

WELL NAME Gulf et al Trout River D-14
FIELD
LOCATION: Unit D Area: 14 Section 14 Grid 61-40-120-00
Latitude 61-33-10.18 Longitude 120-03-39.96
U.W.L.R. 61.55288 — 120.06110
U.W.I. 300DL46140120000

Rig Release Date:
Status:
Information Release Date:

CHANGE OF NAME:

DATE RECEIVED	INDEX
6-2-70	Application for a Drilling Authority. Well Completion Data. Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
30/4/70	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well. Well History Supplement. Well Completion Data. Work-over Report No.
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	Well Inspection Report.
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	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. 418
Date Issued February 6, 1970

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 Gulf et al Trout River D-14

Permit No. 4183

Lease No.

Western Decalta-Tenneco Oil & Minerals
(Permitter, Licensee, Lessee)

Exploratory Licence No. 1228 and 1223

Gulf Oil Canada Limited
(Operator)

Exploratory Licence No. 1243

Location: Unit D Section 14 Grid 61-40-120-06

Latitude 61°33'10.18" Longitude 120°03'39.96"

From Established Reference Marker Top of brass cap NE Corner Sec. 36-141-10-6

Universal Well Location Reference 61.55288°N 120.06110°W

	DATE	DEPTH	Pool(s)
			Interval(s) open to production
Spudded	Feb. 15/70	0	
Suspended	-	-	
Resumed Operations	-	-	
Finished Drilling	Feb. 27/70	2259	
Deepened	-	-	Elevation: Gr. 788' K.B. 799'
Complete (gas/oil)	-	-	Rig No. 4
Abandoned	Mar. 2/70	-	Drilling Contractor Tri-City Drilling (1968) Ltd.
Rig released	Mar. 2/70	0	Contractor's Business Licence No. 675

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at	Sacks of Cement and Additives
1. 9 5/8"	J-55	364	19 jts.	608' KB	300 + 27 CaCl ₂
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Seu	From	To	Rec.	From	To	Rec.
Ft. Simpson	267'	+532	1,464'	1,509'	45'			
Horn River Shale	1450'	-651	1,550'	1,590'	40'			
Horn Plateau Reef	1524'	-725	1,590'	1,630'	40'			
Lonely Bay Lss.	1718'	-919						
Bear Rock Dol.	1932'	-1311						
Bear Rock Anhy	2014'	-1215						
Pre-Cambrian	2252	-1453						
LOG RECORD								
			Run No.	Type of Log		From	To	
			1	Dual Induction Latero		2256'	608'	
			1	SN Porosity		2259'	1500'	
			1	BHC-Sonic Caliper		2258'	608'	
			1	Formation Density		2259'	1300'	
			1	Dipmeter		2255'	608'	
			1	Velocity Survey		2259'	608'	
			1	Hydrocarbon Indicator		2259'	1500'	
			1	Lithology Plot		2259'	1500'	

CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Aldring, Fracturing, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
3-1-70	1750'	1400'	240 sacks, with 2X CaCl ₂ felt at 1260'.				N11				N11
3-2-70	660'	560'	72 sacks, with 2X CaCl ₂ felt at 536'.								
3-2-70	3'	0'	5 sacks, welded on csg. steel plate and name plate on 5 foot riser.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.B.H.P.	P.S.I.B.H.P.	I.F.B.H.P.	F.F.B.H.P.	L.H.P.	F.H.P.	REMARKS
1	2-22-70	Horn Plateau Reef	1520'	1590'	60	60	60	607	596	112	132	729	719	Gas to surface immediately. Rate 20.7 to 73.0 Mcf/D. Recovered 132' drilling mud and 180' salty gas cut mud.

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks	PRESENT STATUS OF WELL			
G-76-70	Gas	1520'	1590'	DST #1		Oil			
70-102	Core	1450	1630'	Cores #2 & #3					
						Gas			
						Dry		X	D & A
						Susp.			

Company **Gulf Oil Canada Limited**
 Signed by *[Signature]*
 Title **Area Production Manager**
 Date **March 26, 1970**

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



File No. _____
Drilling Authority No. **418**

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 Gulf et al. Trout River D-14
Location: Unit D Section 14 Grid 61-40-120-00
Latitude 61° 13' 10.18" Longitude 120° 03' 39.96"
From Established Reference Marker Top of Brass Cap NE corner Section 36-141-10-6
Universal Well Location Reference Lat. 61.55285° N., Long. 120.06110° W.
Permit No. 4188 Lease No. -

Western Decalta - Tenneco Oil & Minerals
(Permitter, Licensee, Lessee)

Date of commencement of proposed program March 1, 1970

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at _____
Gas at 1520'-1596' S.S.T. #1
Water at _____
Total Depth 2259' Date of last operations March 3, 1970
Present condition of well Stranding

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sacks of Cement and Additives	Amount Pulled
1. <u>9-5/8"</u>	<u>36#</u>	<u>596'</u>	<u>608' KB</u>	<u>300 + 7% CaCl₂</u>	
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
<u>1</u>	<u>1750'-1400'</u>	<u>Lonely Bay Limest/oe</u>	<u>240</u>	<u>Fuel</u>
<u>2</u>	<u>660'- 560'</u>	<u>Fort Simpson</u>	<u>72</u>	<u>Fuel</u>
<u>3</u>	<u>3'- 0</u>	<u>Fort Simpson</u>	<u>5</u>	
		<u>Erect Xisec with name plate.</u>		

The following logs have been run B&C Sonic, DIL, FDC, SKP - (Lithology plot, hydrocarbon
Other operations proposed None Indicator)

Operations to be carried out by Tri-City Drilling Contractor Licence No. 575
Address Edmonton, Alberta Address _____
Responsible Agent in field Hjalmar L. Holmberg 10235 - 124 Street, Edmonton, Alberta
Dated at Edmonton this 29 Day of April 19 70
Signed by Hjalmar L. Holmberg Company GULF OIL CANADA LIMITED
Title Area Production Manager Operator's Exploratory Licence No. 1243

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. Thoms
on the 1st March 1970.

Dated 30th April, 19 70

B.H.J. Thoms
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. 418

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

FEB 6 1970

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 **Gulf of St. Lawrence River D-14**

Location: Unit **D** Section **14** Grid **61°48'N, 120°00'W**

Latitude **61°33'18.12"** Longitude **120°03'39.06"**

Reference Marker **(Approximate elevations referred to top of brass cap on corner Sec. 34-141-12)**

Universal Well Location Reference **41.55388°N 120.06110°W**

Elevation: Ground **787.8** K.B. **798** feet above sea-level.

Well is expected to produce from **Horn Plateau Reef Prospects** formation at a depth

of about **1719** feet. Expected total final depth **3000**

Area assigned to well

(for Oil Conservation Engineer's use only)

Permit No. **4188**

Lease No.

Acres **60.948**

Permitter, licensee, or lessee **Western Canada & Temoco Oil & Minerals Ltd.**

Exploratory Licence No. **1223**

1223

Surface owned by Crown or

(if alienated submit name and address of owner and occupant.)

Petroleum and natural-gas rights owned by **Crown**

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

Casing Size O.D. (Inches)	Weight (Lb./Ft.)	Grade	New or Used	Estimated Depth	Bottom of Cement
1. 9 5/8	360	K-55	NEW	600	400
2. 4 1/2	As Required				
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment **To evaluate the Horn Plateau Reef prospects. Drilling mud with sufficient overbalance will be maintained. Hydril 18" - 900 Bar. BOP Shaffer 8" - (100) Hydraulic (HKS)**

Well will be drilled with Rotary Rig No. **4** by **Tri-City Drilling (1968) Ltd.**

(Drilling Contractor or company)

Responsible agent of applicant:—

Contractor's Business Licence No. **675**

At well **E. B. Holmberg**

At registered office **E. B. Holmberg**

Address **10235 - 124 Street**

Address **10235 - 124 Street, Edmonton 40, Alta.**

Edmonton 40, Alta.

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

Dated at **Edmonton** this **5th** day of **February** 19 **70**

Signed by **E. B. Holmberg** Company **Gulf Oil Canada Limited**

Title **Area Production Manager** Operator's Licence No. **1243**

(For Oil and Mineral Division use only)

APPROVED

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

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

Dated **6th February** 19 **70**

Please see over page

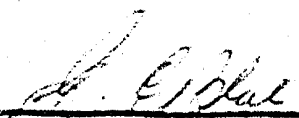
Oil Conservation Engineer

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

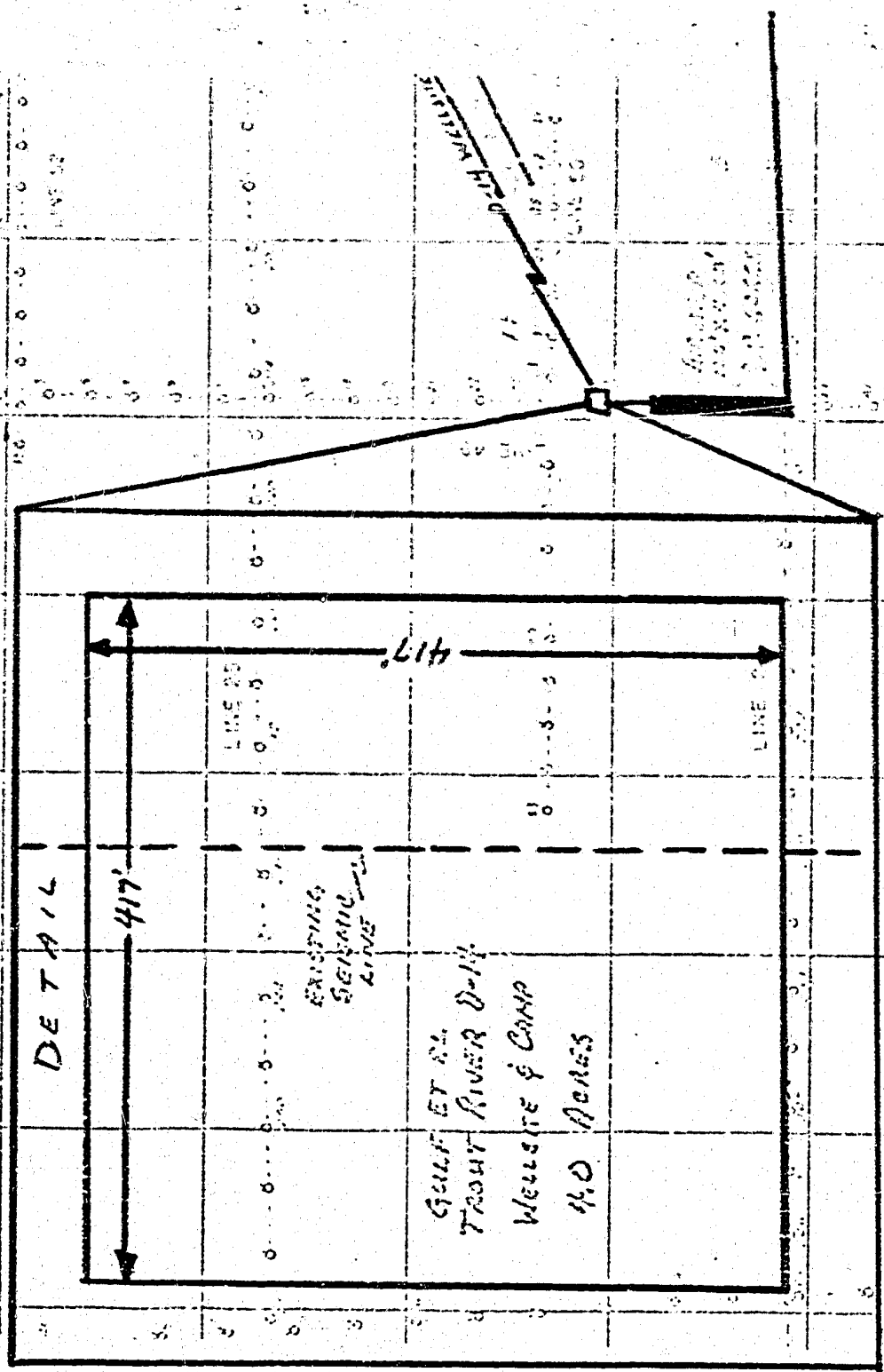
that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent the contamination of adjacent vegetation and surface or sub-surface waters.

3. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
4. Intermediate and production strings of casing are to receive the approval of the Oil Conservation Engineer.

This drilling authority is being issued contingent upon receipt of a Letter of Appointment from Tennessee Oil & Minerals Ltd. whereby Gulf Oil Canada Limited is appointed operator of Permit 4183.



(for) B.H.J. Thomas, Oil Conservation Engineer



61030

12030

WELL HISTORY REPORT

Gulf et al Trout River D-14

61° 33' 10.18" North

120° 03' 39.96" West



GULF OIL CANADA LIMITED

Calgary, Alberta

April, 1970

CONFIDENTIAL

APPROVED:

A handwritten signature in dark ink, appearing to read "Hjalmar B. Holmberg".

Hjalmar B. Holmberg
Area Production Manager

April 3, 1970

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WELL HISTORY REPORT

SECTION I

- (a) Well Name and Number: Gulf et al Trout River D-14 N.W.T.
- (b) Permittee, Licencee: Western Decalta - Tenneco Oil & Minerals Ltd.
- (c) Name of Operator: Gulf Oil Canada Limited
P.O. Box 130, Calgary, Alberta
Operator's Licence No. 1243
- (d) Location: D-14-61-40-120-00 Grid
61° 33' 10.18" Latitude
120° 03' 39.96" Longitude
61.55288° N., 120.06110° W. Universal W.L.R.
300D146140120000 Unique Well Identifier
- (e) Co-ordinates: 1020.0' North and 292.4' East of the South West
corner of Unit D (surface)
- (f) Permit Number: 4188
- (g) Drilling Contractor: Tri-City Drilling (1968) Ltd. Rig No. 4, Fail-
ing Model 90 Stratmaster Trailer Rig.
- (h) Drilling Authority: No. 418 dated 6th of February, 1970
- (i) Classification: New Field Wildcat
- (j) Elevations: Ground - 788 feet; K.B. - 799 feet
- (k) Spud Date: February 15, 1970
- (l) Drilling Completion Date: February 27, 1970
- (m) Total Depth: 2259 feet
- (n) Well Status: Dry and Abandoned
- (o) Rig Released: March 2, 1970
- (p) Hole Sizes: 12-1/4" from 0 to 615 feet K.B.
7-7/8" from 615 to 2259 feet K.B.
- (q) Casing: 19 joints of 9-5/8" OD., 36#, 8 RT, J-55, Class A
set at 608 feet K.B. Net tally 596 feet.

SECTION II

(a) Formation Tops:

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>SAMPLE TOPS</u>
Fort Simpson Shale	-	267
Horn River Shale	1450	1462
Horn Plateau Reef	1524	1520
Lonely Bay Limestone	1718	1706
Bear Rock Dolomite	1932	1930
Bear Rock Anhydrite	2014	2055
Precambrian	2252	2252
Total Depth Logger	2260	
Total Depth Drilled		2259

- (b) Cored Intervals: Core #1 1464'-1509' Horn River, Cut 45', Recovered 45'
Core #2 1550'-1590' Horn Plateau, Cut 40', Recovered 40'
Core #3 1590'-1630' Horn Plateau, Cut 40', Recovered 40'

(c) Core Description:

<u>Core #1</u>	
1464' - 1467'	Limestone, brown, finely crystalline, bands of black pyritic shale.
1467' - 1509'	Shale, black, frequent dolomite lenses and limestone bands. No porosity and no oil stain.
<u>Core #2</u>	
1550' - 1590'	Limestone, alternating bands of fossiliferous limestone and lime mud. Total 17' foss. limestone and 23' lime mud. Estimated porosity 1' good, 3' fair, 3' poor. Core was popping gas and bleeding salt water.
<u>Core #3</u>	
1590' - 1609'	Limestone, light grey, fossiliferous. 2' poor fossil leached porosity, very poor permeability, 6" very good vug porosity, one 6" oblique fracture lined with black bitumen.
1609' - 1630'	Limestone, light grey, recrystallized lime mud with fossil debris. Few scattered vugs not effective. Oblique fractures partially open. Slight popping of gas. Core tasted salty.

- (d) Sample Description: See Appendix.

- (e) Paleontological Determinations: Brachiopods, corals, Amphipora, gastropods and stromatoporoids in Horn Plateau Reef.

SECTION III

(a) Report of Drill Stem Tests:

DST #1

February 22, 1970. Interval 1520' - 1590'. Horn Plateau Reef. Lynes. 7" dual packer, 1/2" ss choke. No water cushion. 5 minute preflow, 60 minute initial shut in. Tool open 60 minutes. 60 minute final shut in. Strong initial air puff on preflow. Gas to surface in 5 minutes. Gas to surface immediately on flow period. Measured at 20.7 mcf/d after 15 minutes with 1/8" orifice plate and 73 mcf/d after 50 minutes with 1/4" orifice plate. Remaining steady. 4" drill pipe recovery: top 132' drilling mud, bottom 180' salty gas cut mud.

IHSP 729, FHSP 719, IFP 112, FFP 132, LSIP 607, FSIP 596

(b) Casing Record:

February 18, 1970. Ran 19 joints of 9-5/8" OD, 36#, 8 RT J-55 Class A casing set at 608' K.B. Ran 4 centralizers on bottom 220'. Cemented by Howco with 300 sacks oilwell cement plus 2% CaCl₂. Pumped plug to 573'. Plug down at 3:05 A.M., 2-18-70. Average slurry weight 15.3#/gal. Average displacement rate 4.5 bbls./min. Witnessed by Carroll for contractor, and Hannegan for Gulf.

(c) Bit Record:

<u>No.</u>	<u>Size</u>	<u>Type</u>	<u>Depth In</u>	<u>Depth Out</u>	<u>Footage</u>	<u>Hours</u>	<u>Cumulative Hours</u>
1A	12-1/4	S4	0	356	356	16-3/4	16-3/4
2A	12-1/4	OSC	356	545	189	9-1/4	26
3A	12-1/4	OSC-3	545	615	70	4	30
1	7-7/8	S3TJ	615	1464	856	27-3/4	57-3/4
1B	6-1/8	Diamond	1464	1509	45	11	68-3/4
2	7-7/8	DSJ	1509	1550	41	3-1/4	72
2B	6-1/8	Diamond	1550	1590	40	6-1/2	78-1/2
2RR	7-7/8	DSJ	Reaming				
2ERR	6-1/8	Diamond	1590	1630	40	5-1/4	83-3/4
2RR	7-7/8	DSJ	1630	1811	181	18	101-3/4
3	7-7/8	DMJ	1811	1880	69	9-1/4	111
4	7-7/8	M4NGJ	1880	2024	144	19-1/4	130-1/4
5	7-7/8	ODVJ	2024	2123	99	23-3/4	154
6	7-7/8	S4J	2123	2259	136	19-1/2	173-1/2

(d) Mud Report: Surface Hole - Gel slurry system.

Mud weight 8.9 - 9.7#/gal.
Viscosity 34 - 85 sec./qt.

615' - 2259' Water - Gel - Benex system
Mud weight 8.7 - 9.4#/gal.
Viscosity 30 - 58 sec./qt.

Pretreated for anhydrite at 2123 feet.

Mud Report, continued..

Materials Used:

Lime	200 pounds	Benex	78 pounds
Caustic	500 pounds	CMC	400 pounds
Gel	19,000 pounds	Soda Ash	1,300 pounds
Sawdust	720 pounds	Peltex	350 pounds
Bicarb	300 pounds	Calcium Chloride	20 pounds

(e) Deviation Record:

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
71	1/2	951	2	1644	1
181	3/4	1013	1-3/4	1707	7/8
264	3/4	1140	1-3/4	1770	1-1/4
356	1-1/8	1203	7/8	1865	1-1/2
450	1-1/8	1266	1-1/2	1928	1-1/2
513	7/8	1329	2	1921	7/8
607	1	1392	1-1/4	2050	7/8
699	1-1/2	1455	1-1/2	2149	1
888	2-1/4	1550	1-1/2	2212	1-1/4

(f) Abandonment Plugs:

<u>Date</u>	<u>Plug No.</u>	<u>Position</u>	<u>Geological Formation</u>	<u>Sacks Cement</u>	<u>Additives</u>	<u>Hrs. WOC</u>	<u>Depth Plug Felt</u>
3-1-70	1	1750'-1400'	Lonely Bay, Horn Reef & Shale	240	2% CaCl ₂	8	1260'
3-2-70	2	660'-560'	Simpson-Btm. Casing	72	2% CaCl ₂	8	556'
3-2-70	-	3'-0'	Top Casing	5	-	-	-

Steel plate and five foot riser with well name plate were welded on top of casing.

(g) Lost Circulation Zones: None

(h) Report of Blowouts: None

SECTION IV

(a) Logs:

<u>Date</u>	<u>Run No.</u>	<u>Interval</u>	<u>Type</u>
2-27-70	1	608' - 2256'	Dual Induction Laterolog
2-27-70	1	1500' - 2259'	Sidewall Neutron Porosity Log
2-27-70	1	608' - 2258'	BHC-Sonic Caliper Log
2-27-70	1	1500' - 2259'	Formation Density Log
2-28-70	1	608' - 2255'	Dipmeter
2-28-70	1	608' - 2259'	Velocity Survey
2-28-70	1	1500' - 2259'	Hydrocarbon Indicator
2-28-70	1	1500' - 2259'	Lithology Plot

SECTION V

(a) Core Analysis: Yes - Cores #2 and #3

(b) Water Analysis: No *See Attached*

(c) Gas Analysis: Yes - No. G-76-70

(d) Oil Analysis: No

SECTION VI

(a) Tubing Record: No tubing run.

(b) Perforation Record: No perforating performed.

(c) Cementation Record: No squeeze or plug back jobs performed.
Abandonment plugs were run as follows:

<u>Plug No.</u>	<u>Date</u>		<u>Geological Formation</u>	<u>Sacks Cement</u>	<u>Additives</u>	<u>Hrs. WOC</u>	<u>Depth Plug Felt</u>
1	3-1-70	1750'-1400'	Lonely Bay, Horn Reef & Shale	240	2% CaCl ₂	8	1260'
2	3-2-70	660'-560'	Simpson - Bottom Casing	72	2% CaCl ₂	8	556'
-	3-2-70	0'-0'	Top Casing	5	-	-	-

Steel plate and five foot riser with well name plate was welded on top of casing.

(d) Acidization and Fracturing Record: None performed.

(e) Back Pressure and Production Tests: None performed.

GULF OIL CANADA LIMITED WATER ANALYSIS REPORT

TIGHT HOLE

PLEASE Gulf et al Trout River LOCATION D-14 N.W.T. FIELD SAMPLE DST #1

SAMPLE DATE February 22, 1970 FORMATION Horn Plateau Reef INTERVAL DEPTH 1,550 FT. TO 1,590 FT. KBE 799 FT.

SAMPLE HEIGHT ABOVE TOOL 312 FT. RECOVERY DATA

OTHER DATA

ION	MILLIGRAMS/LITRE CONCENTRATION	PER CENT MILLIGRAM EQUIVALENTS	5 ° 80 ° F PH RESISTIVITY OHM METERS AT TOTAL DISSOLVED SOLIDS IN MILLIGRAMS/LITRE AS NACL FROM RES BY EVAPORATION AFTER IGNITION ANALYSED BY LAB. NO. DATE RECEIVED DATE ANALYSED DATE DISTRIBUTED
SODIUM - NA	1,862	47.60	1.005 8.22 NEGATIVE
POTASSIUM - K			77
CALCIUM - CA	26	0.76	
MAGNESIUM - MG	34	1.64	
SULPHATE - SO ₄	280	3.42	
CHLORIDE - CL	2,207	36.59	5,000
BROMIDE - BR			
IODIDE - I			
BICARBONATE - HCO ₃	1,036	9.99	
CARBONATE - CO ₃			
HYDROXIDE - OH			
TOTAL	5,445	100.00	D.J. Donnelly W-103-70
REMARKS AND CONCLUSIONS			April 29, 1970

A P P E N D I X

TROUT RIVER D-14.
Sample Description

30'	Sandstone, very calcareous, pebbly, rounded with grains of quartz folds, metamorphic rock, dark grey and light grey dolomite and limestone, occasionally fragmented granite boulders.
60'	Sandstone, as above.
90'	Sandstone, as above.
120'	Sandstone, as above.
150'	Sandstone, as above.
180'	Sandstone, as above, with grains of anhydrite and green siltstone.
210'	Sandstone, as above.
240'	Sandstone, as above.
270'	Shale, grey-green, micromicaceous calcite, slightly silty.
300'	Shale, as above.
330'	Shale, as above.
360'	Shale, as above.
390'	Shale, as above.
420'	Shale, as above.
450'	Shale, as above.
480'	Shale, as above.
510'	Shale, as above and shale, dark grey, micromicaceous, very silty; and shale, light grey, calcareous, silty. 10%
540'	Shale, grey-green, micromicaceous calcite silty, some fractures infilled with calcite.
560'	Shale, as above.
590'	Shale, as above.
620'	Shale, dark grey-green, micromicaceous, calcareous, silty.
630'	Shale, as above.
640'	

650'	Shale, as above.
660'	Shale, as above.
670'	Shale, as above.
680'	Shale, as above.
690'	Shale, as above, with a few pieces of siltstone, light grey, argillaceous.
700'	As above.
710'	Shale, as above.
720'	Shale, dark grey-green, micromicaceous, calcareous, silty.
730'	Shale, as above.
740'	Shale, as above.
750'	Shale, as above.
760'	Shale, as above.
770'	Shale, as above.
780'	Shale, as above.
790'	Shale, as above.
800'	Shale, as above.
810'	Shale, as above.
820'	Shale, as above.
830'	Shale, as above.
840'	Shale, as above.
850'	Shale, as above.
860'	Shale, as above.
870'	Shale, as above.
880'	Shale, as above.
890'	Shale, as above.

900'	Shale, as above.
910'	Shale, as above.
920'	Shale, dark grey-green, micromicaceous, calcareous, silty.
930'	Shale, as above.
940'	Shale, as above.
950'	Shale, as above.
960'	Shale, dark grey-green, micromicaceous, silty, slightly calcareous, very silty in part.
970'	Shale, as above.
980'	Shale, as above.
990'	Shale, as above.
1000'	Shale, as above.
1010'	Shale, as above.
1020'	Shale, as above.
1030'	Shale, as above.
1040'	Shale, as above.
1050'	Shale, as above.
1060'	Shale, as above.
1070'	Shale, as above.
1080'	Shale, as above.
1090'	Shale, as above.
1100'	Shale, as above.
1110'	Shale, dark grey-green, micromicaceous, silty, slightly calcareous.
1120'	Shale, as above, trace pyrite.
1130'	Shale, as above.

1140'	Shale, as above.
1150'	Shale, as above.
1160'	Shale, as above.
1170'	Shale, as above.
1180'	Shale, as above.
1190'	Shale, as above.
1200'	Shale, as above.
1210'	Shale, as above.
1220'	Shale, as above.
1230'	Shale, as above.
1240'	Shale, as above.
1250'	Shale, as above.
1260'	Shale, as above.
1270'	Shale, as above.
1280'	Shale, as above.
1290'	Shale, as above.
1300'	Shale, dark grey to grey-green, micromicaceous, silty, slightly calcareous, trace pyrite.
1310'	Shale, as above.
1320'	Shale, as above.
1330'	Shale, as above.
1340'	Shale, as above.
1350'	Shale, as above; shale, black, micromicaceous, slightly bituminous, slightly calcareous, 60%.
1360'	Shale, as above.
1370'	Shale, as above.

- 1380' Shale, black, as above.
- 1390' Shale, as above.
- 1400' Shale, as above.
- 1410' Shale, as above.
- 1420' Shale, as above.
- 1430' Shale, as above.
- 1440' Shale, as above.
- 1450' Shale, as above.
- 1460' Shale, black as above, with some large and small pyrite inclusions, calcite veins.
- 1463' Limestone, light/medium grey-brown, very dolomitic grading to limy dolomite, very fine crystalline to microcrystalline, trace intercrystalline porosity, trace oil stain.

CUT CORE #1 1464'-1509'

- 1510' Shale, black, bituminous, pyritic.
- 1520' Shale, as above.
- 1530' Limestone, white, fossils (corals, amphipora), poor to fair small vug and intrafossil porosity, some light oil stain.
- 1540' Limestone, as above. Poor vug and intrafossil porosity.
- 1550' Limestone, as above.

CUT CORE #2 1550'-1590'

CUT CORE #3 1590'-1630'

- 1640' Limestone, white to light grey, very fine sucrosic, fossiliferous crinoids, some very poor intercrystalline porosity, streak vug porosity, oil stain in pieces with intercrystalline porosity.
- 1650' Limestone, as above.
- 1660' Limestone, as above.
- 1670' Limestone, as above.
- 1680' Limestone, as above.

- 1690' Limestone, light grey-brown, microcrystalline to very fine crystalline, sucrosic, fossiliferous, crinoids, coral fragments, some very poor intercrystalline porosity in sucrosic limestone with oil stain, traces small vuggy porosity, much secondary white crystalline calcite. Sucrosic limestone is interfossil infilling.
- 1700' Limestone, as above.
- 1710' Limestone, as above.
- 1720' Limestone, medium to dark grey-brown very fine to fine crystalline, sucrosic, crinoidal, slightly argillaceous, trace fractured bitumen.
- 1730' Limestone, as above. Poor sample.
- 1740' Limestone, as above. Poor sample.
- 1750' Limestone, as above. Poor sample.
- 1760' Limestone, dark grey-brown, very fine to fine crystalline, sucrosic, crinoidal, slightly argillaceous, no porosity.
- 1780' Limestone, medium brown very fine to medium crystalline, crinoidal? no porosity.
- 1790' Limestone, medium brown very fine to medium crystalline, crinoidal? no porosity.
- 1800' Limestone, medium to dark grey-brown, microcrystalline, slightly argillaceous, no porosity, some secular white crystalline calcite.
- 1810' Limestone, as above.
- 1820' Limestone, as above.
- 1830' Limestone, as above.
- 1840' Limestone, as above, poor sample - 90% cavings.
- 1850' Limestone, as above, poor sample - 90% cavings.
- 1860' Limestone, medium grey-brown, micro- to very fine crystalline, slightly argillaceous, white crystalline, secular calcite 20%, no porosity. Sample poor - much cavings.
- 1870' Limestone, as above. Very poor sample.
- 1880' Limestone, as above. Very poor sample.
- 1890' Limestone, as above.
- 1900' Limestone, as above, some limestone, brown, very fine to fine crystalline, sucrosic with poor intercrystalline porosity.

- 1910' Limestone, as above, slightly dolomitic.
- 1920' Limestone, as above.
- 1930' Limestone, as above.
- 1940' Dolomite, lining, no porosity.
- 1950' Dolomite, medium grey-brown, sucrosic, very fine to fine crystalline, argillaceous.
- 1960' Dolomite, dark grey-brown, micro-to very fine crystalline, slightly argillaceous, oil stain; some white crystalline secular calcite; very fine porosity (inx), no permeability.
- 1970' Dolomite, as above, medium to dark grey-brown.
- 1980' Dolomite, as above, limy in part.
- 1990' Dolomite, as above, interpolated with light grey, fine crystalline dolomite.
- 2000' Dolomite, as above 90%. Limestone, as above 10%.
- 2010' Dolomite, as above, with some white crystalline secular calcite and some white anhydrite crystals.
- 2020' Dolomite, as above, and dolomite, light grey, microcrystalline, slightly argillaceous, no porosity, trace pyrite.
- 2030' Dolomite, light grey-brown, microcrystalline anhydrite, slightly silty - no porosity.
- 2040' Dolomite, very anhydritic, microcrystalline, slightly silty, very hard and brittle.
- 2050' Dolomite, as above, slightly pyritic in part.
- 2060' Dolomite, as above, and some anhydrite, light grey, dolomitic.
- 2070' Anhydrite, light to medium grey, microcrystalline, slightly dolomitic.
- 2080' Anhydrite, as above.
- 2090' Anhydrite, as above.
- 2100' Anhydrite, as above.
- 2120' Anhydrite, as above.

- 2130' Anhydrite, light grey-brown, microcrystalline, slightly dolomitic.
- 2140' Anhydrite, as above.
- 2150' Anhydrite, as above.
- 2160' Anhydrite, as above.
- 2170' Anhydrite, as above.
- 2180' Anhydrite, as above.
- 2190' Anhydrite, as above.
- 2200' Anhydrite, as above, 40%. Anhydrite, red-brown, microcrystalline, slightly dolomitic, slightly argillaceous, 60%.
- 2210' Anhydrite, red-brown, microcrystalline, slightly dolomitic, slightly argillaceous.
- 2220' Anhydrite, as above.
- 2230' Anhydrite, red-brown, microcrystalline, dolomitic, argillaceous.
- 2240' Anhydrite, as above 95%, or granite wash, quartz with feldspar 5%.
- 2250' Granite wash, as above.
- 2259' Granite wash, as above.

Total Depth.

TROUT RIVER D-14
CORE DESCRIPTIONS

CORE #1 1464'-1509'

- 3'2" Limestone, brown, fine crystalline in bands alternated with shale, black, pyritic. The limestone occurs in fine laminae that appear to be parts of layers of algal filaments. Some pyritic inclusions.
- 2'6" Shale, black with frequent dolomite lenses, light grey, fine crystalline, very pyritic.
- 23' Shale, black, with frequent pyrite lenses and occasional dolomite laminae.
- 6" Dolomite, brown, fine crystalline in thin laminae, as above.
- 8' Shale, black.
- 6" Dolomite.
- 7' Shale, black.

CORE #2 1550'-1590'

- 1550'-1551' (1') Limestone, light grey-brown, fossiliferous - brachiopods, individual corals, gastropods. Fossil debris with some small branching corals (amphipora) in place. Poor porosity.
- 1551'-1565' (14') Limestone, light grey-brown, lime mud with occasional amphipora and solitary corals. Trace small vuggy porosity.
- 1565'-1566' (1') Limestone, light grey-brown, coral and amphipora fragments in recrystallized lime mud. Poor porosity.
- 1566'-1570' (4') Limestone, mostly lime mud with amphipora and coral fragments, a few small stromatoporoids. Very poor porosity.
- 1570'-1572' (2') Limestone, bioclastic, numerous gastropods and some coral fragments. Porosity, fair intrafossil - fossil leached porosity, occasional small stromatoporoids.
- 1572'-1573' (1') Lime mud with some brachiopod fragments and coral fragments, occasional amphipora, very poor vug porosity.
- 1573'-1574' (1') Limestone, bioclastic, abundant gastropods, fair intrafossil (fossil leached) porosity and vug porosity.
- 1574'-1577' (3') Lime mud with some fossil fragments. Tight.
- 1577'-1578' (1') Limestone, bioclastic, and coral debris with gastropods, minor lime mud. Good fossil leached porosity; black bitumen lining porosity.

CORE #2 (continued)

- 1578'-1587' Limestone, recrystallized lime mud with some fossil debris
(9') and some amphipora in place with some algal bands and small occasional crinoid stems, stroms, occasional gastropods (water bugs). Trace small vug porosity, some black bitumen in occasional large vugs. 1" - 4".
- 1587'-1588" Limestone, fossil debris - corals, some gastropods, some
(1') amphipora. Large oblique fractures, open and lined with black bitumen. Poor small vuggy porosity.
- 1588'-1590' As above, with lime mud infill. Trace porosity.
(2')

Core popping gas and bleeding salt water.
Environment - back reef mostly.

Estimate	1' Good Porosity
	3' Fair Porosity
	3' Poor Porosity
	7'

CORE #3 1590' - 1630' Cut 40' Recovered 40'

- Top 19' Limestone, light grey, fossiliferous - corals, amphipora, gastropods.
- 2' poor fossil leached porosity - very poor to nil permeability.
- 6" very good vug porosity.
- 1" - 6" oblique fracture open and lined with black bitumen.
- Next 21' Limestone, light grey, lime mud with fossil debris - amphipora, individual corals, gastropods, crinoids, brachiopods.
- A few scattered vugs - noneffective - 2-1 foot oblique fractures, partially open.

Note: Slight popping of gas. Core tastes salty.

GAS SAMPLE AND ANALYSIS REPORT

70-95.

LAB. NO. 76-70.

"TIGHT HOLE"

WELL SAMPLES

PLANT SAMPLES

FIELD: Gulf et al Trout River
 Location: D14 61°40' N Lat.
 120° W. Long. KB
 SAMPLE POINT: Flare line
 PRESSURE: 30 PSIG TEMP. °F
 FLOW RATE: 312 MCFD Gas cut end.

PLANT:
 SECTION:
 VESSEL:
 SAMPLE POINT:
 PRESSURE: PSIG TEMP. °F
 FLOW RATE:

Sampled by: Lynes United Service DATE: February 22, 1970. TIME:
 CONTAINER NO.: BAROMETRIC PRESSURE: MM HG AIR TEMP.: °F
 FIELD DETERMINATIONS: H-S CO:
 REMARKS: DST #1 (1520 - 1590)

SAMPLE ENTERING CONDITIONS: CONTAINER PRESSURE: @ 76°F: 40 PSIG CONTAINER TEMPERATURE: 150 °F
 ANALYZED DATE: March 12, 1970. METHOD: Chromatograph BY: D.E. Tyler LAM
 BASIS 14.65 PSIG @ 60°F

	MOL % AS REC'D	MOL % AIR FREE	G.P.M.		
OXYGEN		10.70			
NITROGEN		0.10			
CARBON DIOXIDE		0.00			
HYDROGEN SULPHIDE		70.94			
METHANE		11.83			
ETHANE		4.47	1.021		
PROPANE		0.73	0.198		
ISO-BUTANE		0.91	0.238		
N-BUTANE		0.17	0.052		
ISOPENTANE		0.10	0.030		
N-PENTANE		0.04	0.014		
HEXANE		0.01	0.004		
HEPTANES AND HIGHER		100.00	1.557		
TOTAL					

GROSS BTU (ACID GAS FREE) 1103

SPECIFICATION TESTS AND REMARKS:

SPECIFIC GRAVITY BY POD. (AIR FREE)
 SPECIFIC GRAVITY BY CHROMAS REC'D 0.730
 SPECIFIC GRAVITY BY WT.:
 SAMPLE MOLECULAR WEIGHT:

PROPERTIES OF HEAVIEST COMPONENT:

SPECIFIC GRAVITY:
 AVERAGE MOLECULAR WEIGHT:
 U.S. GAL./MOL.:

CORE DATA SHEET

P-76 (10/64)

LEASE AND WELL NO. Gulf of al Trout River D-14

LOCATION

PAGE NO. 1 of 4

LSN SEC	TWP	RGE	N

61°14'N Lat. 120°W Long.

SAMPLE NO.	TOP DEPTH FEET	INTERV. REP FEET	WHOLE CORE POR. %	WHOLE CORE PERMEABILITY			S ₀ %	S _w %	PORE/SITY FEET	SMALL PLUG POR. %	SMALL PLUG PERMEABILITY		Grain Density
				VERT. md.	90° md.	MAX. md.					VERT. md.	HORIZ. md.	

Core #1 1464.0' to 1509.0' Recovered 45.0'

(Shale)

Dense 1464.0 45.0

Drilled 41.0'

<.01

Core #2 1550.0' to 1590.0' Recovered 40.0'

1	1550.0	1.0	10.9	1.3	<.01	95	F	10.90					2.70
2	1551.0	2.8	6.0	<.01	.50	.55		16.80					2.70
3	1553.8	0.6	7.2	.29	.31	1.5		4.32					2.70
4	1554.4	1.2	2.7	<.01	.07	.15		3.24					2.70
5	1555.6	1.0	3.6	<.01	.10	.15		3.60					2.69
6	1556.6	1.2	1.9	<.01	<.01	.04		2.28					2.69
7	1557.8	1.6	2.1	<.01	.05	.06		3.36					2.68
8	1559.4	2.0	2.2	<.01	.07	.13		4.40					2.69
9	1561.4	2.2	1.5	<.01	.02	.09 F		3.30					2.70
10	1563.6	1.8	2.3	<.01	<.01	.03		4.14					2.69
11	1565.4	0.8	5.8	.32	.49	2.5 F		4.64					2.70
12	1566.2	0.8	10.6	2.9	6.9	8.2		8.48					2.70
13	1567.0	1.7	5.8	<.01	.49	.52		9.86					2.69

CORE DATA SHEET

P-76 (10/84)

LEASE AND WELL NO. Gulf et al Trout River D-14

LOCATION

PAGE NO. 2 of 4

LSQ SEC	TWP.	R&E M

61°14'N Lat. 120°W Long.

SAMPLE NO.	TOP DEPTH FEET	INTERV. REPER FEET	WHOLE CORE POR. %	WHOLE CORE PERMEABILITY			SO %	S _w %	POROSITY FEET	SMALL PLUG PERMEABILITY		Brain Density
				VERT. md.	90° md.	MAX. md.				VERT. md.	HORIZ. md.	
14	1568.7	1.1	9.9	.65	3.2	14			10.89			2.70
15	1569.8	0.9	6.3	.83	1.9	2.2			4.47			2.69
16	1570.7	1.1	15.9	8.2	263	947 V			17.49			2.71
17	1571.8	1.5	7.8	1.3	3.3	5.5			11.70			2.69
18	1573.3	1.2	10.5	1.7	5.6	7.8			12.60			2.70
19	1574.5	1.7	4.8	<.01	.09	.17			8.16			2.69
20	1576.2	1.8	19.0	5.3	5.2	10.8			34.20			2.70
21	1578.0	0.6	4.6	1.1	2.8	3.0			2.76			2.70
22	1578.6	1.3	9.9	.50	V 82	V 176			12.87			2.70
23	1579.9	1.9	5.2	<.01	.30	.42			9.88			2.68
24	1581.8	1.9	6.5	.21	.69	.87			12.35			2.69
25	1583.7	1.3	5.2	<.01	.73	.75			6.26			2.70
26	1585.0	0.5	14.3	.43	V .76	.88			7.15			2.69
27	1585.5	1.1	5.7	.10	.22	.26			6.27			2.70
28	1586.6	1.7	4.4	<.01	.17	.18			7.48			2.68
29	1588.3	1.7	4.4	<.01	.31	.34			7.48			2.69

CORE DATA SHEET

P-76 (10/64)

LEASE AND WELL NO. Gulf et al Trout River D-14

LOCATION

PAGE NO. 3 of 4

LOG SEC.	TWP.	R&E	M

61°24'N Lat. 120°W Long.

SAMPLE NO.	TOP DEPTH FEET	INTERV. REP. FEET	WHOLE CORE POR. %	WHOLE CORE PERMEABILITY			S _w %	S _o %	POROSITY FEET	SMALL PLUG POR. %	SMALL PLUG PERMEABILITY		Grain Density
				VERT. md	90° md	MAX. md					VERT. md	HORIZ. md	

Core #3 1590.0' to 1630.0' Recovered 40.0'

30	1590.0	2.5	6.5	<.01	.69	1.3			16.25				2.70
31	1592.5	2.0	7.5	.44	1.5	1.8			15.00				2.70
32	1594.5	1.5	9.8	.26	6.2	8.4			14.70				2.69
33	1596.0	1.0	21.3	19	82	605	F		21.30				2.70
34	1597.0	1.0	18.3	6.3	58	60			18.20				2.69
35	1598.0	0.6	34.4	605	V	281	V		20.64				2.70
36	1598.6	1.3	10.0	.36	2.2	6.8			13.00				2.70
37	1599.9	1.3	20.8	33	V	3840	V		27.04				2.70
38	1601.2	0.7	20.4	42	F	208	F		14.28				2.74
39	1601.9	2.5	12.1	16	F	410	F		20.15				2.71
40	1604.4	2.3	6.9	.62	2.0	3.5			15.87				2.69
41	1606.7	2.6	5.8	<.01	3.2	16			15.08				2.70
42	1609.3	1.4	3.9	<.01	.08	.14			5.46				2.69
43	1610.7	1.6	4.1	<.01	.25	.28			6.56				2.69
44	1612.3	1.3	7.2	.22	2.8	3.0			9.36				2.71
45	1613.6	1.2	2.6	<.01	.45	.54			3.12				2.70

CORE DATA SHEET

P-76 (10/64)

LEASE AND WELL NO. Gulf et al Trout River D-14

LOCATION

PAGE NO. 4 of 4

USGS	TWP.	R&E	M

61°14'N Lat. 120°W Long.

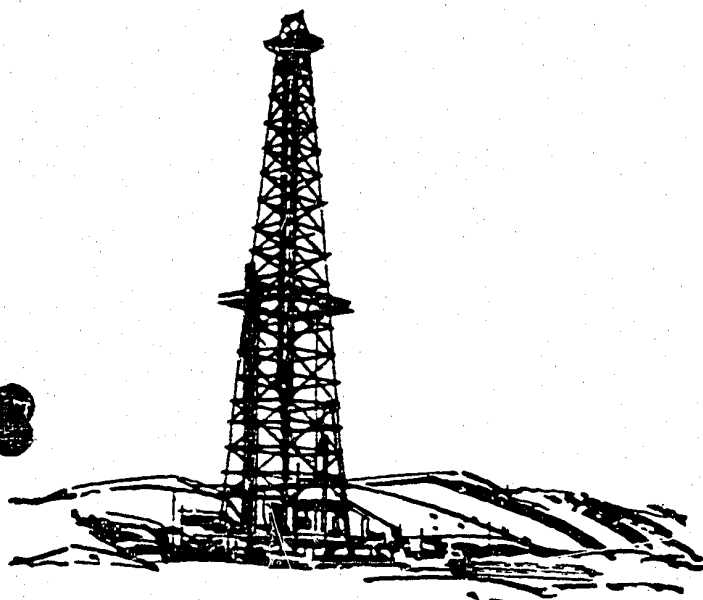
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				VERT. md.	90° md.	MAX. md.					VERT. md.	HORIZ. md.	

46	1614.8	2.4	5.3	.95	.41	.49			12.72				2.70
47	1617.2	1.4	7.6	10	7.1	2000	F		10.64				2.70
48	1618.6	1.8	2.6	.35	.41	420	F		4.68				2.69
49	1620.4	2.0	3.4	.44	.77	8.0	F		6.80				2.70
50	1622.4	2.0	2.5	<.01	.38	.56			5.00				2.70
51	1624.4	1.8	2.8	.17	14	15			5.04				2.70
52	1626.2	1.8	1.4	<.01	.10	.11			2.52				2.70
53	1628.0	2.0	2.6	<.01	.21	.25			5.20				2.70

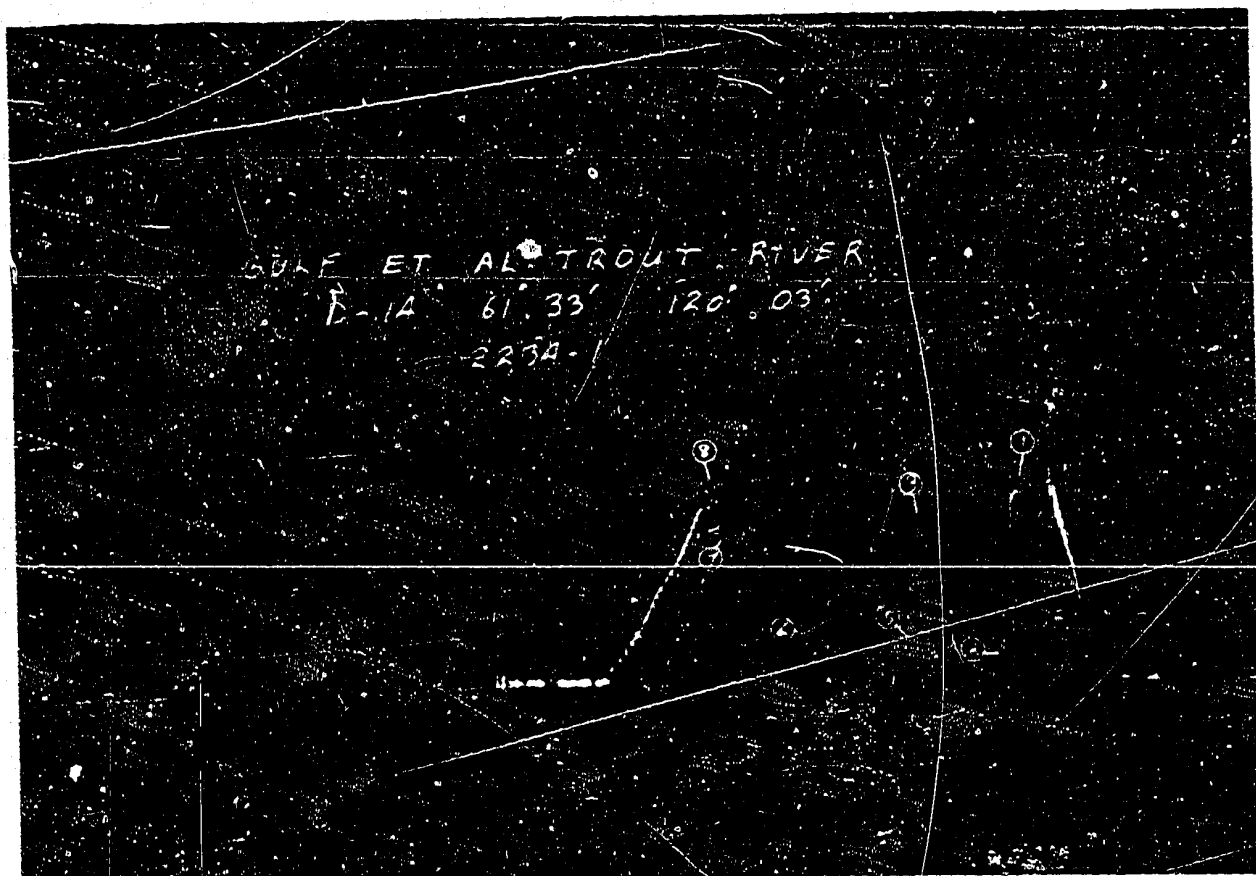
LYNES

BRIGHT NAME IN THE OIL PATCH

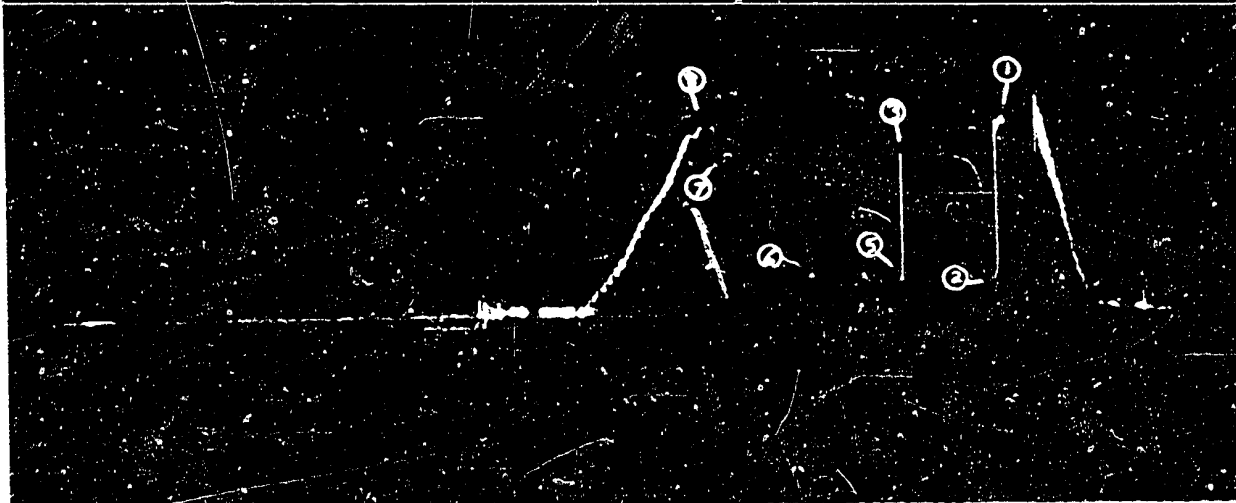
Inflatable and Conventional Packer Tools



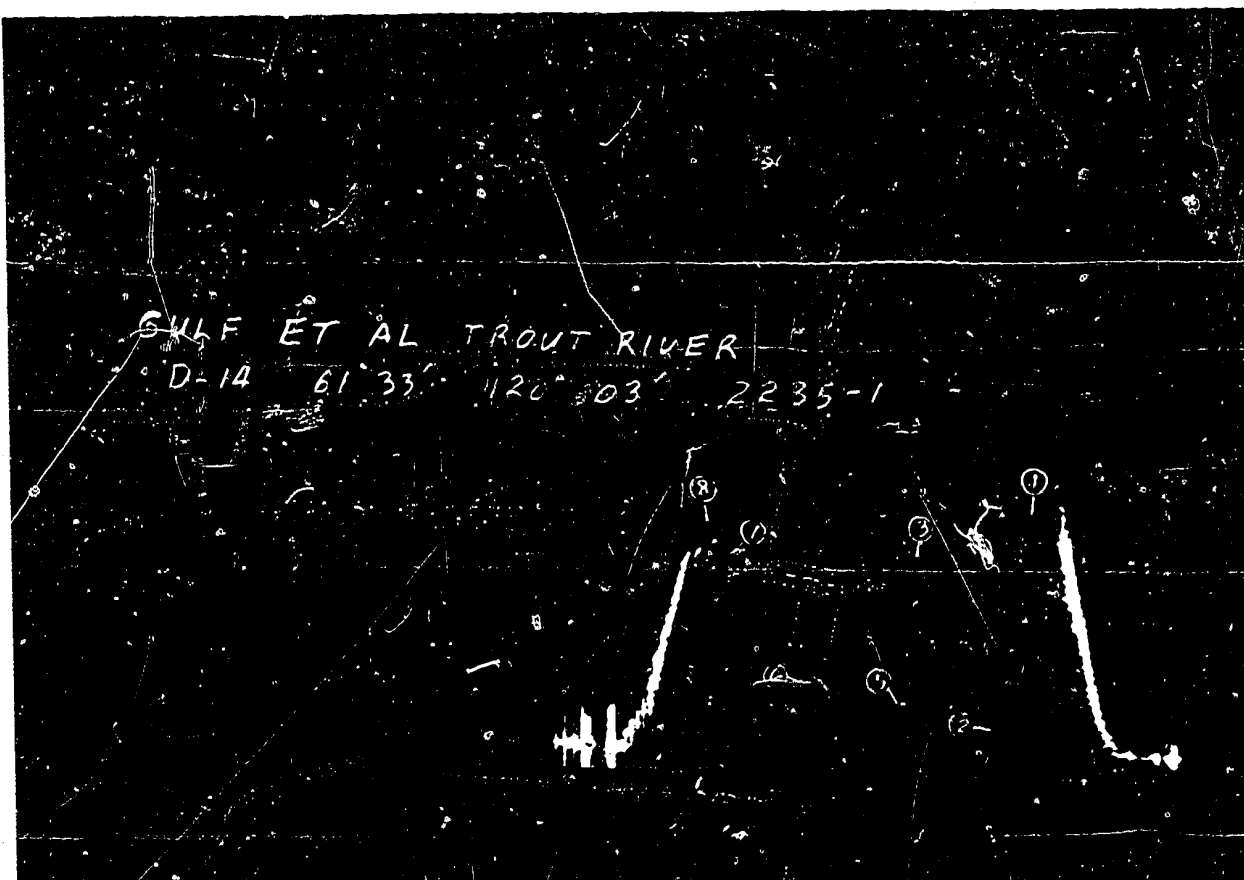
**DRILL STEM TEST
TECHNICAL SERVICE REPORT**

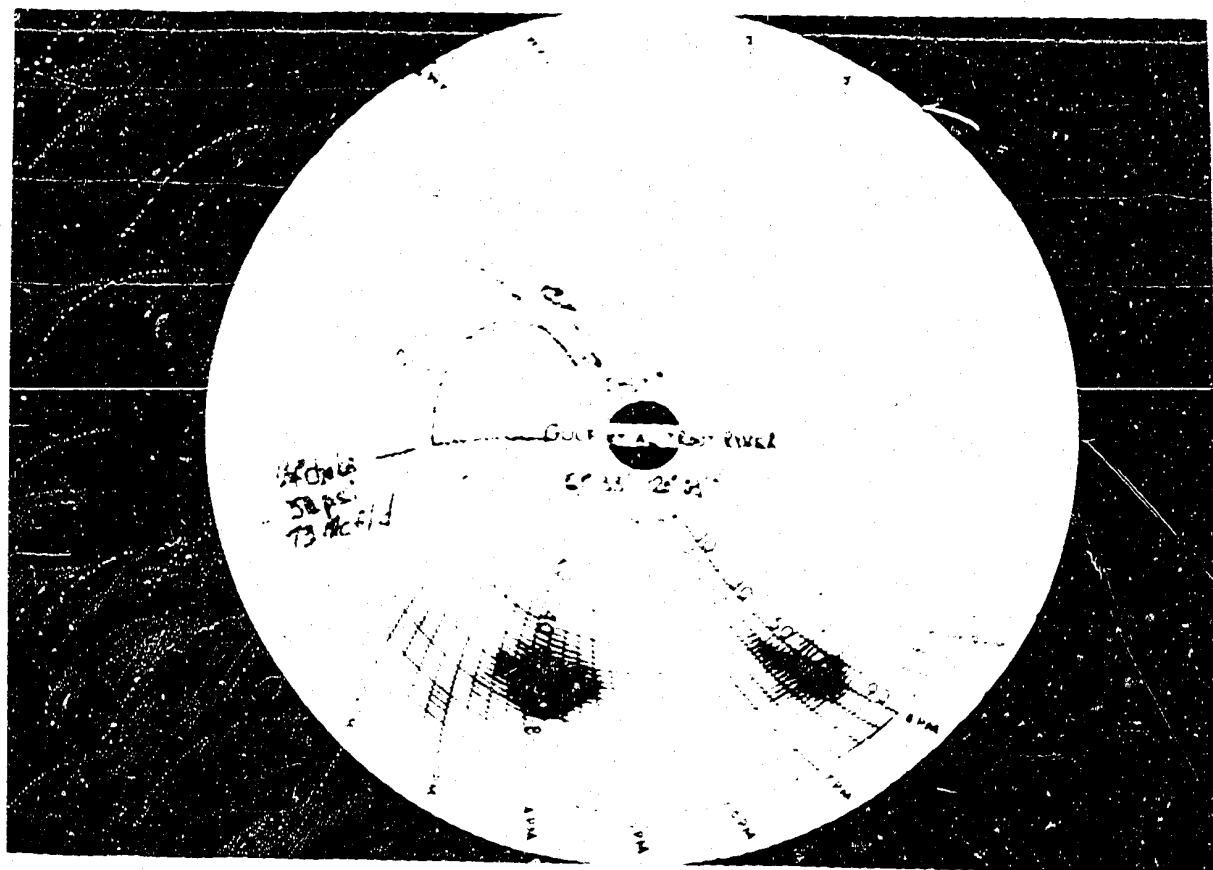


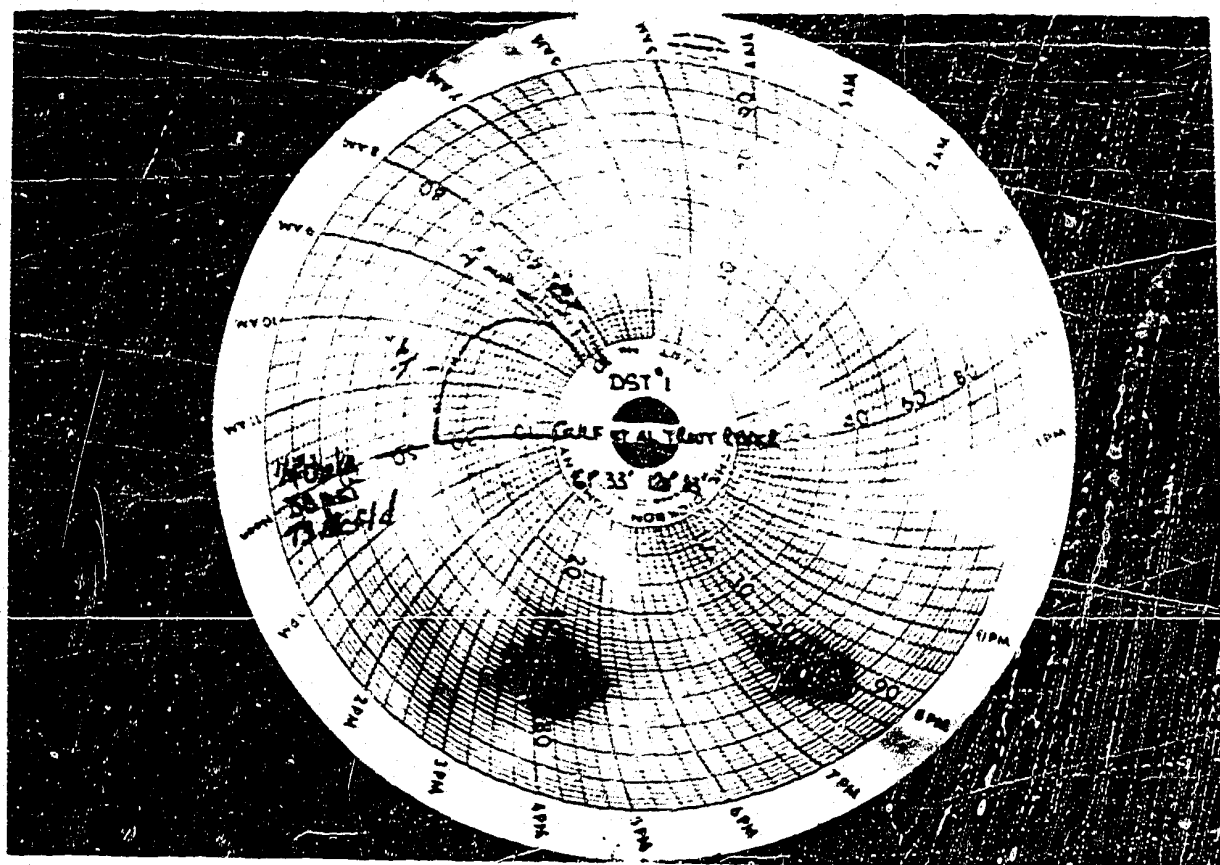
GULF ET AL TROUT RIVER
 D-14 61° 33' 120° 03'
 2234-1



GULF ET AL TROUT RIVER
 D-14 61° 33' 120° 03' 2235-1







NOMENCLATURE (Definition of Symbols)

Q	= average production rate during test, bbl./day
Q _g	= measured gas production rate during test, MCF/day
k	= permeability, md
h	= net pay thickness, ft. (when unknown, test interval is chosen)
μ	= fluid viscosity, centipoise
Z	= compressibility factor
T _r	= reservoir temperature, ° Rankine
m	= slope of final SIP buildup plot, psig/cycle (psig ² /cycle for gas)
b	= approximate radius of investigation, feet
r _w	= wellbore radius, feet
t _o	= total flowing time, minutes
P _o	= Extrapolated maximum reservoir pressure, psig
P _f	= final flowing pressure, psig
P.I.	= productivity index, bbls./day/psi
P.I. ₁	= theoretical productivity index with damage removed, bbl./day/psi
D.R.	= damage ratio
EDR	= estimated damage ratio
AOF	= absolute open flow potential, MCF/D
AOF ₁	= theoretical absolute open flow if damage were removed
Z	= subsea depth
W	= water gradient based on salinity
H _o	= potentiometric surface

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

DEFINITION OF SYMBOLS

Seawater Depth 1527 g. Saloon depth _____ ft. Tidal No. 0895 Hour Recorder No. 7235

t ₀ = 5 Min. Initial Shut-In Pressure				Second Flow Pressure		t ₀ = 65 Min. Final Shut-In Pressure			
Time, Min. Q	$\frac{t_0 + Q}{Q}$	PSIG	PSIG -10 ⁶ (Gas)	Time Diff. .000"	PSIG	Time, Min. Q	$\frac{t_0 + Q}{Q}$	PSIG	PSIG -10 ⁶ (Gas)
0	-----	67				0	-----	110	
5	2.000	479				5	14.000	475	
10	1.500	571				10	7.500	556	
15	1.333	598				15	5.333	580	
20	1.250	609				20	4.250	591	
25	1.200	612				25	3.600	596	
30	1.167	614				30	3.167	600	
35	1.143	615				35	2.857	601	
40	1.125	616				40	2.625	603	
45	1.111	617				45	2.444	604	
50	1.100	618				50	2.300	605	
55	1.091	619				55	2.182	606	
60	1.083	619				60	2.083	606	

Recorder Depth _____ ft. Subsea depth _____ ft. Tidal No. _____ Hour Recorder No. _____

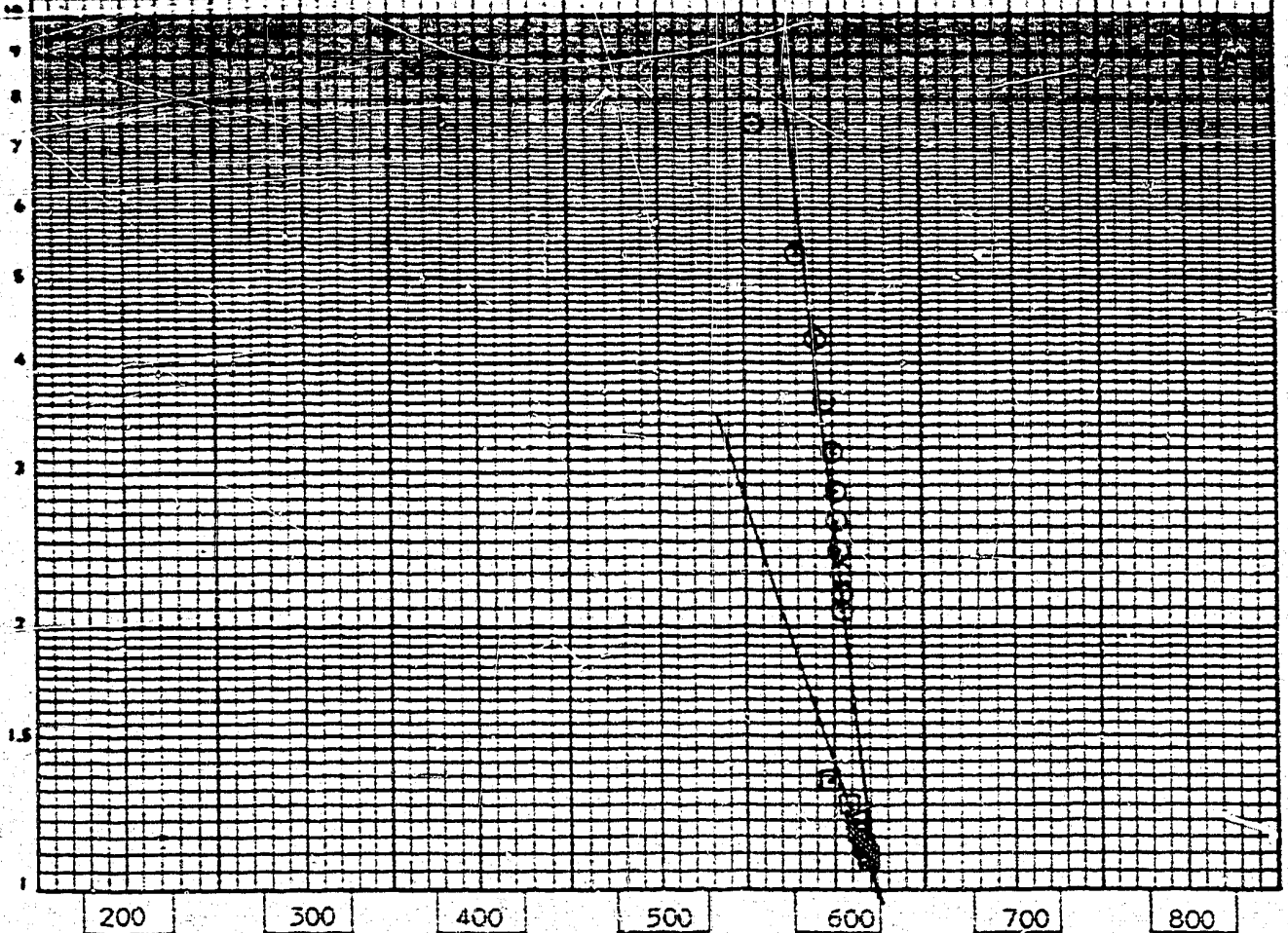
[illegible]

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

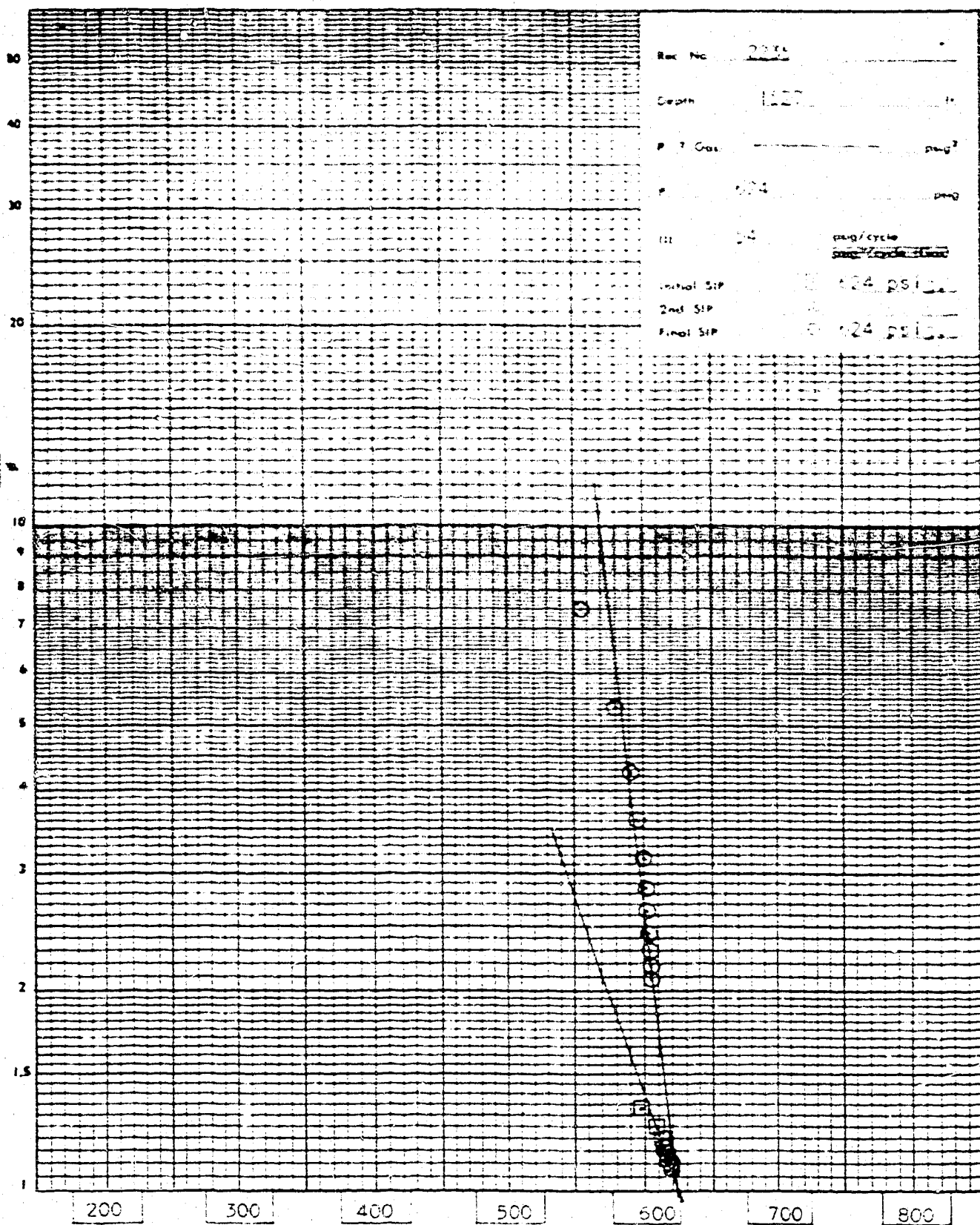
Remarks: DST # 1

PRESSURE DATA

Rec. No. 2235
 Depth 1527 ft.
 P. ² (Gee) _____ psig²
 P. 624 psig
 m 54 per cycle
 Initial S_{IP} ☒ 624 psig.
 2nd S_{IP} ☐ _____
 Final S_{IP} ☐ 624 psig.



PSIG (OIL OR WATER) DST # 1
PRESSURE EXTRAPOLATION PLOT



Rec No. 2261
Depth 1227 ft
P. 7 Gas _____ psig
P. _____ psig
Q. 14 cc/cycle
Initial SIP 1224 psig
2nd SIP _____ psig
Final SIP 1224 psig

PSIG (OIL OR WATER)

DST # 1

PRESSURE EXTRAPOLATION PLOT

LYNES UNITED SERVICES LTD.

TEST DATA		Lynes Test		GENERAL INFORMATION	
Formation	TD 1590	Fr	Company	Gulf Oil Canada Ltd.	
Interval Tested	1520	Fr to	Address	10235 - 124 Street	
Foot of Net Pay Tested	70	Fr		Edmonton, Alberta	
Type of Test	Dual Bottom Hole				
Cushion	nil	Fr	Well Name	Gulf et al Trout River D-14	
Started in Hole at	130	Mrs. Tool Open at	225	Mrs. Well Number	510 33' 10.18 120° 03' 39.05
Pre-Flow	5	Min. Initial Shut-in	60	Min. S.B. Elevation	799 Sub-Sea Elevation
2nd Flow		Min. Second Shut-in		Area	Trout River Province N.W.T.
Final Flow	60	Min. Final Shut-in	60	Min. Company Rep.	Glenn Hannegan
Blow	Good air blow on preflow. Gas to surface in five minutes.			Teacher	Jim Ross
				Contractor	Tri-City Rig No. 4
				Ticket No.	0896 Date February 22, 1970
				Service Reports To:	5 - above address

GAS BLOW MEASUREMENTS

Measured with Critical flow prover

Time	Surface Choke	Reading Inches	Cubic Feet/Day
15 mins	1/8	34	20.7 Mcf/d
50 mins	1/4	38	73.0 Mcf/d
of flow			

MUD AND MUD DATA

Mud Type Gel Chem

Weight 9.2 Viscosity 40 Water Loss 8.5

Filter Cake 2/32" Bottom Hole Temperature 850

Drill Pipe Size 4 1/2" XH Weight 16.5

Drill Collars 4 1/2" H90 I.D. 2 7/8" Foot Run 282

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

Packer Rubber Size 7"

See flow chart below

REMARKS

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

RECOVERY

TOTAL FLUID RECOVERED 312 Ft. Consisting of:

132 Ft. of Drilling mud

180 Ft. of Gas cut mud and salt water

Ft. of

Ft. of

Test was/was not Reverse Circulated

Oil Recovery A.P.I. Water Specific Gravity

Salinity 13,470 PPM

PRESSURE READINGS

Inside	Outside	X	Inside	Outside	X	Inside	Outside	Inside	Outside
Recorder No.	2234		Recorder No.	2235		Recorder No.		Recorder No.	
Capacity	3350		Capacity	3350		Capacity		Capacity	
Depth	1522		Depth	1527		Depth		Depth	

NUMBER KEY:

- 1 - INITIAL HYDROSTATIC
- 2 - PRE-FLOW
- 3 - INITIAL SHUT-IN
- 4a - 2nd INITIAL FLOW
- 4b - 2nd FINAL FLOW
- 4c - 2nd SHUT-IN
- 5 - 3rd INITIAL FLOW
- 6 - FINAL FLOW
- 7 - FINAL SHUT-IN
- 8 - FINAL HYDROSTATIC

729	712
117	67
607	619
112	59
132	110
596	606
710	689

Gulf Oil Canada Ltd.
Company

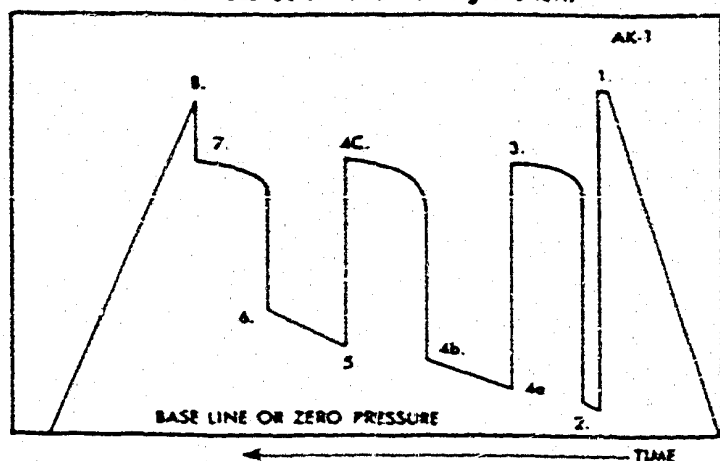
Gulf et al Trout River D-14
Well Name and Description

Test No.

February 22, 1970
Date of Test

GUIDE TO INTERPRETATION AND IDENTIFICATION OF LYNES DRILL STEM TEST PRESSURE CHARTS

AK-1 recorders. Read from right to left.

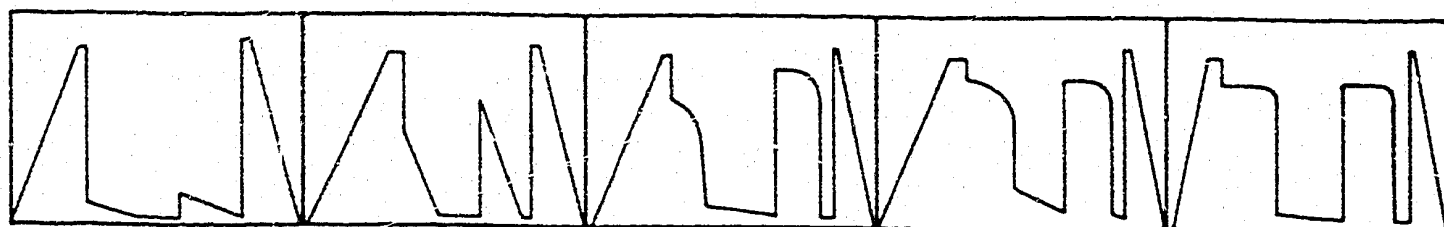


1. INITIAL HYDROSTATIC MUD PRESSURE
2. PRE-FLOW
3. INITIAL SHUT-IN
- 4a. 2nd INITIAL FLOW
- 4b. 2nd FINAL FLOW
- 4c. 2nd SHUT-IN
5. 3rd INITIAL FLOW
6. FINAL FLOW
7. FINAL SHUT-IN
8. FINAL HYDROSTATIC MUD PRESSURE

K-3 recorders. Read from left to right.

N.B. When only two shut-in and flow periods are run, 4a, 4b and 4c are omitted.

Typical charts for visual field analysis ranging from very low to high permeability.



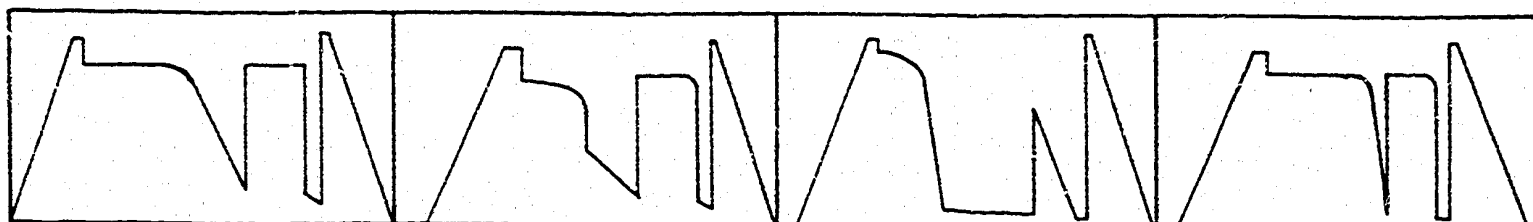
Very low permeability. Usually only mud recovered from interval tested. Virtually no permeability.

Slightly higher permeability. Again mud recovered.

Slightly higher permeability. Small recovery, less than 200' ft).

Average permeability. Final and initial shut-ins differ by 50 psi.

Average permeability. Strong damage effect. High shut-in pressure, low flow pressure.



Excellent permeability where final flow final shut-in pressure.

High permeability where ISIP and FSIP are within 10 psi.

Deep well bore invasion or damage. Final shut-in higher than the initial shut-in.

Tight hole chamber tester. Permeability very difficult to interpret unless the recovery is less than chamber length. Flow pressure builds up rapidly if recovery is large, similar to a shut-in.

GULFLET ALTROUT RIVER

D-14

GULF ET AL TROUT RIVER D-14

D.A. 418

- Tour Reports

Shelf at Front River D-14



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-4 LEASE Gulf east Trout River DATE March 2 19 70
 SEC. D-H T. R. PROVINCE N.W.T. CONTRACTOR Tri City Rig 4

TIME BY
DRILLERS

SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.

TIME CHARGEABLE TO THE COMPANY

FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
1200	1200	2 nd O.C.						
1200	1245	Run feed Plug 1 st 1260						
1245	1330	Lay down pipe						
1330	415	Run in + Run Plug No 2 nd						
415	800	2 nd O.C.						
800	1200	W.O.C.						
1200	1215	Run in @ Feed Plug						
1215	1215	Feed Plug 2 nd @ 1554'						
1215	1200	Lay down pipe						
1200	400	Rig out haps + Rig out Rig						
		Rig Released at 4:00 PM March 2-1970						

DEVIATION
RECORD

DEPTH	SURVEY	DEPTH	SURVEY

TOTAL TIME CHARGEABLE TO THE COMPANY

D/W

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLAPS

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	pH	SAND CONTENT

MUD ADDITIVES:

AMOUNT	TYPE	TIME

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Gulf of Mexico TROUT RIVERDATE MARCH 12 1970SEC. D-14 R. PROVINCE N.W.T.CONTRACTOR TRI-CITY RIG #4

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
TD- 2259- 7 1/2 hole.									
Run P&H plug #1 by HOWCO, from 1750 to 1400 ft with 240 sacks construction sack cement with 2 1/2 cu ft added to water. started mix at 6:30 PM MARCH 1-1970, finish cement at 6:35 PM. Plug in place at 6:45 PM with 15 bbls. mud. Pumped 10 bbls. water chaser cement. Cuske cement slurry 14.6 lb wgt. 9 hrs. Laid down surplus drill pipe pulled out of hole. Run in and got P&H plug at 2:45 AM MARCH 2. found solid cement at 1360 ft. with all weight of drill pipe. Laid down surplus drill pipe pulled out tomorrow in hole to 600 ft. Run P&H plug #2 by HOWCO from 600 to 550 with 72 sacks oil well cement with 2 1/2 cu ft added to water start mix at 4:10 AM MARCH 2-1970 finish mix at 4:15 AM. Plug in place at 4:20 PM with 6 bbls. water. Pumped 2 bbls water chaser cement. Cuske slurry weight 15.4 wgt 9 hrs. Got for plug #2 at 12:30 PM. found solid cement at 550' with all weight of drill pipe. Laid down all drill pipe. Took out BOPs and Times cut off casing bowl 3 ft below ground level. Put 5 sack cement plug in top casing, welded on 30' steel plate and well sign. Disassembled and moved out rig. Rig Released at 4:00 — on MARCH 2-1970									

DEVIATION
RECORD

DEPTH	SURVEY	DEPTH	SURVEY

TOTAL TIME CHARGEABLE TO THE COMPANY

DAY WORK PER 24 HOUR DAY

HRS.	MIN.	HRS.	MIN.	HRS.	MIN.

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT

MUD ADDITIVES:

AMOUNT	TYPE	TIME

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 14 LEASE Highland Forest DATE Feb 25 19 70
 SEC. 4 T. 2 R. 1 PROVINCE AL CONTRACTOR Indy City

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT. INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	1300	Logging							
1300	1400	Run P.D. Logging							
1400	1500	Run Velocity logs							
1500	1600	Logging							
1600	1700	Run P.D. Logging							
1700	1800	Wait on log interpretation							
Run Post Induction Log, S.M.P., P.D.C. and B.H.C.C.C. and Dip meter logs by Schlumberger and velocity survey by INTERPRETER velocity survey S.T.D.									

Run Post Induction Log, S.M.P., P.D.C. and
 B.H.C. and Dip meter logs by Schlumberger
 and velocity survey by INTERPRETATION
 SURVEY LTD.

DEVIATION RECORD

DEPTH	SURVEY	DEPTH	SURVEY

TOTAL TIME CHARGEABLE TO THE COMPANY

HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
04	00				

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT

MUD ADDITIVES:

AMOUNT	TYPE	TIME

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

DEPTH END SECOND TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY'S REPRESENTATIVE

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Gulf et al Trust Riser DATE Feb 27 19 70
 SEC. D-14 T. 1 R. 1 PROVINCE NWT CONTRACTOR TRI CITY Rig Co

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS, TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR. SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY					
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
1200	130	DRILL 7 3/4" Hole						
130	145	SUBMER						
145	500	DRILL						
800	945	DRILL 7 3/4" Hole						
945	1000	Big Spool - big Head & Survey						
1000	1100	DRILL						
1100	415	Rig Service						
415	500	DRILL						
500	600	Casing Connection 111.0						
600	730	Thrust Surveyor Lay Down - install collar						
730	1200	Rig to Log - Logging						

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY					
	2147	10			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
	2212	1 1/4			34	00				

LOGS 1-3

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
6	7 3/4"	4T	410779	23	2259	126	110	10-12	600	1	50	5 1/2"	9-6 1/2-2 3/4"	

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
2nd	4.3	45				
4th	7.2	43	9.1	7/2	10	
1st	9.4	57	7.4	7/2	10	

MUD ADDITIVES:

AMOUNT	TYPE	TIME
2000#	GEL	
100#	LINE	
150#	CAUSER	
200#	FOAMER	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
100#		PELTER			
10#		BELLY			
25#		SHOPOST			

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

DEPTH END SECOND TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY'S REPRESENTATIVE

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-141 LEASE Gulf Star Trout River DATE Feb 26 19 70
SEC. D-14 T. _____ R. _____ PROVINCE N. W. T. CONTRACTOR Tim Pitt D. 4

[illegible]

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY		DAY WORK PER 24 HOUR DAY	
	2054	7/16			34	40		

[illegible]

MUD RECORD:							MUD ADDITIVES:			SWAB CUPS:		OIL SAVER RUBBERS:			
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT	AMOUNT	TYPE	TIME	NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
1200	72	37	1				2200	Gelb		700	Small	SW			
400	91	44	7/2	3/2	10		150	Water		1	Small	SW			
1000	92	44	7/2	3/2	10		50	Water		8	Small	SW			
200							250	Water							

DEPTH/END FIRST TOUR 01/10/14 2082	DEPTH END SECOND TOUR 2114	DEPTH END THIRD TOUR 2141
CONTRACT DRILLER OR WATCHMAN J. L. L. L.	CONTRACT DRILLER OR WATCHMAN M. L. L.	CONTRACT DRILLER OR WATCHMAN J. L. L. L.
TIME CHARGEABLE TO THE COMPANY IS APPROVED J. L. L. L.		
CONTRACTOR'S REPRESENTATIVE	COMPANY'S REPRESENTATIVE	COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. Q-14 LEASE Half Sec Trout River DATE Feb 25 19 70
 SEC. Q-14 T. R. PROVINCE AL WT CONTRACTOR Fair City Rig 4

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS: TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
12 ⁰⁰	3 ³⁰	DRILL 7 3/4" Hole							
3 ³⁰	3 ⁴⁵	SURVEY							
3 ⁴⁵	8 ⁰⁰	DRILL							
8 ⁰⁰	9 ⁰⁰	DRILL 7 3/4" Hole							
9 ⁰⁰	9 ¹⁵	Rig Section Log Closed							
9 ¹⁵	10 ¹⁵	DRILL							
10 ¹⁵	10 ³⁰	SURVEY @ 1991 7/8"							
10 ³⁰	3 ³⁰	DRILL							
3 ³⁰	4 ⁰⁰	Hoist Cor Bit No 4#							
4 ⁰⁰	5 ⁰⁰	DRILL							
5 ⁰⁰	8 ⁰⁰	DRILL 7 3/4" Hole							
8 ⁰⁰	8 ¹⁵	REPAIR HOIST							
8 ¹⁵	12 ⁰⁰	DRILL							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY
	1926	1 1/2		
	1991	7/8		

TOTAL TIME CHARGEABLE TO THE COMPANY		HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
24 00							
DAY WORK PER 24 HOUR DAY		HRS.	MIN.	HRS.	MIN.	HRS.	MIN.

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
4	7 3/4	304NC	71-245	1250	2023	163	14	110	12	600	1	54	5 1/2	7-66-2 3/4
5	7 3/4	DOUJ	18207	2023		28	24	110	12	600	1	54	5 1/2	

MUD RECORD:						
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CANE	PH	SAND CONTENT
7 ⁰⁰	92	43				
1 ⁰⁰	92	42	8.0	7 1/2	10	
10 ⁰⁰	91	40	9.2	7 3/4	9.5	

MUD ADDITIVES:		
AMOUNT	TYPE	TIME
6.66	1000	1000
6.66	1000	1000
6.66	1000	1000
6.66	1000	1000

SWAB CUPS:			OIL SAVER RUBBERS:		
NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

DEPTH END FIRST TOUR		DEPTH END SECOND TOUR		DEPTH END THIRD TOUR	
1977		2023		2051	
CONTRACT DRILLER OR WATCHMAN		CONTRACT DRILLER OR WATCHMAN		CONTRACT DRILLER OR WATCHMAN	
J. E. Russell		J. E. Russell		J. E. Russell	
TIME CHARGEABLE TO THE COMPANY IS APPROVED		TIME CHARGEABLE TO THE COMPANY IS APPROVED		TIME CHARGEABLE TO THE COMPANY IS APPROVED	
CONTRACTOR'S REPRESENTATIVE		COMPANY'S REPRESENTATIVE		COMPANY FOREMAN OR SUPERINTENDENT	



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 244 LEASE Gulf E. 1. Twp. River DATE Feb 24 19 70
 SEC. 2-14T. R. 2 PROVINCE N.W.T. CONTRACTOR City Rig 4

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	245	DRILL 7 7/8" hole							
245	300	Rig Service							
300	430	DRILL							
430	515	11-1/2" C.R. BIT							
515	615	BROCK DOWN CORE P.L.H. Liquidation							
615	700	Rig in mud bit							
700	800	DRILL 7 7/8" hole							
800	900	DRILL							
900	915	Rig Service							
915	300	DRILL 7 7/8" hole							
300	315	Survey @ 1865' 1 1/2"							
315	400	DRILL							
400	545	DRILL							
545	730	TRIP BIT							
730	1300	DRILL							
				</					

DEVIATION RECORD

DEPTH	SURVEY	DEPTH	SURVEY
1865	1 1/2"		

TOTAL TIME CHARGEABLE TO THE COMPANY

D/W

DAY WORK PER 24 HOUR DAY

B.T. RECORD	BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R. P. M.	BIT WEIGHT	PUMP P.A. (GPM)	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
	2	7 7/8"	D-5	910915	1030	1311	181	18	110	16	100	1	50	3 1/2"	250-2 1/2"
	3	7 7/8"	D-5	910919	1211	1220	19	10	110	16	100	1	50	3 1/2"	250-2 1/2"
	4	7 7/8"	D-5	910925	1520	15	33	46	110	16	100	1	50	3 1/2"	250-2 1/2"

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
200	9.0	39				
400	9.0	39				
1000	9.3	39	84	7/32"	9.2	

MUD ADDITIVES:

AMOUNT	TYPE	TIME
2000	Calc	
500	Brine	5 1/2"
50	C.M.C.	
500	S.M.C.	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 9-14 LEASE Gulf Coast Tract Area DATE Feb 23 19 70
 SEC. 9 T. R. PROVINCE W. T. CONTRACTOR City Drilling Co.

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY CAUSE CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	515	CUT CORE NO. 32							
515	600	Pull CORE							
600	630	Recover CORE							
630	645	Start BACKHOLE 2nd							
645	730	Run in w/ BIT							
730	800	Run RAT Hole							
800	915	Run RAT 6 1/4 to 7 7/8 Hole							
915	930	Fig. 8-24 - 50' Used - Check off							
930	1030	DRILL 7 7/8 Hole							
1030	1045	Survey @ 1644' 10"							
1045	400	DRILL 7 7/8 Hole							
400	415	7.0 Survey - Survey							
415	1100	DRILL							
1100	1115	Survey							
1115	1200	DRILL							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY
	1644	10	1770	110
	1707	7 1/2		

TOTAL TIME CHARGEABLE TO THE COMPANY		HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
0/14		24	00				
DAY WORK PER 24 HOUR DAY							

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
2	7 1/2	D.S.T.	9740	1590		76	6 1/2	110	16	100		52	5 1/2	1 - 22
1	5	"				7	7 1/2							

MUD RECORD:						
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
1100	70	44				
400	70	41	7.7		10.0	
900	90	43	7.8		10	
1000	90	38	7.8			

MUD ADDITIVES:		
AMOUNT	TYPE	TIME
1000	WEL	
400	REDEX	
500	SPRINT	

SWAB CUPS:			OIL SAVER RUBBERS:		
NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
11	100	W.T.	W.T.	W.T.	W.T.
40	90	S.L.	S.L.	S.L.	S.L.

DEPTH END FIRST TOUR		DEPTH END SECOND TOUR	DEPTH END THIRD TOUR
1630		1630 TO 1706	1706
CONTRACT DRILLER OR WATCHMAN		CONTRACT DRILLER OR WATCHMAN	CONTRACT DRILLER OR WATCHMAN
J. E. Russell		W. E. Russell	W. E. Russell
TIME CHARGEABLE TO THE COMPANY IS APPROVED		CONTRACTOR'S REPRESENTATIVE	
J. E. Russell		W. E. Russell	
CONTRACTOR'S REPRESENTATIVE		COMPANY'S REPRESENTATIVE	
J. E. Russell		W. E. Russell	
CONTRACTOR'S REPRESENTATIVE		COMPANY FOREMAN OR SUPERINTENDENT	
J. E. Russell		W. E. Russell	



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Gulf of Mexico PROST RIVERDATE Feb-22 1970SEC. D T. 14 R. 1 PROVINCE ALABAMACONTRACTOR TRI-CITY RIG CO

TIME BY DRILLERS

FROM TO

SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS, TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.

TIME CHARGEABLE TO THE COMPANY

WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
HRS.	MIN.	HRS.	MIN.	HRS.	MIN.

TD. 1590. HORN PLATEAU R. DST #1

Rev. DST #1 by Lyons unit in HORN PLATEAU R. from 1520 to 1590 using 7" Dual Bottom hole packers. with 1/2" SS check. No cushion, 5 minutes problem, 60 minutes initial shut in. Tool open 60 minutes commencing at 3:25 PM Feb. 22-1970. 60 minutes final shut in. Had a strong air blow in 5 minutes problem with G.T.S. in 5 minutes. G.T.S. immediately on opening tool on flow period. Mud surge by mud pump. First 15 minutes with 1/2" O.P. = 20.7 MCFD. Changed to 1/2" O.P. gradually increased to 73. MCFD within 50 minutes. & remained steady for rest of test.

Recularity = 312 ft fluid. Bottom 140 ft. in 1/2" O.P. salt. Gas cut mud. Salinity of 13420 PPM. Next 72 ft. 1/2" O.P. & 60 ft. 1/2" O.P. Drilling mud.

1-gal sample at 30 PSI & 30°F. Mud sample 5-0-312 ft. above tool. (Last bottom sample)

THSP. 449P. HSP. FFP 151P 791P B.H.T.

709. 688. 49 97 605 605 85"

Witnessed by Joe Carroll for Contractor & Hemmer for Gulf.

DEVIATION RECORD

DEPTH	SURVEY	DEPTH	SURVEY
-------	--------	-------	--------

TOTAL TIME CHARGEABLE TO THE COMPANY

HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
------	------	------	------	------	------

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	pH	SAND CONTENT

MUD ADDITIVES:

AMOUNT	TYPE	TIME

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Gulf et al Trust River D-14 DATE Feb 22 19 70
 SEC. 4 T. R. PROVINCE W. T. CONTRACTOR T. City Reg.

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY.						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	130	CUT CORE NO. 24							
130	230	CORE CORE							
230	330	Pull CORE							
330	430	RECOVER CORE							
430	515	can stay down CORE 136L							
515	600	Run in w/ BIT							
600	745	Run RPT Hole							
745	800	CORE							
800	815	Rig Setup & hop Mased							
815	1130	CORE & wait FOR TEST							
1130	1215	Wait TO TEST NO. 1.							
1215	130	make up PACKER							
130	215	Run in slow w/ PACKER							
215	400	Head up & Testing							
400	530	TESTING							
530	630	MAKE PACKER							
630	800	RECOVER CORES & LOAD OUT							
800	845	PICKUP CORE 136L							
845	930	Run in							
930	1000	CORE							
1000	1100	CUT CORE - 113							

CORE 113 1550 TO 1590 CUT W/ RECOVER 40'
 CORE 113 1590 TO 1630 CUT W/ RECOVER 40'

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY		DAY WORK PER 24 HOUR DAY	
					HRS.	MIN.	HRS.	MIN.
					24	00		

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
1	1 1/2	A	9740	1590	1590	40	2	80	16	550	1	35	5 1/2	7.00-23
2	2 1/2	A	9740	1590	1590	40	2	80	16	550	1	35	5 1/2	7.00-23
3	3 1/2	A	9740	1590	1590	40	2	80	16	550	1	35	5 1/2	7.00-23

MUD RECORD:						MUD ADDITIVES:			SWAB CUPS:			OIL SAVER RUBBERS:		
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	AMOUNT	TYPE	TIME	NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
12	42					50%	CMC							
90	40					900%	WCL							
20	42	85	2 1/2	95		4%	REMY							
100	44	102	2 1/2	95		2%	SILICONE							

DEPTH END FIRST TOUR _____ DEPTH END SECOND TOUR _____ DEPTH END THIRD TOUR _____
 CONTRACT DRILLER OR WATCHMAN _____ CONTRACT DRILLER OR WATCHMAN _____ CONTRACT DRILLER OR WATCHMAN _____
 TIME CHARGEABLE TO THE COMPANY IS APPROVED _____
 CONTRACTOR'S REPRESENTATIVE _____ COMPANY'S REPRESENTATIVE _____ COMPANY FOREMAN OR SUPERINTENDENT _____



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 0-14 LEASE Cuba Star Tr. & Power DATE Feb 21 19 60
 SEC. 14 T. R. PROVINCE Miss CONTRACTOR Tr. & Power Co., Inc.

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	800								
800	815								
815	930								
930	1030								
1030	1145								
1145	1150								
1150	1230								
1230	315								
315	345								
345	400								
400	420								
420	445								
445	545								
545	630								
630	700								
700	1200								

CORING - 1424 TO 1509 - 45 REAMER & 4567.

D/W

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY					
	1550	1 1/2			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
					34	00				
					DAY WORK PER 24 HOUR DAY					

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
2	6 1/2	D	11208	1424	1509	45	11							
3	2 1/2	D	910915	1424	1530	42	3							
4	1 1/2	D	9740	1530	16	30	5	80	16	150	1	25	3/2	9-66-40-18

MUD RECORD:						MUD ADDITIVES:			SWAB CUPS:			OIL SAVER RUBBERS:		
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	AMOUNT	TYPE	TIME	NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
1200	4.4	40				1700	600							
1500	4.2	40	8.6	7/2	8.5	50	1000							
1600	4.0	45	9.2	7/2	11.0	8	1000							
						342	1000							

DEPTH END FIRST TOUR					DEPTH END SECOND TOUR					DEPTH END THIRD TOUR				
1507					1550					1580				
CONTRACT DRILLER OR WATCHMAN					CONTRACT DRILLER OR WATCHMAN					CONTRACT DRILLER OR WATCHMAN				
TIME CHARGEABLE TO THE COMPANY IS APPROVED					TIME CHARGEABLE TO THE COMPANY IS APPROVED					TIME CHARGEABLE TO THE COMPANY IS APPROVED				
CONTRACTOR'S REPRESENTATIVE					COMPANY'S REPRESENTATIVE					COMPANY FOREMAN OR SUPERINTENDENT				



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 214 LEASE GULF ETAL TRUSTDATE Feb 20 19 70SEC. 5 T. 1 R. 1 PROVINCE ALABAMACONTRACTOR T. C. T. Drilling Co.

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	1215	Rig Service							
1215	215	DRILL 7 1/2" hole							
215	230	SURVEY							
230	515	DRILL							
515	535	SURVEY							
535	715	DRILL							
715	720	SURVEY							
720	800	DRILL							
800	845	DRILL							
845	900	Rig Service & bops closed							
900	1000	DRILL							
1000	1015	SURVEY @ 1329 2°							
1015	1200	DRILL							
1200	1215	RUN TANK Dumps clean Tanks							
1215	1300	DRILL							
1300	1315	SURVEY @ 1342							
1315	345	DRILL							
345	400	SURVEY @ 1455							
400	415	Rig Service							
415	445	DRILL							
445	500	DRILL SAMPLE							
500	615	HOIST BIT							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY
	1140	1 1/4	1329 2°	
	1203	2 1/4	1392	1 1/4

1455 1 1/4

TOTAL TIME CHARGEABLE TO THE COMPANY

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER	SIZE	DRILL COLLAR
1	2 1/2	S25T	11261	1146 3/4	1163 1/2	849	27 1/2	140	4-10	6.50	1	12	3	1-6 1/2	2 1/2	

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
20	84	30				
10	78	10				

MUD ADDITIVES:

AMOUNT	TYPE	TIME
100#	B. L. 200#	
400#	SODIUM	
3400#	Water	
14#	REVEY	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 73-14 LEASE 6-22-1914 7-24-1914

DATE FEB 20 19 70

SEC. _____ T. _____ R. _____ PROVINCE _____

CONTRACTOR Robert A. 4

[illegible]

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY						
					TOTAL TIME CHARGEABLE TO THE COMPANY					
					DAY WORK PER 24 HOUR DAY					
					HRS.	MIN.	HRS.	MIN.	HRS.	MIN.

[illegible]

MUD RECORD:						
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
10 ⁰⁰	9.2	43	7.9	2/32	8.5	

MUD ADDITIVES:		
AMOUNT	TYPE	TIME
50 ^{KG}	CLAY	
1500	SOLVENT	

[illegible]

DEPTH END FIRST TOUR	DEPTH END SECOND TOUR	DEPTH END THIRD TOUR
CONTRACT DRILLER OR WATCHMAN	CONTRACT DRILLER OR WATCHMAN	CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

[Signature]
COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 1744 LEASE LOUISIANA STATE LAND DATE FEB 18 1970

SEC. 1 T. 1 R. 1 PROVINCE LOUISIANA CONTRACTOR DRILLING

TIME BY DRILLERS

SHOW COMPLETE CASING, CORING AND SLOPE TEST LOGS AND ALL DELAYS OR LOST TIME WITH REASONS. DRILLERS ACCOUNT FOR 24 HOURS OF THE DAY, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS, TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR. SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.

TIME CHARGEABLE TO THE COMPANY

FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
9:15	9:30	SURVEY						
9:30	11:45	DRILL						
11:45	12:00	SURVEY						
8:00	8:45	DRILL						
9:00	9:30	DRILL						
9:30	9:45	DRILL						

DEVIATION RECORD

DEPTH	SURVEY	DEPTH	SURVEY
1077	1 1/2		

TOTAL TIME CHARGEABLE TO THE COMPANY

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
1	4 1/2	3275	90855											

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
11:30	90	30				

MUD ADDITIVES:

AMOUNT	TYPE	TIME
--------	------	------

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
--------	------	------	--------	------	------

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Quartz Creek Tract Rice DATE Feb 19 19 70
 SEC. 12-4 T. 1 R. 1 PROVINCE ALABAMA CONTRACTOR Tri City Drilling Co.

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
12 ⁰⁰	12 ¹⁵	Rig set							
12 ¹⁵	12 ⁴⁵	Pressure behind Rams Service							
12 ⁴⁵	1 ³⁰	Run in W.P.T.							
1 ³⁰	2 ¹⁵	Pressure Rams Service & Hydrofracturing							
2 ¹⁵	3 ⁰⁰	work done							
3 ⁰⁰	3 ³⁰	Drilling out							
3 ³⁰	4 ¹⁵	Red mud plug 1 5-15 in W.P.T.							
4 ¹⁵	4 ⁴⁵	clean casing tank							
4 ⁴⁵	5 ³⁰	Drilling out							
5 ³⁰	7 ³⁰	Trailing plugged bit							
7 ³⁰	7 ⁴⁵	Drilling out							
8 ⁰⁰	8 ¹⁵	Big 8-11							
8 ¹⁵	9 ⁰⁰	Drill out & Displace Hole w/ water							
9 ⁰⁰	9 ¹⁵	P.S.I. 150# Formation For 5 min							
9 ¹⁵	11 ¹⁵	Drill 7 7/8 Hole							
11 ¹⁵	11 ³⁰	Survey @ 699' 1 1/2"							
11 ³⁰	4 ⁰⁰	Drill 7 7/8 Hole							
4 ⁰⁰	4 ¹⁵	Survey - 699' 1 1/2"							
4 ¹⁵	6 ³⁰	Drill							
6 ³⁰	6 ⁴⁵	Survey							
6 ⁴⁵	9 ¹⁵	Drill							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY					
	679	1 1/2° 751	2°		24	00				
	788	2 1/4			DAY WORK PER 24 HOUR DAY					

B.T. RECORD	BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
	1	7 7/8	S215	94755					140	6-8	650	1	60	3 1/2	9 1/2 1/2 1/2

MUD RECORD:						MUD ADDITIVES:			SWAB CUPS:			OIL SAYER RUBBERS:		
TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	AMOUNT	TYPE	TIME	NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE
27m	9.6	30				200	Burcol	9.50						
47m	9.5	30				LINE	125							
10	9.5	30					12							

DEPTH END FIRST TOUR	DEPTH END SECOND TOUR	DEPTH END THIRD TOUR
CONTRACT DRILLER OR WATCHMAN	CONTRACT DRILLER OR WATCHMAN	CONTRACT DRILLER OR WATCHMAN
TIME CHARGEABLE TO THE COMPANY IS APPROVED		
CONTRACTOR'S REPRESENTATIVE	COMPANY'S REPRESENTATIVE	COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE Gulf State Farm River - D-14 DATE Feb 15 1970
 SEC. D-14 T. _____ R. _____ PROVINCE N. W. CONTRACTOR Tri City Drilling Co. Inc.

TIME BY DRILLERS

SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.

TIME CHARGEABLE TO THE COMPANY

FROM	TO							
			WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
1200	1230	Run csg						
1230	1300	Circ csg						
1300	1400	Cement csg						
		WOC						
800	200	WOC						
200	300	cut conductor pipe back						
300	400	off landing - cut collar						
400	1200	Head up logs						
		Head up						

DEVIATION RECORD

DEPTH	SURVEY	DEPTH	SURVEY

TOTAL TIME CHARGEABLE TO THE COMPANY

DAY WORK PER 24 HOUR DAY

D/W

HRS. MIN. HRS. MIN. HRS. MIN.

34 00

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT

MUD ADDITIVES:

AMOUNT	TYPE	TIME
200	SHUWAST	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

DEPTH END SECOND TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY'S REPRESENTATIVE

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-44 LEASE Chick Creek DATE Feb 17 19 69
 SEC. 2 T. 1 R. 1 PROVINCE LA CONTRACTOR W. J. Smith

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE, OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
12 ⁰⁰	12 ¹⁵	Drill 12 ¹⁵ bit							
12 ¹⁵	12 ³⁰	Rig case							
12 ³⁰	1 ⁰⁰	Drill 12 ³⁰ bit							
1 ⁰⁰	1 ¹⁵	Drill							
1 ¹⁵	1 ³⁰	Pull out							
1 ³⁰	1 ⁴⁵	Rig to 12 ³⁰ bit							
1 ⁴⁵	2 ⁰⁰								
2 ⁰⁰	10 ³⁰	Run 12 ³⁰ bit							
10 ³⁰	11 ⁰⁰	Haist 12 ³⁰ bit							
12 ⁰⁰	2 ³⁰	Run up to 12 ³⁰ bit							
2 ³⁰	3 ³⁰	Run up on 12 ³⁰ bit							
3 ³⁰	4 ⁰⁰	Run 12 ³⁰ bit							

DEVIATION RECORD	DEPTH		SURVEY		TOTAL TIME CHARGEABLE TO THE COMPANY	DAY WORK PER 24 HOUR DAY	TIME CHARGEABLE TO THE COMPANY					
	DEPTH	SURVEY	DEPTH	SURVEY			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
							24	00				

BITH NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	WIRE RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
1	1/2	12 ³⁰	12 ³⁰	945		7	4	120	12	200	1	35	5	1 1/2 23

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
1 ⁰⁰	4.5	5				
2 ⁰⁰	4.5	100				
3 ⁰⁰	9.7	77				

MUD ADDITIVES:

AMOUNT	TYPE	TIME
100	900 ²	
100	7 ²	
100	50 ²	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR		DEPTH END SECOND TOUR		DEPTH END THIRD TOUR	
1	6.15			6.15	
CONTRACT DRILLER OR WATCHMAN		CONTRACT DRILLER OR WATCHMAN		CONTRACT DRILLER OR WATCHMAN	
TIME CHARGEABLE TO THE COMPANY IS APPROVED					
CONTRACTOR'S REPRESENTATIVE		COMPANY'S REPRESENTATIVE		COMPANY FOREMAN OR SUPERINTENDENT	

WELL NO. D-14 LEASE 1/15 of 1/4 TRACT R-100

SEC. 12 T. 14 R. PROVINCE N. W. T.

DATE Feb-17-1970 19
CONTRACTOR P.S. 1, H 4

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
WUC	TD-61546	12' 4" hole 17' casing.							
Run	19 ft. 95' 0" 3 1/2" SRT. J-55-R-2	LT 26 CLASS H casing							
Using	95' 600 SRTS SRT on casing	Bevel.							
Total Tally	608.57	Toss Cuff. Net Tally 595.75 ft.							
Spent Elevation	787.8 ft.	Dist Spent to R.B. 11.50 ft							
R.B.E	799.5 ft.	Run 4 Taper Controlizers							
with	locking float shoe and float collar.	Top and Bottom plugs.							
Circ.	7000	1' 1/2" loss per foot to cementing at 2nd break							
Revised	100	casing on 35 ft strike for 60 mins							
and	20 ft strike for 20 mins	while cementing.							
Pump	20 bbls water	and cement							
with	20 sacks	oil well cement with 20 sacks							
start	mix at 3:30 AM	Feb. 14-72							
at	3:30 AM	with 4000 water pump							
Pump	play to 573 ft.	average slope at 1123							
Run	4.5 bbls	instant cement							
Go	1	second 4 samples							
to	run	top hole							
Supply	19 ft	hole 10							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY	TOTAL TIME CHARGEABLE TO THE COMPANY	HRS.	MIN.	HRS.	MIN.	HRS.	MIN.
DAY WORK PER 24 HOUR DAY											

[illegible][illegible]

MUD ADDITIVES:		
AMOUNT	TYPE	TIME

[illegible]

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. 5-11 LEASE 5-11 DATE 1971
 SEC. 2 T. 1 R. 1 PROVINCE Alaska CONTRACTOR 11871

TIME BY DRILLERS		SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS. TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR, SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.	TIME CHARGEABLE TO THE COMPANY						
FROM	TO		WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER		
			HRS.	MIN.	HRS.	MIN.	HRS.	MIN.	
1200	115	DRILL 12 1/2 H.L.C.							
115	130	Rig 5000							
130	300	DRILL							
300	315	SURVEY							
315	415	TRIP FOR BIT T.J. H.L.C.							
415	445	DRILL 12 1/2 H.L.C.							
445	715	DRILL 12 1/2 H.L.C.							
715	730	SURVEY							
730	700	DRILL							
900	900	DRILL							
900	915	Rig 5000							
915	1200	DRILL							
1200	1230	SURVEY - mix mud							
1230	300	DRILL							
300	400	HOIST TO CHANGE BIT & MEASURE							
400	300	DRILL							
530	645	DRILL							
645	730	DRILL							
730	800	DRILL							
800	1115	DRILL							
1115	1130	SURVEY							
1130	1200	DRILL							

DEVIATION RECORD	DEPTH	SURVEY	DEPTH	SURVEY
	356	1 1/2	513	7/8
	450	1 1/2	607	1 1/8

TOTAL TIME CHARGEABLE TO THE COMPANY

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS. RUN	R.P.M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S.P.M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
11	1 1/2	RT	900411	3	250	250	14	14	10	1000	1	70	5	2 1/2
3A	12 1/2	OS-3	RT	545		189	9 1/2	160	10	1000	1	70	5	2 1/2

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
1200	9.0	30				
100	7.1	34				
110	9.5	55				

MUD ADDITIVES:

AMOUNT	TIME
Cell 400	6000
Caustic 500	500
1.000	3000
THUNDER 1000	

SWAB CUPS:

NUMBER	SIZE	TYPE

OIL CASTER RUBBERS:

NUMBER	SIZE	TYPE

DEPTH END FIRST TOUR

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

DEPTH END SECOND TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY'S REPRESENTATIVE

DEPTH END THIRD TOUR

CONTRACT DRILLER OR WATCHMAN

COMPANY FOREMAN OR SUPERINTENDENT



DRILLING CONTRACTOR'S DAILY REPORT

WELL NO. D-14 LEASE GULF AR TREST DATE Feb 15 1920
 SEC. D T. 14 R. 1 PROVINCE UNT CONTRACTOR TR City Rig 4

TIME BY
DRILLERS

SHOW COMPLETE CASING, CORING AND SLOPE TEST RECORDS AND ALL DELAYS OR LOST TIME, WITH REASONS. DRILLERS ACCOUNT FOR FULL 24 HOURS ON THE LEFT, INDICATING CLEARLY EACH CHANGE IN DRILLING OPERATIONS, TOOL PUSHER, OR OTHER REPRESENTATIVE OF CONTRACTOR. SHOW ON THE RIGHT ALL TIME CHARGEABLE TO THE COMPANY ON A DAY WORK BASIS. INVOICE MUST CHECK WITH TIME SHOWN ON THE RIGHT.

TIME CHARGEABLE TO THE COMPANY

WITH DRILL PIPE		WITHOUT DRILL PIPE		OTHER	
HRS.	MIN.	HRS.	MIN.	HRS.	MIN.

FROM	TO	
12 ⁰⁰	1 ³⁰	DRILL RPT Hole 3rd Driller
1 ³⁰	2 ⁰⁰	Rig up to 5000 ft
2 ⁰⁰	2 ¹⁵	1st Driller
2 ¹⁵	12 ⁴⁵	DRILL 12 1/4 Hole
12 ⁴⁵	1 ⁰⁰	SURVEY @ 71 1/2
1 ⁰⁰	4 ⁰⁰	DRILL
4 ⁰⁰	4 ¹⁵	P.O. SERVICE
4 ¹⁵	4 ⁴⁰	DRILL 12 1/4 Hole
4 ⁴⁰	5 ¹⁵	DRILL
5 ¹⁵	5 ⁴⁰	DRILL
5 ⁴⁰	6 ⁰⁰	DRILL
6 ⁰⁰	10 ⁰⁰	DRILL
10 ⁰⁰	11 ⁰⁰	DRILL

SPUD - 8:15 AM Feb 15

DEVIATION
RECORD

DEPTH	SURVEY	DEPTH	SURVEY
71	1/2	264	1/4
141	3/4		

TOTAL TIME CHARGEABLE TO THE COMPANY

24 00

DAY WORK PER 24 HOUR DAY

BIT NUMBER	SIZE	TYPE	SERIAL NUMBER	DEPTH IN	DEPTH OUT	FOOTAGE DRILLED	HRS RUN	R. P. M.	BIT WEIGHT	PUMP PRESSURE	PUMP NO.	S. P. M.	LINER SIZE	NUMBER AND SIZE DRILL COLLARS
1	12 1/4	SA	90407	0										
1 A	12 1/4	SA	90407	0		152 7/8	120	10	75			76	5 1/2	9, 10, 11
			90407	0		293 1/4	140	11	75	1				

MUD RECORD:

TIME	WEIGHT	VISCOSITY	WATER LOSS	FILTER CAKE	PH	SAND CONTENT
12 ⁰⁰	5.7	31				

MUD ADDITIVES:

AMOUNT	TYPE	TIME
1.000	1.000	
2.000	2.000	
1.000	1.000	

SWAB CUPS:

NUMBER	SIZE	TYPE	NUMBER	SIZE	TYPE

OIL SAVER RUBBERS:

DEPTH END FIRST TOUR

DEPTH END SECOND TOUR

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

CONTRACT DRILLER OR WATCHMAN

TIME CHARGEABLE TO THE COMPANY IS APPROVED

CONTRACTOR'S REPRESENTATIVE

COMPANY'S REPRESENTATIVE

COMPANY FOREMAN OR SUPERINTENDENT

