

GPD NOEL ET AL MILLS WEST

M-65 AND M-65 A

Drilling Authority No. 433
Date Issued 23 March 1970

WELL NAME GPD NOEL et al Mills West M-65
FIELD
LOCATION: Unit M Area: 65 Grid 61-50-119-15
Longitude 61-46-48 Longitude 119-27-40
U.W.L.R. 61.74666 — 119.46111
U.W.I. 300M656150119150

Rig Release Date
Status
Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
23/3/70	Application for a Drilling Authority. Well Completion Data. Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
3/4/70	Application to Abandon a Well or Suspend Drilling
	Application to Alter Condition of a Well.
9/6/70	Well History Supplement. Well Completion Data. Work-over Report No.
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells — Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells — Vitter's Method.
	M.P.R. — Oil — Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report Logs. Large scale..... Small scale.....



Drilling Authority No. 433
Date Issued March 23, 1970

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

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

GPD NOEL ET AL MILLS WEST M-65

Well name and number
Permit No. 4314 Lease No. N.A.
Northern Oil Explorers & Andex Oil Co. 1322 & 1642 1271 & 1701
(Permitter, Licensee, Lessee) Ltd. Exploratory Licence No.
Great Plains Development Company of 1275 & 1640
(Operator) Canada, Ltd. Exploratory Licence No.

Location: Unit M Section 65 Grid 61°50'119°15'
Latitude 61°44' 48" Longitude 119°27' 40"
From Established Reference Marker 29,248' North Lat. 61°40'N 6,757 East Long.
Universal Well Location Reference Lat. 61.74686°N. Long. 119.46111°W 119°30'W

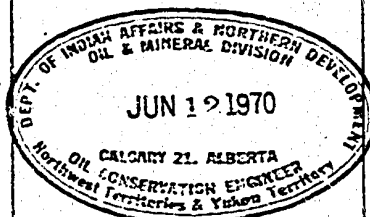
	DATE	DEPTH	Pool(s)
Spudded	Mar. 24/70	0	Interval(s) open to production
Suspended			
Resumed Operations			
Finished Drilling	Mar. 29/70	1548	
Deepened			Elevation: Gr. 756.1 K.B. 766
Complete (gas/oil)			Rig No. 3
Abandoned	Mar. 31/70	1548	Drilling Contractor Tri-City Drilling Ltd.
Rig released	Mar. 31/70	1543	Contractor's Business Licence No. 675 & 787

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
7	J-55	20#	250'	255'	90 sax. cement + 2% CaCl ₂
1.					
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
Glacial Till	0-260				No cores cut			
Hay River	260	+506						
Horn River Shale	1140'	-374						
Lonely Bay	1372'	-606						

LOG RECORD			
Run No.	Type of Log	From	To
	No logs run		



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well or Suspend Drilling

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

Name and number of well **GFD 1001 et al Mills West M-65**
Location: Unit **M** Section **65** Grid **61° 50' N 119° 15' W**
Latitude **61° 44' 43"** Longitude **119° 27' 40"**
From Established Reference Marker **29,245' North Lat. 61° 40' N 6,757' E Long. 119° 30' W**
Universal Well Location Reference **Lat. 61-245000° N, Long. 19.46111° W**
Permit No. **4314** Lease No. **E.A.**

Northern Oil Explorers Limited, and Andex Oil Co. Ltd.
(Partners, Limited, Limited)

Date of commencement of proposed program **March 30, 1970**

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at
Gas at
Water at **1533' - sulphurous water flow.**
Total Depth **1,545'** Date of last operations **March 30, 1970**
Present condition of well

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Palled
1. 7"	20"	270	250	90 sack + 21 CaCl₂	0
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

No.	Plug Position	Geological Formation	Number of Sacks of Cement	Remarks
1	1,410 - 1,250'	Across top to Lonely Bay	50	Pelt for after 8 hrs.
2	300 - 200'	Across Surface Casing Shoe	85	Pelt for after 8 hrs.
				Surface casing cut off
				3' below ground. 5 sack
				cement plug plate welded
				on & marker installed

The following logs have been run **Nil**
Other operations proposed **Rig will be skidded 100' north of original site due to poor gravel conditions and a new hole will be spudded.**

Operations to be carried out by **Great Plains Develop.** Contractor Licence No. **675**
Address **736 - 8th Ave. S.W., Calgary 2, Alberta** Address **14305 - 120th Ave., Edmonton**

Responsible Agent in field **George Lafan**

Dated at **Calgary**, this **31** Day of **March**, 19 **70**

Signed by **[Signature]** Company **GREAT PLAINS DEVELOPMENT**
Title **Drilling Superintendent** Operator's Exploratory Licence No. **1275 & 1640**

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 30th March 1970 and 1st April 1970.

Dated **3rd April**, 19 **70**

[Signature]
Oil Conservation Engineer

POOR COPY

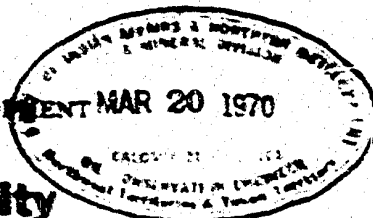
Drilling Authority No. _____

Project No. _____

File No. _____



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION
OIL AND NATURAL GAS 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 GPD NOEL et al Mills West M-65
Location: Unit M Section 65 Grid 61° 50', 119° 15'
Latitude 61° 44' 48" Longitude 119° 27' 40"
From Established Reference Marker 29,248' North Lat. 61° 40' N. 6.75' E from
Universal Well Location Reference Lat. 61.74965 Long. 119.46111
Elevation: Ground 756.1 K.B. 766.1 feet above sea level
Well is expected to produce from Lonely Bay Formation formation at a depth
of about 1,300 feet. Expected total final depth 2,000
Area assigned to well _____
(For Oil Conservation Engineer's use only)

Permit No. 4314 Lease No. N.A. Acreage 60,622
Permitter, licensee, or lessee Northern Oil Explorers Limited & Andax Oil Co. Ltd.
Exploratory Licence No. 1,332 & 1642 1271
Surface owned by Crown or Crown
(If applicant 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	Notes or Remarks
1 7"	20#	J-55	New	200	80 socks
2					
3					
4					
5					

Expected water, gas, and oil horizons and type of control equipment Surface casing will control gas and water in the glacial drift; hydrostatic pressure of mud column and 6" x 900 series BOP's to control all formations below surface casing.

Well will be drilled with Rotary Rig No. 3 by Tri-City Drilling Ltd.
(Drilling Contractor or company)
14305 - 120th Avenue,
Edmonton, Alberta.

Responsible agent of applicant:— Contractor's Business Licence No. 675
At well G. M. Hunter At registered office N. H. Lehto,
Address 736 - 8th Avenue S.W., Calgary 2, Alberta Address 736 - 8th Avenue S.W., Calgary 2, Alta.
It is understood that if changes become necessary, notice of the change of plan will be submitted.
Dated at Calgary, this 20 day of March 19 70
Signed by [Signature] Company GREAT PLAINS OILFIELD COMPANY OF CANADA LTD.
Title Drilling Superintendent Operator's Licence No. 1275 & 1640

(For Resource Management Division use only)

APPROVED

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

1. The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.
2. During well drilling and testing operations, every effort shall be made to ensure

Dated 23rd March 19 70 Please see over page
Oil Conservation Engineer

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

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

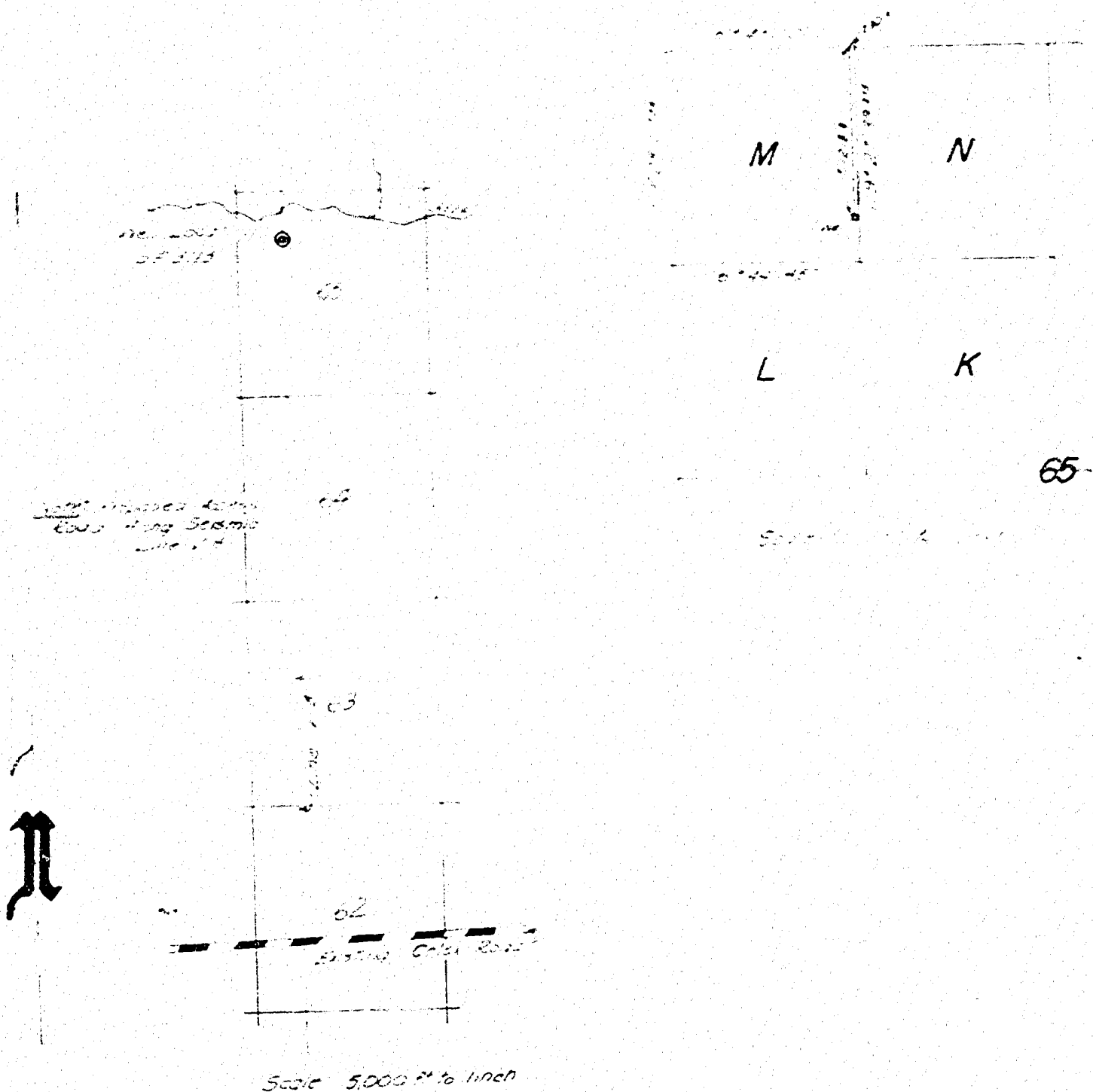
3. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
4. Production casing program is to be approved by the Oil Conservation Engineer before the casing is run.
5. This Drilling Authority is being issued contingent upon registration by Andex Oil Co. Ltd. with the Registrar of Companies in the Northwest Territories, and the receipt in this office of a letter from Andex Oil Co. Ltd. appointing Great Plains Development Company of Canada, Ltd. as Operator of Permit 4314.

B.H.J. Thoms

B.H.J. Thoms, Oil Conservation Engineer

GPD NOEL ET AL MILLS W

● Unit M Section 65 Grid Area $61^{\circ}50' - 119^{\circ}15'$
 Latitude $61^{\circ}44'48''$ Longitude $119^{\circ}27'40''$
 NORTHWEST TERRITORIES



Elevation 756 Ground
 Taken from Seismic Records

GREAT PLAINS DEVELOPMENT COMPANY
OF CANADA, LTD.

W. J. Geringerick P. Eng.

Erica Smith

Date March 20, 1970

Prepared by
 MIDWEST SURVEYS CO. LTD.



C-144-70

Drilling Authority No. 134
Date Issued 31 March 1970

WELL NAME GPD NOEL et al Mills West M-65-A
FIELD Area:
LOCATION: Unit X Section 65 Grid 61-50-119-15
Latitude 61-44-50 Longitude 119-27-40
U.W.L.R. 61.74722 — 119.46111
U.W.I. 3024656150119150

Rig Release Date: _____
Status: _____
Information Release Date: _____

CHANGE OF NAME:

DATE RECEIVED	INDEX
31-3-70	Application for a Drilling Authority.
	Well Completion Data.
	Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
10-4-70	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well.
9/6/70	Well History Supplement.
	Well Completion Data.
	Work-over Report No.
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells - Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells - Vitter's Method.
	M.P.R. - Oil - Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale..... Small scale.....



Drilling Authority No. 434
Date Issued March 23, 1970

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

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

Well name and number GFD NOEL ET AL MILLS WEST N-63-A

Permit No. 4314

Lease No. N.A.

Northern Oil Explorers & Amdex Oil
(Permitter, Licensee, Lessee) Co. Ltd.

Exploratory Licence No. 1322 & 1642 1271 & 1201

Great Plains Development Company of
(Operator) Canada, Ltd.

Exploratory Licence No. 1275 & 1640

Location: Unit N Section 65 Grid 61°50' 119°15'

Latitude 61°44' 50" Longitude 119°27' 40"

From Established Reference Marker 29.443' North Lat. 61°40' 6,757' East Long.

Universal Well Location Reference Lat. 61.74722° N. Long. 119.46111° W 119°30'

	DATE	DEPTH	Pool(s)
Spudded	March 31/70	0	Interval(s) open to production
Suspended			
Resumed Operations			
Finished Drilling	Apr. 6/70	1850'	
Deepened			Elevation: Gr. 756.3' K.B. 764
Complete (gas/oil)			Rig No. 3
Abandoned	Apr. 8/70	1850'	Drilling Contractor Tri-City Drilling
Rig released	Apr. 9/70	1850'	Contractor's Business Licence No. 675 & 787

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1. 7"	J-55	209	375.75	370'	170 sack. cement + 2% CoCl ₂
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
Glacial Till	0-260		No cores cut					
May River	260	+504						
Horn River Shale	1140	-376						
Lonely Bay	1379	-615						

LOG RECORD			
Run No.	Type of Log	From	To
	BHC SCR-C	1845	372
	S.N.P.	1846	371
	F.D.C.	1846	372
	D.I.L.	1844	371
	Lithology Plot	1846	13001



CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Fracing, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
April 8/70	1850	1730	30 sacks cement								
April 8/70	1470	1370	40 sacks cement + 2% CaCl ₂ Pelt at 1367'								
April 8/70	420	320	30 sacks cement + 2% CaCl ₂ Pelt at 300' 5 sack top plug Welded on steel plate and installed marker								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Min.	L.S.I. Mins.	F.S.I. Mins.	I.S.L.B.H.P.	F.S.I.B.H.P.	I.P.B.H.P.	F.F.B.H.P.	L.H.P.	F.H.P.	REMARKS
1	Apr 7/70	Lonsely Bay	1480	1610	-	60						722	722	Micro Fracture Failure
2	Apr 7/70	Lonsely Bay	1470	1610	110	60	60	648		94	148	769	762	Recovery 230; drilling mud Test satisfactory Pressures are field figures

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
G-70-3881-3	Water	1470	1610	Top of tool	

PRESENT STATUS OF WELL

Oil					
					(Interval)
Gas					
					(Interval)
Dry					
Susp.					

Company **Great Plains Development Company of Canada, Ltd.**

Signed by **J. W. SUTTON**

Title **Production Assistant**

Date **June 9, 1970**

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



File No. _____
Drilling Authority No. 434

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Abandon a Well or Suspend Drilling

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

Name and number of well GPD NOEL at al Mills West M65A
Location: Unit M Section 63 Grid 61°50'119°15'
Latitude 61°44'50" Longitude 119°27'40"
From Established Reference Marker 29,448' North Lat. 61°40'6.752' East Long.
Universal Well Location Reference Lat. 61.74722° N. Long. 119.46111° W 119° 30'
Permit No. 4314 Lease No. N.A.
Northern Oil Explorers Ltd. and Andax Oil Co. Ltd.
(Permitter, Licensee, Lessee)

Date of commencement of proposed program _____

OIL, GAS, AND WATER ENCOUNTERED (Depths)

Oil at Nil

Gas at Nil

Water at Nil

Total Depth 1850

Date of last operations April 7, 1970

Present condition of well Abandoned

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. 7"	20#	375.75"	370'	170 sacks + 2% CaCl ₂	0
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
1	1850 - 1750	Chinichaga	30	No feel 20% excess
2	1470 - 1370	Across top to Lonely Bay	30	Feel after 8 hours
3	420 - 320	Across surface casing shoe	50	Surface casing cut off. 3' below ground level 5 sacks cement plug plate welded on and marker installed.

The following logs have been run D.I.L., BHC F.D.L., S.H.P.L., BHC S.G.R.L., LITHOLOG FLOT
Other operations proposed _____

Operations to be carried out by Great Plains Develop. Contractor Licence No. 675
Address 736 - 8th Avenue S. W., Calgary 2, Alta. Address 14305 - 120th Ave., Edmonton.
Responsible Agent in field George Isfan
Dated at Calgary this 7 Day of April 19 70
Signed by A.G. Lindholm Company Great Plains Development Co. of Canada,
Title Operator's Exploratory Licence No. 1275 & 1640 Ltd.
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 8th April 1970.

Dated 10th April 19 70

B. H. S. Jones
Oil Conservation Engineer

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

POOR COPY

Drilling Authority No. 434

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT 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 **GID NOEL et al Mills West M-65A**
 Location: Unit **M** Section **65** Grid **61° 50'; 119° 15'**
 Latitude **61° 44' 30"** Longitude **119° 27' 40"**
 From Established Reference Marker **29,448' North Lat. 61° 40' 6.757' East Long. 119° 30'**
 Universal Well Location Reference **Lat. 61.74722° N. Long. 119.46111° W.**
 Elevation: Ground **757** K.B. **783** feet above sea-level.
 Well is expected to produce from **Lumpy Bay Formation** formation at a depth
 of about **1,300** feet. Expected total final depth **2,000**
 Area assigned to well

(For Oil Conservation Engineer's use only)

Permit No. **4314** Lease No. **N.A.** Acreage **60,622**
 Permittee, licensee, or lessee **Northern Oil Explorers Limited & Andex Oil Co. Ltd.**
 Exploratory Licence No. **1,322 & 18642**
 Surface owned by Crown or **Crown** (If alienated submit name and address of owner and occupant.)
 Petroleum and natural-gas rights owned by **Crown**

We propose to use the following strings of casing, either cementing or landing them as indicated below:—

Casing Size O.D. (Inches)	Weight (Lb./Ft.)	Grade	New or Used	Estimated Depth	Seals of Cement
1. 7"	200	J-55	New	300	100 sax
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment **surface casing will control gas and water in the glacial drift; hydrostatic pressure of mud column and 6" x 900 series BOP's to control all formations below surface casing.**

Well will be drilled with Rotary Rig No. **3** by **Tri-City Drilling Ltd.**
14305 - 120th Avenue,
EDMONTON, Alberta. (Drilling Contractor or company)

Responsible agent of applicant:— Contractor's business Licence No. **675**
 At well **George Isfan** At registered office **D. L. Gingerick**
 Address Address **736 - 8th Avenue S.W., Calgary 2**

It is understood that if changes become necessary, notice of the change of plan will be submitted.
 Dated at **Calgary** this **30** day of **March** 19 **70**
 Signed by **[Signature]** Company **Great Plains Development Company of Canada, Ltd.**
 Title **Drilling Superintendent** Operator's Licence No. **1275 & 1640**

(For Resource Management Division use only)

APPROVED

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

Dated **31st March** 19 **70** Please turn over page **Oil Conservation Engineer**

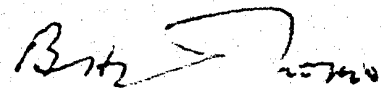
Forms to be submitted to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

LAND 52-90-1 (3-67)

UNIQUE WELL IDENTIFIER - 30246561/0119150

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

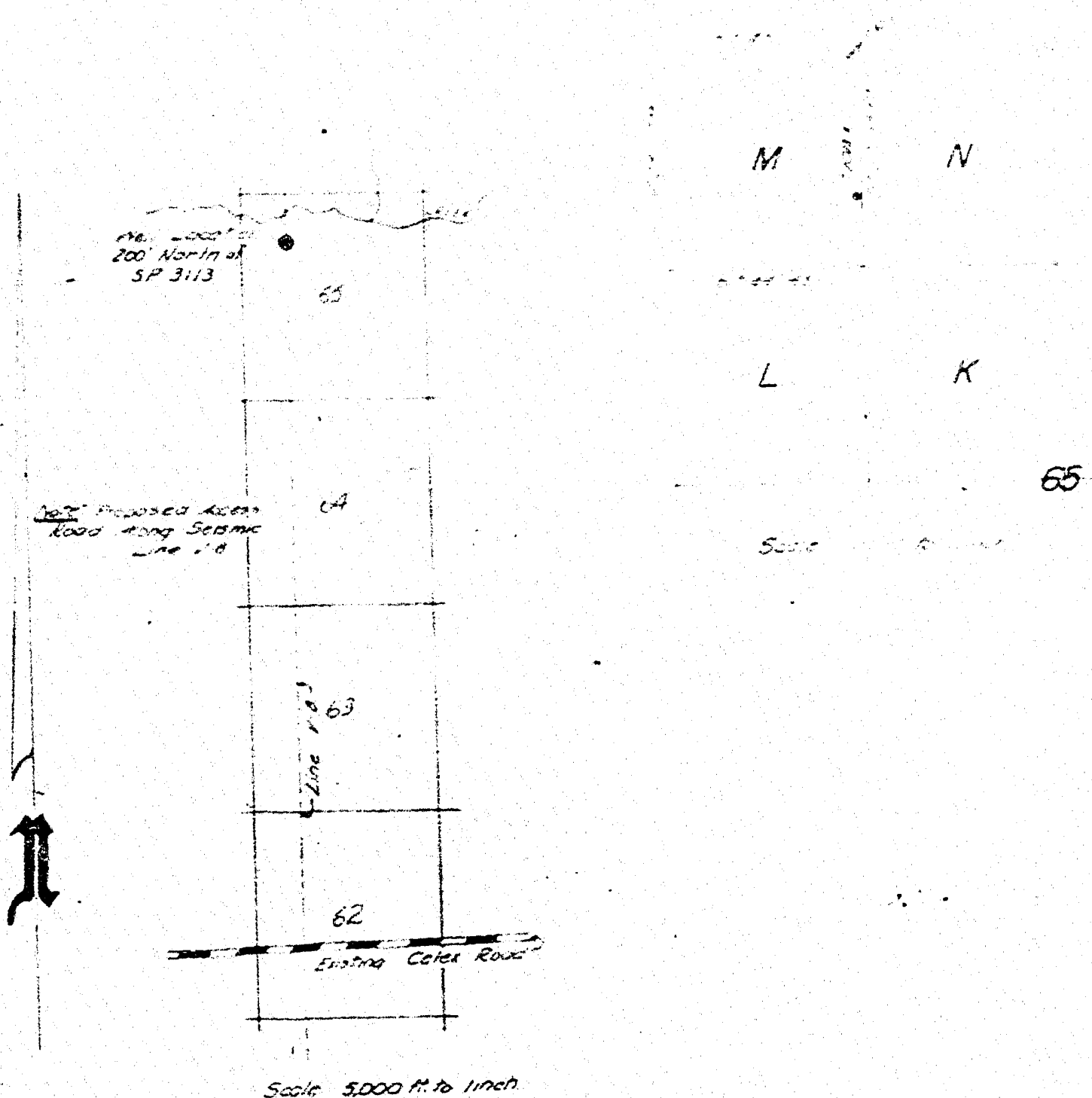
3. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
4. This Drilling Authority is issued subject to Andax Oil Co. Ltd. being in receipt of a 1970-71 Oil and Gas Exploratory Licence.
5. Any further strings of casing are to receive the approval of the Oil Conservation Engineer before being run.



B.H.J. Thoms, Oil Conservation Engineer

GPD NOEL ET AL "A" MILLS W

● Unit M Section 65 Grid Area 61°50'-119°15'
 Latitude 61°44'50" Longitude 119°27'40"
 NORTHWEST TERRITORIES



Elevation 757 Ground
 Taken from Seismic Records

GREAT PLAINS DEVELOPMENT COMPANY
 OF CANADA, LTD.

D.C. Guignard, P. Eng.

George Bell

Prepared by
 MIDWEST SURVEYS CO. LTD.

Date March 20, 1970. Revised: March 30, 1970

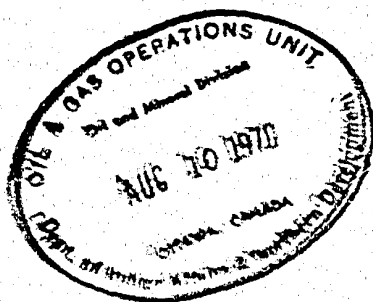


C-144-70

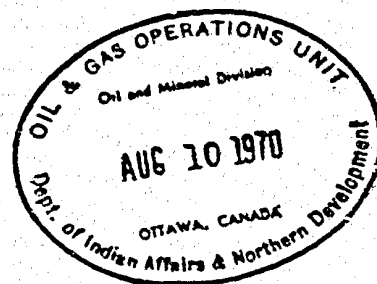
76-11-4-14

DRILLING AND ABANDONMENT REPORT
OF
GPD NOEL ET AL MILLS WEST M-65 AND M65-A
IN
UNIT M, SEC. 65, NORTHWEST TERRITORIES

DRILLING AND ABANDONMENT REPORT
OF
GPD NOEL ET AL MILLS WEST M-65 and M65-A
IN
Unit M, Sec. 65, Northwest Territories



BY
J. M. SCOTT



Distribution

<u>Company</u>	<u>No. of copies</u>
Great Plains Development Company of Canada, Ltd.	2
Noel	1
Noranda Mines Ltd.	1
Barber Oil Corporation	1
Andex Oil Co. Ltd.	2
Gulf Oil Canada Ltd.	2
Shell Canada Limited, Edmonton	2
Dept. of Indian Affairs & Northern Development	3

Phone 262-3363

OILMEN'S WELLSITE SERVICES LTD.

308 - 8th AVENUE SOUTH WEST - CALGARY 2, ALBERTA

GPD NOEL et al MILLS W. M-65

Unit M, Sec. 65

Northwest Territories

D & A

This report prepared and
submitted by:
Oilmen's Wellsite Services Ltd.

per: George Isfan
George Isfan

PREFACE

Drilling Authority No. 433 was issued to Great Plains Development Company of Canada Ltd. as authorization to drill GPD Noel et al Mills West M-65. The operator engaged Tri-City Drilling Ltd. on a turnkey basis to drill the above well with Rotary Rig No. 3.

The well was spudded and 9 7/8" hole was drilled to 255' K.B. This hole was cased with 7" casing, landed at 250' K.B. and cemented to surface. The casing shoe was drilled out and 6 1/4" hole was drilled using clean water to 1403' K.B. In the process of drilling this hole it was noted that approximately 5 feet of gravel was encountered below the surface casing shoe. In addition, the cement around this casing failed to "set-up" properly and the entire casing string dropped approximately 3 feet in the hole. A small sweet gas flow and fresh water flow was occurring at this stage in the operations. The casing and B.O.P. stack was subsequently picked up, and the hole displaced with a 40-50 sec. per quart viscosity mud. The hole was conditioned and D.S.T. #1 was run from 1373-1403 to determine the source of the gas flow. The test indicated that the Lonely Bay Formation (top @ 1372' K.B.) was not the source of the gas (later evidence indicates the Pleistocene gravels overlying the Hay River shale to be the source of the gas and fresh water). Furthermore, gravel from surface hole sloughed into

the hole and the packer was stuck in the hole at approximately 700' while hoisting. The packer was recovered by circulating through the pump-out sub which was located 60' above the packer.

The mud and hole was again conditioned and 6 1/4" hole was drilled from 1403' to 1533' at which depth some very coarse, cavernous porosity was encountered and after drilling 2 feet to 1535' K.B. a complete loss of circulation occurred. The drilling string was immediately hoisted until the bit was inside the surface casing. A new supply of drilling mud with approximately 25 sacks of sawdust mixed for lost circulation purpose was prepared on surface. While this operation was in progress, some material (gravel) sloughed into the hole causing several bridges to form which permitted circulation of the hole above them. It was found that the hole had plugged off at approximately 1525-30' K.B. At this point the hole was completely displaced to mud conditioned with lost circulation material. While displacing the hole from approximately 1525', a black, sulphurous salt water was noted and a sample obtained. (Field tests indicated this water has a salinity of 30, 100 $\frac{1}{2}$ p.p.m. NaCl.). The bridge on bottom was cleaned out whereupon a complete loss of circulation occurred again. Additional 6 1/4" hole was drilled to a final total depth of 1548' K.B. The interval from 1535 to 1548' also exhibited very coarse, cavernous porosity with some "vugs" appearing to be as much as 1/2 to 1 foot in diameter. Gravels caving into the hole

from below and from behind surface casing made it necessary to hoist the drilling string at this point; (the drilling string was again stuck while hoisting, but worked free).

After hoisting the bit to surface, the decision was made to abandon this well and drill an offset well M-65-A, located 102' north of M-65.

The well history reports give all pertinent data relative to both wells.

SUMMARY OF PERTINENT WELL DATAPERMITTEE:

Northern Oil Explorers & Andex Oil Co.

NAME OF OPERATOR:

Great Plains Development Company of Canada, Ltd.

ADDRESS:

738 8th Avenue S. W., Calgary 2, Alberta.

WELL NAME:

GPD NOEL ET AL MILLS WEST M-65

LICENSE NO:

433 March 23, 1970

LOCATION:

Unit M, Section 65, Grid 61°50' 119°15'

CO-ORDINATES:

61°44' 48" N. Lat.

119°27' 40" W. Long.

UNIVERSAL WELL LOCATION REF:

Lat. 61.74666°N. 119.46111°W. Long.

ELEVATION:

Ground: 756.1

Kelly Bushing 766

Kelly Bushing to Casing Flange: 9.0

TECHNICAL SUPERVISION:

George Isfan, P. Geol.

DRILLING CONTRACTOR:

Name: Tri. City Drilling Ltd.

Rig No.: 3 Failing 2500

Mast: GD Exo 6" x 10"

Pump: 10" 600 series Shaffer & Hydrill

B.O.P.:

STATUS:

Dry and Abandoned

PRODUCING ZONE:DATE SPUDDED:

2:00 A.M., March 24, 1970

TOTAL DEPTH:

Driller: 1548 Logs:

PLUGGED BACK DEPTH:

Surface

DATE ABANDONED:

6:30 P.M., March 31, 1970

DATE RIG RELEASED:

6:30 P.M., March 31, 1970

NO. OF RIG DAYS:

8

PERMIT NUMBER

4314

WELL CLASSIFICATION

Wildcat

UNIQUE WELL IDENTIFIER

300M656150119150

Summary of Pertinent Well Data - Continued GPD NOEL ET AL MILLS WEST M65

DRILLING DATA:

Hole Size
Inches

Depth
From To
Feet Feet

9-7/8

0

255

6-1/4

255

1548

CASING:

(a) Surface

Run 6 in. 250.0' of 7" 20.3 55 mm. CSP landed at

255' K. H. Cemented with 50 sacks cement + 2% CaCl₂

Plug down at 7:15 P.M. March 24 1970 Approx

bbls. cement returns

(b) Intermediate

(c) Production

TUBING:

MUD TYPE:

Gel chemical water

GEOLOGICAL MARKERS:

CORE SUMMARY:

<u>SUMMARY:</u>	<u>Interval</u> <u>Feet</u>	<u>Recovered</u> <u>Feet</u>	<u>Formation</u>
No. 1	Nil		
No. 2			

Summary of Pertinent Well Data - Continued GPD NOEL ET AL MILLS WEST M-65 4.

No. 3	_____	_____	_____
No. 4	_____	_____	_____
No. 5	_____	_____	_____
No. 6	_____	_____	_____

FORMATION TEST SUMMARY:

D.S.T. #1 1373-1403 (Bottom Hole) P.F. 7, I.S.I. 60, V.O. 60

F.S.I. 60, Good initial puff, weak continuous air blow

Recovered 60' drilling mud (Packer stuck in hole on trip out)

ISIP - 130 PSIP - 166

IFP - 81 YFP - 63

DF - 662 FHP - 656

LOGS:

Company

	Name	Depth Feet	Scale Inches
_____	Induction Electrical	_____	_____
_____	Gamma Ray Neutron	_____	_____
_____	Sonic Gamma Ray	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PLUGS:

<u>Number</u>	<u>Cement</u>	<u>Felt @</u>
1. 1410 - 1250	50 sacks + 3% CaCl ₂	1235'
2. 300 - 200	135 sacks + 2% CaCl ₂	150'
Surface	10 sacks	

Remarks:

Casing cut off 3' below ground level, riser 4' above ground level welded on plate on casing after 10 sacks placed in casing. Well names inscribed on markers.

DAILY DRILLING RECORD

[illegible]

DAILY MUD RECORD

WELL GPD NOEL ET AL MILLS WEST M-65

AREA Mills Lake, N.W.T.

MUD COMPANY IMC

SERVICE ENGINEER Don Sailer

A Gel	D Bicarb	G	J
B Caustic	E Sawdust	H	
C Lime	F Soda Ash	I	

GEOLOGY

OILMEN'S WELLSITE SERVICES LTD.

SAMPLE RECORD

Well Name GPD NOEL et al MILLS W, M-65K.B. 766

DEPTH		DESCRIPTION
From	To	
0	180	Glacial Till, consisting of clay, silt, sand and gravel with intermixed small boulders; varies in color from yellow to grey.
180	260	Gravel, grades from coarse sand to coarse gravels up to 3 inches in diameter; some poorly sorted "pea gravel" in upper portions of interval with coarse gravel at base of interval.
		HAY RIVER 260' (+506)
260	730	Shale, dark grey to black, fissile to hard, massive, blocky; slightly calcareous with scattered inclusions of hard, silty limestone and limy shale.
730	850	Shale, grey to greenish grey in large part; generally hard, massive, blocky, micromicaceous; calcareous to very calcareous and grading in part to shaly limestone; trace silty and pyritic.
850	1140	Shale, 50%, light greenish grey to dark grey, hard, massive, brittle, blocky to very slightly fissile in parts, micromicaceous, calcareous grading to limy with minor amounts fragmental limestone inclusions; trace pyrite.
		Shale 50%, black, slightly fissile to hard, massive, blocky, micromicaceous, slightly bituminous and carbonaceous; slightly calcareous and trace pyritic.
		HORN RIVER SHALE 1140' (-374)
1140	1372	Shale 100%, black to brownish black in parts; fissile to hard blocky; slightly micromicaceous, very slightly calcareous in parts; very carbonaceous and bituminous giving Shale a very dark black coal-like appearance; scattered inclusions pyrite grains and crystals.

OILMEN'S WELL SITE SERVICES LTD.

SAMPLE RECORD

Well Name GPD NOEL et al MILLS W. M-65K.B. 766

DEPTH		DESCRIPTION
From	To	
		<u>LONELY BAY 1372 (-606)</u>
1372	1500	Limestone, 100%, off to medium brown crypto to microcrystalline, fragmental and fossiliferous in large part; very slightly bituminous and argillaceous in parts; generally hard, massive bedded, dense.
1500	1510	Limestone 50% dark brown, microcrystalline, very fragmental, fossiliferous dolomitic and argillaceous in part; dense.
		Dolomite 50%, medium to dark brown, microcrystalline to granular in part; generally an incompletely dolomitized bioclastic limestone; argillaceous in part; trace to poor leached microvuggy porosity; no oil staining.
1510	1520	Dolomite, medium to dark brown, microcrystalline; fragmental, mainly bioclastic with a microcrystalline matrix; abundant fossil fragments that are generally not recognizable (partly due to dolomitization); trace pyrobitumen, argillaceous to very argillaceous in parts; appears to be a dolomitized biohermal reef; porosity mainly poor to fair, leached microvuggy, no oil staining or fluorescence.
1520	1548	No samples - Lost circulation @ 1533' with consequent loss of 1530 sample. Drilled from 1533 to 1535' - no returns; pulled up into surface casing with bit and mixed mud with lost circulation material; hole bridged off on bottom - ran back in to approximately 1525' and circulated hole; (recovered sample of salt water apparently from bottom of hole); drilled out bridge on bottom; lost circulation again - drilled blind from 1535 to 1548' K.B. with no returns to surface. Hoisted bit out of hole due to problems with sloughing surface hole gravels; final total depth 1548' K.B.

BIT

W-1 GPD NOEL ET AL MILLS WEST M-65

Mills Lake, N. W. T.

[illegible]

DRILL STEM TEST REPORT

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
DRILL STEM TEST REPORT

P-8

Well GPD NOEL ET AL MILE WEST N-63 Test No. 1 Date March 27, 1970
 Testing Company Drill Stem Testers Operator A. Katona
 Formation Tested Lonely Bay Carbonate Depth of Well 1403'
 Interval Tested from 1373 to 1403 Hole Size 6 1/2" Rat Hole Size _____
 Drill Pipe Size 3-1/2 No. & Size Drill Collars Run 10" / 3 1/4
 Type of Mud Gel - Water Weight 9.2 Viscosity 37 Water Loss _____
 Type of Test Run Bottom Hole No. & Size Packer Rubbers 5
 Choke Size: Surface _____ Bottom Hole 3/4 Safety Joint X Jars X P.O. Sub X
 Time Tester Started in Hole 5:15 p.m. On Bottom 6:30 p.m.
 When tool opened did mud level drop no
 Initial Shut In Time 60 min. Final Shut In Time 60 min. Valve Open Time 60 min.
 Packer Set with 25,000 #. Pulled Loose With 15,000 #. Time Tester Out of Hole 6:00 A.M. March 28 1970

Flow Description: Good initial puff, Good air blow on pre flow. Weak initial puff continuous
weak air blow through valve open time. No gas to surface

Recovered: 60' drlg. mud *(below P.O. sub) feet _____ stands _____

Recovery Description: 60 * feet of drlg. mud
 _____ feet of _____ feet of _____

Salinity Test: 13,470 ppm NaCl

Samples Sent to: Chem & Geol. Labs By: G. Isfan

GAS FLOW MEASUREMENTS
 Method of Measurement: No gas to surface

Time	Reading (inches)	Mcf/Day

Gas Sample Sent To: _____

Do you consider test satisfactory: Yes

Remarks: *Packer stuck @ 700' K. B., while tripping out of hole, opened pump out
sub to circulate hole; packer came free, coarse gravel falling in hole from
surface hole (pump out sub located 60' above tool)

Note: Tool plugged with sand and gravel upon reaching surface.

Field Interpretation		
Pressures	Top Chart	Bottom Chart
I.H.P.	639	
F.H.P.	639	
I.F.P.	66	
F.F.P.	55	
L.S.I.P.	133	
F.S.I.P.	133	
B.H. Temp.	98°	

Operator's Representative G. Isfan

DRILL STEM TESTING & GORING LTD.

EDMONTON: PHONE - 7293

CALGARY: PHONE 369-...

P.O. BOX 4185, EDMONTON, ALBERTA

TEST NUMBER

1

Date MARCH 27, 1970.
 Customer GRAND PLAINS DEVELOPMENT COMPANY
OF CANADA LTD.,
736 - 8th AVENUE S.W.,
CALGARY 2, ALBERTA.
 Well Name GPD MOUNT AL WILLS WEST N-65
 Location 61 44'45" N.L. 119 27'40" W.L.
 Area WILLS LK WEST N.W.T.
 Formation ---
 Est. Pay Thick. ---
 Ticket No. B-1236
 Purchase Order No. ---

Interval 1373' TO 1403'
 Test Duration 180 MINUTES
 Initial Hydrostatic 662
 Final Hydrostatic 656
PRE- 57
 Initial Flowing 81
 Final Flowing 83 after 60 mins.
 Initial Shut-In 141 after 60 mins.
 Final Shut-In 164 after 60 mins.
 Blow WEAK
 Recovery 60'

Mud Type GM. Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.2 Size Rat Hole --- O.D. Drill Collar 4-3/4"
 Vis. 37 Size & Type Pipe 3-1/2" I.F. O.D. Sub or T.J. 4-3/4"
 W. L. --- Time Circulated 8 Hrs. Tool Length 61.90'
 pH --- Where Circulated BOTTOM Rat Hole Length ---
 F. C. 27/32 Bit off Bottom 3.15 P.M. Difference ---
 Condition GOOD Formation --- Total Depth 1403'
 TEST EXTRAS: SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FAIL S.P. HEAD. 1BX PACKER.

Type of Test DUAL BOTTOM HOLE Wt. to Set Packer 25,000 15,000 To Pull Loose
 Initial Puff GOOD Gas Flow NIL Size Bean 3/4" Fluid Cushion NIL
 Temp. 98° Gravity --- No. Drill Collars 10 (5 MIF) Length 293.90' I.D.'s 2-1/4"

PRESSURES

FLUID RECOVERY

Started In 5.00 P.M. Recorder No. ---
 Tool Open 6.47 P.M. Depth Run ---
 " Closed 6.55 P.M. Hydrostatics ---
 " Open 7.55 P.M. Flow ---
 " Closed 8.55 P.M. Initial S.I.P. ---
 " Loose 9.55 P.M. Final S.I.P. ---
 " Out 6.30 A.M. Difference ---

INSIDE	OUTSIDE
2033	3145
1381'	1591'
656-653	662-656
78-78	81-83
130	141
160	164
30	23

Mud 60'
 Oil ---
 Water ---
 Total 60'
 Sampled at TOP OF TOOL

Description of Fluid 60' OF MUD.

Witnessed By: G. ISFAL.

REMARKS: GOOD AIR BLOW ON PRE-FLOW. WEAK AIR BLOW ON FLOW. PULLED PACKERS LOOSE
WITH 15,000# OVER STRING WT. PULLED 700' OF PIPE WHEN HIT TIGHT SPOT, COULD NOT
MOVE TOOL UP OR DOWN. WE THEN PUMPED OUT & STARTED TO CIRCULATE FOR TWO HOURS
AND WORK PIPE WHEN IT CAME FREE SO CONDITIONED MUD AND THEN HOISTED. TOOL WAS FULL
OF GRAVEL & SHALE. WHEN CIRCULATING, HAD LOTS OF GRAVEL COMING OVER SHAKER.

TEST SATISFACTORY.

ALVIN J. KATONA.

Testing Supervisor

BEN HUBER.

Customer's Representative

D.S.T. # 1

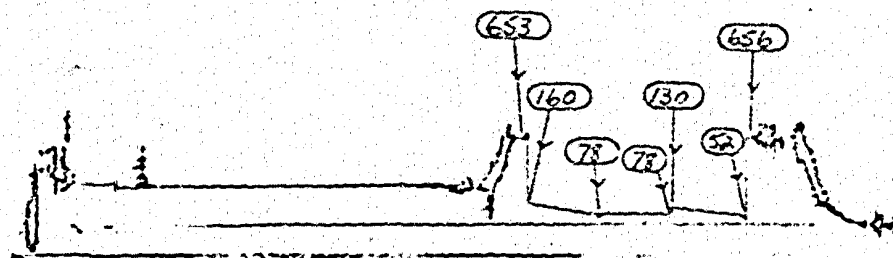
WELL NAME

GPD MOUNT AL WILLS WEST N-65

GPD NOEL ET AL MILLS WEST M-65

DST-1 TICKET-3-1236

REORDER-2823

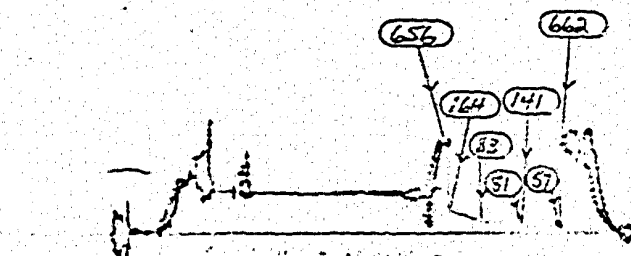


3145

GPD NOEL ET AL MILLS WEST M-65

DST-1 TICKET-3-1236

REORDER-3145



CASING and TUBULAR REPORT

Casing

CASING INFORMATION

Surface Casing _____ 7"
 Intermediate Casing O.D. _____
 Production Casing _____
 Liner _____

Well CPD W01 ET AL WILLS Location WEST M-65 Date March 24, 1970

Joints on Location	Feet on Location	Casing Weight	Grade	Range	Thread	Threads & Couplings	Make	Joint Run	Depth Landed	Feet Run in Well
7	250	20#	J-55	2	8rd	ST&C	Phoenix	7	255	250

Shoe: Make _____ Type _____ Length _____

Collars: Make _____ Type _____ Length _____

Landing Joint (when used) Length -----

Overall Length of Casing String -----

Feet up from K.B. (Subtract) -----

Setting Depth: _____ By Driller _____ By Tally _____

Shoe Joint: _____ Overall _____ (Subtract) _____

Foot Collar Landed: _____ By Driller _____ By Tally _____

CENTRALIZERS:

Make _____

Number _____

Positions _____

No. of Joints Welded _____

SCRATCHERS:

Make _____

Number _____

Positions _____

Remarks Run by contractor. information not available.

Operator's Representative _____

CORE AND FLUID ANALYSIS

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-587

Received: April 14, 1970 Reported: April 16, 1970

Well: Location:

G.P.D. Noel et al Mills West M-65

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF

M-65 N.W.T.

Elect: K.B. CANADA LTD.

Zone/Formation: Lonely Bay

Sample Interval: 1534'

Method of Production: CIRC

Sampled from: Flow Line

Sampled by:

Date: Mar. 29, 1970

OTHER PERTINENT DATA

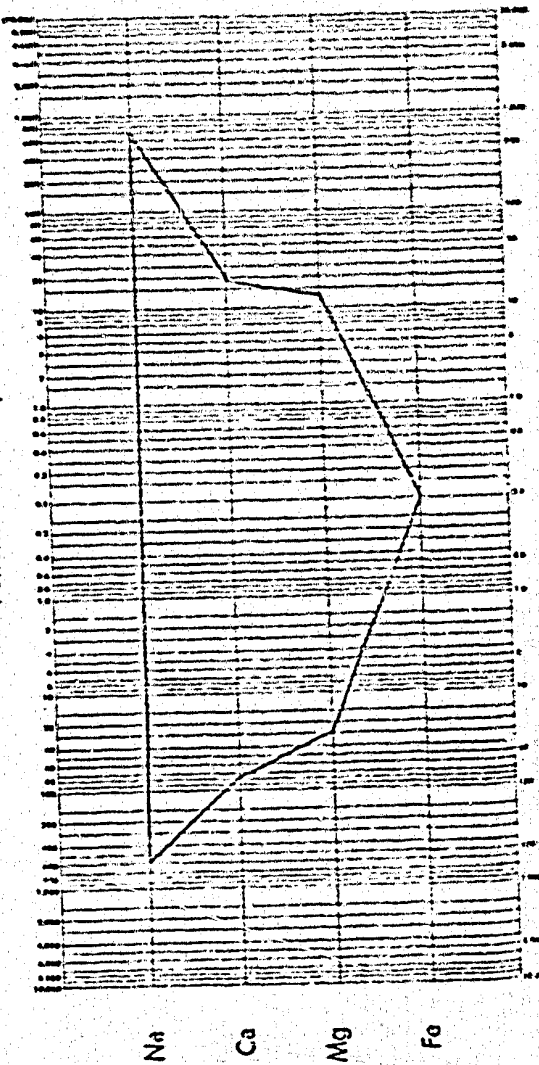
CIRC Hole After Last CIRC at 1533
Hole Bridged off on RTM CIRC Hole.

(Signed)

	Na	K	Ca	Mg	SO ₄	Cl	CO ₂	HCO ₃	
Mg./L	13,600		1520	365	630	23,600		1100	
Meq./L	590.81		75.85	30.00	13.10	665.52		18.04	
Meq. %	42.41		5.44	2.15	0.94	47.77		1.29	

Total Solids Mg/L: By Evaporation 40,920 Fe Present Specific Gravity 1.031 @ 50°F Observed pH 7.4 @ 73 °F
Calculated 40,815 After Ignition 37,440 H₂S Nil Refractive Index 1.3399 @ 25°C Resistivity 0.18 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions

The sample as received contained approximately 10% grey sediment. The filtrate was colorless.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-5021

Received: Apr. 14, 1970 Reported: Apr. 16, 1970

Well Location:

G.P.D. Noel et al Mills West M-65

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF CANADA LTD.

Field or Area:

Wildcat

Elev.: K.B.

Zone/Formation:

Lonely Bay

Sample Interval: 1373' - 1403'

Method of Production:

D.S.T. #1

Sampled from: Top of Tool

Sampled by: Drill Stem Testers Date: Limited

Recovery: 60' Drilling Mud.

OTHER PERTINENT DATA

(Signed)

Na	K	Ca	Mg	SO ₄	Cl	CO ₃	HCO ₃	
2250		284	39	410	3390	Trace	680	
97.90		14.17	3.21	8.53	95.60	Trace	11.15	
42.46		6.15	1.39	3.70	41.46		4.84	

Meq. % 42.46 97.90 2250

Total Solids Mg/L

By Evaporation 7334

Fe Present

Specific Gravity 1.010

@60°F

Observed pH 8.3

@ 73 °F

After Ignition

6896

H₂S Nil

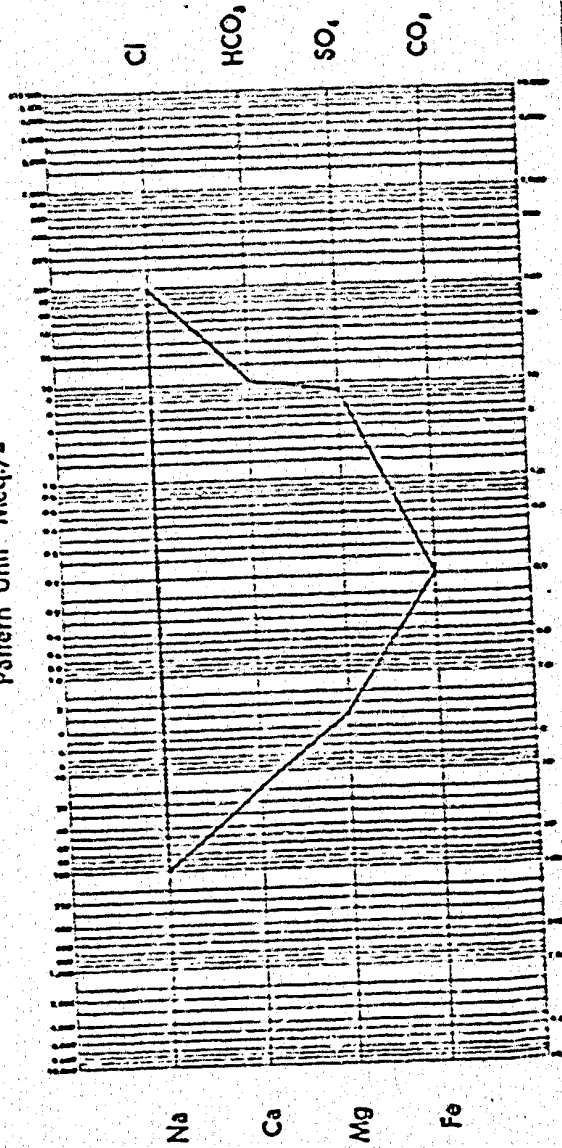
Refractive Index 1.3342

@25°C

Resistivity 0.913 ohm meters @ 68 °F

Pattern Unit Meq./L

Remarks and Conclusions
The sample as received contained approximately 80% grey sediment. The filtrate was colorless.



MISCELLANEOUS

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA LTD.
PLUG-BACK AND ABANDONMENT REPORT

P - 10

Well CPD NOEL ET AL MILLS WEST

Location M-65, Mills Lake N. W.T.

Hole Size	<u>6-1/4"</u>
Depth	

K.B. Elevation 766

E.T.D. 1548

Fluid in Hole Mud gel

Plug Back String 3-1/2"

Service Company Tri City

Cons. Bd. Approval _____

Cons. Bd. Witness _____

Casing in Hole	Size	Set At	Top of Cement
Surface Casing	<u>7"</u>	<u>255'</u>	<u>surface</u>
Prod. String			

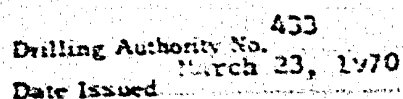
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5
Date	<u>March 30</u>	<u>March 31</u>			
Interval - Top	<u>1250</u>	<u>260</u>			
Bottom	<u>1410</u>	<u>300</u>			
Felt Plug Depth	<u>1235</u>	<u>150</u>			
Formation - Name					
Depth					
Caliper Hole Size (Avg.)	<u>6-1/4</u>				
Type of Mud	<u>gel</u>	<u>gel</u>			
No. of Sacks	<u>50</u>	<u>135</u>			
Additives	<u>3% CaCl₂</u>	<u>2% CaCl₂</u>			
Bbls. of Water Ahead					
Displacement - Bbls. Water	<u>9</u>	<u>1.5</u>			
Bbls. Mud					
Slurry Weight					
Mixing Times - Start					
Finish					
Displacing Times - Start	<u>9:00 P.M.</u>				
Finish	<u>9:30 P.M.</u>				
Felt Plug Time	<u>6:00 A.M.</u>	<u>6:00 P.M.</u>			

Surf. Csg. Cut 3' Ft. Below Grd. Surf. Plug 10 Sacks. Plate Welded Yes/No

Casing Salvage: Shot off at _____ No. of Jts. Recovered _____

Remarks: Riser 4' above surface with well name inscribed welded on plate

Operator's Representative _____



SERVICING RECORD (Acidizing, Flaring, etc.)

CEMENTING RECORD (Plug, Squeeze, etc.)		PERFORMING RECORD (Bullet, Jet)	
Date	Remarks	Date	Remarks
1410	50 sax. cement		
300	85 sax. cement		
	10 sax. at surface Welded on plate and left marker		

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.	L.H.P.	F.H.P.	REMARKS
1	Mar. 27/70	Lonely Bay	1373	1403	60	60	60	133	133	66	55	639	639	Test satisfactory

Company: Grant Plaine Development Company of Canada, Ltd.

Signed by: *A. G. Linton*

Title: Drilling Supervisor

Date: May 1, 1970

Plans to be prepared as duplicate was forwarded to the Oil
Conservation Engineer, Calgary, Alberta

PRESENT STATUS OF WELL

Oil	(Interval)
Gas	(Interval)
Dry	
Susp.	

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
736 - 8th Avenue S.W., Calgary, Alberta - Phone 264-0660

DRILLING AND GEOLOGICAL PROGRAM
PART "A"
INSTRUCTIONS TO THE CONTRACTOR

Lat. 61°44'48"
Long. 119°27'40"

GP/ NOEL ET AL MILLS W

Location: Unit _____ M _____, Sec. 65 _____, Grid Area _____
Top. 61°50' Ege. 119°15',

Elevations: Ground 756 _____ Surv. K.B. 768 _____ Est. _____
(taken from seismic records)

Note: Record in tour book and report K.B. to Ground and K.B. to surface casing flange immediately after drilling out.

- Surface Hole:
- (a) Drill 9-7/8" surface hole to 200' minimum.
 - (b) Take Totco readings at 100' intervals to 200' (Maximum deviations 1°).
 - (c) Round trip prior to running casing to ensure the hole is clean.
 - (c) Double tally drill pipe on last trip prior to running casing.
 - (c) Measure and record distance from K.B. to Ground and K.B. to casing bowl flange and report with surface casing details.

Surface Casing: To be conducted by Contractor,

- (a) Run and cement 7", 20 #, J-55, Casing at 200' minimum, using _____ sacks cement plus 2% CaCl₂. Casing string to be as follows: guid shoe, one joint of casing, float collar and balance of casing to _____. One centralizer to be placed in the middle of joints # _____ and # _____ and a scratcher five feet from each end of the same joints. Weld guid shoe, float collar and two joints of casing. Cement returns to surface must be obtained. Casing must be set so that the casing bowl flange is at ground level or above.
- (b) Land casing after 12 hours, make up bowl and blowout preventors.

Sampler:

Conservation Board - 10' samples
Great Plains - 10' samples

Surface - T.D.
Surface - T.D. (1500')

<u>Mud Control:</u>	<u>Depth</u>	<u>Viscosity (Sec./Qt.)</u>	<u>Water Loss (cc/30 mins.)</u>	<u>Remarks</u>
	Surface Hole:			Spud in mud. After drilling out guide shoe and jetting cement-cut mud, and S.A.P.P. or Bicarbonate of Soda to treat out residual cement.
	<u>Turnkey supplied by Contractor</u>			
				Water

General Mud Requirements:

- (a) Weight approximately _____/U.S. gallon.
- (b) A complete record of all mud and additives used must be correctly logged in the daily reports by "the contractor".
- (c) Check all mud properties at least twice per tour and note results in tour report.
- (d) Lost circulation - Circulation losses may occur during the surface hole and _____

Main Hole Drilling:

- (a) Drill ahead with _____" bit and follow sample collection.
- (b) Tallies - Drillpipe is to be tallied out every 1000' and prior to:
 - (1) Coring
 - (2) Drillstem testing
 - (3) Logging
 - (4) Running casing

If pipe measurement varies more than three feet from the recorded tally, it must be remeasured and the tally adjusted if necessary. A record of adjustment is to be made in the daily report.

- (c) Hole conditions - Great Plains' Drilling Department is to be notified immediately if poor hole conditions develop, if drillpipe is stuck, or if a fishing job develops.

Abnormal Formation Pressures:

[illegible]

Drillstem Tests: To be conducted in the following manner:
I.S.I. 60 mins. V.O. As required. G.S.I. 60 mins. minimum, or
equal to V.O. Time

N.B.

The Production Department of Great Plains Development Company of Canada, Ltd., should be informed of all samples taken, Attn: Mr. Terry Carter

Logging: See attached or below:

Log Type Schlumberger	Scale	Interval
Dual Induction Laterolog	2" = 100'	T.D. - Base Surface Casing
	5" = 100'	
BHC Formation Density Log	5" = 100'	T.D. - Base Surface Casing
Sidewall Neutron Porosity Log	5" = 100'	T.D. - Base Surface Casing
BHC Sonic Gamma Ray Log	2" = 100'	T. D. - Base Surface Casing
	5" = 100'	T. D. - Base Surface Casing
Litholog Plot	5" = 100'	

Production Casing:

To be determined.

Cementing Operations:

To be determined. State clearly in drilling reports cement mixed and Admix dry volumes and calculate slurry volumes pumped.

Service Companies:

Cementing

" TURNKEY SUPPLIED BY CONTRACTOR "

Testing

DIAMOND CORING

Mud

Logging

Schlumberger Canada, Rainbow Lake Location.

Sample Lag Time:

Samples are to be lagged as directed.

Telephone Numbers:

Office	264-0660
G. M. Hunter	255-7312
N.M. Lehto	289-4350
L.L. Samoil	289-3980
D.L. Gingerick	249-4700

Data Requirements:

<u>Partners</u>	<u>To be completed by N.O.E.L.</u>	<u>% Participation</u>	<u>Samples</u>	<u>Logs</u>		<u>Analyses</u>		<u>DST Completion</u>	
				<u>Field</u>	<u>Final</u>	<u>Core</u>	<u>Fluid</u>	<u>Charts</u>	<u>Report</u>
NORL				1	1	1	1	1	1
GPD		18%	X	2	2	1	1	1	2
BOCADEL		18%		1	1	1	1	1	1
NORANDA		9%		1	1	1	1	1	1
ANDEX		25%		2	2	2	2	2	2
SHELL		15%	X	2	2	2	2	2	2
GULF		15%		2	2	2	2	2	2
O & G.C.B.			X	1	2	1	1	1	

Prepared by: _____

Approved G.P.D.: _____

Approved N.O.E.L.: _____

Data Requirements:

<u>Partners</u>	<u>To be completed by N.O.E.L.</u> <u>% Participation</u>	<u>Samples</u>	<u>Logs</u>		<u>Analyses</u>		<u>DST Completion</u>	
			<u>Field</u>	<u>Final</u>	<u>Core</u>	<u>Fluid</u>	<u>Charts</u>	<u>Report</u>
NOEL			1	1	1	1	1	1
GPD	18%	X	2	2	1	1	1	2
BOCADEL	18%		1	1	1	1	1	1
NORANDA	9%		1	1	1	1	1	1
ANDEX	25%		2	2	2	2	2	2
SHELL	15%	X	2	2	2	2	2	2
GULF	15%		2	2	2	2	2	2
O & G.C.B.		X		1	2	1	1	

Prepared by: _____

Approved G.P.D.: _____

Approved N.O.E.L.: _____

GEOLOGICAL PROGNOSIS

GPD NOEL ET AL "HILLS W

UNIT M SEC. 65 GRID AREA 51°50' - 119°15'

Ground Elev. 756 (taken from seismic records)
K. B. Elev. 768 (est.)

<u>FORMATION</u>	<u>DEPTH</u>	<u>SUBSEA</u>	<u>INTERVAL</u>
Lonely Bay Carb.	1290	-522	
T. D.	1850	-1082	

SUMMARY OF PERTINENT WELL DATA

<u>PERMITTEE:</u>	<u>Northern Oil Explorers & Andex Oil Co.</u>	
<u>NAME OF OPERATOR:</u>	<u>Great Plains Development Company of Canada, Ltd.</u>	
<u>ADDRESS:</u>	<u>736 8th Avenue S.W., Calgary 2, Alberta.</u>	
<u>WELL NAME:</u>	<u>CPD NOEL ET AL MILLS WEST M-65-A</u>	
<u>LICENSE NO:</u>	<u>434 March 31, 1970</u>	
<u>LOCATION:</u>	<u>Unit M, Section 65, Grid 61°50' 119°15'</u>	
<u>CO-ORDINATES:</u>	<u>61°44' 50" N. Lat.</u>	
	<u>119°27' 40" W. Long.</u>	
<u>UNIVERSAL WELL LOCATION REF:</u>	<u>61.74722°N. Lat. 119.46111°W. Long</u>	
<u>ELEVATION:</u>	Ground:	<u>756.5</u>
	Kelly Bushing	<u>764.0</u>
	Kelly Bushing to Casing Flange:	<u>9.0</u>
<u>TECHNICAL SUPERVISION:</u>	<u>George Isfan, P. Geol.</u>	
<u>DRILLING CONTRACTOR:</u>	<u>Name: Tri-City Drilling Ltd.</u>	
	<u>Rig No. 3 Failing 2500</u>	
	<u>Mast: Failing 55'</u>	
	<u>Pump: GD Exo 66" x 10"</u>	
	<u>B.O.P.: 10" 600 Series Shaffer & Hydril</u>	
<u>STATUS:</u>	<u>Dry and abandoned</u>	
<u>PRODUCING ZONE:</u>		
<u>DATE SPUDDED:</u>	<u>11:15 P.M. March 31, 1970</u>	
<u>TOTAL DEPTH:</u>	<u>Driller: 1850</u>	<u>Logs: 1848</u>
<u>PLUGGED BACK DEPTH:</u>	<u>Surface</u>	
<u>DATE COMPLETED DRILLING OR ABANDONED:</u>	<u>10:00 A.M., April 6, 1970</u>	
<u>DATE RIG RELEASED:</u>	<u>7:30 P.M., April 8, 1970.</u>	
<u>NO. OF RIG DAYS:</u>	<u>8</u>	
<u>PERMIT NUMBER</u>	<u>4314</u>	
<u>WELL CLASSIFICATION</u>	<u>Wildcat</u>	
<u>UNIQUE WELL IDENTIFIER</u>	<u>302M656150119150</u>	

Summary of Pertinent Well Data - Continued GPD NOEL MILLS WEST M-65ADRILLING DATA:

Hole Size Inches	Depth	
	From Feet	To Feet
<u>9-7/8</u>	<u>0</u>	<u>375</u>
<u>6-1/4</u>	<u>375</u>	<u>1850</u>
<u> </u>	<u> </u>	<u> </u>

CASING:

(a) Surface

Ran 11 jcs 375.75' of 7" 20# 1.55 Wt/Csg with
guide shoe and insert float, landed at 370' "
Cemented with 130 sacks Normal Portland + 27 CaCl₂
plus 60 sacks + 27 CaCl₂ on top. Plug down 8-12 in.
April 2, 1970

(b) Intermediate

(c) Production

TUBING:MUD TYPE:Gel chemical water

Summary of Pertinent Well Data

GEOLOGICAL MARKERS:

[illegible]

CORE SUMMARY:

<u>SUMMARY:</u>	<u>Interval</u> Feet	<u>Recovered</u> Feet	<u>Formation</u>
No. 1	<u>Nil</u>	<u> </u>	<u> </u>
No. 2	<u> </u>	<u> </u>	<u> </u>

Summary of Pertinent Well Data - Continued CPD NOEL ET AL MILLS WEST M-65A 4.

No. 3

No. 4

No. 5

No. 6

FORMATION TEST SUMMARY:

D.S.T. #1 1480 - 1610 Conventional straddle P.F. 3 min

I. S.I. 60 min. Upper packer seat failure on valve open

packer pulled loose. Rec. 750' drilling mud

D.S.T. #2 1470 - 1610 Conventional straddle P.F. 2 min

I.S.I. 60 min. V.O. 60 min. F.S.I. 60 min. Fair initial

blow, weak continuous air blow. Rec. 230' drilling mud

IHP 722

FHP 722

Other pressures not dependable.

LOGS: Run 6th April 1970 Name

Depth
Feet

Scale
Inches

Company

Laterolog

Schlumberger

Dual Induction ~~XXXXXXX~~

1848 - 371

2" & 5"

Gamma Ray Neutron

"

BHC Sonic Gamma Ray C

1845 - 372

2" & 5"

"

Sidewall Neutron Por-

1846 - 371

5"

osity

"

Formation Density

1846 - 372

5"

"

Lithology Plot

1846 - 1300

3"

PLUGS:

<u>Number</u>	<u>Cement</u>	<u>Felt @</u>
1. 1850 - 1750	30 sacks cement	Not felt
2. 1470 - 1370	40 sacks + 2% CaCl ₂	1367'
3. 420 - 320	50 sacks + 2% CaCl ₂	300'
Surface	5 sacks	

Remarks:

Casing cut off 3' below ground level; riser 4' above ground level welded on plate on casing after 7 sacks cement placed in top of casing. Well name inscribed on markers.

DAILY DRILLING RECORD

CPD NOEL ET AL MILLS WEST M-65A

[illegible]

DAILY MUD RECORD

DRILLING MUD RECORD

WELL GPD NOEL ET AL MILLS WEST M-65A

AREA Mills Lake N.Y.T

MUD COMPANY IMC

SERVICE ENGINEER Don Sailer

[illegible]

A Gel D Bicarb G J

B Caustic E Sawdust H

C Lime F Soda Ash I

GEOLOGY

OILMEN'S WELLSITE SERVICES LTD.

308 - 8th AVENUE SOUTH WEST - CALGARY 2, ALBERTA

GPD NOEL et al MILLS W. M-65-A

Unit M, Sec. 65

Northwest Territories

D & A

This report prepared and
submitted by:
Oilmen's Wellsite Services Ltd.

per:

George Isfan
George Isfan

SAMPLE RECORD

K B 764

DEPTH		DESCRIPTION
From	To	
0	200	Glacial Till; consisting of yellow clay, silt, sand gravel and small boulders; gravel generally arkosic, derived from weathered granites.
200	260	Gravel, fine pea gravel grading to coarse, up to 2-3" in diameter; gravel appears to be better sorted than in overlying till, with beds of fine rounded granitic material overlying a generally coarse base.
HAY RIVER SHALE 260' (+504)		
260	650	Shale, dark grey to black, slightly fissile to hard, massive, blocky; micromicaceous, slightly calcareous; scattered inclusions, hard, limy silty shale; trace fragmental limestone inclusions; traces pyrite.
650	850	Shale, grey to greenish grey in large part; hard, massive, blocky, micromicaceous, calcareous, grading in very large part to shaly limestone; limestone partly fragmental, trace silty hard, massive, dense.
850	1140	Shale 50%, black, slightly fissile to hard, massive, blocky; micromicaceous, trace pyrite, slightly carbonaceous and bituminous in parts; slightly calcareous in parts. Shale 50%, light greenish grey to dark grey, hard, massive, brittle, blocky, very slightly fissile in parts; micromicaceous; calcareous grading to limy; minor amounts fragmental-fossiliferous inclusions; trace silty and pyritic.

SAMPLE RECORD

K.B. 764

DEPTH		DESCRIPTION
From	To	
		<u>HORN RIVER SHALE 1140' (-376)</u>
1140	1379	Shale 100%, black to brownish black in parts; fissile to hard, blocky in parts; micromicaceous, very slightly calcareous in parts; very carbonaceous and bituminous; pyritic to very pyritic in parts; scattered inclusions and fracture - infillings of calcite.
		<u>LONELY BAY 1379' (-615)</u>
1379	1510	Limestone 100%, buff to medium brown, crypto to micro-crystalline, fragmental-fossiliferous in part; very slightly argillaceous and dolomitic in parts; traces pyrobitumen inclusions; generally hard, massive, dense.
1510	1580	Limestone 60%, light to dark brown, micro to very fine crystalline; slightly granular in part; very fragmental, fossiliferous, pelletoidal; considerable bioclastic material with a microcrystalline matrix-cement; dolomitic to very dolomitic; argillaceous in parts; traces pyrobitumen; traces to mainly fair to good micro to coarse vuggy porosity, no oil staining.
		Dolomite 40%, medium to dark brown, micro to very fine crystalline; granular in part; generally a dolomitized limestone, with abundant relict fragmental limestone texture, fair to some good vuggy and intercrystalline porosity; no oil staining.

OILMEN'S WELLSITE SERVICES LTD.

SAMPLE RECORD

Well Name GPD NOEL ET AL MILLS W. M-65-AK.B. 754

DEPTH		DESCRIPTION
From	To	
1580	1730	Limestone 65-85%, medium to dark brown, crypto to micro-crystalline; fragmental-fossiliferous; partly bioclastic with a microcrystalline matrix; dolomitic to very dolomitic in parts; argillaceous to shaly in parts; traces pyrobitumen and pyrite; generally hard, massive, dense; no oil staining.
		<u>Dolomite</u> 15-35%, medium to dark brown, microcrystalline; essentially a more completely dolomitized limestone as described above; argillaceous in parts; mainly dense, no oil staining.
		(NOTE: Samples contain abundant cavings of shale and sand grains from surface gravels).
1730	1765	Dolomite, light greenish grey to greenish brown and light brown; crypto to microcrystalline; partly fossiliferous and pelletoidal; argillaceous grading to very shaly and grading to dolomitic shale at base; anhydritic; trace pyritic; slightly silty in parts; very hard, massive, dense.
		CHINCHAGA EQUIV. 1765 (-1001)
1765	1850	<u>Anhydrite</u> 90%, white to light brown, translucent in part; some with a shiny greasy luster; crypto to soft microcrystalline in part; generally very hard, massive; dolomitic in part, traces interbedded shaly dolomite, traces pyrite, dense.
		<u>Dolomite</u> 10%, medium brown and greenish grey in part, micro-crystalline, anhydritic; argillaceous, dense.

BIT

BT RECORD

W.F. GPD NOEL ET AL MILLS WEST M-65A

Mills Lake, N. W. T.

[illegible]

DRILL STEM TEST REPORT

DRILL STEM TEST REPORT

Well GPD NOEL ET AL WELLS WEST M-651 Test No. 1 Date April 7, 1970

Testing Company Drill Stem Testers Operator K. Gunderson

Formation Tested Lonely Bay Depth of Well 1850

Interval Tested from 1480 to 1610 Min Size 6-1/4 Ret. Hole Size

Drill Pipe Size 3-1/2 No. & Size Drill Collars Run 10 4-3/4

Type of Mud Gel Chem Weight 9.3 Viscosity 60 Water Loss

Type of Test Run Straddle conventional No. & Size Packer Rubbers 2 5-1/2

Choke Size: Surface Nil Bottom Hole 3/4 Safety Joint X Jars X P.O. Sub X

Time Tester Started in Hole 12:30 a.m. On Bottom 2:30 a.m.

When tool opened did mud level drop YES

Initial Shut In Time 60 min. Final Shut In Time min. Valve Open Time 3 min. previous

Packer Set with 28,000 #. Pulled Loose With 5,000 #. Time Tester Out of Hole 8:00 a.m.

Blow Description: Strong blow due to packer seat failure

Recovered: 750' feet 24 stands

Recovery Description: 750 feet of Drilling mud

 feet of feet of

Salinity Test:

Samples Sent to: Chem. & Geol. Lab By: G. Isfan

GAS FLOW MEASUREMENTS

Method of Measurement:

Time	Reading (Inches)	Mcf/Day

Gas Sample Sent To:

Do you consider test satisfactory: No

Remarks: Packer seat failure on top rubber; mud level dropped when tool opened, packer
pulled loose and hoisted; rubber O.K. not damaged. Hole size apparently
too large for adequate seal upon expansion of packer rubber

Field Interpretation		
Pressures	Top Chart	Bottom Chart
I.H.P.	722	
F.H.P.	722	
I.F.P.		
F.F.P.		
L.S.I.P.		
F.S.I.P.		
B.H. Temp.		

Operator's Representative G. Isfan

DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 433-1111

CALGARY: PHONE 269-2925

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

1

Date APRIL 7, 1970
 Customer GRAND PLAINS DEVELOPMENT COMPANY
OF CANADA, LTD.,
736 - 8th AVENUE S.W.
CALGARY 2, ALBERTA
 Well Name GPD HOLE NO. AT HILLS WEST N-65A
 Location 61 44'50.00 119 27'40.00
 Area HILLS LAKE WEST, N.W. 1/4
 Formation TIGHT
 Est. Pay Thick ---
 Ticket No. B-1193
 Purchase Order No. ---

Interval 1480' TO 1610'
 Test Duration MIS-RUN
 Initial Hydrostatic 733
 Final Hydrostatic 733
 Initial Flowing ---
 Final Flowing --- after --- mins.
 Initial Shut-In --- after 60 mins.
 Final Shut-In --- after --- mins.
 Slow ---
 Recovery 750'

Mud Type GWL Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.3 Size Rat Hole --- O.D. Drill Collar 4-3/4"
 Vis. 60 Size & Type Pipe 3-1/2" I.F. O.D. Sub or T.J. 4-3/4"
 W. L. --- Time Circulated --- Hrs. Tool Length 92.92'
 pH --- Where Circulated --- Rat Hole Length ---
 F. C. 2/32 Bit off Bottom PRIOR TO LOGGING M. Difference ---
 Condition --- Formation --- Total Depth 1650'
 TEST EXTRAS: SAFETY JT. JARS. PUMP OUT SUB. 1ST PACKER. 3RD RECORDER. FAIL SAFE HEAD.

Type of Test CONV. SADDLE Wt. to Set Packer 28,000 5,000 To Pull Loose
 Initial Puff FAIR Gas Flow NIL Size 3/4" Fluid Cushion NIL
 Temp. 97 Gravity --- No. Drill Collars 8(2 I.F.) Length 234.10' I.D.'s 2-1/8"

PRESSURES

FLUID RECOVERY

Started In 1.45 A.M. Recorder No. ---
 Tool Open 3.05 A.M. Depth Run ---
 " Closed 5.07 A.M. Hydrostatics ---
 " Open 6.07 A.M. Flow ---
 " Closed 6.10 A.M. Initial S.I.P. ---
 " Loose --- M. Final S.I.P. ---
 " Out 8.00 A.M. Difference ---

3153	3152	2832
1595'	1600'	1623'
732-732	733-733	769-753

Mud 750'
 Oil ---
 Water ---
 Total 750'
 Sampled at DRILL PIPE
AND COLLARS.

Description of Fluid 750' DRILLING MUD.

Witnessed By: ---
 REMARKS: WHEN TOOL OPENED FOR PRE-FLOW, MUD DROPPED SLOWLY. SHUT IN FOR ONE HOUR.
WHEN TOOL OPENED FOR FLOW MUD DROPPED RAPIDLY. PULLED OUT OF HOLE.
PACKER SEAT FAILURE.

TEST MIS-RUN.

R.H. GUNDERSON.

Testing Supervisor

BEN HUBER.

Customer's Representative

D.S.T. # 1 WELL NAME GPD HOLE NO. AT HILLS WEST N-65A

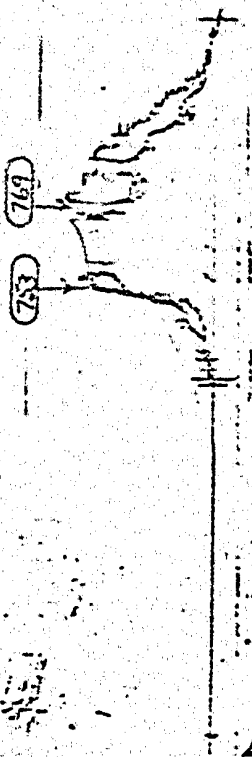
GPD NOEL ET AL MILLS WEST AL-65A

DST-1 TICKET-B-1193

RECORDER-2832

MIS-RUN

753 769



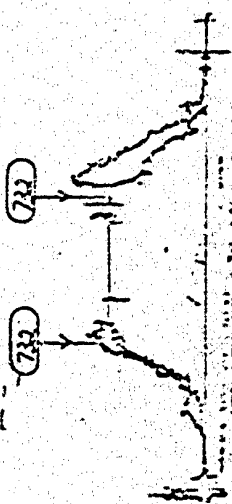
GPD NOEL ET AL MILLS WEST AL-65A

DST-1 TICKET-B-1193

RECORDER-3153

MIS-RUN

753 769



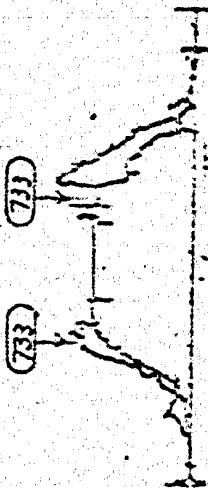
GPD NOEL ET AL MILLS WEST AL-65A

DST-1 TICKET-B-1193

RECORDER-3152

MIS-RUN

753 769



OST 45 PLAN 3152

DRILL STEM TEST REPORT

Well GPD NOEL ET AL MILLS WEST M-651 Test No. 2 Date April 7, 1970
 Testing Company Drill Stem Testers Ltd. Operator R. Gunderson
 Formation Tested Lobely Bay Depth of Well 1850
 Interval Tested from 1470 to 1610 Hole Size 6-1/4 Ret. Hole Size _____
 Drill Pipe Size 3-1/2 No. & Size Drill Collars Run 10 4-3/4"
 Type of Mud Gel Chem Weight 9.3 Viscosity 60 Water Loss _____
 Type of Test Run Saddle No. & Size Packer Rubbers 5 1/2" 1 on btm. 2 on top
 Choke Size: Surface _____ Bottom Hole 3/4 Safety Joint X Jars X P.O. Sub X
 Time Tester Started in Hole 9:00 A.M. On Bottom 10:00 A.M.
 When tool opened did mud level drop no
 Initial Shut in Time 60 min. Final Shut in Time 60 min. Valve Open Time 60 min.
 Packer Set with 28,000 $\pm$. Pulled Loose With 5,000 $\pm$. Time Tester Out of Hole 4:00 P.M.

Blow Description: Pair initial blow on preflow, weak continuous air blow through valve open period

Recovered: 230' feet drilling mud stands

Recovery Description: _____ feet of _____
 _____ feet of _____

Salinity Test: 0% salt content

Samples Sent to: Chem. & Geol. Labs. By: G. Isfan

GAS FLOW MEASUREMENTS

Method of Measurement: nil

Time	Reading (inches)	Mcf/Day

Field Interpretation		
Pressures	Top Chart	Bottom Chart
L.H.P.	769	756
F.H.P.	742	729
L.F.P.	94	94
F.F.P.	135	148
I.S.L.P.	648	648
F.S.L.P.	621	621
B.H. Temp.	98°F	98°F

Gas Sample Sent To: _____

Do you consider test satisfactory: yes

Remarks: Charts indicate rapid build up of F.S.I.P. indicating good permeability. Flow curve indicates possible slight plugging or packer seat leak near start of valve open period, but no plugging found in tool at surface; flow curve otherwise normal

Operator's Representative G. Isfan

DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 4 93

CALGARY: PHONE 269-2

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

2

Date APRIL 7, 1970.
 Customer GRAND PLAINS DEVELOPMENT COMPANY
OF CANADA LTD.,
736 - 8th AVENUE S.W.,
CALGARY 2, ALBERTA.
 Well Name GPD NOEL HT AL HILLS WEST H-65A
 Location 61 44'50.00 119 27'40.00
 Area HILLS LAKE WEST, ALTA.
 Formation TIGHT
 Est. Pay Thick. ---
 Ticket No. B-1194
 Purchase Order No. ---

Interval 1470' TO 1610'
 Test Duration 183 MINUTES
 Initial Hydrostatic 750
 Final Hydrostatic 741
PIG- 72
 Initial Flowing ---
 Final Flowing 148 after 60 mins.
 Initial Shut-In 636 after 60 mins.
 Final Shut-In 627 after 60 mins.
 Blow WEAK
 Recovery 230'

Mud Type GEL Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.3 Size Rat Hole --- O.D. Drill Collar 4-3/4"
 Vis. 60 Size & Type Pipe 3-1/2" I.P. O.D. Sub or T.J. 4-3/4"
 W. L. --- Time Circulated --- Hrs. Tool Length 103.24'
 pH --- Where Circulated --- Rat Hole Length ---
 F. C. --- Bit off Bottom PRIOR TO TEST # 1 M. Difference ---
 Condition GOOD Formation --- Total Depth 1850'
 TEST EXTRAS: 500 BTU JT. DOUBLE SHUT IN. JARE. PUMP OUT SUB. FAIL SAFE HEAD. 1PK PACKER.

Type of Test CONV. SCRADDLE Wt. to Set Packer 28,000 5,000 To Pull Loose
 Initial Puff FAIR Gas Flow HTL Size 3/4" Fluid Cushion ---
 Temp. 98° Gravity --- No. Drill Collars 8 (3 I.P.) Length 234.10' I.D.'s 2-1/8"

PRESSURES

FLUID RECOVERY

Started In 9.00 A.M. Recorder No. ---
 Tool Open 10.07 A.M. Depth Run ---
 " Closed 10.10 A.M. Hydrostatics ---
 " Open 11.10 A.M. Flow ---
 " Closed 12.10 P.M. Initial S.I.P. ---
 " Loose 1.10 P.M. Final S.I.P. ---
 " Out 4.00 P.M. Difference ---

3152	3153	2832
1460'	1468'	1628'
750-741	753-743	812-806
88-148	89-145	HELD AT
636	637	852
627	626	
9	12	

Mud 250'
 Oil ---
 Water ---
 Total 230'
 Sampled at DRILL COLL-
ARKS.

Description of Fluid 230' DRILLING MUD.

Witnessed By: ---
 REMARKS: FAIR INITIAL AIR PUFF ON PRE-FLOW. WEAK AIR BLOW ON FLOW, HOLDING
STEADY THROUGHOUT FLOW PERIOD.

TEST SATISFACTORY.

R.H. GUNDERSON.

Testing Supervisor

BEN HUBER.

Customer's Representative

D.S.T. # 2

WELL NAME

GPD NOEL HT AL HILLS WEST H-65A

GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET B-1194

RECORDER 2830

806

853

812

GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET B-1194

RECORDER 3152

GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET B-1194

RECORDER 3152

750

636

637

148

88

741

636

637

148

88

753

637

636

145

81

743

637

636

145

81

CASING and TUBULAR REPORT

Casing

CASING INFORMATION

Surface Casing _____ O.D. 7"
 Production Casing _____
 Liner _____

Well GPD NOEL ET AL MILLS WEST Location M65-A

Date April 2, 1970

Joints on Location	Feet on Location	Casing Weight	Grade	Range	Thread	Thread & Coupling	Make	Joints Run	Depth Landed	Feet Run in Well
11	359.25	20#	J-55	2	8rd	ST&C	Phoenix	11	370' KB	359.25

Shoe: Make <u>Davis Lynch</u> Type <u>Guide</u> Length _____	1.50
Collars: Make <u>Davis Float</u> Type <u>Insert</u> Length _____	0.00
Landing Joint (when used) Length _____	15.00
Overall Length of Casing String _____	375.75
Feet up from K.B. (Subtract) _____	5.00
Setting Depth: <u>370</u> By Driller _____ By Tally _____	370.75
Shoe Joint: <u>34.56</u> Overall _____ (Subtract) _____	34.56
Float Collar Landed: <u>335.44</u> By Driller _____ By Tally _____	336.19

CENTRALIZERS:

Make B&W

Number 2

Positions 1st St.

SCRATCHERS:

Make N11

Number _____

Positions _____

No. of Joints Welded Guide shoe, 1st St. - Thread Locked

Remarks _____

Operator's Representative G. Isfan

RUNNING AND CEMENTING

Surface Casing _____ 7"
 Intermediate Casing O.D. _____
 Production Casing _____
 Liner _____

GENERAL

Well GPD NOEL ST AT MILLS Location WEST M-65A Date April 2, 1970

K.B. Elevation 766.0' K.B. Csg. Flange 9.0' Total Depth (Driller) 375'

Hole Size	<u>9-7/8</u>			Casing in Hole	<u>7"</u>		
Depth	<u>375</u>			Depth Set	<u>370' K.B.</u>		

Mud: Type Gel Wt. 9.7 Visc. 50 W.L. _____

B.O.P.'s _____

RUNNING

Power Logs _____ Torque: Max. _____ Nom. _____ Min. _____

Time Pipe Started 7:00 A.M. Time on Bottom 7:30 A.M. Time Crc. 15 mins.

Fill-up Points Every 2 fts. Btm. by Casing 370' Ft. up from K.B. 5.00'

Remarks _____

CEMENTING

Cement Co. Tri-City Operator B. Huber Time on Location _____

Types & Quantities of Cement Normal Portland 170 sacks + 2% CaCl₂

(130 sacks displaced; 40 sacks cemented from top)

Water ahead 2 Bbls. Mix Times: Start 7:50 A.M. Finish 8:00 A.M. Slurry Wt. 14.8

Calc. Disp. 13.7 Bbls. Est. Disp. time 7 Mins. Start 8:05 A.M. Finish 8:12 A.M.

Max. Pumping Press. 75 Bump. Press. 500 Bumped by Tri-City No. times bump. 1

Cement Returns: Yes/No _____ Remarks Cemented upper 50; with 1" line from top with 40 sacks.

LANDING

Time Landed 8:00 P.M. Date April 2, 1970 Init. Wt. of Cem. String (Less Bbls.) _____

Wt. Landed in Slips _____ Make of Bowl _____ Nom. Size _____ Series _____

Slip and Seal Assembly _____ Remarks _____

Operator's Representative G. Isfan

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

P-4

CASING AND TUBING TALLY

Page 1 of 1 Joint No. 1 to 1 Date April 2 19 70

WELL: GPD NOEL ET AL MILLS WEST Size 7" Weight 20# Grade J-55 Range 2 Condition New

Manufacturer Phoenix Threads: On Off No. of Threads 8 rd Coupling: Short X Long

No. of Joints: Received at Well 11 Used 11 Disposition of Joints not used

Length of Cut-Off Joint above casing bowl Disposition

Joint No.	Length of Joint	Joint No.	Length of Joint	Joint No.	Length of Joint	Joint No.	Length of Joint
01	33 06	31		61		91	
02	32 80	32		62		92	
03	33 12	33		63		93	
04	32 84	34		64		94	
05	33 12	35		65		95	
06	33 08	36		66		96	
07	29 92	37		67		97	
08	33 08	38		68		98	
09	32 75	39		69		99	
10	32 44	40		70		00	
TOTAL 326 21		TOTAL		TOTAL		TOTAL	

11	33 04	41		71		TALLY SUMMARY	
12		42		72			
13		43		73			
14		44		74			
15		45		75			
16		46		76			
17		47		77			
18		48		78			
19		49		79			
20		50		80			
TOTAL 33 04		TOTAL		TOTAL		Group No. Ending	Length (Forward)

21		51		81		10	326 21
22		52		82		11	33 04
23		53		83		30	Csg. Shoe 1 50
24		54		84		40	
25		55		85		50	
26		56		86		60	
27		57		87		70	
28		58		88		80	
29		59		89		90	
30		60		90		00	
TOTAL		TOTAL		TOTAL		TOTAL 360 75	

Tally By: Tri-City Drilg.

Checked By: G. Isfan

(Note: Include casing shoe and collar in first joint)

REMARKS: Landing jt. 15.00' not included in above string

Operator's Representative G. Isfan

CORE AND FLUID ANALYSIS

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-5881-3

Received: Apr. 14, 1970 Reported: Apr. 16, 1970

Well: Location:

G.P.D. Noel et al Mills West K-65-A N.K.T.

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF

Field or Area:

Elev.: K.B. 764 Grd. 756

Zone/Formation:

Lonely Bay

Method of Production:

D.S.T. #2

Sampled from: Top of Tool

Sample Interval: 1470' - 1610'

Sampled by: Drill Stem Testers Date: Apr. 7, 1970
Limited

OTHER PERTINENT DATA

Recovery: 230' Drilling Mud.

(Signed)

	Na	K	Ca	Mg		SO ₄	Cl	CO ₃	OH	
Mg./L	3450		517	1		5950	1670	12	78	
Meq./L	149.96		25.80	0.08		123.76	47.09	0.40	4.59	
Meq. %	42.64		7.34	0.02		35.19	13.39	0.11	1.31	

Total Solids Mg/L:

By Evaporation 11,750

Fe Present Specific Gravity 1.013

Observed pH 11.4

@ 73 °F

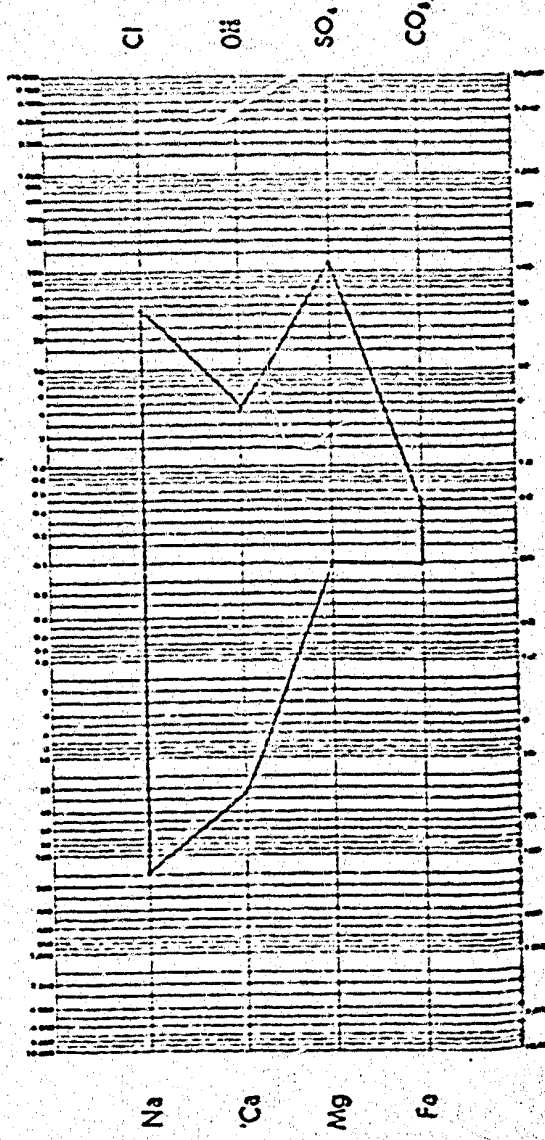
Calculated 11,678

After Ignition 11,390

H₂S Nil Refractive Index 1.3347

Resistivity 0.747 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions

The sample as received was a grey mud. The filtrate was pale yellow in color.

Na
Ca
Mg
Fe

LABORATORY

NUMBER

SAMPLED

FROM

RESISTIVITY

(Ohm-meters at 68 °F)

C70-5881-1 100' Above Tool

0.873

C70-5881-2 220' Above Tool

0.850

MISCELLANEOUS

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
PLUG-BACK AND ABANDONMENT REPORT

P-10

Well CPD NOEL ET AL MILLS WEST

Location M-65A, Mills Lake, N. W.T.

Hole Size	<u>6-1/4"</u>
Depth	<u>1850</u>

R.E. Elevation 764

F.T.D. 1850

Fluid in Hole Mud gel

Plug Back String 3 1/2" I.F. 13.30 D.P.

Service Company Tri-City Drilling

Cons. Bd. Approval _____

Cons. Bd. Witness _____

Casing in Hole	Size	Set At	Top of Cement
Surface Casing	<u>7"</u>	<u>370'</u>	<u>surface</u>
Prod. String			

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5
Date	<u>Apr. 8/70</u>	<u>Apr. 8/70</u>	<u>Apr. 8/70</u>		
Interval - Top	<u>1750</u>	<u>1370</u>	<u>320</u>		
Bottom	<u>1850</u>	<u>1470</u>	<u>420</u>		
Ft. Plug Depth		<u>1367</u>	<u>300</u>		
Formation - Name		<u>Lonely Bay</u>	<u>Surface csg.</u>		
Depth		<u>1379</u>	<u>370'</u>		
Casing Hole Size (Avg.)	<u>6-1/4"</u>	<u>7"</u>	<u>7"</u>		
Type of Mud	<u>gel</u>	<u>gel</u>	<u>gel</u>		
No. of Sacks	<u>30</u>	<u>40</u>	<u>50</u>		
Additives		<u>2% CaCl₂</u>	<u>2% CaCl₂</u>		
Bbls. of Water Ahead	<u>1</u>	<u>2</u>	<u>1</u>		
Displacement - Bbls. Water					
Bbls. Mud	<u>12.9 mud</u>	<u>10 mud</u>	<u>2.3 water</u>		
Slurry Weight	<u>14.8</u>	<u>14.9</u>	<u>15.0</u>		
Mixing Times - Start	<u>12:00 a.m.</u>	<u>12:30 a.m.</u>	<u>9:15 a.m.</u>		
Finish	<u>12:07</u>	<u>12:40 a.m.</u>	<u>9:25 a.m.</u>		
Displacing Times - Start	<u>12:08</u>	<u>12:40 a.m.</u>	<u>9:25 a.m.</u>		
Finish	<u>12:15</u>	<u>12:50 a.m.</u>	<u>9:29 a.m.</u>		
Felt Plug Time	<u>not required</u>	<u>8:45 a.m.</u>	<u>5:30 P.M.</u>		

Surf. Csg. Cut 3 Ft. Below Grd. Surf. Plug 7 Sacks. Plate Welded Yes/No _____

Casing Salvage: Shot off at _____ No. of Jts. Recovered _____

Remarks: 4' riser (above ground level) welded on top of plate: Well Name

CPD MILLS W. M-65-A inscribed with welder on 2" steel riser

Operator's Representative G. Isfan

CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Flaring, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
1850		1750	30 sacks cement								
1470		1370	30 sacks cement								
420		320	50 sacks cement								
			5 sack top plug welded on steel plug and installed								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.R.H.P.	F.S.I.R.H.P.	L.F.R.H.P.	F.F.R.H.P.	L.H.P.	F.H.P.	REMARKS
1	Apr. 7/70	Lonely Bay	1480	1610	60	60	60			94	140	722	722	Motor Packer Failure
2	Apr. 7/70	Lonely Bay	1470	1610	60	60	60	640	621			769	742	Recovery 230' Drilling mud test satisfactory

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks

PRESENT STATUS OF WELL

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

Company Great Plains Development Company of Canada, Ltd.

Signed by *A. G. Linton*

Title A. G. LINTON

Drilling Supervisor

Date May 1, 1970

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

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
736 - 8th Avenue S.W., Calgary, Alberta - Phone 264-0660

DRILLING AND GEOLOGICAL PROGRAM
PART "A"
INSTRUCTIONS TO THE CONTRACTOR

Lat. 61°44'48"
Long. 119°27'40"

GPD NOEL ET AL MILLS W

Unit
Location: Twp. M Sec. 65 Grid Area 61°50' 119°15'
Elevations: Ground 756 Surv. K.B. 768 Est.
(taken from seismic records)
Note: Record in tour book and report K.B. to Ground and K.B. to surface casing flange immediately after drilling out.

- Surface Hole:
- (a) Drill 9-7/8" surface hole to 200' Minimum.
 - (b) Take Torque readings at 100' intervals to 200' (Maximum deviations 1°).
 - (c) Round trip prior to running casing to ensure the hole is clean.
 - (c) Double tally drill pipe on last trip prior to running casing.
 - (e) Measure and record distance from K.B. to Ground and K.B. to casing bowl flange and report with surface casing details.

Surface Casing: To be conducted by Contractor,

- (a) Run and cement 7", 20 #, J-55, Casing at 200' minimum, using _____ sacks cement plus 2% CaCl₂. Casing string to be as follows: guid shoe, one joint of casing, float collar and balance of casing to _____. One centralizer to be placed in the middle of joints # _____ and # _____ and a scratcher five feet from each end of the same joints. Weld guid shoe, float collar and two joints of casing. Cement returns to surface must be obtained. Casing must be set so that the casing bowl flange is at ground level or above.
- (b) Land casing after 12 hours, make up bowl and blowout preventors.

Samples: Conservation Board - 10' samples
Great Plains - 10' samples

Surface - T.D.
Surface - T.D. (1500')

<u>Mud Control:</u>	<u>Depth</u>	<u>Viscosity (Sec./Qt.)</u>	<u>Water Loss (cc/30 mins.)</u>	<u>Remarks</u>
	Surface Hole			Spud in mud. After drilling out guide shoe and jetting cement-cut mud, and S.A.P.P. or Bicarbonate of Soda to treat out residual cement.
	<u>Turnkey supplied by Contractor</u>			
				Water

General Mud Requirements:

- (a) Weight approximately _____ /U.S. gallon.
- (b) A complete record of all mud and additives used must be correctly logged in the daily reports by "the contractor".
- (c) Check all mud properties at least twice per tour and note results in tour report.
- (d) Lost circulation - Circulation losses may occur during the surface hole and _____

Main Hole Drilling:

- (a) Drill ahead with _____" bit and follow sample collection.
- (b) Tallies - Drillpipe is to be tallied out every 1000' and prior to:
 - (1) Coring
 - (2) Drillstem testing
 - (3) Logging
 - (4) Running casing

If pipe measurement varies more than three feet from the recorded tally, it must be remeasured and the tally adjusted if necessary. A record of adjustment is to be made in the daily report.

- (c) Hole conditions - Great Plains' Drilling Department is to be notified immediately if poor hole conditions develop, if drillpipe is stuck, or if a fishing job develops.

Abnormal Formation Pressures:

[illegible]

The Production Department of Great Plains Development Company of Canada, Ltd., should be informed of all samples taken, Attn: Mr. Terry Carter

Logging: See attached or below:

Log Type Schlumberger	Scale	Interval
Dual Induction Laterolog	2" = 100'	T.D. - Base Surface Casing
	5" = 100'	
BHC Formation Density Log	5" = 100'	T.D. - Base Surface Casing
Sidewall Neutron Porosity Log	5" = 100'	T.D. - Base Surface Casing
BHC Sonic Gamma Ray Log	2" = 100'	T.D. - Base Surface Casing
	5" = 100'	T.D. - Base Surface Casing
Litholog Plot	5" = 100'	

Production Casing: To be determined.

Cementing Operations: To be determined. State clearly in drilling reports cement mixed and Admix dry volumes and calculate slurry volumes pumped.

Service Companies:

Cementing	↓
Testing	" TURNKEY SUPPLIED BY CONTRACTOR"
DIAMOND CORING	↓
Mud	↓
Logging	Schlumberger Canada, Rainbow Lake Location.

Sample Lag Time: Samples are to be lagged as directed.

Telephone Numbers:

Office	264-0660
G. M. Hunter	255-7312
N.M. Lehto	289-4350
L.L. Samoil	289-3980
D.L. Gingerick	249-4700

Data Requirements:

<u>Partners</u>	<u>To be completed by N.O.E.L., % Participation</u>	<u>Samples</u>	<u>Logs</u>		<u>Analyses</u>		<u>DST Completion</u>	
			<u>Field</u>	<u>Final</u>	<u>Core</u>	<u>Fluid</u>	<u>Charts</u>	<u>Report</u>
NOEL			1	1	1	1	1	1
GPD	18%	X	2	2	1	1	1	2
BOCADEL	18%		1	1	1	1	1	1
NORANDA	9%		1	1	1	1	1	1
ANDEX	25%		2	2	2	2	2	2
SHEEL	15%	X	2	2	2	2	2	2
GULF	15%		2	2	2	2	2	2
O & G.C.B.		X		1	2	1	1	

Prepared by: _____

Approved G.P.D.: _____

Approved N.O.E.L.: _____

GEOLOGICAL PROGNOSIS

GPD NOEL ET AL MLLIS W
UNIT M SEC. 65 GRID AREA 61°50' - 119°15'

Ground Elev. 756 (taken from seismic records)
K. B. Elev. 768 (est.)

<u>FORMATION</u>	<u>DEPTH</u>	<u>SURSEA</u>	<u>INTERVAL</u>
Loncly Bay Carb.	1290	-522	
T. D.	1850	-1082	

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-5879

Received: April 14, 1970 Reported: April 16, 1970

Well: Location:

G.P.D. Noel et al Mills West M-65

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF

Field or Area:

M-65 N.W.T.

Elev.: K.B.

Zone/Formation:

Lonely Bay

Sample Interval: 1534'

Method of Production:

CIRC

Sampled from:

Flow Line

Sampled by:

Date: Mar. 29, 1970

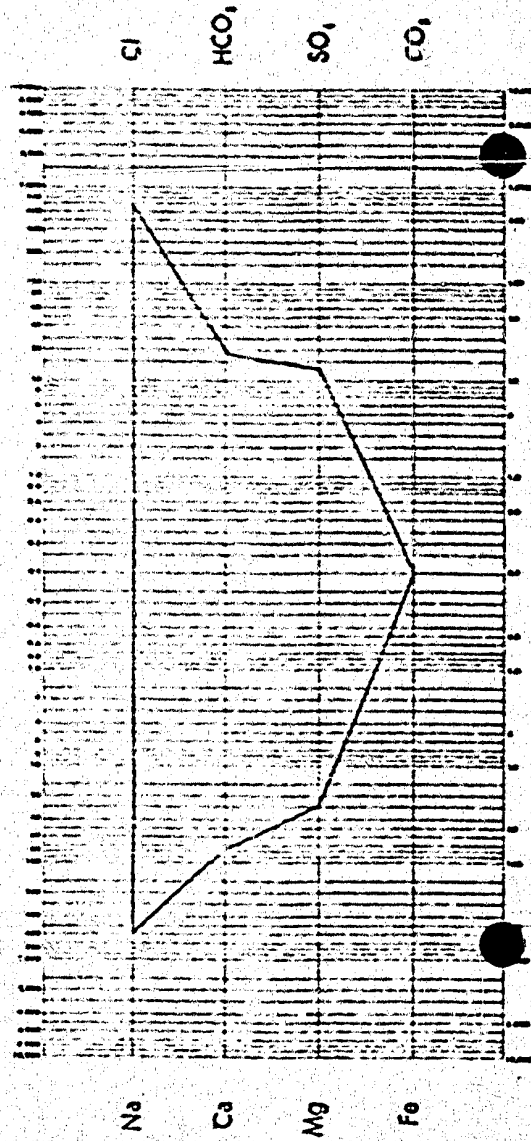
OTHER PERTINENT DATA CIRC Hole After Last CIRC at 1533
Hole Bridged off on RTM CIRC Hole.

(Signed)

	Na	K	Ca	Mg	SO ₄	Cl	CO ₃	HCO ₃	
Mg./L	13,600		1520	365	630	23,600		1100	
Meq./L	590.81		75.85	30.00	13.10	665.52		18.06	
Meq. %	42.41		5.44	2.15	0.94	47.77		1.29	

Total Solids Mg/L: By Evaporation 40,920 Fe Present Specific Gravity 1.031 @ 60°F Observed pH 7.4 @ 73 °F
Calculated 40,815 After Ignition 37,440 H₂S Nil Refractive Index 1.3399 @ 25°C Resistivity 0.18 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions

The sample as received contained approximately 10% gray sediment. The filtrate was colorless.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-5880

Received: Apr. 14, 1970 Reported: Apr. 16, 1970

Well: Location:

G.P.D. Noel et al Millie West M-65

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF

Field of Area: Wildcat

Ekv.: K.B.

Zone/Formation: Lonely Bay

Sample Interval: 1373' - 1403'

Method of Production: D.S.T. #1

Sampled from: Top of Tool

Sampled by: Drill Stem Testers Date: Limited

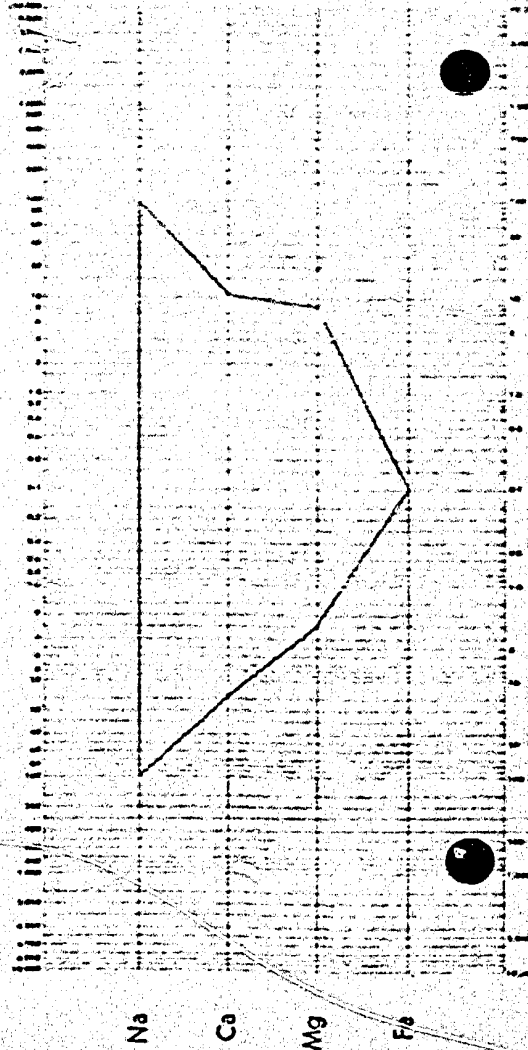
OTHER PERTINENT DATA Recovery: 60' Drilling Mud.

(Signed)

	Na	K	Ca	Mg	SO ₄	Cl	CO ₂	HCO ₃	
Mg./L	2250		284	39	410	3390	Trace	(680)	
Meq./L	97.90		14.17	3.21	8.53	95.60	Trace	11.15	
Meq. %	42.46		6.15	1.39	3.70	41.46		4.84	

Total Solids Mg/L: 7053 By Evaporation 7334 Fe Present Specific Gravity 1.010 @ 60°F Observed pH 8.3 @ 73°F
 Calculated 7053 H₂S Nil Refractive Index 1.3342 @ 25°C Resistivity 0.913 ohm meters @ 68°F

Pattern Unit Meq./L



CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C70-5881-3

Received: Apr. 14, 1970 Reported: Apr. 16, 1970

Well: Location:

G.P.D. Noel et al Millie West H-65-A N.W.T.

Operator: GREAT PLAINS DEVELOPMENT COMPANY OF

Field or Area:

Lonely Bay

Elev.: K.D. 764

Zone/Formation:

756

Method of Production:

D.S.T. #2

Sampled from: Top of Tool

Sample Interval: 1470' - 1610'

Sampled by: Drill Stem Testers Date: Apr. 7, 1970
Limited

OTHER PERTINENT DATA

Recovery: 230' Drilling Mud.

(Signed)

Na	K	Ca	Mg	SO ₄	Cl	CO ₃	OH
3450		517	1	5950	1670	12	78
149.96		25.80	0.08	123.76	47.09	0.40	4.59
42.64		7.34	0.02	35.19	13.39	0.11	1.31

Total Solids Mg/L:

By Evaporation 11,750

Fe

Present Specific Gravity 1.013

@ 60°F

Observed pH 11.4

@ 73 °F

Calculated 11,678

After Ignition

11,390

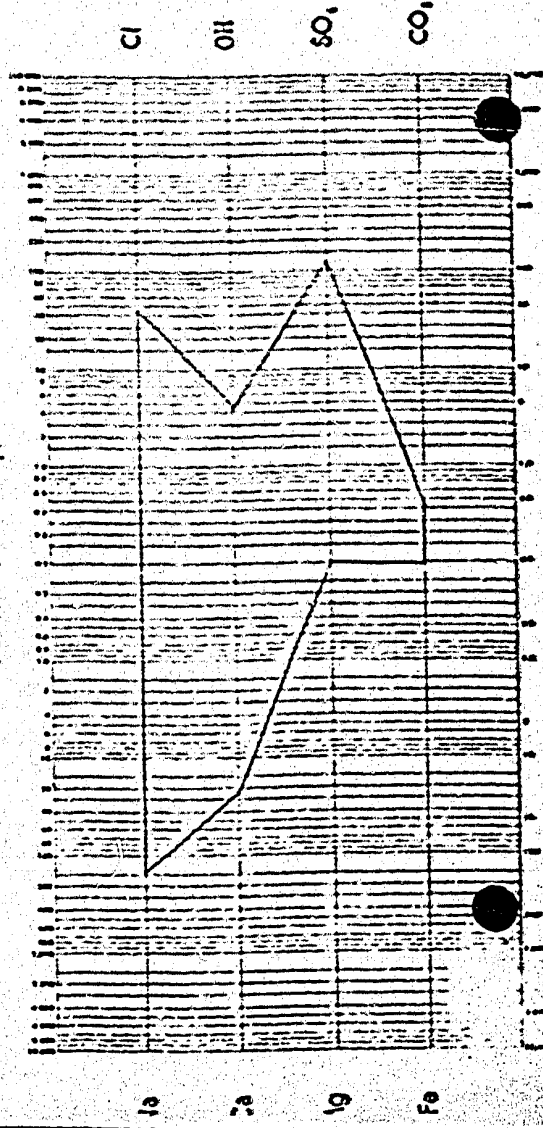
H₂S N11

Refractive Index 1.3347

@ 75°C

Resistivity 0.747 ohm meters @ 68 °F

Pattern Unit Mcq./L



Remarks and Conclusions

The sample as received was a grey mud. The filtrate was pale yellow in color.

LABORATORY NUMBER

C70-5881-1

SAMPLED FROM

100' Above Tool

RESISTIVITY

(Ohm-meters at 68°F.)

C70-5881-2

220' Above Tool

0.873

0.850

DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE - 7273

CALGARY: PHONE 269-1111

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

1

Date MARCH 27, 1970.
 Customer GREAT PLAINS DEVELOPMENT COMPANY
OF CANADA LTD.,
736 - 8th AVENUE S.W.,
CALGARY 2, ALBERTA.
 Well Name GPD HOLE NO. AL HILLS WEST X-65
 Location 61 44'48" N.L. 119 27'40" W.L.
 Area HILLS LK WEST N.W.T.
 Formation _____
 Est. Pay Thick _____
 Ticket No. B-1236
 Purchase Order No. _____

Interval 1373' TO 1403'
 Test Duration 184 MINUTES
 Initial Hydrostatic 662
 Final Hydrostatic 656
PRE- 57
 Initial Flowing 61
 Final Flowing 83 after 60 mins.
 Initial Shut-In 141 after 60 mins.
 Final Shut-In 164 after 60 mins.
 Blow WEAK
 Recovery 60'

Mud Type GEL Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.2 Size Rat Hole NIL O.D. Drill Collar 4-3/4"
 Vis. 37 Size & Type Pipe 3-1/2" I.F. O.D. Sub or T.J. 4-3/4"
 W. L. _____ Time Circulated 8 Hrs. Tool Length 61.90'
 pH _____ Where Circulated BOTTOM Rat Hole Length _____
 F. C. 2/32 Bit off Bottom 3.25 P.M. Difference _____
 Condition GOOD Formation _____ Total Depth 1403'
 TEST EXTRAS: SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FAIL SAFE HEAD. LEY PACKER.

Type of Test DUAL BOTTOM HOLE Wt. to Set Packer 25,000 15,000 To Pull Loose
 Initial Puff GOOD Gas Flow NIL Size Bean 3/4" Fluid Cushion NIL
 Temp. 98° Gravity _____ No. Drill Collars 10 (3 1/2") Length 293.90' I.D.'s 2-1/4"

PRESSURES

FLUID RECOVERY

Started In 5.00 P.M. Recorder No. _____
 Tool Open 6.47 P.M. Depth Run _____
 " Closed 6.55 P.M. Hydrostatics _____
 " Open 7.55 P.M. Flow _____
 " Closed 8.55 P.M. Initial S.I.P. _____
 " Loose 9.55 P.M. Final S.I.P. _____
 " Out 6.30 A.M. Difference _____

INSIDE	OUTSIDE
2833	3145
1381'	1391'
656-653	662-656
78-78	81-83
130	141
160	164
30	23

Mud 60'
 Oil _____
 Water _____
 Total 60'
 Sampled at TOP OF TOOL

Description of Fluid 60' OF MUD.

Witnessed By: G. ISFANI.

REMARKS: GOOD AIR BLOW ON PRE-FLOW. WEAK AIR BLOW ON FLOW. PULLED PACKERS LOOSE
WITH 15,000# OVER STRING WT. PULLED 700' OF PIPE WHEN HIT TIGHT SPOT, COULD NOT
MOVE TOOL UP OR DOWN. WE THEN PUMPED OUT & STARTED TO CIRCULATE FOR TWO HOURS
AND WORK PIPE WHEN IT CAME FREE SO CONDITIONED MUD AND THEN HOISTED. TOOL WAS FULL
OF GRAVEL & SHALE. WHEN CIRCULATING, HAD LOTS OF GRAVEL COMING OVER SHAKER.

TEST SATISFACTORY.

ALVIN J. KAPONA.

BEN HUBER.

Testing Super for

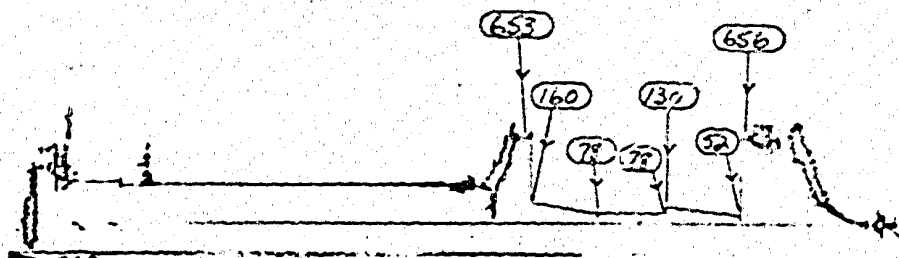
Customer's Representative

D.S.T. # 1 WELL NAME GPD HOLE NO. AL HILLS WEST X-65

GPD NOEL ET AL MILLS WEST M-65

DST-1 TICKET-9-1236

RECORDER-2833

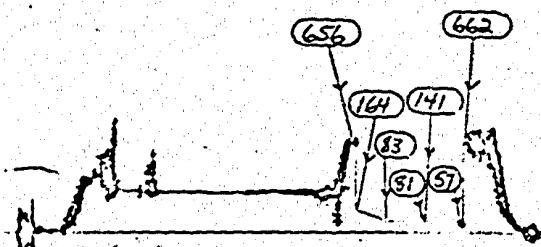


3141

GPD NOEL ET AL MILLS WEST M-65

DST-1 TICKET-5-1236

RECORDER-3145



DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 433-5555

CALGARY: PHONE 249-3925

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

1

Date APRIL 7, 1970.
 Customer GREAT PLAINS DEVELOPMENT COMPANY
OF CANADA, LTD.,
736 - 8th AVENUE S.W.,
CALGARY 2, ALBERTA.
 Well Name GPD HOLE #1 AT MILLS WEST K-65A
 Location 61 44'50.00 119 27'40.00
 Area MILLS LAKE WEST, ALTA.
 Formation TIGHT
 Est. Pay Thick ---
 Ticket No. B-1193
 Purchase Order No. ---

Interval 1480' TO 1610'
 Test Duration MIS-RUN
 Initial Hydrostatic 733
 Final Hydrostatic 733
 Initial Flowing ---
 Final Flowing --- after --- mins.
 Initial Shut-In --- after 60 mins.
 Final Shut-In --- after --- mins.
 Blow ---
 Recovery 750'

Mud Type GEL Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.3 Size Rat Hole --- O.D. Drill Collar 4-3/4"
 Vis. 60 Size & Type Pipe 3-1/2" I.P. O.D. Sub or T.J. 4-3/4"
 W. L. --- Time Circulated --- Hrs. Tool Length 91.22'
 pH --- Where Circulated --- Rat Hole Length ---
 F. C. 2/32 Bit off Bottom PRIOR TO LOGGING M. Difference ---
 Condition --- Formation --- Total Depth 1450'
 TEST EXTRAS: SAFETY JT. JARS. PUMP OUT SUB. 1ST PACKER. 3RD RECORDER. FAIL SAFE HEAD.

Type of Test CONV. STRADDLE Wt. to Set Packer 28,000 5,000 To Pull Loose
 Initial Puff FAIR Gas Flow NIL Size Bean 3/4" Fluid Cushion NIL
 Temp. 97 Gravity --- No. Drill Collars 8(3-1/2") Length 234.10' I.D.'s 2-1/8"

PRESSURES

FLUID RECOVERY

Started In 1.45 A.M. Recorder No. ---
 Tool Open 3.05 A.M. Depth Run ---
 " Closed 3.07 A.M. Hydrostatics ---
 " Open 4.07 A.M. Flow ---
 " Closed 4.10 A.M. Initial S.I.P. ---
 " Loose --- M. Final S.I.P. ---
 " Out 8.00 A.M. Difference ---

3153	3152	2832
1595'	1600'	1623'
732-732	733-733	769-753

Mud 750'
 Oil ---
 Water ---
 Total 750'
 Sampled at DRILL PIPE
AND COLLARS.

Description of Fluid 750' DRILLING MUD.

Witnessed By: ---

REMARKS: WHEN TOOL OPENED FOR PRE-FLOW, MUD DROPPED SLOWLY. SHUT IN FOR ONE HOUR.
WHEN TOOL OPENED FOR FLOW MUD DROPPED RAPIDLY. PULLED OUT OF HOLE.
PACKER SEAT FAILURE.

TEST MIS-RUN.

R.H. GUNDERSON.

Testing Supervisor

BEN HUBER.

Customer's Representative

D.S.T. # 1 WELL NAME GPD HOLE #1 AT MILLS WEST K-65A

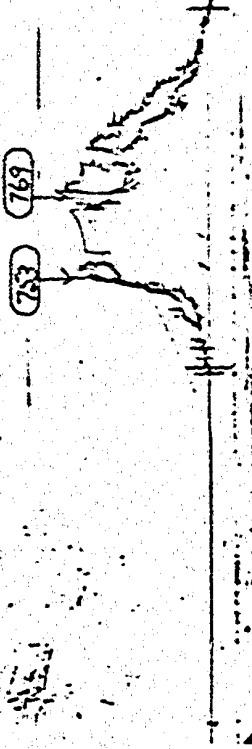
GPD NOEL ET AL MILLS WEST M-65A

DST-1 TICKET-B-1193

RECORDER-2832

MIS-RUN

733 769



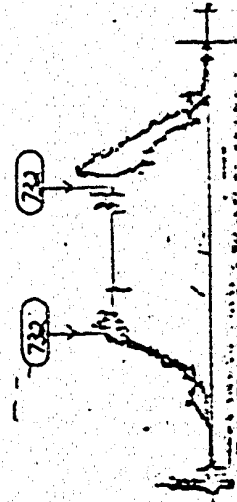
GPD NOEL ET AL MILLS WEST M-65A

DST-1 TICKET-B-1193

RECORDER-3/53

MIS-RUN

732 732



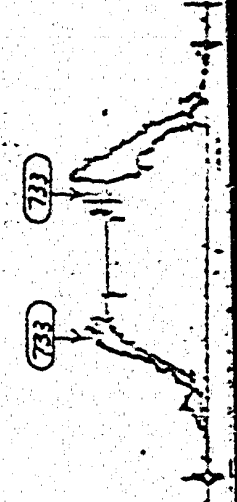
GPD NOEL ET AL MILLS WEST M-65A

DST-1 TICKET-B-1193

RECORDER-3/52

MIS-RUN

733 733



GPD NOEL ET AL MILLS WEST M-65A

DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 4 32

CALGARY: PHONE 269-7

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

2

Date APRIL 7, 1970.
 Customer GREAT PLAINS DEVELOPMENT COMPANY
OF CANADA LTD.,
736 - 8th AVENUE S.W.,
CALGARY 2, ALBERTA.
 Well Name GPD HOLE ET AL HILLS WEST H-65A
 Location 61 44'50.00 119 27'40.00
 Area HILLS LAKE WEST, H.A.C.
 Formation TIGHT
 Est. Pay Thick. ---
 Ticket No. B-1194
 Purchase Order No. ---

Interval 1470' TO 1610'
 Test Duration 183 MINUTES
 Initial Hydrostatic 750
 Final Hydrostatic 742
PRE- 72
 Initial Flowing ---
 Final Flowing 148 after 60 mins.
 Initial Shut-In 636 after 60 mins.
 Final Shut-In 627 after 60 mins.
 Blow WEAK
 Recovery 230'

Mud Type GEL Size Full Hole 6-1/4" Size Rubber 5-1/2"
 Mud Wt. 9.3 Size Rat Hole --- O.D. Drill Collar 4-3/4"
 Vis. 60 Size & Type Pipe 3-1/2" I.P. O.D. Sub or T.J. 4-3/4"
 W. L. --- Time Circulated --- Hrs. Tool Length 103.24'
 pH --- Where Circulated --- Rat Hole Length ---
 F. C. --- Bit off Bottom PRIOR TO TEST # 1.M. Difference ---
 Condition GOOD Formation --- Total Depth 1850'
 TEST EXTRAS: SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FAIL SAFE HEAD. 1IN PACKER.

Type of Test CONV. SCRADDLE Wt. to Set Packer 28,000 5,000 To Pull Loose
 Initial Puff FAIR Gas Flow NIL Size Bean 3/4" Fluid Cushion ---
 Temp. 98 Gravity --- No. Drill Collars 8(3 1/2" IF) Length 234.10' I.D.'s 2-1/8"

PRESSURES

FLUID RECOVERY

Started In 9.00 A.M. Recorder No. ---
 Tool Open 10.07 A.M. Depth Run ---
 " Closed 10.30 A.M. Hydrostatics ---
 " Open 11.10 A.M. Flow ---
 " Closed 12.10 P.M. Initial S.I.P. ---
 " Loose 1.10 P.M. Final S.I.P. ---
 " Out 4.00 P.M. Difference ---

3152	3153	2832
1460'	1468'	1628'
750-741	753-743	812-806
88-148	89-145	HELD AT
636	637	852
627	626	
9	11	

Mud 230'
 Oil ---
 Water ---
 Total 230'
 Sampled at DRILL COLL.
ARS.

Description of Fluid 230' DRILLING MUD.

Witnessed By: ---
 REMARKS: FAIR INITIAL AIR PUFF ON PRE-FLOW. WEAK AIR BLOW ON FLOW, HOLDING
STEADY THROUGHOUT FLOW PERIOD.

TEST SATISFACTORY.

BEN HUBER.

R.H. GUNDERSON.

Testing Supervisor

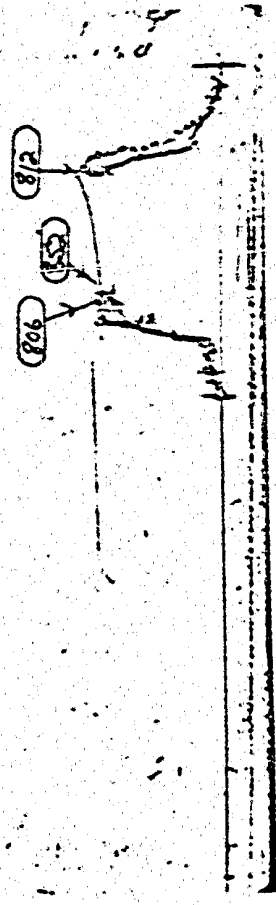
Customer's Representative

O.S.T. # 2 WELL NAME GPD HOLE ET AL HILLS WEST H-65A

GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET # B-1194

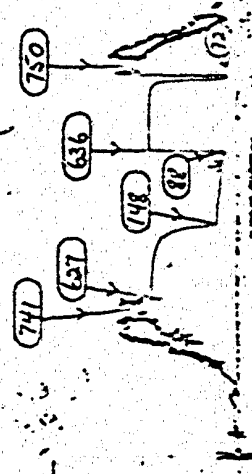
RECORDER 2832



GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET # B-1194

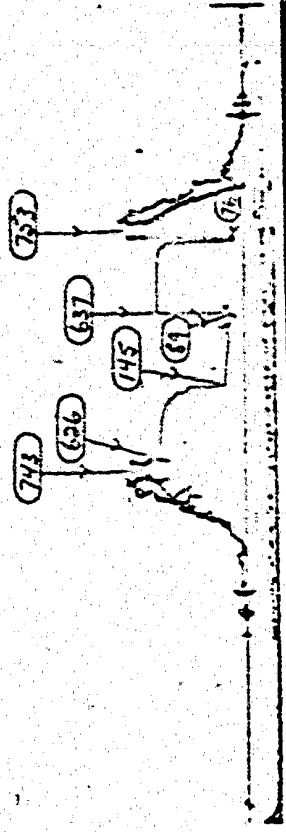
RECORDER 3152



GPD NOEL ET AL MILLS WEST M-65A

DIST. 2 TICKET # B-1194

RECORDER 3153



TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD

DAY WORK RECORD

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

RIG No. 441 LOCATION WREST PLAINS MILLS W. M-65 AREA

DATE MAR 31 1970

Tour — Midnight — 8 a.m.	
Specify actual hours worked	Hrs.
Driller ROBERT RIZZOLI	12
Derrick RICHARD BOURQUE	12
Floor ROBERT NASHIM	12
Floor HAMID FERRIS	12
Floor	
Motor	
Mechanic	
Extra	
Injuries:	
Fires:	

From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands	
										No.	O.D.	I.D.	Wgt.	Gals.		Bbls.		Tons		Singles	
BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION						D. Collars			
																		Other Ft.			
																		C.B. Ft.			
																		Subs. Ft.			
MUD		12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives				At Surveys Degree				MOTOR HOURS		Next Oil Change		Ft. Up On Kelly			
WEIGHT														1				TOTAL			
VISCOSITY														2							
GEL														3				Next Slip			
PUMPS	No. 1	Pressure																			
	Model	S.P.M.																			
		Liner Size																			
	No. 2	Pressure																			
Model	S.P.M.																				
	Liner Size																				
W.L.		F.C.		pH.		General															
						Plug # 2 300' to 200' w/ 85 sacks + 2 1/2 cu yd Discharge - 11 # 1 1/2" casing - 20'															

REMARKS	Time		
	Start	Stop	Interval
WOC	12 ⁰⁰	530	
RUN IN TO FEEL plug #1	530		5½
FELT @ 1235'		6 ⁰⁰	½
LAY DOWN PIPE	6 ⁰⁰	730	1½
RIG TO RUN plug #2	730	8 ⁰⁰	½
			8

Tour — 8 a.m. to 4 p.m.	
Specify actual hours worked	Hrs.
Driller	
Derrick	
Floor	
Floor	
Floor	
Motor	
Mechanic	
Extra	
Injuries:	
Fires:	

From		Footage		To		Wt. Drill String		DRILL COLLARS		FUEL		WATER		COAL		Stands					
				10		200		50		50		50		50		Singles					
BITS	No.	Size	Type	Size	Jet	Serial No.	Weight	R.P.M.	Feet Drilled	Feet Returned	Hrs.	CONCRETE		D. Collars		Other Ft.					
	Pulled out & left square plug under pressure 4 h * Picked out - picked up cut off bit, bit sub & flapper float) Pulled up to 150 & square plug was MOTOR MOUNTED Cement - stripped out then Hydril - Cloud Blind Rams) - Felt top of plug @ 150' @ 6:00 PM March 3/10																				
MUD		WEIGHT		VISCOSITY		GEL												C.E. Ft.		Subs. Ft.	
																		Ft. Un On Kelly		TOTAL	
PUMPS	No. 1	Pressure	S.P.M.	Liner Size	No. 2	Pressure	S.P.M.	Liner Size	Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or	Cut	Feet Left on Spool	Next Slip			
	General																				
Reg released from M-65																					

[illegible]

Tour — 4 p.m. to Midnight	
Specify actual hours worked	Hrs.
Driller <u>DING JOHNSON</u>	<u>12</u>
Derrick <u>WALTER CHASE</u>	<u>12</u>
Floor <u>DAN STORUN</u>	<u>6</u>
Floor <u>STEVE HAWRILAK</u>	<u>12</u>
Floor STEVE <u>T. EYMUNDSON</u>	<u>8</u>
Motor	
Mechanic	
Extra	

Injuries:

Fires:

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER		COAL	Stands
0	30	30	3 1/4	-	No.	O.D.	I.D.	Wgt.	Gals.	-- Bbls.	Tons	Singles	
BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
	A	9 7/8	O.C.S. A-60N		20351	ALL	120	30	3				Other Ft. 35.24
													C.B. Fr.
	MUD	4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys Degree			MOTOR HOURS		Next Oil Change	Subs. Ft. 430
	WEIGHT												H. Up On Kelly 7.71
	VISCOSITY												TOTALS 50
	GEL												
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.											

Company Time	Cont'r Time			
W.O.C.	4 ⁰⁰	6 ⁰⁰	2	
Felt cement at 150' and	6 ⁰⁰			
lay down p.p.c		6 ³⁰	1/2	
Tool out & move rig 100' N	6 ³⁰	9 ⁴⁵	3 1/4	
Drill rat hole	9 ⁴⁵	11:15	1 1/4	
DRILL 9 3/8 HOLE	11:15	12:00	3/4	
5 P.M. 11:15 P.M.				

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 Don Keegan
Total Company Time _____ Hrs. Approved by George Isler

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD

DAY WORK RECORD

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

RIG No. 3 LOCATION GREAT PLAINS A-65

AREA

N.W.T. DATE MARCH 30 1970

Tour — Midnight - 8 a.m.		Footage										Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS			FUEL		WATER		COAL		REMARKS			Time						
Specify actual hours worked		From										To				No.			Gals.		Bbls.		Tons					Start	Stop	Interval				
Hrs.		No. Size Type Size Jets Serial No. Weight R.P.M. Ft. Drilled Hrs. Feet Reamed Hrs. CONDITION																																
Driller	12	1548																								SEA RIG			12:00	12:15	1/4			
Derrick	12																									PUMP MUD IN HOLE			12:15	1:00	3/4			
Floor	12																									MIX MUD			1:00	5:00	4			
Floor	12																									WAIT ON LOST CIRC. MATERIAL			5:00	8:00	3			
Floor																																		
Motor																																		
Mechanic																																		
Extra																																		
Injuries:																																		
Fires:																																		
Tour — 8 a.m. to 4 p.m.		1548																								Company Time			Cont'r Time					
Driller																										SEA RIG			8:00	8:15	1/4			
Derrick																										WAIT ON LOST CIRC. MATERIAL			8:15					
Floor																										RAN IN 17 SINGLES				11:00				
Floor																										MIX MUD			11:00	5:30	3 1/2			
Floor																										STUCK IN HOLE			2:30	4:00	1 1/2			
Motor																																		
Mechanic																																		
Extra																																		
Injuries:																																		
Fires:																																		
Tour — 4 p.m. to Midnight		1548																								Company Time			Cont'r Time					
Driller																										STUCK IN HOLE			4:00	4:30	1/2			
Derrick																										FREE PIPE + CIRC			4:30	5:30	1			
Floor																										PULL OUT OF HOLE + RUN			5:30					
Floor																										IN 6 SINGLES OPEN END				6:00	1/2			
Floor																										MIX GEL			6:00	6:30	1/2			
Motor																										RAN IN 3 MORE SINGLES + CIRC			6:30	7:30	1			
Mechanic																										Ran in to 1410' - bridged off			7:30					
Extra																										CIRC. to run plug # 1				9:00	1 1/2			
Injuries:																										Ran plug # 1 1410' - 1250'			9:00	9:30	1/2			
Fires:																										Pull out of hole - W.O.C.			9:30	12:00	2 1/2			
Totco Ring on Bit No.		D.P. Calipered Date																								Total Contractor Time			Hrs.					
B.O.P. Test-Operated		Time																								Total Company Time			Hrs.					
																													Toolpusher			Approved by		

150 CASTLE
150 GEL
Felt top @ 1235' - 6:00 PM March 31/70
Plug # 1 1410' - 1250' w/50 sacks
Cement + 3% Cacl₂ - Displaced w/
9 bbls water - Plug down 9:30 PM

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by George J. [Signature]

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

RIG No. 3 LOCATION GREAT PLAINS AREA MT. DATE MARCH 29 1970

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

Tour — Midnight - 8 a.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands						
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		
Driller	ROBERT RIZZOLI	12		1426	54	1480	7 1/4	30.000	10	4 3/4	2 1/2	15																
Derrick	RICHARD BOURQUE	12																										
Floor	ROBERT NASHUM	12																										
Floor	HAMID FERRIS	12																										
MUD		12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives		At Surveys Degree		MOTOR HOURS		Next Oil Change																
WEIGHT		9.0	9.0	9.1	9.1																							
VISCOSITY		40	40	39	38																							
GEL																												
PUMPS		No. 1	Pres- sure																									
Model		S.P.M.																										
Liner Size																												
No. 2		Pres- sure																										
Model		S.P.M.																										
Liner Size																												
W.L.																												
F.C.																												
pH.																												
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		
Driller						1480		46		1526		4 1/2		30.000		10 4 3/4 2 1/2 15										1197.15		
Derrick																										Singles		
Floor																										D. Collars		
Floor																										Other Ft.		
MUD						8 a.m.		10 a.m.		12 Noon		2 p.m.		Additives		At Surveys Degree		MOTOR HOURS		Next Oil Change						C.B. Ft.		
WEIGHT																												
VISCOSITY																												
GEL																												
PUMPS																												
Model																												
Liner Size																												
No. 2																												
Model																												
Liner Size																												
W.L.																												
F.C.																												
pH.																												
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		
Driller		DUKE JOHNSON		12		1526		22		1548		3 1/4		30.000		10 4 3/4 2 1/2 15										1228.15		
Derrick		VALTER CHYZ		12																						Singles		
Floor		DAN STOEGRYN		12																						D. Collars		
Floor		STEVE HANKYLAK		12																						Other Ft.		
MUD						4 p.m.		6 p.m.		8 p.m.		10 p.m.		Additives		At Surveys Degree		MOTOR HOURS		Next Oil Change						C.B. Ft.		
WEIGHT																												
VISCOSITY																												
GEL																												
PUMPS																												
Model																												
Liner Size																												
No. 2																												
Model																												
Liner Size																												
W.L.																												
F.C.																												
pH.																												

REMARKS		Time		
		Start	Stop	Interval
BEAR RIG		12:00	12:15	1/4
DRILL 6 1/4 HOLE		12:15	8:00	7 3/4
SERV RIG & CHECK BOP'S		8:00	8:15	1/4
DRILL 6 1/4 HOLE		8:15	12:00	3 3/4
JET PIT & SERV RIG & BOP'S		12:00	12:15	1/4
FIN KELLY HOSE		12:15	12:45	1/2
TRIP FOR BIT		12:45	3:00	2 1/4
WORK ON PUMP		3:00	3:15	1/4
DRILL 6 1/4 HOLE		3:15	4:00	3/4
DRILL 6 1/4 HOLE		4:00	4:30	1/2
Mix mud for lost		4:30		
Circ. at 1534' - Pull drill				
pipe into casing & mix mud -		6:30		2
Run back in - mix mud		6:30	5:00	1 1/2
REAM BACK TO BOTTOM		5:00		
AND LOST CIRC (DRILL 15 feet)		10:00		2
PULL UP TO Casing		10:00	11:00	1
out of hole.		11:00	12:00	1

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 George Sefan

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

RIG No. 3 LOCATION GREAT PLAINS

M-65

AREA NWT

DATE MARCH 28 1970

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

Tour — Midnight - 8 a.m.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands					
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION	
Driller	ROBERT RIZZOKI	12																									
Derrick	CHARLES BOURQUE	12																									
Floor	ROBERT NASILIN	12																									
Floor	HAMID FERRIS	12																									
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands	
Driller																											
Derrick																											
Floor																											
Floor																											
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.		From		Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands	
Driller	DON JOHNSON	12																									
Derrick	WALTER CHYZ	12																									
Floor	DAN STOCKIN	12																									
Floor	STEVE HAWKLEY	12																									
Floor																											
Motor																											
Mechanic																											
Extra																											
Injuries:																											
Fires:																											

REMARKS		Time	
		Start	Stop
SERV. RIG STUCK IN HOLE		12 ⁰⁰	12 ¹⁵
STUCK IN HOLE		12 ⁰⁰	3 ⁴⁵
MIX MUD		3 ⁴⁵	4 ³⁰
RUN IN 5 SINGLES		4 ³⁰	4 ⁴⁵
CIRC. OUT GRAVEL		4 ⁴⁵	5 ¹⁵
HIST TEST #1		5 ¹⁵	6 ⁰⁰
BREAK DOWN TEST, SERV. TEST		6 ⁰⁰	
TOOLS & LOAD OUT SAME		8 ⁰⁰	2
Company Time			
Cont'r Time			
SERV. RIG CHECK DOI.		8 ⁰⁰	8 ¹⁵
RUN IN W/FISHING TOOL		8 ¹⁵	9 ¹⁵
FISHING		9 ¹⁵	11 ³⁰
HIST FISHING		11 ³⁰	12 ⁰⁰
No Got Fish LOTS GRAVEL/CAVIN		12 ⁰⁰	3 ⁰⁰
RUN IN COLLARS + FIRE		3 ⁰⁰	4 ⁰⁰
Company Time			
Cont'r Time			
Run in 1141			
RUN IN ALL PIPE + CIRC		4 ¹⁰	5 ³⁰
WITH BASKET TRY TO			
PICK UP SUSPECTED IRON		5 ³⁰	8 ³⁰
RECOVER NIT			
TRIP OUT + RUN IN WITH BIT		8 ³⁰	10 ³⁰
DRLC 6 1/4 HOLE		10 ³⁰	12 ⁰⁰
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 _____

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

AREA _____ NUT DATE MARCH 27 1970

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

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

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

RIG No. 3 LOCATION GREAT PLAINS

AREA _____ DATE MARCH 26 1970

[illegible]

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

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

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

AREA _____ DATE MAR 25 19 70

Totco Ring on Bit No. _____		D.P. Calipered Date _____		Results _____		From Pipe Rack _____		Company Time _____		Cont'r Time _____	
B.O.P. Test-Operated _____		Time _____		Results _____				Total Contractor Time _____ Hrs.		Toolpusher _____	
								Total Company Time _____ Hrs.		Approved by <u>George J. [Signature]</u>	

BOARD DAY WORK RECORD

RIG No. 3 LOCATION GREAT PLAINS

AREA

DATE MARCH 24 1970

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

Tour — Midnight - 8 a.m.		Specify actual hours worked		Hrs.
Driller	ROBERT RIZZOLI	12		
Derrick	RICHARD BOURQUE	12		
Floor	ROBERT NASHIM	12		
Floor	ALAN FERRIS	12		
Floor				
Motor				
Mechanic				
Extra				
Injuries:				
Fires:				
Tour — 8 a.m. to 4 p.m.				
Specify actual hours worked		Hrs.		
Driller				
Derrick				
Floor				
Floor				
Floor				
Motor				
Mechanic				
Extra				
Injuries:				
Fires:				
Tour — 4 p.m. to Midnight				
Specify actual hours worked		Hrs.		
Driller	DICK JAMESON	12		
Derrick	WALTER	12		
Floor	DAN STOKER	12		
Floor	STEVE HANLEY	12		
Floor				
Motor				
Mechanic				
Extra				
Injuries:				
Fires:				

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Gals.	Bbls.	Tons	
0	126	126	126	126	8,000	3	4 3/4	1 1/4	5		
1A	9 7/8	RROSC3	3 1/2	22431		160	126				
MUD											
WEIGHT											
VISCOSITY											
GEL											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
PUMPS											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
W.L.											
F.C.											
pH.											

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Gals.	Bbls.	Tons	
126	129	255	4	12							
1A	9 7/8	OSC-3	3 1/2	22431	160		255-3 1/2				
MUD											
WEIGHT											
VISCOSITY											
GEL											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
PUMPS											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
W.L.											
F.C.											
pH.											

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Gals.	Bbls.	Tons	
126	129	255	4	12							
1A	9 7/8	OSC-3	3 1/2	22431	160		255-3 1/2				
MUD											
WEIGHT											
VISCOSITY											
GEL											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
PUMPS											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
W.L.											
F.C.											
pH.											

From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Gals.	Bbls.	Tons	
126	129	255	4	12							
1A	9 7/8	OSC-3	3 1/2	22431	160		255-3 1/2				
MUD											
WEIGHT											
VISCOSITY											
GEL											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
PUMPS											
No. 1	Pressure										
Model	S.P.M.										
No. 2	Pressure										
Model	S.P.M.										
W.L.											
F.C.											
pH.											

[illegible]

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

Total Contractor Time _____ Hrs. Toolpusher Bert Huxley
Total Company Time _____ Hrs. Approved by George J. ...

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

DATE MAR 23 1970

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

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

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

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

RIG No. 3 LOCATION GREAT PLAINS MILLS W. M-65 AREA DATE MAR 31 1970

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller	ROBERT RIZZOLI 12												
Derrick	RICHARD BOURBON 12												
Floor	ROBERT NASHUM 12												
Floor	HAMID FERRIS 12												
Floor													
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller													
Derrick													
Floor													
Floor													
Floor													
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked Hrs.		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller	DINA JOHNSON 12												
Derrick	WALTER CHAZ 12												
Floor	DAN STOKER 6												
Floor	STEVE HAWKILAK 12												
Floor	T. EYMUNDSON 8												
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													

REMARKS		Start	Stop	Interval
W.O.C.		12 ⁰⁰	5 ³⁰	
Run in to FEEL plug #1		5 ³⁰		5 1/2
FELT @ 1235'			6 ⁰⁰	1/2
LAY DOWN PIPE		6 ⁰⁰	7 ³⁰	1 1/2
RIG TO Run plug #2		7 ³⁰	8 ⁰⁰	1/2
				8
Company Time				
Cont'r Time				
RIG TO Run plug #2		8 ⁰⁰	9 ⁰⁰	1
Run plug #2 @ 300' to 700'		9 ⁰⁰		
w/ 85 SACK CEMENT + 2% CaCl ₂			9 ³⁰	1/2
W.O.C.		9 ³⁰	10 ⁰⁰	1 1/2
RIG UP CEMENTER		10 ⁰⁰		
50 sacks cement + 2% CaCl ₂			10 ⁵	1/4
Displace to 150' w/ water		10 ⁵	4 ⁰⁰	3 1/4
W.O.C.				
Company Time				
Cont'r Time				
W.O.C.		4 ⁰⁰	6 ⁰⁰	2
Felt cement at 150' and		6 ⁰⁰		
lay down P.P.C.			6 ³⁰	1/2
Tear out & move rig 100' N		6 ³⁰	9 ⁴⁵	3 1/4
Drill rat hole		9 ⁴⁵	11 ¹⁵	1 1/4
DRILL 9 3/4" HOLE		11 ¹⁵	12 ⁰⁰	3/4
SPUD 11:15 p.m.				
Company Time				
Cont'r Time				

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

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

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

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

RIG No. 3 LOCATION GREY PLAINS #65 AREA N.W.T. DATE MARCH 30 1970

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons
Driller	<u>ROBERT RIZZOLI</u>	<u>1548</u>											
Derrick	<u>SIMON BOURQUE</u>												
Floor	<u>ROBERT NASHIM</u>												
Floor	<u>HAROLD FERRIS</u>												
Floor													
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons
Driller		<u>1548</u>											
Derrick													
Floor													
Floor													
Floor													
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons
Driller	<u>DOUG JOHNSON</u>	<u>1548</u>											
Derrick	<u>WALTER CHYZ</u>												
Floor	<u>DAN STACRUM</u>												
Floor	<u>STEVE HAWRYLAK</u>												
Floor													
Motor													
Mechanic													
Extra													
Injuries:													
Fires:													

REMARKS	Time		
	Start	Stop	Interval
SERV R.G.	12:00	12:15	1/4
PUMP MUD IN HOLE	12:15	1:00	3/4
MIX MUD	1:00	5:00	4
WAIT ON LOST CIRC MATERIAL	5:00	8:00	3
Company Time			
Cont'r Time			
SERV R.G.	8:00	8:15	1/4
WAIT ON LOST CIRC MATERIAL	8:15		
RAN IN 17 SINGLES		11:00	
MIX MUD	11:00	5:30	3 1/2
STUCK IN HOLE	2:30	4:10	1 1/2
Company Time			
Cont'r Time			
STUCK IN HOLE	4:00	4:30	1/2
FREE PIPE + CIRC	4:30	5:30	1
PULL OUT OF HOLE + RUN	5:30		
IN 6 SINGLES OPEN END		6:10	1/2
MIX GEL	6:10	6:30	1/2
RUN IN 3 MORE SINGLE + CIRC	6:30	7:30	1
RUN IN TO 1410' - bridged off	7:30		
CIRC. to run plug # 1		9:00	1 1/2
Ran plug # 1 1410' - 1250	9:00	9:30	1/2
Pull out of hole - W.O.C.	9:30	12:00	2 1/2
Company Time			
Cont'r Time			

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

Total Contractor Time _____ Hrs. Toolpusher _____
Total Company Time _____ Hrs. Approved by George J. Lamm

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

[illegible]

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

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

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

RIG No. 3 LOCATION GREAT PLAINS M-65 AREA UNT. DATE MARCH 28 1970

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller	ROBERT RIZZOLI 12													
Derrick	RICHARD BOURGNE 12													
Floor	ROBERT NASILIM 12													
Floor	HAMID FERRIS 12													
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller														
Derrick														
Floor														
Floor														
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller	BOB JOHNSON 12													
Derrick	WALTER CAYLE 12													
Floor	DAVE STOCKYK 12													
Floor	STEVE HAWKLEY 12													
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														

REMARKS	Time		
	Start	Stop	Interval
SERV. RIG STUCK IN HOLE	12 ⁰⁰	12 ¹⁵	1/4
STUCK IN HOLE	12 ⁰⁵	3 ⁴⁵	3 1/2
MIX MUD	3 ⁴⁵	4 ³⁰	3/4
RUN IN 5 SINGLETS	4 ³⁰	4 ⁴⁵	1/4
CIRC OUT GRAVEL	4 ⁴⁵	5 ¹⁵	1/2
HIGST TEST #1	5 ¹⁵	6 ⁰⁰	3/4
BREAK DOWN TEST. SERV. TEST	6 ⁰⁰		
TOOLS & LOAD OUT SAME		8 ⁰⁰	2
Company Time			
Cont'r Time			
SERV. RIG CHECK BOI.	8 ⁰⁰	8 ¹⁵	1/4
RUN IN W/ FISHING TOOL	8 ¹⁵	9 ¹⁵	1
FISHING	9 ¹⁵	11 ³⁰	2 1/4
HIGST FISH	11 ³⁰	13 ⁰⁰	1 1/2
No. 100 FISH 1025 GARD CAVIN	13	300	1 1/2
RUN IN COLLARS + FIRE	300	400	1
Company Time			
Cont'r Time			
ALL COLLARS + FIRE			
RUN IN ALL PIPE + CIRC	410	5:30	1 1/2
WITH BASKET TRY TO			
PICK UP SUSPECTED IRON	5:30	8:30	3
RECOVER NIT			
TRIP OUT + RUN IN WITH BIT	9:30	10:30	2
DRLC 4 1/2 HOLE	10:30	12 ⁰⁰	1 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 Joe Weber
 Total Company Time _____ Hrs. Approved by George Span

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

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

RIG No. 3 LOCATION GREAT PLAINSAREA NEW DATE MARCH 27 1970

Tour — Midnight - 8 a.m.
Specify actual hours worked Hrs.

Driller ROBERT RIZZOLI 12
Derrick RICHARD BOURQUE 12
Floor ROBERT NASHIM 12
Floor HAMID FERRIS 12
Motor
Mechanic
Extra

Injuries:

Fires:

Tour — 8 a.m. to 4 p.m.
Specify actual hours worked Hrs.

Driller
Derrick
Floor
Floor
Floor
Motor
Mechanic
Extra

Injuries:

Fires:

Tour — 4 p.m. to Midnight
Specify actual hours worked Hrs.

Driller DAVE JOHNSON 12
Derrick WALTER HAYZ 12
Floor DAN STORRYN 12
Floor STEVE HAWKILAK 12
Motor
Mechanic
Extra

Injuries:

Fires:

From		Footage		To		Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	
MUD															
WEIGHT															
VISCOSITY															
GEL															
At Surveys Degree															
MOTOR HOURS															
Next Oil Change															
PUMPS															
No. 1	Pressure														
Model	S.P.M.														
No. 2	Pressure														
Model	S.P.M.														
General															
W.L.															
F.C.															
pH.															

REMARKS	Time		
	Start	Stop	Interval
SEU RIG	12 ⁰⁰	12 ¹⁵	1/4
WORK ON BOP'S	12 ¹⁵	4 ¹⁵	4
PICK UP SINGLES + FEEL	4 ¹⁵		
TO BOTTOM NOT JUMP		5 ¹⁵	1
CIRC. & CLEAN TO BOTTOM	5 ¹⁵	6 ¹⁵	1
CIRC. TO COND HOLE	6 ¹⁵	6 ⁴⁵	1/2
DUMMY TRIP 10 STANDS	6 ⁴⁵	7 ⁰⁰	1/4
CIRC. & WAIT ON TESTER	7 ⁰⁰	8 ⁰⁰	1
Company Time			
Cont'r Time			
WAIT ON TESTER + CIRC. HOLE	7 ⁰⁰	12 ⁰⁰	4
SEU RIG CHECK BOP	12 ⁰⁰	12 ¹⁵	1/4
CIRC. - WORK PIPE WAIT ON TESTER	12 ¹⁵	3 ¹⁵	3
HOIST FOR TEST # 1	3 ¹⁵	4 ⁰⁰	3/4
MEASURE CUTLIP DOWN SINGLES			
(.66 DIFF AND CORRECTION)			
Company Time			
Cont'r Time			
MAKE UP PICKER	4 ⁰⁰	5 ⁰⁰	1
RUN IN WITH PACKER	5 ⁰⁰	6 ³⁰	1 1/2
HEAD UP TO TEST	6 ³⁰	6 ⁴⁵	1/4
TESTING	6 ⁴⁵	10 ⁰⁰	3 1/4
HIGHEST TEST # 1 STUCK IN HOLE @ 700'	10 ⁰⁰	12 ⁰⁰	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 George S. S.

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

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

RIG No. 3 LOCATION GREAT PLAINS

AREA

DATE MARCH 26, 1970

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS	Start	Time Stop	Interval					
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars									
Driller <u>ROBERT RIZZOLI</u>	<u>12</u>	<u>821</u>	<u>581</u>	<u>1402</u>	<u>7 1/2</u>	<u>24,000</u>	<u>10</u>	<u>4 1/4</u>	<u>2 1/8</u>	<u>15</u>				Singles	<u>SERV RIG</u>	<u>1200</u>	<u>1215</u>	<u>1/4</u>					
Derrick <u>RICHARD BOURQUE</u>	<u>12</u>	<u>1</u>	<u>6 1/4</u>	<u>OSC-3</u>	<u>3 1/4</u>	<u>10585</u>	<u>18</u>	<u>160</u>	<u>1147</u>	<u>15</u>				D. Collars	<u>DRILL 6 1/4 HOLE</u>	<u>1215</u>	<u>345</u>	<u>3 1/2</u>					
Floor <u>ROBERT NASHUN</u>	<u>12</u>													Other Ft.	<u>RUN SURVEY @ 1158 19</u>	<u>345</u>	<u>400</u>	<u>1/4</u>					
Floor <u>HAMID FERRIS</u>	<u>12</u>													C.B. Ft.	<u>DRILL 6 1/4 HOLE</u>	<u>400</u>	<u>800</u>	<u>4</u>					
Floor		MUD												At Surveys Degree	MOTOR HOURS	Next Oil Change							
Motor		WEIGHT												<u>1158</u>	<u>1</u>								
Mechanic		VISCOSITY													<u>2</u>								
Extra		GEL													<u>3</u>								
Injuries:		PUMPS													<u>4</u>								
Fires:		No. 1 Pressure													<u>5</u>								
		Model S.P.M.																					
		Liner Size												Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or	Cut	Feet Left on Spool	Next Slip
		No. 2 Pressure																					
		Model S.P.M.																					
		Liner Size												General									
		W.L.	F.C.	pH.																			
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS	Start	Time Stop	Interval					
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars									
Driller		<u>1402</u>												Singles	<u>SERV RIG</u>	<u>800</u>	<u>815</u>	<u>1/4</u>					
Derrick														D. Collars	<u>TRIP OUT FOR BIT.</u>	<u>815</u>	<u>930</u>	<u>1 1/4</u>					
Floor														Other Ft.	<u>930</u>								
Floor														C.B. Ft.	<u>Run in & C.R.C. TO KILL WELL</u>	<u>300</u>	<u>5 1/2</u>						
Floor		MUD												At Surveys Degree	MOTOR HOURS	Next Oil Change							
Motor		WEIGHT													<u>1</u>								
Mechanic		VISCOSITY													<u>2</u>								
Extra		GEL													<u>3</u>								
Injuries:		PUMPS													<u>4</u>								
Fires:		No. 1 Pressure													<u>5</u>								
		Model S.P.M.																					
		Liner Size												Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or	Cut	Feet Left on Spool	Next Slip
		No. 2 Pressure																					
		Model S.P.M.																					
		Liner Size												General									
		W.L.	F.C.	pH.																			
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS	Start	Time Stop	Interval					
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars									
Driller <u>DOUG JOHNSON</u>	<u>12</u>	<u>1402</u>												Singles	<u>CIRC 4 MIX MUD</u>	<u>400</u>							
Derrick <u>WALTER CHAZ</u>	<u>12</u>													D. Collars	<u>WORK ON PIPE</u>	<u>1200</u>	<u>8</u>						
Floor <u>AN SEORIN</u>	<u>12</u>													Other Ft.									
Floor <u>STEVE HAWRYLAK</u>	<u>12</u>													C.B. Ft.									
Floor		MUD												At Surveys Degree	MOTOR HOURS	Next Oil Change							
Motor		WEIGHT													<u>1</u>								
Mechanic		VISCOSITY													<u>2</u>								
Extra		GEL													<u>3</u>								
Injuries:		PUMPS													<u>4</u>								
Fires:		No. 1 Pressure													<u>5</u>								
		Model S.P.M.																					
		Liner Size												Size	TRIPS	No. Lines	TON MILES	TOTAL MILES	Slip	Feet or	Cut	Feet Left on Spool	Next Slip
		No. 2 Pressure																					
		Model S.P.M.																					
		Liner Size												General									
		W.L.	F.C.	pH.																			

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 _____

George Isfah

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

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

RIG No. 3 LOCATION GREAT PLAINS AREA _____ DATE MAR 25 1970

Tour — Midnight - 2 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller <u>ROBERT RIZZOLI</u>	<u>12</u>													
Derrick <u>WILLIAM GUNDE</u>	<u>12</u>													
Floor <u>ROBERT NASRIN</u>	<u>12</u>													
Floor <u>HAROLD FERRIS</u>	<u>12</u>													
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller														
Derrick														
Floor														
Floor														
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked	Hrs.	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars
Driller <u>DON JOHNSON</u>	<u>12</u>													
Derrick <u>WALTER CHYZ</u>	<u>12</u>													
Floor <u>JOHN STORUM</u>	<u>12</u>													
Floor <u>STEVE HAWRYLAR</u>	<u>12</u>													
Floor														
Motor														
Mechanic														
Extra														
Injuries:														
Fires:														

REMARKS		Time		
		Start	Stop	Interval
<u>10-05</u>		<u>12</u>	<u>8:00</u>	
<u>WIPPLE UP BOPS</u>		<u>8</u>	<u>1:30</u>	<u>5 1/2</u>
<u>WIPPLE UP BOPS</u>		<u>1:30</u>	<u>1:45</u>	<u>1/4</u>
<u>RUN IN PREASURE UP PIPE</u>		<u>1:45</u>	<u>2:45</u>	<u>1</u>
<u>PREASURE UP HYDRIL 500' O.K.</u>		<u>2:45</u>	<u>3:00</u>	<u>1/4</u>
<u>DRILL OUT CEMENT</u>		<u>3:00</u>	<u>4:00</u>	<u>1</u>
<u>DRILL OUT CEMENT</u>		<u>4:00</u>	<u>4:45</u>	<u>3/4</u>
<u>DRILL 6 1/4 HOLE</u>		<u>4:45</u>	<u>6:00</u>	<u>1 1/4</u>
<u>DISPLACE HLE + SERV RIG</u>		<u>6:00</u>	<u>6:15</u>	<u>1/4</u>
<u>DRILL 6 1/4 HOLE</u>		<u>6:15</u>	<u>9:45</u>	<u>3 1/2</u>
<u>SURVEY + PUMP PIT</u>		<u>9:45</u>	<u>10:00</u>	<u>1/4</u>
<u>DRILL 6 1/4 HOLE</u>		<u>10:00</u>	<u>12:00</u>	<u>2</u>

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 George J. J.

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

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

RIG No. 3 LOCATION GREAT PLAINS AREA _____ DATE MARCH 24 1970

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	
Driller	<u>ROBERT RIZZOLI</u>	<u>12</u>	<u>126</u>	<u>126</u>	<u>126</u>	<u>8.500</u>	<u>3</u>	<u>4 3/4</u>	<u>2 3/4</u>	<u>5.000</u>				
Derrick	<u>EDWARD BOURQUE</u>	<u>12</u>												
Floor	<u>ROBERT NASHUM</u>	<u>12</u>												
Floor	<u>AND FERRIS</u>	<u>12</u>												
MUD		12 Mn.	2 a.m.	4 a.m.	6 a.m.	Additives	At Surveys Degree				MOTOR HOURS	Next Oil Change		
WEIGHT														
VISCOSITY														
GEL														
PUMPS		No. 1	Pressure											
Model		S.P.M.												
Liner Size														
No. 2		Pressure												
Model		S.P.M.												
Liner Size														
W.L.		F.C.	pH.											
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	
Driller		<u>126</u>	<u>129</u>	<u>255</u>	<u>4</u>	<u>12</u>								
Derrick														
Floor														
Floor														
MUD		8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives	At Surveys Degree				MOTOR HOURS	Next Oil Change		
WEIGHT														
VISCOSITY														
GEL														
PUMPS		No. 1	Pressure											
Model		S.P.M.												
Liner Size														
No. 2		Pressure												
Model		S.P.M.												
Liner Size														
W.L.		F.C.	pH.											
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked		No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	
Driller	<u>DAVE JENSEN</u>	<u>12</u>												
Derrick	<u>WALTER</u>	<u>12</u>												
Floor	<u>DAN STORRUM</u>	<u>12</u>												
Floor	<u>STEVE HANLEY</u>	<u>12</u>												
MUD		4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives	At Surveys Degree				MOTOR HOURS	Next Oil Change		
WEIGHT														
VISCOSITY														
GEL														
PUMPS		No. 1	Pressure											
Model		S.P.M.												
Liner Size														
No. 2		Pressure												
Model		S.P.M.												
Liner Size														
W.L.		F.C.	pH.											

REMARKS	Time		
	Start	Stop	Interval
DRILL RAT HOLE	1200	100	1
WORK ON PUMP	100	200	1
SPUD IN & DRILL 9 1/8 HOLE	200	600	4
MIX MUD	600	700	1
DRILL 9 1/8 HOLE	700	845	3/4
RUN SURVEY @ 126	745	800	1/4
			7
			6
Company Time	Cont'r Time		
SEV. B.G. & WORK ON PUMP	800	900	1
DRILL 9 1/8 HOLE	900	1100	2 1/4
RUN SURVEY @ 215	1100	1150	1/2
DRILL 7 1/8 HOLE	1150	1200	1/2
DUMMY TRIP + REAM WORK	100	300	2
CIRC HOLE	300	400	1
Company Time	Cont'r Time		
HOLE TO RUN CASING	400	430	1/2
RIG TO RUN CASING	430	500	1/2
RUN CASING	500	600	1 1/2
CIRC CASING	600	630	1/2
CEMENT & PLUG DOWN	630	715	3/4
MUD	715	1200	4 3/4
Company Time	Cont'r Time		

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

Total Contractor Time _____ Hrs. Toolpusher Ben Huxley
Total Company Time _____ Hrs. Approved by George Stefan

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD

DAY WORK RECORD

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

RIG No. 3 LOCATION Great Plains

AREA

DATE MAR 23 1920

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons					Start	Stop	Interval
Driller		BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars					
Derrick															Other Ft.					
Floor															C.B. Ft.					
Floor															Subs. Ft.					
Floor															Ft. Up On Kelly					
Motor		MUD										At Surveys Degree	MOTOR HOURS	Next Oil Change	TOTAL					
Mechanic		WEIGHT																		
Extra		VISCOSITY																		
Injuries:		GEL																		
Fires:		PUMPS	No. 1	Pres- sure																
			Model	S.P.M.																
			Liner Size																	
			No. 2	Pres- sure																
			Model	S.P.M.																
		General																		
		W.L. F.C. pH.																		
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons							
Driller		BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars					
Derrick															Other Ft.					
Floor															C.B. Ft.					
Floor															Subs. Ft.					
Floor															Ft. Up On Kelly					
Motor		MUD										At Surveys Degree	MOTOR HOURS	Next Oil Change	TOTAL					
Mechanic		WEIGHT																		
Extra		VISCOSITY																		
Injuries:		GEL																		
Fires:		PUMPS	No. 1	Pres- sure																
			Model	S.P.M.																
			Liner Size																	
			No. 2	Pres- sure																
			Model	S.P.M.																
		General																		
		W.L. F.C. pH.																		
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons							
Driller		BITS	No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars					
Derrick															Other Ft.					
Floor															C.B. Ft.					
Floor															Subs. Ft.					
Floor															Ft. Up On Kelly					
Motor		MUD										At Surveys Degree	MOTOR HOURS	Next Oil Change	TOTAL					
Mechanic		WEIGHT																		
Extra		VISCOSITY																		
Injuries:		GEL																		
Fires:		PUMPS	No. 1	Pres- sure																
			Model	S.P.M.																
			Liner Size																	
			No. 2	Pres- sure																
			Model	S.P.M.																
		General																		
		W.L. F.C. pH.																		

Totoo 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 _____