Drilling Authority No. [illegible]
Date Issued 28 January 1971

WELL NAME Roger B. Cardal et al Bennett J-05
FIELD Area:
LOCATION: Unit J Section 05 Grid 62-30-122-15
Latitude 62-24-37 Longitude 122-15-56
U.W.I.R. 62.41025 --- 122.26555
U.W.I. 300J056230122150

Rig Release Date.
Status.
Information Release Date.

CHANGE OF NAME:

DATE RECEIVED	INDEX
28-1-71	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.
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	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.....

IAND 52-90 (3-69)

File No.
Drilling Authority No. 491

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well or [redacted]

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 CANDEL ET AL EBBUTT J-05

Location: Unit J Section Grid 62° 30' N. Lat. 122° 15' W. L.

Latitude 62° 24' 37" Longitude 122° 15' 56"

From Established Reference Marker

Universal Well Location Reference Lat. 62.41028° N., Long. 122.26555° W.

Permit No. 4405 Lease No.

CANADA-CITIES SERVICE & STANDARD OIL CO. OF B.C.
(Permittee, Licensee, Lessee)

Date of commencement of proposed program

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at Nil
Gas at Nil
Water at 2690 to 2800 (DST #1)
Total Depth 4163 Date of last operations Rig released March 19, 1971 7:45 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	505	505K.B.	316 sks cement plus 2% $CaCl_2$	Nil
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	4163 to 4063	Cambrian	25 plus 4% Gel	
2	2850 to 2640	Manitoe Bear Rock	90 sks + 2% $CaCl_2$	Top at 2620
3	555 to surface		140 sks + 4% Gel	

Cut casing off three feet below ground. Weld on plate and rod with well marker.

The following logs have been run BHC Gamma Sonic Caliper, IES, SNP, FDC
Other operations proposed Nil

Operations to be carried out by Commonwealth Rig 12 Contractor Licence No. 931
Address Fort 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 18th March 1971.

Dated March 24, 19 71 [signature] 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. 491

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. 491, concerning

Horn R Candel et al Ebbutt J-05 - 62°24'37" N. Lat., 122°15'56" W. Long.

(Name and Number of Well)

The following amendments are required:

Change B.O.P.'s to G.K. 10" 900 Series Hydril, Schaeffer Type B
10" 900 Series Double Gate Hydraulic Preventer

Change Rig to Commonwealth Drilling Western Ltd. Rig No. 12

Change Contractors Business Licence No. to 931.

Reasons for the amendments:

Change in contractor and 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 71, 19

[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. 491
Date Issued Jan. 28/71

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

IAND 62-90 (2) (3-70)

DEPT. OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT OIL & MINERAL DIVISION JUN 29 1971 CALGARY, ALBERTA CHIEF CONSERVATION ENGINEER Northwest Territories & Yukon Territory

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 Candel et al Ebbutt J-05

Permit No. 4405 Lease No.

Canada Cities Service
Standard Oil of B.C. (Permittee, Licensee, Lessee) Exploratory Licence No. 1650 and 1631

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

Location: Unit J Section 05 Grid 62°30'N.Lat., 122°15' W.Long.

Latitude 62°34'37" N. Longitude 122°15'56" W.

Unique well identifier 300 J 056230122150

Universal Well Location Reference Lat. 62.41028°N., Long. 122.26555°W.

	DATE	DEPTH
Spudded	Mar. 2/71	
Suspended		
Resumed Operations		
Finished Drilling	Mar.17/71	4163(Drlr)
Deepened		
Complete (gas/oil)		
Abandoned	Mar.19/71	4164 (Log)
Rig released	Mar.19/71	

Pool(s) NA

Interval(s) open to production NA

Elevation: Gr. 1942 K.B. 1953

Rig No. 12

Drilling Contractor Commonwealth Drilling Co.

Contractor's Business Licence No. 931

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at —	Sacks of Cement and Additives
1. 8 5/8"	J-55	24#	15 jts.	505 (K.B.)	316 sx + 2% $CaCl_2$
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION Depths	ELEVATION Sub-Sea
Lower Cretaceous	50	+ 1903
Imperial	880	+ 1073
Canol	2085	- 132
Hume	2168	- 215
Manetoe	2670	- 717
Bear Rock	2908	- 955
Ronning	3638	- 1685
Cambrian	4145	- 2192

CORE RECORD

From	To	Rec.	From	To	Rec.
None taken					

LOG RECORD

Run No.	Type of Log	From	To
1	IES	4164	504
1	BHCSGRC	4163	504
1	FDL	4164	504
1	SNP	4164	504

CEMENTING RECORD (Plug, Squeeze, etc.)

Date	From	To	Remarks
Mar.19/71	4163	4063	25 sx + 4% gel
Mar.19/71	2850	2640	90 sx + 3% $CaCl_2$ - felt at 2620 ft.
Mar.19/71	555	Surface	225 sx + 4% Gel. Welded on steel plate and marker on surface.

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.18/71	Manetoe	2690	2800	60	30	60	594	594	185	576	1272	1272	Good blow, decreasing to end of test - recovered 300 ft. muddy salt water and 760 ft. brackish salt water (67,000 ppm)

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
					None

PRESENT STATUS OF WELL

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

Company Horn River Resources Ltd.

Signed by J. Kulbaalley

Title President

Date June 23, 1971

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

POOR COPY

Drilling Authority No. 491

Project No.

File No.

CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

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 Cundel et al Ebbett J-05

Location: Unit J Section 5 Grid 62°30' N.Lat., 122°15' W.Long.

Latitude 62°24'37" Longitude 122°15'56"

Unique Well Identifier: 300J056230122150

Universal Well Location Reference: Lat. 62.41028° N., Long. 122.26555° W.

Elevation: Ground 1942 K.B. 1953 (est.) feet above sea-level.

Well is expected to produce from Middle Devonian and/or Stinson Carbonates formation at a depth of about feet. Expected total final depth 4,500' See geological prognosis

Area assigned to well

(For Oil Conservation Engineer's use only)

Permit No. 4405 Lease No. Acreage 59,310

Permittee, licensee, or lessee: Canada-Cities Service & Standard Oil Company of British Columbia

Exploratory Licence No. 1650 1631

Surface owned by Crown or

(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	460	230
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment: Middle Devonian Carbonates
GK 10" 900 Series Hydril B.O.P.
10" 900 Series Mechanical

Well will be drilled with Rotary Rig No. 9 by Kenting Oilwell Drilling
(Drilling Contractor or company)

Responsible agent of applicant:—

At well: Gordon Gillis
Address: Gen. Del., Ft. Simpson

Contractor's business Licence No. 800

At registered office: F. L. Woolley
Address: 1020 Aquitaine Tower, 540 - 5th 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 14 day of January 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 28th January 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. Any additional strings of casing are to receive the approval of the Oil Conservation Engineer prior to running.

B.H.J. Thoms, Oil Conservation Engineer

GEOLOGICAL PROGNOSIS

Well Name: Horn R Candel et al EBBUTT J-05

Location: J-05-62-30-122-15

Elevation: Ground est. 1942' (shot point 205)
K.B. est. 1955'

Operator: Canadian Delhi Oil Ltd.

Formation		Drilling Depth	Sub-Sea Depth
L. Cretaceous		Near surface	
U. Devonian	Imperial	1000?	+955
M. & L. Devonian	Nahanni (Hume)	2405	-405
	Bear Rock	2895	-940
Sil-Ord	Ronning?	3815	-1860
Cambrian		4480	-2525
Total Depth		4500	-2545

Note:

1. Anhydrite and possibly salt can be expected in the Bear Rock section.

2. Total Depth will be determined by

   (a) penetrate 20' into the Cambrian clastics

   or (b) 4700' below Kelly Bushing, whichever first occurs.

Samples:

Two bags of washed samples will be taken at 10 foot interval, from surface to total depth.

Testing:

All tests at discretion of wellsite geologist.

Coring:

If water free hydrocarbons are recovered on a test, a core should be cut and further tests run if warranted.

..... 2

Logging:

Dual Ind. Laterlog	2" T.D. to surface casing 5" T.D. to surface casing	These Logs Must Be Run First
BHC Sonic Gamma w/Caliper	2" T.D. to surface casing 5" T.D. to surface casing	
Formation Density	2" T.D. to surface casing 5" T.D. to surface casing	
Sidewall Neutron Porosity	2" T.D. to surface casing 5" T.D. to surface casing	

****

Canadian Delhi Oil Ltd.,
28th Floor, Calgary Place No. 1,
330 - 5th Avenue S.W.,
CALGARY 1, Alberta. Phone: 265-3430

K. E. Basaraba	Home Phone:	282-4698
D. M. Ericson	" "	252-3277
R. K. Terrell	" "	289-7652

OPERATION REEF
NORTHWEST TERRITORIES
CANADA

Geological and Engineering
REPORT

HORN R. CANDEL et al EBBUTT J-05

PREPARED FOR

HORN RIVER RESOURCES LTD.

PREPARED BY

JAMES A. LEWIS ENGINEERING CO. LTD.
Petroleum Reservoir Analysts
CALGARY - ALBERTA

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Section 1

GENERAL

SUMMARY OF WELL DATA

WELL: Horn R Candel et al Ebbutt J-05

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

LEGAL DESCRIPTION: Unit J, Section 5, Grid 62° 30'N, 122° 15' W.

LOCATION: LATITUDE: 62° 24' 37" LONGITUDE: 122° 15' 56"

UNIVERSAL WELL LOCATION REFERENCE: Lat. 62.41028° N, Long. 122.26555° W

UNIQUE WELL IDENTIFIER: 300J050230122150

CO-ORDINATES: None

PERMIT OR LEASE: Permit No. 4405

PERMITTEE, LICENCEE, LESSEE: Canada Cities Service Petroleum Corp. and Standard Oil Company of British Columbia

DRILLING AUTHORITY: No. 491 DATE: January 14, 1971

CLASSIFICATION: New Field Wildcat

ELEVATION: GROUND: 1,942' K.B. 1,953' (est.)

DRILLING CONTRACTOR: Commonwealth Drilling Western Ltd. Rig No. 12 Rotary

WELLSITE GEOLOGIST: T.D.A. Haddow, Canadian Delhi Oil Ltd.

SURFACE CASING: 8-5/8" - 24 lb. - J-55 New Set @ 505' K.B. w/c 316 sax + 2% $CaCl_2$

HOLE SIZE: Surface Hole 12-1/4", 0' - 510' Main Hole 7-7/8", 510' - 4,163'

MUD SYSTEM: Gel Chemical

CORES: None Taken

FORMATION TESTS: DST No. 1: 2,690' - 2,800' - Manetoe

ABANDONMENT PLUGS: Plug No. 1: 4,163' - 4,063' - 25 sax + 4% Gel
Plug No. 2: 2,850' - 2,640' - 90 sax + 3% $CaCl_2$
Plug No. 3: 555' - surface - 140 sax + 4% Gel

LOST CIRCULATION: Surface Hole Only

LOGS:

IES	4,164' - 504'	FDL	4,164' - 504'
BHCSGRC	4,163' - 504'	SNP	4,164' - 504'

WELL SPUDDED: 8:00 p.m. March 2, 1971

FINISHED DRILLING: 8:00 a.m. March 17, 1971

RIG RELEASED: 7:45 p.m. March 19, 1971

TOTAL DEPTH: 4,163' K.B.

STATUS: Drilled and Abandoned

Section 2

GEOLOGICAL

FORMATION TOPS

WELL: Horn R Candel et al Ebbutt J-05

FORMATION	DEPTH, Feet	DATUM, Feet	REMARKS
Lower Cretaceous	50		
Imperial	880		
Canol	2085		
Hume	2168		
Manitoe	2670		
Bear Rock	2908		
Roning	3638		
Cambrian	4145		
TOTAL DEPTH	4163		

James A. Lewis Engineering Co. Ltd.

HORN R CANDEL et al EBBUTT J-05

J-05-62-30-122-15

K.B. 1955' est.

Interval	Sample Description
	Glacial Drift - Surface
20'- 50'	Sand, gravel and boulders, rounded and frosted medium to very coarse quartz and feldspar grains, boulder fragments.
	L. Cretaceous. 50'
50'- 60'	Shale, dark grey, very fissile, soft, micromicaceous.
60'- 80'	Shale, as above, thin streaks of very fine grained, silty, argillaceous, glauconitic sandstone.
80'- 100'	Sandstone, yellowish grey, friable, very fine to fine grained, argillaceous, silty, sideritic, glauconitic, tight, shaley streaks.
100'- 140'	Shale, dark grey - some reddish brown streaks, fissile, micromicaceous, streaks and interbeds of sandstone as above.
140'- 240'	Shale, medium dark grey, fissile, micromicaceous, silty and sandy streaks.
240'- 290'	Shale, medium to dark grey, fissile, micromicaceous
290'- 300'	Sandstone, light grey, very fine grained, silty, argillaceous, glauconitic, tight, shaley streaks.
300'- 310'	Cavings
310'- 330'	Shale, medium dark grey, silty and sandy, micromicaceous.
330'- 350'	Shale, medium dark grey, fissile, micromicaceous.
350'- 410'	Shale, medium to dark grey, fissile, micromicaceous.
410'- 620'	Shale, as above - some brown ironstone.
620'- 640'	Shale, medium to dark grey, fissile, micromicaceous some brown ironstone, trace of fossil fragments, slightly pyritic in part.
640'- 800'	Shale, as above.
800'- 880'	Shale, as above - somewhat more pyritic.

Imperial Shale. 880'

880'-1000'	Shale, greenish grey, fissile, micromicaceous.
1000'-1070'	Shale, as above - some scattered thin silty streaks, faintly dolomitic in part.
1070'-1090'	Shale, as above - silty.
1090'-1120'	Shale, greenish grey, fissile, micromicaceous, calcareous, silty streaks.
1120'-1270'	Shale, greenish grey, fissile, micromicaceous, calcareous.
1270'-1300'	Shale, greenish grey, fissile, micromicaceous, calcareous in part, dolomitic in part.
1300'-1320'	Shale, as above - interbedded limestone - slightly greenish grey, very fine to fine crystalline, argillaceous, dense.
1320'-1410'	Shale, greenish grey, fissile, micromicaceous dolomitic.
1410'-1420'	Shale, as above - calcareous in part, trace of brown fine crystalline dense limestone.
1420'-1490'	Shale, greenish grey, fissile, micromicaceous, slightly dolomitic.
1490'-1530'	Shale, greenish grey, fissile, micromicaceous, calcareous, slightly pyritic in part.
1530'-1580'	Shale, greenish grey, fissile, micromicaceous, slightly dolomitic.
1580'-1740'	Shale, as above - calcareous in part.
1740'-1800'	Shale, greenish grey, fissile, micromicaceous, slightly dolomitic.
1800'-2080'	Shale, as above - dark greenish grey streaks. A few scattered thin beds of limestone and calcareous streaks.

Canol Shale. 2085'

2080'-2150'	Shale, black, fissile - blocky in part, micromicaceous, bituminous, some scattered pyrite.
2150'-2160'	Shale, black, fissile to blocky, micromicaceous, bituminous, pyritic, some fine fractures filled with calcite.

Nahanni (Hume). 2160'

2160'-2170'	Limestone, grey to medium dark brownish grey, cryptocrystalline and microcrystalline to very fine crystalline, calcilutite, calcarenite in part, algal in part, bituminous, dense, white calcite as inclusions and infilling fine fractures.

2170'-2190'	Limestone, medium dark brownish grey, microcrystalline to very fine crystalline, calcilutite, bituminous, dense, some inclusions of white calcite, a few scattered fossil fragments (crinoids), scattered brachiopods, scattered partings of black bituminous shale.
2190'-2230'	Limestone, grey to medium dark brownish grey cryptocrystalline to microcrystalline, calcilutite, bituminous, dense, scattered crinoids and brachiopods, scattered fractures filled with white calcite and a trace of light bluish grey chert, bituminous.
2230'-2240'	Limestone, as above - very fine to fine crystalline in part.
2240'-2250'	Limestone, as above - coralline in part.
2250'-2270'	Limestone, brownish grey, microcrystalline to very fine crystalline - some scattered fine to medium crystals, calcarenite, some streaky dolomitization, scattered irregular fractures filled with white calcite, trace of noneffective intercrystalline porosity, bituminous.
2270'-2290'	Limestone, buff to brownish grey, cryptocrystalline to microcrystalline, calcilutite - coralline in part, dense, scattered fractures filled with calcite.
2290'-2300'	Limestone, as above; limestone - brownish grey, microcrystalline to very fine crystalline, calcarenite, dolomitic in part, trace of noneffective intercrystalline porosity.
2300'-2320'	Limestone, buff, microcrystalline to fine crystalline organic, bioclastic in part, slightly dolomitic in part, trace of streaky noneffective intercrystalline porosity, bituminous, some partings of black bituminous shale, scattered fine fractures filled with white calcite, stromatoporoids, brachiopods.
2320'-2330'	Limestone, as above, some streaks and thin interbeds of dolomite - brownish grey, fine crystalline, calcitic slight intercrystalline porosity.
2330'-2340'	Limestone, as above - slightly dolomitic, stromatoporoids, amphipora, some interbedded brownish grey dense calcilutite. Trace of silicous infilling.
2340'-2350'	Limestone, brownish grey, microcrystalline to very fine crystalline, calcilutite, dense, bituminous.
2350'-2360'	Limestone, brownish grey, microcrystalline to very fine crystalline - cryptocrystalline in part, organic and bioclastic, dense, some dolomitic streaks, bituminous.
2360'-2390'	Limestone brownish grey, microcrystalline to very fine crystalline, calcilutite, bituminous, dense, some dolomitic streaks.

2390'-2410'	Limestone, brownish grey, cryptocrystalline - microcrystalline to very fine crystalline in part, organic and bioclastic, slightly dolomitic, dense, bituminous, scattered fractures filled with calcite.
2410'-2420'	Limestone, as above - somewhat more dolomitic - streaky slight intercrystalline porosity.
2420'-2430'	Dolomite, brownish grey, very fine to fine crystalline, slightly calcitic, slightly intercrystalline porosity.
2430'-2450'	Limestone, brownish grey, microcrystalline to very fine crystalline, organic and bioclastic, dolomitic in part, dense, bituminous.
2450'-2460'	Limestone, as above - very dolomitic slight streaky intercrystalline porosity, trace of silicous infilling.
2460'-2500'	Limestone, brownish grey, microcrystalline to very fine crystalline, organic and bioclastic, - calcilutite in part, bituminous, dolomitic, tight.
2500'-2510'	Limestone, slightly greenish grey, cryptocrystalline, calcilutite, dense.
2510'-2530'	Limestone, grey to brownish grey, very fine to fine crystalline, dolomitic, tight, bituminous.
2530'-2620'	Limestone, brownish grey, cryptocrystalline to very fine crystalline, calcilutite - calcarenite in part, bituminous, dolomitic in part, dense, some partings of black bituminous shale.
2620' - 2630'	Dolomite, buff, cryptocrystalline to microcrystalline earthy, slight to poor intercrystalline porosity, no permeability.
2630'-2640'	Dolomite, as above; dolomite, (trace) light grey, fine to medium crystalline. Limestone, greenish to brownish grey, cryptocrystalline, dense, some streaks of greenish grey waxy shale. Shale, greenish grey, blocky, waxy, finely disseminated pyrite.
2640'-2650'	Shale, greenish grey, blocky, waxy, finely disseminated pyrite. Limestone, greenish to brownish grey, cryptocrystalline, dense, streaks of waxy green shale. Breccia, brownish grey, cryptocrystalline limestone breccia with a green waxy shale matrix.
2650'-2670'	Shale, greenish grey, blocky waxy, finely disseminated pyrite. Breccia, as above.
2670'-2680'	Shale, as above. Limestone, brownish grey, cryptocrystalline, dense, brecciated in part, pyritic in part.

Manetoe. 2680'

2680'-2690'	Dolomite, mottled light brownish grey and white, medium to coarse crystalline, white - coarse - secondary dolomite crystals completely infilling old vugs and fractures, slight intercrystalline porosity.
2690'-2700'	Dolomite, greyish brown, microcrystalline to very fine crystalline, dense, scattered fractures filled with white coarse secondary dolomite crystals.
2700'-2710'	Dolomite, greyish brown as above and buff, cryptocrystalline, earthy, slight intercrystalline and scattered pinpoint porosity - low permeability, scattered fractures filled with secondary dolomite.
2710'-2720'	Dolomite, greyish brown, microcrystalline to very fine crystalline, dense and medium dark brownish grey, very fine to fine crystalline, dense.
2720'-2770'	Dolomite, brownish grey, very fine to fine crystalline, streaky slight intercrystalline porosity; dolomite, brownish grey, cryptocrystalline to microcrystalline, dense, fractures filled with secondary dolomite.
2770'-2780'	Dolomite, buff, cryptocrystalline to microcrystalline - earthy, scattered salt casts, intercrystalline and pinpoint porosity - probably noneffective due to salt infilling.
2780'-2790'	Dolomite, buff to brownish grey, cryptocrystalline to microcrystalline, slight streaky intercrystalline porosity - no permeability.
2790'-2800'	Dolomite, buff to brownish grey, cryptocrystalline, dense.
2800'-2850'	Dolomite, grey, very fine to fine crystalline, dense, scattered fractures filled with secondary dolomite.
2850'-2870'	Dolomite, as above - some scattered streaky noneffective intercrystalline porosity.
2870'-2880'	Dolomite, grey to brownish grey, microcrystalline to very fine crystalline, dense, some scattered salt casts.
2880'-2890'	Dolomite, grey to brownish grey, microcrystalline to very fine crystalline dense, trace of breccia.
2890'-2900'	Dolomite, buff, cryptocrystalline, dense.

Bear Rock Anhydrite. 2905'

2900'-2910'	Dolomite, as above. Anhydrite, brownish grey, cryptocrystalline.

2910'-2940'	Dolomite, brownish grey, microcrystalline, anhydrite, dense, Anhydrite, light grey, microcrystalline, dolomitic streaks.
2940'-3040'	Anhydrite, brownish grey, cryptocrystalline, streaks of dolomite. Dolomite, brownish grey, cryptocrystalline to microcrystalline, dense.
3040'-3270'	Anhydrite, brownish grey, cryptocrystalline, some interbedded dolomite - brownish to greenish grey cryptocrystalline some microcrystalline, dense.
3270'-3280'	Dolomite, buff microcrystalline, dense. Anhydrite, brownish grey, cryptocrystalline.
3280'-3290'	Dolomite, buff to very light brownish grey - some scattered dark spots and thin lines, microcrystalline, dense, some scattered fine fractures filled with anhydrite, some interbedded anhydrite.
3290'-3300'	Dolomite, buff to very light brownish grey and medium dark grey, microcrystalline, anhydritic, dense, some interbedded anhydrite,
3300'-3320'	Anhydrite, brownish grey cryptocrystalline.
3320'-3330'	Dolomite, brownish grey, microcrystalline, dense.
3330'-3340'	Dolomite, as above. Anhydrite, as above.
3340'-3350'	Anhydrite, as above, some interbedded dolomite, trace of brownish grey chert.
3350'-3360'	Dolomite, brownish grey, microcrystalline, dense.
3350'-3370'	Dolomite, brownish grey, microcrystalline, dense; trace of dolomite - brownish grey, very fine to fine crystalline, slightly calcitic, slight intercrystalline porosity.
3370'-3380'	Dolomite, brownish grey, microcrystalline, dense, some interbedded anhydrite.
3380'-3390'	Dolomite, medium dark and light brownish grey, cryptocrystalline, dense, interbedded anhydrite.
3390'-3400'	Dolomite, brownish grey, microcrystalline - some very fine to fine crystalline, dense for the most part - trace of noneffective intercrystalline porosity, some interbedded anhydrite.
3400'-3410'	Dolomite, brownish grey, microcrystalline to very fine crystalline dense, some partings of black bituminous shale.
3410-3420'	Anhydrite, brownish grey and some greenish grey, cryptocrystalline, some interbedded dolomite - brownish grey, microcrystalline, dense.
3420'-3560'	Anhydrite, brownish grey, cryptocrystalline, some streaks, and

	thin interbeds of dolomite - brownish grey, cryptocrystalline to microcrystalline.
3560'-3570'	Anhydrite, as above, some thin interbeds of dolomite - as above - very fine crystalline in part.
3570'-3580'	Anhydrite, brownish grey, cryptocrystalline, some interbedded dolomite - brownish grey, cryptocrystalline to microcrystalline, dense.
3580'-3620'	Anhydrite, as above. Dolomite, brownish grey, microcrystalline, dense, scattered hairline fractures.
3620'-3630'	Anhydrite, brownish grey, cryptocrystalline and white, - very fine crystalline. Dolomite, brownish grey, microcrystalline, dense.
	Ronning. 3630'
3630'-3640'	Dolomite, brownish grey, microcrystalline, noneffective slight small vuggy porosity; dolomite - greenish grey, microcrystalline, argillaceous, dense.
3640'-3680'	Dolomite, slightly greenish grey, microcrystalline, to very fine crystalline, argillaceous, dense, some streaks of medium dark greenish grey shale, some scattered blebs of anhydrite. Pyritic in part.
3680'-3690'	Dolomite, as above - some thin streaks with fine to medium rounded frosted quartz grains. Chert, brownish grey. Dolomite, brownish grey, very fine crystalline - dense.
3690'-3700'	Dolomite, brownish grey, very fine crystalline, dense for the most part - some sucrosic streaks with noneffective intercrystalline porosity.
3700'-3730'	Dolomite, brownish grey, very fine and some fine crystalline dense, some scattered blebs of anhydrite.
3730'-3740'	Dolomite buff, very fine crystalline, anhydritic, dense.
3740'-3750'	Dolomite, grey-slightly brownish, microcrystalline to very fine crystalline, dense, slightly anhydritic, finely disseminated pyrite.
3750'-3770'	Dolomite, light grey - slightly brownish to greenish, very fine crystalline - sucrosic in part, streaky slight intercrystalline porosity, some partings of waxy green shale.
3770'-3780'	Dolomite, brownish grey, very fine to fine crystalline - sucrosic in part, streaky slight intercrystalline porosity, some partings of black bituminous shale, some gypsum crystals, some quartz crystals.

3780'-3800'	Dolomite, brownish grey, microcrystalline to very fine crystalline, dense.
3800'-3810'	Dolomite, as above - some streaks of silicous material.
3810'-3830'	Dolomite, buff, very fine crystalline, streaky slight to poor intercrystalline porosity, trace of scattered small vugs, inclusions of gypsum crystals, pyritic in part, inclusions of silicous material.
3830'-3840'	Dolomite, as above, dolomite - brownish grey, microcrystalline, dense.
3840'-3860'	Dolomite, buff to brownish grey, microcrystalline to very fine crystalline - sucrosic in part streaky slight intercrystalline porosity.
3860'-3880'	Dolomite, brownish grey, microcrystalline to very fine crystalline, - sucrosic in part slight scattered intercrystalline porosity, scattered stylolites, some scattered fractures filled with secondary dolomite. Some partings of dark grey shale.
3880'-3890'	Dolomite, grey - slightly brownish, microcrystalline to very fine crystalline, poor vuggy porosity, vugs lined with dolomite rhombs, gypsum crystals and some quartz crystals.
3890'-3910'	Dolomite, brownish grey, very fine to fine crystalline - sucrosic in part, poor intercrystalline and drusy vuggy porosity, thin streaks of brownish grey chert.
3910'-3940'	Dolomite, grey, slightly brownish to greenish, very fine crystalline, dense for the most part - a few scattered blind vugs. Some cherty streaks.
3940'-3950'	Dolomite, as above - sucrosic in part.
3950'-3960'	Dolomite, medium dark grey, very fine crystalline dense, some inclusions of gypsum, some partings of black bituminous shale, finely disseminated pyrite, slightly silty.
3960'-3970'	Dolomite, grey, very fine crystalline - sucrosic in part slight to poor intercrystalline and vuggy porosity.
3970'-4010'	Dolomite, medium dark grey, microcrystalline to very fine crystalline, dense for the most part - some scattered blind vugs, some inclusions of gypsum some scattered fractures filled with gypsum and secondary dolomite, a few thin streaks of dark grey chert, pyritic, bituminous.
4010'-4030'	Dolomite, as above- some light grey chert, quartz crystals.
4030'-4040'	Dolomite, medium dark grey, very fine to fine crystalline slight vuggy porosity, scattered pyrite, gypsum crystals lining the vugs.

4040'-4050'	Dolomite, dark grey to black, fine crystalline - scattered coarse crystals, dense, bituminous, partings of black bituminous shale, cherty, pyritic in part, some scattered inclusions of gypsum and quartz crystals.
4050'-4100'	Dolomite, dark grey to black, microcrystalline to very fine crystalline - scattered coarse crystals (fossil remnants) bituminous, partings of black bituminous shale, cherty (grey - dark grey banded) scattered pyrite.
4100'-4120'	Dolomite as above abundant frosted coarse rounded floating quartz grains, some stringers of sandstone - glassy, coarse grained quartzose, very silicous - grading to a quartzite, tight, scattered pyrite.
4120'-4130'	Dolomite, light grey - slightly greenish to brownish in part, microcrystalline to very fine crystalline, dense, frosted, coarse, rounded floating quartz grains, scattered fractures filled with white coarse crystalline secondary dolomite, pyritic, some streaks of green brittle dolomitic shale. Sandstone, light grey, fine grained - some scattered coarse grains, quartzose, frosted - rounded grains, very dolomitic - grading to a sandy dolomite in part, tight.
4130'-4140'	Dolomite, with sandy streaks as above, interbedded green brittle shale - finely disseminated pyrite, sandy streaks. Siltstone, light grey dolomitic.
	<u>Cambrian. 4145'</u>
4140'-4150'	Dolomite, reddish grey, microcrystalline to very fine crystalline, silty and sandy, dense - interbedded shale - green, brittle, disseminated pyrite.
4150'-4163'	Dolomite, reddish as above and light grey microcrystalline to very fine crystalline, very silty and sandy - grading to a dolomitic siltstone and sandstone in part, dense, interbedded green, brittle shale - slightly dolomitic.

Section 3

DRILLING AND ENGINEERING

SUMMARY OF DAILY DRILLING OPERATIONS

Horn R Candel et al Ebbutt J-05

Date	Depth	Operation
3- 2-71	0'	Preparing to spud.
3- 3-71	289'	Drilling 12-1/4" surface hole. Spudded in 5:00 p.m., March 2, 1971.
3- 4-71	510'	Running surface casing.
3- 5-71	510'	Heading up surface casing. Ran 15 joints 8-5/8", 24 lb./ft. J-55 casing plus Guide Shoe and Float Collar. Landed at 505' K.B. Cemented with 316 sacks of neat portland cement plus 2% $CaCl_2$. Plug down 11:00 a.m., March 4, 1971. Good returns. Waiting on cement for 8 hours. Headed up and tested Blind Rams to 1,000 psi.
3- 6-71	1330'	Drilling 7-7/8" hole. Pressure tested Pipe Rams and hydril each to 1,200 psi.
3- 7-71	2080'	Drilling 7-7/8" hole.
3- 8-71	2363'	Drilling 7-7/8" hole.
3- 9-71	2642'	Drilling 7-7/8" hole.
3-10-71	2880'	Drilling 7-7/8" hole.
3-11-71	3093'	Drilling 7-7/8" hole.
3-12-71	3217'	Drilling 7-7/8" hole.
3-13-71	3440'	Drilling 7-7/8" hole.
3-14-71	3634'	Drilling 7-7/8" hole.
3-15-71	3790'	Drilling 7-7/8" hole.
3-16-71	4002'	Drilling 7-7/8" hole.

SUMMARY OF DAILY DRILLING OPERATIONS (Continued)

Horn R Candel et al Ebbutt J-05

Date	Depth	Operation
3-17-71	4163'	Drilling 7-7/8" hole.
3-18-71	4163'	Waiting on orders. Ran Schlumberger logs: Induction Electric 4164' - 504' Sidewall Neutron Porosity 4164' - 504' BHCSGRC 4163' - 504' Formation Density 4164' - 504'
3-19-71	4163'	Running abandonment plugs. Ran drill stem test No. 1. 2690' - 2800' Manitoe. Times: 5 minutes, 30 minutes, 60 minutes and 60 minutes. Pressures: I.H.S. 1283 In. Flow 150 I.S.I. 590 Flow 187 Final Flow 574 Final S.I. 588 Final H.S. 1283 Recovered 300' muddy salt water, 760' brackish salt water. 67,800 ppm salinity. Ran Plug No. 1: 4163' to 4063', 25 sacks + 4% Gel Ran Plug No. 2: 2850' - 2640', 90 sacks + 3% $CaCl_2$
3-20-71		Abandoned. Felt plug No. 2 at 2620'. Ran plug No. 3 - 555' to surface. 225 sacks + 4% Gel. Cut off casing. Welded on cap and marker. Rig released at 7:45 p.m. March 19, 1971.

DRILL STEM TEST REPORT

WELL: Horn R Candel et al Ebbutt J-05

DATE: March 18, 1971 TEST NO. 1

INTERVAL TESTED: 2690' - 2800' FORMATION: Manitoe

TOTAL DEPTH DRILLER: 4163' LOGS: IES, BHCSGRC, FDL and SNP

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

TESTING COMPANY: Lynes United OPERATOR: Harris

MUD		DRILL PIPE		TEST TOOL	
Type	Gel Chemical	Type	F.H.	Size Rubber	7"
Wt.	9.1	Size	4½"	Type	-
Visc.	105	Size T.J.	5-3/16	Tool Type	-
W.L.	7.6	Collars	4½" FH	Size Choke	½"
pH		Jars	-	Wt. to Set	-
F.C.	2/32	Safety Joint	-	Pull Loose	-
Conditions	Good	Pumpout Sub.	-	Fluid Cushion	-

Bit off Bottom	4:15 p.m. 3/17/71	Preflow	5 min.	B.H. Temp.	137 °F.
Start Tester in	10:15 a.m. 3/18/71	I.S.I.	30 min.	Gauge Depths	2700 K.B.
Tester on Bottom	12:15 p.m.	Tool Open	60 min.		2712 K.B.
Tool Open	12:45 p.m.	F.S.I.	60 min.		-
Tool Closed	12:50 p.m.				

		Upper Gauge		Lower Gauge	
Tool Open	1:20 p.m.	I.H.S.	1283 psig	I.H.S.	1272 psig
Tool Closed	2:20 p.m.	Preflow	150 psig	Preflow	273 psig
Tool Loose	3:30 p.m.	I.S.I.	590 psig	I.S.I.	594 psig
Tool Out	5:45 p.m.	Initial Flow	187 psig	Initial Flow	185 psig
Rubber Condition	Good	Final Flow	574 psig	Final Flow	576 psig
Test O.K.	Yes	Final S.I.	588 psig	Final S.I.	594 psig
		F.H.S.	1283 psig	F.H.S.	1272 psig

BLOW: Good blow decreasing slightly at end of test. No gas to surface.

RECOVERY: 300' muddy salt water. 760' brackish salt water 67,000 ppm.

James A. Lewis Engineering Co. Ltd.

SURFACE CASING REPORT

Horn R Candel et al Ebbutt J-05

Date: March 4, 1971

Ran 15 joints of 8-5/8", 24 lb./ft., 8RD thread, J-55 casing plus landing joint, Davis float collar and guide show.

Landed at: 505' K.B.

Cemented to surface with 316 sacks of Portland cement and 2% $CaCl_2$.

ABANDONMENT REPORT

Plug No. 1: 4163' to 4063' with 25 sacks of cement and 4% Gel.

Plug No. 2: 2850' to 2640' with 90 sacks of cement and 3% $CaCl_2$. Felt plug at 2620'.

Ran third plug from 555' to surface with 225 sacks cement and 4% Gel.

BIT RECORD

WELL: Horn R Candel et al Ebbutt J-05

BIT NO.	SIZE & SER. NO.	DEPTH OUT, Feet	FOOTAGE, Feet	HOURS	WEIGHT, M Pounds	R.P.M.	PUMP PRESSURE, Psi
SURFACE HOLE							
1A	12-1/4-85684	466	466	20	6	160	
2A	12-1/4	510	44	2½	8	160	
MAIN HOLE							
1	7-7/8-30399	1971	1461	27¾	15	70	
2	7-7/8-28661	2178	207	9	18	60	
3	7-7/8-30202	3116	938	86	40	50	
4	7-7/8-29565	3713	597	72	40	50	
5	7-7/8-29559	4163	450	54	40	48	

SUMMARY

Surface Hole 510 of 12-1/4 " 22-1/2 hours on bottom.

Main Hole 3653 of 7-7/8 " 248-3/4 hours on bottom.

Core Hole — of — " — hours on bottom.

SUMMARY OF MUD ADDITIVES

Horn R Candel et al Ebbutt J-05

Hydra-gel	58,100 lbs.
CMC	1,250 lbs.
Caustic	250 lbs.
Lime	50 lbs.
Bicarbonate	50 lbs.
Pelfex	200 lbs.
Sawdust	30 sax
DV-68	25 gal.

SURVEY RECORD

Horn R Candel et al Ebbutt J-05

Depth, Feet	Deviation, Degrees
Surface Hole	
79	3/4
110	1/2
221	1/4
282	1/2
309	7/8
334	7/8
403	1/2
510	1/4
Main Hole	
692	1/2
907	0
1093	1/2
1313	1/2
1501	1/2
1720	1
1815	7/8
1940	1-1/4
2065	1/2
2158	1-1/4
2178	7/8
2269	1-1/4
2671	1-1/2
3104	1-3/4
3604	4
3698	4
4010	3
4163	4-1/4

Section 4

WELL LOG DATA

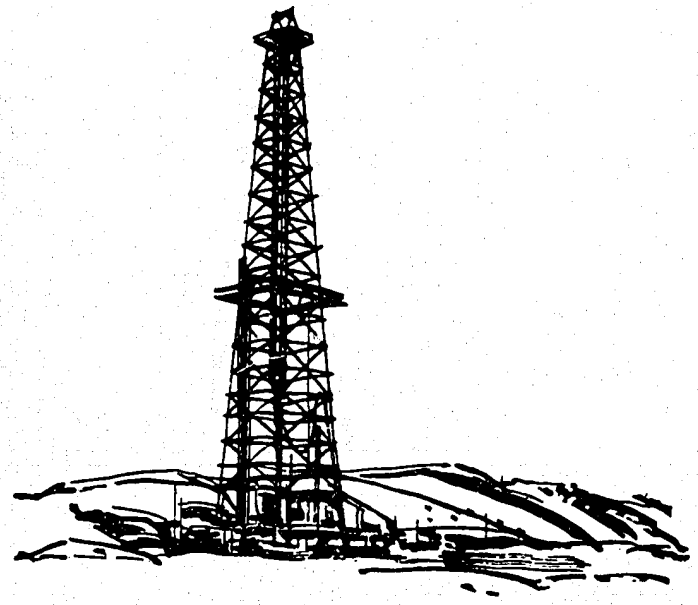
Horn R Candel et al Ebbutt J-05

Log	Scale	Interval
Induction Electric	2" & 5"/100'	4164' to 504'
Sidewall Neutron Porosity	2" & 5"/100'	4164' to 504'
Formation Density	2" & 5"/100'	4164' to 504'
Borehole Compensated Sonic Gamma-Ray Caliper	2" & 5"/100'	4163' to 504'

LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools



DRILL STEM TEST
TECHNICAL SERVICE REPORT

Canadian Delhi Oils Ltd. Horn River Candel et al Ebbutt J-05 62° 24' 122° 15' #1 March 18/71

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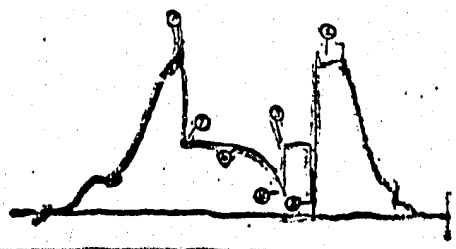

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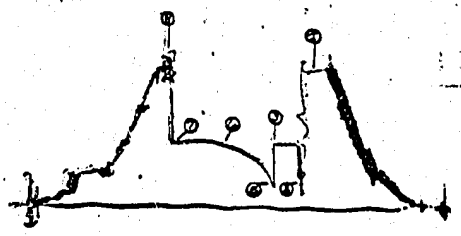

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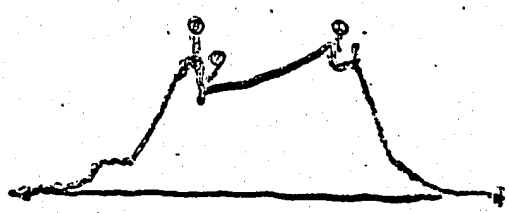


Canadian Delhi Oils Ltd.
Horn River Candel et al Ebbutt J-05
62° 24' 37.00 122° 15' 56.00 DST # 1

NOMENCLATURE (Definition of Symbols)

Q	=	average production rate during test, bbls./day
Q_g	=	measured gas production rate during test, MCF/day
k	=	permeability, md
h	=	net pay thickness, ft. (when unknown, test interval is chosen)
μ	=	fluid viscosity, centipoise
Z	=	compressibility factor
T_f	=	reservoir temperature, ° Rankine
m	=	slope of final SIP buildup plot, psig/cycle (psig²/cycle for gas)
b	=	approximate radius of investigation, feet
r_w	=	wellbore radius, feet
t_o	=	total flowing time, minutes
P_o	=	Extrapolated maximum reservoir pressure, psig
P_f	=	final flowing pressure, psig
P.I.	=	productivity index, bbls./day/psi
$P.I._t$	=	theoretical productivity index with damage removed, bbl./day/psi
D.R.	=	damage ratio
E.D.R.	=	estimated damage ratio
AOF	=	absolute open flow potential, MCF/D
AOF_t	=	theoretical absolute open flow if damage were removed
Z	=	subsea depth
W	=	water gradient based on salinity
H_w	=	potentiometric surface

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

DEFINITION OF SYMBOLS

Recorder Depth 2707 ft. Subsea depth ..... ft. Ticket No. 2962 Hour Recorder No. 1097

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	----	150				0	----	574	
3	2.667	586				5	14.000	582	
6	1.833	588				10	7.500	583	
9	1.556	589				15	5.333	584	
12	1.417	590				20	4.250	585	
15	1.333	590				25	3.600	586	
18	1.278	590				30	3.167	586	
21	1.238	590				35	2.857	587	
24	1.208	590				40	2.625	587	
27	1.185	590				45	2.444	588	
30	1.167	590				50	2.300	588	
						55	2.182	588	
						60	2.083	588	

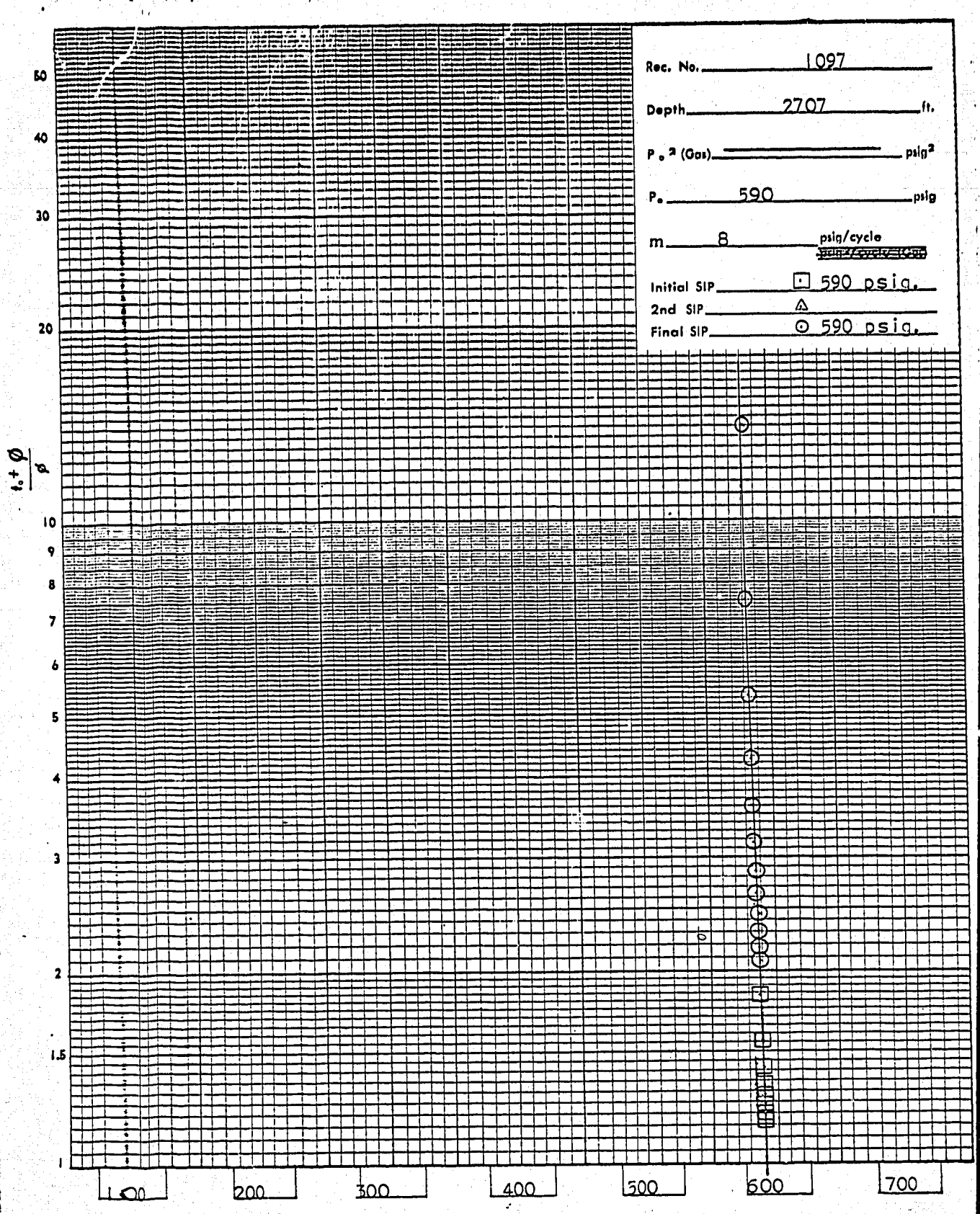
Recorder Depth ..... ft. Subsea depth ..... ft. Ticket No. ..... Hour Recorder No. .....

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 # 1

PRESSURE DATA



DST # 1

PRESSURE EXTRAPOLATION PLOT

LYNES UNITED SERVICES LTD.

TEST DATA

Test No. 1 Lynes Test 1

Formation: Hume - Bear Rock T.D. 4165 Ft.

Interval Tested: 2690 Ft. to 2800 Ft.

Feet of Net Pay Tested: 110 Ft.

Type of Test: Conventional Straddle

Cushion: nil Amount Ft.

Started in Hole at: 10:30 Hrs. Tool Open at: 12:50 Hrs.

Pre-Flow: 5 Mins. Initial Shut-in: 30 Mins.

2nd Flow: Mins. Second Shut-in: Mins.

Final Flow: 60 Mins. Final Shut-in: 60 Mins.

Remarks:

Blow: Fair initial puff. Good air blow decreasing slightly throughout the test.

GAS BLOW MEASUREMENTS

Measured with

Time	Surface Choke	Reading Inches	Cubic Feet/Day

RECOVERY

TOTAL FLUID RECOVERED 1060 Ft. Consisting of:

300 Ft. of muddy salt water

760 Ft. of blackish salt water

Ft. of

Ft. of

Test was/was not Reverse Circulated: was not

Oil Recovery A.P.I. Water Specific Gravity

Salinity: 67,800 PPM

GENERAL INFORMATION

Company: Canadian Delhi Oils Ltd.

Address:

Well Name: Horn River Candel et al Ebbutt J-05

Well Number: 62° 24' 37.00 122° 15' 56.00

K.B. Elevation: 1953 Sub-Sea Elevation

Area: Ft. Simpson Province: N.W.T.

Company Rep.: J. Lepine

Tester: E. Harris

Contractor: Commonwealth Rig No. 12

Ticket No. 2962 Date: March 18/71

Service Reports To:

5 - Lewis Engineering Ltd.
+ 40 xeroxed copies

MUD AND HOLE DATA

Mud Type: Gel Chem

Weight: 9.1 Viscosity: 105 Water Loss: 7.6

Filter Cake: 2/32" Bottom Hole Temperature: 137°

Drill Pipe Size: 4" FH Weight

Drill Collars: 4 1/2" FH I.D. 2 7/8" Feet Run: 520

Main Hole or Casing Size: 7 7/8"

Rathole or Liner Size No. of Feet

Bottom Hole Choke Size: 1/2"

Surface Choke Size

Packer Rubber Size: 7"

REMARKS

Shut-in pressures suggest high permeability within the interval tested.

PRESSURE READINGS

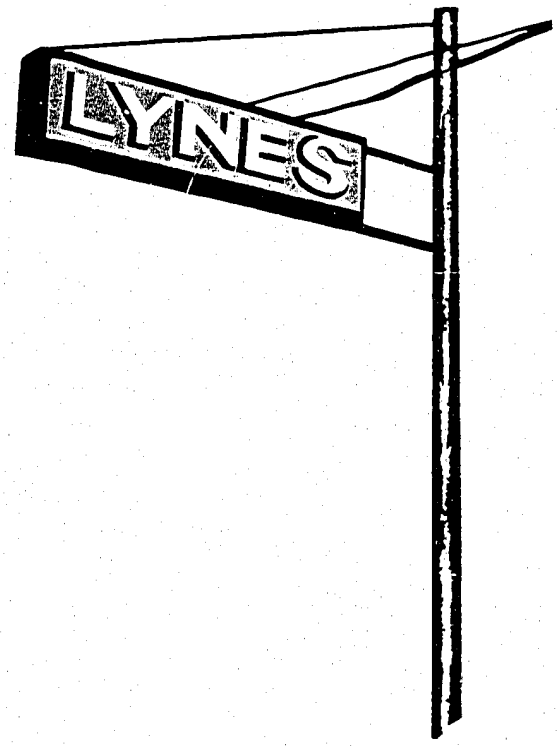
	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside X	Inside ___ Outside ___
	Recorder No. 1097	Recorder No. 2816	Recorder No. 966	Recorder No.
	Capacity 4100	Capacity 4600	Capacity 5040	Capacity
	Depth 2707	Depth 2712	Depth 2808	Depth
NUMBER KEY:				
1 - INITIAL HYDROSTATIC	1283	1272	1346	
2 - PRE-FLOW	150	273		
3 - INITIAL SHUT-IN	590	594		
4a - 2nd INITIAL FLOW				
4b - 2nd FINAL FLOW				
4c - 2nd SHUT-IN				
5 - 3rd INITIAL FLOW	187	185		
6 - FINAL FLOW	574	576		
7 - FINAL SHUT-IN	588	594	1018 (bleed off)	
8 - FINAL HYDROSTATIC	1283	1272	1346	

Company: Canadian Delhi Oils Ltd.

Well Name and Description: Horn River Candel et al Ebbutt J-05 62° 24' 122° 15'

Test No.: #1

Date of Test: March 18/71



LYNES UNITED SERVICES LTD. 262-4501 CALGARY, ALBERTA

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION HORN R. CANDEL ETAL EBBUTT I-05 AREA FORT SIMPSON DATE MARCH 19 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller AL NOREN	12
Derrick J. LAPPENBUSH	12
Floor W. LAPPENBUSH	12
Floor W. WHITE	12
Floor	
Motor F. LAPPENBUSH	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
4163	T.D.										

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	
2	
3	
4	
5	

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

W.L. F.C. pH.

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

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

General: PLUG # 1-4153 - 4063 25 SKS CEMENT 4% GEL. NO FEEL.
PLUG # 2-2850 - 2640 90 SKS. 3% CALC. PLUG DOWN 900 AM.

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J. ROBINSON	12
Derrick A. HERMAN	12
Floor T. SPIEL HOFF	12
Floor K. WILLIAMS	12
Floor	
Motor N. SAVARD	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	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY				
GEL				

Additives: At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

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

W.L. F.C. pH.

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

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

General: PLUG 3# 555FT TO SURFACE.
225 SKS. PLUS 4% GEL (NO FEEL).

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

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	Next Oil Change
1	
2	
3	
4	
5	

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

W.L. F.C. pH.

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

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

General:

DAY WORK RECORD

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

REMARKS	Time Start	Time Stop	Time Interval
LAY DOWN 21 DRILL COLLARS	12 00	1 30	1 1/2
RUN IN & PICK UP 20 SINGLES	1 30	3 00	1 1/2
CIR. TO CEMENT	3 00	5 15	2 1/4
RIG TO CEMENT	5 15	5 30	1/4
RUN PLUG # 1	5 30	6 00	1/2
PULL STDS	6 00	6 30	1/2
RUN PLUG # 2	6 30	7 00	1/2
W.O.C	7 00	8 00	1
Company Time / Cont'r Time			
W.O.C.	8 00	2 00	6
RUN IN TO FREE. 2# plug @ 2620	2 00	2 15	1/4
HOIST TO RUN plug 3#	2 15	3 00	3/4
RUN plug 3# FROM 555 TO SURFACE.	3 00	3 45	3/4
LAY DOWN DRILL PIPE.	3 45		
TEAR OUT B.O.P.S. CLEAN MUD TANKS DRAIN PUMPS, REMOVE BOWL CUTOFF, CSG WELD ON CAP.		7 45	
RIG RELEASED @ 7.45 p.m. MARCH 19/71			
Company Time / Cont'r Time			
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. 12 LOCATION HORN R. CONDEL ET AL ABBOTT J-05 AREA FORT SIMPSON DATE MARCH 18 1971

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
4163											

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

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller A. NOREN	8
Derrick J. LAPPENBUSH	8
Floor W. LAPPENBUSH	8
Floor W. WHITE	8
Floor	
Motor F. LAPPENBUSH	8
Mechanic	
Extra	

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J. ROBINSON	12
Derrick A. HERMAN	12
Floor T. SPELLACY	12
Floor K. WILLIAMS	12
Floor	
Motor NORMAN SAVARD	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	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 TEST 1st 2690 TO 2800. CONN STRADDLE. IN HYD. 1275, INCHT in. 579 INFLOW, 192, FINAL FLOW 569, FINAL SHUT 579, FINAL HYD. 1235.

W.L. F.C. pH.

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

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller A. NOREN	4
Derrick J. LAPPENBUSH	4
Floor W. LAPPENBUSH	4
Floor W. WHITE	4
Floor	
Motor F. LAPPENBUSH	4
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.	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
LOG W/ SCHLUMBERGER	12 00	7 00	7 00
TEAR OUT SCHLUMBERGER	7 00	7 15	1/4
RIG SER, B.O.P.s & BLIND RAM'S	7 15	7 30	1/4
W. O. O.	7 30	8 00	1/2
Company Time / Cont'r Time			
WAIT ON ORDERS	8 00	8 30	1/2
RIG SER + CHECK B.O.P.s	8 30	8 45	1/4
MAKE UP PACKER	8 45	10 45	2
RUN IN DST #1	10 45	12 15	1 1/2
R.C UP TO TEST	12 15	12 45	1/2
TESTING	12 45	3 30	2 3/4
BREAK OFF TESTING HEAD	3 30	3 45	1/4
FLOAT	3 45	4 00	1/4
FAIR INITIAL PUFF.			
GOOD AIR BLOW, DECREASING SLIGHTLY THROUGHOUT TEST			
RECOVERED 300 FT HEADY SALT WATER.			
FLOAT BLACKISH SALT WATER.			
Company Time / Cont'r Time			
FINISH OUT	4 00	5 45	1 3/4
BREAK DOWN + LOAD OUT	5 45		
PACKED		7 45	1/4
PULL TAIL PIPE	7 45	8 15	1/2
RIG SERVICE & B.O.Ps	8 15	8 30	1/4
W. O. O.	8 30	11 30	3
RUN IN D.C.s.	11 30	12 30	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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION HORN R. CANOEL ETAL EBRUTI J-05 AREA FORT SIMPSON DATE MARCH 12 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller: AL NOREN	8
Derrick: J. LAPPENBUSH	8
Floor: W. LAPPENBUSH	8
Floor: W. WHITE	8
Floor	
Motor: F. LAPPENBUSH	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
4114	49	4163	7 3/4	102.	21	6	2 7/8	46.00			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3/13	29559	40.	48	458.	54			RUN

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.1	9.1	9.1	9.1
VISCOSITY	83	78	75	72
GEL				

Additives: GEL - 1000#, C.M.C. - 25#

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	800	
Model	D 300	C 250
S.P.M.	55	MUD ROLL
Liner Size	5 1/2 x 14	5 1/2 x 15

W.L. 7.6 F.C. 2/32 pH. 7.6

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

General

Stands 56 — 3523.16; Singles 1; D. Collars 603.29; Other Ft.; C.B. Ft.; Subs. Ft. 2.20; Ft. Up On Kelly 46; TOTAL 4169.15

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller: J. Robinson	8
Derrick: A. Herman	8
Floor: T. Spielhoff	8
Floor: K. Williams	8
Floor	
Motor: N. Savard	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
4163					21	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3-13	29559							

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.1			9.1
VISCOSITY	63			75
GEL				

Additives

At Surveys Degree: 4163 4114

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	750	
Model	D 300	C 250
S.P.M.	53	
Liner Size	5 1/2 x 14	5 1/2 x 15

W.L. F.C. pH.

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

General

Stands 56 — 3523.16; Singles; D. Collars 603.29; Other Ft.; C.B. Ft.; Subs. Ft. 2.00; Ft. Up On Kelly 6; TOTAL

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller: AL NOREN	4
Derrick: J. LAPPENBUSH	4
Floor: W. LAPPENBUSH	4
Floor: W. WHITE	4
Floor	
Motor: F. LAPPENBUSH	4
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
4168				102.	21	6"	2 7/8	46.			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3-13	29559							6 5 1

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	9.1			
VISCOSITY	105			
GEL				

Additives: STRAP 4130 56; TALLY 4186.5; DIFF 1.91; ΣFL = 2000 lbs; C.M.C = 50 lbs.

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

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

W.L. F.C. pH.

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

General

Stands 56 — 3523.16; Singles 1; D. Collars 603.29; Other Ft.; C.B. Ft.; Subs. Ft. 2.20; Ft. Up On Kelly 6; 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
DRILL 7 7/8" HOLE	12 00	3 30	3 1/2
RIG SERVICE & B.O.Ps	3 30	3 45	1/4
DRILL	3 45	8 00	4 1/4
Company Time	**Cont'r Time**		
CIRC SAMPLE	8 00	8 30	1/2
W.O.O	8 30	10 00	1 1/2
RIG SERV & CHECK BOPs	10 00	10 15	1/4
DUMMY TEST (35 STANDS)	10 15	12 15	2
CIRC & COND MUD TO LOG (WAIT ON SCHLUMBERGER)	12 15	3 45	3 1/2
SURVEY @ 4163	3 45	4 00	1/4
Company Time	**Cont'r Time**		
RIG SERV & CHECK BOPs	4 00	4 15	1/4
HOLE (STRAP)	4 15	5 45	1 1/2
RIG UP SCHLUMBERGER	5 45	6 00	1/4
LOGGING W/ SCHLUMBERGER	6 00	12 00	6
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. 12 LOCATION HORN R. SANDEL ET AL FRANTTJOS AREA FT. SIMPSON DATE March 16 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller H.M. Dittmer	8
Derrick L. Brennan	8
Floor F. Hardisty	8
Floor Wm. Hunter	8
Floor	
Motor J. Daidge	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
3936	66	4002	7½	100m	21	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3/13	29554	40M	48	184	31			Run

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT	9.1	9.2	9.2	9.2	Gel .1000		1	
VISCOSITY	62	60	60	64			2	
GEL							3	

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.	55	55	55	55
	Liner Size	5½ X 14			
No. 2	Pressure				
Model C 250	S.P.M.	Mud Roll			
	Liner Size	5½ X 15			

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 603.27 / Other Ft. / C.B. Ft. / Subs. Ft. 2.20 / Ft. Up On Kelly / TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller Al Noren	8
Derrick J. Lappenbush	8
Floor P.W. Lappenbush	8
Floor W. White	8
Floor	
Motor F. Lappenbush	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
4002	58	4060	7½	100.	21	6	2 7/8	46.			

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3/10	29559	40.	48	347	38½			Run

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT	9.2	9.2	9.2	9.2	Gel -1500 lbs	4010 3°	1	
VISCOSITY	62	62	60	64	CMC-100 lbs		2	
GEL							3	

PUMPS		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure	800	800	800	800
Model B 300	S.P.M.	55	55	55	55
	Liner Size	5½ X 14			
No. 2	Pressure				
Model C 250	S.P.M.	Mud Roll			
	Liner Size	5½ X 15			

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

General

W.L. 9.4 F.C. 2/32 pH. 7.6

Stands 55 / Singles / D. Collars 603.29 / Other Ft. / C.B. Ft. / Subs. Ft. 2.20 / Ft. Up On Kelly 18 / TOTAL

Tour -- 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller T. Robinson	8
Derrick A. Herman	8
Floor T. Spielhoff	8
Floor K. Williams	8
Floor	
Motor N. Savard	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
4060	54	4114	7¾	102	21	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
5	7 7/8	X55R	3-13	29559	40	50	401	36¼			RUN

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT	9.1	9.1	9.1	9.1	C.M.C. -25 lbs.		1	
VISCOSITY	65	65	62	63			2	
GEL							3	

PUMPS		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure	800	800	800	800
Model B 300	S.P.M.	58	58	56	55
	Liner Size	5½ X 14			
No. 2	Pressure				
Model C 250	S.P.M.				
	Liner Size	5½ X 15			

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 56 / Singles / D. Collars 603.29 / Other Ft. / C.B. Ft. / Subs. Ft. 2.20 / Ft. Up On Kelly 23 / TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drlg	12 00	1 00	1
Rig SER & BOPs	1 45	2 00	¼
DRILL	2 00	8 00	6
			8
Company Time — Cont'r Time			
DRILLING 7 7/8" HOLE	8 00	9 00	1
RIG SERVICE & B.O.Ps	9 00	9 15	1/4
DRILL	9 15	1 30	4 1/4
SURVEY @ 4010' 3°	1 30	1 45	1/4
DRILL	1 45	4 00	2 1/4
Company Time — Cont'r Time			
DRILL	4 00	6 15	2 1/4
RIG SER + CHECK BOPs	6 15	6 30	1/4
DRILL	6 30	12 00	5 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 _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

G No. 12 LOCATION Hon R Crosbie Ebbett Jo 5 AREA Nat. Depen. DATE Dec 15 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller Hon Ebbett	12
Derrick L Brennan	12
Floor F Hardinty	12
Floor Wm Hunter	12
Floor	
Motor J Doigde	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
3717	77	3740	7¾	98m	2	6	2¼				

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	5	7¾	X55R	3-13	29554	40-30	~~77~~ 48	77	7¾			Run

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT		9.1	9.1	9.1	Gel 3000 Lbs		1	
VISCOSITY		62	60	64	Cmc 150 Lbs		2	
GEL					1" Stream of water		3	
							4	
							5	

PUMPS													
No. 1	Pressure	800	800	800	800								
Model 700	S.P.M.		55	55	55								
	Liner Size	5½	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

General

W.L. 9.0 F.C. 2/32 pH. 8.0

Stands ~~47~~ 50 | Singles 1 | 314954 | D. Collars 60329 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly | TOTAL 15

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J Pratt	
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
3790	70	3860	7¾	100m	21	6	2¼				

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	6	7⅞	X55R	3/13	295511	40	48	147	15½			Rec.

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT	9.1	9.1	9.1	9.1	GEL = 3000 lbs		1	
VISCOSITY	58	65	66	58	CMC = 75 lbs		2	
GEL							3	
							4	
							5	

PUMPS													
No. 1	Pressure	500	800	800	800								
Model 700	S.P.M.	55	55	55	55								
	Liner Size	5½	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

General

W.L. 9.1 F.C. 2/32 pH. 9.

Stands 61-1 32.50 | Singles | D. Collars 60329 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly | TOTAL

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
3860	76	3936	7¾	48m	21	6	2¼				

BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
	5	7⅞	X55R	3-13	29554	30-40	48	223	23¼			Run

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys Degree	MOTOR HOURS	Next Oil Change
WEIGHT	9.1	9.1	9.1	9.1	Gel 1000		1	
VISCOSITY	62	66	60	62	CMC 25		2	
GEL							3	
							4	
							5	

PUMPS													
No. 1	Pressure	900	900	900	900								
Model 700	S.P.M.	55	55	55	55								
	Liner Size	5½	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

General

W.L. 9.2 F.C. 2/32 pH. 7.6

Stands 53 | Singles | D. Collars 60329 | Other Ft. | C.B. Ft. 220 | Subs. Ft. 220 | Ft. Up On Kelly 16 | TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Time Stop	Interval
Rig Ser & BOPs	12 00	12 15	¼
Drill	12 15	7 00	7¾

Company Time Cont'r Time

Drill	8 00	8 30	½
Rig Ser + Chk Bops	8 30	8 45	¼
Drill	8 45	4 00	7¼

Company Time Cont'r Time

Drill	4 00	10 00	6
Rig Ser & BOPs	10 00	10 15	¼
Drill	10 15		

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. Total Company Time _____ Hrs.

Toolpusher Al Norman

Approved by R Nixon

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

G No. 12 LOCATION Hamel Lonadale ET 191 Elbetta Jo 5 AREA Fort Simpson DATE March 14 19 71

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller H. Dettman	12
Derrick D. Bannon	12
Floor H. Handsky	12
Floor Wm Hunter	12
Floor	
Motor J. Dingle	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
3572	62	3634	7¼	94	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	x55B	3/4 3/4	29565	40	48	515	62¼			Rec

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys	Degree
WEIGHT	93	93	93	93	Del 1000	3684	4°
VISCOSITY	79	65	60	57	CMC 50		
GEL							

PUMPS	No. 1	No. 2
Pressure	700	700 800 700
Model	Bow	Mud Roll
S.P.M.	54	54 54 54
Liner Size	5½ x 14	5½ x 15

W.L. 9.8 F.C. 2/32 pH. 7.6

MOTOR HOURS 1 2 3 4 5 — Next Oil Change

Stands 44 299090 Singles — D. Collars 60220 — Other Ft. — C.B. Ft. — Subs. Ft. 220 — Ft. Up On Kelly None — TOTAL

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

General

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J. Prato	8
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
3634	64	3698	7¾	94	21	6"	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	x55R	2-14 3/4	29565	40	48	582	70			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys	Degree
WEIGHT	94	94	94	94	DEL = 2000 lbs		
VISCOSITY	72	72	67	65	CMC = 100 lbs		
GEL							

PUMPS	No. 1	No. 2
Pressure	750	750 750 750 750
Model	500	53 53 53
S.P.M.	53	
Liner Size	5½ x 14	
Pressure		
Model	250	5½ x 15
S.P.M.		
Liner Size		

W.L. 10.2 F.C. 2/32 pH. 8.0

MOTOR HOURS 1 2 3 4 5 — Next Oil Change

Stands 49 365362 Singles — D. Collars 60220 — Other Ft. 20620 — C.B. Ft. — Subs. Ft. 220 — Ft. Up On Kelly 0 — TOTAL 3698

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

General

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
3698	15	3713	2	96 max	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	x55R	2-14 3/4	29565	40	50	597	72			2 2 I
5	7⅞	x55R	3/4	29554							

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys	Degree
WEIGHT	93	93				3648	4
VISCOSITY	67	73					
GEL							

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

W.L. F.C. pH.

MOTOR HOURS 1 2 3 4 5 — Next Oil Change

Stands 49 309941 Singles — D. Collars 60529 — Other Ft. — C.B. Ft. 220 — Subs. Ft. — Ft. Up On Kelly 16 — TOTAL

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

General

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Riser & BOPs	12 00	12 15	¼
Drill	12 15	7 30	7¼
Circ To Survey	7 30	7 45	¼
Survey	7 45	8 00	¼
Company Time / Cont'r Time			
Rig Service & BOPs	8 00	8 15	¼
Drill	8 15	4 00	7¾
Company Time / Cont'r Time			
Drill	4 00	6 00	2
Circ	6 00	6 15	¼
Survey	6 15	6 30	¼
Trip out F/Bit	6 30	9 30	3
Rig Ser & Blind Rams	9 30	9 45	¼
Strap in Hole	9 45	12 00	2¼
Strap Tally 308779			
Board " 308499			
283			
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 A. Nevin

Total Company Time _____ Hrs. Approved by C. Hawes

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Harmon Prov. Trial Ebatt 10-1 AREA Fort Simpson DATE March 12 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller Hem Dittner	8
Derrick L Brennan	8
Floor F Hardisty	8
Floor Wm Hunter	8
Floor	
Motor J Doigde	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
3366	84	3440	7¾	92m	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	X55R	3/14 1/32	29565	40	40	334	37½			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.3	9.2	9.3	9.3
VISCOSITY	70	69	63	65
GEL				

Additives: Gel 1000 lbs; Dv 68 1 gal; CMC 25 lbs

At Surveys Degree

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS		12 Mn.	2 a.m.	4 a.m.	6 a.m.
No. 1	Pressure	1050	950	950	950
Model D 300	S.P.M.	50	50	50	50
	Liner Size				
No. 2	Pressure	Mud Roll			
Model C 250	S.P.M.				
	Liner Size	5½ X 15			

W.L. F.C. pH.

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

General

Stands 43 Singles 2504 42; D. Collars 60220; Other Ft.; C.B. Ft.; Subs. Ft. 220; Ft. Up On Kelly 9; TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J Pratt	
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
3440	64	3504	7¾	92	21	6"	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	X55R	3/14 1/32	29565	40	48	388	47½			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.3	9.2	9.2	9.2
VISCOSITY	68	65	64	72
GEL				

Additives: DFL=1000; CMC=25

At Surveys Degree

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS		8 a.m.	10 a.m.	12 Noon	2 p.m.
No. 1	Pressure	950	750	750	750
Model D 300	S.P.M.	50	55	55	55
	Liner Size				
No. 2	Pressure				
Model C 250	S.P.M.				
	Liner Size				

W.L. 9.6 F.C. 2/32 pH. 8.0

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

General

Stands 46 Singles 2486 06; D. Collars 60220; Other Ft.; C.B. Ft.; Subs. Ft. 220; Ft. Up On Kelly 5; TOTAL 3504

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller H. Dittner	4
Derrick L Brennan	4
Floor F Hardisty	4
Floor Wm Hunter	4
Floor	
Motor J Doigde	4
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
3504	68	3572	7¾	94m	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	X55R	3/14 1/32	29565	40	45	456	55			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	9.3	9.2	9.3	9.3
VISCOSITY	68	65	60	58
GEL				

Additives: Gel 2000; CMC 50; Dv 68 2 gals

At Surveys Degree

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure	750	750	550	850
Model D 300	S.P.M.	50	50	55	55
	Liner Size	5½ X 19			
No. 2	Pressure				
Model C 250	S.P.M.	Mud Roll			
	Liner Size	5½ X 15			

W.L. 9.8 F.C. 2/32 pH. 7.6

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

General

Stands 47 Singles 2928 08; D. Collars 60220; Other Ft.; C.B. Ft.; Subs. Ft. 220; Ft. Up On Kelly Down; TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drill	12 00	2 00	2
Rig serv & BOPs	2 00	2 15	¼
Drill	2 15	8 00	5¾
			8

Company Time Cont'r Time

REMARKS	Start	Stop	Interval
Drill	8 00	9 00	1
Rig service & BOPs	9 00	9 15	¼
Drill	9 15	3 00	6¾

Company Time Cont'r Time

REMARKS	Start	Stop	Interval
Drill	4 00	8 00	4
Rig serv & BOPs	8 00	8 15	¼
Drill	8 15	12 00	3¾
			7

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 Al Nunn

Total Company Time _____ Hrs. Approved by P Stevens

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Barnes Creek Etal Ebert Lake AREA Fort Simpson DATE March 11 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller H M Dittmer	8
Derrick L Brennan	8
Floor F Hardisty	8
Floor Wm Hunter	8
Floor	
Motor J Doigde	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
3147	70	3217	7 3/4	90m	21	6	2 1/4				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
7	7 7/8	X55R	7/4 7/4	29565	40	48	101	14			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.2	9.2	9.3	9.3
VISCOSITY	76	78	79	81
GEL				

Additives: Del 1000#

At Surveys Degree

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	650 650 650 650	
Model	D 900	C 250
S.P.M.	51 50 50 50	
Liner Size	5 1/2 x 14	5 1/2 x 16

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

General

W.L. 13.2 F.C. 2/32 pH. 8.0

Stands 47 | Singles 1 | 25 55 54 | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 13 | TOTAL

REMARKS	Time Start	Stop	Interval
Drill	12 00	2 15	2 1/4
Rig Serv & Bops	2 15	2 30	1/4
Drill	2 30	8 00	5 1/2
			8

Company Time Cont'r Time

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller Z Prat	
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
3217	69	3286	7 3/4	91	21	6"	2 1/4				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
7	7 7/8	X55R	2-14 1-12	29565	40	48	170	19			RRG

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.4	9.2	9.2	9.2
VISCOSITY	71	64	62	74
GEL				

Additives: DEL = 3000 lbs; CMC = 60 lbs; DV = 68 gal

At Surveys Degree

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	650 650 650	
Model	D 900	C 250
S.P.M.	50 50 50	
Liner Size	5 1/2 x 14	5 1/2 x 16

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

General: On Tanks

W.L. 13.2 F.C. 2/32 pH. 8.0

Stands 42-1 | ~~Singles 1 | 25 55 54~~ | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 7.21 | TOTAL 3246

REMARKS	Time Start	Stop	Interval
Drill 7 7/8 hole	8 00	9 30	1 1/2
Rig Serv & Chk Bops	9 30	9 45	1/4
Drill	9 45	4 00	6 1/4
			8

Company Time Cont'r Time

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller Hm Dittmer	4
Derrick L Brennan	4
Floor F Hardisty	4
Floor Wm Hunter	4
Floor	
Motor J Doigde	4
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
3286	80	3366	7 3/4	91m	21	6	2 1/4				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
7	7 7/8	X55R	2-14 1-12	29565	40	48	250	26 1/4			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	9.2	9.2	9.2	9.3
VISCOSITY	60	76	50	61
GEL				

Additives: Del 11 100 LBS; CMC 75 LBS; DV 18 2 gals

At Surveys Degree

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	650 1050 1050 1050	
Model	D 900	
S.P.M.	52 52 52 52	
Liner Size	5 1/2 x 14	

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

General

W.L. 12.8 F.C. 2/32 pH. 7.0

Stands | Singles | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 21 | TOTAL

REMARKS	Time Start	Stop	Interval
Drill	4 00	8 00	4
Rig Serv & Bops	8 00	8 15	1/4
Drill	8 15	12 00	3 3/4

Company Time Cont'r Time

DAY WORK RECORD

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

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 A. Nerson

Total Company Time _____ Hrs. Approved by R. Nerson

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Hebron P. Canadel Final Ebert Test AREA Fort Nelson DATE March 11 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller H M Dittmer	8
Derrick L Brennan	8
Floor F Hardisty	8
Floor Wm Hunter	8
Floor	
Motor J Daigle	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
3020	70	3093	7¾	90 m	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55R	3-14	30202	40	44	915	83			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.1	9.1	9.1	9.1
VISCOSITY	85	81	80	75
GEL				

Additives: Nil

At Surveys Degree

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS					
No. 1 Pressure	650	650	650	650	
Model D 300 S.P.M.	50	50	50	50	
Liner Size	5½ X 14				
No. 2 Pressure					
Model C 250 S.P.M.	Mud Roll				
Liner Size	5½ X 15				

Water ¾" Stream

General

W.L. 13.2 F.C. 3/2 pH 8.0

Stands 37 Singles 1 245953 D. Collars 602.20 Other Ft. C.B. Ft. Subs. Ft. 220 Ft. Up On Kelly 11 TOTAL

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

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J Lind	8
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
3098	23	3116	3	90 m	21	6"	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55R	3-14	30202	40	45	996	86			3-7-I
4	7⅞	X55B	2-14, 1-13	29665			938				

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.2	9.2	Trip	
VISCOSITY	65	72		
GEL				

Additives: DFL 2000 lbs

At Surveys Degree 3104 1¾

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS					
No. 1 Pressure					
Model D 300 S.P.M.					
Liner Size	5½ X 14				
No. 2 Pressure					
Model C 250 S.P.M.	Mud Roll				
Liner Size	5½ X 15				

General

W.L. 10.4 F.C. 5/2 pH 8.0

Stands 40 Singles 1 252264 D. Collars 60220 Other Ft. C.B. Ft. Subs. Ft. 220 Ft. Up On Kelly 191.76 TOTAL 97 16

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

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller H M Dittmer	4
Derrick L Brennan	4
Floor F Hardisty	4
Floor Wm Hunter	4
Floor	
Motor J Daigle	4
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
3116	31	3147	3½	90	21	6	2¼				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
4	7⅞	X55R	3/14 K3	29555	40	45	31	3½			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	Trip		9.2	9.2
VISCOSITY			69	68
GEL				

Additives

At Surveys Degree

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS					
No. 1 Pressure	Trip		825	825	
Model D 300 S.P.M.			69	64	
Liner Size	5½ X 14				
No. 2 Pressure					
Model C 250 S.P.M.		Mud Roll			
Liner Size	5½ X 15				

General

W.L. F.C. pH.

Stands 40 Singles 1 252264 D. Collars 60220 Other Ft. C.B. Ft. Subs. Ft. 220 Ft. Up On Kelly 20 TOTAL

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

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drill	12 00	2 15	2¼
Rig Serv & BOPS	2 15	2 30	¼
Drill	2 30	8 00	5½
			8
Company Time Cont'r Time			
Drill	8 00	11 00	3
Circ & cond mud	11 00	11 30	½
Rig Serv & chk Bops	11 30	11 45	¼
Survey	11 45	12 00	¼
Trip out, work tight hole & pump out 6 singles	12 00	1 00	1
Company Time Cont'r Time			
Finish out	1 00	5 00	4
C-Bit & Rig Serv	5 00	5 30	½
Run in	5 30	7 45	2¼
Ream 150 ft to Bottom	7 45	8 30	¾
Drill	8 30	12 00	3½
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 A. Nor

Total Company Time _____ Hrs. Approved by D. Kenna

KENTING · OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Harm. Br. Cardal Fl. Ak. Exploit J-05 AREA N.W.T. DATE Mar. 10 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller H M DITTMER	8
Derrick L BRENNAN	8
Floor E HARDISTY	8
Floor Wm HUNTER	8
Floor	
Motor J DOIGDE	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
2802	78	2880	7¾	88m	21	6	2¾				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55B	31/4	30202	40	50	702	59½			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.0	9.0	9.0	9.0
VISCOSITY	60	58	59	58
GEL				

Additives: 700 lbs. Bit.

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	650 650 650 650	
Model	D 300	mud Rail
S.P.M.	50 50 50 50	
Liner Size	5½ X 14	
Model	D 250	
S.P.M.		
Liner Size	5½ X 15	

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

General

W.L. 74 F.C. 2/32 pH. 80

Stands | Singles | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly | TOTAL 9

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller J Graf	
Derrick J Leppenhurst	
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
2880	73	2953	7 1/4	88	21	6"	2¾				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55B	3-14	30202	40	50	775	67½			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.	8.9	9.9	9.
VISCOSITY	54	65	75	50
GEL				

Additives: DEL 1000 lbs. Peltex 250 lbs. Caustic 125 lbs.

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	650 650 650 650	
Model	D 300	
S.P.M.	50 50 50 50	
Liner Size	5½ x 14	
Model	D 250	
S.P.M.		
Liner Size	5½ x 15	

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

General

W.L. 7.1 F.C. 2/32 pH. 8

Stands 37-1 253824 | Singles | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 2969 | TOTAL 2953

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller HM DITTMER	4
Derrick L BRENNAN	4
Floor E HARDISTY	4
Floor WM Hunter	4
Floor	
Motor J DOIGDE	4
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
2953	69	2023	7¾	88m	21	6	2¾				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55B	3-14	30202	40	44	~~889~~ 845	75½			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	9.	9.	9.1	9.1
VISCOSITY	70	58	60	60
GEL				

Additives: gel #2000, CMC 50

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	650 650 650 650	
Model	D 300	
S.P.M.	50 50 50 50	
Liner Size	5½ X 14	
Model	D 250	mud Rail
S.P.M.		
Liner Size	5½ X 15	

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 38 | Singles 239674 | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 19 | TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
DRILL	12 00	2 30	2½
Rig SER & BOPS	2 30	2 45	¼
DRILL	2 45	8 00	5¼
Company Time Cont'r Time			
DRILL	8 00	8 45	¾
Rig SER + chk BOPS	8 45	9 00	¼
DRILL 7⅞ hole	9 00	4 00	7
Company Time Cont'r Time			
DRILL	4 00	7 00	3
Rig SER & chk BOPS	7 00	7 15	¼
DRILL	7 15	12 00	4¾
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. 12 LOCATION Horn Randel Etal Kabutt S-05 AREA Fort Simpson DATE March 9 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller J Robinson	8
Derrick D Harman	8
Floor Sp. Blackoff	8
Floor K Williams	8
Floor	
Motor N Savard	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
2547	95	2642	7¾	84	21	6	2⅞				

Stands 32 159742 Singles

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55R	3-14	30202	40	50	464	37			

D. Collars 6-220 Other Ft. C.B. Ft. Subs. Ft. 2.20 Ft. Up On Kelly TOTAL

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.8	8.8	8.8	8.8
VISCOSITY	56	54	52	55
GEL				

Additives: CMC = 25 lbs. DV65 = 1 gal. GEL = 500 lbs.

At Surveys Degree

MOTOR HOURS 1 2 3 4 5 Next Oil Change

PUMPS	No. 1	No. 2
Pressure	875	875 875 875
Model	D 300	C 250
S.P.M.	64	64 64 64
Liner Size	5½ x 14	5½ x 14

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

General

W.L. F.C. pH.

REMARKS	Time Start	Stop	Interval
Rig Serv + Check BOPs	12⁰⁰	12¹⁵	1¼
Drill	12¹⁵	8	7¾

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller H Dittmer	8
Derrick L Breman	8
Floor F Hardisty	8
Floor Wm Hunter	8
Floor	
Motor T Doig DE	6
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
2642	80	2722	7¼	84m	21	6	2⅞				

Stands 1 Singles 31 2089.86

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55R	3/14	30202	40	50	544	44¼			Run

D. Collars 6 0220 Other Ft. C.B. Ft. Subs. Ft. 220 Ft. Up On Kelly 12 TOTAL

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	8.8	8.8	8.8	8.8
VISCOSITY	47	52	55	53
GEL		PV-22	YP 23	

Additives: gel - 700 CMC - 25 DV68 - 1 gal

At Surveys Degree 2671 1¼

MOTOR HOURS 1 2 3 4 5 Next Oil Change

PUMPS	No. 1	No. 2
Pressure	820	650 650 650
Model	D 300	C 250
S.P.M.	64	50 50 50
Liner Size	5½ x 14	Mud Roll 5½ x 14

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

General

W.L. F.C. pH.

Company Time	Cont'r Time	Start	Stop	Interval
Drill		9⁰⁰	8³⁰	½
Rig Serv & BOPs Check		8³⁰	8⁴⁵	¼
Drill		8⁴⁵	10⁴⁵	2
Circ To Survey		10⁴⁵	11⁰⁰	¼
Survey 2671 - 1¼		11⁰⁰	11¹⁵	¼
Drill		11¹⁵	400	4¾

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller Al Noren	8
Derrick J Lappenbush	8
Floor W. Lappenbush	8
Floor W. White	8
Floor	
Motor F. Lappenbush	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
2722	80	2802	7¾	84.	21	6"	2⅞	45.000			

Stands 35 2185.04 Singles

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	X55R	3/14	30202	40	44.	624	52			RUN

D. Collars 602.20 Other Ft. C.B. Ft. Subs. Ft. 2.20 Ft. Up On Kelly TOTAL

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.8	8.8	8.8	8.8
VISCOSITY	55	75	70	64
GEL	PV 23	YP - 22.		

Additives: DEL - 1000 lbs. CMC. 50 lbs. DV68 1 gal

At Surveys Degree

MOTOR HOURS 1 2 3 4 5 Next Oil Change

PUMPS	No. 1	No. 2
Pressure	600	650 650 650
Model	D 300	C 250
S.P.M.	48	50 50 50
Liner Size	5½ x 15	Mud Roll 5½ x 15

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

General

W.L. 7.4 F.C. pH.

Company Time	Cont'r Time	Start	Stop	Interval
Drill 7⅞" Hole		4⁰⁰	5⁰⁰	1
Rig Service & B.O.Ps		5⁰⁰	5¹⁵	1/4
Drill		5¹⁵	12⁰⁰	6¾

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 _____

DAY WORK RECORD

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

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. _____ LOCATION HORNRCANDEL ET AL EABUSS S-05 AREA Fort Simpson DATE MARCH 8 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller John Robinson	8
Derrick Jim Herman	8
Floor Les Spiegelhoff	8
Floor Kent Williams	8
Floor	
Motor Norm Savard	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
2257	106	2363	7½	80	21	6	2⅞				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	XSSR	3-14	30202	40	50	188	13¾			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.8	8.8	8.8	8.8
VISCOSITY	48	54	52	53
GEL				

Additives: GEL - 1200 lbs. DV68 - 2 gals.

At Surveys Degree: 2269 1¾

MOTOR HOURS: 1 2 3 4 5

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	800	800
Model	D 300	C 250
S.P.M.	64	64
Liner Size	5½ x 14	5½ x 15

TANKS

W.L. 8.4 F.C. 4/32 pH.

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

General

Stands 74 Singles 2 Ft. 60.49 | D. Collars 602.20 | Other Ft. | C.B. Ft. | Subs. Ft. 2.20 | Ft. Up On Kelly — | TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller H. M. RITTMER	12
Derrick L. BREMAN	12
Floor F. HARDISTY	12
Floor WM HUNTER	12
Floor	
Motor J DOIGDE	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
2363	97	2460	7¾	82m	21	6	2⅞				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	XSSR	3/14	30202	40	50	282	21¼			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	8.9	8.9	8.9	8.9
VISCOSITY	45	50	51	50
GEL	PV-23		YP 24	

Additives: gel 1300 CMC 50 DV68 - 19 gal

At Surveys Degree

MOTOR HOURS: 1 2 3 4 5

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	800	800
Model	D 300	C 250
S.P.M.	64	64
Liner Size	5½ x 14	5½ x 15

Mud Roll

W.L. F.C. pH.

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

General

Stands 29 Singles 180827 | D. Collars 60220 | Other Ft. | C.B. Ft. | Subs. Ft. 2.20 | Ft. Up On Kelly 22 | TOTAL

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller J Robinson	4
Derrick A HERMAN	4
Floor T SPIEGLHOFF	4
Floor K WILLIAMS	4
Floor	
Motor N SAVARD	4
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	87	2547	7¾	83	21	6	2⅞				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7⅞	XSSR	3-14	30202	40	50	369	29¼			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.9	8.9	8.8	8.8
VISCOSITY	50	51	48	50
GEL	PV-22		YP-23	

Additives: gel - 1800 lbs DV68 - 1 gal

At Surveys Degree

MOTOR HOURS: 1 2 3 4 5

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	800	875
Model	D 300	C 250
S.P.M.	64	64
Liner Size	5½ x 14	5½ x 15

Mud Roll

W.L. 8.4 F.C. 4/32 pH.

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

General

Stands 41 Singles 190233 | D. Collars 602.20 | Other Ft. | C.B. Ft. | Subs. Ft. 2.20 | 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
Drill	12:00	12:45	3/4
Rig Serv + Check BOPs	12:45	1:00	1/4
Survey @ 2269	1:00	1:15	1/4
Drill	1:15	8:00	6¾
Company Time	Cont'r Time		
Drill	8:00	10:00	2
Rig Serv + BOPs check	10:00	10:15	¼
Drill	10:15	4:00	5¾
Company Time	Cont'r Time		
Drill	4:00	6:15	2¼
Rig Serv + BOPs Check	6:15	6:30	¼
Drill	6:30	12:00	5½
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. 12 LOCATION Horn Rcanden et al Sebert Sec AREA Fort Simpson DATE Mar 7 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller J Robinson	8
Derrick A Herman	8
Floor K Williams	8
Floor T Spielhoff	8
Floor	
Motor N Savard	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
1965	115	2080	5	68	15	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1	7 7/8	X 3A	3-12	30399	15	70	1461	2 3/4			3 3 I
2	7 7/8	X 1 G	2 8661	3/13 1/12	10-12	60	99	4 3/4			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT		8.9	8.9	8.8
VISCOSITY		42	46	44
GEL				

Additives: Gel - 1000 #; Viscine 50 #; DV 68 - 1 Gal

At Surveys Degree: 2065 1/2

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	950	925 / 900
S.P.M.	60	64 / 64
Model	D 300	D 250
Liner Size	5 1/2 X 14	5 1/2 X 15

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 23 1/1 1550.07; Singles; D. Collars 43062; Other Ft.; C.B. Ft.; Subs. Ft. 2.20; Ft. Up On Kelly; TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller H.M. Dittmer	12
Derrick Bremen	12
Floor F Hardisty	12
Floor Wm Hunter	12
Floor	
Motor J Doigde	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
2080	98	2178	4 1/4	69 M	15	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2	7 7/8	X 1 G	2/3 X 12	28661	15	66	209	9			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.0	9.0	9.0	Tr
VISCOSITY	42	41	41	1p
GEL				

Additives: Gel 1300; CMC 50; DV 68 - 1 gal

At Surveys Degree: 2158 1 1/4; 2178 1 3/4

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	900	900 / 900
S.P.M.	64	64 / 64
Model	D 300	C 250
Liner Size	5 1/2 X 14	5 1/2 X 15

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 27; Singles 171649; D. Collars 43062; Other Ft.; C.B. Ft.; Subs. Ft. 220; Ft. Up On Kelly 11; TOTAL

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller J Robinson	4
Derrick A Herman	4
Floor T Spielhoff	4
Floor K Williams	4
Floor	
Motor N Savard	4
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
2178	79	2257	6 1/4	79	21	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
3	7 7/8	X55R	[illegible]	30202	35	50	79	6 1/4			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	Tr	8.9	8.8	8.8
VISCOSITY	1p	50	53	44
GEL		PV-20	YP-20	

Additives: Gel - 700; CMC - 50; DV - 65 = 2 gal

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS	No. 1	No. 2
Pressure	900	900 / 900
S.P.M.	64	64 / 64
Model		
Liner Size	5 1/2 X 14	

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

General: Mud Roll

W.L. F.C. pH.

Stands 36 1/2 12; Singles; D. Collars 60220; Other Ft.; C.B. Ft.; Subs. Ft. 22; Ft. Up On Kelly 12; TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drill	12 00	12 15	1/4
Rig Serv & Check Bops	12 15	12 30	1/4
Trip	12 30	2 45	2 1/4
Clean 45' To Btm	2 45	3 00	1/4
Drill	3 00	6 45	3 3/4
Survey @ 2065	6 45	7 00	1/4
Drill	7 00	8 00	1
Company Time / Cont'r Time			
Drill 7 7/8 Hole	8 00	8 30	1/2
Rig Serv & Bops check	8 30	8 45	1/4
Drill	8 45	11 00	2 1/4
Survey	11 00	11 15	1/4
Drill	11 15	12 45	1 1/2
Circ	12 45	1 15	1/2
Survey	1 15	1 30	1/4
Hoist	1 30	3 00	1 1/2
Run in Collar & pick 6 more up	3 00	4 00	1
Company Time / Cont'r Time			
Run in Hole	4 00	5 00	1
Rig Serv & Bops check	5 00	5 15	1/4
Ream 45 ft To Bottom	5 15	5 45	1/2
Drill	5 45	12 00	6 1/4
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.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Horn River Basin Ebbutt S-05 AREA Fort Simpson DATE Mar 6 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller J Robinson	8
Derrick A Harman	8
Floor T Spielhofer	8
Floor K Williams	8
Floor	
Motor N Sanford	6
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
920	410	1330	7 1/4	57	15	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1	7 7/8	X3A	3-12	30399	10-12	85	820	12 1/4			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.9	9.0	9.0	9.2
VISCOSITY	35	34	37	34
GEL				

Additives: GEL = 2000 lbs. DV-68 = 2 gals.

At Surveys Degree		
[illegible]		
1093	1/2	
1313	1/2	

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	950	950
Model	300	950
S.P.M.	44	60
Liner Size	5 1/2 x 14	

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 15 | Singles 871.11 | D. Collars 43062 | Other Ft. | C.B. Ft. | Subs. Ft. 3.20 | Ft. Up On Kelly | TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller H.M. Dittmer	12
Derrick L Breman	12
Floor F Hardisty	12
Floor Wm Hunter	12
Floor	
Motor J Doig DE	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
1330	370	1700	7 1/2	62 m	15	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1	7 7/8	X3A	3/11	30399	15	70	1190	20 1/4			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT	9.2	9.1	9.0	8.7
VISCOSITY	33	33	33	32
GEL				

Additives: gel #2000 DV 68 - 2 gal

At Surveys Degree		
1501	1/2	

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	800	800
Model	D 300	800
S.P.M.	69	67
Liner Size	5 1/2 x 14	64
Pressure	Mud Roll	
Model		
S.P.M.		
Liner Size	5 1/2 x 15	

Water 24" Streams

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 20 124.764 | Singles | D. Collars 43062 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 20 | TOTAL 1760

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller J Robinson	4
Derrick A Harman	4
Floor K Williams	4
Floor T Spielhofer	4
Floor	
Motor N Sanford	4
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
1700	265	1965	6 3/4	65	15	6	2 7/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1	7 7/8	X3A	3-12	30399	15	70	1455	21 1/2			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	8.8	8.8	8.8	8.8
VISCOSITY	35	35	32	35
GEL				

Additives: Gel 2500 # DV68 2 1/2 Gal Hilite CMC - 25 #

At Surveys Degree		
1720	1	
1815	3/4	
1940	1 1/4	

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	800	950
Model	300	950
S.P.M.	61	60
Liner Size	5 1/2 x 14	60
Pressure		
Model		
S.P.M.	Mud Roll	
Liner Size	5 1/2 x 15	

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 24 497.97 | Singles | D. Collars 430.62 | Other Ft. | C.B. Ft. | Subs. Ft. 220 | Ft. Up On Kelly 6 | TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drill 7 7/8 Hole	12 00	2 45	2 3/4
Survey @ 1093	2 45	3 00	1/4
Drill	3 00	3 30	1/2
Rig Serv + Check BOPs	3 30	3 45	1/4
Drill	3 45	7 15	3 1/2
Survey @ 1313	7 15	7 30	1/4
Drill	7 30	8 00	1/2
Company Time Cont'r Time			
Rig Serv & BOPs	8 00	8 15	1/4
Drill	8 15	11 15	3
Survey 1501 - 1/2	11 15	11 30	1/4
Drill	11 30	400	4 1/2
			8
Company Time Cont'r Time			
Drill	400	430	1/2
Survey 1720 - 1	430	445	1/4
Rig Serv & BOPs	445	500	1/4
Drill	500	745	2 1/4
Survey @ 1815	745	800	1/4
Drill	800	10 00	2
Survey @ 1908 (Miss Run)	10 00	10 15	1/4
Drill	10 45	11 00	3/4
Survey @ 1940	11 00	11 00	3/4
Drill	11 15	12 00	3/4
Company Time Cont'r Time			

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

R.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. 12 LOCATION Hon R Sandalist Ck. About 1 mile AREA Fort Simpson DATE March 5, 1974

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller J Robinson	8
Derrick A Herman	8
Floor K Williams	8
Floor T Spielhoff	8
Floor	
Motor N Spurrier	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	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT				
VISCOSITY				
GEL				

Additives

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
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

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller H M Dittmer	12
Derrick Len Brennan	12
Floor Fred Handisyde	12
Floor Wm Hunter	12
Floor	
Motor Jim Doigde	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
1	7 7/8	X3A	3/11	30399							

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

Additives: Bicarb of Soda #50; gell 2000; C.M.C. #25; DV68 - 1 gal

At Surveys Degree

MOTOR HOURS	Next Oil Change
1	
2	
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

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller S Robinson	4
Derrick A Herman	4
Floor T Spielhoff	4
Floor K Williams	4
Floor	
Motor N Spurrier	4
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
510	410	920	6	55	15	6	2 1/2				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1	7 7/8	X3A	3-12	30399	8-10	160	410	5			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT		8.4	8.6	8.8
VISCOSITY		34	35	35
GEL				

Additives: GEL = 500 lbs.

At Surveys Degree: 692 ½; 907 0°

MOTOR HOURS	Next Oil Change
1	
2	
3	
4	
5	

PUMPS		4 p.m.	6 p.m.	8 p.m.	10 p.m.
No. 1	Pressure	750	750	750	750
Model P3B	S.P.M.	64	64	64	64
	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

General

W.L. F.C. pH.

Stands 741 / Singles 466.04 / D. Collars 430.62 / Other Ft. / C.B. Ft. / Subs. Ft. 2.30 / Ft. Up On Kelly 19 / TOTAL

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Rig Service	12 00	12 15	1/4
Nipple Up	12 15	2 15	2
Drill Mouse Hole	2 15	6 15	4
Pressure Blind Rams To 1000#	6 15	6 45	1/2
Lay Down 7" Drill Collars	6 45	8 00	1 1/4

Company Time Cont'r Time

Pick up 9 collar and Run in Hole & Lay Down 6 joints of 4" Pipe	8 00	10 00	2
Cir	10 00	10 15	1/4
Pres Pipe Ram 1200 OK	10 15	10 30	1/4
Pres Hydril & manifold	10 30	10 45	1/4
Drill out float & shoe	10 45	12 45	2
Clean Tanks & Jack Rig & mix mud	12 45	400	3 1/4

Company Time Cont'r Time

Jack Rig	400	500	1
Rig Sen & motor shut off	500	515	1/4
Drill	515	745	2 1/2
Survey 692 - ½	745	800	1/4
Drill	800	1100	3 1/2
Survey	1100	1105	1/4
Drill	1105	1200	1/4

Company Time Cont'r Time

Total Contractor Time _____ Hrs. Toolpusher _____

Total Company Time _____ Hrs. Approved by _____

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

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

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. 12 LOCATION Hare Rendel Rt Pl Robert I-05 AREA Fort Simpson DATE Mar 4 1971

Tour — Midnight - 8 a.m. Specify actual hours worked	Hrs.
Driller J Robinson	8
Derrick A Herman	8
Floor K Williams	8
Floor T Spielhoff	8
Floor	
Motor N Sawaqd	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
485	25	510	1 3/4	47	6	6	2 1/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
2A	12 1/2	OSC3	3/32 3/32	RETIP	8	160	44	2 1/2			2 2 I

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	9.5	9.6	9.7	
VISCOSITY	56	70	100	
GEL				

Additives

At Surveys Degree: 510 1/0

MOTOR HOURS 1 2 3 4 5

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	700	200
Model	D 300	C 250
S.P.M.	64	64
Liner Size	5 1/2 x 14	5 1/2 x 15

W.L. F.C. pH.

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

General

Stands 5+1 | Singles 217+13 | D. Collars 26 17 6 | Other Ft. | C.B. Ft. | Subs. Ft. 724 | Ft. Up On Kelly 16 | TOTAL

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
Circ + Con Mud to Run Csg	1 45	2 15	1/2
Survey + Blow Mudlines	2 45	2 50	1/4
Trip	2 50	4 15	1 3/4
Circ + Cond Hole for Csg	4 15	4 45	1/2
Hoist	4 45	5 45	1
Pick up to Run Csg	5 45	6 15	1/2
Running Csg	6 15	8 00	1 3/4

Company Time Cont'r Time

Run Csg	8 00	9 15	1 1/4
Circ Csg	9 15	10 30	1 1/4
Cementing	10 30	11 00	1/2
W.O.C.	11 00	4 00	5

Ran 15 jts + landing jt of 8 5/8 - 24# - 8rd - J55 surface csg. Davis float collar + guide shoe + 1 centralizer. Total of 522.36 landed @ 505' K.B. Cemented by B.J. w/ 316 sx Pozmix cement + 2% calc. Plug down @ 11 00 Am March 4. Good cement returns

Company Time Cont'r Time

W.O.C.	4 00	7 30	3 1/2
Back off Top Joint	7 30	8 00	1/2
Nipple Up	8 00	12 00	4

Company Time Cont'r Time

Tour — 8 a.m. to 4 p.m. Specify actual hours worked	Hrs.
Driller Hm Dittmer	12
Derrick Len Berman	12
Floor Fred Hardisty	12
Floor Wm Hunter	12
Floor	
Motor Jim Dougde	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
					6	6	2 1/8				

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

W.L. F.C. pH.

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

General

Stands | Singles | D. Collars 26 96 | Other Ft. | C.B. Ft. | Subs. Ft. | Ft. Up On Kelly 16 | TOTAL

Tour — 4 p.m. to Midnight Specify actual hours worked	Hrs.
Driller J Robinson	4
Derrick A Herman	4
Floor K Williams	4
Floor T Spielhoff	4
Floor	
Motor N Sawaqd	4
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

MOTOR HOURS 1 2 3 4 5

Next Oil Change

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

W.L. F.C. pH.

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 _____

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. 12 LOCATION Hon R Candel Et Al Ebbett 505 AREA Fort Simpson DATE Mar 3 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller J Robinson	
Derrick A Herman	
Floor T Spielhoff	
Floor K Williams	
Floor	
Motor X Savard	
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
79	210	289	6 3/4	45	3 6	7 6	2 3/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1A	12 1/4	OSC3J	3/20 1/32	RetiP	6/12	180	289	6 1/2 11 1/2			

MUD	12 Mn.	2 a.m.	4 a.m.	6 a.m.
WEIGHT	8.7	8.9	9.2	9.4
VISCOSITY	48	48	47	46
GEL				

Additives

At Surveys	Degree
118	1/2
221	1/4
282	1/2

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	100	160 160 160
Model	D 300	C 250
S.P.M.	64 64 64 64	
Liner Size	5 1/2 x 14	5 1/2 x 15

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 26 96 | Other Ft. | C.B. Ft. | Subs. Ft. 72 4 | Ft. Up On Kelly | TOTAL

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller Hm DITTMER	12
Derrick LEN BREMAN	12
Floor FRED HARDISTY	12
Floor Wm HUNTER	12
[redacted]	
Motor Jim Doyde	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
289	117	406	7	47m	3 6	7 6	2 3/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1A	12 1/4	OSC3C	3/20 1/32	RetiP	4-6	150	406	17 1/2			

MUD	8 a.m.	10 a.m.	12 Noon	2 p.m.
WEIGHT				
VISCOSITY	45	48		
GEL				

Additives: Gel = 2200; Lime = 25; Water; Sawdust 10 Bags

At Surveys	Degree
309	1/4
334	1/4
403	1/2

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	150 150 150	600 600
Model	D 300	C 250
S.P.M.	64 64	
Liner Size	5 1/2 x 14	5 1/2 x 15

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 2 | Singles | D. Collars 26 96 | Other Ft. | C.B. Ft. | Subs. Ft. 72 4 | Ft. Up On Kelly 2 8 | TOTAL

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller J Robinson	4
Derrick A Herman	4
Floor K William	4
Floor T Spielhoff	4
Floor	
Motor X Savard	4
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
406	79	485	3 1/4	47	3 6	7 6	2 3/8				

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
1A	12 1/4	OSC3G	1/22 2/20	RetiP	4-8	160	466	20			
2A	12 1/4	OSC3	—	RetiP	8	156	19	3 1/4			

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT	9.5	9.5		
VISCOSITY	50	50		
GEL				

Additives: Water; 2 1000# Gel; 20 sks Sawdust

At Surveys	Degree
466	1/4

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS	No. 1	No. 2
Pressure	150 150	
Model	D 300	C 250
S.P.M.	64 64	
Liner Size	5 1/2 x 14	5 1/2 x 15

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 3 | Singles 186 75 | D. Collars 261 96 | Other Ft. | C.B. Ft. | Subs. Ft. 72 4 | Ft. Up On Kelly | TOTAL 1

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Drill	12 00	1 00	1
Rig Serv	1 00	1 15	1/4
Survey @ 110	1 15	1 30	1/4
Drill	1 30	4 45	3 1/4
Survey @ 194 (Missrun)	4 45	5 00	1/4
Drill	5 00	5 45	3/4
Survey @ 221	5 45	6 00	1/4
Drill	6 00	7 30	1 1/2
Survey @ 282	7 30	7 45	1/4
Drill	7 45	8 00	1/4
Company Time / Cont'r Time			
Drill	8 00	9 00	1
survey	9 00	9 15	1/4
Rig Serv	9 15	9 30	1/4
Drill	9 30	11 45	2 1/4
survey	11 45	12 00	1/4
Drill	12 00	3 30	3 1/2
survey	3 30	3 45	1/4
Drill	3 45	4 00	1/4
Company Time / Cont'r Time			
Drill	4 00	6 30	2 1/2
survey	6 30	6 45	1/4
Rig Serv	6 45	7 00	1/4
strap out of Hole	7 00	8 00	1
Run In (Bridges @ 300)	8 00	9 00	1
Mix Mud & Lost Circ Material	9 00	10 00	1
Ream Bridges from 300'	10 00	11 15	1 1/4
Drill 12 1/4 Hole	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. Total Company Time _____ Hrs.

Toolpusher _____ Approved by _____

KENTING OILWELL DRILLING

DIVISION OF KENTING EXPLORATION SERVICES LTD.

DAILY DRILLING REPORT

RIG No. F3 LOCATION Horn R Candau et al Abbott S-05 AREA Fort Simpson DATE March 2 1971

Tour — Midnight - 8 a.m.

Specify actual hours worked	Hrs.
Driller A Norell	8
Derrick J Lappenbush	
Floor W Lappenbush	
Floor W Whatc	
Floor	
Motor F Lappenbush	
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.
WEIGHT				
VISCOSITY				
GEL				

Additives

At Surveys Degree

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

PUMPS		
No. 1	Pressure	
Model D-300	S.P.M.	
	Liner Size	5½ x 14
No. 2	Pressure	
Model C-250	S.P.M.	
	Liner Size	5½ x 15

W.L. F.C. pH.

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	

Tour — 8 a.m. to 4 p.m.

Specify actual hours worked	Hrs.
Driller John Robinson	8
Derrick Gene Helman	8
Floor Ken Williams	8
Floor Ted Strickhorn	8
Floor	
Motor Norman Sauder	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	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	Pressure	
Model D-300	S.P.M.	
	Liner Size	5½ x 14
No. 2	Pressure	
Model C-250	S.P.M.	
	Liner Size	5½ x 15

W.L. F.C. pH.

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	

Tour — 4 p.m. to Midnight

Specify actual hours worked	Hrs.
Driller Jim Dittmer	8
Derrick Jim Brennan	8
Floor Fred Hardisty	8
Floor Wm Hunt	8
Floor	
Motor Jim Doig DE	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
0	79	79	3¾		2	7					

BITS No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
RR7	12¼	OSC1C	20 20 20	85684							

MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.
WEIGHT				
VISCOSITY				55
GEL				

Additives: Gel #3600; Caustic #100; Lime #25

At Surveys Degree: 79 ¾

MOTOR HOURS	
1	
2	
3	
4	
5	

Next Oil Change

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

W.L. F.C. pH.

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	Down
TOTAL	

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

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

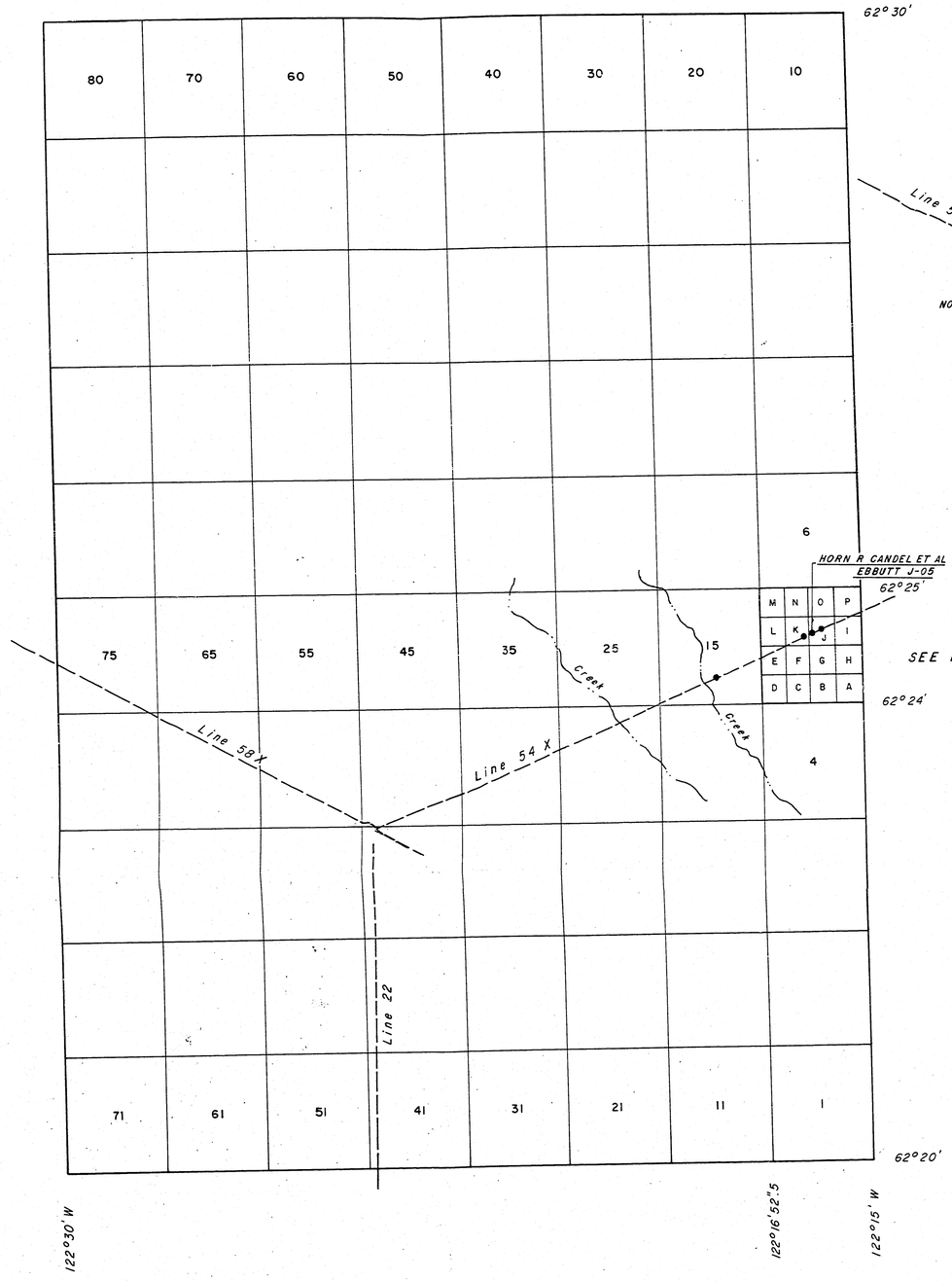
Total Contractor Time _____ Hrs. Toolpusher _____

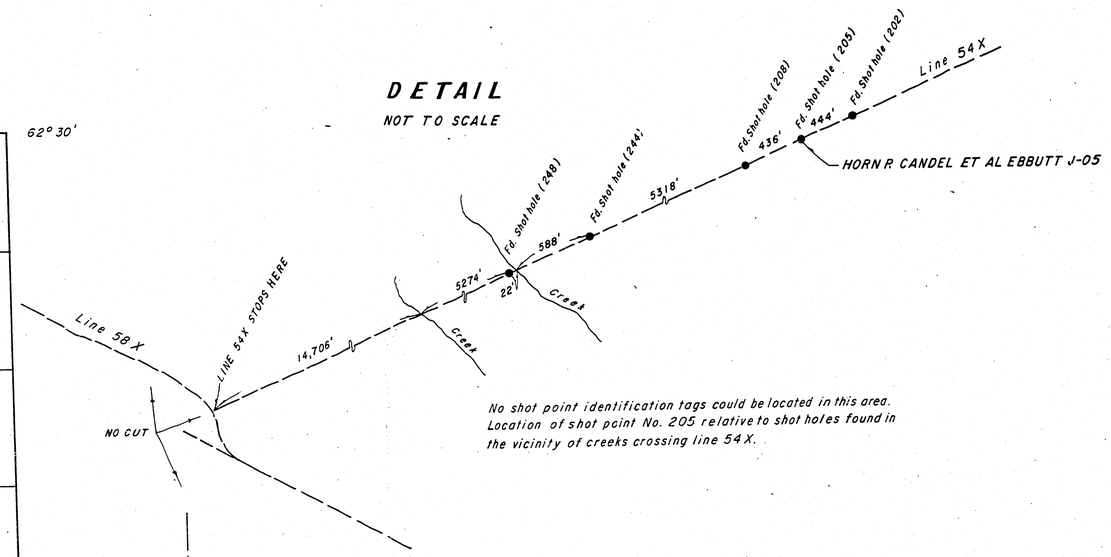
Total Company Time _____ Hrs. Approved by _____

DAY WORK RECORD

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

REMARKS	Time Start	Stop	Interval
Prepare to dig Rathole	12 00	1 30	1½
Dig Rathole	1 30	3 30	2
W.O Water	3 30	4 30	1
Dig Rathole	4 30	5 30	1
W.O Water	5 30	6 45	1¼
Dig Rathole	6 45	7 45	1
W.O Water	7 45	8 00	¼
Company Time / Cont'r Time			
Wait on Water	8 00	9 00	1
Rig Serv	9 00	9 15	¼
Dig Rat Hole	9 15	4 00	6¾
Company Time / Cont'r Time			
Rig Ser	4 00	4 15	¼
Dig Rat Hole	4 15	5 00	¾
mix mud to spud	5 00	8 00	3
Drill 12¼ Hole	8 00	11 30	3½
Survey	11 30	11 45	¼
Drill 12¼ Hole	11 45	12 00	¼
Spudded at 8 00 pm			
Company Time / Cont'r Time			





No shot point identification tags could be located in this area. Location of shot point No. 205 relative to shot holes found in the vicinity of creeks crossing line 54 X.

Note: Well is to be drilled at Shot Point No. 205, Line 54 X.

HORN RIVER RESOURCES LTD.

PLAN

SHOWING SHOT POINT LOCATION OF

HORN R CANDEL ET AL EBBUTT J-05

CAMSELL BEND AREA

NORTHWEST TERRITORIES

Scale: 1" = 1 mile

GRID AREA: 62° 30' N., 122° 15' W.

Certified correct, February 3rd, 1971.

Dominion Land Surveyor

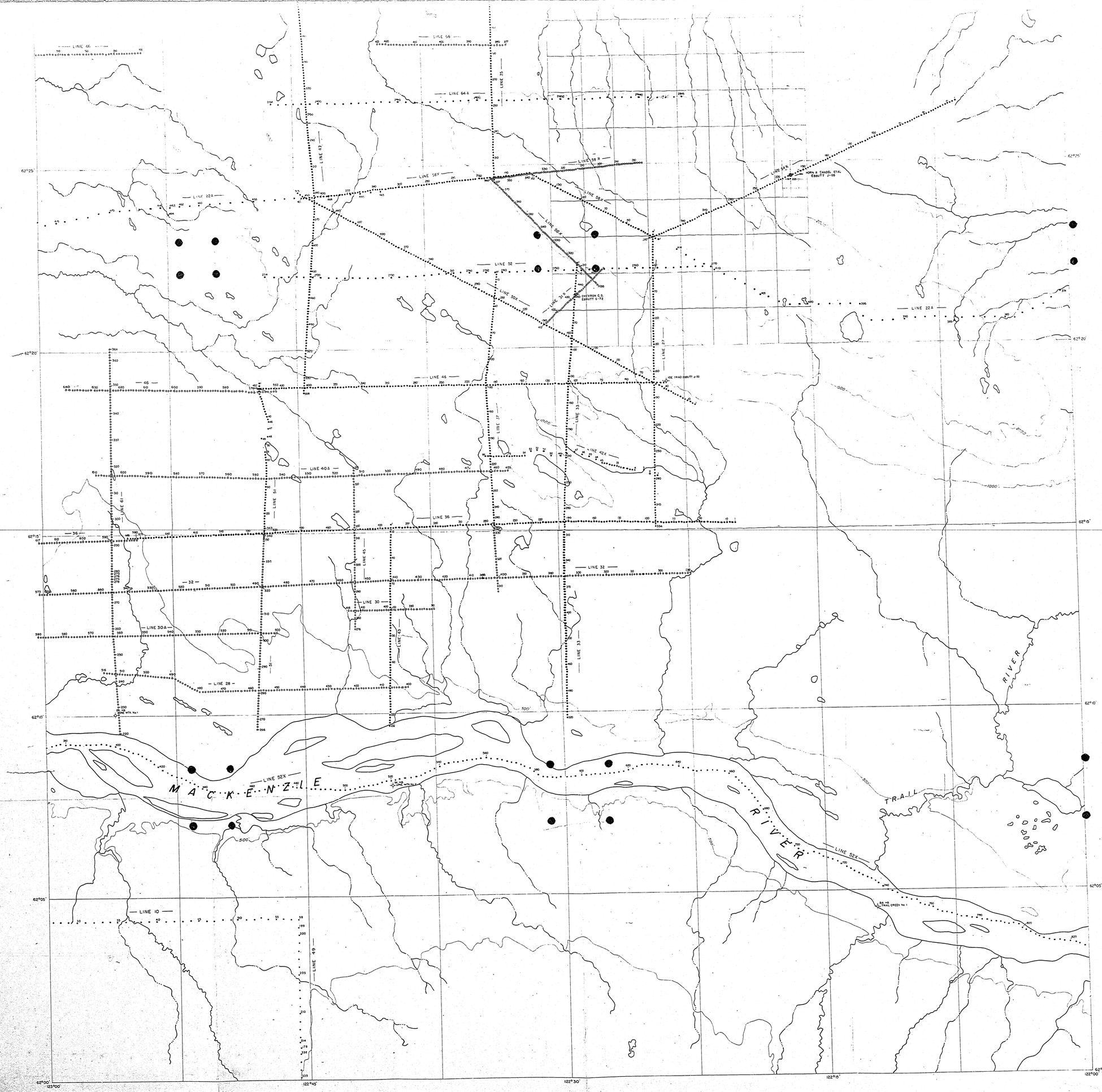
SIGNATURES FOR
HORN RIVER RESOURCES LTD.

NOTE: Relative to Seismic information supplied by client.

CANADIAN ENGINEERING SURVEYS CO. LTD.
EDMONTON ALBERTA

JOB NO. :	C-6491
DATE :	Feb. 3rd /71
DRWG. NO.:	6491-M-1

N.T.S. 95-J

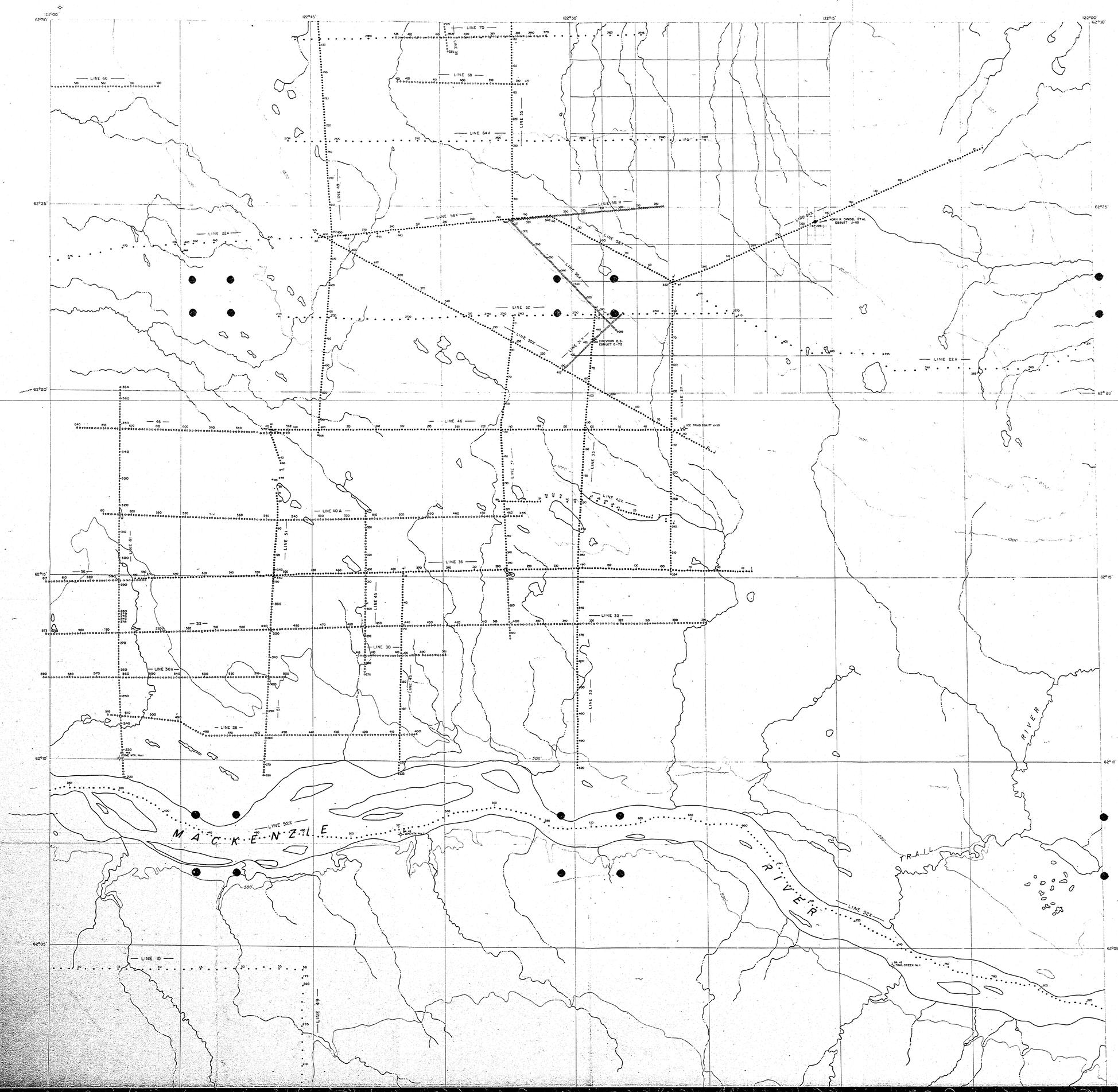


NOTE FOR INDEX MAP SEE F-6797-E-1

REVISIONS	CANADIAN DELHI OIL LTD. CALGARY ALBERTA
	95 - J - SE EBBUTT AREA HORN R CANDEL ET AL EBBUTT J-05 GRID 62°30' 122°15'

SCALE	DATE	DRAWN
1 INCH = 1 MILE	JAN. 12, 1970	

SEISMIC



NOTE FOR INDEX MAP SEE F-6797-E-1

REVISIONS	CANADIAN DELHI OIL LTD. CALGARY ALBERTA

95-1-95