plug #2 and found top of cement at 250'.

Pulled out of hole, laid down drill pipe and removed B.O.P's.

Cut casing off 3' below ground level, placed 5-sack cement plug in top of casing and welded on steel plate.

Installed identification marker and released drilling rig March 12, 1970.

/gm
Calgary
March 26, 1970.



DATE Feb 25/70 TICKET # 31-95586
CO. United Canal Co. & Bldg. Co.
WELL # 2-12 LBD SEC TWP RGE W
FIELD San Diego PROV. IV. W.
TYPE JOB San Diego DEPTH 220
HOWCO GP. San Diego CHART #

HR. OPERATOR

DATE

TRUCK NUMBER

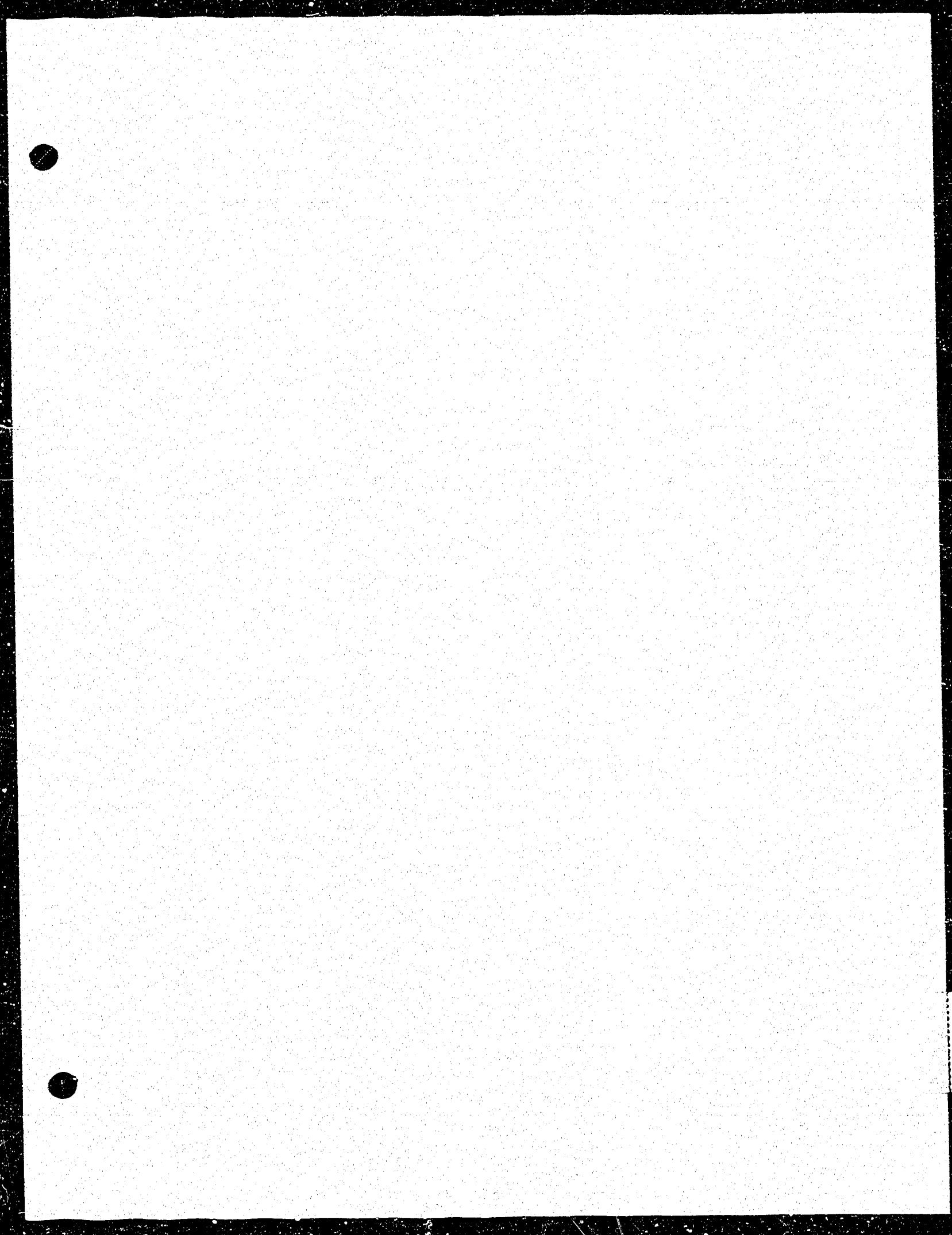
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SECTION IV

S U M M A R Y O F L O G S

<u>Date</u>	<u>Run No.</u>	<u>Interval</u>	<u>Type of Log</u>
March 8, 1970	1	341'-2850'	Dual Induction Laterolog
March 8, 1970	1	300'-2852'	Borehole Compensated Sonic Log
March 8, 1970	1	100'-2853'	Formation Density Log
March 9, 1970	1	1700'-2853'	Sidewall Neutron Porosity Log
March 9, 1970	1	1700'-2853'	Porosity Overlay





CORE LABORATORIES - CANADA LTD.

PETROLEUM RESERVOIR ENGINEERING

WATER ANALYSIS

CONFIDENTIAL

File CAL-2-1830 Page 1 of 2

Company United Canso Oil & Gas Ltd.
Well Canso et al Grumbler S-13 K.B. Grd. 967'
60 12'43.00 N.L.
Location 116 17'40.00 W.L. Field Wildcat Province N.W.T.
Formation Keg River Interval
Sampled from DST #3 (Top of Tool) by
Date sampled March 11/70 Date analysed March 18/70 Analyst DS
Recovery 450' Muddy Water, 1400' Salt Water.

Mud type Water cushion

Total Solids:

Resistivity 0.120 Ohm-meters @ 70 °C Calculated 62,368 mg/liter
Specific gravity 1.0421 @ 60°F By evaporation @ 110°C - mg/liter
pH 7.40 H₂S Present By evaporation @ 180°C - mg/liter
Refractive Index 1.346 @ 70°F At ignition - mg/liter

MILLIGRAMS PER LITER

Na+K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO ₃	SO ₄	CO ₃	OH
18,835	3,689	809	Trace	Abs.	-	-	35,169	610	3,256	Nil	Nil

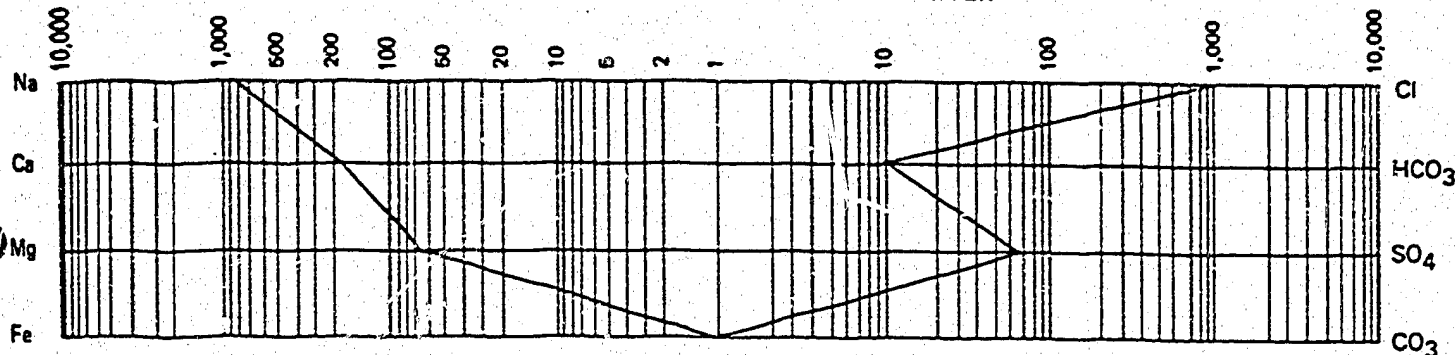
PER CENT CALCULATED SOLIDS

30.2	5.9	1.3	Trace	Abs.	-	-	56.4	1.0	5.2	Nil	Nil
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MEQ PER LITER

818.9	184.1	66.5	Trace	Abs.	-	-	991.8	10.0	67.7	Nil	Nil
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LOGARITHMIC PATTERN MEQ PER LITER





CORE LABORATORIES - CANADA LTD.
PETROLEUM RESERVOIR ENGINEERING
WATER ANALYSIS



File CAL-2-1830 Page 2 of 2

Company United Canzo Oil & Gas Ltd.
Well Canzo et al Grumbler J-13 K.B. Grd.
Location 60 12'43.00 N.L.
116 17'40.00 W.L. Field Wildcat Province N.W.T.
Formation Sulphur Point Interval 1905' - 2145'
Sampled from DST #4 (Top of Tool) by
Date sampled March 11/70 Date analysed March 18/70 Analyst DS
Recovery 720' Watery Mud, 700' Salt Water.
 Mud type Water cushion

Resistivity 0.144 Ohm-meters @ 75 °F
Specific gravity 1.0356 @ 60°F
pH 7.35 H₂S Absent
Refractive Index 1.342 @ 70°F
Total Solids:
Calculated 51,929 mg/liter
By evaporation @ 110°C - mg/liter
By evaporation @ 180°C - mg/liter
At ignition - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	NO ₃	SO ₄	CO ₃	OH
16,194	2,980	329	Pres.	Abs.	-	-	28,100	586	3,740	Nil	Nil

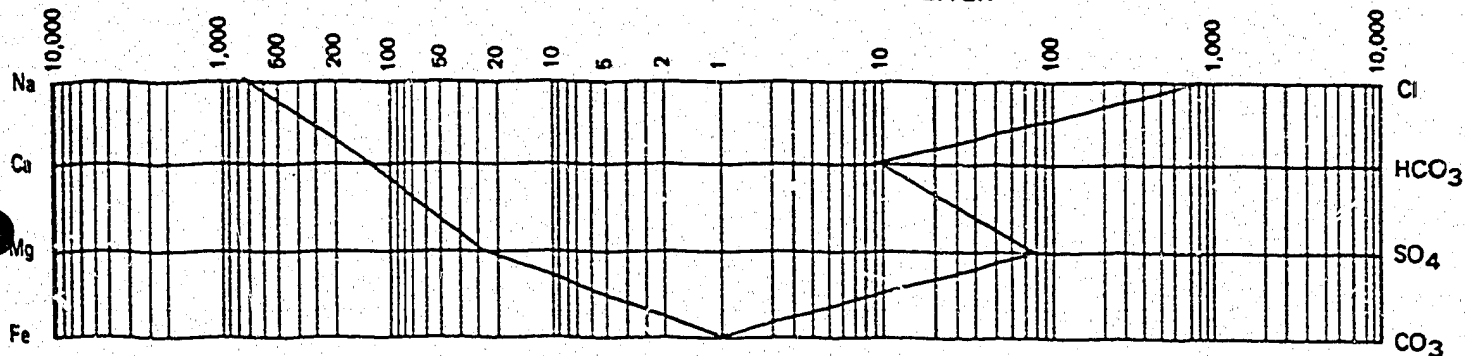
PER CENT CALCULATED SOLIDS

31.2	5.7	0.6	Pres.	Abs.	-	-	54.2	1.1	7.2	Nil	Nil
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MEQ PER LITER

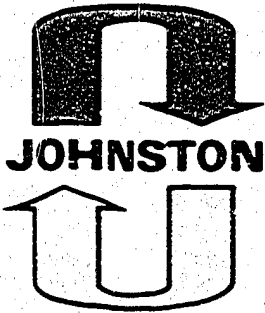
704.1	148.7	27.0	Pres.	Abs.	-	-	792.4	9.6	77.8	Nil	Nil
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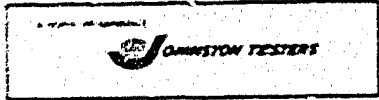
LOGARITHMIC PATTERN MEQ PER LITER



CONFIDENTIAL

TECHNICAL REPORT

The logo for Johnston is positioned between the words 'REPORT' and 'ART'. It features a stylized 'J' shape formed by two thick, black, blocky arrows. One arrow points downwards and to the right, while the other points upwards and to the left, meeting at the top and bottom to form the vertical strokes of the 'J'. The word 'JOHNSTON' is printed in a bold, sans-serif, uppercase font across the middle of the 'J' shape.



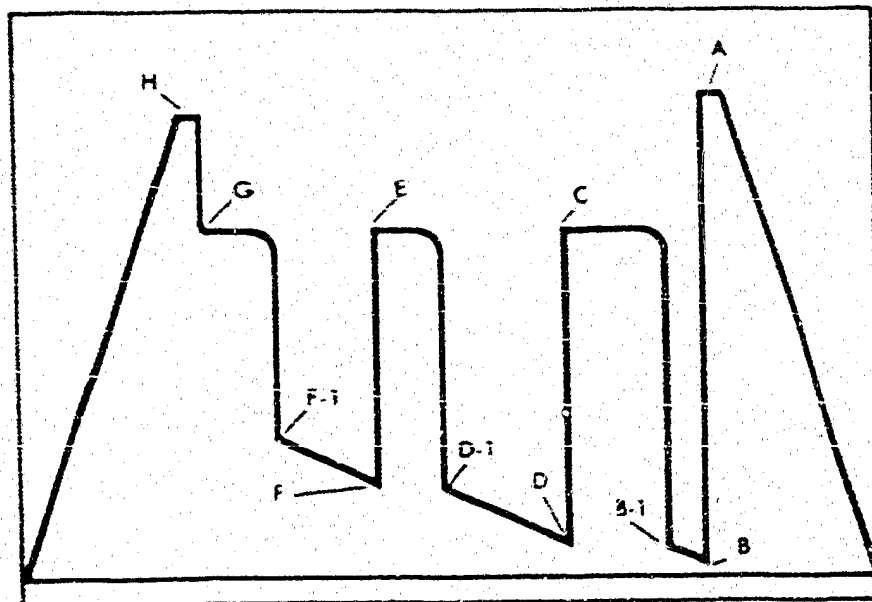
TEST DATA						TOOL SEQUENCE		
Formation		Zone Thickness	Ft.	Tool	Length	O.D.		
Interval	2150	To	2270TD	2850	P.O. SUB	.85		
Type of Test	OPEN HOLE, STRADDLE, CONVENTIONAL.			SUB.	.75			
Time Started in Hole	1730 Hrs	Tool Opened	1901 Hrs	MFE TOOL	9.15			
First Flow	5 Min	Initial Shut-In	30 Min	BYPASS TOOL	3.00			
Second Flow	50 Min	Second Shut In	Min	JARS	6.80			
Third Flow	Min	Final Shut-in	60 Min	SAFETY JOINT	1.75			
Pulled Loose @	2126 Hrs	Out of Hole	0200 Hrs	S.S. & PACKER	9.20	7 1/2"		
Wt. Set on Packers	30,000 #	Pulled Loose Wt	15,000 #	T.C. & PACKER	5.30	7 1/2"		
Description of Blow During Test:	STRONG INITIAL BLOW. STRONG AIR BLOW ON SECOND FLOW, DECREASING IN 45 MINUTES.			TOTAL	36.80			
				STUB.	1.00			
				PERF.	19.00			
FLUID RECOVERY Was Test Reverse Circulated Yes ☐ No ☒				RECORDER	4.40			
Total Fluid Recovered	1850'			RECORDER	4.40			
Description of Fluid Recovered				BLANK SUB.	.85			
	400' MUD CUT, WATER.			SUB	.85			
	1450' SALT WATER.			DRILL COLLARS	85.21			
				SUB	.85			
				T.C. & STUB	3.50			
				TOTAL INTERVAL	120.06			
				PACKER	2.80	7 1/2"		
GAS BLOW MEASUREMENT				T.C. & PACKER	6.20	7 1/2"		
Measured With	ID Rider			PERF.	9.00			
Type of Instrument				RECORDER	4.40			
Time	Blow Choke	Reading psi inches	M Cubic Feet Day	SUB	.85			
NIL.				DRILL PIPE	555.02			
				B.N. & PERF.	2.45			
				TOTAL BELOW INTV.	580.72			
				TOTAL LENGTH	737.58			
				Elevation	NOT REPORTED			
				Bottom Hole Choke Size	1/2"			
REMARKS TEST SATISFACTORY.				Fluid Cushion Type	NIL Amt.			
				MUD AND HOLE DATA				
				Mud Type	W.L.			
				Filter Cake	2/32 Visc.	Wt.		
				Time Taken				
				Contractor	TRI-CITY DRLLG.	Rig No.	2	
				Drill Pipe Size	4 1/2 XH			
				Drill Collar Size	2 7/8 ID Length	358.71'		
				Main Hole Size	8 3/4"			
				Rat Hole Size				
RESISTIVITY CHLORIDE CONTENT								
Recovery Water	%	CF.	dpm.					
Mud Pit sample filtrate	%	CF.	dpm.					
District	HIGH LEVEL	Ticker No.	D 04401	Date	MARCH 10, 1970	Test No.	3	J.T. No. 3
Company	UNITED CANSO OIL & GAS LTD.			Address	940 - 8TH AVENUE S.W.			
Well Name	CAN SO ET AL GRUMBLER J-13				CALGARY 2, ALBERTA			
Number	60° 12'N 116° 17'W			Field	GRUMBLER	Province	N.W.T.	
Formation				Co. Rep.				
and Interval	2150 - 2270 DST#3			Technician	C. SCHFER			
Distribution of Reports	9 - CALGARY			1 - DATA CENTER (ENCL.)				

421 5014 AVENUE SE - CALGARY 24 ALBERTA - CAN. 2541191

A DIVISION OF SIMONED HEAR CANADA LIMITED

[illegible]

GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



- A. Initial Hyd. Mud
- B. First Flow
- C. Initial Shut-In
- D. Second Flow
- E. Second Shut-In
- F. Third Flow
- G. Final Shut-In
- H. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B, B-1, Initial Flow Pressures
- C, Initial Shut-In
- D-1, D-2, D-3, etc. Second Flow Pressures
- E, Second Shut-In
- F, F-1, F-2, Third Flow Pressures
- G, Final Shut-In
- H, Final Hyd. Pressures
- Z - Special pressure points such as pumping pressures recorded for formation breakdown.

FIELD
REPORT NO.

D 04401

RECORDER NO.

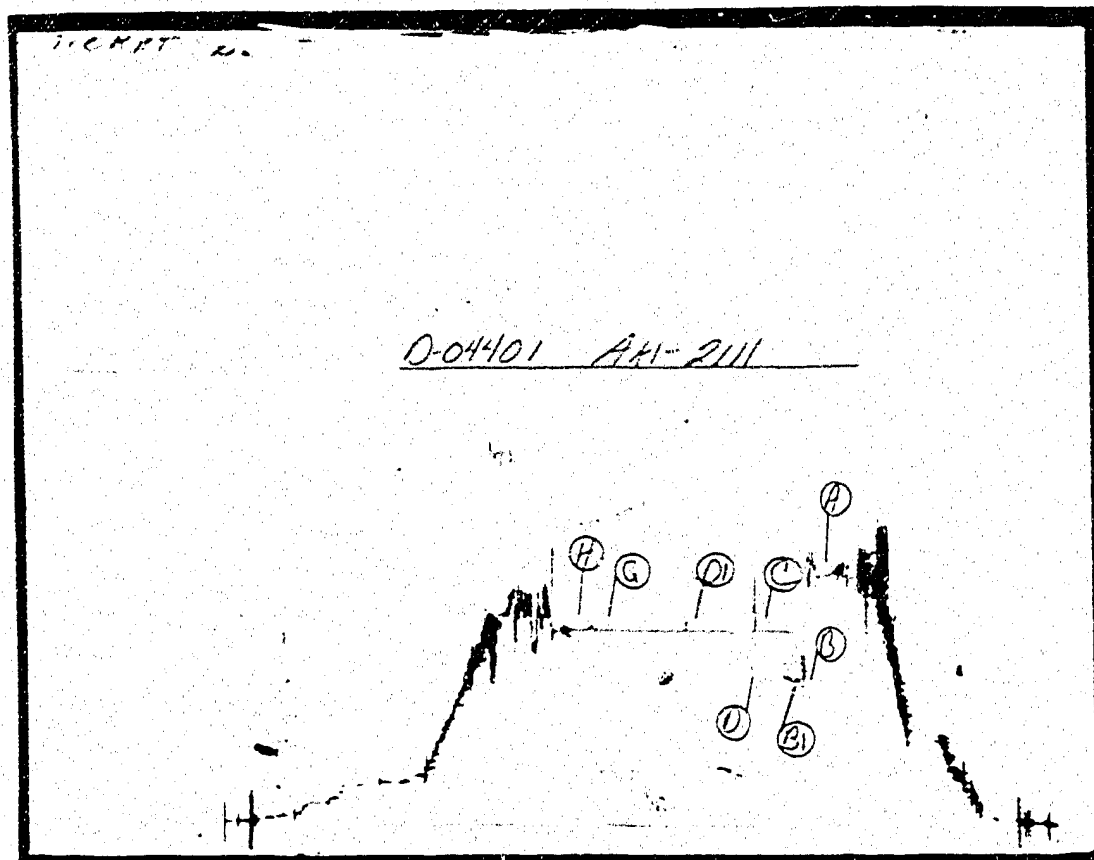
AKI-2111

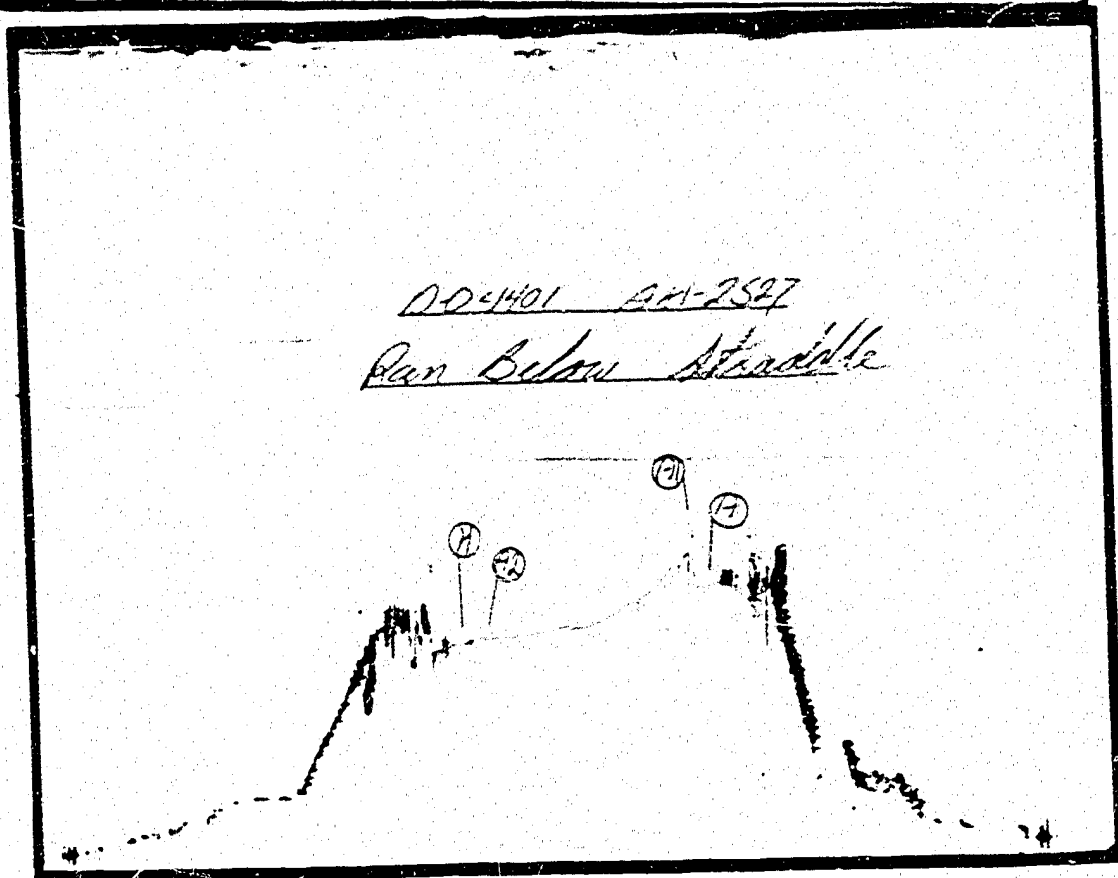
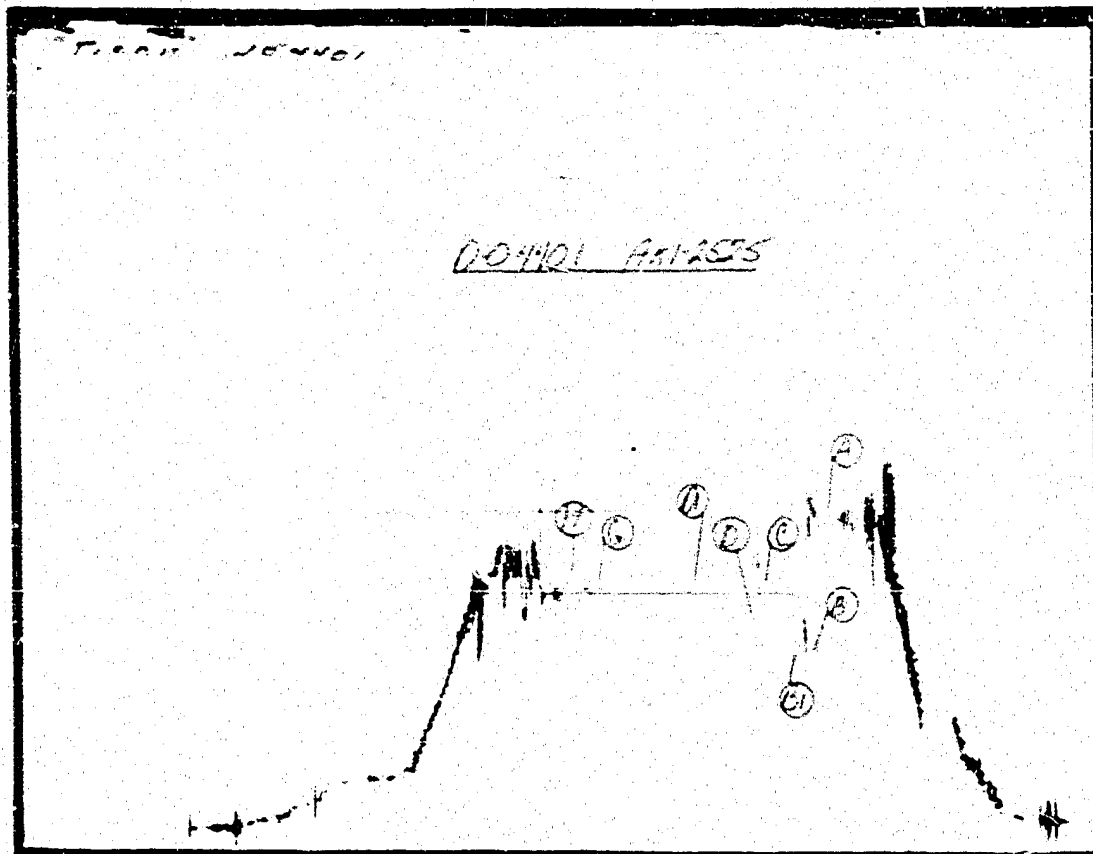
CAPACITY

4000

REPORTS
REQUESTED

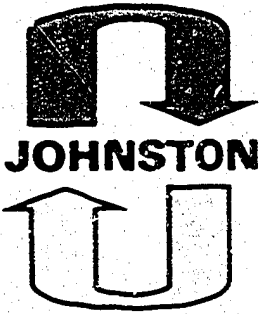
10





CONFIDENTIAL

TECHNICAL REPORT

The logo for Johnston is positioned between the words 'REPORT' and 'ART'. It features a stylized 'J' formed by two thick, black, curved arrows. One arrow starts at the top left and points down and to the right, while the other starts at the bottom left and points up and to the right. The word 'JOHNSTON' is written in a bold, sans-serif font across the middle of the 'J'.

[illegible]



JOHNSTON TESTERS

121 5TH AVENUE S.E. - CALGARY 26 ALBERTA - PH 353-1191

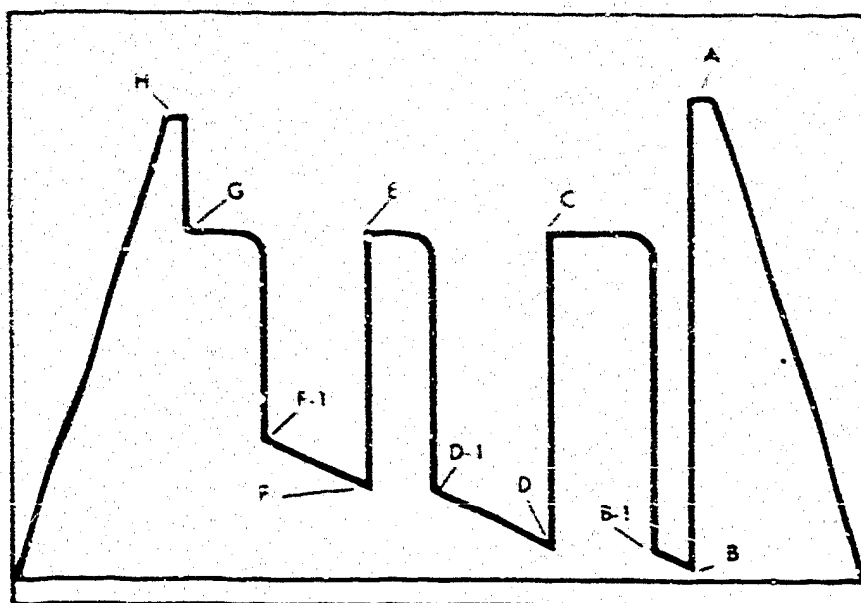
A DIVISION OF SOUTHWESTERN AIRWAYS, INC.

D 04402		PRESSURE DATA			FLUID SAMPLE REPORT	
INSTRUMENT NO.		AKI-2111	AKI-2525	AKI-2527	Sample No.	
CAPACITY in/gal.		4000	3200	4000	Type	
INSTRUMENT DEPTH FT.		1925	1930	2164	Depth	ft.
INSTRUMENT OPENING		OUTSIDE	OUTSIDE	OUTSIDE	Volume	
PRESSURE GRADIENT psi/ft.						
WELL TEMP °F	92					
INITIAL HYDROSTATIC	A	996#	1000#	1131#	Sample Pressure	psig. at Surface
FIRST FLOW	B	659#	662#		Gravity	API GG °F
	B-1	725#	731#	A1-1214#	Gas Oil Ratio	Cu.Ft. bbl.
INITIAL SHUT-IN	C	752#	760#			
SECOND FLOW	D	710#	713#	RAN		
	D-1	760#	764#	BELOW	Recovery:	
SECOND SHUT-IN	E			STRADDLE	Cu. Ft. Gas	
THIRD FLOW	F				cc. Oil	
	F-1			A1-881#	cc. Water	
FINAL SHUT-IN	G	761#	766#		cc. Mud	
FINAL HYDROSTATIC	H	986#	989#	1054#	Total Liquid cc.	
REMARKS:						

PRESSURE INCREMENTS

[illegible]

GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



- A. Initial Hyd. Mud
- B. First Flow
- C. Initial Shut-In
- D. Second Flow
- E. Second Shut-In
- F. Third Flow
- G. Final Shut-In
- H. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B, B-1, Initial Flow Pressures
- C, Initial Shut-In
- D-1, D-2, D-3, etc. Second Flow Pressures
- E, Second Shut-In
- F, F-1, F-2, Third Flow Pressures
- G, Final Shut-In
- H, Final Hyd. Pressures
- Z — Special pressure points such as pumping pressures recorded for formation breakdown.

FIELD
REPORT NO.

D 04402

RECORDER NO.

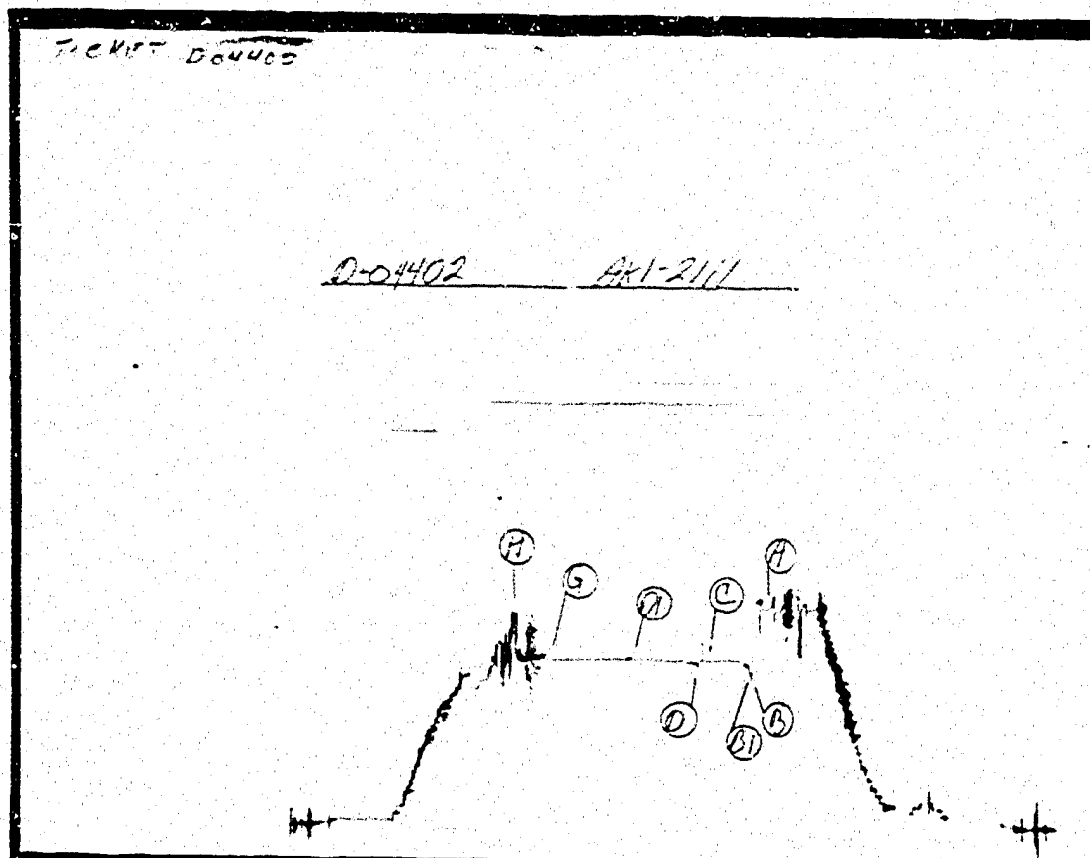
AK1-2111

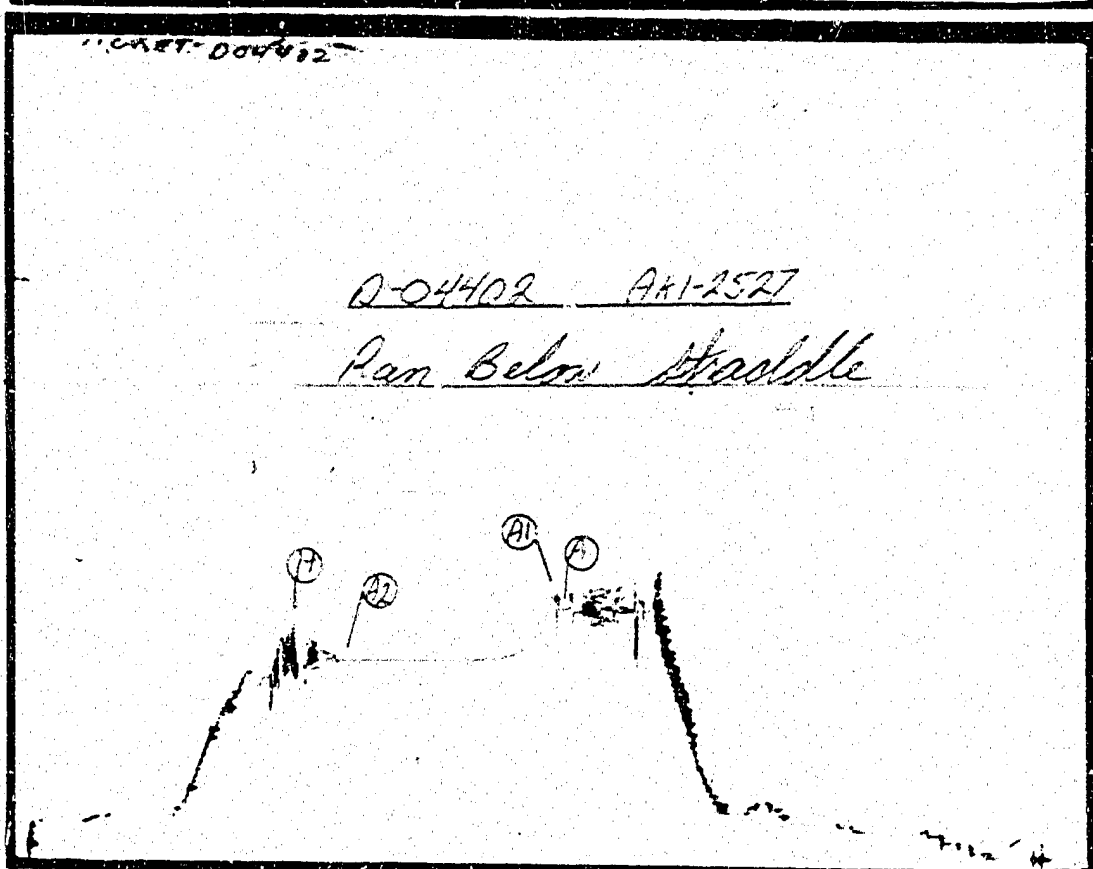
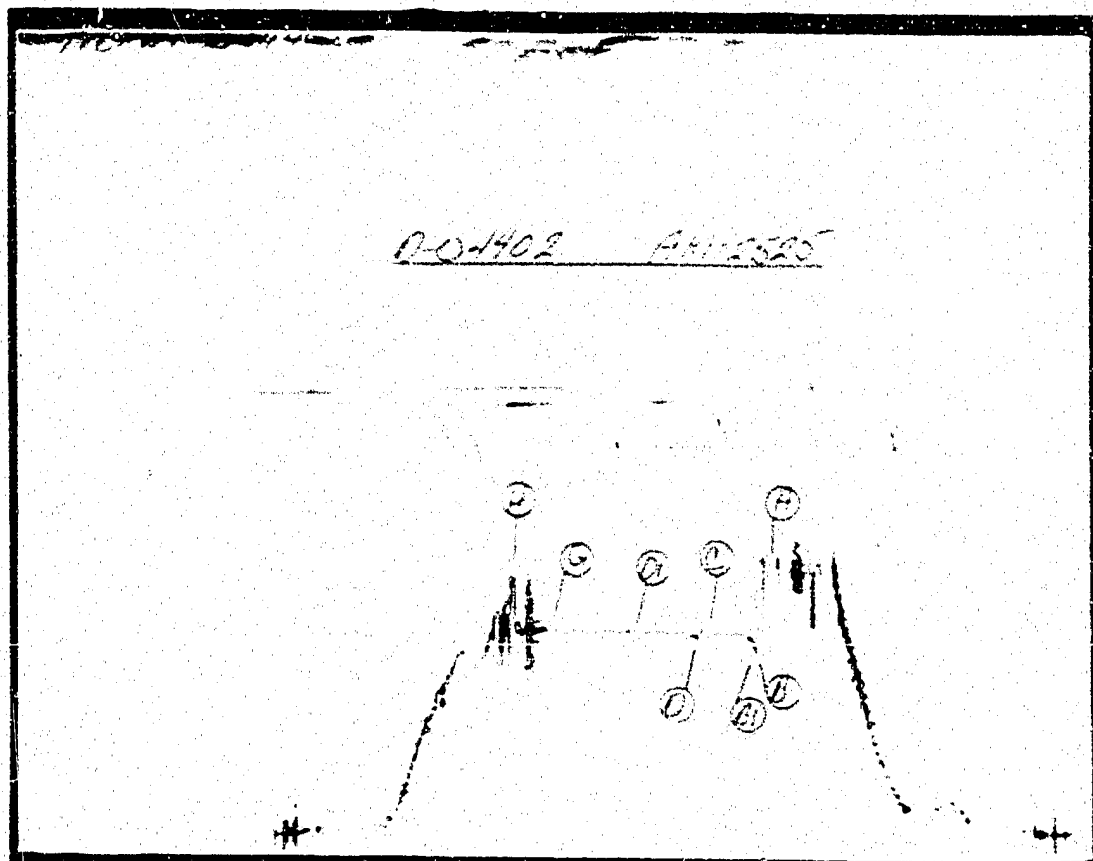
CAPACITY

4000

REPORTS
REQUESTED

10





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CHEMICAL ANALYSIS

FOR

UNITED CANSO OIL & GAS LTD.

**CANSO ET AL GRUMBLER J-13
WILDCAT
NORTHWEST TERRITORIES**

CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering
CALGARY - EDMONTON - REGINA



CORE LABORATORIES - CANADA
PETROLEUM RESERVOIR ENGINEERING
WATER ANALYSIS

CONFIDENTIAL



File CAL-2-1830 Page 1 of 2

Company United Canso Oil & Gas Ltd.
Well Canso et al Grumbler J-13 K.B. Grd. 967'
60 12'43.00 N.L.
Location 116 17'40.00 W.L. Field Wildcat Province N.W.T.
Formation Keg River Interval
Sampled from DST #3 (Top of Tool) by
Date sampled March 11/70 Date analysed March 18/70 Analyst DS
Recovery 450' Muddy Water, 1400' Salt Water.
 Mud type Water cushion

Resistivity 0.120 Ohm-meters @ 70 °F

Specific gravity 1.0421 @ 60°F

pH 7.40 H₂S Present

Refractive Index 1.346 @ 70°F

Total Solids:

Calculated 62,368 mg/liter

By evaporation @ 110°C - mg/liter

By evaporation @ 180°C - mg/liter

At ignition - mg/liter

MILLIGRAMS PER LITER

Na + K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO ₃	SO ₄	CO ₃	OH
18,835	3,689	809	Trace	Abs.	-	-	35,169	610	3,256	Nil	Nil

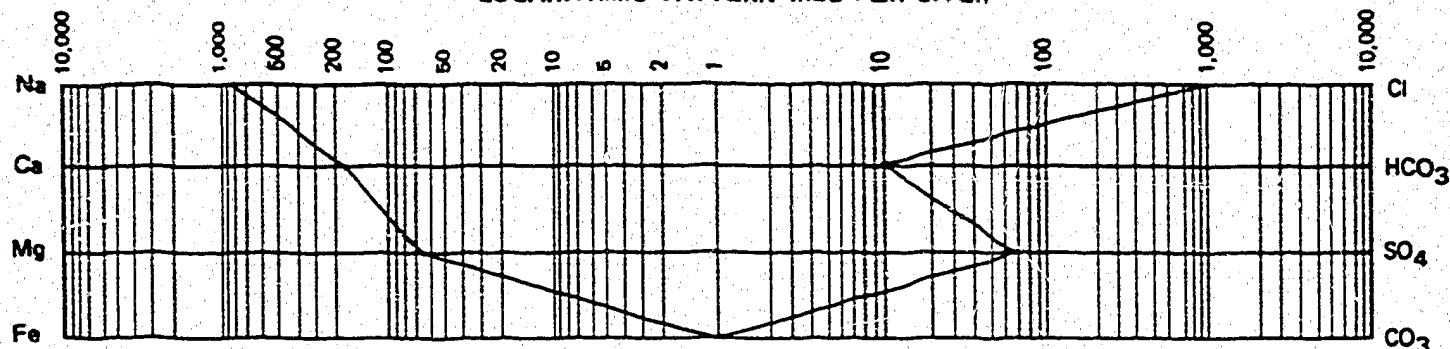
PER CENT CALCULATED SOLIDS

30.2	5.9	1.3	Trace	Abs.	-	-	56.4	1.0	5.2	Nil	Nil
------	-----	-----	-------	------	---	---	------	-----	-----	-----	-----

MEQ PER LITER

818.9	184.1	66.5	Trace	Abs.	-	-	991.8	10.0	67.7	Nil	Nil
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LOGARITHMIC PATTERN MEQ PER LITER





CORE LABORATORIES - CANADA LTD.
PETROLEUM RESERVOIR ENGINEERING
WATER ANALYSIS



File CAL-2-1830 Page 2 of 2

Company United Canso Oil & Gas Ltd.
Well Canso et al Grumbler J-13 K.B. Grd.
60 12°43.00 N.L.
Location 116 17°40.00 W.L. Field Wildcat Province N.W.T.
Formation Sulphur Point Interval 1905' - 2145'
Sampled from DST #4 (Top of Tool) by
Date sampled March 11/70 Date analysed March 18/70 Analyst DS
Recovery 720' Watery Mud, 700' Salt Water.

 Mud type Water cushion

Resistivity 0.144 Ohm-meters @ 75 °F
Specific gravity 1.0356 @ 60°F
pH 7.35 H₂S Absent
Refractive Index 1.342 @ 70°F

Total Solids:
Calculated 51.929 mg/liter
By evaporation @ 110°C - mg/liter
By evaporation @ 180°C - mg/liter
At ignition - mg/liter

MILLIGRAMS PER LITER

Na+K	Ca	Mg	Fe	Ba	Br	I	Cl	HCO ₃	SO ₄	CO ₃	OH
16,194	2,980	329	Pres.	Abs.	-	-	28,100	586	3,740	Nil	Nil

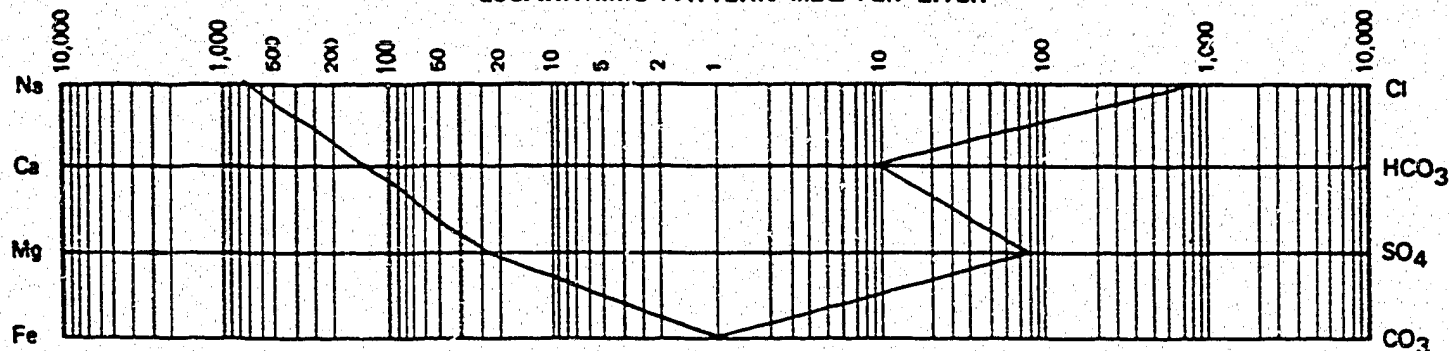
PER CENT CALCULATED SOLIDS

31.2	5.7	0.6	Pres.	Abs.	-	-	54.2	1.1	7.2	Nil	Nil
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MEQ PER LITER

704.1	148.7	27.0	Pres.	Abs.	-	-	792.4	9.6	77.8	Nil	Nil
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LOGARITHMIC PATTERN MEQ PER LITER



Cano ET AL Grumbler
J-13

CANSO ET AL GRUMBLER J-13

D.A. 414

- Tour Reports

OPERATOR DAY WORK RECORD

AREA Enterprise DATE March 12 1970

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

[illegible]

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by _____

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

#17

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ET AL Grumbler J-13 AREA

DATE 11-3 1970

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		Stands		REMARKS			Time		
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL	Start	Stop	Interval	
Driller	D. Szpiniacki 8																					Rig Serv.			12 ⁰⁰	12 ¹⁵	1/4
Derrick	M. Lambert 8																					Hoist Test #3 + Lay Down 3			12 ¹⁵		
Floor	T. BITTman 8																					Washed D.C.S.				200	13/4
Floor	J. Vagso 8																					Break Down Test Tool			2 ⁰⁰	3 ⁰⁰	1
Floor																						Make Up D.S.T. #4			3 ⁰⁰	5 ⁰⁰	2
Motor																						Run In D.S.T. #4			5 ⁰⁰	7 ⁰⁰	2
Mechanic																						Head Up + Testing			7 ⁰⁰	8 ⁰⁰	1
Extra																											
Injuries:																											
Fires:																											
Tour — 8 a.m. to 4 p.m.		MUD 12 Mn. 2 a.m. 4 a.m. 6 a.m. Additives										At Surveys Degree		MOTOR HOURS		Next Oil Change											
Driller	H. Flett 8																										
Derrick	J. PAUL 8																										
Floor	R. LIZOTTE 8																										
Floor	G. LAMBERT 8																										
Floor																											
Motor																											
Mechanic	J. JANOL 8																										
Extra																											
Injuries:																											
Fires:																											
Tour — 4 p.m. to Midnight		MUD 8 a.m. 10 a.m. 12 Noon 2 p.m. Additives										At Surveys Degree		MOTOR HOURS		Next Oil Change											
Driller	B. DRYDEN 8																										
Derrick	W. SELAMIO 8																										
Floor	N. LIZOTTE 8																										
Floor	H. MODESTE 8																										
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											
Tour — 4 p.m. to Midnight		MUD 4 p.m. 6 p.m. 8 p.m. 10 p.m. Additives										At Surveys Degree		MOTOR HOURS		Next Oil Change											
Driller	B. DRYDEN 8																										
Derrick	W. SELAMIO 8																										
Floor	N. LIZOTTE 8																										
Floor	H. MODESTE 8																										
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
 B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher *de Kellen*
 Total Company Time _____ Hrs. Approved by _____

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT #16

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ET AL GAUMBER J. 13 AREA DATE 10-3-1920

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS			FUEL		WATER		COAL		Stands		REMARKS		Time					
Specify actual hours worked Hrs.												No. O.D. I.D. Wgt.			Gals.		Bbls.		Tons											
Driller D. Szpuniorski	8																						Hoist Test #2 + Break		12 ⁰⁰					
Derrick M. Lambert	8																						Down Tool		5 ⁰⁰	5				
Floor T. Bittman	8																						W.O. Hoist Clutch		5 ⁰⁰	8 ⁰⁰	3			
Floor J. Vegso	8																													
Floor																														
Motor																														
Mechanic																														
Extra																														
Injuries:																														
Fires:																														
Tour — 8 a.m. to 4 p.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS			FUEL		WATER		COAL		Stands		Company Time		Cont'r Time					
Specify actual hours worked Hrs.												No. O.D. I.D. Wgt.			Gals.		Bbls.		Tons											
Driller H. Flett	8																						W.O. Check BOPS		8 ⁰⁰	9 ⁰⁰	1			
Derrick J. Paul	8																						Hoist Tail Pipe		9 ⁰⁰	9 ³⁰	1/2			
Floor R. Lizotte	8																						Run in with bit		8 ³⁰	12 ⁰⁰	2 1/2			
Floor G. Lambert	8																						Circ to condition		12 ⁰⁰	1 ³⁰	1 1/2			
Floor																							Hoist Pipe		1 ³⁰	3 ⁰⁰	1 1/2			
Motor																							Run in Tail Pipe		3 ⁰⁰	3 ¹⁵	1/4			
Mechanic J. Jandol	8																						Make up Tool		3 ¹⁵	4 ⁰⁰	3/4			
Extra																														
Injuries:																														
Fires:																														
Tour — 4 p.m. to Midnight		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS			FUEL		WATER		COAL		Stands		Company Time		Cont'r Time					
Specify actual hours worked Hrs.												No. O.D. I.D. Wgt.			Gals.		Bbls.		Tons											
Driller B. Dryden	8	2450'																					Make up Tool		4 ⁰⁰	5 ³⁰	1 1/2			
Derrick W. Selamio	8																						Run in to test		5 ³⁰	6 ³⁰	1			
Floor N. Lizotte	8																						Testing - DST #3		6 ³⁰	9 ³⁰	3			
Floor H. Modeste	8																						Hoist Test Salt Water		9 ³⁰	12 ⁰⁰	2 1/2			
Floor																														
Motor																														
Mechanic																														
Extra																														
Injuries:																														
Fires:																														
Total Ring or Bit No.		D.P. Calipered Date										Results			F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		Total Contractor Time		Hrs.		Toolpusher		Approved by	
B.O.P. Test-Operated		Time										Results			F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		F.S.E. - 881 F.H.P. - 1068		Total Company Time		Hrs.		Approved by			

Totco Ring or Bit No.

D.P. Calipered Date

Results H.P. - 1166" ISL 889" F.FLOW 667" FINAL FLOW 881

Total Contractor Time

Hrs.

Toolpusher

B.O.P. Test-Operated

Time

Results F.S.E. - 881 F.H.P. - 1068

Total Company Time

Hrs.

Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

OPERATOR DAY WORK RECORD

RIG No. 2 LOCATION CHASSO ETAL GRUMBLER J-13 AREA Enterprise DATE March 9 1970

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

[illegible]

	REMARKS	Time		
		Start	Stop	Interval
	Logging + Rig Out Logger's	12 ⁰⁰	5 ⁰⁰	5
	Run In 11 STD Tool Pipe	5 ⁰⁰		
	Pick Up Test Tools + Make up Same		8 ⁰⁰	3
	Company Time Cont'r Time			
	MAKE UP TOOL	8 ⁰⁰	9 ³⁰	1 ²
	RUN IN MAKE UP TESTING HEAD	8 ³⁰	9 ⁴⁵	1 ¹ / ₄
	TESTING	9 ⁴⁵	12 ⁴⁵	3
	HUIST TEST #1 BREAK DOWN TOOK	12 ⁴⁵	4 ⁰⁰	3 ¹ / ₄
	Company Time Cont'r Time			
	BREAK DOWN TOOL	4 ⁰⁰	5 ⁰⁰	1
	WORK ON DEADLINE	5 ⁰⁰	6 ⁴⁵	3 ¹ / ₄
	MAKE UP AND RUN TEST	5 ⁴⁵	9 ⁰⁰	3 ¹ / ₄
	TESTING DST #2.	9 ⁰⁰	11 ¹⁵	2 ¹ / ₄
	BREAK DOWN HEAD + HUIST	11 ¹⁵	12 ⁰⁰	3 ¹ / ₄
	HEX			
	Company Time Cont'r Time			

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by _____

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT #14

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANISO ETAL GRUMBLER J-13 AREA Enterprise DATE March 8 1970

Tour — Midnight - 8 a.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands					
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller	O. Szpunarski	8	2850	15		6 1/2		2 1/2																			
Derrick	M. Lambert	8		8		8 3/4		WD-7		2-11-10		V-291						85		11 1/4							
Floor	T. Bittman	8																									
Floor	J. Veyso	8																									
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											
Tour — 8 a.m. to 4 p.m.		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands			
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller	H. FLETT	8		15		6 1/2		2 1/2																			
Derrick	J. PAUL	8		8		8 3/4		WD-7		2-11-10		V-291						7		11 1/4							
Floor	R. LIZOTTE	8																									
Floor	G. LAMBEAT	8																									
Floor																											
Motor																											
Mechanic	J. Jagdh	8																									
Extra																											
Injuries:																											
Fires:																											
Tour — 4 p.m. to Midnight		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands			
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller	B. DRYDEN	8	2850	15		6 1/2		2 1/2																			
Derrick	W. SELAMIO	8		8		8 3/4		WD-7		2-11-10		V-291						7		11 1/4							
Floor	N. LIZOTTE	8																									
Floor	H. MODESTE	8																									
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											

REMARKS		Time		
		Start	Stop	Interval
Circ. + W.O. Logger's		1200	800	8
Company Time				
Cont'r Time				
Circ W.O. Logger		800	1200	4
Rig & Bop Service		1200	1265	4
Horst		1265	200	1
Rig up Logger & Log		200	400	2
Company Time				
Cont'r Time				
LOGGING		400	1200	8
Company Time				
Cont'r Time				

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
 B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
 Total Company Time _____ Hrs. Approved by _____

#13

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

Time	Results	From ripe Rack

Total Contractor Time _____ Hrs. Toolpusher W. K. Lh

Total Company Time _____ Hrs. Approved by _____

#12

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ETAL GRIMBLER J-13

AREA ENTERPRISE DATE MARCH 6 1970

[illegible][illegible]

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs.

Toolpusher

Total Company Time _____ Hrs.

Approved by _____

DAILY DRILLING REPORT

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ETAL GRUMBLER 6-13 AREA ENTERPRISE DATE MARCH 5 1970

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Toolpusher

Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

10

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ETAL GRUMBAER J-13 AREA ENTERPRISE DATE MARCH 4 19 70

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		REMARKS		Time		
Specify actual hours worked Hrs.		2260 75 2335		7 3/4 64		15 6 1/4 2 1/2												30		Start Stop Interval				
Driller B. DRYDEN	8																	DRILLING 8 3/4 HOLE		1200	1230	1/2		
Derrick W. SELAMIO	8																	RIG SER		1230	1245	1/4		
Floor N. LIZOTTE	8																	DRILLING 8 3/4 HOLE		1245	9.00	7 1/4		
Floor H. MODESTE	8																							
Floor																								
Motor																								
Mechanic																								
Extra																								
Injuries:																								
Fires:																								
Tour — 8 a.m. to 4 p.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		REMARKS		Time		
Specify actual hours worked Hrs.		2335 70 2405		6 1/4 70		15 6 1/4 2 1/2														31		Company Time Cont'r Time		
Driller D. SzpuniarSKI	8																	Drill 8 3/4 Hole		800	1015	2 1/4		
Derrick M. Lambert	8																	Rig Serv. ✓ B.O.P		1015	1030	1/4		
Floor N. LIZOTTE	4																	Drill 8 3/4 Hole		1030	230	4		
Floor J. Cummings	8																	Survey + Blow Kelly + Rig To Hoist		230	315	3/4		
Floor																		Hoist		315	400	3/4		
Motor																								
Mechanic J. Jandl	8																							
Extra																								
Injuries:																								
Fires:																								
Tour — 4 p.m. to Midnight		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		REMARKS		Time		
Specify actual hours worked Hrs.		2405 50 2425 5 1/2		70		15 6 1/4 2 1/2														32		Company Time Cont'r Time		
Driller H. FLETT	8																	Hoist BIT RIG SERVICE		400	500	1		
Derrick J. PAUL	8																	Run in BIT & BREAK CIRCU		500	630	1 1/2		
Floor R. LIZOTTE	12																	Drill 8 3/4 HOLE		630	1200	5 1/2		
Floor G. LAMBERT	8																							
Floor																								
Motor																								
Mechanic																								
Extra																								
Injuries:																								
Fires:																								

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____ Total Contractor Time _____ Hrs. Toolpusher _____
 B.O.P. Test-Operated _____ Time _____ Results _____ Total Company Time _____ Hrs. Approved by _____

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT # 9

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ETAL GRUMBLER J-13

AREA ENTER DRISE DATE MARCH 3 1974

Tour — Midnight - 8 a.m.		From										Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		REMARKS			Time		
Specify actual hours worked		Hrs.		2012		88		2100		7 3/4		64		15		64		2 3/4		Gals.		Bbls.		Tons		26		DRILLING 8 3/4 HOLE			1200 4.30 4 1/2						
Driller	B. DRYDEN	8																										SURVEY + RIG SER			4.30 4.45 1/4						
Derrick	J. PAUL	8																										DRILLING 8 3/4 HOLE			4.45 8.00 3 1/4						
Floor	M. LIZOTTE	12																																			
Floor	G. LAMBERT	8																																			
Floor																																					
Motor																																					
Mechanic																																					
Extra																																					
Injuries:																																					
Fires:																																					
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.		2100		51		2150		4 1/4		64		15		64		2 3/4								27		Drill 8 3/4 Hole			8.00 9.00 1				
Driller	D. Szpuniarowski	8																										Rig serv. J.B.O.P.S + Survey			9.00 9.50 1/2						
Derrick	M. Lambert	8																										Drill 8 3/4 Hole			9.50 11.15 1 3/4						
Floor																												Blow Kelly + Rig To Hoist			11.15 11.45 1/2						
Floor	J. Cummings	8																										Trip			11.45 2.15 2 1/2						
Floor																												Break Circ.			2.15 2.35 1/4						
Motor																												Drill 8 3/4 Hole			2.30 4.00 1 1/2						
Mechanic	J. Jandh	8																																			
Extra																																					
Injuries:																																					
Fires:																																					
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.		2151		109		2210		7		70		15		64		2 3/4								29		Run SURVEY RIG SERVICE			4.00 4.30 1/2				
Driller	H. FLETT	8																										Drill 8 3/4 Hole			4.30 10.30 6 1/2						
Derrick	J. Paul	8																										Run SURVEY			10.30 11.00 1/2						
Floor	R. LIZOTTE	12																										Drill 8 3/4 Hole			11.00 12.00 1						
Floor	G. LAMBERT	8																																			
Floor																																					
Motor																																					
Mechanic																																					
Extra																																					
Injuries:																																					
Fires:																																					

Totco Ring on Bit No. D.P. Calipered Date Results From Pipe Rack

B.O.P. Test-Operated Time Results

Total Contractor Time Hrs. Total Company Time Hrs.

Total Company Time Hrs. Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT #8

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSE ETAL GRUMBLER J-13 AREA ENTERPRISE DATE MARCH 2 1970

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS			FUEL		WATER		COAL		Stands		REMARKS			Time		
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL	Company Time	Cont'r Time	Start	Stop	Interval				
Driller	B. DRYDEN 8	1846	7 1/2		1925	7 1/2	59	15	64	2 3/8										23	DRILLING 8 3/4 HOLE		1200	2.00	2			
Derrick																				SURVEY + RIG SER		2.00	2.15	1/4				
Floor	R. LIZOTTE 8																			DRILLING 8 3/4 HOLE		2.15	5.30	3 1/4				
Floor	G. LAMBERT 8																			SURVEY		5.30	5.45	1/4				
Floor																				DRILLING 8 3/4 HOLE		5.45	8.00	2 1/2				
Driller	D. Szpuniar-ski 8	1925	37		1962	2 3/4	64	15	64	2 3/8										23	DRILLING 8 3/4 HOLE		8.00	8.30	1/2			
Derrick	M. Lambert 8																			RIG SER. CHECK B.O.P.S + BLOW		8.30						
Floor	N. LIZOTTE 8																			KELLY			9.00	1/2				
Floor	J. Cummings 12																			Hoist Bit #2 Run IN w/Bit		9.00						
Floor																				3" Hit obstruction @ 320'								
Floor																				Hoist Bit #3 (Damaged.) Run IN								
Floor																				w/Bit #4		12.45	3 3/4					
Floor																				Drill 8 3/4 Hole		12.45	1.05	1				
Floor																				W.O. Air chamber		1.45	2.30	7/8				
Floor																				Drill 8 3/4 Hole		2.30	3.30	1				
Floor																				Survey		3.30	3.45	1/4				
Floor																				Drill 8 3/4 Hole		3.45	4.00	1/4				
Driller	H. FLETT 8	1962	50		2012	4 1/2	64	15	64	2 3/8										25	DRILL 8 3/4 HOLE		4.00	7.30	3 1/4			
Derrick	J. PAUL 8																			SURVEY		7.30	7.45	1/4				
Floor	R. LIZOTTE 8																			WELD AIR CHAMBER		7.45	11.00	3 1/4				
Floor	G. LAMBERT 4																			DRILL 8 3/4 HOLE		11.00	12.00	1				

Totco Ring on Bit No. D.P. Caliper Date Results From Pipe Rack Total Contractor Time Hrs. Toolpusher
 B.O.P. Test-Operated Time Results Total Company Time Hrs. Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT # 7

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ET AL GRUMBLER 3-13 AREA ENTERPRISE DATE MARCH 1, 1970

Tour — Midnight - 2 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		Stands		REMARKS			Time			
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL	Start	Stop	Interval		
Driller	B. DRYDEN 8	1584	166	1750	6 1/4	59	15	114	274	10							21							RIG SER + SURVEY	1200	12.15	1/4	
Derrick	G. DESCHAMPS 8	2	8 3/4	5 1/4	3-10	243257	20-15	110	260	10							443.92							DRILLING 8 3/4 HOLE	12.15	2.15	2	
Floor	R. LIZOTTE 12																38.55							SURVEY	2.15	2.30	1/4	
Floor	G. LAMBERT 12																							DRILLING 8 3/4 HOLE	2.30	5.45	3 1/4	
Floor																								SURVEY	5.45	6.00	1/4	
Motor																								WORK ON AIR CHAMBER	6.00	8.00	1	
Mechanic																								DRILLING 8 3/4 HOLE	7.00	8.00	1	
Extra																												
Injuries:																												
Fires:																												
Tour — 8 a.m. to 4 p.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		Stands		REMARKS			Time			
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL	Company Time	Cont'r Time			
Driller	D. Szpakowski 8	1750	48	1798	6 3/4	59	15	120	310	16 1/4							21							Rig Serv. ✓ BOP + Hyd. 11	8.00	8.15	1/4	
Derrick	M. Lambert 8	2	8 3/4	5 1/4	3-10	243257	15	120	310	16 1/4							443.92							W.O. Air Chamber	8.15	9.00	7/4	
Floor	N. Lizotte 12																38.55							Dr. 11 8 3/4 Hole	9.00	12.45	3 3/4	
Floor	J. Cummings 12																							Survey @ 1770	12.45	1.00	1/4	
Floor																								Dr. 11 8 3/4 Hole	1.00	4.00	3	
Motor																												
Mechanic	J. Jandak 10																											
Extra																												
Injuries:																												
Fires:																												
Tour — 4 p.m. to Midnight		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS		FUEL		WATER		COAL		Stands		REMARKS			Time			
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL	Company Time	Cont'r Time			
Driller	H. FLETT 8	1798	48	1846	6 3/4	59	15	130	358	23 1/2							22							Dr. 11 8 3/4 Hole	4.00	5.15	1 1/4	
Derrick	J. PAUL 8	2	8 3/4	5 1/4	3-10	243257	12	130	358	23 1/2							443.92							Rig Serv. + Survey	5.15	5.45	1/2	
Floor																	38.55							Dr. 11 8 3/4 Hole	5.45	10.30	4 3/4	
Floor																								SURVEY	10.30	10.45	1/4	
Floor																								DRILLING 8 3/4 HOLE	10.45	11.00	1/4	
Motor																								WORK ON AIR CHAMBER	11.00	11.30	1/2	
Mechanic																								DRILLING 8 3/4 HOLE	11.30	12.00	1/2	
Extra																												
Injuries:																												
Fires:																												

Totco Ring on Bit No.

D.P. Caliper Date

Results

From Pipe Rack

Total Contractor Time

Hrs.

Toolpusher

B.O.P. Test-Operated

Time

Results

Total Company Time

Hrs.

Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT #6

OPERATOR DAY WORK RECORD

RIG No. 2 LOCATION CANSO E.T.A. Gungahar J-3 AREA ENTERPRISE DATE FEB 28 1970

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

Tour — Midnight - 8 a.m.		From Footage To										Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		
Driller	H. FLETT	8		1012	290	1297	7	52-	15	6 1/4	2 1/2																	
Derrick	J. PAUL	8																										
Floor	R. LIZOTTE	8																										
Floor	G. LAMBERT	8																										
MUD		12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives																						
WEIGHT		8.6		9.1	9.1	GEL # 3600																						
VISCOSITY		25		45	44	POLYMER # 150																						
GEL						CAUSTIC # 100																						
No. 1		Pressure	11.00	11.00	11.00	CMC # 50																						
Model		S.P.M.	71	71	71																							
Liner		Size	5 X 4																									
No. 2		Pressure																										
Model		S.P.M.																										
Liner		Size	5 1/2 X 10																									
W.L.		8.0	F.C.	2/32	PH	10.5																						

REMARKS		Time		
		Start	Stop	Interval
DRILL 8 3/4 HOLE		1200	1225	1/4
RIG SERVICE		1225	1230	1/4
DRILL 8 3/4 HOLE		1230	330	3
WORK ON PUMP		330	400	1/2
DRILL 8 3/4 HOLE		400	630	2 1/2
RUN SURVEY		630	645	1/4
DRILL 8 3/4 HOLE		645	800	1 1/4
TOTAL				
Company Time				
Cont'r Time				
DRILLING 8 3/4 HOLE		8.00	9.15	1/4
RIG SER. CHECK 4" + KELLYCOCK		9.15	9.30	1/4
DRILLING 8 3/4 HOLE		9.30	11.30	3
SURVEY		11.30	11.45	1/4
DRILLING 8 3/4 HOLE		11.45	2.00	2 1/4
SURVEY		2.00	2.15	1/4
WORK ON AIR LINES		2.15	2.30	1/4
DRILLING 8 3/4 HOLE		2.30	3.15	3/4
WORK ON PUMP		3.15	3.30	1/4
DRILLING 8 3/4 HOLE		3.30	4.00	1/2
Company Time				
Cont'r Time				
DRILL 8 3/4 HOLE		4.00	4.30	1/2
Rig Serv. + Rig To Hoist		4.30	5.00	1/2
Trip (Measure Out)		5.00	7.30	2 1/2
Break Circ. + Clean 10' of Fill		7.30	8.00	1/2
Drill 8 3/4 HOLE		8.00	10.00	2
Survey		10.00	10.15	1/4
Drill 8 3/4 HOLE		10.15	12.00	1 3/4
Company Time				
Cont'r Time				

Totco Ring on Bit No.		D.P. Calipered Date		Results		From Pipe Rack		Total Contractor Time		Hrs.		Toolpusher	
B.O.P. Test-Operated		Time		Results				Total Company Time		Hrs.		Approved by	

DAILY DRILLING REPORT#5

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSD ET AL GRUMBLER J-13 AREA ENTERPRISE DATE FEB 21 1970

[illegible]

Total Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____

B.O.P. Test-Operated	Time	Results

Total Contractor Time _____ Hrs. Toolpusher W. G. Hall

Total Company Time _____ Hrs. Approved by _____

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSD ETAL GRUMBLER J-13 AREA ENTERPRISE DATE FEB 26 1970

Tour — Midnight - 8 a.m.		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands			
					No.	O.D.	I.D.	Wgt.				Gals.	Bbls.	Tons					
Driller	H. FLEET	8			No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Singles		
Derrick	J. ROBERT	8															D. Collars		
Floor	R. ROBERT	8															Other Ft.		
Floor	G. ROBERT	8															C.B. Ft.		
Floor																	Subs. Ft.		
Motor																	Ft. Up On Kelly		
Mechanic																	TOTAL		
Injuries:																			
Fires:																			
Tour — 8 a.m. to 4 p.m.					Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
					No.	O.D.	I.D.	Wgt.				Gals.	Bbls.	Tons					
Driller	B. DRYDEN	8			No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Singles		
Derrick	G. DESCHAMPS	8															D. Collars		
Floor	N. LIZOTTE	8															Other Ft.		
Floor	G. LAMBERT	4															C.B. Ft.		
Floor																	Subs. Ft.		
Motor																	Ft. Up On Kelly		
Mechanic	J. JandL	8															TOTAL		
Injuries:																			
Fires:																			
Tour — 4 p.m. to Midnight					Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
					No.	O.D.	I.D.	Wgt.				Gals.	Bbls.	Tons					
Driller	D. Szpaniariski	8			No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Singles		
Derrick	M. Lambert	8															D. Collars		
Floor	C. Ward	8															Other Ft.		
Floor	J. Cummings	12															C.B. Ft.		
Floor																	Subs. Ft.		
Motor																	Ft. Up On Kelly		
Mechanic																	TOTAL		
Injuries:																			
Fires:																			

REMARKS	Time		
	Start	Stop	Interval
Wac	1200	700	7
BACK OFF LANDING JOINT PUT ON CASING BOWH	700	800	1
Company Time Cont'r Time			
W.O.C	800	634	
PRESSURE TEST BLIND RAMMS	245		
TO 1200# HOLD FOR 15 MIN	330	314	
RUN IN	330	400	1/2
CHECK MOTOR SHUT OFF "OK"			
CHECK KEYHOLE OK			
Company Time Cont'r Time			
Run In	400	430	1/2
Rig Serv + W.O. Pump	430	500	1/2
Pressure Test Pipe Rams	500		
To 1200 PSI + Hydrill To 1200 PSI			
Held OK. 15 min, Each	530	92	
Drill Cement + Float	530	730	2
Trip For Plugged Bit	730	830	1
Drill Float + Shoe	830	1045	2 1/4
Drill 8 3/4 Hole	1045	1200	1 1/4
Company Time Cont'r Time			
Total Contractor Time _____ Hrs.	Toolpusher _____		
Total Company Time _____ Hrs.	Approved by _____		

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT #3

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANISO ET AL GAUMBLER J-13 AREA INTERPULSE DATE FEB 25 1970

Tour — Midnight - 8 a.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands					
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller	H. FLETT	8	327																								
Derrick	J. PAUL	8																									
Floor	R. LIZOTTE	8																									
Floor	G. LAMBERT	8																									
Floor																											
Motor																											
Mechanic	J. JANDL	8																									
Extra																											
Injuries:																											
Fires:																											
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.		327																					
Driller	B. DRYDEN	8																									
Derrick	G. DESCHAMPS	8																									
Floor	N. LIZOTTE	13																									
Floor																											
Floor																											
Motor																											
Mechanic	J. JANDL	12																									
Extra																											
Injuries:																											
Fires:																											
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.																							
Driller	D. Szpunowski	8																									
Derrick	M. Lambert	16																									
Floor	C. Ward	16																									
Floor	J. Cummings	13																									
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											

REMARKS	Time		
	Start	Stop	Interval
CIRC HOLE	1200	1230	1/2
RUN SURVEY	1230	1245	1/4
HOIST TO RUN CASING	1245	100	1/4
RIG TO RUN CASING	100	430	3 1/2
CIRC CASING	430	500	1/2
RIG TO CEMENT	500	600	1
W.O.C.	600	800	2
RAN 115TS - 340.64' - 9 5/8" - 32.3" - H 40 - SMLESS CASING LANNEN BUDDIE SHOE @ 321' CEMENTED W/ 150SY CEMENT + 2 7/8 CaCl₂ - NO RETURNS			
Company Time	Cont'r Time		
W.O.C.	8:00	4:00	8
RAN 1" PIPE TO 90' - OUTSIDE CEC. MIXED 170SY CEMENT + 3 7/8 CaCl₂ LET PLUG SET FOR 7 HRS - RAN EN NO CEMENT TO 90'.			
Company Time	Cont'r Time		
W.O.C.	4:00	12:00	8
RAN 12 BAL - DIESEL CEMENT BEL PLUG THRD 1" LINE SET @ 80'. PULLED 1" WAITED 1 1/2 HRS - FELT PLUG @ 50'. CEMENTED W/ 50SY CEMENT + 5 7/8 CaCl₂ + 2 7/8 CaCl₂ GOOD CEMENT @ SURFACE			
Company Time	Cont'r Time		

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
 B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
 Total Company Time _____ Hrs. Approved by _____

THE CITY DRILLING LTD.

DAILY DRILLING REPORT

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSO ET AL. CANADIAN - J-13

AREA ENTERPRISE DATE FEB 24 1920

Tour — Midnight - 8 a.m.		From Footage To										Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		
Driller	H. FLETT	8		140	60	200				7 1/4			6	6 1/2	23													
Derrick	J. PAUL	8		1A	12 1/4	OSC-3	3/4	RT		15	100	155	20 1/2															
Floor	R. LIZOTTE	8		2A	12 1/4	OSC-3	3/4	RT		15	100	45	3 1/2															
Floor	G. LAMBERT	8												At Surveys Degree		MOTOR HOURS		Next Oil Change										
Floor														159		3 1/4		1										
Motor																2												
Mechanic																3												
Extra																4												
Injuries:																5												
Fires:																												
Tour — 8 a.m. to 4 p.m.		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		
Driller	B. DRYDEN	8		200	74	278				6 1/4			8	6 1/2	27 1/2													
Derrick	G. DESCHAMPS	8		2A	12 1/4	OSC-3	3/4	RT		15	100	123	10															
Floor	N. LIZOTTE	8												At Surveys Degree		MOTOR HOURS		Next Oil Change										
Floor	J. CUMMINGS	8												210		2 1/4		1										
Floor																2												
Motor																3												
Mechanic	J. J. ANDERSON	8														4												
Extra																5												
Injuries:																												
Fires:																												
Tour — 4 p.m. to Midnight		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		
Driller	D. SZPUNIAWSKI	8		278	49	322				5 1/4			10	6 1/4	27 1/2													
Derrick	M. LAMBERT	8		2A	12 1/4	OSC-3	3/4	RT		15	100	172	15 1/4															
Floor	C. WARD	8												At Surveys Degree		MOTOR HOURS		Next Oil Change										
Floor	J. CUMMINGS	8												179		3 1/4		1										
Floor																2												
Motor																3												
Mechanic																4												
Extra																5												
Injuries:																												
Fires:																												

REMARKS	Start	Stop	Interval
Drill 12 1/4 Hole	1200	330	3 1/2
Horizontal Bit	330	400	1/2
Run Survey	400	415	1/4
Drill 12 1/4 Hole	415	800	3 3/4
Company Time			
Cont'r Time			
DRILLING 12 1/4 HOLE	8.00	9.00	1
SURVEY	9.00	9.30	1/2
DRILLING 12 1/4 HOLE	9.30	12.30	3
WORK ON PUMP	12.30	12.45	1/4
DRILLING 12 1/4 HOLE	12.45	3.00	2 1/4
TRIP OUT	3.00	3.15	1/4
WORK ON SWIVEL	3.15	4.00	3/4
Company Time			
Cont'r Time			
W.O. Swivel	4.00	4.30	1/2
W.O. Air Comp + Rig Serv.	4.30	5.30	1
Run In (Strooped) In	5.30	6.00	1/2
Survey @ 279	6.00	6.15	1/4
DRILL 12 1/4 HOLE	6.15	12.00	5 3/4
Company Time			
Cont'r Time			

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
 B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
 Total Company Time _____ Hrs. Approved by _____

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANISO FT AL GAMBLER - J-13 - AREA ENTERPRISE DATE FEB 23 1970

Tour - Midnight - 8 a.m.										DATE FEB 23 1970										REMARKS										Time									
Specify actual hours worked										Hrs.																				Start			Stop			Interval			
Driller H. FLETT										8										Dig RAT HOLE										1200			300			300			
Derrick J PAUL										8										Spud 12 1/4 HOLE										300			800			500			
Floor R. LIZOTTE										8																													
Floor G. LAMBERT										8																													
Floor																																							
Motor																																							
Mechanic																																							
Extra																																							
Injuries																																							
Fires																																							
Tour - 8 a.m. to 4 p.m.																				Company Time										Cont'r Time									
Specify actual hours worked										Hrs.										RIG SER										8.00			9.15			1 1/4			
Driller B. DRYDEN										8										DRILLING 12 1/4 HOLE										8.15			9.30			1 1/4			
Derrick G. DESCHAMPS										12										WORK ON PUMP										9.30			10.00			1/2			
Floor N. LIZOTTE										12										DRILLING 12 1/4 HOLE										10.00			1.30			3 1/2			
Floor J. CUMMINGS										12										SURVEY										1.30			1.45			1/4			
Floor																				DRILLING 12 1/4 HOLE										1.45			4.00			2 1/4			
Motor																																							
Mechanic J. JANDL										8																													
Extra																																							
Injuries																																							
Fires																																							
Tour - 4 p.m. to Midnight																				Company Time										Cont'r Time									
Specify actual hours worked										Hrs.										RIG SER. + SURVEY										4.00			4.15			1/4			
Driller D. SZPUNIAWSKI										4										DRILLING 12 1/4 HOLE										4.15			8.45			4 1/2			
Derrick J PAUL										4										RUN SURVEY										8.45			9.00			1/4			
Floor R. LIZOTTE										4										WORK ON PUMP MOTOR										9.00			9.30			1/2			
Floor G. LAMBERT										4										DRILL 12 1/4 HOLE										9.30			12.00			2 1/2			
Floor																																							
Motor																																							
Mechanic																																							
Extra																																							
Injuries																																							
Fires																																							

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs.

Toolpusher

Total Company Time _____ Hrs.

Approved:

Approved:

OPERATOR DAY WORK RECORD
NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

AREA ENTERPRISE DATE FEB 22 19 70

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by _____

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

OPERATOR DAY WORK RECORD

NOTE—Please show FOOTAGE made while "Control Drilling" as well as HOURS.

RIG No. 2 LOCATION CANSA & T. A. Crumbler J. 13 AREA _____ DATE Feb 21 1970

Tour — Midnight - 8 a.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands			
Specify actual hours worked		No.		Site		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller <u>D. SPONIASKI</u>	<u>8</u>																								
Derrick																									
Floor <u>J. CONNINGS</u>	<u>11</u>																								
Floor																									
Floor																									
Motor																									
Mechanic																									
Extra																									
Injuries:																									
Fires:																									
Tour — 8 a.m. to 4 p.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands			
Specify actual hours worked		No.		Site		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller <u>H. FLETT</u>	<u>11</u>																								
Derrick <u>J. PAUL</u>	<u>11</u>																								
Floor <u>R. LIZOTTE</u>	<u>11</u>																								
Floor																									
Motor																									
Mechanic <u>J. JANDK</u>	<u>11</u>																								
Extra																									
Injuries:																									
Fires:																									
Tour — 4 p.m. to Midnight		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands			
Specify actual hours worked		No.		Site		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller <u>B. Dryden</u>	<u>11</u>																								
Derrick <u>G. Deschamps</u>	<u>11</u>																								
Floor <u>N. LIZOTTE</u>	<u>11</u>																								
Floor <u>G. LAMBERT</u>	<u>11</u>																								
Floor																									
Motor																									
Mechanic																									
Extra																									
Injuries:																									
Fires:																									

Ring in up

Ring in up

Ring in up

[Signature]

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____
B.O.P. Test-Operated _____ Time _____ Results _____

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by _____

OPERATOR DAY WORK RECORD

DATE Feb 20 1970

Total Contractor Time _____ Hrs. Toolpusher Ed J. Elden
Total Company Time _____ Hrs. Approved by _____