Drilling Authority No. 712

Date Issued 24 February 1971

WELL NAME [illegible] B. [illegible]-71

FIELD .... Area: ....

LOCATION: Unit [illegible] Section 71 Grid 62-[illegible]-121-30

Latitude [illegible]-11 Longitude 121-43-1[illegible]

U.W.L.R. 62.[illegible] --- 121.72267

U.W.I. [illegible]171025012300

Rig Release Date: ....

Status ....

Information Release Date ....

CHANGE OF NAME:

DATE RECEIVED		INDEX
24-2-71		Application for a Drilling Authority.
		~~Well Completion Data.~~
		Well History Report.
3-3-71		Application to Amend a Drilling Authority.
		Application to change a Well Name.
24/3/71		Application to Abandon a Well or Suspend Drilling.
		Application to Alter Condition of a Well.
		Well History Supplement.
		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............

LAND 52-90 (3-69)

File No.
Drilling Authority No. 512

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well or [illegible]

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 HORN R CDR IOE WILLOW L R I-71

Location: Unit I Section 71 Grid 62° 50' N.Lat. 121° 30' W.L.

Latitude 62° 40' 44" Longitude 121° 43' 18"

From Established Reference Marker

Universal Well Location Reference N.Lat. 62.67889°, W. Long. 121.72167°

Permit No. 4409 Lease No.

IMPERIAL OIL ENTERPRISES LTD.
(Permittee, Licensee, Lessee)

Date of commencement of proposed program March 5, 1971 8:15 A.M.

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at NIL
Gas at NIL
Water at 2330 to 2504 and 985 to 1040
Total Depth 3009 Date of last operations March 19, 1971 11:00 P.M.
Present condition of well D and A

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. 8-5/8"	24		321.6K.B.	190 sks+3%$CaCl_2$	Nil
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	3009 to 2290	Clastics, Mt.Kindle, Red Beds, Lotsberg, Carbonates	180 sks +	4% Gel
2	1180 to 940	Lower Chinchaga, Anhydrite, Manitoe	100 sks + 3% $CaCl_2$	Felt top at 925 feet
3	371 to 271		45 sks + 3% $CaCl_2$	Felt top at 253 feet.

Ran 5 sacks cement in top of casing. Cut casing off 3 feet below ground, weld on plate, and rod with well marker.

The following logs have been run Lithology log LL-7, BHCSGC, FDC, SNP, Dipmeter
Other operations proposed Nil

Operations to be carried out by Kenting Oilwell Drilling Contractor Licence No.
Address Ft. Simpson, N.W.T. Address
Responsible Agent in field Gordon Gillis

Dated at Calgary, this 22nd Day of March 19 71
Signed by [signature] Company Horn River Resources Ltd.
Title President Operator's Exploratory Licence No. 1785

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

(For OIL AND MINERAL DIVISION use only)

APPROVAL

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

Confirming oral approval given by Mr. G. E. Blue on the 19th March 1971.

Dated March 24, 19 71 [signature] for Oil Conservation Engineer

IAND 52-90 (5) (2-69)

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

File No.

Drilling Authority No. 512

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

RESOURCE MANAGEMENT DIVISION

Application to Amend a Drilling Authority

This application, in triplicate, must be submitted and approved before commencing operations. If the well location is changed, this application must be accompanied where required, with a plan of survey approved by the Surveyor General.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. 512, concerning

Horn R CDR IOE Willowl R. I-71 62°40'44" N. Lat., 121°43'18" W. Long.

(Name and Number of Well)

The following amendments are required:

Change Rig to Kenting Oilwell Drilling Rig No. 9

Change B.O.P.'s to G.K. 10" 900 Series Hydril B.O.P.

G.K. 10" 900 Series Mechanical

Reasons for the amendments:

Change in Rig

Dated at Calgary, this 3rd day of March, 19 71

Signed by [signature]

Title President

Company Horn River Resources Ltd.

(For Resource Management Division use only)

APPROVED

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

Date 3rd March, 19 71

[signature]

Oil Conservation Engineer

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

IAND 52-90-3 (3-67)

Drilling Authority No. 512

Project No.

File No.

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

FEB 19 1971
CALGARY 71, ALBERTA

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: Horn R CDR IOE Willowl R. I-71

Location: Unit I Section 71 Grid 62°50' N. Lat., 121°30' W.Long.

Latitude 62°40'44" Longitude 121°43'18"

Unique Well Identifier: 300F7162501213 00

Universal Well Location Reference: Lat. 62.67889° N., Long. 121.72167° W.

Elevation: Ground 824 K.B. 834 feet above sea-level.

Well is expected to produce from Middle Devonian and/or Silurian Carbonates formation at a depth of about 2500 feet. Expected total final depth 2900

Area assigned to well

(for Oil Conservation Engineer's use only)

Permit No. 4409 Lease No. Acreage 58650

Permittee, licensee, or lessee: Imperial Oil Enterprises Ltd.

Exploratory Licence No. 1674

Surface owned by Crown or Crown

(If alienated 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./Ft.)	Grade	New or Used	Estimated Depth	Sacks of Cement
1. 8 5/8"	24#	J-55	New	325	110
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment: Paleozoic (Devonian) Carbonates - Control with: 2 B.O.P.'s - 10" 900 Series G.K. Hydro
- 10" 900 Series Schaffer Mechanical Double Gate

Well will be drilled with Rotary Rig No. 35 by Kenting Oilwell Drilling
(Drilling Contractor or company)

Responsible agent of applicant:— Contractor's business Licence No. 800

At well Gordon Gillis At registered office F. L. Woolley

Address c/o Kenting, Gen.Del, Ft. Simpson Address 1020 Aquitaine Tower, 540 Fifth Ave. S.W. Calgary 1, Alta.

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at Calgary, this 19th day of February 19 71

Signed by F. L. Woolley Company Horn River Resources Ltd.

Title President Operator's Licence No. 1785

(For Oil and Mineral Division use only)

APPROVED

This application has been examined and approved subject to the following conditions:—

1. Copies of this Drilling Authority shall be exhibited at the Drilling Rig in both the Doghouse and the Drilling Foreman's Office between spud and rig release dates.
2. The Company will submit to this office, on Tuesday of each week, the latest reports

Dated 24th February 19 71

Please see over page
Oil Conservation Engineer

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

IAND 52-90-1 (3-69)

received by radio on the progress of the well.

3. During well drilling and testing operations, every effort shall be made to ensure 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.

4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.

5. The surface casing string shall be set at least 75 feet into a competent formation.

6. Any additional casing programs are to receive the approval of the Oil Conservation Engineer prior to running.

B.H.J. Thoms, Oil Conservation Engineer

CANADA

Drilling Authority No. 512

Date Issued Feb. 24/71

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

IAND 52-90 (2) (3-70)

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 Horn R CDR IOE Willowl R. I-71

Permit No. 4409 Lease No.

Imperial Oil Enterprises Ltd. (Permittee, Licensee, Lessee) Exploratory Licence No. 1684

Horn River Resources Ltd. (Operator) Exploratory Licence No. 1785

Location: Unit I Section 71 Grid 62°50' N.Lat., 121°30' W.Long.

Latitude 62°40'44" N. Longitude 121°43'18"

Unique well identifier 300I 716250121300

Universal Well Location Reference Lat. 62.67889°N., Long. 121.72167°W.

	DATE	DEPTH
Spudded	Mar.5/71	
Suspended		
Resumed Operations		
Finished Drilling	Mar.17/71	3009 (Drlr)
Deepened		
Complete (gas/oil)		
Abandoned	Mar.19/71	3005 (Log)
Rig released	Mar.19/71	

Pool(s) NA

Interval(s) open to production NA

Elevation: Gr. 824 K.B. 834

Rig No. 9

Drilling Contractor Kenting Oilwell Drilling

Contractor's Business Licence No. 800

CASING RECORD

	Casing Size (Inches)	Grade	Weight	Amount	Set at —	Sacks of Cement and Additives
1.	8 5/8"	J-55	24#	10 jts.	321-6(K.B.)	190 sx + 3% $CaCl_2$
2.						
3.						
4.						
5.						
6.						

GEOLOGICAL TOPS	ELEVATION	
	Depths	Sub-Sea
Ft. Simpson	180	+ 654
Canol	520	+ 314
Lonely Bay	695	+ 39
Headless	1050	- 216
Monetoe	1130	- 296
Lower Chinchaga	1230	- 396
Anhydrite		
Cold Lake Salt	1696	- 862
Ernestina Lake	1980	- 1146
Lotsberg Salt	2020	- 1186
Lotsberg Anydrite	2040	- 1206
Lotsberg Carbonate	2335	- 1501
Camsell	2545	- 1711
Basal Camsell	2855	- 2021
Cambro-Ord.		
Clastics	2960	- 2126

CORE RECORD

From	To	Rec.	From	To	Rec.
2454	2504	50'			

LOG RECORD

Run No.	Type of Log	From	To
1	Laterlog	3000	322
1	SNP	3004	318
1	Formation Density	3004	318
1	BHCSGRC	3003	318
1	Rithology Plat	3004	318

CEMENTING RECORD (Plug, Squeeze, etc.)

Date	From	To	Remarks
Mar.19/71	3009	2290	180 sx ∤ 4% gel
Mar.19/71	1180	940	150 sx ∤ 3% $CaCl_2$
Mar.19/71	371	273	55 sx ∤ 3% $CaCl_2$
Mar.19/71	Surface		5 sx
			Welded on steel plate and marker

PERFORATING RECORD (Bullet, Jet)

Date	From	To	Remarks
			Nil

SERVICING RECORD (Acidizing, Fracing, etc.)

Date	From	To	Remarks
			Nil

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.B.H.P.	F.S.I.B.H.P.	I.F.B.H.P.	F.F.B.H.P.	I.H.P.	F.H.P.	REMARKS
1	Mar.12/71	Lotsberg	2330	2504										Misrun - did not reach bottom.
2	Mar.13/71	"	2330	2504										Misrun - did not reach bottom.
3	Mar.14/71	"	2330	2504	60	30	60	967	966	55	126	1076	1076	Weak air blow-recovered 200' muddy salt water.
4	Mar.18/71	Lonely Bay	985	1040	30	30	30	464	63	41	41	464	460	Very small blow, died in 5 mins. - recovered 60' watery mud.

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
C71-3039-3	Watery Mud	985	1040	Lonely Bay	63,060 ppm total solids

PRESENT STATUS OF WELL

Oil		(Interval.)
Gas		(Interval.)
Dry	X	
Susp.		

Company Horn River Resources Ltd.

Signed by [signature]

Title President

Date June 23, 1971

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

GEOLOGICAL PROGNOSIS

WELL: HORN R CDR IOE WILLOW R. I-71

GRID: 62-50-121-30 Permit 4409

COORDINATES: 62° 40' 44"N 121° 43' 18"W. 60' E of Shot Point 23D-1440

GROUND ELEVATION: 824 KB Elevation: 834

FORMATION	SUBSURFACE	DRILL DEPTH KB
Canol	+ 330	504
Lonely Bay	+ 250	584
Headless Dolomite	- 125	959
Manetoe	- 200	1034
Lower Chinchaga Evaporite	- 290	1124
Cold Lake Salt	- 730	1564
Ernestina Dolomite	-1030	1864
Lotsberg Evaporite	-1220	2054
Lotsberg Carbonate	-1460	2294
Mt. Kindle (Chedabucto)	-1740	2574
Cambro-Ord. Clastics	-2020	2854
Total Depth	-2070	2904

SAMPLES:

Government: 1 set of bagged samples @ 10' intervals surface to total depth
CDR : 1 set of washed and bottled samples @ 10' intervals surface to total depth
IOE : 1 set of washed and bottled samples @ 10' intervals from base of surface casing to 50 feet above Lonely Bay (534) and 5' samples 534 feet to total depth.

CORES:

Cut a 50' core immediately upon entering the Lotsberg Carbonate. Other cores will be cut depending upon drill stem tests results.

DRILL STEM TESTS:

If porosity accompanied by oil staining is encountered, penetrate no more than 30 feet of section and drill stem test. If water free hydrocarbons are encountered, cut a 90 foot core and test. Continue coring and testing in 30' increments until water or lack of porosity is encountered. A drill stem test of the Lotsberg carbonate, if porous in the core, must be run. Run formation sampler and three recorders on all tests. Fluid and Gas Samples to be taken from all tests.

VELOCITY SURVEY:

A velocity survey will be run.

LOGGING: Logs - Schlumberger

a) Dual Induction - LL8

2" Scale - Total depth to surface casing
5" Scale - Total depth to 50 feet above Lonely Bay - repeat bottom 200 feet

b) Formation Density - Gamma Ray - Caliper

2" Scale - Total depth to surface casing (Show correction Curve on 2" only)
5" Scale - Total depth to 50 feet above Lonely Bay - repeat bottom 200 feet
Use Limestone porosity scale matrix 30-20-10-0

c) Sidewall Neutron Porosity

5" Scale - Total depth to 50 feet above Lonely Bay
Use Limestone porosity scale matrix 30-20-10-0

d) Interrated BHC Sonic

2" Scale - Total depth to surface casing
5" Scale - Total depth to 50 feet above Lonely Bay - repeat bottom 200 feet
Run Sonic on 140-90-40 Repeat zones of interest on a 80-60-40 scale

e) Lithology Log

5" Scale - Total depth to 50 feet above Lonely Bay

f) Diameter - 4 Arm High Resolution

The decision to run this log will be made at the time of logging.

On all logs show all zeros, calibrations and statistical variations.

Phonofax: 1 copy of all logs to Imperial Oil, Edmonton, c/o Mr. Bruce Fahlman
office 229-5480; Residence 466-6709

1 copy of all logs to CDR representative at Calgary

Log Prints Required

Field Prints 8
Final Prints 7

OTHER:

Lag samples @ 1 minute/100 feet unless hole conditions merit otherwise. Check lag time at least 50 feet above expected top of Lonely Bay carbonate. Drill string must be strapped before all cores, tests, and logging at total depth. Take a mud sample immediately prior to pulling out of the hole to commence logging.

GEOLOGICAL SUPERVISION

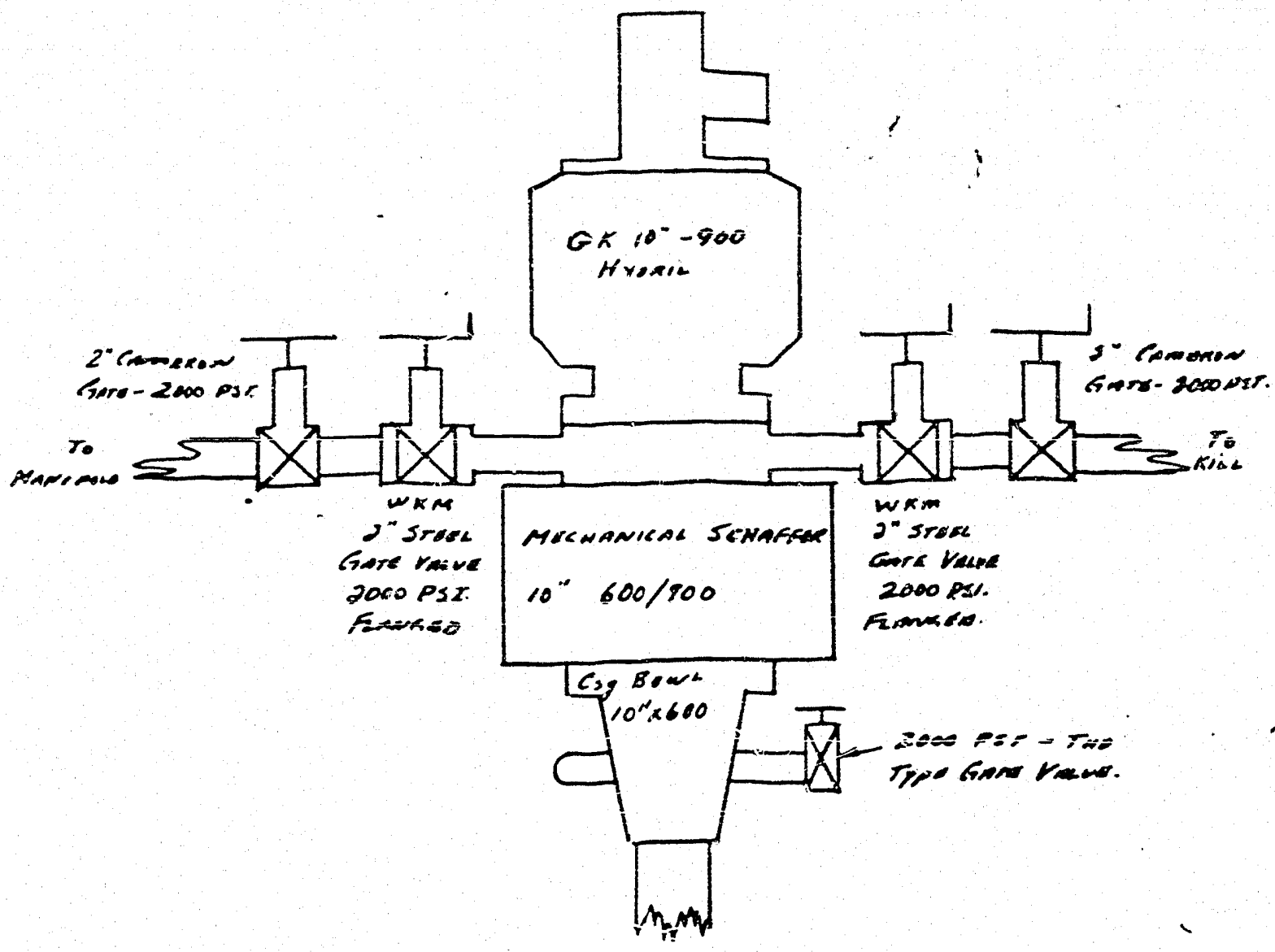
From surface to total depth.

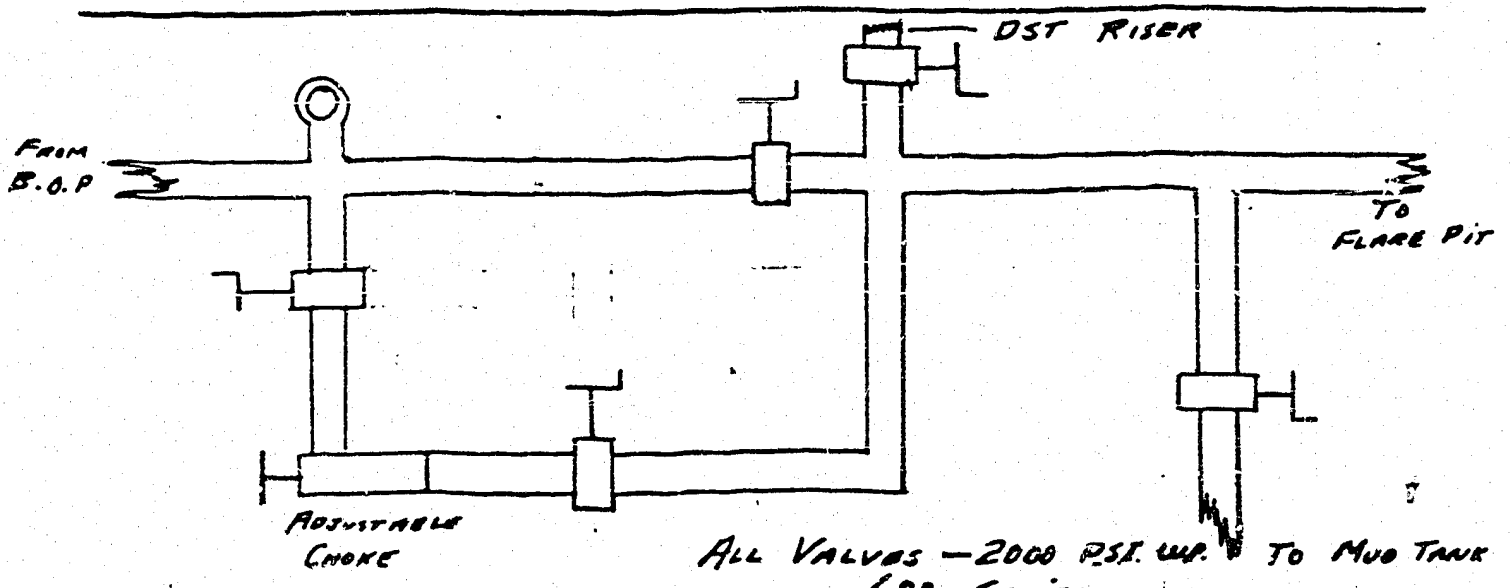
DISTRIBUTION:

Executive Vice-President	1
Production Manager	1
Drilling Operations Superintendent	1
Drilling Superintendent	1
Chief Petroleum Engineer	1
Production Superintendent	1
Geological	3
Well File	1
Imperial Oil Enterprises Ltd.	4
Horn Resources Ltd.	5

KENTING OILWELL DRILLING — NOV 30/70

Rig # 35





ALL VALVES — 2000 PSI WP. TO MUD TANK
600 SERIES

OPERATION REEF
NORTHWEST TERRITORIES
CANADA

Geological and Engineering
REPORT

HORN R CDR IOE WILLOWL R. I-71

PREPARED FOR

HORN RIVER RESOURCES LTD.

PREPARED BY

JAMES A. LEWIS ENGINEERING CO. LTD.

Petroleum Reservoir Analysts

CALGARY - ALBERTA

INTRODUCTION

This is a concise report of the operations conducted at the well,

Horn R CDR IOE Willowl R. I-71

The well was drilled through the co-operative exploration program conducted by Horn River Resources Ltd. under

"OPERATION REEF"

This report was compiled by James A. Lewis Engineering Co. Ltd. from drilling data taken from the tour reports of Kenting Oilwell Drilling Ltd. and geological data supplied by Central Del-Rio Oils Limited.

JAMES A. LEWIS ENGINEERING CO. LTD.

TABLE OF CONTENTS

Section 1

GENERAL

SUMMARY OF WELL DATA

WELL: Horn R CDR IOE Willowl R. I-71

NAME OF OPERATOR: Horn River Resources Ltd.
1020 Aquitaine Tower, 540 Fifth Avenue S.W., Calgary 1

LEGAL DESCRIPTION: Unit I, Section 71, Grid 62° 50' N, Lat. 121° 30' W, Long.

LOCATION: LATITUDE: 62° 40' 44" N LONGITUDE: 121° 43' 18" W.

UNIVERSAL WELL LOCATION REFERENCE: Lat 62. 67889° N., Long 121. 72167° W

UNIQUE WELL IDENTIFIER: 3001716250121300

CO-ORDINATES: None

PERMIT OR LEASE: Permit No. 4409

PERMITTEE, LICENCEE, LESSEE: Imperial Oil Enterprises Ltd.

DRILLING AUTHORITY: No. 512 DATE: February 24, 1971

CLASSIFICATION: New Field Wildcat

ELEVATION: GROUND: 824' K.B. 834'

DRILLING CONTRACTOR: Kenting Oilwell Drilling Ltd. Rig No. 35

WELLSITE GEOLOGIST: Don R. Clark, Central Del-Rio Oils Limited

SURFACE CASING: 8-5/8" - 24 lb. - J-55 New Set @ 321.61' K.B. w/c 190 sax + 3% $CaCl_2$

HOLE SIZE: Surface Hole 0' - 330', 12-1/4" Main Hole 330' - 3,009', 7-7/8"

MUD SYSTEM: Gel-Chemical

CORES: No. 1: 2,454' - 2,504'

FORMATION TESTS: DST No. 1: 2,330' - 2,504' Lotsburg Carbonate
DST No. 2: 2,330' - 2,504' Lotsburg Carbonate
DST No. 3: 2,330' - 2,504' Lotsburg Carbonate
DST No. 4: 985' - 1,040' Lonely Bay

ABANDONMENT PLUGS: Plug No. 1: 3,009' - 2,290' - 180 sax + 4% Gel Plug No. 4: Surface - 5 sax
Plug No. 2: 1,180' - 940' - 150 sax + 3% $CaCl_2$
Plug No. 3: 371' - 271' - 55 sax + 3% $CaCl_2$

LOGS:

Laterolog	3,000' - 322'	FDL	3,004' - 318'
SNP	3,004' - 318'	BHCSGRC	3,003' - 318'

WELL SPUDDED: 8:15 a.m. March 5, 1971

FINISHED DRILLING: March 17, 1971

RIG RELEASED: 11:00 p.m. March 19, 1971

TOTAL DEPTH: 3,009'

STATUS: Drilled and Abandoned

Section 2

GEOLOGICAL

FORMATION TOPS

WELL: Horn R CDR IOE Willowl R. I-71

FORMATION	DEPTH, Feet	DATUM, Feet	REMARKS
Glacial Drift/Ft. Simpson	180		
Canol	520		
Lonely Bay	695		
Headless	1050		
Manetoe	1130		
Lower Chinchaga Anhydrite	1230		
Cold Lake Salt	1696		
Ernestina Lk. Carbonate	1980		
Lotsberg Salt	2020		
Lotsberg Anhydrite	2040		
Lotsberg Carbonate	2335		
Pre-Devonian			
Camsell	2545		
Basal Camsell	2855		
Cambro-Ordovician Clastics	2960		
Total Depth	3009		

James A. Lewis Engineering Co. Ltd.

SAMPLE DESCRIPTION

Horn R CDR IOE Willowl R. I-71

0 - 180′	Glacial till. Weathered clay, sand, gravel and boulders.
180 - 190′	Shale, grey-green gumbo (weathered?).
190 - 200′	As above.
200 - 210′	As above.
210 - 220′	As above.
220 - 230′	As above.
230 - 240′	As above.
240 - 250′	As above.
250 - 260′	As above.
260 - 270′	As above.
270 - 280′	Shale, grey-green, firm (unweathered).
280 - 290′	As above.
290 - 300′	As above.
300 - 310′	As above.
310 - 320′	As above.
320 - 330′	As above.
330 - 340′	As above.
340 - 350′	As above.
350 - 360′	As above.

360 - 370'	As above.
370 - 380'	Shale, grey-grey, in part dark brown.
380 - 390'	As above.
390 - 400'	As above.
400 - 410'	As above.
410 - 420'	As above.
420 - 430'	As above.
430 - 440'	As above.
440 - 450'	As above.
450 - 460'	As above.
460 - 470'	As above.
470 - 480'	As above.
480 - 490'	As above.
490 - 500'	As above.
500 - 510'	As above.
510 - 520'	As above.
520 - 530'	Shale, black, micromicaceous.
530 - 540'	As above.
540 - 550'	As above.
550 - 560'	As above.

560 - 570'	As above.
570 - 580'	As above.
580 - 590'	As above.
590 - 600'	Shale, black, brittle, bituminous, with trace of pyrite. Marked drilling break at 593'.
600 - 610'	As above.
610 - 620'	Trip trash.
620 - 630'	Shale, black, brittle, bituminous, with trace of pyrite.
630 - 640'	As above, bituminous odour.
640 - 650'	As above, bituminous odour.
650 - 660'	As above, bituminous odour.
660 - 670'	As above.
670 - 680'	As above.
680 - 690'	As above.
690 - 700'	Limestone, medium brown, microcrystalline.
700 - 710'	Limestone, in part medium brown, microcrystalline, in part light grey, argillaceous, sparry.
710 - 720'	As above, rare vug.
720 - 730'	As above.
730 - 740'	As above, in part coarse crystalline at fractures.
740 - 750'	As above.
750 - 760'	As above.

SAMPLE DESCRIPTION (Continued)

Horn R CDR IOE Willowl R. I-71

760 - 770′	As above.
770 - 780′	As above, light brown, coarse crystalline.
780 - 790′	Limestone, light brown to brown, microcrystailine, in part bioclastic. Coarse calcite in fractures.
790 - 800′	As above.
800 - 810′	Limestone, light brown to brown, microcrystalline, coarse calcite in fractures.
810 - 820′	As above.
820 - 830′	As above.
830 - 840′	Limestone, as above. Calcite crystals in brown, dense limestone.
840 - 850′	Limestone, dark brown, fine crystalline, bituminous stylolite partings.
850 - 860′	As above.
860 - 870′	As above.
870 - 880′	As above.
880 - 890′	Dolomite, dark brown, fine crystalline, and smokey, chert, massive.
890 - 900′	Limestone, medium brown, microcrystalline.
900 - 910′	As above.
910 - 920′	As above.
920 - 930′	Limestone, medium brown, microcrystalline, dolomite.
930 - 940′	As above. Trace of green shale interbeds.
940 - 950′	As above. Some yellow fluorescence - imovable.

950 - 960'	Limestone, dolomitic, in part dark brown, fine crystalline, in part olive-grey, lithographic.
960 - 970'	Limestone, olive-grey, lithographic.
970 - 980'	Limestone, in part dark brown, fine crystalline, in part olive-grey.
980 - 990'	Limestone, in part light grey lithographic, and in part medium brown with calcite crystals.
990 - 1000'	Limestone, light brown, faintly pelletal.
1000 - 1010'	Limestone, light brown, dolomitic, microcrystalline.
1010 - 1020'	As above.
1020 - 1030'	As above.
1030 - 1040'	As above.
1040 - 1050'	As above.
1050 - 1060'	Dolomite, light brown, sucrose, fair intercrystalline and pin-point porosity, no evidence of hydrocarbon.
1060 - 1070'	As above, good pin-point and intercrystalline porosity.
1070 - 1080'	As above, porosity only fair.
1080 - 1090'	Dolomite, light brown, sucrose, fair intercrystalline and pin-point porosity. Trace of bright green, waxy, pyritic shale.
1090 - 1100'	As above.
1100 - 1110'	As above. No shale.
1110 - 1120'	As above. No shale.
1120 - 1130'	As above. No shale.
1130 - 1140'	Anhydrite, light brown, massive.

1140 - 1150'	Dolomite, light brown, cryptocrystalline.
1150 - 1160'	Anhydrite.
1160 - 1170'	As above.
1170 - 1180'	Dolomite, dark brown, fine crystalline.
1180 - 1190'	Anhydrite, dark brown.
1190 - 1200'	As above.
1200 - 1210'	As above.
1210 - 1220'	As above, dark brown dolomite stringers.
1220 - 1230'	Dolomite, dark brown, fine crystalline.
1230 - 1240'	Anhydrite, white.
1240 - 1250'	As above.
1250 - 1260'	As above.
1260 - 1270'	As above.
1270 - 1280'	As above. Dark brown dolomite stringer.
1280 - 1290'	As above.
1290 - 1300'	As above.
1300 - 1310'	As above.
1310 - 1320'	As above.
1320 - 1330'	As above, dark brown dolomite stringer.

SAMPLE DESCRIPTION (Continued)

Horn R CDR IOE Willowl R. I-71

1330 - 1340'	As above.
1340 - 1350'	As above, dark brown dolomite stringer.
1350 - 1360'	Dolomite, medium brown, fine crystalline, in part with coarse dolomite rhombs.
1360 - 1370'	As above.
1370 - 1380'	Anhydrite, white.
1380 - 1390'	As above, with dolomite rhombs.
1390 - 1400'	As above.
1400 - 1410'	Anhydrite, white, with dark brown dolomite stringers.
1410 - 1420'	As above.
1420 - 1430'	As above.
1430 - 1440'	As above.
1440 - 1450'	As above.
1450 - 1460'	As above.
1460 - 1470'	Dolomite, dark brown, medium crystalline, bituminous partings.
1470 - 1480'	Anhydrite, white, massive.
1480 - 1490'	As above.
1490 - 1500'	Dolomite, light brown, cryptocrystalline, anhydritic.
1500 - 1510'	Anhydrite.
1510 - 1520'	Dolomite, light brown, cryptocrystalline.

1520 - 1530'	Anhydrite, with dark brown dolomite stringers.
1530 - 1540'	Anhydrite, green, argillaceous.
1540 - 1550'	Anhydrite, with dark brown dolomite stringers.
1550 - 1560'	As above.
1560 - 1570'	As above.
1570 - 1580'	As above.
1580 - 1590'	As above.
1590 - 1600'	Dolomite, dark brown, with anhydrite stringers.
1600 - 1610'	Anhydrite, with dolomite stringers.
1610 - 1620'	Dolomite, dark brown, with anhydrite stringers.
1620 - 1630'	Anhydrite, with dolomite stringers.
1630 - 1640'	Anhydrite, olive-grey, massive.
1640 - 1650'	As above.
1650 - 1660'	As above.
1660 - 1670'	As above.
1670 - 1680'	As above.
1680 - 1690'	As above, light brown.
1690 - 1700'	As above.

1700 - 1710'	Anhydrite, light brown, with rare halite cast.
1710 - 1720'	Anhydrite, light brown.
1720 - 1730'	Anhydrite, as above, with rare halite cast.
1730 - 1740'	As above.
1740 - 1750'	Anhydrite, as above, with halite casts common.
1750 - 1760'	As above.
1760 - 1770'	As above.
1770 - 1780'	As above.
1780 - 1790'	Anhydrite, as above, with salt casts abundant.
1790 - 1800'	As above.
1800 - 1810'	As above.
1810 - 1820'	As above.
1820 - 1830'	As above.
1830 - 1840'	As above.
1840 - 1850'	As above.
1850 - 1860'	As above, salt casts common.
1860 - 1870'	As above, salt casts common.
1870 - 1880'	As above, salt casts rare.
1880 - 1890'	Anhydrite, as above, salt casts abundant.
1890 - 1900'	As above.
1900 - 1910'	As above.

1910 - 1920'	As above.
1920 - 1930'	As above.
1930 - 1940'	As above.
1940 - 1950'	As above.
1950 - 1960'	As above.
1960 - 1970'	As above.
1970 - 1980'	As above, salt casts common.
1980 - 1990'	As above.
1990 - 2000'	Dolomite, very fine grained, dark brown.
2000 - 2010'	Dolomite, dark brown, fine grained, trace vuggy porosity, sulphurous odour when heated. No oil stain.
2010 - 2020'	Dolomite, dark brown, fine sucrose, trace intercrystalline porosity. No oil stain.
2020 - 2030'	As above.
2030 - 2040'	Anhydrite, with dolomite stringers.
2040 - 2050'	Anhydrite, brown.
2050 - 2060'	Anhydrite, as above, with dark brown dolomite stringers.
2060 - 2070'	Dolomite, brown, sucrose, fair intercrystalline porosity, no oil stain.
2070 - 2080'	Anhydrite, medium brown, with dark brown, sucrose dolomite stringers, fair porosity, no oil stain.
2080 - 2090'	As above.
2090 - 2100'	As above.

2100 - 2110'	As above.
2110 - 2120'	Anhydrite, light brown.
2120 - 2130'	As above.
2130 - 2140'	As above.
2140 - 2150'	As above.
2150 - 2160'	As above.
2160 - 2170'	As above.
2170 - 2180'	As above.
2180 - 2190'	As above.
2190 - 2200'	Anhydrite, with trace of salt casts.
2200 - 2210'	As above.
2210 - 2220'	As above.
2220 - 2230'	As above.
2230 - 2240'	As above.
2240 - 2250'	As above.
2250 - 2260'	As above.
2260 - 2270'	Anhydrite, massive.
2270 - 2280'	As above.
2280 - 2290'	As above.
2290 - 2300'	As above.

2300 - 2310'	As above. Trace of dark brown dolomite.
2310 - 2320'	As above.
2320 - 2330'	As above.
2330 - 2340'	As above. Trace of dark brown dolomite.
2340 - 2350'	Dolomite, cream to medium brown, cryptocrystalline, anhydritic.
2350 - 2360'	Dolomite, as above, trace pyrite. Trace of pin-point porosity.
2360 - 2370'	Anhydrite, with stringers of cream dolomite. Trace pyrite.
2370 - 2380'	As above.
2380 - 2390'	Anhydrite, light brown, massive.
2390 - 2400'	As above. Trace cream dolomite.
2400 - 2410'	As above.
2410 - 2420'	As above.
2420 - 2430'	Dolomite and anhydrite, interbedded, light brown anhydrite and cream, microcrystalline.
2430 - 2440'	As above.
2440 - 2450'	As above.
2450 - 2504'	(See Core Report).
2504 - 2510'	Dolomite, light brown, very anhydritic, dense.
2510 - 2520'	As above.
2520 - 2530'	Dolomite, very dark brown, microcrystalline.

2530 - 2540'	Dolomite, microcrystalline, light brown.
2540 - 2550'	As above, anhydritic.
2550 - 2560'	As above, anhydritic, trace of pyrite.
2560 - 2570'	Dolomite, cream to light brown, trace of olive-grey, argillaceous dolomite, clear gypsum crystals common. Dolomite, fine crystalline, with trace of vuggy porosity, no oil stain.
2570 - 2580'	As above.
2580 - 2590'	As above.
2590 - 2600'	As above.
2600 - 2610'	As above.
2610 - 2620'	As above.
2620 - 2630'	As above.
2630 - 2640'	Dolomite, light brown and dark brown, fine crystalline.
2640 - 2650'	As above.
2650 - 2660'	Dolomite, very dark brown, in part black with trace of black chert.
2660 - 2670'	Dolomite, dark brown and light brown, fine crystalline. Trace of black
2670 - 2680'	As above.
2680 - 2690'	As above.
2690 - 2700'	As above.
2700 - 2710'	As above.

2710 - 2720'	As above.
2720 - 2730'	As above.
2730 - 2740'	As above.
2740 - 2750'	As above.
2750 - 2760'	Dolomite, black, stylolitic, black chert, trace of black shale partings.
2760 - 2770'	Dolomite, cream to dark brown, fine crystalline. Trace of black chert.
2770 - 2780'	As above.
2780 - 2790'	As above, with trace of anhydrite.
2790 - 2800'	As above, in part black.
2800 - 2810'	As above.
2810 - 2820'	Dolomite, fine crystalline, black, in part brown, with large sphere and frosted quartz grains floating.
2820 - 2830'	As above.
2830 - 2840'	As above.
2840 - 2850'	Dolomite, white to light grey-green, cryptocrystalline, anhydritic, slightly argillaceous. Slightly pyritic. Floating quartz grains.
2850 - 2860'	As above.
2860 - 2870'	As above.
2870 - 2880'	As above, thin anhydrite stringers.
2880 - 2890'	Anhydrite, white. Floating quartz grains, occasional thin waxy shale beds.
2890 - 2900'	Dolomite, white to light grey-green, sandy.

2900 - 2910'	Anhydrite, white, sandy.
2910 - 2920'	Dolomite, white to light grey-green, sandy, anhydritic.
2920 - 2930'	As above.
2930 - 2940'	Sandstone, very coarse quartz sandstone grains all spherical and frosted. Firmly cemented with white dolomite.
2940 - 2950'	As above.
2950 - 2960'	As above.
2960 - 2970'	Shale, maroon and green, silty and sandy.
2970 - 2980'	As above.
2980 - 2990'	As above.
2990 - 3000'	Shale, as above, and stringers of sandy dolomite.
3000 - 3009'	As above.
3009'	Total Depth

CORE DESCRIPTION

Horn R CDR IOE Willow! R. I-71

CORE NO. 1

2454.0 - 2504.0'	Lotsberg dolomite.
2454.0 - 2463.0'	Dolomite, microcrystalline, light brown, faintly translucent. Solution-compaction phenomenon common.
2463.0 - 2466.9'	Dolomite, microcrystalline, light brown, faintly translucent, dense. Vuggy porosity. Fluorescence soft brown of very dead oil.
2466.9 - 2474.0'	Dolomite, cryptocrystalline, light brown, dense, faintly translucent, with anhydrite knobs. In part minutely fractured. Concoidal fracture.
2474.0 - 2477.6	Dolomite, microcrystalline, light brown, dense, vuggy (pencil size). Permeability may be low. Vugs in part lined with dolomite rhombs.
2477.6 - 2478.6'	Anhydrite (?), light brown, dense, dolomitic.
2478.6 - 2484.0'	Dolomite, light brown, dense, microcrystalline vuggy (pencil size), minutely fractured, faintly translucent. Trace of pyrite and galena.
2484.0 - 2489.4'	Dolomite, as above. Only minor vuggy porosity.
2489.4 - 2504.0'	Dolomite, anhydritic, in crystal-for-crystal relationship, light brown, dense.

Section 3

DRILLING AND ENGINEERING

SUMMARY OF DAILY DRILLING OPERATIONS

Horn R CDR IOE Willowl R. I-71

Date	Depth	Operation
3- 5-71	0'	Drilling rat hole. Rigging up to spud.
3- 6-71	330'	Conditioning 12-1/4" surface hole to run casing. Spudded in at 8:15 a.m. March 5, 1971. Drilled 12-1/4" hole to 330'.
3- 7-71	330'	Nippling up B.O.P.'s Ran 10 joints 8-5/8" - 24 lbs/ft. - J-55 New casing plus float collar and shoe. Landed at 321.61' K.B. Cemented with 190 sacks of construction cement plus 3% $CaCl_2$. Plug down 6:30 p.m. March 6, 1971. Four barrels of returns.
3- 8-71	791'	Drilling 7-7/8" hole. Pressure tested blind rams, manifold, pipe rams and hydril to 1,000 psi for 15 minutes each. Drilled out plug. Mud wt. 8.5 Vis. 32
3- 9-71	1282'	Drilling 7-7/8" hole. Mud wt. 8.4, Vis. 28
3-10-71	1906'	Drilling 7-7/8" hole. Mud wt. 8.5, Vis. 28
3-11-71	2289'	Drilling 7-7/8" hole. Mud wt. 8.7, Vis. 29
3-12-71	2484'	Cutting Core No. 1. Lotsberg Carbonate. Started coring at 2454' with 6-3/16" core bit. Mud wt. 8.8, Vis. 29.
3-13-71	2504'	On bottom with DST No. 2: 2,330' to 2,504'. Finished cutting Core No. 1: 2,454' to 2,504'. Recovered 50'. Ran DST No. 1, could not get to bottom. Circulated hole, reamed rat hole. Running in with DST No. 2.
3-14-71	2504'	Rigging out DST No. 3. Ran DST No. 2: 2,330' to 2,504'. Misrun could not get to bottom. Ran DST No. 3: 2,330' - 2,504'. Bottom hole conventional. Weak air blow throughout test. Times: 5 minutes, 30 minutes, 60 minutes, 60 minutes. Pressures I.H.S. 1067 Flow 42 I.S.I. 962 Final Flow 128 Final S.I. 964 Final H.S. 1067 Recovered 200' of muddy salt water.

SUMMARY OF DAILY DRILLING OPERATIONS (Continued)

Horn R CDR IOE Willowl R. I-71

Date	Depth	Operation
3-15-71	2760'	Drilling 7-7/8" Hole. Mud wt. 8.6, Vis. 40
3-16-71	2980'	Drilling 7-7/8" Hole. Mud wt. 8.7, Vis. 50
3-17-71	3009'	Waiting on orders. Drilled to 3009', logged. Ran: Laterolog 3000' - 322' BHCSGRC 3003' - 318' Formation Density Log 3004' - 318' Sidewall Neutron Porosity Log 3004' - 318'
3-18-71	3009'	Wait on tester.
3-19-71	3009'	Waiting on cement. Plug No. 2
		Ran DST No. 4: 985' - 1040', Lonely Bay. Tool open with very small blow. Times: 7 minutes, 30 minutes, 30 minutes 30 minutes. Pressures: I.H.S. 473 Flow 39 I.S.I. 464 Final Flow 47 Final S.I. 63 Final H.S. 460
		Recovered 60 feet watery mud.
		Ran Plug No. 1: 3009' to 2290' - 180 sacks of cement + 4% Gel.
3-20-71		Well plugged and abandoned.
		Ran Plug No. 2: 1180' - 940' - 150 sacks plus 3% $CaCl_2$ Plug down at 2:40 a.m. Felt plug No. 2 at 925'.
		Ran Plug No. 3: 371' - 271' - 55 sacks plus 3% $CaCl_2$. Plug down at 11:35 a.m. March 19, 1971. Felt plug No. 3 at 253'. Cut off casing and welded on marker.
		Released rig at 11:00 p.m. March 19, 1971.

SUMMARY OF MUD ADDITIVES

Horn R CDR IOE Willowl R. I-71

SURFACE HOLE	
Caustic	150 lbs.
Lime	150 lbs
Gel	1,500 lbs.
MAIN HOLE	
Gel	22,100 lbs.
DV68	3 gals.
Caustic	550 lbs.
Peltex	500 lbs.
Spersene	150 lbs.

SURVEY RECORD

Horn R CDR IOE Willowi R. I-71

Depth, Feet	Deviation, Degrees
Surface Hole	
103	3/4
193	1
281	3/4
330	3/4
Main Hole	
568	1-3/4
721	1-3/4
939	1-3/4
1,154	1-3/4
1,426	2-1/4
1,637	2-3/4
1,788	2-3/4
2,083	3
2,289	1-3/4
2,504	1-3/4
2,774	3
2,980	1-3/4

BIT RECORD

WELL: Horn R CDR IOE Willowl R. I-71

BIT NO.	SIZE & SER. NO.	DEPTH OUT, Feet	FOOTAGE, Feet	HOURS	WEIGHT, M Pounds	R.P.M.	CONDITION
1A	7-7/8" XT3J	60	60	4		100	8-7-1
2A	12-1/4 ST3	74	R&D 74	3½	10-15	180	6-4-1
3A	12-1/4 OSC3	310	176	6	15-20	180	6-2-1
4A	12-1/4 RT	330	20	2½	20	160	2-1-1
1	7-7/8 T1AG	610	280	3¾	15	160	3-2-1
2	7-7/8 SCMJ	1906	1296	55	35	45	6-6-1
3	7-7/8 SS4	2289	304	17¼	35	45	-
4	7-7/8 SCMJ	2454	165	9¼	38	45	8-4-1
5 'D'	6-3/16 Dia.	2504	50	9½	12	100	Scuffed
5	7-7/8 WD7	2504	Reamed 50	2¾	15	140	-
6	7-7/8 5JS	2980	476	37½	35	45	-
7	7-7/8 WD7	3009	29	3	35	70	7-5-1

SUMMARY

Surface Hole 330 of 12-1/4 " 16 hours on bottom.

Main Hole 2679 of 7-7/8 " 137-3/4 hours on bottom.

Core Hole 50 of 6-3/16 " 9-1/2 hours on bottom.

DRILL STEM TEST REPORT

WELL: Horn R CDR IOE Willowl B. I-71

DATE: March 12, 1971 TEST NO. 1

INTERVAL TESTED: 2330' - 2504' FORMATION: Lotsburg

TOTAL DEPTH DRILLER: 2504' LOGS: None Run

HOLE SIZE: 7-7/8" RAT HOLE SIZE: 6-3/16"

TESTING COMPANY: Lynes United OPERATOR:

MUD	DRILL PIPE	TEST TOOL
Type	Type	Size Rubber
Wt.	Size	Type
Visc.	Size T.J.	Tool Type
W.L.	Collars	Size Choke
pH	Jars	Wt. to Set
F.C.	Safety Joint	Pull Loose
Conditions	Pumpout Sub.	Fluid Cushion

Bit off Bottom		Preflow	min.	B.H. Temp.	°F.
Start Tester in		I.S.I.	min.	Gauge Depths	K.B.
Tester on Bottom		Tool Open	min.		K.B.
Tool Open		F.S.I.	min.		
Tool Closed		**Upper Gauge**		**Lower Gauge**	
Tool Open		I.H.S.	psig	I.H.S.	psig
Tool Closed		Preflow	psig	Preflow	psig
Tool Loose		I.S.I.	psig	I.S.I.	psig
Tool Out		Initial Flow	psig	Initial Flow	psig
Rubber Condition		Final Flow	psig	Final Flow	psig
Test O.K.		Final S.I.	psig	Final S.I.	psig
		F.H.S.	psig	F.H.S.	psig

BLOW:

RECOVERY: Misrun. Could not reach bottom.

James A. Lewis Engineering Co. Ltd.

DRILL STEM TEST REPORT

WELL: Horn R CDR IOE Willowl R. I-71

DATE: March 13, 1971 TEST NO. 2

INTERVAL TESTED: 2330' - 2504' FORMATION: Lotsberg

TOTAL DEPTH DRILLER: 2504' LOGS: None Run

HOLE SIZE: 7-7/8" RAT HOLE SIZE: -

TESTING COMPANY: Lynes United OPERATOR: Bell

MUD	DRILL PIPE	TEST TOOL
Type	Type	Size Rubber
Wt.	Size	Type
Visc.	Size T.J.	Tool Type
W.L.	Collars	Size Choke
pH	Jars	Wt. to Set
F.C.	Safety Joint	Pull Loose
Conditions	Pumpout Sub.	Fluid Cushion

Bit off Bottom		Preflow	min.	B.H. Temp.	°F.
Start Tester in		I.S.I.	min.	Gauge Depths	K.B.
Tester on Bottom		Tool Open	min.		K.B.
Tool Open		F.S.I.	min.		
Tool Closed		**Upper Gauge**		**Lower Gauge**	
Tool Open		I.H.S.	psig	I.H.S.	psig
Tool Closed		Preflow	psig	Preflow	psig
Tool Loose		I.S.I.	psig	I.S.I.	psig
Tool Out		Initial Flow	psig	Initial Flow	psig
Rubber Condition		Final Flow	psig	Final Flow	psig
Test O.K.		Final S.I.	psig	Final S.I.	psig
		F.H.S.	psig	F.H.S.	psig

BLOW:

RECOVERY: Misrun. Could not reach bottom

James A. Lewis Engineering Co. Ltd.

DRILL STEM TEST REPORT

WELL: Horn R CDR IOE Willowl R. I-71

DATE: March 14, 1971 TEST NO. 3

INTERVAL TESTED: 2330' - 2504' FORMATION: Lotsberg

TOTAL DEPTH DRILLER: 2504' LOGS: None Run

HOLE SIZE: 7-7/8" RAT HOLE SIZE: -

TESTING COMPANY: Lynes United OPERATOR: Bell

MUD		DRILL PIPE		TEST TOOL	
Type	Gel Chemical	Type	F.H.	Size Rubber	7"
Wt.	8.7	Size	4½"	Type	Dual
Visc.	70	Size T.J.		Tool Type	
W.L.	-	Collars	4½" - H-90	Size Choke	5/8"
pH	8	Jars	-	Wt. to Set	-
F.C.	2/32	Safety Joint	-	Pull Loose	-
Conditions	Fair	Pumpout Sub.	-	Fluid Cushion	None

Bit off Bottom	7:30 p.m. March 13/71	Preflow	5 min.	B.H. Temp.	°F.
Start Tester in	11:00 p.m.	I.S.I.	30 min.	Gauge Depths	2341 K.B.
Tester on Bottom	12:45 a.m. March 14/71	Tool Open	60 min.		2345 K.B.
Tool Open	1:55 a.m. March 14/71	F.S.I.	60 min.		2349
Tool Closed	2:00				
Tool Open	2:30				
Tool Closed	3:30				
Tool Loose	4:30				
Tool Out	6:00 p.m.				
Rubber Condition	Good				
Test O.K.	Yes				

Upper Gauge		Lower Gauge	
I.H.S.	1067 psig	I.H.S.	1076 psig
Preflow	42 psig	Preflow	45 psig
I.S.I.	962 psig	I.S.I.	967 psig
Initial Flow	46 psig	Initial Flow	55 psig
Final Flow	128 psig	Final Flow	126 psig
Final S.I.	964 psig	Final S.I.	966 psig
F.H.S.	1067 psig	F.H.S.	1076 psig

BLOW: Weak air blow throughout.

RECOVERY: 200' muddy salt water.

James A. Lewis Engineering Co. Ltd.

DRILL STEM TEST REPORT

WELL: Horn R CDR IOE Willowl R. I-71

DATE: March 18, 1971 TEST NO. 4

INTERVAL TESTED: 985' - 1040' FORMATION: Lonely Bay

TOTAL DEPTH DRILLER: 3009' LOGS: Laterolog, BHCSGRC, FDL, SNP

HOLE SIZE: 7-7/8" RAT HOLE SIZE: -

TESTING COMPANY: Lynes United OPERATOR: Lewchuk

"Dual Straddle"

MUD		DRILL PIPE		TEST TOOL	
Type	Gel-Chemical	Type		Size Rubber	
Wt.	8.8	Size		Type	
Visc.	54	Size T.J.		Tool Type	
W.L.	-	Collars		Size Choke	
pH	9.0	Jars		Wt. to Set	
F.C.	2/32	Safety Joint		Pull Loose	
Conditions	Fair	Pumpout Sub.		Fluid Cushion	

Bit off Bottom	3:00 p.m. Mar. 16/71	Preflow	7	min.	B.H. Temp.	-	°F.
Start Tester in	2:00 p.m. Mar. 18/71	I.S.I.	30	min.	Gauge Depths	1005	K.B.
Tester on Bottom	6:00 p.m. Mar 18/71	Tool Open	30	min.		1009	K.B.
Tool Open	7:25 p.m. Mar. 18/71	F.S.I.	30	min.		1060	
Tool Closed	7:32 p.m. Mar. 18/71	Upper Gauge			Lower Gauge		
Tool Open	8:02 p.m.	I.H.S.	473	psig	I.H.S.	464	psig
Tool Closed	8:30	Preflow	39	psig	Preflow	36	psig
Tool Loose	9:02	I.S.I.	464	psig	I.S.I.	464	psig
Tool Out	10:30 p.m.	Initial Flow	50	psig	Initial Flow	41	psig
Rubber Condition	Good	Final Flow	47	psig	Final Flow	41	psig
Test O.K.	Yes	Final S.I.	63	psig	Final S.I.	63	psig
		F.H.S.	460	psig	F.H.S.	460	psig

BLOW: Very small blow, dead in 5 minutes

RECOVERY: 60' watery mud.

James A. Lewis Engineering Co. Ltd.

SURFACE CASING REPORT

Horn R CDR IOE Willowl R. I-71

Ran 10 joints 8-5/8" New - 24 lb./foot - J-55 casing plus float shoe.

Set at 321.61' K.B.

Cemented with 190 sacks of neat construction cement plus 3% Calcium Chloride
Circulated .4 barrels of returns. Plug down at 6:30 p.m., March 6, 1971

ABANDONMENT REPORT

Plug No. 1	3,009' - 2,290' - 180 sacks + 4% Gel Plug down 2:00 a.m., March 19, 1971 Not Felt
Plug No. 2	1,180' - 940' - 150 sacks + 3% $CaCl_2$ Plug down 2:40 a.m., March 19, 1971 Felt at 10:30 a.m. at 925'
Plug No. 3	371' - 271' - 55 sacks + 3% $CaCl_2$ Plug down 11:35 a.m. Felt at 7:15 p.m. at 253'
Plug No. 4	5 sacks at surface. Welded on steel plate and marker

Section 4

WELL LOG DATA

Horn R CDR IOE Willow R. I-71

Log	Scale	Interval
Laterolog	2"/100'	3,000 - 322'
	5"/100'	3,000 - 584'
Formation Density	2"/100'	3,004' - 600'
	5"/100'	3,004' - 600'
Borehole Compensated Sonic Gamma Ray Caliper	2"/100'	3,003' - 318'
	5"/100'	3,005' - 318'
Sidewall Neutron Porosity	5"/100'	3,005' - 550'
Composite Lithology Log	5"/100'	3,004' - 600'

Section 5

ANALYSIS WATER SAMPLE, DST NO. 4

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C71-3039-3

Received: Apr. 8,1971 Reported: April 16,1971

Well: Location: HR CDR IOE Willow Lk. I-71 62°50'N - 121°30'W

Operator: KENTING OILWELL DRILLING LTD.

Field or Area:

Elev.: K.B. Grd. Zone/Formation:

Sample Interval: 985' - 1040'

Method of Production: D.S.T. #4 Sampled from: Top of Tool Sampled by: Lynes United Services Ltd. Date: Mar.19,1971

OTHER PERTINENT DATA Recovered 60'

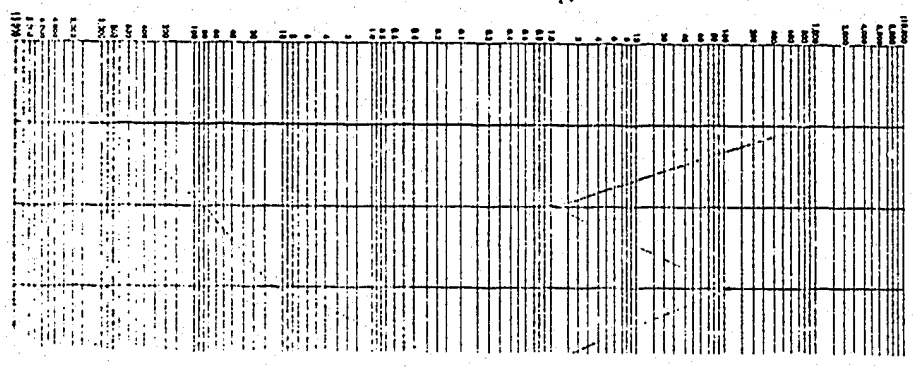
(Signed)

	Na & K		Ca	Mg					SO_4	Cl			CO_3	HCO_3		
Mg./L	22,200		1600	170					5700	33,300			20	70		
Meq./L	965.63		79.84	13.97					118.56	939.06			0.67	1.15		
Meq. %	45.57		3.77	0.66					5.60	44.32			0.03	0.05		

Total Solids Mg/L: By Evaporation 63,000 Fe Trace Specific Gravity 1.047 @60°F Observed pH 8.8 @ 74 °F

Calculated 63,060 After Ignition 61,100 H_2S Nil Refractive Index 1.3433 @25°C Resistivity 0.13 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions

The sample as received, contained approximately 75 percent sediment. The filtrate was yellow in color.

LABORATORY NUMBER	SAMPLED FROM	RESISTIVITY (OHM-meters at 68°F)
C71-3039-1	Top	0.13
C71-3039-2	Middle	0.14

CORE LABORATORIES – CANADA LTD.

COMPANY	CANADIAN PACIFIC OIL AND GAS LIMITED	**FORMATION**	LOTSBERG CARBONATE	**PAGE**	1 of 1
WELL	HORN R CDR IOE WILLOW LR I-71	**DRILLING FLUID**	WATER BASE MUD	**FILE**	911-170
FIELD	WILDCAT, N.W.T.	**ELEVATION**		**DATE REPORT**	MARCH 30/71
LOCATION	62 40' 44.00 121 43' 18.00 GRID. 62-50-121-30	**ANALYSIS**	FULL DIAMETER	**ANALYSTS**	WD
		REMARKS			

AST : APPEARS SIMILAR TO
* : BROKEN CORE (CALCULATED FOR SUMMARY PURPOSES)
** : PERMEABILITY > 20000 MD.

FS = PERMEABILITY < FINE SAND
MS = MEDIUM SAND
CS = COARSE SAND

CONG = CONGLOMERATE
DOL = DOLOMITE
SH = SHALE
LIME = LIME

SHLY = SHALLY
FRAC = FRACTURED
SYT = SYNDETRITAL
CARB = CARBONACEOUS

A = ANHYDRITE
FOSS = FOSSILIFEROUS
XLN = CRYSTALLINE
LAM = LAMINATIONS

V = VUGULAR
LV = LARGE VUGS
SV = SMALL VUGS
PPV = PIN POINT VUGS

I = INTERGRANULAR
STY = STYLOLITIC
HF = HORIZONTAL FRACTURE
VF = VERTICAL FRACTURE

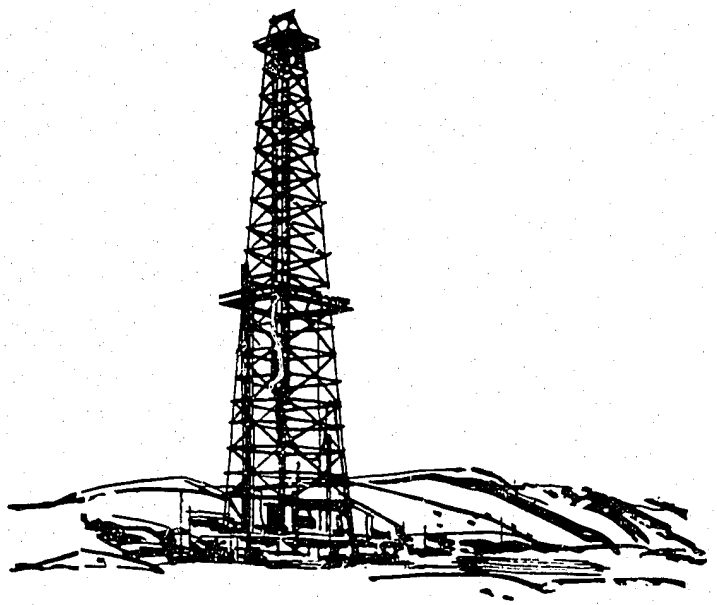
SS = SIDEWALL PLUG SAMPLE
SL/ = SLIGHTLY
V/ = VERY
W/ = WITH

SAMPLE NUMBER	INTERVAL REPRESENTED, FEET		PERMEABILITY TO AIR, MILLIDARCYS			PERMEABILITY FEET	POROSITY, PER CENT	POROSITY FEET	DENSITY, gm./cc.		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K90°	K V				BULK	GRAIN	
	CORED INTERVAL 2454' – 2504'										
	CORE NO. 1 2454' – 2504' (REC. 49.5')										
-	2454.0-62.8	8.8	-	-	-	-	-	-	-	-	DENSE
1	2462.8-65.3	2.5	-0.01	-0.01	-0.01	-	0.3	0.75	2.82	2.82	I STY
2	2465.3-66.1	0.8	1.61	1.14	-0.01	1.29	2.4	1.92	2.76	2.83	FEW SV PPV STY HF
3	2466.1-67.1	1.0	0.43	0.10	-0.01	0.43	2.2	2.20	2.77	2.83	FEW SV PPV HF
4	2467.1-68.1	1.0	-0.01	-0.01	-0.01	-	0.5	0.50	2.81	2.83	FEW SV PPV STY
-	2468.1-74.1	6.0	-	-	-	-	-	-	-	-	DENSE
5	2474.1-75.2	1.1	1.97	0.12	3.50	2.17	2.1	2.31	2.76	2.82	SV PPV VF
6	2475.2-76.4	1.2	0.04	0.02	-0.01	0.05	1.9	2.28	2.75	2.81	SV PPV VF
7	2476.4-77.8	1.4	*	0.13	*	0.18	2.8	3.92	2.72	2.80	SV PPV STY VF
-	2477.8-78.9	1.1	-	-	-	-	-	-	-	-	DENSE
AST6	2478.9-80.6	1.7	0.04	0.02	-0.01	0.07	1.9	3.23	-	-	APPEARS SIMILAR TO #6
8	2480.6-82.3	1.7	*	0.76	*	1.29	2.7	4.59	2.74	2.84	SV PPV VF
9	2482.3-83.5	1.2	7.21	4.81	0.27	8.65	2.4	2.88	2.77	2.83	SV PPV HF VF
-	2483.5-84.8	1.3	-	-	-	-	-	-	-	-	DENSE
10	2484.8-86.2	1.4	0.03	0.01	-0.01	0.04	1.1	1.54	2.81	2.84	FEW SV STY HF
11	2486.2-87.6	1.4	196.00	0.39	-0.01	274.40	2.9	4.06	2.77	2.85	SV PPV STY
-	2487.6-03.5	15.9	-	-	-	-	-	-	-	-	DENSE
-	2503.5-04.0	0.5	-	-	-	-	-	-	-	-	LOST CORE.

LYNES

BRIGHT NAME IN THE OIL PATCH

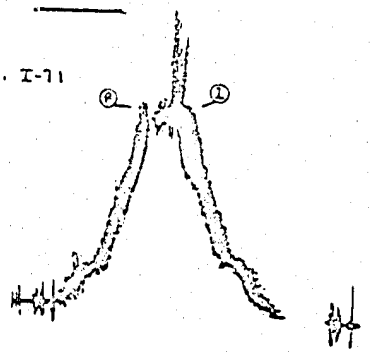
Inflatable and Conventional Packer Tools



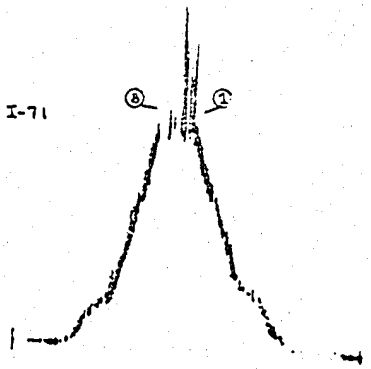
DRILL STEM TEST
TECHNICAL SERVICE REPORT

620 40' 44.00 1210 43' 18.00

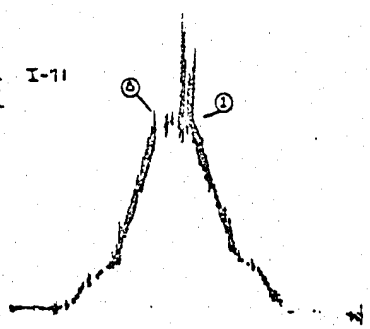
HORN RIVER COR. IDE WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 2816 I
COULD NOT GET TO BOTTOM



HORN RIVER COR IDE WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 1097-I
COULD NOT GET TO BOTTOM



HORN RIVER COR. IDE WILLOW LAKE R. I-71
62° 40' 44.00 121° 43 18.10 566-I
COULD NOT GET TO BOTTOM



LYNES UNITED SERVICES LTD.

TEST DATA					GENERAL INFORMATION	
Test No.		Lynes Test				
Formation		T.D.		Ft.	Company	Horn River Resources Ltd.
Interval Tested	2330 Ft. to	2504		Ft.	Address	Kenting Oilwell Drilling
Feet of Net Pay Tested	174			Ft.		Central Del Rio Oils Ltd.
Type of Test	Bottom Hole Conventional					
Cushion		Amount		Ft.	Well Name	Horn River CDR IOE Willow LRI-71
Started in Hole at	1800 Hrs.	Tool Open at		Hrs.	Well Number	62° 40' 44.00 121° 43' 18.00
Pre-Flow	Mins.	Initial Shut-in		Mins.	K.B. Elevation	Sub-Sea Elevation
2nd Flow	Mins.	Second Shut-in		Mins.	Area	Province
Final Flow	Mins.	Final Shut-in		Mins.	Company Rep.	D. Clark -CDR
Remarks:					Tester	H. Bell
Could not get to bottom					Contractor	Kenting Rig No. 9
					Ticket No.	2115 Date March 12/71
Blow:					Service Reports To:	
						5 - James A. Lewis Engineering Ltd.
						+ 40 copies.

GAS BLOW MEASUREMENTS			
Measured with			
Time	Surface Choke	Reading Inches	Cubic Feet/Day

MUD AND HOLE DATA				
Mud Type	water			
Weight	8.	Viscosity	29	Water Loss
Filter Cake		Bottom Hole Temperature		
Drill Pipe Size	4 1/2" FH		Weight	
Drill Collars	4 1/2" H90	I.D.	Feet Run	
Main Hole or Casing Size	7 7/8"			
Rathole or Liner Size	6 3/16		No. of Feet	50
Bottom Hole Choke Size	5/8 "			
Surface Choke Size	1"			
Packer Rubber Size	7"			
REMARKS	Could not get to bottom			
	2 stands fill on bottom.			

RECOVERY	
TOTAL FLUID RECOVERED	nil Ft. Consisting of:
Ft. of	
Ft. of	
Ft. of	
Ft. of	
Test was/was not Reverse Circulated	
Oil Recovery A.P.I.	Water Specific Gravity
Salinity	

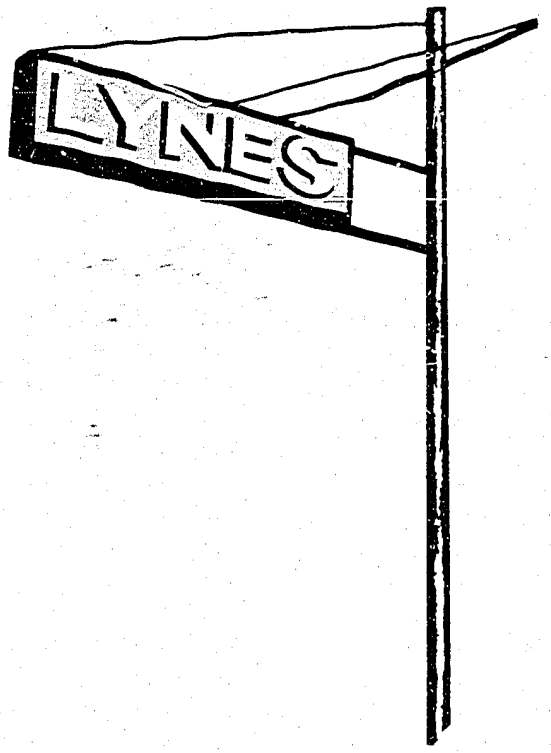
PRESSURE READINGS				
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 2816	Recorder No. 1097	Recorder No. 966	Recorder No.
	Capacity 4600	Capacity 4100	Capacity 5000	Capacity
	Depth 2341	Depth 2345	Depth 2349	Depth
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	1124	1109	1120	
2 - PRE-FLOW				
3 - INITIAL SHUT-IN				
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW				
- FINAL FLOW				
- FINAL SHUT-IN				
- FINAL HYDROSTATIC	1124	1109	1120	

Kenting Oilwell Drilling
Company

62° 40' 44.00 121° 43' 18.00
Horn River CDR IOE Willow LRI-71
Well Name and Description

#1
Test No.

March 12/71
Date of Test

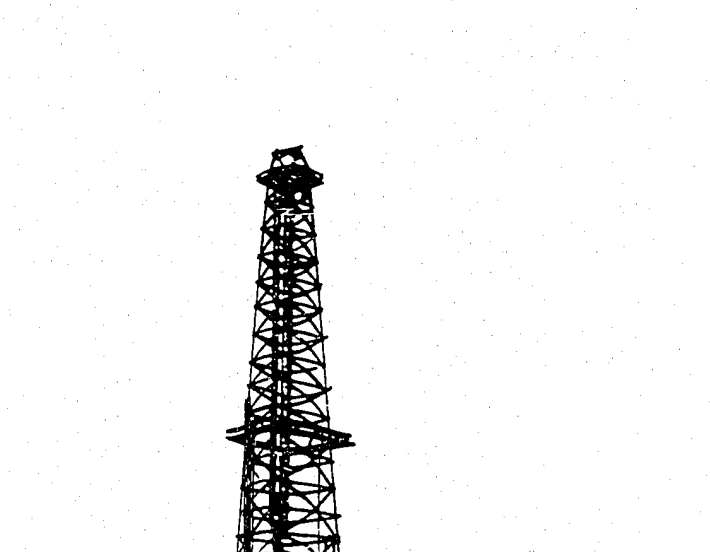


LYNES UNITED SERVICES LTD. 262-4501 CALGARY, ALBERTA

LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools

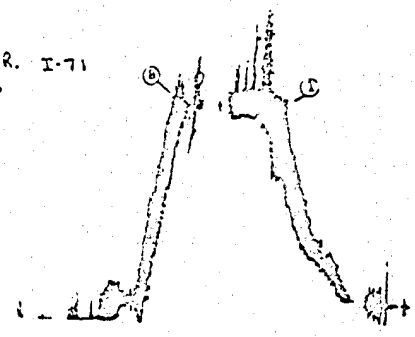


DRILL STEM TEST

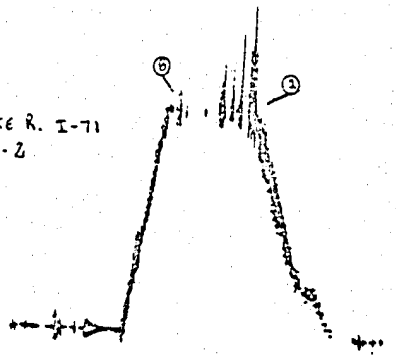
TECHNICAL SERVICE REPORT

62° 40' 44.00 12!o 43' 18.00

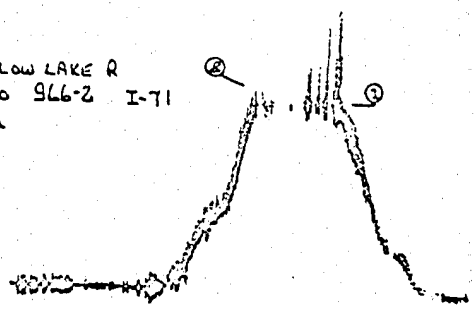
HORN RIVER COR T.C WILLOW LAKE R. I-71
62° 40' 44.00 121° 43° 18.00 2816-2
COULD NOT GET TO BOTTOM



HORN RIVER COR. TOE WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 1097-2
COULD NOT GET TO BOTTOM



HORNRIVER COR TOE. WILLOW LAKE R
62° 40° 44.00 121° 43' 1300 976-2 I-71
COULD NOT GET TO BOTTOM



LYNES UNITED SERVICES LTD.

TEST DATA				GENERAL INFORMATION	
Test No.	2	Lynes Test	2		
Formation		T.D.	Ft.	Company	Kenting Oilwell Drilling
Interval Tested	2330 Ft. to	2504	Ft.	Address	
Feet of Net Pay Tested	174		Ft.		
Type of Test	Bottom Hole Conventional				
Cushion	Amount		Ft.	Well Name	Horn River CDR 10E Willow L.R.I-71
Started in Hole at	0650 Hrs.	Tool Open at	Hrs.	Well Number	62° 40' 44.00 121° 43' 18.00
Pre-Flow	Mins.	Initial Shut-in	Mins.	K.B. Elevation	Sub-Sea Elevation
2nd Flow	Mins.	Second Shut-in	Mins.	Area	Province
Final Flow	Mins.	Final Shut-in	Mins.	Company Rep.	D. Clark - CDR
Remarks:	Could not get to bottom - misrun.			Tester	H. Bell
				Contractor	Kenting Rig No. 9
				Ticket No.	2116 Date March 13/71
Blow:				Service Reports To:	
					5 - above address

GAS BLOW MEASUREMENTS			
Measured with			
Time	Surface Choke	Reading Inches	Cubic Feet/Day

MUD AND HOLE DATA			
Mud Type	water		
Weight	8.8	Viscosity 29	Water Loss
Filter Cake		Bottom Hole Temperature	
Drill Pipe Size	4 1/2" FH		Weight
Drill Collars	4 1/2" H90	I.D.	Feet Run
Main Hole or Casing Size			
Rathole or Liner Size			No. of Feet
Bottom Hole Choke Size	5/8"		
Surface Choke Size	1"		
Packer Rubber Size	7"		
REMARKS	Could not get to bottom.		

RECOVERY	
TOTAL FLUID RECOVERED	nil Ft. Consisting of:
Ft. of	
Ft. of	
Ft. of	
Ft. of	
Test was/was not Reverse Circulated	
Oil Recovery A.P.I.	Water Specific Gravity
Salinity	

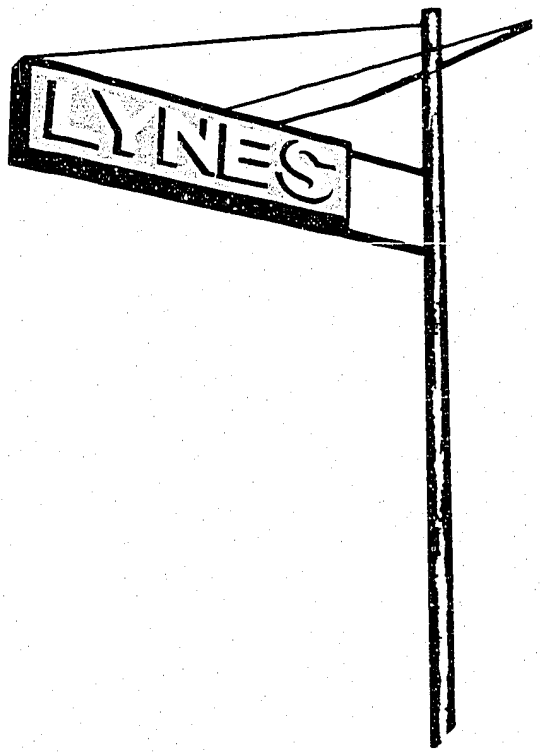
PRESSURE READINGS				
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 2816	Recorder No. 1097	Recorder No. 966	Recorder No.
	Capacity 4600	Capacity 4100	Capacity 5000	Capacity
	Depth 2341	Depth 2345	Depth 2349	Depth
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	1143	1144	1152	
2 - PRE-FLOW				
3 - INITIAL SHUT-IN				
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW				
6 - FINAL FLOW				
7 - FINAL SHUT-IN				
8 - FINAL HYDROSTATIC	1143	1144	1152	

Kenting Oilwell Drilling
Company

62° 40' 44.00 121° 43' 18.00
Horn River CDR 10E Willow L.R.I-71
Well Name and Description

#2
Test No.

March 13/71
Date of Test


LYNES

Kentina Oilwell Drilling

62° 40' 44.00 121° 43' 18.00
Horn River CDR 10F Willow 1 .R. 1-71

#3

March 16/71

LYNES

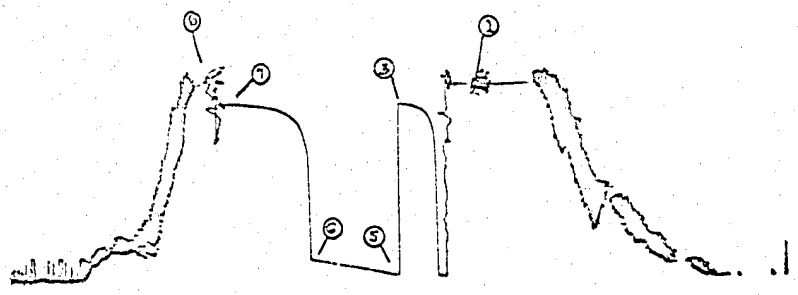
BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools.

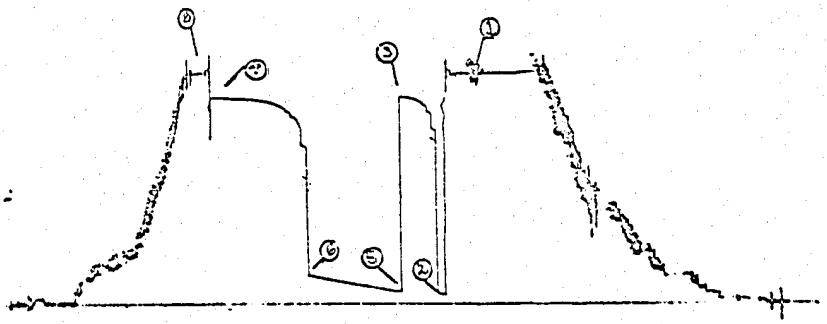
DRILL STEM TEST

TECHNICAL SERVICE REPORT

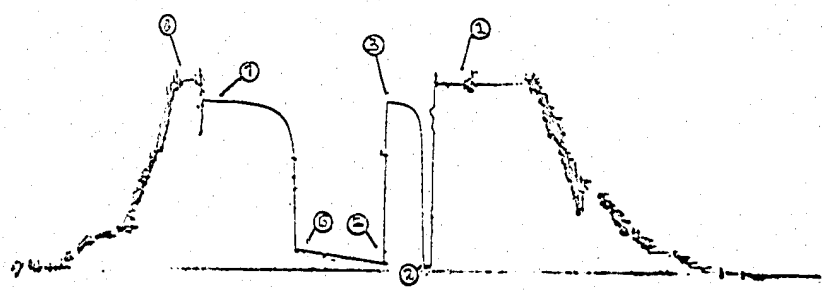
HORN RIVER CDR. IOE. WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 8816-3



HORN RIVER CDR. IOE. WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 1097-3



HORN RIVER CDR. IOE. WILLOW LAKE R. I-71
62° 40' 44.00 121° 43' 18.00 966-3



Recorder Depth 2349 ft. Subsea depth ..... ft. Ticket No. 2117 Hour Recorder No. 966

t_o = 5 Mins. initial Shut-In Pressure				Second Flow Pressure		t_o = 65 Mins. Final Shut-In Pressure			
Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)	Time Defl. .000"	PSIG	Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)
0	------	40				0	----	125	
3	2.667	838				5	14.000	823	
6	1.833	902				10	7.500	887	
9	1.556	927				15	5.333	917	
12	1.417	941				20	4.250	934	
15	1.333	949				25	3.600	944	
18	1.278	954				30	3.167	949	
21	1.238	961				35	2.857	956	
24	1.208	963				40	2.625	958	
27	1.185	964				45	2.444	961	
30	1.167	968				50	2.300	962	
						55	2.182	964	
						60	2.083	966	

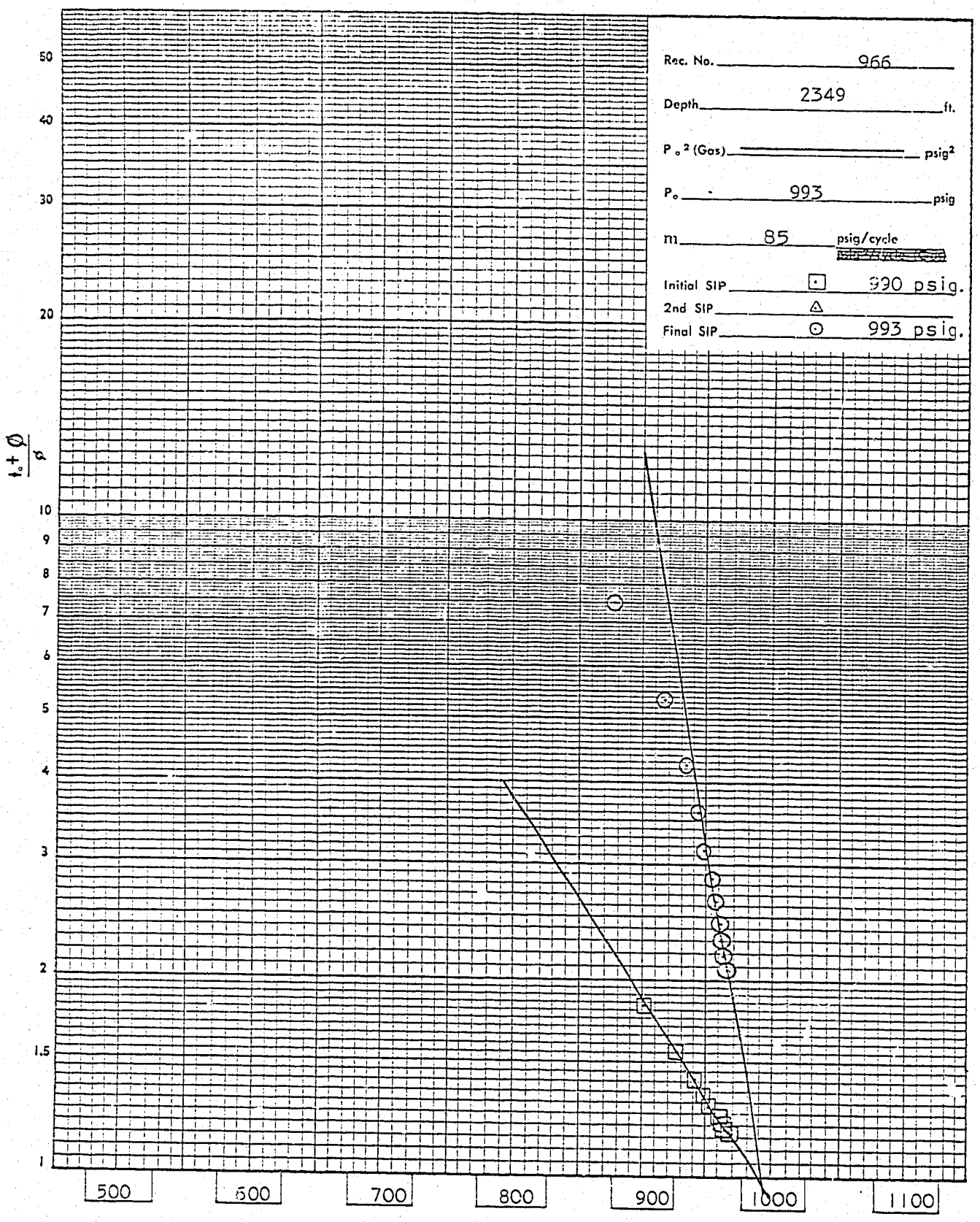
Recorder Depth ..... ft. Subsea depth ..... ft. Ticket No. ..... Hour Recorder No. .....

t_o = Mins. Initial Shut-In Pressure				Second Flow Pressure		t_o = Mins. Final Shut-In Pressure			
Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ Ø	Time Defl. .000"	PSIG	Time, Min. Ø	$\frac{t_o + Ø}{Ø}$	PSIG	PSIG² ÷10⁶ (Gas)

Interval of Pressure Readings (Mins.) ISIP 3 2nd Flow Press. FSIP 5

Remarks: DST # 3

PRESSURE DATA



DST # 3

PRESSURE EXTRAPOLATION PLOT

LYNES UNITED SERVICES LTD.

TEST DATA						GENERAL INFORMATION	
Test No.	3	Lynes Test	3			Company	Kenting Oilwell Drilling
Formation		T.D.		Ft.		Address	
Interval Tested	2330	Ft. to	2504	Ft.			
Feet of Net Pay Tested	174			Ft.			
Type of Test	Bottom Hole Conventional						
Cushion		Amount		Ft.		Well Name	Horn River CDR 10E Willow L.R.I-71
Started in Hole at	2300 Hrs.	Tool Open at	0155 Hrs.			Well Number	620 40' 44.00 121° 43' 18.00
Pre-Flow	5 Mins.	Initial Shut-in	30 Mins.			K.B. Elevation	Sub-Sea Elevation
2nd Flow	Mins.	Second Shut-in	Mins.			Area	Province
Final Flow	60 Mins.	Final Shut-in	60 Mins.			Company Rep.	D. Clark
Remarks:						Tester	H. Bell
						Contractor	Kenting Rig No. 9
						Ticket No.	2117 Date March 15/71
Blow:	Weak air blow throughout the test. Remained steady.					Service Reports To:	5 - James A. Lewis Engineering Ltd. + 40 xeroxed copies.

GAS BLOW MEASUREMENTS			
Measured with			
Too small to measure.			
Time	Surface Choke	Reading Inches	Cubic Feet/Day

MUD AND HOLE DATA				
Mud Type	Gel			
Weight	8.7	Viscosity	70	Water Loss
Filter Cake	2/32"	Bottom Hole Temperature		
Drill Pipe Size	4 1/2" FH	Weight		
Drill Collars	4 1/2"H90	I.D.	Feet Run	
Main Hole or Casing Size	7 7/8"			
Rathole or Liner Size		No. of Feet		
Bottom Hole Choke Size	5/8"			
Surface Choke Size	1"			
Packer Rubber Size	(2) - 7"			
REMARKS	Shut-in pressures suggest average permeability within the interval tested.			

RECOVERY	
TOTAL FLUID RECOVERED	200 Ft. Consisting of:
200 Ft. of	muddy salt water
Ft. of	
Ft. of	
Ft. of	
Test was/was not Reverse Circulated	
Oil Recovery A.P.I.	Water Specific Gravity was not
Salinity	

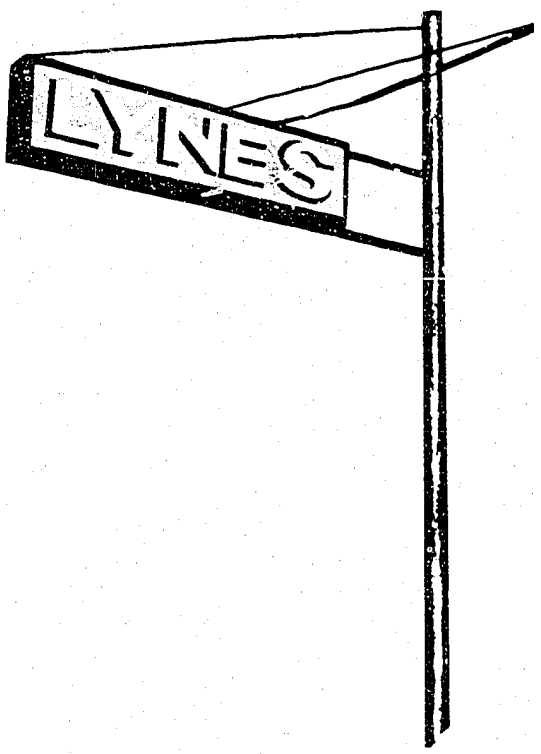
PRESSURE READINGS				
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 2816	Recorder No. 1097	Recorder No. 966	Recorder No. ___
	Capacity 4600	Capacity 4100	Capacity 5000	Capacity ___
	Depth 2341	Depth 2345	Depth 2349	Depth ___
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	1067	1076	1074	
2 - PRE-FLOW	42	45	40	
3 - INITIAL SHUT-IN	962	967	968	
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW	46	55	49	
6 - FINAL FLOW	128	126	125	
7 - FINAL SHUT-IN	964	966	966	
8 - FINAL HYDROSTATIC	1067	1076	1074	

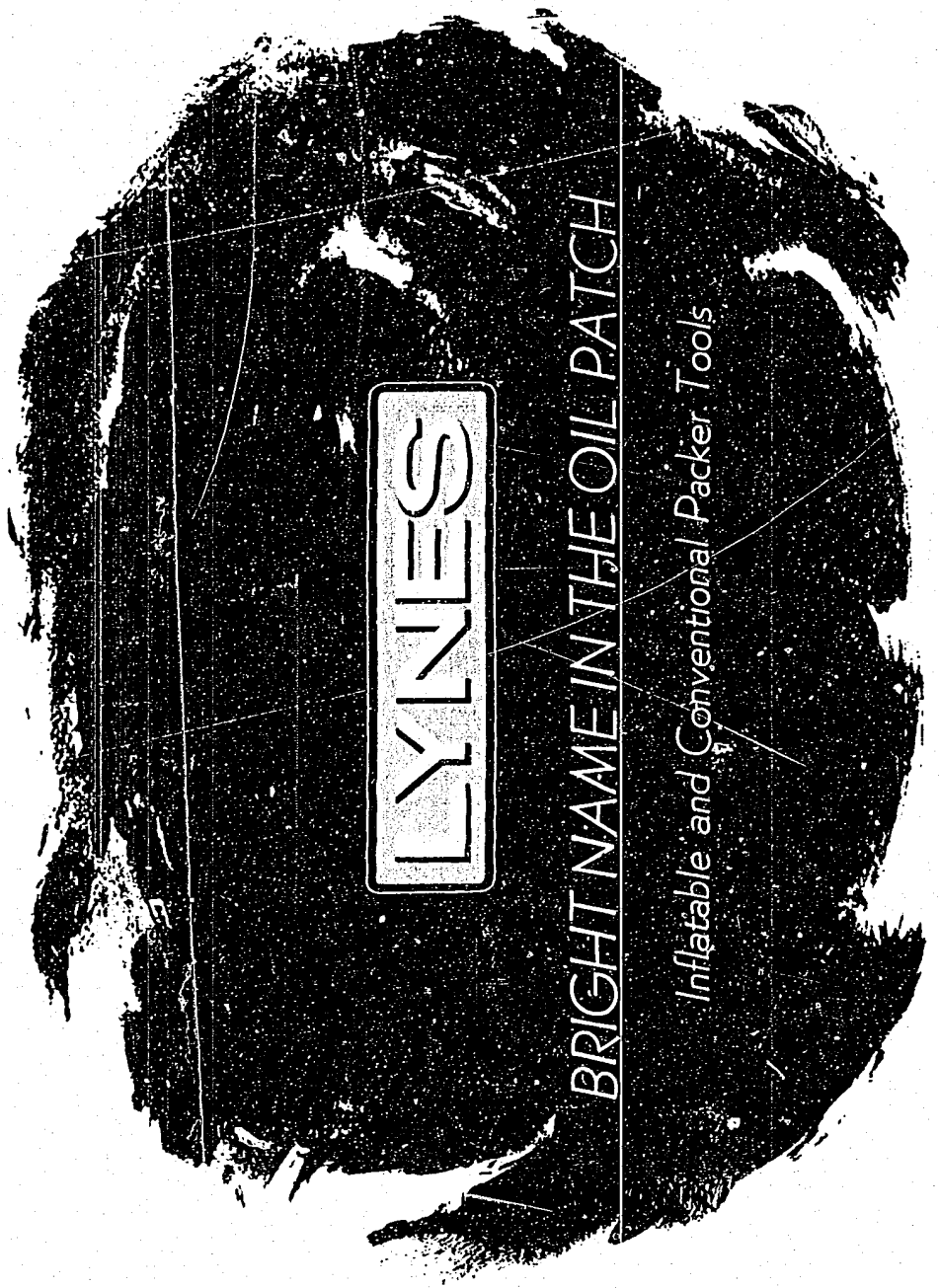
Kenting Oilwell Drilling — Company

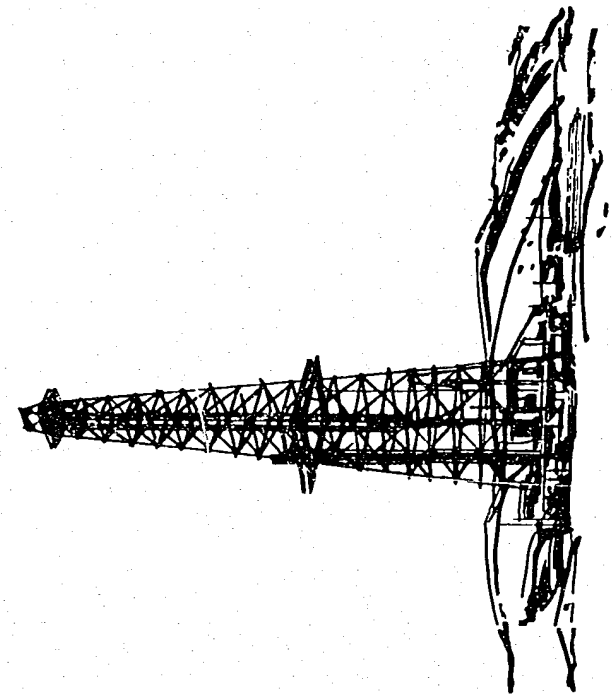
620 40' 44.00 121° 43' 18.00 Horn River CDR 10E Willow L.R.I-71 — Well Name and Description

#3 — Test No.

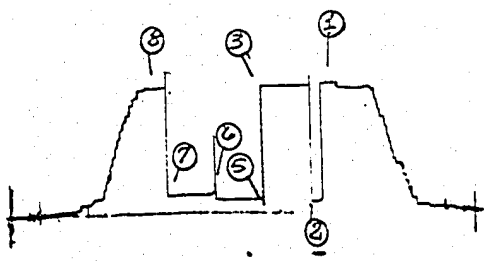
March 15/71 — Date of Test


LYNES

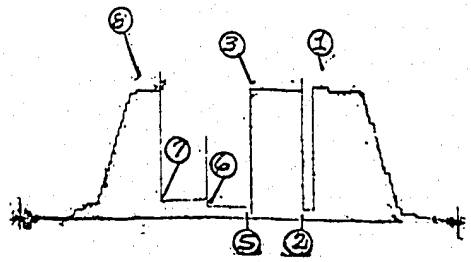

LYNES
BRIGHT NAME IN THE OIL PATCH
Inflatable and Conventional Packer Tools



HORN RIVER CDR 10E WILLOW L.R.I-71
62° 40' 121° 43' 901-4



HORN RIVER CDR 10E WILLOW L.R.I-71
62° 40' 121° 43' 901-4



HORN RIVER CDR 10E WILLOW L.R.I-71
62° 40' 121° 43' 1135-4
Below Straddle

LYNES UNITED SERVICES LTD.

TEST DATA				GENERAL INFORMATION	
Test No.	4	Lynes Test	4		
Formation		T.D.	3009 Ft.	Company	Kenting Oilwell Drilling
Interval Tested	985 Ft. to	1040	Ft.	Address	
Feet of Net Pay Tested	55		Ft.		
Type of Test	Dual Straddle Conv.				
Cushion	nil	Amount	Ft.	Well Name	Horn River CDR 10E Willow LRI-71
Started in Hole at	6:00 Hrs.	Tool Open at	7:25 Hrs.	Well Number	62° 40' 44.00 121° 43' 18.00
Pre-Flow	7 Mins.	Initial Shut-in	30 Mins.	K.B. Elevation	Sub-Sea Elevation
2nd Flow	Mins.	Second Shut-in	Mins.	Area	Willow Lake Province N.W.T.
Final Flow	30 Mins.	Final Shut-in	30 Mins.	Company Rep.	J. Hulkovich
Remarks:	Lost initial shut-in when shuting			Tester	G. Lewchuk
	in tool due to very little weight			Contractor	Kenting Drilling Rig No. 9
	above the packer (12,000 lbs.)			Ticket No.	2024 Date March 19/71
Blow:	Tool open with very small blow.			Service Reports To:	
	Dead in 5 minutes.				5 - Lewis Engineering Ltd.
					+ 40 xeroxed copies.

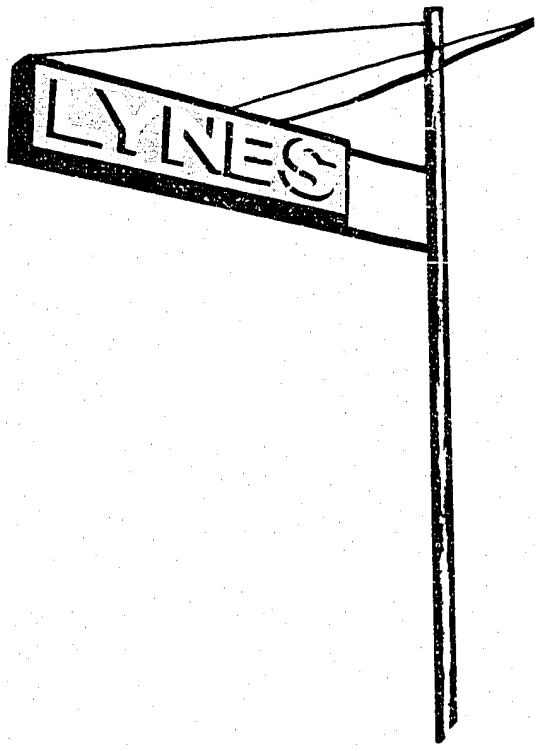
GAS BLOW MEASUREMENTS			
Measured with			
Time	Surface Choke	Reading Inches	Cubic Feet/Day

MUD AND HOLE DATA	
Mud Type	Gel
Weight	8.9 Viscosity 55 Water Loss
Filter Cake	2/32" Bottom Hole Temperature
Drill Pipe Size	4 1/2" FH Weight 16.60
Drill Collars	4 1/2"H90 I.D. 2 7/8 Feet Run
Main Hole or Casing Size	7 7/8"
Rathole or Liner Size	No. of Feet
Bottom Hole Choke Size	3/4"
Surface Choke Size	1"
Packer Rubber Size	7"
REMARKS	Initial shut-in pressure false. Final shut-in pressure suggests virtually no permeability within the interval tested.

RECOVERY	
TOTAL FLUID RECOVERED	60 Ft. Consisting of:
60 Ft. of	salty mud
Ft. of	
Ft. of	
Ft. of	
Test was/was not Reverse Circulated	
Oil Recovery A.P.I.	Water Specific Gravity
Salinity	65,000 PPM

PRESSURE READINGS				
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 901	Recorder No. 902	Recorder No. 1135	Recorder No.
	Capacity 3400	Capacity 3300	Capacity	Capacity
	Depth 1005	Depth 1009	Depth 1060	Depth
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	473	464	485	
2 - PRE-FLOW	39	36		
3 - INITIAL SHUT-IN	464	464		
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW	50	41		
6 - FINAL FLOW	47	41		
7 - FINAL SHUT-IN	63	63		
8 - FINAL HYDROSTATIC	460	460	485	

Kenting Oilwell Drilling — Company
Horn River CDR 10E Willow LRI-71 — Well Name and Description
62° 40' 121° 43' — Well Name and Description
#4 — Test No.
March 19/71 — Date of Test



LYNES UNITED SERVICES LTD. 262-4501 CALGARY, ALBERTA

CORE ANALYSIS REPORT

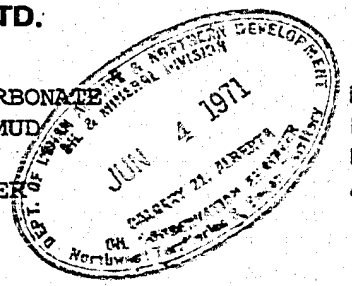
FOR

CANADIAN PACIFIC OIL AND GAS COMPANY LIMITED

HORN R. CDR IOE WILLOW LR I-71
WILDCAT
N. W. T.

CORE LABORATORIES - CANADA LTD.
Petroleum Reservoir Engineering
CALGARY - EDMONTON - REGINA

CORE LABORATORIES – CANADA LTD.



COMPANY	CANADIAN PACIFIC OIL AND GAS LIMITED	**FORMATION**	LOTSBERG CARBONATE
WELL	HORN R CDR IOE WILLOW LR I-71	**DRILLING FLUID**	WATER BASE MUD
FIELD	WILDCAT, N.W.T.	**ELEVATION**	
LOCATION	62 40' 44.00 121 43' 18.00	**ANALYSIS**	FULL DIAMETER
	GRID. 62-50-121-30	**REMARKS**	

AST - APPEARS SIMILAR TO	- - PERMEABILITY <	CONG - CONGLOMERATE	SHY - SHALY	A - ANHYDRITE	V - VUGULAR	I - INTERGRANULAR	SS - SMALL PLUG SAMPLE
- BROKEN CORE (CORE USED FOR SUMMARY PURPOSES)	FS - FINE SAND	DOL - DOLOMITE	/BK - BREAK	FOSS - FOSSILIFEROUS	LV - LARGE VUGS	STY - STYLOLITIC	SL/ - SLIGHTLY
- PERMEABILITY > 10000 MD.	MS - MEDIUM SAND	SH - SHALE	BIT - BITUMEN	XLN - CRYSTALLINE	SV - SMALL VUGS	HF - HORIZONTAL FRACTURE	V/ - VERY
	CS - COARSE SAND	LMY - LIMY	CARB - CARBONACEOUS	LAM - LAMINATIONS	PPV - PIN POINT VUGS	VF - VERTICAL FRACTURE	W/ - WITH

SAMPLE NUMBER	INTERVAL REPRESENTED, FEET		PERMEABILITY TO AIR, MILLIDARCYS			PERMEABILITY FEET	POROSITY, PER CENT	POROSITY FEET	DENSITY, gm./cc.		VISUAL EXAMINATION
	DEPTH	THICK	KMAX	K90°	KV				BULK	GRAIN	
	CORED INTERVAL 2454' - 2504'										
	CORE NO. 1 2454' - 2504' (REC. 49.5')										
-	2454.0-62.8	8.8	-	-	-	-	-	-	-	-	DENSE
1	2462.8-65.3	2.5	-0.01	-0.01	-0.01	-	0.3	0.75	2.82	2.82	I STY
2	2465.3-66.1	0.8	1.61	1.14	-0.01	1.29	2.4	1.92	2.76	2.83	FEW SV PPV STY HF
3	2466.1-67.1	1.0	0.43	0.10	-0.01	0.43	2.2	2.20	2.77	2.83	FEW SV PPV HF
4	2467.1-68.1	1.0	-0.01	-0.01	-0.01	-	0.5	0.50	2.81	2.83	FEW SV PPV STY
-	2468.1-74.1	6.0	-	-	-	-	-	-	-	-	DENSE
5	2474.1-75.2	1.1	1.97	0.12	3.50	2.17	2.1	2.31	2.76	2.82	SV PPV VF
6	2475.2-76.4	1.2	0.04	0.02	-0.01	0.05	1.9	2.28	2.75	2.81	SV PPV VF
7	2476.4-77.8	1.4	*	0.13	*	0.18	2.8	3.92	2.72	2.80	SV PPV STY VF
-	2477.8-78.9	1.1	-	-	-	-	-	-	-	-	DENSE
AST6	2478.9-80.6	1.7	0.04	0.02	-0.01	0.07	1.9	3.23	-	-	APPEARS SIMILAR TO #6
8	2480.6-82.3	1.7	*	0.76	*	1.29	2.7	4.59	2.74	2.84	SV PPV VF
9	2482.3-83.5	1.2	7.21	4.81	0.27	8.65	2.4	2.88	2.77	2.83	SV PPV HF VF
-	2483.5-84.8	1.3	-	-	-	-	-	-	-	-	DENSE
10	2484.8-86.2	1.4	0.03	0.01	-0.01	0.04	1.1	1.54	2.81	2.84	FEW SV STY HF
11	2486.2-87.6	1.4	196.00	0.39	-0.01	274.40	2.9	4.06	2.77	2.85	SV PPV STY
-	2487.6-03.5	15.9	-	-	-	-	-	-	-	-	DENSE
-	2503.5-04.0	0.5	-	-	-	-	-	-	-	-	LOST CORE.

Report No. S-11 BSN 1974

Report on one collection of fossils from core from the Willowlake River I-71 well, District of Mackenzie, submitted by Mr. Meijer-Drees. (NTS 95I).

The relevant parts of any manuscript prepared for publication that paraphrase or quote from this report should be referred to the Paleontology Subdivision, Calgary, for possible revision.

Well, Depth, Formation	Fauna and Age	GSC Loc. No.
Horn River-C.D.R.-I.O.E. Willowlake R. I-71 62°40'44"N, 121°43'18"W, 1971 Depth 2,463 ft., core Mount Kindle Formation	stromatoporid undetermined tabulate coral *Catenipora* sp. *Cystihalysites* sp. *Favosites*? sp. indeterminate brachiopods age: Silurian	C-34854/2,463

B. S. Norford

Paleontology Subdivision
Institute of Sedimentary and Petroleum Geology
Calgary, November 26, 1974

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION COR TOE - 1-71 AREA FT SIMPSON DATE MAR 19 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller EARL BAYKER	12.
Derrick D. LACHANCE	12.
Floor D. DE MELT	12.
Floor	
Floor	
Motor L. MEIDINGER	12.
Mechanic	
Extra FRANK TURNER	13

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor SPARE	
Floor	
Motor	
Mechanic	
Extra	

Injuries:

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. BRYANT	12.
Derrick E. HARSTAD	12.
Floor	
Floor	
Floor R. SAVARD	12.
Motor L. TOMZAK	12
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
TD	3009.										

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD

	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

At Surveys Degree

MOTOR HOURS

1
2
3
4
5

Next Oil Change

PUMPS

No. 1	Model	Pressure
		S.P.M.
		Liner Size
No. 2	Model	Pressure
		S.P.M.
		Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands
Singles
D. Collars
Other Ft.
C.B. Ft.
Subs. Ft.
Ft. Up On Kelly
TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD

	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

At Surveys Degree

MOTOR HOURS

1
2
3
4
5

Next Oil Change

PUMPS

No. 1	Model	Pressure
		S.P.M.
		Liner Size
No. 2	Model	Pressure
		S.P.M.
		Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands
Singles
D. Collars
Other Ft.
C.B. Ft.
Subs. Ft.
Ft. Up On Kelly
TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD

	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

At Surveys Degree

MOTOR HOURS

1
2
3
4
5

Next Oil Change

PUMPS

No. 1	Model	Pressure
		S.P.M.
		Liner Size
No. 2	Model	Pressure
		S.P.M.
		Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands
Singles
D. Collars
Other Ft.
C.B. Ft.
Subs. Ft.
Ft. Up On Kelly
TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
WAIT ON ORDERS	12.00	12.30	1/2
TRIP IN OPEN END.	12.30	1.30	1
RUN plug 1#	1.30	2.00	1/2
HOIST.	2.00	2.15	1/4
RUN plug 2#	2.15	2.45	1/2
W.O.C.	2.45	8.00	5 1/4
RAN plug 1# 3009-2290. 180 SKS PLUS 4% GEL DOWN @ 2.00 AM.			
RAN plug 2# 1180-940- 150 SKS PLUS 3% CACL-plug DOWN @ 2.40 AM.			

Company Time Cont'r Time

W.O.C.	8.00	10.15	2 1/4
FEEL plug 2# @ 925 FT	10.15	10.30	1/4
HOIST LAYING DOWN PIPE	10.30	11.15	3/4
RAN plug 3#	11.15	11.30	1/4
W.O.C.	11.30	4.00	4 1/2
RAN plug 3 - 371-271 55 SKS PLUS 3% CACL plug DOWN @ 1135 AM.			

Company Time Cont'r Time

W.O.C.	4.00	7.15	3 1/4
FEEL plug 3# @ 253 FT	7.15	7.30	1/4
LAY DOWN PIPE.	7.30	8.00	1/2
LAY DOWN B.O.P.S. RIG	8.00		
3 FT CELLAR CUT OFF CSG			
RAN 5 SK plug ON TOP			
WELD ON PLATE W/ WELL			
MARKER.		17.00	3.
RIG OUT	11.00	12.00	1
RIG RELEASED @ 11.00 pm MARCH 19/71			

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 John R. Kerton

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.O.R. 1-11 FT. SIMPSON AREA FT. SIMPSON DATE MAR 12 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SAUDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LACHANCE	12
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2454	30	2484	5 3/4	76	20	6 1/4	2 7/8	42			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	6 7/16	CHRIST	D	EC17101	12	100	30	5 3/4			RUN

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT		8.8	8.8	8.8
VISCOSITY		29	29	29
GEL				

PUMPS

		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure		800	800	1000
Model D 300	S.P.M.		40	40	40
	Liner Size		5 1/2 x 14		
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

Additives: WATER

At Surveys Degree	MOTOR HOURS	Next Oil Change
	1 104	D.W.
	2 104	200
	3 120	P.m
	4 120	200
	5 106	I.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs, Ft.	Ft. Up On Kelly	TOTAL
1847.3		581.00			4.50	26.16	2510.16

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor Rig-mit	8
Motor	
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2484	20	2504	4 3/4	76	20	6 1/4	2 7/8	42			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	6 7/16	CHRIST	D	EC17101	12	100	50	9 1/2			SEMI-FLEX

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.8	9.9	8.8	
VISCOSITY	29	29	29	
GEL				

PUMPS

		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure	1000	1000	1020	
Model D 300	S.P.M.	40	40	40	
	Liner Size	5 1/2 x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

Additives: WATER

At Surveys Degree	MOTOR HOURS	Next Oil Change
	1 112	D.W.
	2 112	200
	3 128	P.m
	4 128	200
	5 114	I.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		9					250

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs, Ft.	Ft. Up On Kelly	TOTAL
					4.50		

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller L. BRYFIDE	12
Derrick BARCLAY	12
Floor J. SAUDER	
Floor	
Floor	
Motor MESSINGER	12
Mechanic	
Extra	

Injuries: NIL

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
@ 2454	68	2460	1/2	76	20	6 1/4	2 7/8	42			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7 7/8	W.O.7	3x11	270762	15	140			6	1/2	

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS

		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure				
Model	S.P.M.				
	Liner Size				
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

Additives:

At Surveys Degree	MOTOR HOURS	Next Oil Change
	1 120	
	2 120	
	3 136	
	4 136	
	5 122	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs, Ft.	Ft. Up On Kelly	TOTAL
1847.3		581.00			4.50		

Totco Ring on Bit No. ____ D.P. Calipered Date ____ Results ____ From Pipe Rack ____ Tot. Contractor Time ____ Hrs. Toolpusher ____

B.O.P. Test-Operated ____ Time ____ Results ____ Total Company Time ____ Hrs. Approved by ____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
STRIP IN W/ CORE BBLS	12 00	1 15	1 1/4
SERVICE RIG	1 15	1 30	1/4
CIRC CORE BBL TO BOTTOM.	1 30		
+ DROP BALL		2 15	3/4
CUT CORE #1	2 15	8 00	5 3/4
Company Time Cont'r Time			
CUT CORE #1	8 00	1245	4 3/4
HOIST CORE #1	1245	145	1
RECOVER CORE LAY DOWN	145		
CORE BBLS.		400	2 1/4
~~MAKE UP D.S.T. #1~~	~~#~~		
Company Time Cont'r Time			
MAKE UP D.S.T. #1	400	530	1 1/2
RUN IN SLOW	530	645	1 1/4
WORK TOOL IN TIGHT SPOT @ 2200	645	715	1/2
HOIST TEST TOOL	715		
STAND IN DERRICK HOIST PIPE.		930	2 1/4
RUN IN W/ BIT TO CLEAN OUT TIGHT SPOT.	930	1030	1
CLEAN FROM [illegible]	1030	1130	1
REAM RAT [illegible]	1130	1230	1/2
Company Time Cont'r Time			

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.K.I.O.E. Willow R. R. AREA Ft. Simp. DATE March 18 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. Bayerle	12
Derrick D. LaFrance	12
Floor M. Demers	12
Floor	
Floor	
Motor L. Meidinger	12
Mechanic	
Extra	

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra F. Turner	8

Injuries:

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. Bryant	12
Derrick E. Halstad	12
Floor R. Savard	12
Floor	
Floor	
Motor R. Jonasak	12
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT							1	
VISCOSITY							2	
GEL							3	
							4	
							5	

PUMPS: No. 1 Pressure / Model / S.P.M. / Liner Size; No. 2 Pressure / Model / S.P.M. / Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands / Singles / D. Collars / Other Ft. / C.B. Ft. / Subs. Ft. / Ft. Up On Kelly / TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT							1	
VISCOSITY							2	
GEL							3	
							4	
							5	

PUMPS: No. 1 Pressure / Model / S.P.M. / Liner Size; No. 2 Pressure / Model / S.P.M. / Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands / Singles / D. Collars / Other Ft. / C.B. Ft. / Subs. Ft. / Ft. Up On Kelly / TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT							1	
VISCOSITY							2	
GEL							3	
							4	
							5	

PUMPS: No. 1 Pressure / Model / S.P.M. / Liner Size; No. 2 Pressure / Model / S.P.M. / Liner Size

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands / Singles / D. Collars / Other Ft. / C.B. Ft. / Subs. Ft. / Ft. Up On Kelly / TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Wait on Orders	12⁰⁰	4⁰⁰	4
Wait on Tests	4⁰⁰	8⁰⁰	4
Company Time Cont'r Time			
Wait on Test Tools	8⁰⁰	11⁰⁰	3
Make up Test Tools	11⁰⁰	2⁰⁰	3
Trip in w/ Test Tools	2⁰⁰	4⁰⁰	2
Company Time Cont'r Time			
Trip in w/ Test Tools	4⁰⁰	6⁰⁰	2
D.S.T. #4	6⁰⁰	9⁰⁰	3
Hoist Packer	9⁰⁰	10³⁰	1½
Wait on Orders	10³⁰	12⁰⁰	1½
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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.O.R. E.O.E FT. SIMPSON AREA FT. SIMPSON DATE MAR 11 19 71 (23)

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LACHANCE	12
Mechanic	
Extra	

injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2190	99	2289	5½	12	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	554	3/11	DX809E	35	45	303	17¼			RWN

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.7	8.7	8.7	
VISCOSITY	29	29	29	
GEL				

Additives: WATER

PUMPS		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure	750	750	750	
Model D 300	S.P.M.	48	48	48	
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys: 2289 Degree 1¾

MOTOR HOURS		Next Oil Change
1	80	D.W.
2	80	200
3	96	P.m.
4	96	200
5	82	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
1		8						250

General

FUEL Gals.	WATER Bbls.	COAL Tons

Stands	1648.88
Singles	3065
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	50
Ft. Up On Kelly	46
TOTAL	2295.96

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic M. DEMELT	8
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2289	105	2394	6¼	76	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	Sem	3/11	5836	35	45	105	6¼			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT		8.7		
VISCOSITY		29		
GEL				

Additives:

PUMPS		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure		750		
Model D 300	S.P.M.		48		
	Liner Size		5½ x 14		
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys: Degree

MOTOR HOURS		Next Oil Change
1	88	D.W.
2	88	200
3	104	P.m.
4	104	200
5	90	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
1		8						250

General

FUEL Gals.	WATER Bbls.	COAL Tons

Stands	
Singles	
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	
TOTAL	

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller BRIEDE	12
Derrick BARCLAY	12
Floor SPINDER	12
Floor	
Floor	
Motor MEDINGER	12
Mechanic	
Extra	

Injuries: NIL

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2394	60	2454	3½	76	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	Sem	3/11	5836	35/37	45	165	9¾			8-4-1

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

PUMPS		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure				
Model	S.P.M.				
	Liner Size				
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys: 2454 Degree

MOTOR HOURS		Next Oil Change
1	96	
2	96	
3	112	
4	112	
5	98	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

FUEL Gals.	WATER Bbls.	COAL Tons

Stands	1820.19
Singles	2872
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	2.50
Ft. Up On Kelly	39.59
TOTAL	3416.00

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12 00	5 30	5½
SERVICE RIG	5 30	5 45	¼
SURVEY @ 2289	5 45	6 00	¼
TRIP F.N.B.	6 00	8 00	2
Company Time / Cont'r Time			
TRIP F.N.B.	8 00	9 00	1
SERVICE RIG	9 00	9 15	¼
CLEAN 60' TO BOTTOM	9 15	9 45	½
DRILL	9 45	4 00	6¼
Company Time / Cont'r Time			
RIG SERVICE	4 00	4 15	¼
DRILLING	4 15	7 30	3¼
CIRC SAMPLE	7 30	8 15	¾
SURVEY	8 15	8 30	¼
HOIST TO CORE	8 30	9 30	1
PICK UP CORE BBL.	9 30	10 30	1
CHANGE HEADS IN PUMP. RUN IN	10 30	11 45	1¼
	11 45	12 00	¼
Company Time / Cont'r Time			

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.R.I.O.E. Willow Lk. 1-21 AREA Ft. Simp. DATE 17/3 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. Bryside	12
Derrick D. Lachance	12
Floor M. Diemert	12
Floor	
Floor	
Motor L. Meidinger	12
Mechanic	
Extra	

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra H. Turner	8

Injuries:

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller C. Bryant	12
Derrick T. Halstad	12
Floor R. Savard	12
Floor	
Floor	
Motor L. Tomczak	12
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
	@ 3009.										

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

PUMPS														
No. 1	Model	Pressure	S.P.M.	Liner Size	Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
No. 2	Model	Pressure	S.P.M.	Liner Size									

General:

W.L. F.C. pH.

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	48	
2	48	
3	96	
4	48	
5	48.	

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
	@ 3009.										

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

PUMPS														
No. 1	Model	Pressure	S.P.M.	Liner Size	Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
No. 2	Model	Pressure	S.P.M.	Liner Size									

General:

W.L. F.C. pH.

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	56	
2	56	
3	56	
4	56	
5	56	

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
	@ 3009.										

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

PUMPS														
No. 1	Model	Pressure	S.P.M.	Liner Size	Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
No. 2	Model	Pressure	S.P.M.	Liner Size									

General:

W.L. F.C. pH.

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	64	
2	64	
3	64	
4	64	
5	64	

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Logging	12:00	5:30	5½
Wait on Orders	5:30	8:00	2½
Company Time Cont'r Time			
Wait on Orders	8:00	4:00	8
Rig Serviced - B.O.P.s Motor Shut Off O.K.			
Company Time Cont'r Time			
Wait on Orders	4:00	12:00	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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.R. Tgt. 1-21 Ft. Simpson AREA Ft. Simpson DATE MAR 1c 1970

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LACHANCE	12
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
1656	250	1906	7½	64	18	6¼	2⅞	38			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2	7⅞	SCM-3	3/11	3836	15-35	45	1296	55			RUN

MUD

	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.5	8.5	8.5	8.5
VISCOSITY	28	28	28	28
GEL				

Additives: WATER

At Surveys: 1788 Degree 2¾

PUMPS

		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure	750	750	750	750
Model P 300	S.P.M.	48	48	48	48
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

MOTOR HOURS

		Next Oil Change
1	56	D.W
2	56	200
3	72	P.m.
4	72	200
5	88	I.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool
1		8				

General

W.L. F.C. pH.

Stands 1252.36 Singles

D. Collars 526.00 Other Ft.

C.B. Ft.

Subs. Ft. 4.50

Ft. Up On Kelly 4.86

TOTAL 1910.86

Next Slip 250

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra DEMELT	8

Injuries: NIL.

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
1906	104	2010	4¼	70	20	6¼	2⅞	44			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	~~SCM-3~~	3/11	DYECSE	30	45	104	4¼			RUN.

MUD

	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT			8.6	
VISCOSITY				
GEL				

Additives

At Surveys: 1906 Degree 3°

PUMPS

		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure			750	
Model	S.P.M.			48	
	Liner Size	5½	x 14		
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

MOTOR HOURS

		Next Oil Change
1	64	
2	64	
3	80	
4	60	
5	96	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool
1		8				

General

W.L. F.C. pH.

Stands 1398.76 (23) Singles

D. Collars 581.00 Other Ft.

C.B. Ft.

Subs. Ft. 4.50

Ft. Up On Kelly 25.74

TOTAL 2010.

Next Slip

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller BRYEIDE	12
Derrick BARWAY	12
Floor SPINDER	12
Floor	
Floor	
Motor MEDINGER	12
Mechanic	
Extra	

Injuries: NIL

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2010	180	2190	7½	72	20	6¼	2⅞	44			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	554	3 X 11		35/38	46	204	11½			RUN.

MUD

	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.7			
VISCOSITY	28			
GEL				

Additives

At Surveys: 2082 Degree 3

PUMPS

		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure	750			
Model	S.P.M.	48			
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

MOTOR HOURS

		Next Oil Change
1	72	
2	72	
3	88	
4	88	
5	74	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool
1		8				

General

W.L. F.C. pH.

Stands 1580.11 Singles

D. Collars 581.00 Other Ft.

C.B. Ft.

Subs. Ft. 4.50

Ft. Up On Kelly 4.39

TOTAL 2190

Next Slip

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12 00	4 00	4
SERVICE RIG	4 00	4 15	¼
SURVEY @ 1788	4 15	4 30	¼
DRILL	4 30	8 00	3½
Company Time Cont'r Time			
RIG SERVICE + B.O.P.'S	8 00	8 15	¼
SURVEY	8 15	8 30	¼
TRIP FOR BIT (PICK UP 20')	8 30	11 00	2½
CHANGE BUSHING ROLLERS	11 00	11 30	½
CLEAN 10' TO BTM	11 30	11 45	¼
DRILL	11 45	4 00	4¼ / 8
Company Time Cont'r Time			
RIG SERVICE	4 00	4 15	¼
DRILLING	4 15	7 25	3
SURVEY	7 15	7 30	¼
DRILLING	7 30	12 00	4½
Company Time Cont'r Time			

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C D R T.O.E. 1-71 FT SIMPSON AREA FT SIMPSON DATE MAR 16 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	8
Derrick K. JOHNSON	8
Floor	
Floor	
Floor B CROSS	8
Motor D. LACHANCE	8
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2970	10	2980	1½	80	20	6¼	2⅞	42			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞	5J5	3-12	DJ 6565	20-35	45	476	9¾			

MUD

	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.7			
VISCOSITY	56			
GEL				

Additives: CAUSTIC #50

At Surveys Degree: 2980 1¾

PUMPS

No. 1	Model	D 300	S.P.M. 57
	Pressure	800	Liner Size 5½ x 14
No. 2	Model		S.P.M.
	Pressure		Liner Size

MOTOR HOURS

		Next Oil Change
1	24	D.W.
2	24	200
3	24	P.M.
4	24	200
5	24	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands | Singles | D. Collars 581.00 | Other Ft. | C.B. Ft. | Subs. Ft. 4.50 | Ft. Up On Kelly | TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller L. BRYEIDE	8
Derrick D. LACHANCE	8
Floor M. DEMERS	8
Floor	
Floor	
Motor L. MEIDINGER	8
Mechanic	8
Extra FRANK TUENER	8

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2980	29	3009	3	80	18	6¼	2⅞	36			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
7	7⅞	WDTJ	3-12	28703	35	70	29	3	12	1	7-5-1

MUD

	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	8.8	8.8		
VISCOSITY	42	54		
GEL				

Additives:

At Surveys Degree:

PUMPS

No. 1	Model		S.P.M.
	Pressure		Liner Size 5½ X 14
No. 2	Model		S.P.M.
	Pressure		Liner Size

MOTOR HOURS

		Next Oil Change
1	32	200 D.W.
2	32	200 D.W.
3	32	200 P.M.
4	32	200 P.M.
5	32	200 L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					

General

W.L. F.C. pH.

Stands | Singles | D. Collars ~~581.00~~ | Other Ft. 523.49 | C.B. Ft. | Subs. Ft. 4.50 | Ft. Up On Kelly 91.00 | TOTAL 3009

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. BAYANT	8
Derrick F. HARSTAD	12
Floor A. SAVARD	8
Floor	
Floor	
Motor L. TOMCZAK	8
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD

	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

At Surveys Degree:

PUMPS

No. 1	Model		S.P.M.
	Pressure		Liner Size
No. 2	Model		S.P.M.
	Pressure		Liner Size

MOTOR HOURS

		Next Oil Change
1	40	
2	✓	
3	✓	
4	✓	
5	✓	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL 3009

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12.00	1.30	1½
SURVEY @ 2980	1.30	1.45	¼
SERVICE RIG	1.45	2.00	¼
TRIP OUT W/BIT #6 (STAMP	2.00		
INSPECT DRILL COLLARS			
BIT SUBS + C/O SUBS			
LAY DOWN 2 D.C.'S			
DRILL COLLARS VERY TIGHT		8.00	6
Company Time / Cont'r Time			
RIG SERVICE - B.O.P. BLANK RAMS	8.00		
KELLY COCK & RIG SAVERS		8.30	1½
TRIP IN BIT #7 - WDTJ	8.30	9.45	1¼
BRK CIRC REAM 30' TO BTM 12' U.G.	9.45	10.45	1
DRILL 7⅞" HOLE	10.45	1.45	3
CIRC TO LOG	1.45	2.90	1¼
HOIST TO LOG	3.00	4.00	1
Company Time / Cont'r Time			
HOIST TO LOG	4.00	4.30	½
RIG UP LOGGERS	4.30	4.45	¼
RUN LL-7 LOG	4.45	6.30	1¾
RUN BHC - GR-C LOG	6.30	10.30	4
RUN SWP LOG	10.30	12.00	1½
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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.R. Joe 1-71 FT Simpson AREA FT Simpson DATE MAR 9 19 71 (11)

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LA CHANCE	12
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
1112	170	1282	7¾	60	18	6¼	2⅜	38			

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	2	7⅞	SCMJ	3/11	5836	35	45	672	32½			RUN

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys	Degree
WEIGHT	84	84	84	84	WATER	1154	1¾
VISCOSITY	28	28	28	28			
GEL							

PUMPS						
No. 1	Pressure	750	750	750	750	
Model D 300	S.P.M.	48	48	48	48	
	Liner Size	5½ x 14				
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

MOTOR HOURS		Next Oil Change
1	32	D.W.
2	32	200
3	48	P.M.
4	48	200
5	64	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands 737.72 | Singles — | D. Collars 526.00 | Other Ft. | C.B. Ft. | Subs. Ft. 4.60 | Ft. Up On Kelly 12.18 | TOTAL 1306.22

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra D.F. MELT	8

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
1282	174	1456	7½	60	18	6¼	2⅜	38			

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	2	7⅞	SCMJ	3/11	5836	35	45	846	40			RUN

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys	Degree
WEIGHT	84	84	84		WATER	1426	2¼
VISCOSITY	28	28	28				
GEL							

PUMPS						
No. 1	Pressure	750	750	750		
Model D 300	S.P.M.	48	48	48		
	Liner Size		5½ x 14			
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

MOTOR HOURS		Next Oil Change
1	40	D.W.
2	40	200
3	56	P.M.
4	56	200
5	72	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands 857.54 | Singles 30.25 | D. Collars 526.00 | Other Ft. | C.B. Ft. | Subs. Ft. 4.50 | Ft. Up On Kelly 38.00 | TOTAL 1456.

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller L. BRYEIDE	12
Derrick W. BARCLAY	12
Floor G. SANDER	12
Floor	
Floor	
Motor L. MEDINGER	12
Mechanic	
Extra	

Injuries: NIL.

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
1456	200	1656	7½	62	18	6¼	2⅜	38			

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	2	7⅞	SCM	3/11	5836	35	45	1046	41½			RUN

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys	Degree
WEIGHT						1637	2¾
VISCOSITY							
GEL							

PUMPS						
No. 1	Pressure					
Model	S.P.M.					
	Liner Size					
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

MOTOR HOURS		Next Oil Change
1	48	
2	48	
3	64	
4	64	
5	80	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands 1098.80 | Singles | D. Collars 526.00 | Other Ft. | C.B. Ft. | Subs. Ft. 4.50 | Ft. Up On Kelly 46.20 | TOTAL 1656

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12 00	1 45	1 3/4
SERVICE RIG + SURVEY	1 45	2 00	1/4
DRILL	2 00	8 00	6
Company Time — Cont'r Time			
DRILL	8 00	10 15	2 1/4
SERVICE RIG ✓ BOPS OK	10 15	10 30	1/4
DRILL	10 30	2 30	4
SURVEY	2 30	2 45	1/4
DRILL	2 45	4 00	1 1/4
Company Time — Cont'r Time			
RIG SERVICE	4 00	4 15	1/4
DRILLING	4 15	11 00	6 3/4
SURVEY	11 00	11 15	1/4
DRILLING	11 15	12 00	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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD. Hon R.R.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.O.R. 1-2E W6-71 FT SIMPSON AREA FT SIMPSON DATE MAR 15 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	8
Derrick K. JOHNSON	8
Floor	
Floor	
Floor B. CROSS	8
Motor D. LACHANCE	8
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2685	75	2760	7	78	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞	555	3/12		35	44	256	20¼			Run

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.6	8.6	8.6	8.6
VISCOSITY	39	39	39	50
GEL				

Additives: GEL # 3500

PUMPS		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure	800	800	800	800
Model B-300	S.P.M.	58	58	58	58
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys Degree	MOTOR HOURS	Next Oil Change
	1 176	D.W.
	2 176	200
	3 192	P.M.
	4 192	200
	5 186	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
1		8						250

General: CHANGED HEAD IN PUMP (RIG SIDE)

Stands	2146.75
Singles	—
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs Ft.	41.50
Ft. Up On Kelly	18.40
TOTAL	2771.45

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller BRYEDE	8
Derrick D. LACHANCE	4
Floor M. DEMERS	
Floor	
Floor	
Motor MEIDINGER	8
Mechanic	
Extra	

Injuries:

Fires: NIL.

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2760	125	2885	7¾	78	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞	555	3/12		35/40	46	381	28			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	8.6	8.6	8.7	8.7
VISCOSITY	37	36	37	39
GEL				

Additives: CAUSTIC 100 #; SPERSENE 100 #

PUMPS		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure	600	600		
Model	S.P.M.	58	58		
	Liner Size	5½ X 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys Degree	MOTOR HOURS	Next Oil Change
2774 3°	1 8	
	2 8	
	3 8	
	4 8	
	5 8	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
1		8						

General:

Stands	2269.60
Singles	
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	41.50
Ft. Up On Kelly	19.90
TOTAL	2885

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. QUIGLEY	8
Derrick E. LARSTAD	12
Floor R. SQUARE	8
Floor	
Floor	
Motor J. TOMCZAK	8
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.
2885	85	2970	7¾	40 on 20	20	6¼	2⅞	42

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞	555	3/12		30/40	40/46	466	35¾			Run

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.8	8.7	8.7	8.8
VISCOSITY	38	38	39	44
GEL				

Additives: GEL 4000 #; CAUSTIC 50 #; SPERSENE 50 #

PUMPS		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure				
Model	S.P.M.				
	Liner Size				
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

W.L. F.C. pH.

At Surveys Degree	MOTOR HOURS	Next Oil Change
	1 16	
	2 ✓	
	3 ✓	
	4 ✓	
	5 ✓	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General:

Stands	2354
Singles	—
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	41.50
Ft. Up On Kelly	25.80
TOTAL	2970

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
WORK ON PUMP	12:00	12:45	¾
SERVICE RIG	12:45	1:00	¼
DRILL	1:00	8:00	7

Company Time	Cont'r Time			
DRILLING		8:00	8:45	¾
RIG SERVICE + B.O.P. SURVEY		8:45	9:00	¼
DRILLING		9:00	4:00	7

Company Time	Cont'r Time			
DRILL		4:00	4:30	½
RIG SER + B.O.P.S		4:30	4:45	¼
DRILL		4:45	12:00	7¼

Company Time Cont'r Time

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by: _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION E.D.R. 1-71 FT. SIMPSON AREA FT. SIMPSON DATE MAR 8 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LACHANCE	12
Mechanic	
Extra	

Injuries: Nil

Fires: Nil

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
659	132	791	7½	36	18	6¼	2⅞	38			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2	7⅞	SCM-J	3-11	5836	15-35	45	181	9¾			RUN

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.5	8.5	8.6	86
VISCOSITY	29	33	32	32
GEL				

Additives: GEL # 2000; DUGB # 1 gal.; Caustic 5#

PUMPS

		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure	800	800	800	800
Model D 300	S.P.M.	58	58	58	58
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

At Surveys: Degree 721 1¾

MOTOR HOURS

		Next Oil Change
1	8	D.W.
2	8	200
3	32	P.M.
4	32	200
5	40	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands	246.59
Singles	
D. Collars	526.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	15.10
TOTAL	814.30

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra DEMELT	8

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
791	148	939	7¼	58	18	6¼	2⅞	38			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2	7⅞	SCM-J	3/11	5836	35	45	329	17			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	85	85	85	84
VISCOSITY	30	30	30	29
GEL				

Additives:

PUMPS

		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure	1000	1000	1000	
Model D 300	S.P.M.	50	50	50	
	Liner Size	5½ x 14			
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

At Surveys: Degree 934 1¼

MOTOR HOURS

		Next Oil Change
1	16	D.W.
2	16	200
3	40	P.M.
4	40	200
5	48	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands	271.57
Singles	
D. Collars	526.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	11
TOTAL	939

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller L. BRYEIDE	12
Derrick W. BARCLAY	12
Floor G. SPINNER	12
Floor	
Floor	
Motor L. MENINGER	12
Mechanic	
Extra	

Injuries: NIL

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
939	173	1112	7¾	58	18	6¼	2⅞	38			

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2	7⅞	S.C.M.	3/11	5836	35	45	502	24¾			RUN

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.4			
VISCOSITY	28			
GEL				

Additives:

PUMPS

		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure	750			
Model	S.P.M.				
	Liner Size	5"	x 14		
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

At Surveys: Degree

MOTOR HOURS

		Next Oil Change
1	24	
2	24	
3	48	
4	48	
5	56	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands	555.53
Singles	
D. Collars	526.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	25.97
TOTAL	1112

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 _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12⁰⁰	1⁴⁵	1¾
SERVICE RIG	1⁴⁵	2⁰⁰	¼
DRILL	2⁰⁰	4⁰⁰	2
SURVEY @ 721	4⁰⁰	4¹⁵	¼
DRILL	4¹⁵	8⁰⁰	3¾

Company Time / Cont'r Time

REMARKS	Time Start	Stop	Interval
DRILL	8⁰⁰	9¹⁵	1¼
SERVICE RIG	9¹⁵	9³⁰	¼
DRILL	9³⁰	10³⁰	1
TIGHTEN LINERS IN PUMP	10³⁰	10⁴⁵	¼
DRILL	10⁴⁵	345	5
SURVEY	345	4⁰⁰	¼

Company Time / Cont'r Time

REMARKS	Time Start	Stop	Interval
RIG SERVICE	4⁰⁰	4¹⁵	¼
DRILLING	4¹⁵	12⁰⁰	7¾

Company Time / Cont'r Time

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 4 LOCATION C.D.R. I.o.E. 1-71 FT. SIMPSON AREA FT. SIMPSON DATE MAR 14 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	9
Floor	
Floor	
Floor B. CROSS	8
Motor D. LACHANCE	8
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller BRYEIDE	8
Derrick	
Floor M. DEMELT	8
Floor	
Floor	
Motor MEDINGER	8
Mechanic	
Extra	

Injuries: NIL

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. BRYANT	8
Derrick E. HARSTAD	12
Floor B. SAVARD	8
Floor	
Floor	
Motor L. TOMCZAK	8
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
@ 2504					20	6¼	2⅞	42			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

Additives:

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	152	D.W.
2	152	200
3	168	P.M.
4	168	200
5	164	L.P.

PUMPS			
No. 1	Model	Pressure	
		S.P.M.	
		Liner Size	
No. 2	Model	Pressure	
		S.P.M.	
		Liner Size	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General

W.L. F.C. pH.

Stands	187.14
Singles	
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	
TOTAL	1904.20

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2504	81	2585	6	76	20	6¼	2⅞	42			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞		3X12		35	40	81	6			Run.

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT			8.7	8.7
VISCOSITY			39	40
GEL				

Additives: Gel 100 Sax; Caustic 4 Sax; Peltex 8 Sax

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	160	
2	160	
3	176	
4	170	
5	162	

PUMPS			
No. 1	Model	Pressure	800
		S.P.M.	56
		Liner Size	
No. 2	Model	Pressure	
		S.P.M.	
		Liner Size	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		6					

General

W.L. F.C. pH.

Stands	194.28
Singles	
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	23.22
TOTAL	2505

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2585	100	2685	7¼	78	M20	6¼	2⅞	42			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
6	7⅞		3/12		35	48	181	13¼			Run

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.7	8.6	8.6	8.6
VISCOSITY	39	41	39	39
GEL				

Additives: CAUSTIC 100 #; PELTEX 100 #; GEL 500 #; WATER 1" STREAM; DUMPED SHAKER TANK

At Surveys Degree

MOTOR HOURS		Next Oil Change
1	168	
2	169	
3	184	
4	184	
5	170	

PUMPS			
No. 1	Model	Pressure	
		S.P.M.	
		Liner Size	
No. 2	Model	Pressure	
		S.P.M.	
		Liner Size	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

W.L. F.C. pH.

Stands	210542
Singles	2996
D. Collars	581.00
Other Ft.	
C.B. Ft.	
Subs. Ft.	4.50
Ft. Up On Kelly	11.00
TOTAL	2685

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
TRIP IN W/ TEST # 3	12 00	12 45	¾
RIG TO TEST	12 45	1 15	½
INSTALL NEW LOW CHAIN	1 15	1 45	½
TEST	1 45	4 15	2 ½
BREAK DOWN TEST HEAD	4 15	4 30	¼
TRIP OUT W/ TEST # 3	4 30	6 00	1 ½
BREAK DOWN TEST TOOL	6 00	-	
WASH TOOLS + LAY DOWN SAME		7 45	1 ¾
HOIST TAIL PIPE	7 45	8 00	¼
Company Time / Cont'r Time			
RUN IN	8 00	9 15	1¼
RIG SERVICE B.OP.S	9 15	9 30	¼
CK. VALVES IN PUMP	9 30	10 00	½
DRILLING	10 00	4 00	6
Company Time / Cont'r Time			
DRILL	4 00	4 15	¼
RIG SER + V BOPS	4 15	4 30	¼
DRILL	4 30	11 30	7
WORK ON PUMP	11 30	12 00	½
Company Time / Cont'r Time			

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.R.T.O.L. Willow Lake 1-71 AREA Fr. Swan R. DATE March 6 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller G. Bryant	8
Derrick E. Knutstad	8
Floor R. Seward	8
Floor	
Floor	
Motor L. Semczak	8
Mechanic	
Extra	

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller L. Sander	8
Derrick K. Johnson	8
Floor M. Hewett	6
Floor	
Floor L. Cross	8
Motor D. Laclasse	8
Mechanic	
Extra	

Injuries:

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller Lars. Lyseide	8
Derrick W. Barclay	8
Floor M. Hewett	8
Floor	
Floor	
Motor L. Meidinger	8
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
240	91	330	3¼	40	10	6¼	2⅞				

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	3A	12¼	RT.	CONJ		15-20	180	176	6			6-2-1
	4A	V	V	V		20	180	80	2½			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS						
No. 1	Pressure					
Model	S.P.M.					
	Liner Size					
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

W.L. F.C. pH.

Additives: Gel 2000 #, Caustic 50 #

At Surveys Degree: 281 3/4

MOTOR HOURS: 1, 2, 3, 4, 5

Next Oil Change: ✓

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

Stands | Singles | D. Collars 290.78 | Other Ft. | C.B. Ft. | Subs. Ft. 6.50 | Ft. Kelly 39.90 | TOTAL 330

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
(R)	330.										

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS						
No. 1	Pressure					
Model	S.P.M.					
	Liner Size					
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

W.L. F.C. pH.

Additives:

At Surveys Degree: 330 3/4

MOTOR HOURS: 1, 2, 3, 4, 5

Next Oil Change:

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS						
No. 1	Pressure					
Model	S.P.M.					
	Liner Size					
No. 2	Pressure					
Model	S.P.M.					
	Liner Size					

W.L. F.C. pH.

Additives:

At Surveys Degree:

MOTOR HOURS: 1, 2, 3, 4, 5

Next Oil Change:

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General

Stands | Singles | D. Collars | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly | TOTAL

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Rig Serviced	1200	1215	¼
Drill	1215	100	¾
Trip for bit	100	230	1½
Drill	230	300	½
Clean Pump Suction	300	330	½
Drill	330	415	¾
Survey @ 281	415	430	¼
Clean Pump	430	500	½
Drill	500	615	1¼
Circ to Run Surface Casg	615	630	¼
Dummy Trip	630	730	1
Circ Prior to Casg.	730	800	½
Company Time / Cont'r Time			
Rig Serviced	800	815	¼
Survey	815	830	¼
Trip to Run Casg	830	1030	2
Rig to Run Casg	1030	345	5¼
Rig to Circ Casg.	345	400	¼
Company Time / Cont'r Time			
Circulate Casg to Bottom	400	545	1¾
Cement Casg	545	630	¾
W.O.C.	630	1200	5½
Company Time / Cont'r Time			

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.R. F.o.E. 1-71 FT SIMPSON AREA FT SIMPSON DATE MAR 13 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	12
Derrick K. JOHNSON	12
Floor	
Floor	
Floor B. CROSS	12
Motor D. LAFRANCE	12
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller BRYEIDE	8
Derrick BARCLAY	8
Floor SPINDER	8
Floor	
Floor	
Motor MEDINGER	8
Mechanic	
Extra DEMEST	9

Injuries: NIL

Fires:

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
2460	44	2504	2¼	76	20	6¼	2⅞	42			

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	5	7⅞	WDT	3-11	27076	15	140			50	2¾	

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	89	89		
VISCOSITY	29	29		
GEL				

PUMPS				
No. 1	Pressure	1800	1100	
Model B 300	S.P.M.	65	65	
	Liner Size	5½ x 14		
No. 2	Pressure			
Model	S.P.M.			
	Liner Size			

W.L. F.C. pH.

Additives: WATER

At Surveys Degree: 2504 1¾

MOTOR HOURS		Next Oil Change
1	128	D.W.
2	128	200
3	144	P.m.
4	144	200
5	130	L.P.

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip
1		8						250

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL
1877.14		581.00			4.50	IN	2504/20

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
					20	6¼	2⅞	42			

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS				
No. 1	Pressure			
Model	S.P.M.			
	Liner Size			
No. 2	Pressure			
Model	S.P.M.			
	Liner Size			

W.L. F.C. pH.

Additives:

At Surveys Degree:

MOTOR HOURS		Next Oil Change
1	136	D.W.
2	136	
3	152	
4	152	
5	138	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL
		581.00			4.50	IN	

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
@2504											

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				
GEL				

PUMPS				
No. 1	Pressure			
Model	S.P.M.			
	Liner Size			
No. 2	Pressure			
Model	S.P.M.			
	Liner Size			

W.L. F.C. pH.

Additives:

At Surveys Degree:

MOTOR HOURS		Next Oil Change
1	144	
2	144	
3	160	
4	160	
5	146	

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or Cut	Feet Left on Spool	Next Slip

General

Stands	Singles	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL

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

B.O.P. Test-Operated _____ Time _____ Results _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
REAM RAT HOLE	12:00	1:30	1½
CHECK VALVES Pump (Remove STONE)	1:30	1:45	¼
REAM RAT HOLE	1:45	2:30	¾
CIRC HOLE CLEAN TO TEST	2:30	3:30	1
SURVEY @ 2504	3:30	3:45	¼
TRIP OUT TO TEST	3:45	5:00	1¼
MAKE UP DST #2	5:00	6:30	1½
TRIP IN DST #2 (Slow)	6:30	7:45	1¼
WORK TEST TOOL ON BTTM	7:45	8:00	¼
Company Time / Cont'r Time			
WORK TEST TOOL ON BTTM	8:00	8:30	½
TRIP OUT W/ TEST TOOL	8:30	9:45	1¼
BREAK TEST TOOL + STAND IN DERRICK	9:45	10:45	1
HOIST TAIL PIPE	10:45	11:15	½
CLEAN MUD TANKS	11:15	12:00	¾
MIX MUD	12:00	2:30	2½
RUN IN CLEAN 120' To Bttm	2:30	4:00	1½
Company Time / Cont'r Time			
CIRC HOLE CLEAN	4:00	7:30	3½
HOIST TO TEST	7:30	9:30	2
PICK UP TEST TOOL + MAKE UP RECORDERS	9:30	11:00	1½
RUN IN	11:00	12:00	1
Company Time / Cont'r Time			

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 9 LOCATION C.D.L. Wilson Lake 1-71 AREA _____ DATE March 5 1971

DAY WORK RECORD

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

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller A. BRYANT	8
Derrick E. HARSTAD	8
Floor R. SAVARD	8
Floor	
Floor	
Motor L. TOMCZAK	8
Mechanic	
Extra	

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller L. SANDER	8
Derrick K. JOHNSON	8
Floor	
Floor	
Floor B. CROSS	8
Motor D. LACHANCE	8
Mechanic	
Extra	

Injuries: NIL

Fires: NIL

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller L. BRYDGE	8
Derrick W. BARCLAY	8
Floor M. DEMELT	8
Floor	
Floor	
Motor L. MEDINGER	8
Mechanic	
Extra	

Injuries: N.I.L.

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons

Stands: Singles: D. Collars: Other Ft.: C.B. Ft.: Subs. Ft.: Ft. Up On Kelly: TOTAL:

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION

MUD

	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

Additives: At Surveys Degree: MOTOR HOURS: Next Oil Change

PUMPS

No. 1	Pressure				
Model	S.P.M.				
	Liner Size				
No. 2	Pressure				
Model	S.P.M.				
	Liner Size				

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General:

W.L. F.C. pH.

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
0	60	60	6 3/4	10	1	6 1/4	2 7/8	2			

Stands: Singles: D. Collars 29.13 Other Ft.: C.B. Ft.: Subs. Ft. 6.50 Ft. Up On Kelly 14.08 TOTAL 74.08

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1A	7 7/8	XT3G	3-16	F46127	ALL	6/100	60	4			8-1-1
2A	12 1/4	ST3	Conv	274492	ALL	100	60	2 3/4			RUN

MUD

	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT		8.7	8.7	8.7
VISCOSITY		50	75	92
GEL				

Additives: GEL # 1500, CAUSTIC # 100 — At Surveys Degree — MOTOR HOURS — Next Oil Change

PUMPS

No. 1	Pressure	100	100	100
Model D	S.P.M.	65	65	65
3 cyl	Liner Size	5 1/2 x 14		
No. 2	Pressure			
Model	S.P.M.			
	Liner Size			

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip
1		8					250

General: BOULDERS & GRAVEL

W.L. F.C. pH.

HB TO GR. 11.90

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS No.	O.D.	I.D.	Wgt.	FUEL Gals.	WATER Bbls.	COAL Tons
60	180	240	5 3/4	32	7	6 1/4	7 8	16			

Stands: Singles: D. Collars 206.98 Other Ft.: C.B. Ft.: Subs. Ft. 6.50 Ft. Up On Kelly TOTAL 240

BITS

No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2A	12 1/4	ST3	CON	274492	ALL	180	74	3 1/2			6-4-1
3A	12 1/4				10-15	160	166	5			

MUD

	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				300
GEL				

Additives: At Surveys Degree: 10° 1/4°, 19° 1° — MOTOR HOURS — Next Oil Change

PUMPS

No. 1	Pressure			800
Model	S.P.M.			65
	Liner Size			
No. 2	Pressure			
Model	S.P.M.			
	Liner Size			

Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip Feet or Cut	Feet Left on Spool	Next Slip

General: BOULDERS @ 200'

W.L. F.C. pH.

REMARKS	Time Start	Stop	Interval
DRILL RAT HOLE	12 00	8 00	8

Company Time / Cont'r Time

RIG SERVICE	8 00	8 15	1/4
SPUD & DRLG 7 7/8" HOLE	8 15		
BOULDERS (0-74)		12 15	4
MAKE UP BELL SUB + 12 1/4 BIT	12 15		
		1 00	3/4
REAM 7 7/8 HOLE W/ 12 1/4 BIT (BOULDERS + GRAVEL) FROM 0-74)	1 00	2 45	2 3/4
CLEAN PUMP SUCTION	2 45	4 00	1/4

Company Time / Cont'r Time

RIG SERVICE	4 00	4 15	1/4
DRILL	4 15	5 00	3/4
CHANGE BIT	5 00	5 30	1/2
DRILL	5 30	6 30	1
SURVEY	6 30	6 45	1/4
DRILL	6 45	9 30	2 3/4
SURVEY	9 30	9 45	1/4
CLEAN PUMP SUCTION	9 45	10 15	1/2
DRILL	10 15	11 30	1 1/4
CLEAN PUMP VALVES SUCTION	11 30	12 00	1/2

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 _____