



DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
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 **Placid Chevron Gull Creek F-46**
Location: Unit **F** Section **46** Grid **60°50' 118°00'**
Latitude **60° 45' 29"** Longitude **118° 08' 38"**
From Established Reference Marker.....
Universal Well Location Reference - Lat. **60.75805° N.**, Long. **118.14388° W.**
Elevation: Ground **1002** KB **1014** feet above sea-level.
Well is expected to produce from **Granite Wash** formation at a depth
of about **3100** feet.
Area assigned to well

(for Oil Conservation Engineer's use only)

Permit No. **4084** Lease No. **-** Acreage **31,244**
Permittee, licensee, or lessee **Chevron Standard Limited**
Exploratory Licence No. **1055**
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	Brand	New or Used	Estimated Depth	Sacks of Cement
1. 8-5/8	24	J-55	Mann	New	200	100
2. 5-1/2	14	J-55	Mann	New	3100	250
3.						
4.						
5.						

Expected water, gas, and oil horizons and type of control equipment. **Middle Devonian and Granite Wash to be controlled with drilling mud and blowout preventors**

Well will be drilled with (Rotary) Rig No. **11** by **Commonwealth Drilling Co. Ltd.**
(Cable) (Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No. **Applied for**
At well **Jack Rosichuk** At registered office **T. J. Harp**
Address **At Rig** Address **860 Guinness House, Calgary**
It is understood that, if changes become necessary, notice of the change of plan will be submitted.
Dated at **Calgary**, this **8th** day of **February**, 19**68**
Signed by **T. J. Harp** Company **Placid Oil Company**
Title **Superintendent** Operator's Licence No. **1157**

(For Resource Management Division use only)

APPROVED

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

The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.

Dated **9th February** 19 **68**

Oil Conservation Engineer

Forms to be submitted to Oil Conservation Engineer, Calgary, Alberta.



File No. _____
Drilling Authority No. 303

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well ~~or Suspend Drilling~~

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

Name and number of well Placid Chevron Gull Creek F-46
Location: Unit F Section 46 Grid 60°50' 118°00'
Latitude 60° 45' 29" Longitude 118° 08' 38"
From Established Reference Marker _____
Universal Well Location Reference Lat. 60.75805°N., Long. 118.14388°W.
Permit No. 4084 Lease No. _____

Chevron Standard Limited
(Permitter, Licensee, Lessee)

Date of commencement of proposed program March 10, 1968

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at _____
Gas at 2750
Water at _____
Total Depth 3065 Date of last operations March 10, 1968
Present condition of well Preparing to abandon

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. <u>8-5/8</u>	<u>24</u>	<u>162</u>	<u>162</u>	<u>145 + 4% CaCl₂</u>	
2. _____					
3. _____					
4. _____					
5. _____					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
<u>1</u>	<u>2600 - 3311</u>	<u>Devonian</u>		
<u>2</u>	<u>112 - 212</u>	<u>Surface Casing</u>		

The following logs have been run Density, Gamma Ray Sonic, DII
Other operations proposed None

Operations to be carried out by Commonwealth Contractor Licence No. A 11174
Address 706 Seventh Avenue S.W. Address Calgary, Alberta
Responsible Agent in field Jack Rosichuk
Dated at Calgary this 11th Day of March, 19 68
Signed by T.J. Harp Company Placid Oil Company
Title Superintendent Operator's Exploratory Licence No. 1157

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

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

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

Confirming oral approval given by Mr. B.S.J. Innes on the 7th of March 1968

Dated 14th March, 19 68

B.S.J. Innes
Oil Conservation Engineer

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



Drilling Authority No. 303
Date Issued February 9, 1968

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 Placid Chevron Gull Creek F-46
Permit No. 4084 Lease No. -
Chevron Standard Limited Exploratory Licence No. 1055
(Permittee, Licensee, Lessee)
Placid Oil Company Exploratory Licence No. 1157
(Operator)

Location: Unit F Section 46 Grid 60°50', 118°00'
Latitude 60° 45' 29" Longitude 118° 08' 38"
From Established Reference Marker - Shot Point 121, Line 7.
Universal Well Location Reference Lat. 60.75805°N., Long. 118.14388°W.

	DATE	DEPTH	Pool(s)	Interval(s) open to production
Spudded	2/26/68			
Suspended				
Resumed Operations				
Finished Drilling	3/7/68	3061		
Deepened				
Complete (gas/oil)				
Abandoned	3/10/68	3061		
Rig released	3/10/68	3061		

Elevation: Gr. 1002 K.B. 1014
Rig No. 12
Drilling Contractor Commonwealth Drilling
Contractor's Business Licence No. A11174

CASING RECORD

Casing Size (inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1. 8-5/8	J-55	24#	166'	162'	145 + 4% CaCl
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
Hay River Shale	1673	- 659	No Cores					
Slave Point	2643	-1629						
Sulphur Point	2758	-1744						
Granite Wash	3023	-2009						
Pre-Cambrian	3046	-2032						

LOG RECORD

Run No.	Type of Log	From	To
1	BHC-Sonic-GR-Caliper	3053	162
1	Dual Induction LL	3052	162
1	Formation Density	3052	162

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
3/10/68	2600	3061	200 sks cement								
3/10/68	112	212	60 sks cement Felt at 122'.								
	Surface		5 sacks of cement (Portland Normal)								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	LS.L Mins.	F.S.L Mins.	LS.L.B.H.P.	F.S.L.B.H.P.	LF.B.H.P.	F.F.B.H.P.	L.H.P.	F.H.P.	REMARKS
1	3/8/68	Granite Wash	3010	3061	30	30	30	39	39	38	38	1618	1613	Rec. 15' drilling fluid
2	3/8/68 3/9/68	Slave Point	2641	3061	120	30	90	-	-	104	131	1445	1444	Rec. 120' black sulphurous water and drilling fluid

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
C68-3454-1	Water	2640	3061	DST #2	Top of tool

PRESENT STATUS OF WELL

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

Company Placid Oil Company

Signed by [Signature]

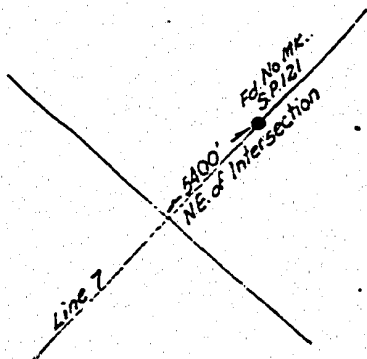
Title Production Superintendent

Date April 26, 1968

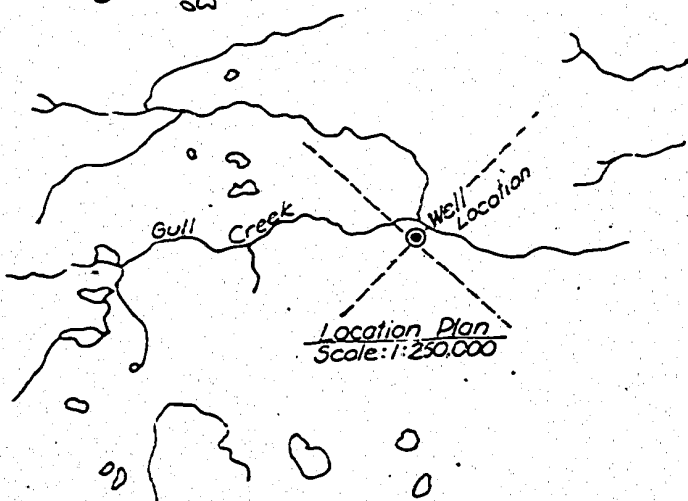
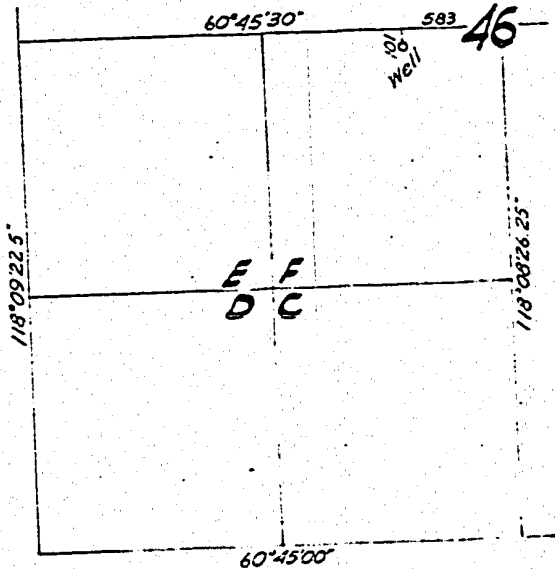
Forms to be prepared in duplicate and forwarded to the Oil
Conservation Engineer, Calgary, Alberta.

PRELIMINARY PLAN

PLACID CHEVRON GULL CREEK F-46
 Unit F Section 46 Grid Area 60°50'118°00'
 Latitude 60°45'29" Longitude 118°08'38"
 NORTH WEST TERRITORIES



Detail
N.T.S.



I certify that this plan is correct to the best of my knowledge and was completed on the 8th day of February, 1968.

[Signature]
 Dominion and Alberta Land Surveyor

[Signature]
 Witness
 MIDWEST SURVEYS CO. LTD.

PLACID OIL COMPANY

ELEVATION: 1002 Ground S.P. Elev.

CO-ORDS: Well is located 101 S. } of N.E. cor. Unit F
 583 W. } Sec. 46

Scale: 1000' = 1"

Triangulation Station:

Well location:

Survey Monuments found shown thus:

"planted"

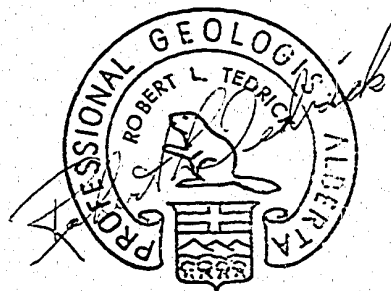
Portions referred to outlined:

Distances are in feet and decimals.



PLACID CHEVRON GULL CREEK F-46

PLACID CHEVRON GULL CREEK F-46
F-46-60-50-118-00



March 29, 1968

Robert L. Tedrick Petroleum Ltd.,
1520 - 110th Avenue S.W.,
Calgary, Alberta.

CONTENTS

	<u>Page</u>
Section I - Summary of Well Data	1
Section II - Geological Summary	2
(a) Formation Tops	2
(b) Cored Intervals	2
(c) Core Descriptions	2
(d) Sample Description	2
Section III - Engineering Summary	5
(a) Drill Stem Tests	5
(b) Casing Record	6
(c) Bit Record	6
(d) Mud Additives	6
(e) Deviation Record	6
(f) Abandonment Plugs	7
Section IV - Logs	7
Section V - Analyses	8
Section VI - Completion Summary	8
(a) Cementation Record	8

Section I - Summary of Well Data

- (a) Well Name and Number - Placid Chevron Gull Creek F-46
- (b) Permittee - Chevron Standard Limited
- (c) Operator - Placid Oil Co., 860 Guinness House,
Calgary, Alberta.
- (d) Location - F-46-60-50-118-00 60°45'29"N.; 118°08'38"W.
- (e) Permit - 4084
- (f) Contractor - Commonwealth Drilling Co., Rig No. 12
- (g) Drilling Authority - 303
- (h) Classification - New field wildcat
- (i) Elevations - Ground 1002, Kelly Bushing 1014
- (j) Sounded - 12:00 p.m., February 26, 1968
- (k) Completed Drilling - 1:15 a.m., March 7, 1968
- (l) Total Depth - 3061 feet
- (m) Status - Drilled and abandoned
- (n) Rig Released - 8:00 a.m., March 10, 1968
- (o) Hole Size - 0' - 162' : 12 1/4"
162' - 3061' : 7 7/8"
- (p) Casing - 166 feet of 8 5/8", 24 pound, J-55 STC casing at 162' with
145 sacks + 4% CaCl₂
- (q) Universal Well Location Reference - Lat. 60.75805° N.
Long. 118.14388° W.
- (r) Unique Well Identifier - 300F466050118000

Section II - Geological Summary

(a) Formation Tops

	<u>Sample Top</u>	<u>E-log Top</u>	<u>Subsea</u>
Devonian			
Trout River	Surface		+1014
Hay River	1680	1673	- 659
Slave Point	2635	2643	-1629
Sulphur Point	2755	2758	-1744
Granite Wash	3020	3023	-2009
Precambrian	3040	3046	-2032

(b) Cored Intervals

No cores cut.

(c) Core Descriptions

Nil

(d) Sample Description

- 0-30 Siltstone, white, slightly calcareous, slightly arenaceous and Limestone, light brown, microcrystalline, dense.
- 30-80 Limestone, as above with Limestone, light brown with gray mottling, 40% micrite, 10% very fine intraclasts, 30% oolites and calcispheres, 10% organic fragments, 10% silt and argillaceous material, dense. Ostracodes and gastropods recognizable.
- 80-290 Limestone, light brown, 75% micrite, 10% ostracodes and gastropods, 10% sparry calcite, 5% argillaceous and silt-sized material, dense. At 150', lime becomes earthy in part.
- 290-320 Limestone, as above with Siltstone, light gray, non-calcareous.
- 320-350 Limestone, light brown, 80% fine intraclasts, 15% micrite, 5% sparry calcite, less than 5% argillaceous material.
- 350-410 Siltstone, light gray-brown, non-calcareous with Limestone, as above.
- 410-500 Siltstone, light gray-brown, very slightly calcareous, trace of argillaceous material.
- 500-540 Siltstone, as above with Limestone, light brown, microcrystalline, dense with scattered fossil ghosts

and with Sandstone, white very fine grained, sub-angular, fair sorting, up to 10% calcareous cement.

- 540-700 Limestone, light brown, microcrystalline, dense. At 560' with Siltstone, light gray-brown, non-calcareous, trace of pyrite. From 610'-700', Limestone to Siltstone ratio is 1:1.
- 700-770 Limestone, light gray, very fine crystalline, slightly argillaceous with Siltstone, light gray-brown, very slightly calcareous. At 730', as above with Limestone, light brown, microcrystalline, with less than 5% very fine intraclasts.
- 770-890 Limestone, light brown, 75% micrite, 15% very fine intraclasts, 10% calcareous rods and organic debris, dense. Crinoids and ostracodes identifiable.
- 890-960 Limestone, as above with interbeds of Sandstone, light gray, very fine grained, subangular, poor sorting, slightly argillaceous, very slightly calcareous, tight, with Shale, light gray, non-calcareous.
- 960-1070 No samples.
- 1070-1100 Shale, light gray-brown, non-calcareous, with Siltstone, light gray, calcareous, and Limestone, light gray, microcrystalline, rare brachiopod.
- 1100-1120 No sample.
- 1120-1130 Shale, Siltstone and Limestone, as above.
- 1130-1140 No sample.
- 1140-1270 Shale and Siltstone as above with Limestone, light brown, microcrystalline, 10-15% organic debris with recognizable brachiopods and crinoid ossicles, dense.
- 1270-1500 Limestone, light gray, very fine to fine crystalline, argillaceous, dense, with Shale, light gray, calcareous, blocky. At 1330' as above with Sandstone, white, very fine grained, subangular, fair sorting, micaceous, slightly calcareous.
- 1500-1510 No sample.
- 1510-1530 Limestone, Shale and Sandstone, as above.
- 1530-1540 No sample.

1540-1680 Limestone, Shale and Sandstone, as above.

Devonian Hay River Formation

1680-1720 Shale, dark green, non-calcareous, with Limestone, light gray, microcrystalline, argillaceous, silty in part, micaceous, dense.

1720-2340 Shale, dark green as above with Shale, light gray, non-calcareous, blocky, with rare interbeds of Limestone, light gray, microcrystalline, argillaceous, dense and Sandstone, light gray, very fine grained, subangular, poor sorting, argillaceous, micaceous, slight calcareous cement.

2340-2415 Shale, dark green as above, with Shale, black, very slightly calcareous and Limestone, medium gray, microcrystalline, argillaceous, dense.

2415-2635 Shale, dark gray, non-calcareous, blocky with Shale, light gray, very calcareous, micaceous.

Devonian Slave Point Formation

2635-2640 Shale, black, non-calcareous, with Limestone, light brown, microcrystalline, 40% algal or amphiportal.

2640-2675 Limestone, light brown, microcrystalline to very fine crystalline, 20-25% Amphipora, fair vug porosity with Limestone, light brown, microcrystalline, dense.

2675-2700 Limestone, dark brown, microcrystalline, dense.

2700-2730 Limestone, mottled light and dark brown, microcrystalline, dense.

2730-2755 Limestone, medium gray-brown, very fine crystalline, poor to fair vug porosity, trace of patchy dead oil stain.

Devonian Sulphur Point Formation (Presqu'île)

2755-2765 Limestone, white to light brown, microcrystalline, earthy.

2765-2775 Limestone, light gray, microcrystalline, dense.

2775-2790 Limestone, medium brown, microcrystalline, with Limestone, medium brown, 90% fine intraclasts, 10% micrite.

- 2790-2800 Limestone, dark brown, 20% very fine intraclasts, 80% micrite.
- 2800-2810 Limestone, light gray, microcrystalline, dense, chalky in part.
- 2890-2930 Limestone, dark brown, microcrystalline, dense with Limestone, medium gray-brown, micro to very fine crystalline, argillaceous, 25% unidentifiable organic fragments, with occasional pyrobitumen.
- 2930-2970 Limestone, dark brown as above with Limestone, light brown, microcrystalline, aphanitic but chalky in part.
- 2970-2915 Limestone, dark brown, microcrystalline, dense, up to 20% argillaceous material and 10% organic fragments (crinoids and brachiopods) with Limestone, light gray-brown, microcrystalline, argillaceous, dense.
- 2915-3020 Limestone, as above with Marl, medium gray, pyritic with rare dolomite and calcite veins and with Quartzite fragments, biotitic.

"Granite Wash"

- 3020-3040 Quartzite and Granite fragments showing very little weathering.

Precambrian

- 3040-3061 Granite, quartz, pink feldspar, biotite.

Section III - Engineering Summary

- (a) Drill Stem Tests (Field readings are given for DST figures)

Drillstem Test No. 1 3010-3061 "Granite Wash"
 Bottom hole test with dual uphole packers.
 Preflow 5 min. Weak air blow steadily decreasing to end of test.
 Initial Shut In - 30 min. Valve Open - 30 min.
 Final Shut In - 30 min.
 Recovered 15' drilling mud.

I.H.P. - 1624	I.S.I. - 37	I.F.P. - 37
F.H.P. - 1624	F.S.I. - 37	F.F.P. - 37

Drillstem Test No. 2 2641-3061 Slave Point

Bottom hole test with dual uphole packers.

Preflow 5 min. Strong gas blow with gas to surface immediately at 196,000 cf/d decreasing 150,000 cf/d at end of test.

Initial Shut In - 30 min. Valve Open - 120 min.

Final Shut In - 90 min.

Recovered 120' black, sulphurous, water cut mud.

25 foot flame on a 2" riser.

I.F.P. - 1448 I.S.I. - nil I.F.P. - 98

F.H.P. - 1441 F.S.I. - nil F.F.P. - 121

Packer partially unseated during shut in portion of test.

(b) Casing

Five joints - 166' of 8 5/8", 24#, J-55. Landed at 162', with 145 sacks Portland Normal plus 4% CaCl₂. Plug down at 3:00 p.m., February 27, 1968. Six barrels of returns at surface.

(c) Bit Record

<u>Bit No.</u>	<u>Size</u>	<u>Make</u>	<u>Footage</u>	<u>Hours</u>
1A	8 3/4	MHC	157	13 1/2
2A	12 1/2	OWV	162	10 3/4
1	7 7/8	XLG-J	1109	31
2	7 7/8	XLG-J	615	21 1/2
3	7 7/8	X3A	761	29 1/4
4	7 7/8	XV-J	261	29
5	7 7/8	X-55R	175	22 1/2

(d) Mud Additives

Gel - 20,600 lbs.
Caustic - 300 lbs.
Peltex - 500 lbs.
CMC - 100 lbs.

(e) Deviation Record

<u>Feet</u>	<u>Degrees</u>
670	1
972	1 1/4
1050	2 1/2
1159	5 1/2
1229	9
1300	13
1400	17
1500	18 1/2
1600	17 3/4
1725	15

1756	14 $\frac{1}{2}$
1786	14 $\frac{1}{2}$
1816	14 $\frac{1}{2}$
1847	14 $\frac{1}{2}$
1877	16
1908	17
1938	16 $\frac{1}{2}$
1966	15 $\frac{1}{2}$
1997	14 $\frac{3}{4}$
2028	14 $\frac{3}{4}$
2058	14
2087	13 $\frac{3}{4}$
2149	12 $\frac{1}{2}$
2208	12 $\frac{1}{2}$
2268	11 $\frac{1}{2}$
2328	12
2388	12
2450	12
2510	13
2541	14 $\frac{1}{2}$
2571	14 $\frac{1}{2}$
2601	14 $\frac{1}{2}$
2631	14 $\frac{1}{2}$
2649	15 $\frac{1}{2}$
2692	14 $\frac{1}{2}$
2783	14 $\frac{1}{2}$
2876	13 $\frac{1}{2}$
2910	12 $\frac{1}{2}$
3065	12 $\frac{1}{2}$

(f) Abandonment Plugs

Plug No. 1 3061-2600 with 200 sacks Portland Normal cement. Plug down at 2:30 p.m., March 9, 1968.

Plug No. 2 212- 112 with 60 sacks Portland Normal cement. Plug down at 6:30 p.m., March 9, 1968. Felt at 122'.

Plug No. 3 Surface with 5 sacks Portland Normal cement.

Section IV - Logs

March 7, 1968 Dual Induction Laterolog
 2" and 5" scales 3052'-162'
 Sonic-Gamma Ray-Caliper
 2" and 5" scales 3053'-162'
 Formation Density Log
 2" and 5" scales 3052'-162'

Section V - Analyses

Following pages.

Section VI - Completion Summary

(a) Cementation Record

Plug No. 1	3061-2600	Precambrian to Slave Point
Plug No. 2	212- 112	Trout River <i>Felt at 122'</i>
Plug No. 3	Surface	

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C68-3454-1

Received: March 1968 Reported: March 28, 1968 Well: Location: Gull Creek F-46 60° 50' 118° 00'

Operator: Placid Oil Company Field or Area: Placid Chevron

Elev.: K.B. Grd. Zone/Formation: Slave Point Sample Interval: 2640' - 3000'

Method of Production: D.S.T. #2 Sampled from: Top of tool Sampled by: Lynes United Services Ltd. Date: March 1968

OTHER PERTINENT DATA Sample No. 1. Recovered: 120' black sulphurous salt water and drilling fluid.

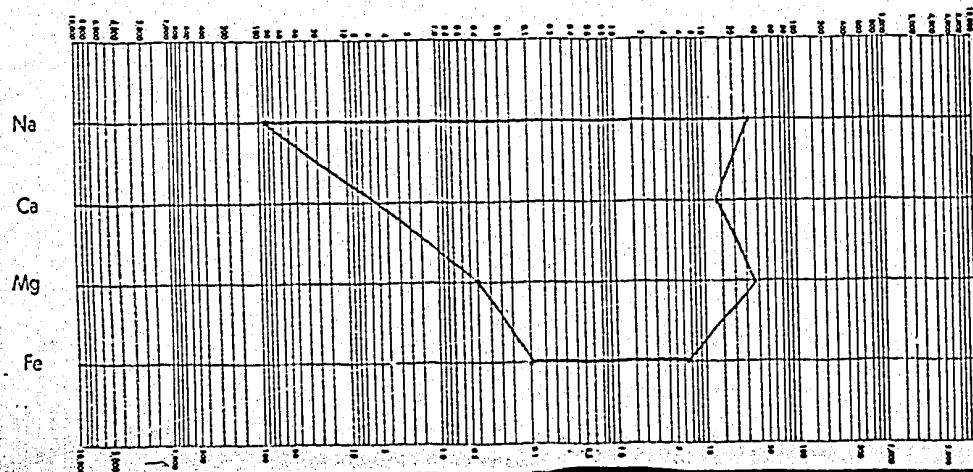
(Signed)

	Na	K	Ca	Mg					SO ₄	Cl			CO ₃	HCO ₃	
Mg./L	1931		104	5					1760	1190			192	790	
Meq./L	84.0		5.2	0.4					36.6	33.6			6.4	13.0	
Meq. %	46.87		2.90	0.23					20.42	18.75			3.57	7.26	

Total Solids Mg/L: By Evaporation 6,880 Fe Present Specific Gravity 1.020 @60°F Observed pH 8.30 @

Calculated 5,972 After Ignition 4,680 H₂S Nil Refractive Index @25°C Resistivity 0.121 ohm meters @

Pattern Unit Meq./L



Remarks and Conclusions Sample as received was mud.

Filtered sample was clear and dark brown colour.

Cl

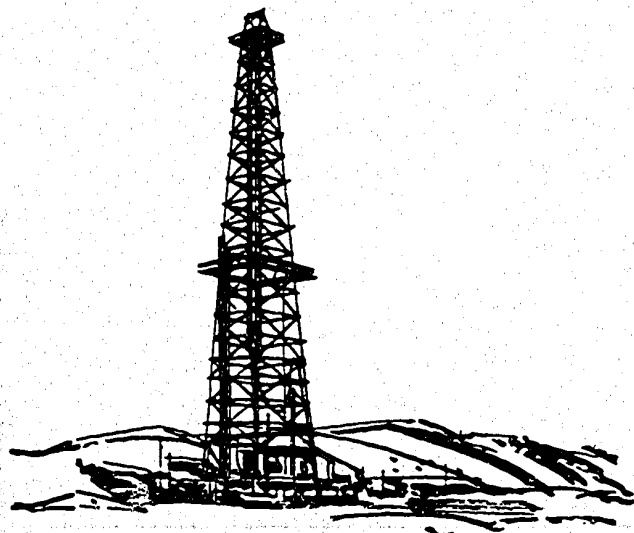
HCO₃SO₄CO₃



LYNES

BRIGHT NAME IN THE OIL PATCH

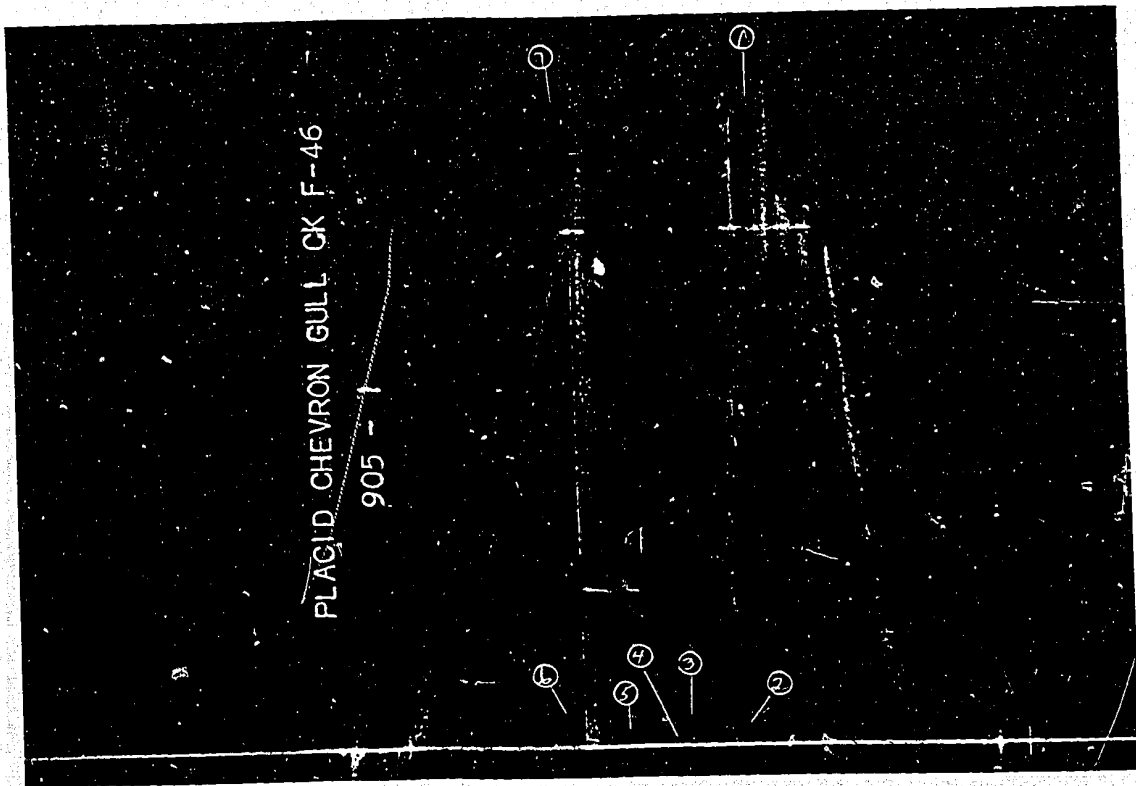
Inflatable Sealing Element Packers



**Formation Testing
Service Report**

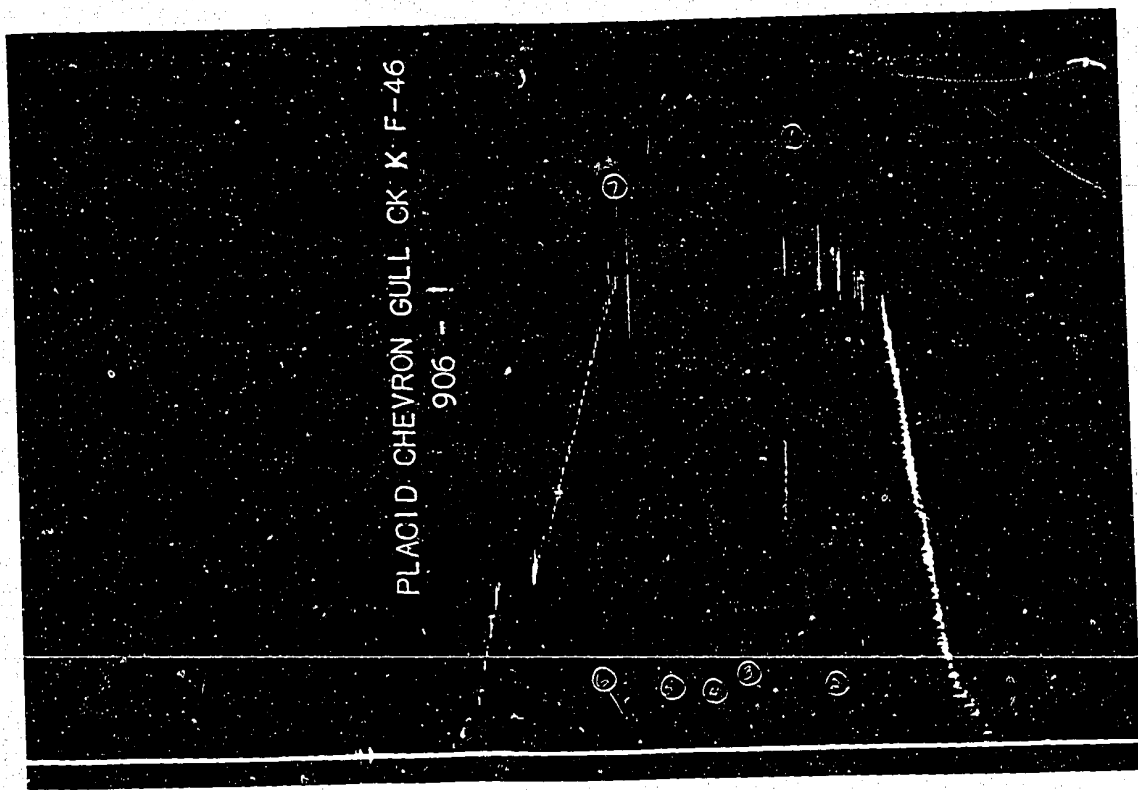
PLACID CHEVRON GULL CK F-46

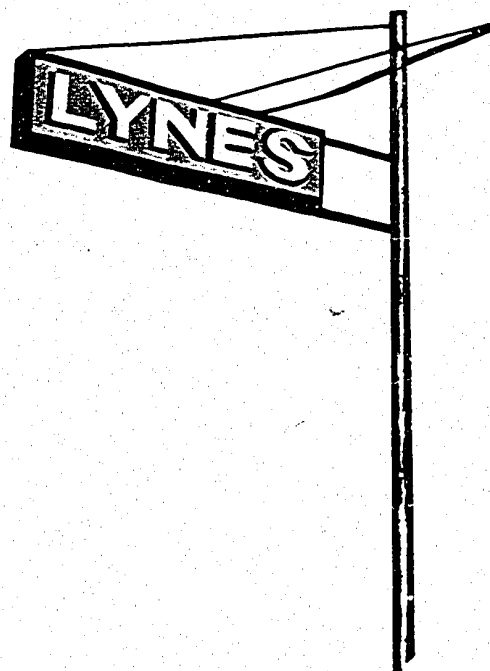
905 - 1



PLACID CHEVRON GULL CK K F-46

906 - 1





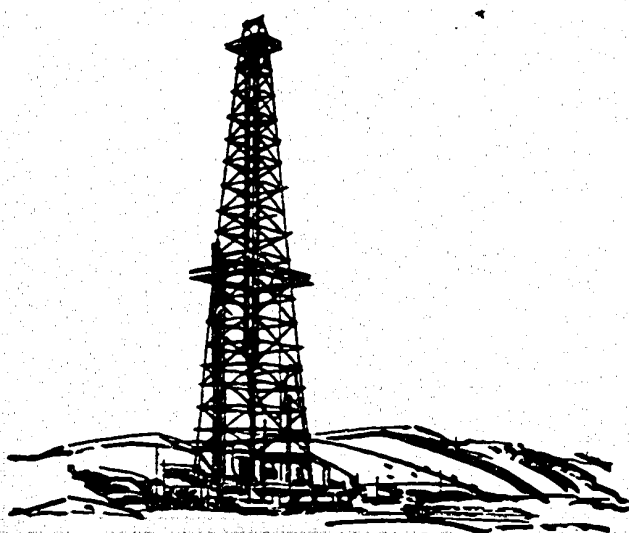
LYNES UNITED SERVICES LTD. 255-4467 CALGARY, ALBERTA



LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable Sealing Element Packers

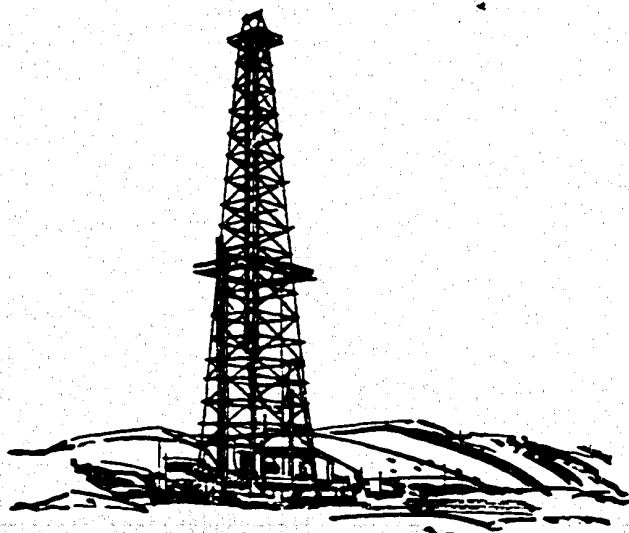


**Formation Testing
Service Report**

LYNES

BRIGHT NAME IN THE OIL PATCH

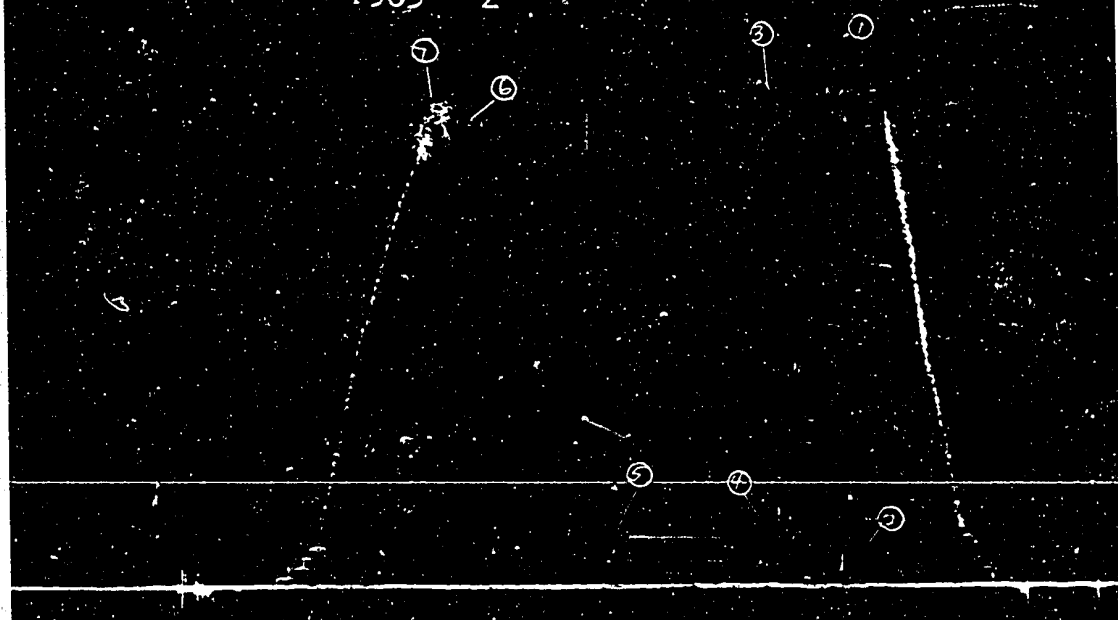
Inflatable Sealing Element Packers



**Formation Testing
Service Report**

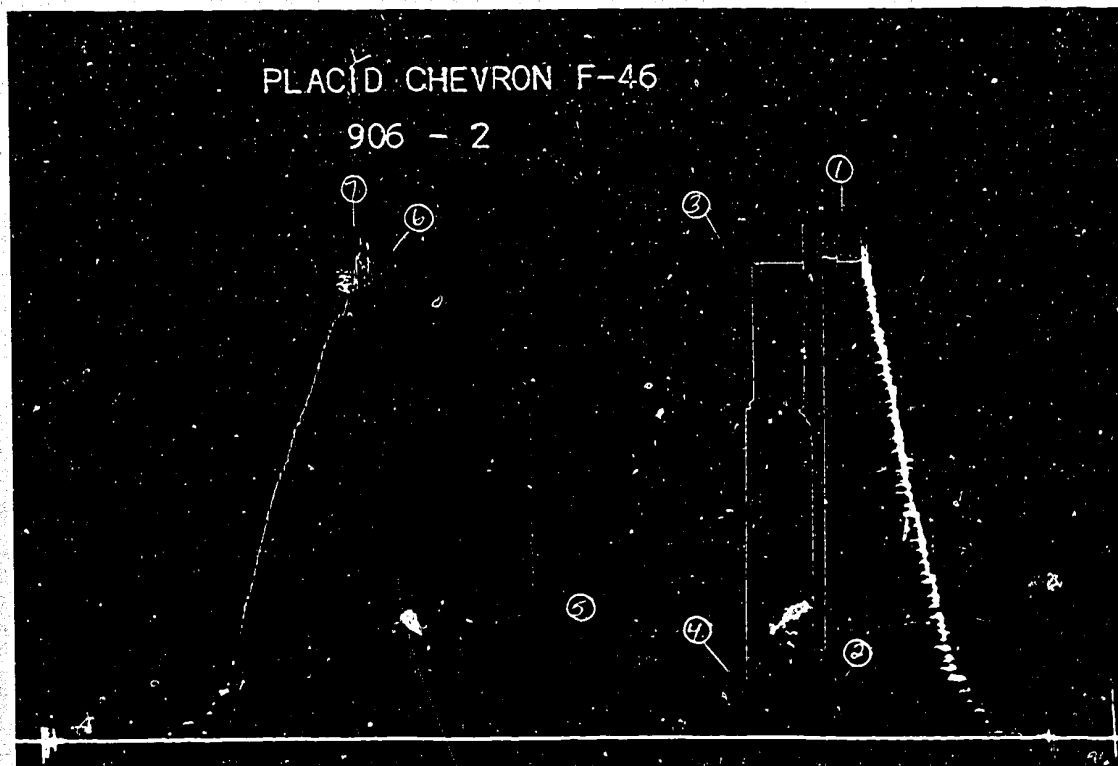
PLACID CHEVRON F-46

905 - 2



PLACID CHEVRON F-46

906 - 2



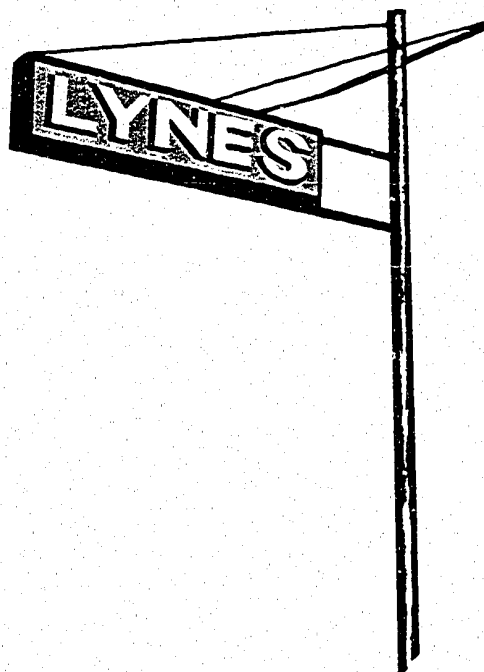
TEST DATA				Lynes Test No. 2		GENERAL INFORMATION	
Formation	Slave Point		T.D.	3061	Ft.	Company	Placid Oil Company
Interval Tested	2641		Ft. to	3061	Ft.	Address	860 Guinness House
Feet of Net Pay Tested	420'				Ft.		Calgary, Alberta
Type of Test	Single Bottomhole						
Cushion	Nil		Amount	-	Ft.	Well Name	PLACID CHEVRON
Started in Hole at	2005	Hrs. Tool Open at	2152	Hrs.	Well Number	F46 60°-50'-W118°-00'	
Pre-flow	3	Mins. Initial Shut-in	35	Mins.	K.B. Elevation	1014	
Final Flow	120	Mins. Final Shut-in	90	Mins.	Area	Guli Creek	Province Alberta
Remarks					Company Rep.	S. Rosichuck	
					Tester	D. Ray	
					Contractor	Commonwealth	Rig No. 12
					Ticket No.	4476	Date March 8 & 9, 1968
Blow	Strong blow. Gas to surface on preflow.				Service Reports To 5 - Above address.		
	Steady gas blow with slight surging.						
MUD AND HOLE DATA							
Mud Type Gel Chemical							
GAS BLOW MEASUREMENTS							
Measured with Manometer filled with water, 2" riser.							
Weight 10.3 Viscosity 8 Water Loss 6.3							
Filter Cake 2/32 Bottom Hole Temperature 92°							
Drill Pipe 4 1/2" F.H. Weight 1660							
Drill Collars 4 1/2" F.H. I.D. 2 3/8" Foot Run 260							
Main Hole or Casing Size 7 7/8"							
Rathole or Liner Size - No. of Feet -							
Bottom Hole Choke Size 1 1/2"							
Surface Choke Size 2"							
Packer Rubber Size 7"							
REMARKS Test successful. Shut-ins failed. Pressures not valid.							
RECOVERY							
TOTAL FLUID RECOVERED 120 Ft. Consisting of:							
120 Ft. of Black sulphurous water and							
Ft. of drilling fluid.							
Ft. of							
Ft. of							
Test was/was not Reverse Circulated Not							
Oil Recovery Degrees A.P.I. - Water Specific Gravity -							
PRESSURE READINGS							
Inside X		Outside		Inside X		Outside	
Recorder No. 905		Recorder No. 906		Recorder No.		Recorder No.	
Capacity 2700		Capacity 3050		Capacity		Capacity	
Depth 2625		Depth 2662		Depth		Depth	
1. INITIAL HYDROSTATIC 1427 1445							
2. PRE-FLOW 58 89							
3. INITIAL SHUT-IN 1420 1432							
4. INITIAL FLOW 76 104							
5. FINAL FLOW 116 131							
6. FINAL SHUT-IN 1420 1435							
7. FINAL HYDROSTATIC 1426 1444							

Placid Oil Company

PLACID CHEVRON F-46 60°-50'-W118°-00'

2

March 8th & 9th, 1968



LYNES UNITED SERVICES LTD. 255-4467 CALGARY, ALBERTA

WELL

RIG NO.

LOCATION

Math 10

SHIPPING

MILES

ROAD CONDITIONS

198

COM 7-1-E CONSERVATION BOARD COPY COM-27572

[illegible]

DIRECTIONS TO WELL

RIG NO. 12 LOCATION Grand Canyon Blvd CR LSD. 74th SEC. 60 TWP. 50 RGE. 115 W. DATE 7-6-68 1968

MAILING POINT Long Beach, A.D.E. SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

TOU

DIRECTIONS TO USER

MAILING POINT Los Angeles, CA SHIPPING POINT _____

MILES MOVED

ROAD CONDITIONS

[illegible][illegible]

JTS		CSG	EQUIPMENT CHARGES	
SAX		CEM	10/10/78 10/10/78	
A.M. P.M.		DAYS FROM SPUD:	TOTAL COMPANY TIME	TOTAL CONTRACTOR'S TIME
GENERAL			HRS.	
			Approved by Operator's Representative	<i>[Signature]</i>
			Approved by Toolpusher	<i>[Signature]</i>

**ROAD
CONDITIONS**

COM 1-1-E

DIRECTIONS TO WELL

MAILING
POINT _____

SHIPPING
POINT

126

RIG NO. 12 LOCATION Placid Ore Run
MAILING POINT Big Horn Mnt SHIPPING POINT

LSD. 144 SEC. 60 TWP. 6 RGE. 112 W. 27

ROAD CONDITIONS

~~CONFIDENTIAL~~ 1-5-E

COM-27567

DIRECTIONS TO WELL

RIG NO. 12 LOCATION PLACID CHURCH GULCH LSD. F4 SEC. 60 TWP. 50 RGE. 11 W. 20 DATE 12 Mar 41 196 6

MAILING POINT WAY FIDELITY SHIPPING POINT _____ MILES MOVED _____ ROAD CONDITIONS _____

COM 1-1-E

COM-27566

DIRECTIONS TO WELL

DIRECTIONS TO WELL

MAILING

SHIPPING

1997-1998

DATE 11-1-68

196

COM 1-1-E

COM-27565

COMMONWEALTH DRILLING LTD.

DAILY DRILLING LOG

DIRECTIONS TO WELL

RIG NO. 12

LOCATION

Phacid Chevron Gulf Creek

LSD

SEC 12

TWP.

RGE 118 W.

DATE

March 6

1960

MAILING POINT

Hwy 100 N.W. 1

SHIPPING POINT

MILES MOVED

ROAD CONDITIONS

From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME
1574	173	1717	5 1/2	77	19	1	18	6"	2 1/2	52246					8.95		
Mud: 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP: 12 mn. 2 a.m. 4 a.m. 6 a.m. PUMP: 12 mn. 2 a.m. 4 a.m. 6 a.m. MOTOR HOURS																	
WEIGHT: 9.7 71 7.2 7.3 No. 1 PRES-SURE 500 500 500 500 No. 2 PRES-SURE																	
VISCOSITY: 36 36 72 72 MODEL S.P.M. 65 65 65 65 MODEL S.P.M.																	
GEL: 300 LINDER SIZE 5 1/2 X 14 150 LINDER SIZE																	
W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																	
ADDITIVES: 1500' 50' GENERAL: At Feet Degrees																	
Drilling Line Record: Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME
1717	141	1656	5 1/2	75	22	0	18	6"	2 1/2	52246					20.6	Drill	8 1/2 8 1/2 1/4
Mud: 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP: 8 a.m. 10 a.m. 12 noon 2 p.m. PUMP: 8 a.m. 10 a.m. 12 noon 2 p.m. MOTOR HOURS																	
WEIGHT: 9.4 9.4 4.5 7.3 No. 1 PRES-SURE 550 550 550 550 No. 2 PRES-SURE																	
VISCOSITY: 42 45 44 44 MODEL S.P.M. 65 65 65 65 MODEL S.P.M.																	
GEL: 300 LINDER SIZE 5 1/2 X 14 150 LINDER SIZE																	
W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																	
ADDITIVES: GENERAL: At Feet Degrees																	
Drilling Line Record: Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly	REMARKS	TIME
1656	61	1549	4 1/2	47	13	13	18	6"	2 1/2	52246					17.9	Drill	2 1/2 2 1/2 3/4
Mud: 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP: 4 p.m. 6 p.m. 8 p.m. 10 p.m. PUMP: 4 p.m. 6 p.m. 8 p.m. 10 p.m. MOTOR HOURS																	
WEIGHT: 9.7 9.7 9.7 No. 1 PRES-SURE 500 500 500 500 No. 2 PRES-SURE																	
VISCOSITY: 43 43 42 MODEL S.P.M. 65 65 65 65 MODEL S.P.M.																	
GEL: 300 LINDER SIZE 5 1/2 X 14 150 LINDER SIZE																	
W.L. F.C. pH. DESILTER: Hours Op: U. Flow: O. Flow: SURVEYS																	
ADDITIVES: GENERAL: At Feet Degrees																	
Drilling Line Record: Size Make Serial No. No. Lines Trips Ton Miles Total Miles Slip Feet or Cut At Miles Date Slip or Cut Next Slip Ft. Left on Spool																	
B.O.P. Tested Elapsed Time Pres-sure Packing & Seal Inspected Date Crown-a-matic Chk'd. Fuel on Hand 12.01 a.m. gals. RAN JTS CSG EQUIPMENT CHANGES																	
Hydr. Rig Savers Chk'd. Fuel Rec'd Today (add) gals. TO KB. USED SAX CEM																	
Pipe Rams. Kelly Cock Chk'd. Fuel on Hand 11.59 p.m. (deduct) gals. PLUS PLUG DOWN A.M. P.M.																	
Blind Rams. Fire Equip. Chk'd. FUEL USED gals. CEMENT RETURNS (YES/NO) GENERAL																	
TOTCO RING ON BIT # Boiler Operated: Hrs. Fire Equip. Chk'd. FUEL USED gals. CEMENT RETURNS (YES/NO) GENERAL																	
Approved by Operator's Representative																	
Approved by Toolpusher																	

COMMONWEALTH DRILLING LTD.

DAILY DRILLING LOG

DIRECTIONS TO
WELLRIG NO. 12 LOCATION Placid Chevron Gulf Creek F-4/6 SEC. 60 TWP. 50 RGE. 16 W. 00 DATE March 1 1968
MAILING POINT Hoy River SHIPPING POINT _____ MILES MOVED _____ ROAD CONDITIONS _____

From		Footage		To		Hrs. on Bottom		Wt. Drill (1000)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		REMARKS			TIME										
No.		Size		Type		Jct/W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cor'd		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		S.		START			STOP			INTVL.					
1240		189		1429		3 1/2		42.		14		0		18		6"		2 1/2		522.42												Rig Ser + B.O.P.			12 ⁰⁰			12 ¹⁵			1/4				
1		7 1/2		X16		3 1/2		16102		32		120		170		31						1		750		65		4		3		Drilling			12 ¹⁵			12 ³⁰			1/4				
2		7 1/2		X16		3 1/2		91507		32		120		159		39						1		750		65		4		3		Dropped Survey			12 ³⁰			12 ⁴⁵			1/4				
M.U.D.		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change		Tripping For New Bit			12 ⁴⁵			2 ⁰⁰			1 1/4		
WEIGHT		8.5						8.4		No. 1		PRES-SURE		450				750		No. 2		PRES-SURE												Clean Mud Tanks & Change			12 ⁰⁰			3 ³⁰			1 1/2		
VISCOSITY										MODEL		S.P.M.		65				65		MODEL		S.P.M.												Barber Gates			2 ⁰⁰			3 ³⁰			1 1/2		
GEL										LINER SIZE		5 1/2		X 14						LINER SIZE		5 1/2		X 14										Run In Hole			3 ³⁰			4 ¹⁵			3/4		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees				Weather		Water												Break Cir & Clean To Bot. H.			4 ¹⁵			4 ²⁵			1/2		
ADDITIVES		Water				GENERAL																												Drilling			4 ²⁵			8 ⁰⁰			3 1/4		
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool						FIRES			At Noon			DRILLER'S SIGNATURE							
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Rig Ser + B.O.P.			8 ⁰⁰			8 ¹⁵			1/4				
1429		117		1548		5 3/4		45		15		1		18		6"		2 1/2		522.42												Drilling			8 ¹⁵			9 ⁰⁰			1 1/2				
1		7 1/2		X16		3 1/2		16003		32		85		215		9						1		500		65		4		3		Work light on hole			9 ⁰⁰			9 ¹⁵			1 1/2				
M.U.D.		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		MOTOR HOURS		Next Oil Change		Survey off 8 1/2"			10 ⁰⁰			1/4					
WEIGHT		8.7		8.7		8.7		8.7		No. 1		PRES-SURE		500		500		500		No. 2		PRES-SURE		700		mud								Drilling with 12" on bit			10 ⁰⁰			11 ³⁰			1 1/2		
VISCOSITY		28		30		35		10		MODEL		S.P.M.		65		65		65		MODEL		S.P.M.		65										Work light on hole Mud mud			11 ³⁰			1 ⁰⁰			1 1/2		
GEL										LINER SIZE		5 1/2		X 14						LINER SIZE		5 1/2		X 14										Survey 8 1/2"			1 ⁰⁰			1 ¹⁵			1 1/2		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees				Weather		Water												Drilling			1 ⁰⁰			3 ⁴⁵			2 3/4		
ADDITIVES		Water				GENERAL																												Survey			3 ⁴⁵			4 ⁰⁰			1/4		
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool						FIRES			At Noon			DRILLER'S SIGNATURE							
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		Rig Ser + B.O.P.			4 ⁰⁰			4 ¹⁵			1/4				
1548		36		1574		1		45		992.63				18		6"		2 1/2		522.40												Survey Hole			4 ¹⁵			6 ¹⁵			2				
1		7 1/2		X16		3 1/2		16003		32		85		300		10						1		500		65		4		3		WATT ON ORDERS			6 ¹⁵			8 ¹⁵			2				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change		TAKE SURVEYS AT 1300 & 1400			8 ¹⁵			8 ⁴⁵			1 1/2		
WEIGHT		8.8		8.8						No. 1		PRES-SURE		500						No. 2		PRES-SURE												Hole & KENOVIE BIT KENOVIE			8 ⁴⁵			9 ¹⁵			1 1/2		
VISCOSITY		41								MODEL		S.P.M.		65						MODEL		S.P.M.		65										INSTALL STAB 31' ABOVE BT			11 ⁰⁰			12 ⁰⁰			1		
GEL										LINER SIZE		5 1/2		X 14						LINER SIZE		5 1/2		X 14										Run In			11 ⁰⁰			12 ⁰⁰			1		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees				Weather		Water												DRILL			11 ⁰⁰			12 ⁰⁰			1		
ADDITIVES		Water				GENERAL																												FIRES			At Noon			DRILLER'S SIGNATURE					
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool						FIRES			At Noon			DRILLER'S SIGNATURE							
B.O.P.		Tested		Elapsed Time		Pres-sure		Packing & Seal Inspected Date		Crown-a-matic Chk'd.		Fuel on Hand 12.01 a.m.		gals.		Casing Report		RAN		JTS		CSG		EQUIPMENT CHANGES		TRANSFER #						TOTAL			12.58										
Hydri.										Rig Savers Chk'd.		Fuel Rec'd Today (add)		gals.		TO		KB. USED		SAX		CEM		DAYS FROM SPUD:		TOTAL COMPANY TIME		HRS.		TOTAL CONTRACTOR'S TIME		HRS.													
Pipe Rams.										Kelly Cock Chk'd.		Fuel on Hand 11.59 p.m. (deduct)		gals.		PLUG DOWN		A.M.		P.M.		GENERAL		Approved by Operator's Representative																					
Blind Rams.										Fire Equip. Chk'd.		FUEL USED		gals.		CEMENT RETURNS - (YES/NO)								Approved by Toolpusher																					
TOTCO RING CN BIT #																																													

DIRECTIONS TO WELL

RIG NO. 12 LOCATION Placid Chevron Gull Creek LSD. F-4 SEC. 60 TWP. 50 RGE. 118 W. 00 DATE Feb. 29 1968

MAILING POINT Hay River SHIPPING POINT _____ MILES MOVED _____ ROAD CONDITIONS _____

DRILLING LOG																		REMARKS			TIME		
GENERAL DATA																		START	STOP	INTVL			
From	Footage	To	Hrs. on Bottom	Wt. Drill Pipe (1000 lbs.)	Stands	Singles	DRILL COLLARS	No.	O.D.	I.D.	Length	Air Wt.	Sub. Wt.	C.B. Ft.	Ft. up on Kelly								
334	180	516	6 1/2	33				16	6"	2 3/8"	41.00				L. 15								
PUMP & MOTOR DATA																							
M.U.D.	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	PUMP	12 m.	2 a.m.	4 a.m.	6 a.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.7	8.7	8.9	9.0	No. 1 PRES-SURE	650	600	600	400	No. 2 PRES-SURE													
VISCOSITY	29	29	29	2	MODEL S.P.M.	-66	66	66	66	MODEL S.P.M.													
GEL					300 LINER SIZE	33	X	14		150 LINER SIZE													
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength Change Head for U-300 706 3																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
516	212	728	7	33	180.89																		
PUMP & MOTOR DATA																							
M.U.D.	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	PUMP	8 a.m.	10 a.m.	12 noon	2 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT					No. 1 PRES-SURE					No. 2 PRES-SURE													
VISCOSITY					MODEL S.P.M.					MODEL S.P.M.													
GEL					LINER SIZE					LINER SIZE													
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES GENERAL 580 1° 670 1/8																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65				MODEL S.P.M.													
GEL					318																		
SURVEYS																							
W.L.	F.C.	pH.	DESILTER Hours Op:	U. Flow:	O. Flow:	At Feet	Degrees	Weather	Water	Temp.	Bbls.												
ADDITIVES Water 1/2 strength 1 pump 1/2 tank																							
DRILLING LINE RECORD																							
Drilling Line Record	Size	Make	Serial No.	No. Lines	Trips	Ton Miles	Total Miles	Slip or Cut	At Miles	Date Slip or Cut	Next Slip	Ft. Left on Spool											
728	512	1240	7 1/4	41.00	663.46																		
PUMP & MOTOR DATA																							
M.U.D.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	PUMP	4 p.m.	6 p.m.	8 p.m.	10 p.m.	MOTOR HOURS	Next Oil Change							
WEIGHT	8.6		8.6		No. 1 PRES-SURE	450				No. 2 PRES-SURE													
VISCOSITY	28		28		MODEL S.P.M.	65																	

DIRECTIONS TO WELL

RIG NO.

- LOCATION

Macled Chevron Gull Creek

41

•

112

42

51

MAILING
POINT

Hay River

SHIPPING

**MILES
MOVED**

ROAD
CONDITIONS[illegible]

**DIRECTIONS TO
WELL**

RIG NO. 12 LOCATION Placid Chevron Gull Creek LSD. F SEC. 16 TWP. 10 RGE. 118 W. 00 DATE Feb. 27 1968

MAILING
POINT _____

SHIPPING
POINT

MILES MOVED

ROAD CONDITIONS

COM 1-1-5

COM-27560

DIRECTIONS TO WELL

RIS NO. 12 LOCATION Placid Chevron Gull Creek LSD. F SEC. 16 TWP. 50 RGE. 114 W. 40 DATE Feb. 26 1968

MAILING
POINT :

SHIPPING
POINT

**MILES
MOVED**

ROAD
CONDITIONS

DRILLING LOG																				REMARKS		TIME																
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly		START	STOP	INTVL.				
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		PUMP		12 m.		2 a.m.		4 a.m.		6 a.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE						No. 2		PRES-SURE																				
VISCOSITY								MODEL		S.P.M.						MODEL		S.P.M.																				
GEL								LINER SIZE								LINER SIZE																						
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES						GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		PUMP		8 a.m.		10 a.m.		12 noon		2 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE						No. 2		PRES-SURE																				
VISCOSITY		35				35		MODEL		S.P.M.						MODEL		S.P.M.																				
GEL								LINER SIZE								LINER SIZE																						
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		2000 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓		MODEL		S.P.M.																
GEL								LINER SIZE				5 1/2		✓		✓		✓		LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		300 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓		MODEL		S.P.M.																
GEL								LINER SIZE				5 1/2		✓		✓		✓		LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		300 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓		MODEL		S.P.M.																
GEL								LINER SIZE				5 1/2		✓		✓		✓		LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		300 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓		MODEL		S.P.M.																
GEL								LINER SIZE				5 1/2		✓		✓		✓		LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		300 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓		MODEL		S.P.M.																
GEL								LINER SIZE				5 1/2		✓		✓		✓		LINER SIZE																		
W.L.		F.C.		pH.		DESILTER: Hours Op:		U. Flow:		O. Flow:		SURVEYS		At Feet		Degrees																						
ADDITIVES		300 BEN				GENERAL																																
Drilling Line Record		Size		Make		Serial No.		No. Lines		Trips		Ton Miles		Total Miles		Slip		Feet or Cut		At Miles		Date Slip or Cut		Next Slip		Ft. Left on Spool												
From		Footage		To		Hrs. on Bottom		Wt. Drill Pipe (1000 lbs.)		Stands		Singles		DRILL COLLARS		No.		O.D.		I.D.		Length		Air Wt.		Sub. Wt.		C.B. Ft.		Ft. up on Kelly								
No.		Size		Type		Jct. W.C.		Serial No.		Wgt.		R.P.M.		Drilled or Cored		Hrs.		Reamed		Hrs.		Pump No.		Pump Pressure		S.P.M.		Table Torque		T.		B.		G.				
M.U.D.		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		PUMP		4 p.m.		6 p.m.		8 p.m.		10 p.m.		MOTOR HOURS		Next Oil Change						
WEIGHT								No. 1		PRES-SURE		150		✓		✓		✓		No. 2		PRES-SURE																
VISCOSITY		35		60		✓		MODEL		S.P.M.		60		✓		✓		✓																				

DIRECTIONS TO WELL

6

SHIPPING
POINT

**MYLES
MOVIES**

ROAD

1

TOUR	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N	I	C	H	T	O	8	A	M	T	O	4	P	M	T	O	M	D	N
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---