

BUTTES ET. AL

BLACKWATER LAKE

1-54

Buttes et al Blackwater Lake 1-7.

Rig Release Date:

Status.....

Information Release Date.....

DATE RECEIVED	INDEX
16-1-71	Application for a Drilling Authority.
	Well Completion Data.
	Well History Report.
17-2-71	Application to Amend a Drilling Authority.
19-2-71	Application to change a Well Name.
4-5-71	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well.
	Well History Supplement.
26-2-71	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. **488**

Date Issued Jan. 18, 1971

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL 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

Buttes et al Blackwater Lake I-54

3443
Shell Canada Limited and
Shell Explorer Limited
(Permitted Licensee License)

License No. N/A

Exploratory Licence No. 108 & 116

Buttes Resources Northern, Ltd.
(Operator)

Exploratory License No. 1807

Location: Unit

I

Section

54

Grid 64° 40' . 122° 30'

Latitude 64° 33' 43.88"

Longitude 122° 39' 40.87"

Unique well identifier: 300 154 6440122300

Universal Well Location Reference 64.56218° N 122.66135° W

	DATE	DEPTH	Pools)
Spudded	Feb. 10/71		Interval(s) open to production None
Suspended			Bottom joint of surface casing parted and dropped in hole.
Resumed Operations			Well is junked and abandoned
Finished Drilling	Feb. 20/71	1428'	
Deepened			Elevation Gr. 782 K.B. 794
Complete (gas/oil)			Rig No. 2
Abandoned	Feb. 24/71	1428'	Drilling Contractor Tri-City Drilling
Rig released	Feb. 24/71		Contractor's Business Licence No. 787

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Net wt.	Sacks of Cement and Additives
1. 8 5/8	J-55	24#	684.3'	697.4'	x 430 SXS + 2 1/2 CaCl ₂
2.					
3.					
4.					
5.					
6.					

[illegible]

CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Facing, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
Feb. 17	635	636	Squeezed 130 sxs to re-cement surf. casing	Feb. 17	635'	636'	4 shots for cement squeeze.				
Feb. 23	900	950	25 sxs. Plug felt at 890								
Feb. 23	600	750	75 sxs. Plug felt at 680								
Feb. 24	600	680	50 sxs. + 4 % col.								

Surface plug was run. An identification marker was erected at the time the I-54A well was abandoned.

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Hrs.	L.S.L. Mins.	F.S.L. Mins.	L.S.R.H.P.	F.S.R.H.P.	L.F.R.H.P.	F.F.R.H.P.	L.H.P.	F.H.P.	REMARKS
														No D.S.T.'s run

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks	PRESENT STATUS OF WELL				Company	Signed by	Title	Date
						Oil			(Interval)	Buttes Resources Northern, Ltd.	<i>R. B. Griffiths</i>	Staff Exploration Geologist	February 26, 1971
						Gas			(Interval)				
						Dry	X						
						Susp.							



File No.
Drilling Authority No

488

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 **Ruttes et al Blackwater Lake I-54**
Location: Unit **I** Section **S4** Grid **64°40', 122°30'**
Latitude **64°33'43.88"** Longitude **122°39'40.87"**
From Established Reference Marker
Universal Well Location Reference **64.562180N, 122.661350W**
Permit No. **3443** Lease No. **N/A**

Shell Canada Limited & Shell Explorer Limited
(Permitter, Licensee, Lessee)

Date of commencement of proposed program **Feb 23/71**

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at **none**
Gas at **none**
Water at **none**

Total Depth **1428**

Date of last operations **Feb. 22/71**

Present condition of well **Standing**

Bottom joint of surface casing parted and dropped in hole prohibiting re-entry.

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	S. At	Value of Cement and Additives	Amount Pulled
1. 8 5/8	24#	684.3	697.4	430 sacks +2% CaCl ₂	none
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
1	900-950'	Bear Rock	25	
2	600-750'	Cretaceous	75	
	Surface		5	

The following logs have been run **Cement Bond Log**
Other operations proposed **Run abandonment plugs.**

Operations to be carried out by **Halliburton Services** Contractor Licence No. **787**
Address **275, Bentall Bldg. Calgary 2, Alta.** Address **14305 - 120 Ave., Edmonton**
Responsible Agent in field **W. Hunka**
Dated at **Calgary**, this **22** Day of **February** 19 **71**
Signed by **R.E. Griffiths** Company **BUTTES RESOURCES NORTHERN LTD.**
Title **Staff Exploration Geologist** Operator's Exploratory Licence No. **1807**

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. B.H.J. Thomas
on the 22nd February 1971, to include surface plug and
vertical riser with well marker.

Dated **23 Feb**, 19 **71**

Oil Conservation Engineer

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

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

File No.

Drilling Authority No. 480



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Amend a Drilling Authority

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

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. 480, concerning

Buttes et al Blackwater Lake I-94
(Name and Number of Well)

The following amendments are required:

CHANGE OF LOCATION: From: Lat. $44^{\circ} 33' 42''$ N., Long. $122^{\circ} 39' 45''$ W.
To: Lat. $44^{\circ} 33' 43.48''$ N., Long. $122^{\circ} 39' 40.87''$ W.

CHANGE OF UNIVERSAL: From: Lat. 44.56167° N., Long. 122.6625° W.
WELL LOCATION REFERENCE: To: Lat. 44.5621° N., Long. 122.66139° W.

Reasons for the amendments:

Amended plan of survey.

Dated at Calgary, Alberta, this 18th day of February, 19 71

Signed by *A.S. McBride*
A.S. McBride
Title Secretary-Treasurer
Company Buttes Resources Northern, Ltd.

(For Oil and Mineral Division use only)

APPROVED

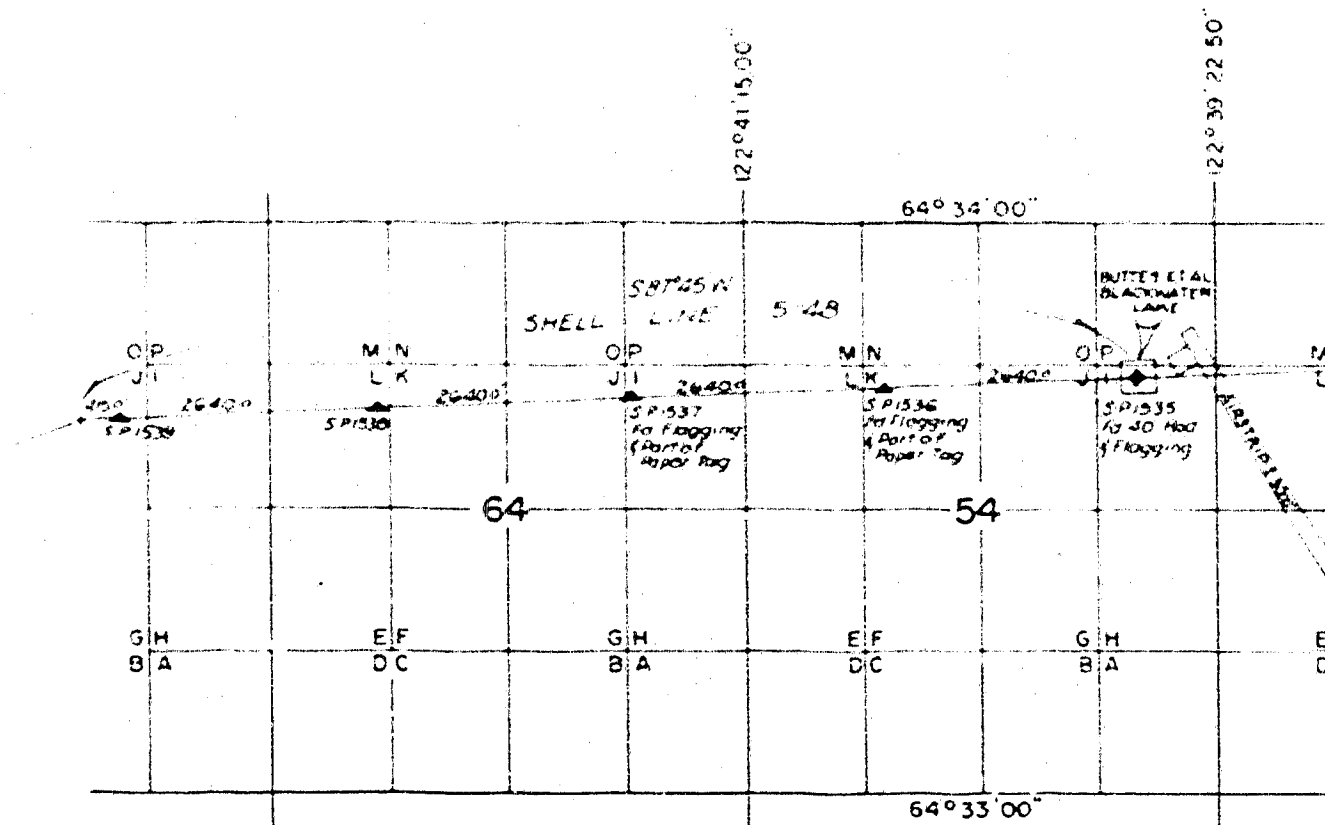
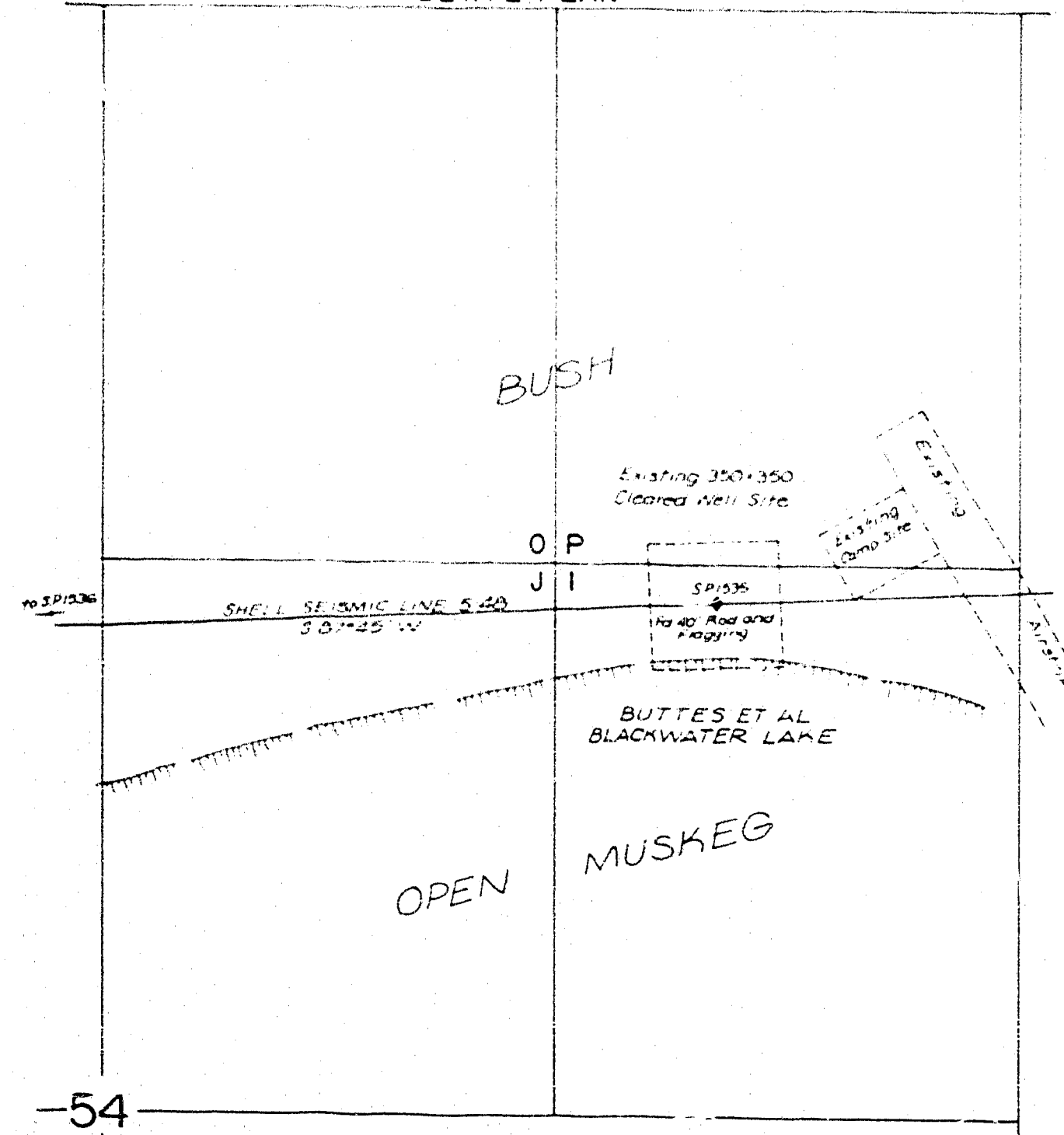
This application has been examined and approved subject to the following conditions:

Date 19th February, 19 71

B.H. Thomas
Oil Conservation Engineer

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

DETAIL PLAN



LOCATION PLAN
Scale 2000 ft to inch

BUTTES ET AL BLACKWATER LAKE I 54 64°40', 122°30'

Latitude 64°33'43.88" Longitude 122°39'40.87"
Northwest Territories

Survey completed on January 24th 1977
Certified correct

D. R. Lindstrom
Alberta Land Surveyor

R. J. Hawthorne
Witness
MIDWEST SURVEYS CO. LTD.

COORDINATES		
UTM Values		Ref Mer 123°00'
STATION	NORTH	EAST
SP1535 (Well Centre)	23,496,260.9	53,267.2

NOTE: Rectangular co-ords from Shell Seismic Survey
Well Centre (SP1535) is 113.8' South } of NE Corner Unit 1
802.1' West }

ELEVATION: 782' GROUND

BUTTES RESOURCES CANADA, LTD.

R. E. Griffiths

J. M. B. B. B.

Scale 400 feet to inch or as shown
Iron Rod found shown thus
Shot Point positions found shown thus

DATUM: Elevation from
SHELL seismic notes



C-11-71

File No.

Drilling Authority No. 488



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application to Amend a Drilling Authority

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

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. 488, concerning Buttes et al Blackwater Lake

1-54 64°33' 13.80" N. 122° 39' 10.87" W. Long.
(Name and Number of Well)

The following amendments are required: That operator of the well be changed from Buttes Resources Canada, Ltd. to Buttes Resources Northern, Ltd. of the same address - Operators Lic. No. 1807

Reasons for the amendments: Buttes Resources Northern, Ltd. is a wholly owned Canadian subsidiary recently incorporated under the laws of the Province of Alberta to qualify in part under Section 55 of The Canada Oil and Gas Land Regulations.

Dated at Calgary, this 10th day of February, 1971

Signed by *T. S. M. Brule*

Title Chief Landman and Assistant Secretary

Company Buttes Resources Canada, Ltd.

(For Oil and Mineral Division use only)

APPROVED

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

Date 17th February, 1971

B. S. Jones
Oil Conservation Engineer

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

ASSIGNMENT AND AGREEMENT

THIS ASSIGNMENT AND AGREEMENT is made and entered into this 9th day of February, 1971, between Buttes Resources Canada, Ltd., a Delaware corporation (hereinafter called "the Assignor") and Buttes Resources Northern, Ltd., a body corporate incorporated under the laws of the Province of Alberta, (hereinafter called "the Assignee").

WITNESSETH:

Whereas by Drilling Authority No. 488 issued on the 18th day of January 1971 by the Department of Indian Affairs and Northern Development in the right of Canada, the Assignor was granted approval to drill in compliance with the "Canada Oil and Gas Land Regulations" the well Buttes et al Blackwater Lake 1-54, Unit 1, Section 54, Grid 64°40', 117°30'; and

Whereas the Assignee was recently incorporated under the laws of the Province of Alberta for the purpose of qualifying in part under Section 55 of the Canada Oil and Gas Land Regulations; and

Whereas it is desirable and prudent that the rights and obligations of the Assignor as operator under Drilling Authority No. 488 be assigned to the Assignee.

Now Therefore in consideration of the sum of One Dollar (\$1.00) and other valuable consideration, payment of which is hereby acknowledged by the Assignor, the Assignor hereby transfers and assigns unto the Assignee all of its rights and obligations with respect to all operations whatsoever required by regulation and the Oil Conservation Engineer for the Department.

The Assignee assumes and shall be responsible for the performance of all the obligations accruing to the Assignor under Drilling Authority No. 488 from and after the date hereof and the Assignee agrees to save and hold the Assignor wholly free and harmless on account of any failure of the Assignee to perform such obligations.

This Assignment and Agreement, and all of the provisions, covenants and conditions herein set forth shall bind and inure to the benefits of the parties hereto, their successors and assigns:

Each of the parties hereto shall from time to time and at all times do all such further acts and execute and deliver all such further documents as shall be reasonably required in order to fully perform and carry out the terms hereof.

IN WITNESS WHEREOF, this Assignment has been executed as of the date first hereinabove written.

This is Page 2 of an Assignment and Agreement, made and entered into this 9th day of February, 1971

BUTTES RESOURCES CANADA, LTD.

J. L. Gray
Vice President and General Manager

J. S. McBurnie
Assistant Secretary

"the Assignor"

BUTTES RESOURCES NORTHERN, LTD.

J. L. Gray
Vice-President

J. S. McBurnie
Secretary-Treasurer

"the Assignee"

THIS ASSIGNMENT of Drilling Authority No. 488 from Buttes Resources Canada, Ltd., to Buttes Resources Northern, Ltd., has been accepted.

B. H. J. Thoms
B.H.J. Thoms, Oil Conservation Engineer
17th February 1971

Drilling Authority No. 488

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application for a Drilling Authority

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

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

Name and number of well Buttes et al Blackwater Lake I-54
Location: Unit I Section 54 Grid 64° 40', 122° 30'
Latitude 64° 33' 42" N Longitude 122° 39' 45" W
Unique Well Identifier 3001546440122300
Universal Well Location Reference 64.56167° N; 122.66250° W
Elevation: Ground 805 (est.) M.B. 817 (est.) feet above sea-level.
Well is expected to produce from Mt. Kindle formation at a depth
of about 2550 feet. Expected total final depth 4200 ft.
Area assigned to well

(For Oil Conservation Engineer's use only)

Permit No. 3443 Lease No. N/A Acreage 55,000 acres
Permittee, licensee, or lessee Shell Canada Limited and Shell Explorer Limited
Exploratory Licence No. 108 & 116
Surface owned by Crown or Crown
Petroleum and natural-gas rights owned by Crown
(If allocated submit name and address of owner and occupant.)

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	Depth of Cement
1. 8 5/8	24#	RG3-K-55	New	750 ft.	TD to surface
2.					
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment
Cretaceous, Bear Rock, Mt. Kindle. To be controlled by B.O.P.'s on
drilling rig

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

Responsible agent of applicant:—

Contractor's business Licence No. 787

At well W. Hunka At registered office R.E. Griffiths

Address #2203, 727-6th Avenue S.W., Calgary, Alta. Address #1530, 606 - 4th Street S.W., Calgary

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

Dated at Calgary this 30th day of November 19 70

Signed by R.E. Griffiths Company Buttes Resources Canada, Ltd.

Title Staff Exploration Geologist Operator's Licence No. 1683

(For Oil and Mineral Division use only)

APPROVED

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

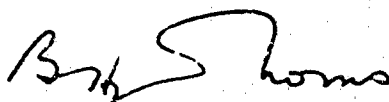
- Copies of this Drilling Authority shall be exhibited at the Drilling Rig in both the Doghouse and the Drilling Foreman's Office between spud and rig release dates.
- The Company will submit to this office, on Tuesday of each week, the latest reports
Dated 18th January 1971 Please see over page

Oil Conservation Engineer

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

received by radio on the progress of the well.

3. During well drilling and testing operations, every effort shall be made to ensure that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent the contamination of adjacent vegetation and surface or sub-surface waters.
4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
5. Production and intermediate strings of casing are to be approved by the Oil Conservation Engineer before running.



B. H. J. Thoms
Oil Conservation Engineer

BUTTES ET AL BLACKWATER LAKE I-54 (96-B-10)

GEOLOGICAL PROGNOSIS

Glacial Drift	Surface - 600'
Cret. Shales	600'
Cret. Sand?	1000'
Hume	1100'
Bear Rock	1250'
Mt. Kindle	2550'
Franklin Mtn.	3250'
Saline River	4050'
T.D.	4200'

BLOW OUT PREVENTION EQUIPMENT ON TRI-CITY DRILLING LTD. RIG #2

Blow Out Preventers Consist Of:

Hydril (GK) 10" 900 Series

Cameron SS 10" 900 Series

Double Gate (Hydraulic)

717-11-5-1

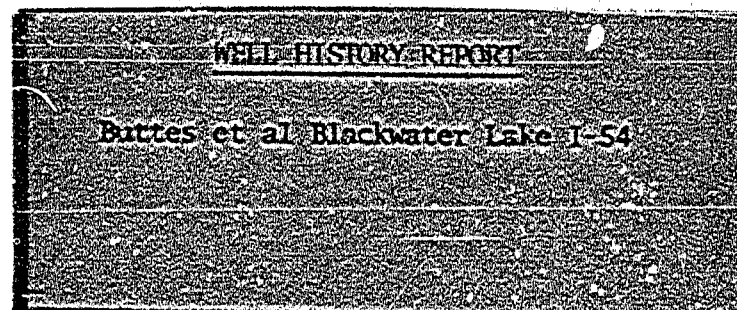
WELL HISTORY REPORT

Buttes et al Blackwater Lake I-54



BUTTES RESOURCES CANADA, LTD.

717-11-5-1

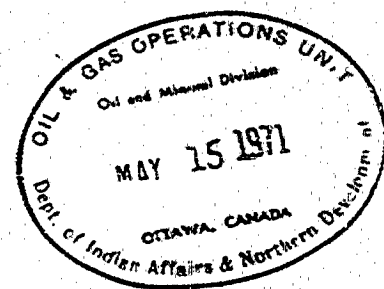


BUTTES RESOURCES CANADA, LTD.

717-11-5-1

WELL HISTORY REPORT

Buttes et al Blackwater Lake I-54



by
R.E. Griffiths, P. Geol.

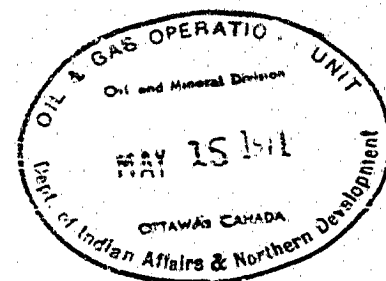
March 11, 1971

TABLE OF CONTENTS

	<u>Page Number</u>
I Summary of Well Data-----	1
II Geological Summary -----	2
III Engineering Summary -----	4
IV Logs -----	6
V Analyses -----	6
VI Completion Summary -----	6
VII Remarks -----	7

Enclosures

Cement Bond Log ----- In Pocket



I SUMMARY OF WELL DATA

a. Well Name	Buttes et al Blackwater Lake I-54
b. Permittee	Shell Canada Limited and Shell Explorer Limited
c. Operator	Buttes Resources Northern, Ltd. #1530, 606 - 4th Street S.W., CALGARY 2, Alberta.
d. Location	I-54-64-40-122-30 64° 33' 43.88" N., 122° 39' 40.87" Universal well location reference: 64.56218° N, 122.66135° W Unique well identifier: 3001546440122300
e. Co-ordinates	N/A
f. Permit No.	3443
g. Drilling Contractor	Tri-City Drilling Ltd. Rig #2. Unit 34 Trailer Rig with 97 ft. Lee C. Moore mast rated at 300,000 lbs.
h. Drilling Authority	#488, issued January 18, 1971
i. Classification	New field wildcat
j. Elevations	Ground: 782'; K.B.: 794'
k. Spudded	10:00 P.M., February 10, 1971
l. Completed Drilling	February 20, 1971
m. Total Depth	1428 feet
n. Status	Junked and abandoned
o. Rig released	February 24, 1971, 10:00 A.M.
p. Hole size	12 1/4" Sfc to 697.4' 7 7/8" 697.4 to 1428'
q. Casing	8 5/8", 684.3 feet surface casing @ 697.4'

II GEOLOGICAL SUMMARY

a. Sample Tops

Elev.

Drift

0 to 240' ?

Cretaceous shale

240' ? + 554 ?

Devonian Bear Rock

915 - 121

b. Cored intervals

None

c. Core Description

N/A

d. Sample description:

- samples start at 600'

600 - 620

Shale, dark grey, fissile, soft & rubbery

620 - 650

Siltstone to very fine grained sandstone,
light-medium grey, glauconitic,
sl. calcareous, salt & pepper

650 - 700

Very poor samples, appear to be mainly
siltstone as above

700 - 720

No samples

720 - 740

Siltstone, lt. grey, very argillaceous,
and shale, med. grey, soft

740 - 840

Claystone, lt. grey - lt. brn., slightly
silty, soft, interbedded with lt. brn. earthy,
calcareous claystone and lt. grey sl. calc.,
arg., glauconitic siltstone. Rare
mollusk fragments.

840 - 915

Claystone and siltstone as above with
interbeds of med. grey shale containing
floating sand grains, pyrite common.
Traces of microx'n to microsucrosic,
argillaceous limestone.

915 - 1428

Anhydrite, lt. brn & white, microx'n,
with probably less than 25% interbeds
of Dolomite, brn. to lt. brn, micro
to very fine crystalline, earthy in
part, traces of poor pinpoint and
intercrystalline porosity. Below 1290'
there are traces of pyrobitumen and
some light grey anhydrite.

e. Paleontological
Determinations

None

III ENGINEERING SUMMARY

a. Drillstem tests

none run

b. Casing Record

Surface Casing:

Ran 18 joints 8 5/8", 24#, J-55 casing measuring 684.3 feet. Shoe set at 697.4 ft. K.B. Cemented with 50 sxs penna frost cement and 380 sxs oilwell cement + 2% CaCl₂. Estimated 50 sxs returns. Plug down 8:30 P.M., Feb. 13, 1971.

c. Bit Record

<u>BIT</u>	<u>SIZE</u>	<u>TYPE</u>	<u>FOOTAGE</u>	<u>HRS. ON BOTTOM</u>	<u>REMARKS</u>
#1	7 7/8"	X 1G	419'	20 1/2	Dulled
#2	7 7/8"	X DV	309'	20	Dulled
#3	7 7/8"	J 44	0	0	Junk in the hole
#4	7 7/8"	XIV	0	0	Junk in the hole

d. Mud Report

Used 2200# gel and 200# caustic to drill surface hole.

Drilled with water from 700' to T.D.

e. Deviation Record

98'	--	3/4°	613'	--	1 1/8°
155'	--	1	700'	--	1
182'	--	7/8	1119'	--	2 1/4
292'	--	3/4	1265'	--	3 1/4
406'	--	3/4	1297'	--	3
521'	--	1	1392'	--	3 7/8

f. Abandonment Plugs:

Plug #1

900' - 950', 25 sxs cement + 2% CaCl₂

Plug down 6:15 AM Feb. 23/71. Felt at

Plug #2

890', 2:15 PM, Feb. 23, 1971.
600' - 750', 75 sx s cement +
1.3% CaCl₂. Plug down 4:20 PM,
February 23, 1971. Felt at 4:30
A.M. February 24, 1971. at 680'

Plug #3

600' - 680', 50 sxs cement + 4%
GFL. Plug down at 6:45 A.M. Feb.
24, 1971.

Cut off casing 3' below ground and
placed 5 sxs cement in top. Welded
plate on top of casing. Installed wall
marker at the time the I-54A well was
None abandoned.

g. Lost circulation zones

h. Blowouts

None

Plug #2

890', 2:15 PM, Feb. 23, 1971.

600' - 750', 75 sx s cement +

1.3% CaCl₂. Plug down 4:20 PM,

February 23, 1971. Felt at 4:30

A.M. February 24, 1971. at 680'

Plug #3

600' - 680', 50 sxs cement + 4%

GHL. Plug down at 6:45 A.M. Feb.

24, 1971.

Cut off casing 3' below ground and

placed 5 sxs cement in top. Welded

plate on top of casing. Installed well
marker at the time the I-54A well was abandoned.
None

g. Lost circulation zones

h. Blowouts

None

IV LOGS

On February 20, 1971 a Schlumberger Cement Bond Log was run from 652' to surface.

V ANALYSES

- | | |
|-------------------|--------------|
| a. Core analysis | No cores cut |
| b. Water analysis | N/A |
| c. Gas analysis | N/A |
| d. Oil analysis | N/A |

VI COMPLETION SUMMARY

- | | |
|-----------------------|--|
| a. Tubing Record | N/A |
| b. Perforation Record | N/A |
| c. Cementation Record | See Section III (f) for abandonment plugs. |

Cement squeeze on surface casing:

Set Baker bridge plug at 640' K.B.

Perforated 635' - 636' with 4 shots,

squeezed 130 sxs cement into perforations

at maximum pressure of 1100 psi. Job

completed 7:30 AM Feb. 7, 1971.

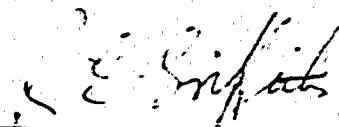
- | | |
|--|-----|
| d. Acidizing &
Fracturing Record | N/A |
| e. Back Pressure &
Production Tests | N/A |

VII REMARKS

Waited on surface casing cement approximately 30 hours and then drilled out. Stopped drilling after making 67' of new hole to effect repairs to the rotary clutch. While repairing the clutch, surface casing settled approximately 6 inches. The casing was hoisted back into position and re-cemented with a squeeze job. Drilled out cement and bridge plug and drilled ahead while waiting for logging equipment. Ran Cement Bond Log but could not get beyond 652'. After running in hole with bits and a magnet and not being able to get past 652', ran an impression block which showed that the lowest joint of casing had either parted or backed-off. The casing lay across the hole effectively prohibiting entry, hence the well was abandoned.

While lowering the derrick to skid the rig, one leg buckled causing the derrick to fall to the ground and be damaged beyond repair. A new derrick was required before drilling operations could begin on the new hole.

March 11, 1971



R.E. GRIFFITHS, P. Geol.
Staff Exploration Geologist.

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. 2 LOCATION BUTTES RT. AL. BLACKWATER AREA 14 DATE FEB. 24 19 21

Tour — Midnight - 8 a.m.		From										Footage		To		Hrs. on Bottom		Wt. Drill String (1000 lbs.)		DRILL COLLARS				FUEL		WATER		COAL		Stands		REMARKS			Time			
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		D. Collars		Start			Stop			Interval		
Driller	H. FLETT	8																												W.C.			1200			400		
Derrick	F. GUNGEY	8																												RUN IN FEEL PLUG @ 680								
Floor	R. LESTER	8																												W.C. @ 4:30 AM								
Floor	L. PAUL	8																												RIG TO RUN			430			615		
Motor																														PLUG #3								
Mechanic																														RUN PLUG #3			645			645		
Extra																														LAY DOWN PIPE			645			730		
Injuries:																														TEAR OUT			730			800 1/2		
Fires:																																						
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.																										Company Time			Cont'r Time					
Driller	J. Jandl	8																												Tear out, Lay down			800					
Derrick	N. Campbell	8																												derrick, (dropped same)								
Floor	D. STOKER	8																												@ 11:50 A.M.)			400 8					
Floor	W. RIEMER	8																																				
Motor																																						
Mechanic																																						
Extra																																						
Injuries:																																						
Fires:																																						
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.																										Company Time			Cont'r Time					
Driller	B. HUBER	8																												400			1200 8					
Derrick	L. ANDERSON	8																												WAIT ON ORDERS								
Floor	T. H. VANSON	8																												WAIT ON INSURANCE								
Floor	D. BURT	8																												ADJUST								
Motor																																						
Mechanic																																						
Extra																																						
Injuries:																																						
Fires:																																						

Totco Ring on Bit No. _____ D.P. Caliper Date _____ Results _____ From Pipe Rack _____ Total Contractor Time _____ Hrs. Toolpusher H. Jandl

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

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

REMARKS	Time		
	Start	Stop	Interval
RIG SERVICE.	12 ⁰⁰	12 ¹⁵	1/4
Ran in with D.P.	12 ¹⁵	1 ¹⁵	1
Circ down 680-750	1 ¹⁵	3 ¹⁵	2
Ran into 950	3 ¹⁵	3 ⁴⁵	1/2
Mixed 25SKs batch of cement + Pumped down	3 ⁴⁵	6 ¹⁵	2 1/2
Pulled up TO 750.	6 ¹⁵	6 ³⁰	1/4
Circ. W.O.C.	6 ³⁰	8 ⁰⁰	1 1/2
Company Time	Cont'r Time		

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.	
MUD		12 Mn.		2 a.m.		4 a.m.		6 a.m.		Additives						At Surveys Degree		MOTOR HOURS		Next Oil Change		C.B. Ft.				
WEIGHT																		1				Subs. Ft.				
VISCOSITY																		2				Ft. Up On Kelly				
GEL																		3								
PUMPS	No. 1		Pres- sure														4				TOTAL					
	Model		S.P.M.														5									
			Line Size						Size		TRIPS		No. Lines		TON MILES		TOTAL MILES		Slip Feet or Cut		Feet Left on Spool		Next Slip			
	No. 2		Pres- sure																							
Model		S.P.M.												General		Plug #1 900-950 - 25 SKS. CEMENT + 1/2 SK. C-12 Plug down @ 6:15 A.M.										
W.L.		F.C.		pH.																						

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.	Wright	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars		
													Other Ft.		
													C.B. Ft.		
													Subs. Ft.		
MUD		8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives			At Surveys Degree		MOTOR HOURS		Next Oil Change	Ft. Up On Kelly	
WEIGHT														TOTAL	
VISCOSITY															
GEL															
PUMPS	No. 1	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			
No. 2	Pressure														
Model	S.P.M.														
	Liner Size														
W.L.		F.C.		pH.											

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.		
MUD				4 p.m.		6 p.m.		8 p.m.		10 p.m.		Additives				At Surveys Degree				MOTOR HOURS		Next Oil Change		Subs. Ft.			
WEIGHT																										Ft. Up On Kelly	
VISCOSITY																										TOTAL	
GEL																											
PUMPS	No. 1		Pressure																								
	Model		S.P.M.																								
			Liner Size																								
	No. 2		Pressure																								
Model		S.P.M.																									
		Liner Size																									
General				Plug # 2 600-750-75 SKS. CEMENT + 1SK CACL2 Plug down @ 4:20 P.M.																							
W.L.				F.C.				p.H.																			

[illegible]

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

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

RIG No. 2 LOCATION BUTTES ET AL BLACKWATER AREA _____ DATE FEB 21 1926

Tour — Midnight - 8 a.m.		Specify actual hours worked		Hrs.
Driller	H. FLETT	8		
Derrick	E. ARSEY	8		
Floor	R. LIZOTTE	8		
Floor	L. PAUL	8		
Floor				
Motor				
Mechanic				
Extra				
Injuries:				
Fires:				
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.
Driller	J. Jandk	8		
Derrick	N. Campbell	8		
Floor	D. STOGRYN	8		
Floor	W. RIFNER	8		
Floor				
Motor				
Mechanic				
Extra				
Injuries:				
Fires:				
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.
Driller	Ben. Hansen	8		
Derrick	J. ANDERSEN	8		
Floor	D. STOGRYN			
Floor	D. CURTIS	8		
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	S.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	Gals.	Bbls.	Tons	D. Collars	Other Ft.	C.B. Ft.	Subs. Ft.	Ft. Up On Kelly	TOTAL
MUD																					
WEIGHT																					
VISCOSITY																					
GEL																					
PUMPS																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
MOTOR HOURS																					
Next Oil Change																					
Slip																					
Feet Left on Spool																					
Next Slip																					
General																					
W.L.																					
F.C.																					
pH.																					
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 H. Janda
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. 2 LOCATION BUTTES ET AL BLACKWATER J-54 AREA DATE FEB 21 1971

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 H FLETT	8						16	6 1/4	2 3/4					
Derrick E. FISHER	8													
Floor R LIZOTTE	8													
Floor L PAUL	8													
Floor														
Motor														
Mechanic														
Extra														
Injuries														
Fires														
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands
Specify actual hours worked							No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons	
Driller J JAGEL	8													
Derrick N. Campbell	8													
Floor D. SIOGRIN	8													
Floor U. RIEMER	8													
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 B. Huber	8													
Derrick A. F. Lett	8													
Floor J. Anderson	8													
Floor D. Courter	8													
Floor T. EXAMINER	8													
Floor														
Motor														
Mechanic														
Extra														
Injuries														
Fires														

REMARKS	Time		
	Start	Stop	Interval
Rig SERVICE	1200	1215	15
RUN IN WITH OVERSHOT	1215	1300	45
CIRC OVER FISH CATCH FISH	1300	1315	15
PULL FISH FREE	200	245	45
HOIST FISH	245	430	185
BREAK DOWN OVERSHOT LAX	430		
DOWN COLLAR		530	1
CLEAN Plug COLLARS	530	700	170
RUN IN BIT	700	800	100
Company Time			
Contr Time			
Rig Serv. check top	8:00	8:15	15
Keen To Bottom and try	8:15	9:00	45
To get By Iron	9:00		
Blow Kelly and Hoist Bit		10:15	15
Run in with Bit	10:15	11:15	1
Try To get By Iron	11:15	12:45	130
Blow Kelly and Hoist Bit	12:45	1:45	1
Make up magnet and Run in		2:45	1
Try To get magnet on Bottom	2:45	4:00	1:15
Company Time			
Contr Time			
PULL OUT magnet	4:00	5:00	1
RUN IN WITH BIT & JACK SUB	5:00	6:30	1:30
AG SERV.	6:30	6:45	15
Ream @ 678, & CIRC.	6:45	10:30	3:45
MAKE UP COMPRESSOR BLOCK			
PULL OUT BIT.	10:30		
RUN IN COMPRESSOR BLOCK,		12:00	1:30
Company Time			
Contr 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 H. J. Judd
 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. 2 LOCATION ENTERED AT AL BLACKWATER EST AREA DATE Feb 22 1971

Tour — Midnight - 8 a.m.		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS	Start	Stop	Interval
					No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION	D. Collars				
Driller	H. FLETT	12			1292	36	1428	3 1/2	19	6 1/2	100	307	17 1/2				873.65	RUN SURVEY R.G. SERVICE	1200	1230	2
Derrick	E. ANDERSEN	8			3	7 1/2	ADV	7 1/2	28	2	100	307	17 1/2				543.31	DRILL 7 1/2 HOPE	1230	400	3 1/2
Floor	R. L. ANDERSEN	8															386.0	WORK ON PUMP	400	530	1 1/2
Floor	L. PAUL	12															386.0	HOIST AND TWIST OFF 4 COLLARS	530	730	2
Floor																		LAY DOWN COLLARS	730	800	1/2
Floor																					
Motor																					
Mechanic																					
Extra																					
Injuries:																					
Fires:																					
Tour — 8 a.m. to 4 p.m.																					
Driller	J. Jandk	12																			
Derrick	N. Campbell	8																			
Floor	D. STODRYN	8																			
Floor	W. RIEBER	12																			
Floor																					
Motor																					
Mechanic																					
Extra																					
Injuries:																					
Fires:																					
Tour — 4 p.m. to Midnight																					
Driller	A. FLETT	8																			
Derrick	J. ANDERSEN	8																			
Floor																					
Floor																					
Motor																					
Mechanic																					
Extra																					
Injuries:																					
Fires:																					

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

Total Contractor Time _____ Hrs.

Total Company Time _____ Hrs.

Toolpusher

Approved by

H. Jandk

BOARD DAY WORK RECORD

REMARKS

Time		
Start	Stop	Interval

[illegible]

Total Contractor Time _____ Hrs. Toolpusher B. Auer
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. 2 LOCATION BUTTES ET AL BLACKWATER I 54 AREADATE FEB 18 1971

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.) DRILL COLLARS FUEL WATER COAL										REMARKS		Time		
Specify actual hours worked Hrs.														Start	Stop	Interval
Driller <u>H FLEET</u>	<u>12</u>	767 253 1020 7 1/2 64 19 6 1/2 2 3/4										24698 RIG IN BIT		1200	1230	1/2
Derrick <u>F ARSEY</u>	<u>8</u>	1 7/8 X 16 3-10 25632 35 120 320 15 1/4										SHOW KELLY BREAK LINE		1230	100	1/2
Floor <u>R LIZOTIA</u>	<u>8</u>											PRESSURE TEST CEMENT 500 PSI		100		
Floor <u>L PAUL</u>	<u>12</u>											45 MINS OK DRILL CEMENT		130		1/2
Floor		MUD 12 Mn. 2 a.m. 4 a.m. 6 a.m. Additives										PRESSURE TEST RETAINER TO 500 PSI		130		
Motor		WEIGHT										15 MINS OK		200		1/2
Mechanic		VISCOSITY										DRILL OUT RETAINER & CLEAN		200		5 1/2
Extra		GEL										TO BOTTOM		730		
Injuries:		PUMPS No. 1 Pres- sure S.P.M. No. 2 Pres- sure S.P.M. Model S.P.M. Liner Size										CIRC ON BOTTOM		730	745	1/4
Fires:		W.L. F.C. pH.										Pump Tank		745	800	1/4
Tour — 8 a.m. to 4 p.m.		767 253 1020 7 1/2 64 19 6 1/2 2 3/4										Rig Serv. & CHECK		800	815	1/4
Driller <u>J Jacob</u>	<u>12</u>	1 7/8 X 16 3-10 25632 35 120 320 15 1/4										Work on Pump		815	830	1/4
Derrick <u>H Campbell</u>	<u>8</u>											Drill 7 7/8 Hole		830	400	7 1/2
Floor <u>D STOGGYN</u>	<u>8</u>															
Floor <u>W Rimmer</u>	<u>12</u>	MUD 8 a.m. 10 a.m. 12 Noon 2 p.m. Additives														
Floor		WEIGHT 8.6 8.6 8.7														
Motor		VISCOSITY 28 28 28														
Mechanic		GEL														
Extra		PUMPS No. 1 Pres- sure 1250 1500 1300 1300 Model S.P.M. 72 72 72 72 Liner Size 5X14														
Injuries:		W.L. F.C. pH.														
Fires:																
Tour — 4 p.m. to Midnight		1020 28 1119 4 1/2 19 6 1/2 2 3/4										Drill 7 7/8 Hole		400	500	1
Driller		1 7/8 X 16 3-10 25632 35 120 419 22 1/2										Rig Serv.		500	515	1/4
Derrick <u>A FLEET</u>	<u>8</u>											Drill 7 7/8 Hole		515	700	1 3/4
Floor <u>I ANDERSEN</u>	<u>8</u>											Work on Swivel		700	715	1/4
Floor		MUD 4 p.m. 6 p.m. 8 p.m. 10 p.m. Additives										Drill 7 7/8 Hole		715	800	3/4
Floor		WEIGHT 8.8 8.9										Work on pump		800	830	1/2
Motor		VISCOSITY 28										Drill 7 7/8 Hole		830	850	1
Mechanic		GEL										DRILL SURVEY		850	1000	1 1/2
Extra		PUMPS No. 1 Pres- sure 1300 1300 1300 Model S.P.M. 300 300 300 Liner Size 300										Hole BIT #1		1000	1145	1 3/4
Injuries:		W.L. F.C. pH.										PERFOR SWIVEL		1145	1200	1/4
Fires:																

Totco Ring on Bit No.

D.P. Caliper Date

Results

From Pipe Rack

Total Contractor Time Hrs.

Toolpusher

B.O.P. Test-Operated

Time

Results

Total Company Time Hrs.

Approved by

TRI-CITY DRILLING LTD.

DAILY DRILLING REPORT

BOARD DAY WORK RECORD

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

RIG No. 2 LOCATION BUTTS F# AL-BLACKWATER 1-54 AREA DATE FEB 17 1971

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.) DRILL COLLARS FUEL WATER COAL Stands										REMARKS		Time		
Specify actual hours worked Hrs.														Start	Stop	Interval
Driller <u>H FLETT</u>	<u>12</u>											<u>RIG UP PERFORATING GUN</u>		<u>12:00</u>		
Derrick <u>E ARKSEN</u>	<u>8</u>											<u>PICK UP 19 SINGLES RUN IN</u>		<u>2:00</u>		
Floor <u>R LIGOTTE</u>	<u>8</u>											<u>OPEN END TO 592 KB.</u>		<u>3:30</u>		
Floor <u>L PAUL</u>	<u>12</u>											<u>RIG UP TO CEMENT GUN</u>		<u>3:00</u>		
Floor												<u>CEMENT</u>		<u>8:00</u>		
Motor																
Mechanic																
Extra																
Injuries:																
Fires:																
Tour — 8 a.m. to 4 p.m.		W.L. F.C. pH. <u>General Perforated 4 shots @ 635 to 636. Established head 1 1/2 bbl/min @ 200 PSI. Mixed 152 SKs of cement with quick set. squeezed 130 SKs into</u>										Company Time		Cont'r Time		
Driller <u>J Jandl</u>	<u>12</u>											<u>W.O.C.</u>		<u>8:00</u>	<u>4:00</u>	
Derrick <u>N Campbell</u>	<u>8</u>															
Floor <u>D. STOBBS</u>	<u>8</u>															
Floor <u>W RIFMER</u>	<u>12</u>															
Floor																
Motor																
Mechanic																
Extra																
Injuries:																
Fires:																
Tour — 4 p.m. to Midnight		W.L. F.C. pH. <u>Top of cement @ 630. Top of retaining @ 637. Pressure up to 800 PSI OK.</u>										Company Time		Cont'r Time		
Driller												<u>W.O.C.</u>		<u>4:00</u>	<u>12:00</u>	
Derrick <u>A. FLETT</u>	<u>8</u>											<u>RUN IN BIT</u>		<u>11:00</u>	<u>12:00</u>	
Floor <u>I ANDERSEN</u>	<u>8</u>															
Floor																
Floor																
Motor																
Mechanic																
Extra																
Injuries:																
Fires:																

Totes 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 Ray K. Nelson

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. 2 LOCATION Butte Ft. Al. Blackwater AREA FT. AL. BLACKWATER DATE FEB 16 1971

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands	REMARKS	Time															
Specify actual hours worked	Hrs.					No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons			Start	Stop	Interval													
Driller <u>H. Flett</u>	<u>12</u>												Singles	<u>400</u>	<u>1200</u>	<u>800</u>	<u>8</u>													
Derrick <u>E. Arnsby</u>	<u>8</u>												D. Collars																	
Floor <u>R. Lizotte</u>	<u>12</u>												Other Ft.																	
Floor <u>L. Paul</u>	<u>12</u>												C.B. Ft.																	
Floor													Subs. Ft.																	
Motor													Ft. Up On Kelly																	
Mechanic													TOTAL																	
Extra																														
Injuries:																														
Fires:																														
MUD 12 Mn. 2 a.m. 4 a.m. 6 a.m. Additives WEIGHT VISCOSITY GEL PUMPS No. 1 Pressure S.P.M. Model No. 2 Pressure S.P.M. Model W.L. F.C. pH.														Company Time	Cont'r Time															
Tour — 8 a.m. to 4 p.m. Specify actual hours worked Hrs. Driller <u>J. Jandh</u> <u>12</u> Derrick <u>N. Campbell</u> <u>8</u> Floor <u>D. Stogryn</u> <u>8</u> Floor <u>W. Riemer</u> <u>12</u> Motor Mechanic Extra Injuries: Fires:																														
MUD 8 a.m. 10 a.m. 12 Noon 2 p.m. Additives WEIGHT VISCOSITY GEL PUMPS No. 1 Pressure S.P.M. Model No. 2 Pressure S.P.M. Model W.L. F.C. pH.														Company Time	Cont'r Time															
Tour — 4 p.m. to Midnight Specify actual hours worked Hrs. Driller Derrick <u>A. Flett</u> <u>8</u> Floor <u>J. Anderson</u> <u>8</u> Floor Motor Mechanic Extra Injuries: Fires:																														
MUD 4 p.m. 6 p.m. 8 p.m. 10 p.m. Additives WEIGHT VISCOSITY GEL PUMPS No. 1 Pressure S.P.M. Model No. 2 Pressure S.P.M. Model W.L. F.C. pH.														Company Time	Cont'r Time															

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

Total Contractor Time _____ Hrs. Toolpusher Ben K. Weber
 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. 2 LOCATION BUTTES ET AL BLACK WATER I-54 AREA N.W.T. DATE FEB 12 1978

Tour — Midnight - 8 a.m.		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
					No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller	H FLETT			12	7	7 3/4	XIG	3-10	25631							
Derrick	E ARKSEY			8												
Floor	R LIBOTIE			8												
Floor	L PAUL			8												
Floor																
Motor																
Mechanic																
Extra																
Injuries:	NIL															
Fires:																
Tour — 8 a.m. to 4 p.m.		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
					No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller	J JandL			12	1	7 3/4	XIG	3-10	25632	30m	120	67	2 3/4			
Derrick	N Campbell			8												
Floor	D. STORIN			8												
Floor	W. Riener			8												
Floor																
Motor																
Mechanic																
Extra																
Injuries:	NIL															
Fires:																
Tour — 4 p.m. to Midnight		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS			FUEL	WATER	COAL	Stands
					No.	Size	Type	Size Jets	Serial No.	Weight	R.P.M.	Ft. Drilled	Hrs.	Feet Reamed	Hrs.	CONDITION
Driller	A FLETT			8												
Derrick				8												
Floor				8												
Floor	T ANDERSEN			8												
Floor																
Motor																
Mechanic																
Extra																
Injuries:	NIL															
Fires:																

REMARKS	Time		
	Start	Stop	Interval
REPAIR CHICKSENO	12:00	2:00	
PRESSURE TEST BLIND RAM	2:00		
TO 1000 15 MIN OK		3:00	
RUN IN BIT	3:00	4:00	
CIRC PRESSURE TEST PIPE	4:00		
RAM TO 1000 15 MIN OK		6:00	
HOIST BIT JETS PLUG	6:00		
RUN IN BIT		8:00	
Company Time	Cont'r Time		
Circ. Pressure Test	8:00		
Hydril To 1000 15 min. OK			
Check motor shut offs		10:00	
Hoist Plugged BIT	10:00		
and Run in		11:15	
Drill out	11:15	11:15	2
Dump Suction Tank and	11:15		
displace Hole		2:00	
Drill 7 3/4 Hole	2:00	2:15	1/4
Work on Rotary Clutch	2:15	2:45	1/2
Drill 7 3/4 Hole	2:45	3:15	1/2
Work on Rotary Drive	3:15	4:00	1/2
Company Time	Cont'r Time		
Work on Rotary Drive	4:00	10:00	
PRESSURE TEST CAGING	10:00	10:30	1/2
Hoist	10:30	12:50	1 1/2
Company Time	Cont'r Time		

Totco Ring on Bit No.

D.P. Caliper Date

Results

From Pipe Rack

B.O.P. Test-Operated

Time

Results

Total Contractor Time Hrs.

Toolpusher

Total Company Time Hrs.

Approved by

Ben Huber

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. 2 LOCATION BUTTE E. 34 BLACKWATER I 34 AREA DATE FEB 14 1921

Torq — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS			FUEL		WATER		COAL		Stands		REMARKS			Time																			
Specify actual hours worked		Hrs.		No.		Size		Type		Size Jets		Serial No.		Weight		R.P.M.		Ft. Drilled		Hrs.		Feet Reamed		Hrs.		CONDITION		D. Collars		Other Ft.		C.B. Ft.		Subs. Ft.		Ft. Up On Kelly		TOTAL		Company Time		Cont'r Time			
Driller <u>H. FLEET</u>	<u>12</u>																																												
Derrick <u>E. ARKSEN</u>	<u>8</u>																																												
Floor <u>P. L. LUTTS</u>	<u>8</u>																																												
Floor <u>L. PAUL</u>	<u>8</u>																																												
Motor																																													
Mechanic																																													
Extra																																													
Injuries: <u>NIL</u>																																													
Fires:																																													
Torq — 8 a.m. to 4 p.m.																																													
Driller <u>J. J. J. J.</u>	<u>12</u>																																												
Derrick <u>A. SP. J. J.</u>	<u>8</u>																																												
Floor <u>D. SP. J. J.</u>	<u>8</u>																																												
Floor <u>W. R. J. J.</u>	<u>8</u>																																												
Motor																																													
Mechanic																																													
Extra																																													
Injuries: <u>NIL</u>																																													
Fires:																																													
Torq — 4 p.m. to Midnight																																													
Driller																																													
Derrick <u>A. FLEET</u>	<u>8</u>																																												
Floor <u>I. ANDERSEN</u>	<u>8</u>																																												
Floor <u>D. CURTIS</u>	<u>18</u>																																												
Motor																																													
Mechanic																																													
Extra																																													
Injuries: <u>NIL</u>																																													
Fires:																																													

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

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

Totco Ring on Bit No. _____ D.P. Calipered Date _____ Results _____ From Pipe Rack _____ Total Contractor Time _____ Hrs. Toolpusher *Don N. Nelson*
 B.O.P. Test-Operated _____ Time _____ Results _____ 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. 2 LOCATION BUTTE ETAL BLACKWATER E 54 AREA DATE FEB 12 1971

Tear — Midnight - 8 a.m.		Specify actual hours worked		Hrs.	From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS	Time		
										No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons			Start	Stop	Interval
Driller	H. FLETT	12			350	171	521	6 3/4		17	6 1/2	2 1/2						DRILL 12 1/4 HOLE	1200	230	2 1/2
Derrick	E. ARSEV	8																RUN SURVEY RIG SERVICE	230	245	1/4
Floor	R. LIZOTTE	8																DRILL 12 1/4 HOLE	245	500	2 1/4
Floor	L. PAUL	8																WORK ON PUMP	500	540	1/4
Floor																		DRILL 12 1/4 HOLE	540	640	1
Motor																		WORK ON PUMP	640	700	1/4
Mechanic																		DRILL 12 1/4 HOLE	700	800	1
Extra																					
Injuries:	NIL																				
Fires:																					
Driller	J. Jondk	12			521	9	530	1 1/2		18	6 1/2	2 1/2						DRILL 12 1/4 HOLE	800	830	2
Derrick	N. Campbell	8																RUN SERVICE (MISS RUN)	830	900	
Floor	W. Ricmer	8																RUN SERVICE #2 (RIG SERV)		900	1/2
Floor	D. Curtis	8																WORK ON PUMP	900	915	1/4
Floor																		DRILL 12 1/4 HOLE	915	1015	1
Motor																		HOIST FOR BIT	1015	1130	1 1/2
Mechanic																		REAM TO BOTTOM	1130	200	2 1/2
Extra																		HOIST BELLED BIT	200	330	1 1/2
Injuries:	NIL																	CLEAN BIT AND RUN IN	330	400	1/2
Fires:																					
Driller	A. FLETT	8			30	120	650	4 1/2		18	6 1/2	2 1/2						RUN IN BIT	400	430	2
Derrick		8																DRILL 12 1/4 HOLE	430	530	1
Floor	DAN STODARYN	8																CLEAN SCREEN	530	645	1/4
Floor	IAN ANDERSEN	8																DRILL 12 1/4 HOLE	645	715	1 1/2
Floor																		WORK ON PUMP CLEAN SCREEN	715	845	1 1/2
Motor																		DRILL 12 1/4 HOLE	845	900	1/4
Mechanic																		SURVEY & RIG SERVICE	900	930	1/2
Extra																		DRILL 12 1/4 HOLE	930	1130	2
Injuries:	NIL																	WORK ON PUMP	1130	1200	1/2
Fires:																					

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

Total Contractor Time _____ Hrs. Toolpusher Ben Kuehn
 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. 2 LOCATION BUTTES ETAL BLACKWATER I-55 AREA DATE Feb 11 1971

Tour — Midnight - 8 a.m.		From Footage To Hrs. on Bottom Wt. Drill String (1000 lbs.)										DRILL COLLARS				FUEL		WATER		COAL		Stands		REMARKS			Time		
Specify actual hours worked		Hrs.		No.		O.D.		I.D.		Wgt.		Gals.		Bbls.		Tons		Singles					Start	Stop	Interval				
Driller	H FLETT	12		40	28	68	17																						
Derrick	E ARSE	8																											
Floor	R LIZETTE	8																											
Floor	L PAUL	8																											
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	Pres- sure	20																									
Model		S.P.M.																											
Liner Size																													
No. 2		Pres- sure																											
Model		S.P.M.																											
Liner Size																													
General																													
W.L.																													
F.C.																													
pH.																													
Driller	J JandL	12		68	61	129	6																						
Derrick	N Campbell	8																											
Floor	W Riemer	8																											
Floor	D CURTIS	8																											
MUD		8 a.m.	10 a.m.	12 Noon	2 p.m.	Additives		At Surveys Degree		MOTOR HOURS		Next Oil Change																	
WEIGHT						1000 LB GELL		48																					
VISCOSITY						100 LB CAUSTIC		1																					
GEL																													
PUMPS		No. 1	Pres- sure	300 250 500 450																									
Model		S.P.M.	74 74 74 74																										
Liner Size				6 3/4 x 14																									
No. 2		Pres- sure																											
Model		S.P.M.	7																										
Liner Size																													
General																													
W.L.																													
F.C.																													
pH.																													
Driller	A FLETT	8		129	221	350	7 1/2																						
Derrick	A FLETT	8																											
Floor	D. STOGRYN	8																											
Floor	I ANDERSEN	8																											
MUD		4 p.m.	6 p.m.	8 p.m.	10 p.m.	Additives		At Surveys Degree		MOTOR HOURS		Next Oil Change																	
WEIGHT								155																					
VISCOSITY								182																					
GEL								292																					
PUMPS		No. 1	Pres- sure	450 300																									
Model		S.P.M.	74																										
Liner Size				6 3/4 x 14																									
No. 2		Pres- sure																											
Model		S.P.M.																											
Liner Size																													
General																													
W.L.																													
F.C.																													
pH.																													

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

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

REMARKS

[illegible]

Total Contractor Time _____ Hrs. Toolpusher Ben K. K. K.
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. 2 LOCATION Butter A. C. Richardson 1-54 AREA DATE Feb. 9 1971

Tour — Midnight - 8 a.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked	Hrs.						No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons		Start	Stop	Interval			
Driller <u>H. FLETT</u>	<u>15</u>																			
Derrick <u>E. WIKSEY</u>	<u>12</u>																			
Floor <u>R. LIZOTTE</u>	<u>10</u>																			
Floor <u>L. PAUL</u>	<u>15</u>																			
Floor																				
Motor																				
Mechanic																				
Extra																				
Injuries: <u>NIL</u>																				
Fires:																				
Tour — 8 a.m. to 4 p.m.		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked	Hrs.						No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons		Start	Stop	Interval			
Driller <u>J. Jandh</u>	<u>10</u>																			
Derrick <u>N. Campbell</u>	<u>12</u>																			
Floor <u>T. Fymundson</u>	<u>10</u>																			
Floor <u>D. Curtis</u>	<u>13</u>																			
Floor																				
Motor																				
Mechanic																				
Extra																				
Injuries: <u>NIL</u>																				
Fires:																				
Tour — 4 p.m. to Midnight		From	Footage	To	Hrs. on Bottom	Wt. Drill String (1000 lbs.)	DRILL COLLARS				FUEL	WATER	COAL	Stands	REMARKS			Time		
Specify actual hours worked	Hrs.						No.	O.D.	I.D.	Wgt.	Gals.	Bbls.	Tons		Start	Stop	Interval			
Driller																				
Derrick <u>A. FLETT</u>	<u>16</u>																			
Floor <u>W. KLEMER</u>	<u>14</u>																			
Floor																				
Floor																				
Motor																				
Mechanic																				
Extra																				
Injuries: <u>NIL</u>																				
Fires:																				

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

Total Contractor Time _____ Hrs.

Toolpusher H. Jandh

Total Company Time _____ Hrs.

Approved by _____

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

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

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

Total Contractor Time _____ Hrs. Toolpusher A. J. Smith
Total Company Time _____ Hrs. Approved by _____