

ATLANTIC CIRCLE RIVER

NO. 1

K-47

Drilling Authority No.

Date Issued

WELL NAME Atlantic Circle River No. 1 K-7

FIELD Wildcat

Area: Port Good Hope

LOCATION: Unit K

Section 07

Grid 66-80/139-10

Latitude 00°26'36" N.

Longitude 130°08'50" W.

From Established Reference Marker

Rig Release Date: 25-2-61

Status D & A

Information Release Date 25-2-63

CHANGE OF NAME:

DATE RECEIVED	INDEX
	Application for a Drilling Authority. Well Completion Data. Well History Report. Application to Amend a Drilling Authority. Application to change a Well Name. 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. Application to Commingle Production before Measurement. Approval to Commingle Production before Measurement. Application to Amend Approval No. to Commingle Production before Measurement. Application for M.P.R.—Oil. New Oil Well Report. New Gas Well Report. Well Inspection Report. Rig Inspection Report. Battery Inspection Report. Field Abandonment Programme and Approval. Well Card. Well Visit. Daily Drilling Reports.

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NORTHERN ADMINISTRATION BRANCH

RESOURCES DIVISION

For the period from 1-26-61
to 2-25-61

REPORT of ~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
of a Well
ABANDONMENT

Permit No. 1295

Name of well Atlantic Circle River No. 1 Lease No.
Registered owner The Atlantic Refining Company Drilling Company Tri-City Drilling Co. Ltd.
Location 66° 26' 30" N. Lat. 130° 08' 50" N. Long.
Survey description, if available 171, 833.33' W and 8,324.68' S of Triangulation Station "Loon"; 213, 968.33' W and 75,182.56' N of Triangulation Station "Peel"
Elevation: Ground 287' Last previous depth 2660'
Kelly bushing 295' Present depth 2660'
Spudded 1-26-61 Finished drilling 2-23-61 Rig Released
2-25-61

Deviations from vertical 125' - 1/2°, 240' - 1°, 520' - 3/4°, 830' - 1°, 1325' - 1-1/2°
1667' - 1-1/4°, 1800' - 1-3/4°, 1890' - 1/2°, 2200' - 1-1/2°

CASING RECORD

Date	Size O.D.	Weight lbs/ft	Grade	Set at feet	Sacks Cement	Top of Cement
1 1-28-61	7"	20	J-55	236	75 - 1/2	CsCl2 Surface
2...	.....	.....	.....	.....	.....	.....
3...	.....	.....	.....	.....	.....	.....
4...	.....	.....	.....	.....	.....	.....

TUBING RECORD

Size	Wt.Lbs/foot	Grade	Amount	Landed Depth	Remarks
.....					
.....					

Wellhead(Manufacturer).....(Size).....(Series)

Producing Zone and formation

Cord intervals . . . none

Interval logged: ^{Ind.} E-log 2652-2752 Other logs same as 2652-2752 .

R-log

M-log ~~cal 2651 - 2652~~

Velocity log ~~26524 - 2850~~

The above logs ~~(are)~~
(will be) submitted in accordance with Section 65 of the Regulations.

[illegible]

(If space insufficient, attach further sheet)

(Strike out the non-applicable) (Completion) (Rework) (Recompletion)

Perforations Bullet

Shootings

Hydraulic fracturing

Chemical treatment

Date initial production tests

Initial production data

Pumping or flowing
Plug back
Other
.
.
.
.

CEMENT PLUGS SET

<u>Date</u>	<u>Plug set at</u>	<u>Sacks cement</u>	<u>Method</u>	<u>Top found at</u>
2/24/61	2660' - 2560'	30	Disp.	2560' Not felt
2/24/61	1800' - 1700'	35 1/2 bbls C&G12	Disp.	1695' ✓
2/24/61	285' - 185'	10 1/2 bbls C&G12	Disp.	183' ✓
.				
.				

Washed well samples ~~have been~~ sent to Geological Survey of Canada, Calgary
will be

Cores will be stored at

Core analysis (was made) of the Intervals
(to be made)

Oil analysis (was made) of the Intervals.
(to be made)

Gas analysis (was made) of the Intervals.
(to be made)

Water analysis (was made) of the Intervals.
(to be made)

The above analyses (see)
(will be) submitted in accordance with Section 70(2) of
the Regulations.

ADDITIONAL DETAILS AND COMMENTS

Cut off surface casing below ground level, plugged top and welded on plate.
Welded onto casing 2" pipe, projecting 1' above ground, and marked with
electric weld to read "Atlantic Circle River No. 1".
.
.

Signed.  Address 11802- 12th St., Edmonton . .

Date March 1, 1961.

(To be submitted in triplicate in accordance with Sections
68, 69, 70 and 71, of the Territorial Oil and Gas Regulations
to the Oil Conservation Engineer at Calgary, Alberta.)

FORM "C"

C A N A D A

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NORTHERN ADMINISTRATION BRANCH

RESOURCES DIVISION

ABANDON

NOTICE OF INTENTION TO

or

a Well

~~SUMMIT DRILLING~~

(Strike out operation which does not apply)

In accordance with Sections 43 & 49 of the Territorial Oil and Gas Regulations, notice is hereby given of our intention to

..... ~~ABANDON~~ the well named ~~Atlantic Circle River No. 1~~ on Oil

and Gas Permit No. ~~1295~~.

Registered in the name of ~~The Atlantic~~

Lease No.

~~Refining Company~~

Depth ~~2660~~ .. feet. Elevation above sea level: Ground surface .. ~~287~~ .. ft.

Kelly bushing .. ~~295~~ .. ft.

Location . ~~66° 26' 38"~~ .. N. Lat. . ~~120° 08' 50"~~ .. W. Long.

..... (N. of S. boundary) (Permit No.)
 (S. of N. boundary) of (Lease No.)
 (W. of E. boundary) of (Permit No.)
 (E. of W. boundary) (Lease No.)

Survey description, if available ~~171,833.33' W and 8, 384.68' S of Triangulation Station "Lean"; 213,968.33' W and 75, 482.56' N of Triangulation Station "Pool"~~

CASING RECORD

Size C.D. inches	Weight lbs/ft	Grade	Amount feet	Set at feet	Sacks cement	Method	to be withdrawn
1 . . 7"	.2	J-55	.226	.236	75-1-16	Cement Plug	No.
2							
3							
4							

OIL, GAS AND WATER

Oil from feet to feet From feet to feet with
 sacks cement

Oil from feet to feet From feet to feet with
 sacks cement

Gas from feet to feet From feet to feet with
sacks of cement.

Gas from feet to feet From feet to feet with
sacks of cement.

Water from ~~2144~~ . . feet to ~~2153~~ . . feet From ~~50~~ . . feet to ~~50~~ . . feet with ~~35~~ . .
(Bear Rock) (1800' to 1700')
sacks cement. + $\frac{1}{2}$ CaCl₂.

Water from ~~2376~~ . . feet to ~~2425~~ . . feet From ~~2660~~ . . feet to ~~2560~~ . . feet with ~~30~~ . .
(Bear Rock) sacks cement.

Surface and bottom plugs:

1. from ~~2660~~ . . feet to ~~2560~~ . . feet with ~~30~~ . . sacks cement.
2. from ~~1800~~ . . feet to ~~1700~~ . . feet with ~~35~~ . . sacks cement. + $\frac{1}{2}$ CaCl₂.
3. from . ~~215~~ . . feet to ~~185~~ . . feet with ~~40~~ . . sacks cement. + $\frac{1}{2}$ CaCl₂.

Date of last operation . Feb. 25, 1961 Total depth ~~2660~~

Nature of liquid left in well Drilling Mud . . . Level from surface . 0
on suspension or abandonment

The following logs will be
have been run Induction ES 2651' - 235',

. ~~Gamma Sonic - 2652-235', Microlog-Cal 2655'-235', Velocity~~
Survey

Produced from zone and
on abandonment of a well which has been on production.

Present condition of well in addition to above

On abandonment or suspension of drilling we shall comply with Sections 68, 69 and 70 of the Regulations.

Program of operation not included above ~~Feet for Plugs #2 and #1 and bring up if~~
~~necessary. Cut off surface casing below ground level, plug top and weld on plate.~~
~~Weld on 2" pipe projecting 4" above ground to mark well location. Permanently mark~~
~~well name on marker pipe.~~

Responsible agents of permittee or lessee in charge of operation:

At well . W. K. Walters Postal address 11803-12th St., Edmonton, Alta

At registered office . R.G. Edmonton Postal address 444-7th Ave. W., Calgary, Alta.

It is understood that if changes in this Notice of Intention become necessary we will promptly notify you.

dated at . . Edmonton . . this . . 1st . . day of . . March 1961 .

Signed by . . *[Signature]*

This program is approved subject to the following provisions

... Confirming oral approval given to abandon on 23rd February.
.....
.....
.....

2 March, 1961.
.....
Date

..... *B. J. Shaw*
Oil Conservation Engineer

(To be submitted in triplicate to the Oil Conservation
Engineer at Calgary, Alberta.)

FORM "A"

C A N A D A

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

NORTHERN ADMINISTRATION BRANCH

RESOURCES DIVISION

NOTICE OF INTENTION TO BEGIN DRILLING OPERATIONS

or

TO CARRY OUT A STRUCTURE TEST PROGRAM

57

Canada

In accordance with Section ~~66~~ of the ~~Territorial~~ Oil and Gas Regulations, notice is hereby given of our intention to begin drilling a well on Oil and Gas Permit No. ~~1295~~ registered in the name of Lease No.

The Atlantic Refining Company

TYPE OF WELL:

Wildcat ☒

Development

Expected total depth 2,500 feet, in the Silurian-Ordovician formation of Silurian-Ordovician age.

The well will be located at 66° 26' 38" N. Lat. 130° 08' 50" W. Long.

..... (N. of S. boundary) (Permit No.)
 (S. of N. boundary) of (Lease No.)
 (W. of E. boundary) of (Permit No.)
 (E. of W. boundary) (Lease No.)

Sec. 47 Unit X.

Survey description of Location, if known

Approximate surface elevation of 287 feet above sea level.

Name of well Atlantic Circle River No. 2

Type of drilling rig Rotary Drilling 2500

Expected date of commencement January 20, 1961

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

Size O.D. Inches	Weight lbs/ft	Grade	Brand	New or Used	Estimated Depth	Sacks of Cement
1. 7"	20	J-55	Nat. Tube	New	250'	50 sack + 4% CaCl ₂
2. 4-1/2"	9.5	J-55	Page Hersey	New	2500'	170 sack + 4% CaCl ₂ + 100 sack Neat
3. ....	....	....	....	....	....	....

Expected depth of water, gas and oil horizons and method of control:
All horizons to be controlled with drilling mud of adequate weight,
BOPs, 1 - 8" Series 600 Hydril and 1 - 8" Series 600 Double Guiberson
ram type with 3-1/2" C. 5-0 Rams.

will will
An electric log be run Other logs be run
~~will not~~ ~~will not~~

STRUCTURE TEST PROGRAM

Proposed number of holes Maximum well depth
enclosed within an area bounded by

. N. Latitudes

. W. Longitudes

will will
An electric log be run Other logs be run
will not will not

Name and address of drilling contractor . Tri City Drilling Company Ltd. .
11903 Kingsway .
Edmonton, Alberta .

Responsible agents of permittee or lessee in charge of operation:

At well . W. K. Walters Postal address #204 11802 - 124th St., Edmonton
Alberta

At registered R. G. Simonton Postal address #204 11802 - 124th Street,
office Edmonton, Alberta

It is understood that if changes in this Notice of Intention become
necessary we will promptly notify you.

Dated at Edmonton this 11th day of January 19 61

Signed by *R. G. Simonton*
R. G. Simonton

This program is approved subject to the following provisions (if any):

Because of the delays which will be caused by the remoteness of your . .
operation in furnishing the daily drilling reports each week to my office,
oral, or if preferred, written reports on the progress of the well are to
be sent based on the daily reports you receive by radio.

13 January, 1961.

Date

B. H. Shown
Oil Conservation Engineer.

(To be submitted in triplicate to the Oil Conservation Engineer at
least 15 days prior to the commencement of drilling)



File No.
Drilling Authority No. 96

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

OIL AND MINERAL DIVISION

WELL-SITE INSPECTION REPORT

FROM: Field Office or Area: Norman Wells Date: 11th July 1971

TO: The Oil Conservation Engineer:

RE: Atlantic Circle River No. 1 66-72-140-00

Location: 66°26'38"N., 130°08'50" W. Status: D & A February 1961

This location was inspected by the undersigned on 11th July 1971

The location is in satisfactory/~~satisfactory~~ condition. T.D. 2660'

The following items require attention:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Other comments and recommendations: (Include Map, if necessary for clarity)

Completely grown over
Very clean

Inspected by *M. D. Thomas*

Original to Oil Conservation Engineer, Dept of IA & ND, Duplicate to Field Office or Inspecting Engineer.
IAND 52-90-14 (9-69)

M. D. Thomas
District 2

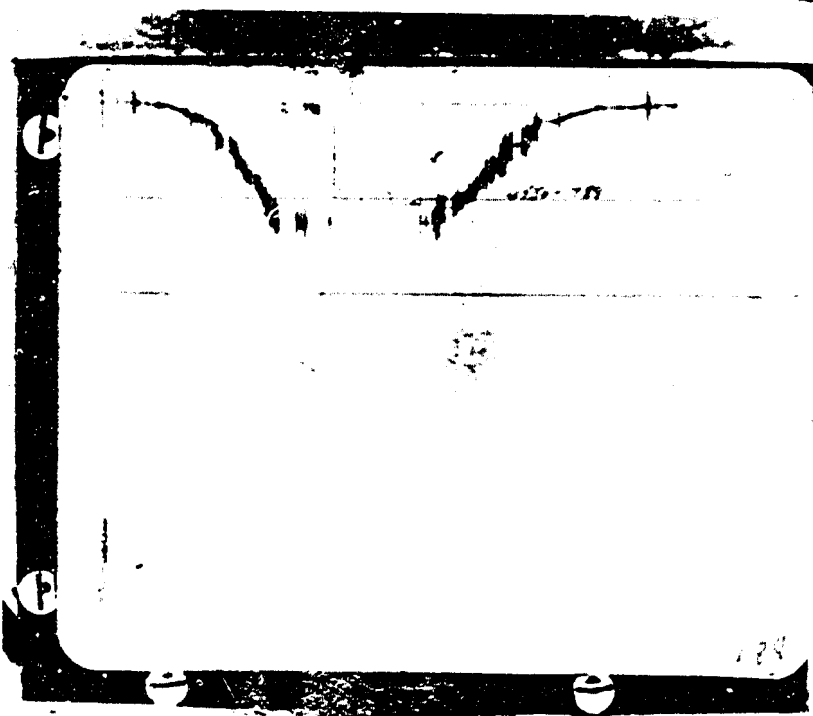
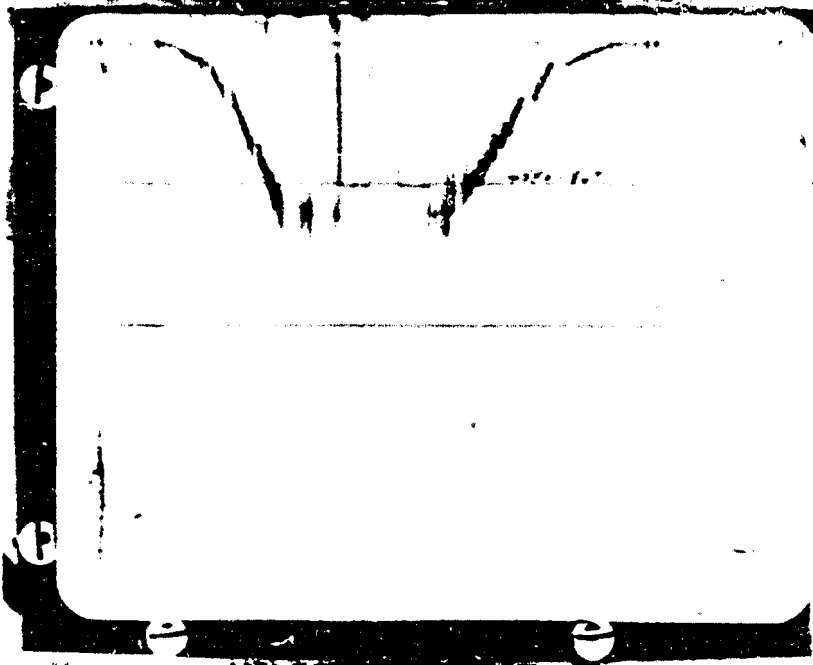
ATLANTIC CIRCLE RIVER NO. 1

Northwest Territories

Test No. 3

NAME

No.



Time		PSI							
Initial Hydro Mod Pressure		1019	Ticket No. 4550						
2	Initial Flow	108							
	Final Flow	139							
2 minutes		139	Lease CIRCLE RIVER						
Initial Closed In Pressure		30 minutes	1025	Well No. #1		Test No. 3			
24	Initial Flow	200	ST No. 367		Depth 2367				
	Final Flow	930	12		Mr. Clark No. 3342				
	30 minutes	930							
Final Closed In Pressure		31 minutes	1025	Temperature Corrected to		100°		° F	
Final Hydro Mod Pressure		1209							
1st Flow Pressure			Initial CIP		2nd Flow Pressure		Final CIP		
	Time Diff. .000"	PSI Temp. Corr.	Time Diff. .000"	PSI Temp. Corr.	Time Diff. .000"	PSI Temp. Corr.	Time Diff. .000"	PSI Temp. Corr.	
P0	.000	103	.000	139	.000	200	.000	930	
P1	.005	140	.019	1022	.041	421	.021	1021	
P2	.010	139	.033	1024	.062	615	.042	1022	
P3			.057	1025	.123	761	.063	1023	
P4			.076	1025	.164	861	.064	1024	
P5			.095	1025	.205	930	.105	1024	
P6			.114	1025			.126	1024	
P7			.133	1025			.147	1024	
P8			.152	1025			.163	1025	
P9			.171	1025			.183	1025	
P10			.190	1025			.210	1025	
1	Minute Intervals		3.0	Minute Intervals	6	Minute Intervals	3.1	Minute Intervals	

Remarks:

		Time	PSI					
Initial Hydro Mud Pressure			1250	Ticket No. 4550				
2	Initial Flow		161					
	Final Flow	2 minutes	288					
Initial Closed In Pressure		30 minutes	1061					Loss CIRCLE RIVER M/T
24	Initial Flow		250	Well No. #2 Test No. 3				
	Final Flow	30 minutes	966	ST No. 748 Depth 2421				
Final Closed In Pressure		31 minutes	1059	12 Hr. Clock No. 2998				
Final Hydro Mud Pressure			1247	Temperature Corrected to 100 ° F				
1st Flow Pressure			Initial CIP		2nd Flow Pressure		Final CIP	
	Time Defl. .000"	PSI Temp. Corr.	Time Defl. .000"	PSI Temp. Corr.	Time Defl. .000"	PSI Temp. Corr.	Time Defl. .000"	PSI Temp. Corr.
P0	.000	161	.0000	288	.000	250	.0000	966
P1	.004	232	.0135	1059	.040	466	.0203	1056
P2	.008	288	.0370	1061	.080	663	.0406	1058
P3			.0555	1061	.120	801	.0609	1058
P4			.0740	1061	.160	902	.0812	1058
P5			.0925	1061	.200	966	.1015	1058
P6			.1110	1061			.1218	1058
P7			.1295	1061			.1421	1059
P8			.1480	1061			.1624	1059
P9			.1665	1061			.1827	1059
P10			.1850	1061			.2030	1059
1	Minute intervals		3.0	Minute intervals	6	Minute intervals	3.1	Minute intervals

Remarks:

Initial Closed in Time <u>30</u> Minutes				Date <u>FEBRUARY 19, 1941</u>	
Tool Open Flow Period <u>2</u> / <u>30</u> Minutes				Tether No. <u>T-1500</u>	
Final Closed in Time <u>32</u> Minutes				HOWCO DISTRICT <u>EDMONTON</u>	
Depth Top Gauge <u>2367</u> Fr. Blanked Off <u>NO</u>				Kind of Job <u>OPEN HOLE</u>	
ST P.R.D. No. <u>847</u> Hr. Clock <u>12</u>		CONTRACTOR <u>TRI - CITY</u>		LOCATION <u>CIRCLE RIVER</u>	
Pressure Readings <u>Field</u> Office Corrected		HOLE & TOOL DATA			
Initial Hydro Mud Pressure <u>1190</u> <u>1112</u>		Elevation		Top Packer Depth	
Initial Closed in Pres. <u>1024</u> <u>1025</u>		Total Depth <u>2425'</u>		Bottom Packer Depth <u>2376'</u>	
Initial Flow Pres. <u>200</u> <u>219</u>		Casing or Hole Size <u>6 1/2"</u>		Size & Type Well Packer <u>5 1/2" B.S.W.P.</u>	
Final Flow Pres. <u>920</u> <u>930</u>		Liner or Rathole Size <u>-</u>		Size Bottom Choke <u>2"</u>	
Final Closed in Pres. <u>1000</u> <u>1025</u>		Casing Perforations <u>Top -</u> <u>Bottom -</u>		Size Surface Choke <u>-</u>	
Final Hydro Mud Pressure <u>1190</u> <u>1209</u>		Interval Tested <u>2376' - 2425'</u>		ID & Length Air Chamber <u>-</u>	
Depth Center Gauge <u>Fr.</u> Blanked Off		Formation Tested <u>Best Rock</u>		ID & Length Drill Collars <u>2" x 306'</u>	
ST P.R.D. No. <u>847</u> Hr. Clock <u>12</u>		Est. Gauge Depth Temp. <u>100</u> F.		Size Drill Pipe <u>3 1/2" I.P.</u>	
Pressure Readings <u>Field</u> Office Corrected		MUD DATA Weight <u>9.9</u>		Viscosity <u>42</u>	
Initial Hydro Mud Pressure		All depths measured from <u>Kelly Bearing</u>		No. Folders Reproduced <u>11</u>	
Initial Closed in Pres.		REMARKS: Tool open with good initial air blow			
Initial Flow Pres.		30 minutes initial C.I.P.. Open for flow			
Final Flow Pres.		with good air blow decreasing slightly at end			
Final Closed in Pres.		of flow. 12 minutes final C.I.P.			
Final Hydro Mud Pressure					
Depth Bottom Gauge <u>2420</u> Fr. Blanked Off <u>YES</u>					
ST P.R.D. No. <u>733</u> Hr. Clock <u>12</u>					
Pressure Readings <u>Field</u> Office Corrected					
Initial Hydro Mud Pressure <u>1220</u> <u>1250</u>					
Initial Closed in Pres. <u>1070</u> <u>1061</u>		Recovered <u>2000</u> Feet of <u>sulfur and salt water</u>			
Initial Flow Pres. <u>250</u> <u>250</u>		Recovered <u>45</u> Feet of <u>drilling mud</u>			
Final Flow Pres. <u>950</u> <u>966</u>		Recovered <u>Feet of</u>			
Final Closed in Pres. <u>1040</u> <u>1059</u>		Recovered <u>Feet of</u>			
Final Hydro Mud Pressure <u>1220</u> <u>1247</u>		Witnessed By <u>W. WALTERS</u>			
Amount-Type of Cushion <u>-</u>		Tester <u>GEORGE CHERNOK</u>			

CIRCLE RIVER NO. 1

A 1

3

THE ATLANTIC REFINING COMPANY

EDMONTON

LEASE OWNER

OWNERS DISTRICT

LOCATION CIRCLE RIVER

FIELD

WILDCAT

PROVINCE

ALBERTA

COUNTRY

CANADA

NAME

No.

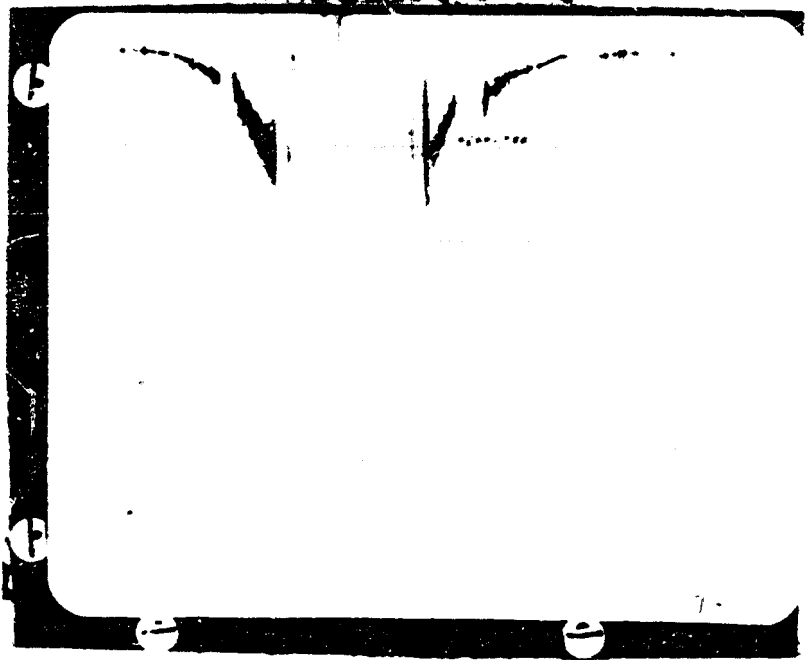
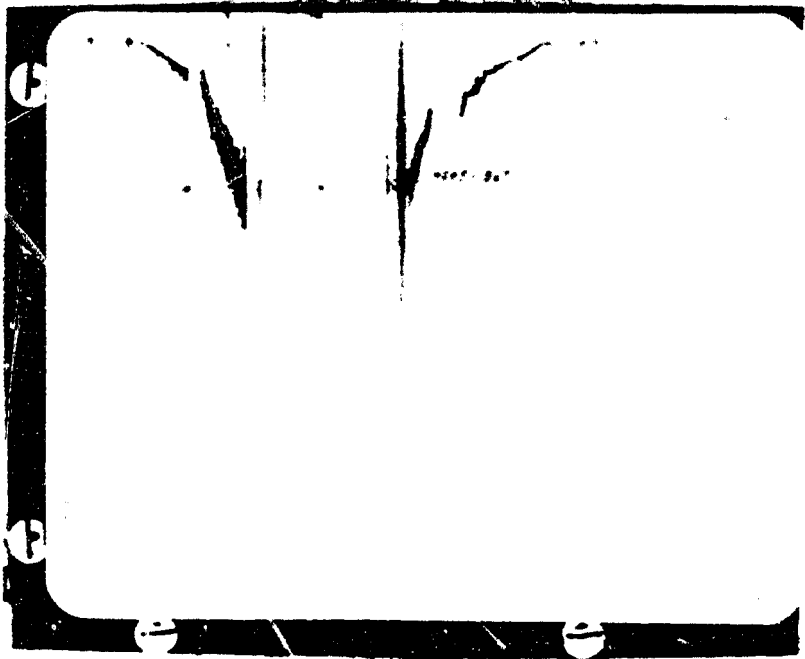
ATLANTIC CIRCLE RIVER NO. 1

Northwest Territories

Test No. 2

No.

NAME



Time		PSI	Ticket No. 4549 Lease Atlantic Circle River Well No. 1 Test No. 2 BT No. 267 Depth 2090' Hr. Clock No. 3312 Temperature Corrected to 62 ° F	
Initial Hydro				
Mud Pressure	-	1067		
3	Initial Flow	-		
	Final Flow	24		
3	Initial Flow	-		
	Final Flow	3 minutes 32		
30	Initial Closed			
	In Pressure	30 minutes 893		
60	Initial Flow	-		
	Final Flow	40		
60	Initial Flow	-		
	Final Flow	60 minutes 342		
30	Initial Closed			
	In Pressure	30 minutes 834		
Final Hydro				
Mud Pressure		1067		

	1st Flow Pressure		Initial CIP		2nd Flow Pressure		Final CIP	
	Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.
P0	.000	24	.0000	32	.000	40	.0000	342
P1	.007	32	.0225	874	.164	167	.0205	739
P2			.0450	885	.203	246	.0410	766
P3			.0675	890	.312	297	.0615	782
P4			.0900	893	.416	342	.0820	793
P5			.1125	895			.1025	804
P6			.1350	896			.1230	811
P7			.1575	897			.1435	819
P8			.1800	898			.1640	824
P9			.2025	899			.1845	829
P10			.2250	898			.2050	834
3	Minute Intervals		3	Minute Intervals	15	Minute Intervals	3	Minute Intervals

Remarks:

Company THE ATLANTIC STEERING COMPANY

Date February 14, 1961

		Time	PSI		
Initial Hydro Mud Pressure		-	1107	Ticket No. 549	
1	Initial Flow	-	43	Lester Atlantic Circle River	
	Final Flow	3 minutes	60		
Initial Closed In Pressure		3 minutes	636	Well No. 1	Test No. 2
2	Initial Flow	-	74	BT No. 738 Depth 2101'	
	Final Flow	60 minutes	377	10 Hr. Clock No. 276	
Final Closed In Pressure		90 minutes	370	Temperature Corrected to 6	
Final Hydro Mud Pressure			1107		

1st Flow Pressure		Initial CIP		2nd Flow Pressure		Final CIP	
Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.	Time Diff. 000"	PSI Temp. Corr.
P0 .000	43	.010	60	.000	74	.000	377
P1 .004	60	.022	909	.100	222	.020	775
P2		.044	922	.200	233	.040	799
P3		.066	926	.300	331	.060	816
P4		.088	929	.400	377	.080	830
P5		.110	932			.100	840
P6		.132	933			.120	848
P7		.154	934			.140	854
P8		.176	935			.160	860
P9		.198	936			.180	865
P10		.220	936			.200	870
3	Minute Intervals	3	Minute Intervals	15	Minute Intervals	3	Minute Intervals

Remarks:

NEW YORK, NY. 2/14/61

Initial Closed In Time 30 Minutes			Date FEBRUARY 14, 1961	
Tool Open Flow Period 3 / 2nd 60 Minutes			Ticket No. 74549	
Final Closed In Time 30 Minutes			HOWCO DISTRICT Red Deer	
Depth Top Gauge 2020 Ft. Blanked Off No			Kind of Job Bottom hole	
BT P.R.D. No 367 12 Hr. Clock		CONTRACTOR TPI City		
Pressure Readings Field Office Corrected		MOLE & TOOL DATA		
Initial Hydro Mud Pressure 1065 067		Elevation - Top Packer Depth -		
Initial Closed in Pres. 902 373		Total Depth 2155' Bottom Packer Depth 2104'		
Initial Flow Pres. 30 40		Casing or Hole Size 6 1/4" Size & Type Well Packer 5 1/2" BSWP		
Final Flow Pres. 340 342		Liner or Rathole Size - Size Bottom Choke 1/2"		
Final Closed in Pres. 920 834		Casing Perforations Top Bottom Size Surface Choke -		
Final Hydro Mud Pressure 1065 1067		Interval Tested 2104' - 2155' ID & Length Air Chamber -		
Depth Center Gauge Ft. Blanked Off		Formation Tested Bear Rock ID & Length Drill Collars 2" x 421'		
BT P.R.D. No Hr. Clock		Est. Gauge Depth Temp. 62 F. Size Drill Pipe 3 1/2" I.F.		
Pressure Readings Field Office Corrected		MUD DATA Weight 9.6 Viscosity 48		
Initial Hydro Mud Pressure		All depths measured from Kelly Pushing No. Folders Reproduced 11		
Initial Closed in Pres.		REMARKS: Tool open with good initial air		
Initial Flow Pres.		blow. Valve open for flow after 30 minute		
Final Flow Pres.		initial shut in. Good air blow all during		
Final Closed in Pres.		flow time. 30 minute final shut in.		
Final Hydro Mud Pressure				
Depth Bottom Gauge 2151 Ft. Blanked Off Yes				
BT P.R.D. No 788 Hr. Clock				
Pressure Readings Field Office Corrected				
Initial Hydro Mud Pressure 1100 1102				
Initial Closed in Pres. 920 936		Recovered 50 Feet of Drilling mud		
Initial Flow Pres. 42 74		Recovered 700 Feet of Sulfur water		
Final Flow Pres. 352 377		Recovered Feet of		
Final Closed in Pres. 860 870		Recovered Feet of		
Final Hydro Mud Pressure 1100 1102		Witnessed By Bill Walters		
Amount Type of Cushion -		Tester George Chabuk		

LOCATION 66 - 20 - 33 N

FIELD

"11 cent

COUNTRY N.A.T.

Country Canada

ALLIANCE OILFIELD RIVER

WELL NO.

TESTING.

THE ATLANTIC REFINING COMPANY

EMERTON

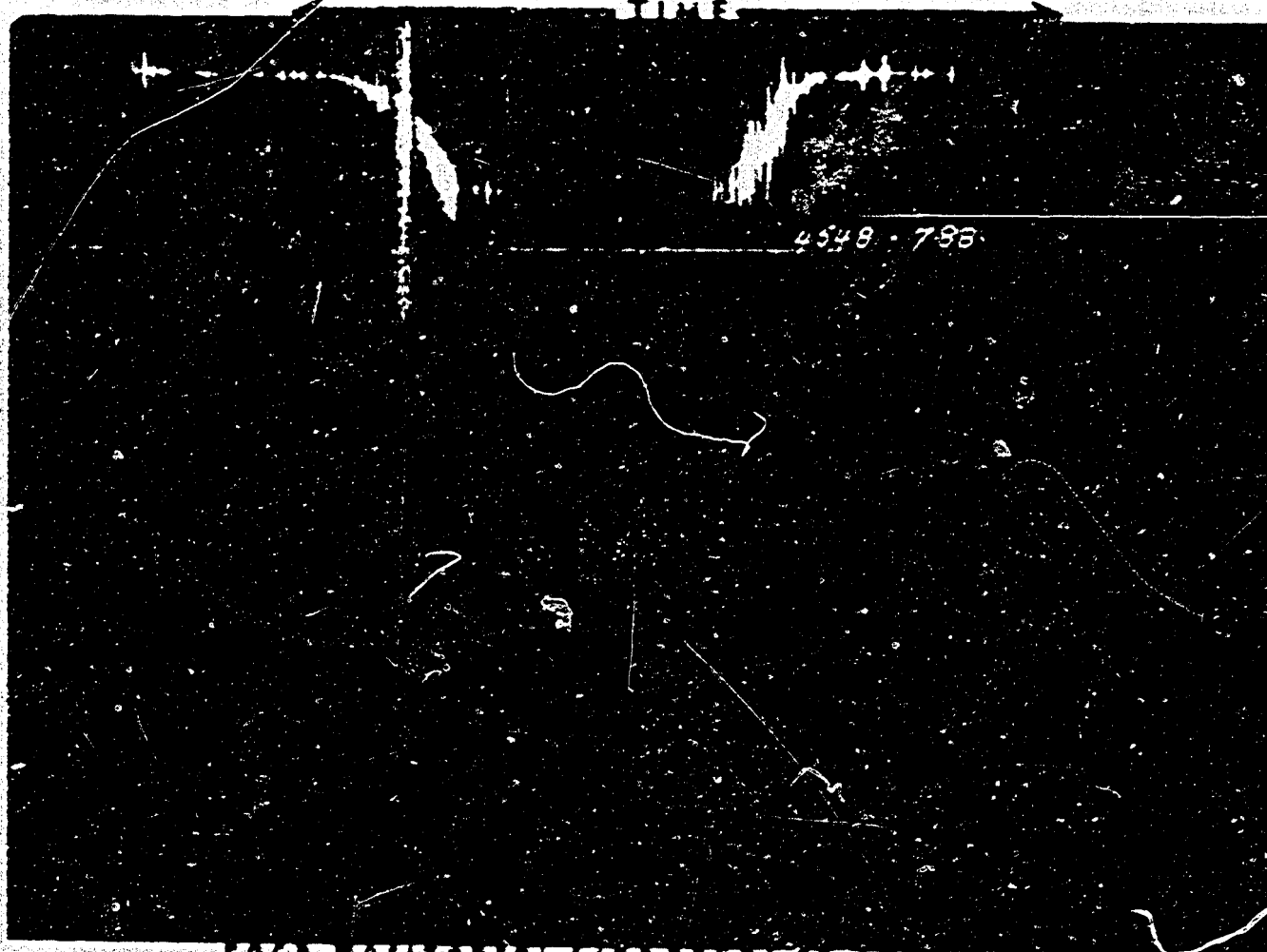
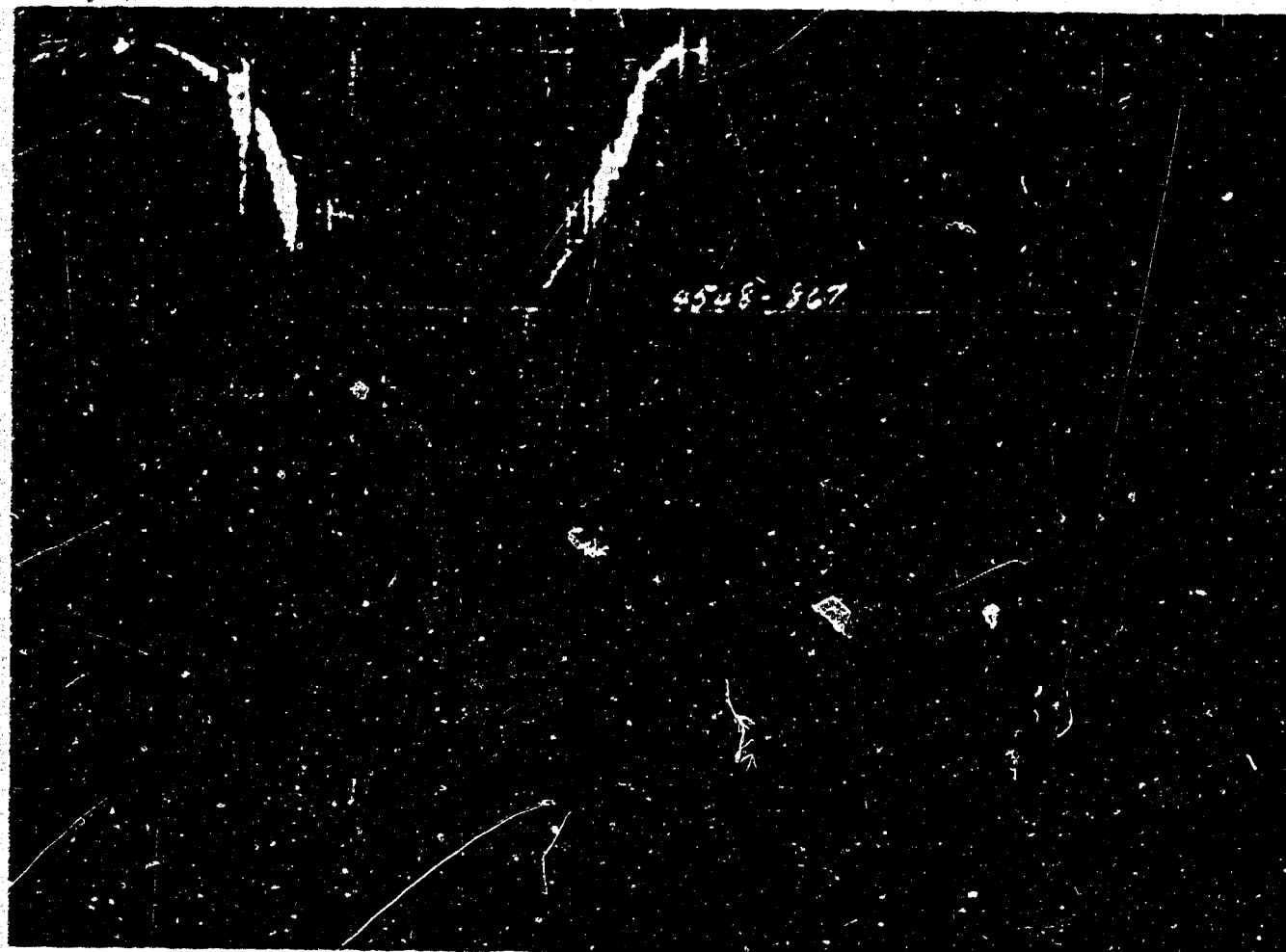
OWNERS DISTRICT

ATLANTIC CIRCLE RIVER NO. 1

Northwest Territories

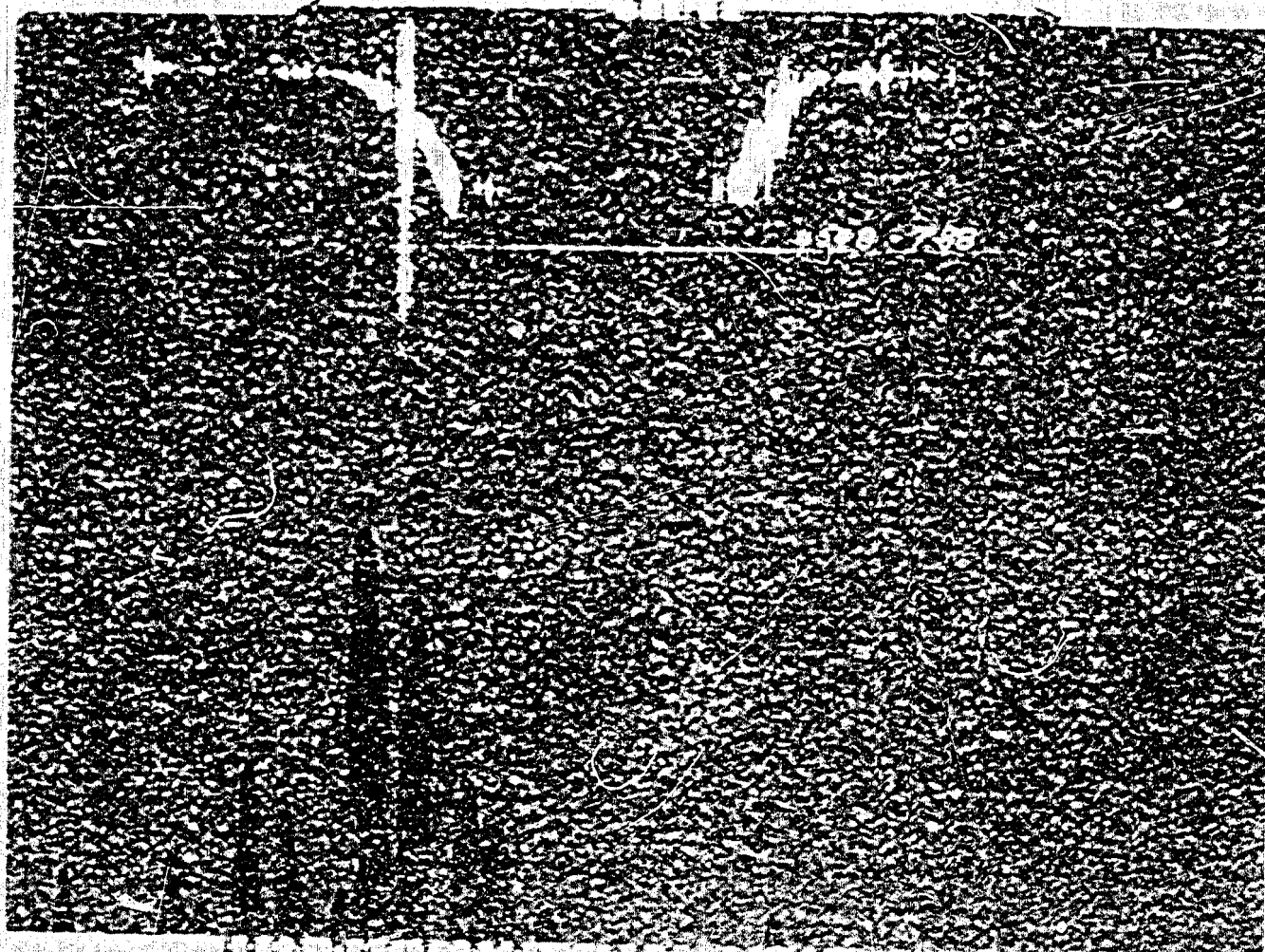
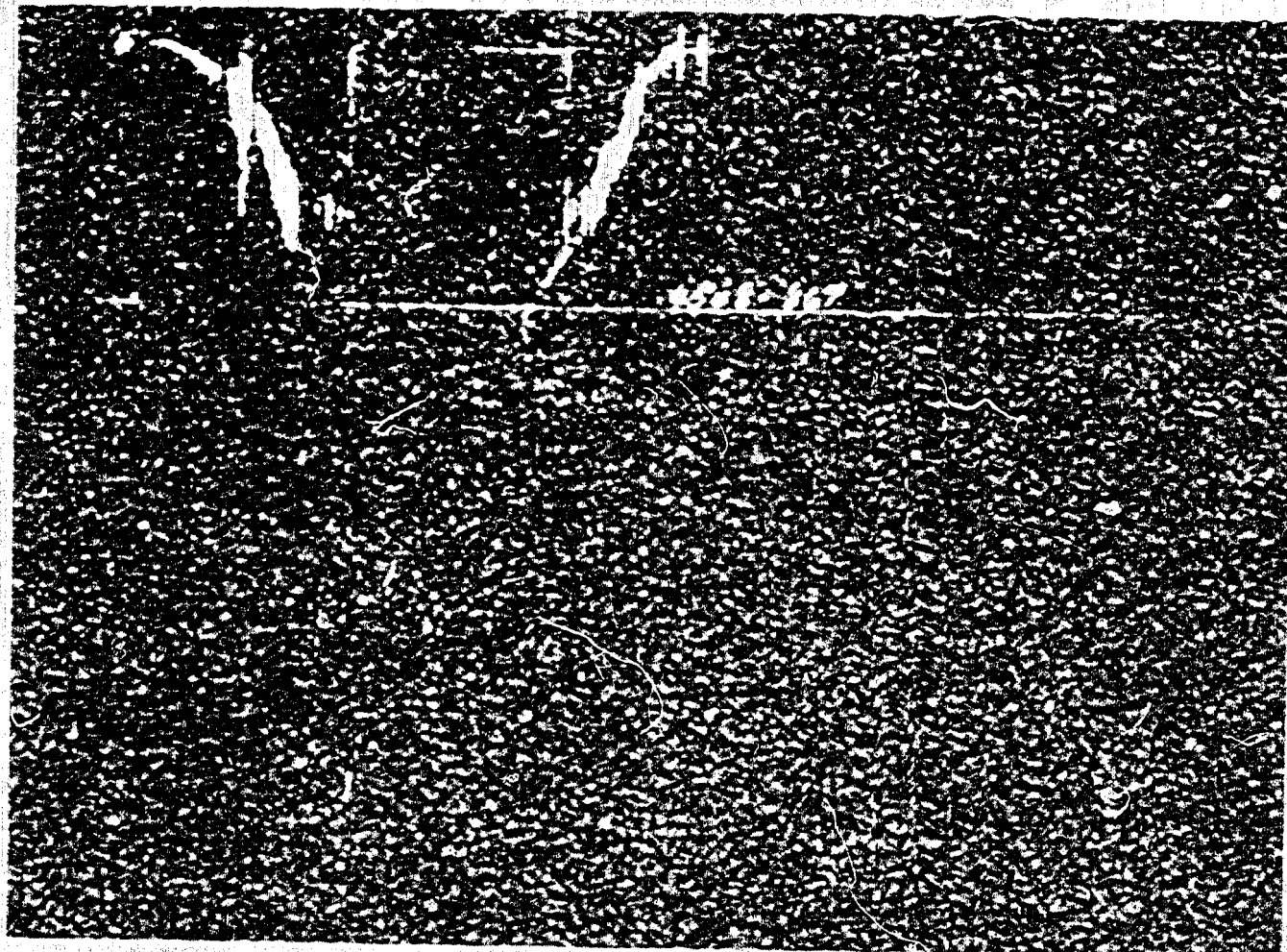
Test No. 1

PRESSURE



Each horizontal line equals 1000 p.s.i.

↑ PRESSURE



(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour

TRACT N.W.T. WELL NO. 1
Designation

DATE 2/25/64

FIELD Glacier House

CONTRACTOR Trinity Drilling, Ltd.

SIZE HOLE 6 1/2

REDUCED AT 240'

KIND OF TOOLS *Lotary*

KIND OF FUEL Diesel

FURNISHED BY *Teico*

FROM *Harold*

NO. OF HOURS *24*

WATER FURNISHED BY *Tarco*

FROM Lake

NO. OF HOURS 24

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12⁰⁰ AM TO 1⁰⁰ PM DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER 8

12:00-6:30 WOC, Lay down BOPs & Tear out. Tagged plug at 173';
6:30-8:00 Lay down 9 singles & Kelly - Log Released at 8:00 am

SIGNED E. Moore

DRILLER

TOUR No. 2 FROM _____ M TO _____ M DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER _____

SIGNED

100

TOUR No. 3 FROM _____ M TO _____ M DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER _____

SIGNED

DRYER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3D 100 4.55

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THE ATLANTIC REFINING COMPANY
LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/24/61
Name to be same as shown in permit to drill Designation
FIELD Galager Project CONTRACTOR Tri-City Drilling, Ltd.
SIZE HOLE 6 1/2 REDUCED AT 240' KIND OF TOOLS Rotary
KIND OF FUEL Diesel FURNISHED BY Tarco FROM Storage NO. OF HOURS 24
WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR	TOUR 1	TOUR 2	TOUR 3
	FROM	TO					
I	2660	2660	-T.D. Finished Logging Schlumberger logs	DRILL PIPE IN USE: SIZE LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE			
			Log: First Reading 2651 235 2" 45"	DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE			
			T-ES 2651 235 2" 45"	CORE BARREL: KIND SIZE			
			Sonic-GM 2652 235 2" 45"	CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE			
			Aluro Log- 2655 235 5"	STRAIGHT HOLE TEST AT DEGREES OFF			
			Formation Tops:	MUD MATERIAL: KIND 1 2 3	AMOUNT	AMOUNT	AMOUNT
			Upper Fort Creek 480'	CHEMICAL: KIND 1 2 3 4	AMOUNT	AMOUNT	AMOUNT
			Upper Raniparts 575'	MUD TYPE MUD WEIGHT VISCOSITY: 1500 cc IN 1 quart OUT			
			Half Indian River Shale 658'	PH			
			Lower Raniparts 1317'	WATER LOSS: cc			
			Lower Raniparts Shale Unit 1450'	FILTER CAKE	/32"	/32"	/32"
			Lower Raniparts Limestone Unit 1680'	FOR COMPANY REPRESENTATIVE ONLY			
			Bear Rock 1748'	DRILLING			
			Electronic Logging, Ltd. made Velocity Survey	CORING			
II	2660	2660	T.D. - Went in hole with DPDE and spotted Abandonment Plug #1 at 2660 to 2560 with 30 50x Inland Cement - in place at 1:20 P.M.	DST. OPEN HOLE			
			Layed down 25 singles and spotted Abandonment Plug No. 2 at 1800' to 1700' with 35 50x Inland Cement plus 4% Celcon in place at 2:25 P.M. NCC	LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP			
				CO. TIME w/o DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

page 2

TOUR No. 1 FROM _____ M TO _____ M DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____

SIGNED

DRILLER

TOUR No. 2 FROM _____ M TO _____ M DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____

SIGNED

DRILLER

TOUR No. 3 FROM _____ M TO _____ M DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____

SIGNED

DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

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Page 3

THE ATLANTIC REFINING COMPANY
LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/24/61
Name to be same as shown in permit to drill Designation

FIELD _____ CONTRACTOR _____

SIZE HOLE _____ REDUCED AT _____ KIND OF TOOLS _____

KIND OF FUEL _____ FURNISHED BY _____ FROM _____ NO. OF HOURS _____

WATER FURNISHED BY _____ FROM _____ NO. OF HOURS _____

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
III	2660	2660	T.D. WOC Abandonment Plug No. 2 to 10:30 P.M. Tagged plug at 1695. Layed down 47 singles and spotted Abandonment plug No. 3 at 285 to 185 with 40 sac Inland Cement plus 4% Col. 12. Plug in place at 11:48 P.M.	DRILL PIPE IN USE: SIZE LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE			
				DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE			
				CORE BARREL: KIND SIZE			
				CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE			
				STRAIGHT HOLE TEST AT DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE			
				MUD WEIGHT			
				VISCOSITY: 1500 cc IN 1 quart OUT			
				PH			
				WATER LOSS: cc			
				FILTER CAKE	/ 32"	/ 32"	/ 32"
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING			
				CORING			
				DST. OPEN HOLE			
				LOGGING	8		
				CASING & WOC			
				DOWNTIME			
				Loss Circulation		8	8
				FISHING			
				CO. TIME w/DP		8	8
				CO. TIME w/o /DP	8		

Temp. - 42 - Clear

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12⁰⁰ A.M. TO 8⁰⁰ A.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
12:00-12:30-Logging; 12:30-6:30-Velocity Survey; 6:30-8:00 Lay down logging equipment

SIGNED R. Moore DRILLER
TOUR No. 2 FROM 8⁰⁰ A.M. TO 4⁰⁰ P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____
8:00-1:00-Run in O.E. & lay down 10 D.C's. 1:00-1:30-Run A. Plug #1
1:30-2:00 Layed down 25 singles; 2:00-2:30 Run A. Plug No. 2; 2:30-4:00 WOC plug No. 2

SIGNED G. Poisson DRILLER
TOUR No. 3 FROM 4⁰⁰ P.M. TO 12⁰⁰ A.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
4:00-10:30 WOC, tagged plug at 1695; 10:30-11:20- Layed down 47 singles
11:20-12:00 Run A. Plug #3

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED J. S. Wallace

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".

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3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/23/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Ten-City Drilling Co. Ltd
 SIZE HOLE 6 1/2 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM LAKE NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2629	2660	- 31' - T.O. Drilling	DRILL PIPE IN USE: SIZE 3 1/2 IF			
				LENGTH DRILL COLLARS 303.0			
				LENGTH DRILL PIPE 2324.0			
				KELLY DOWN 33.0			
				TOTAL IN HOLE 2660.0			
II	2660	2660	- T.O. Logging	DRILL BIT: SERIAL NO. 6229d			
			NIOH: DRI 2660 =	DRILL BIT: NUMBER 22			
			SLH: 2660.87	MAKE HTC			
				TYPE QWV			
III	2660	2660	- T.O. Logging	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE <u>White FWG</u>			
				MUD WEIGHT <u>10.2</u>			
				VISCOSITY: 1500 cc IN 1 quart OUT <u>49</u>			
				PH <u>9</u>			
				WATER LOSS: cc <u>9.2</u>			
				FILTER CAKE <u>2 1/2"</u>	<u>1 1/2"</u>	<u>1 1/2"</u>	
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8		
				CORING			
				DST. OPEN HOLE			
				LOGGING		8	8
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8		
				CO. TIME w/o /DP		8	8

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 P.M. to 8:00 P.M. DRILLING 8 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____
12:00 - 8:00 - Drilling

SIGNED K. Moore DRILLER
 TOUR No. 2 FROM 8:00 P.M. to 4:00 P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
8:00 - 8:30 Circulate to Log; 8:30 - 10:30 Trip & NIOH to Log; 10:30 - 11:30 Log up to Log; 11:30 - 4:00 Logging

SIGNED G. Pisson DRILLER
 TOUR No. 3 FROM 4:00 P.M. to 12:00 P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
4:00 - 12:00 Logging

SIGNED B. Huber DRILLER
 SIGNED J. R. Thayer
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
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THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/22/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Ta-City Drilling Co. Ltd.
 SIZE HOLE 6 1/4 REDUCED AT 240' KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR		
	FROM	TO		TOUR 1	TOUR 2	TOUR 3
<u>I</u>	<u>2574</u>	<u>2580</u>	<u>- 6' Drilling</u>	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>
				LENGTH DRILL COLLARS <u>3030</u>	<u>3030</u>	<u>3030</u>
				LENGTH DRILL PIPE <u>2265.0</u>	<u>2292.0</u>	<u>2292.0</u>
				KELLY DOWN <u>12.0</u>	<u>13.0</u>	<u>34.0</u>
				TOTAL IN HOLE <u>2580.0</u>	<u>2608.0</u>	<u>2629.0</u>
<u>II</u>	<u>2580</u>	<u>2608</u>	<u>- 28' Drilling</u>	DRILL BIT: SERIAL NO. <u>73125</u>	<u>69994</u>	<u>69994</u>
				DRILL BIT: NUMBER <u>21</u>	<u>22</u>	<u>22</u>
				MAKE <u>HTC</u>	<u>HTC</u>	<u>HTC</u>
				TYPE <u>OWN</u>	<u>OWN</u>	<u>OWN</u>
				CORE BARREL: KIND		
				SIZE		
				CORE BIT: SERIAL NO.		
				CORE BIT: NUMBER		
				KIND		
				SIZE		
				STRAIGHT HOLE TEST AT		
				DEGREES OFF		
				MUD MATERIAL: KIND	AMOUNT	AMOUNT
				1		
				2		
				3		
				CHEMICAL: KIND	AMOUNT	AMOUNT
				1		
				2		
				3		
				4		
				MUD TYPE <u>White FNG</u>	<u>IL</u>	
				MUD WEIGHT <u>10.1</u>	<u>10.1</u>	<u>10.2</u>
				VISCOSITY: 1500 cc IN 1 quart OUT <u>50</u>	<u>50</u>	<u>51</u>
				PH <u>9</u>	<u>9</u>	<u>9</u>
				WATER LOSS: cc <u>9</u>	<u>9</u>	<u>9</u>
				FILTER CAKE <u>2 1/2"</u>	<u>2 1/2"</u>	<u>2 1/2"</u>
				FOR COMPANY REPRESENTATIVE ONLY		
				DRILLING	<u>8</u>	<u>7 1/2</u>
				CORING		
				DST. OPEN HOLE		
				LOGGING		
				CASING & WOC		
				DOWNTIME		<u>1/2</u>
				COMPLETING		
				LOSS CIRCULATION		
				FISHING		
				CO. TIME w/DP	<u>8</u>	<u>8</u>
				CO. TIME w/o /DP		<u>8</u>

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 2 1/2 HRS. TRIPPING 5 1/2 HRS. REPAIRS HRS. OTHER: HRS.
12:00-2:00 Drilling; 2:00-7:00 Trip for Bit; 7:00-8:00 Running to bottom

SIGNED R. Morge DRILLER
 TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS 1 1/2 HRS. OTHER: 1/2
8:00-8:15 Drilling; 8:15-8:30 Service Rig & Check BOP's; 8:30-10:00 Drilling; 10:00-11:00 Work on Compressor; 11:00-12:00 Drilling

SIGNED G. Pousson DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 1/2
4:00-4:30 Drilling; 4:30-4:45 Service Rig; 4:45-12:00 Drilling

SIGNED R. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
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THE ATLANTIC REFINING COMPANY
LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/31/61
Name to be same as shown in permit to drill Designation
FIELD Glacier Project CONTRACTOR The City Drilling Co. Ltd.
SIZE HOLE 6 1/2 REDUCED AT 240' KIND OF TOOLS Rotary
KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2507	2530	-33'-Drilling	DRILL PIPE IN USE: SIZE	3 1/2 IF	3 1/2 IF	3 1/2 IF
				LENGTH DRILL COLLARS	303.0	303.0	303.0
				LENGTH DRILL PIPE	2201.0	2230.0	2265.0
				KELLY DOWN	26.0	19.0	6.0
				TOTAL IN HOLE	2530.0	2553.0	2574.0
II	2530	2553	-33'-Drilling	DRILL BIT: SERIAL NO.	73125	73125	73125
				DRILL BIT: NUMBER	21	21	21
				MAKE	HTC	HTC	HTC
				TYPE	ONV	ONV	ONV
				CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
			2507' to 2574' - Brown Dolomite	MUD TYPE	White FNG		
				MUD WEIGHT	10.1	10.1	10.1
				VISCOSITY: 1500 cc IN 1 quart OUT	48	46	43
				PH	9	9	9
				WATER LOSS: cc	8.2	9.4	9.2
				FILTER CAKE	2/32"	2/32"	2/32"
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING 8 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____
12:00-8:00 - Drilling

SIGNED R. Moore DRILLER
TOUR No. 2 FROM 8:00 PM TO 11:00 PM DRILLING 7 1/2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 1 1/2
8:00-11:00 Drilling; 11:00-11:00 Service Rig & Check BOP; 11:00-12:00 Drilling

SIGNED G. P. Russell DRILLER
TOUR No. 3 FROM 12:00 PM TO 12:00 AM DRILLING 7 1/2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 1 1/2
12:00-12:00 Drilling; 12:00-5:00 Service Rig; 5:00-12:00 Drilling

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED H. H. H. H.

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.

INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/20/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Ten City Drilling Co. Ltd.
 SIZE HOLE 6 1/2 REDUCED AT 240' KIND OF TOOLS Heavy
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2458	2471	-13'-Drilling	DRILL PIPE IN USE: SIZE	3 1/2 IF	3 1/2 IF	3 1/2 IF
				LENGTH DRILL COLLARS	303.0	303.0	303.0
				LENGTH DRILL PIPE	2137.0	2169.0	2169.0
				KELLY DOWN	31.0	25.0	35.0
				TOTAL IN HOLE	2471.0	2497.0	2507.0
II	2471	2497	-26'-Drilling	DRILL BIT: SERIAL NO.	37216	37216	72125
				DRILL BIT: NUMBER	20	20	21
				MAKE	HTC	HTC	HTC
				TYPE	OWN	OWN	OWN
III	2497	2507	-10'-Drilling	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE	Milwhite FNG		
				MUD WEIGHT	9.9	10	10
				VISCOSITY: 1500 cc IN 1 quart OUT	47	47	49
				PH	9	9	9
				WATER LOSS: cc	9.2	9	9.6
				FILTER CAKE	2/11	2/11	2/11
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12⁰⁰ P.M. TO 8⁰⁰ P.M. DRILLING 8 HRS. TRIPPING HRS. REPAIRS HRS. OTHER:
12⁰⁰-8⁰⁰ Drilling

SIGNED K. Moore DRILLER
 TOUR No. 2 FROM 8⁰⁰ P.M. TO 12⁰⁰ P.M. DRILLING 2 1/4 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 4 1/2
8⁰⁰-9¹⁵ Drilling; 9¹⁵-9³⁰ Service Rig & check BOP's; 9³⁰-12⁰⁰ Drilling

SIGNED G. Brissan DRILLER
 TOUR No. 3 FROM 12⁰⁰ P.M. TO 12⁰⁰ P.M. DRILLING 3 1/4 HRS. TRIPPING 1 1/2 HRS. REPAIRS HRS. OTHER: 1 1/2
12⁰⁰-1⁰⁰ Drilling; 1⁰⁰-1³⁰ Service Rig; 1³⁰-6⁰⁰ Drilling; 6⁰⁰-10⁰⁰ Trip for bit
 10⁰⁰-10³⁰ Repair 12' to bottom; 10³⁰-12⁰⁰ Drilling

SIGNED B. Huber DRILLER
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility. SIGNED A. S. Miller
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRACT N.W. 1 WELL NO. 1 DATE 2/19/64
 Name to be same as shown in permit to drill
 FIELD Glacier Project DESIGNATION
 SIZE HOLE 6 1/4 REDUCED AT 240' KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKLO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKLO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	2425	2425	- 0'-Taking DST #3 & PCH w/ T.T.		3 1/2 IF	3 1/2 IF	3 1/2 IF		
II	2425	2434	- 9'-Finish PCH w/ DST #3 and start Drilling; Made DST #3 of Bear Rock. Formation from 2425 to 2376 with dual parkers set at 2376 & 2372 with 1/2" B.C.; 30 min. ISI; 1/2" T.O.; 30 min. FSI Tool opened with strong blow - decreased slightly in 30 minutes. Recovered 45' drilling mud & 2000 feet sulfurous salt water of 33,000 ppm NaCl Too short at 2367; IHP - 1190 FHP - 1190 IFF - 200 FFF - 920 ISE - 1022 FSE - 1000 Bottom Chart at 2421: IHP 1220 FHP 1220 IFF 250 FFF 950 ISE 1070 FSE 1040		3020	3020	3020		
					2109.0	2109.0	2138.0		
					13.0	22.0	17.0		
					2025.0	2034.0	2058.0		
					37216	37216	37216		
					20	20	20		
					HTC	HTC	HTC		
					OWV	OWV	OWV		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 3 HRS. TRIPPING 3 HRS. REPAIRS 3 HRS. OTHER: 8
12:00-3:00 Run into test; 3:15-3:30 lead up to test; 3:30-5:00 Testing; 5:00-8:00 PCH w/ Test tool

SIGNED R. Moore DRILLER

TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 3 HRS. TRIPPING 3 HRS. REPAIRS 3 HRS. OTHER: 5
8:00-9:00 Pull out & break down tool; 9:00-10:00 Clean off log; 10:00-12:00 Run in with bit; 12:00-1:00 Run 12' to bottom; 1:00-4:00 Drilling

SIGNED G. Peterson DRILLER

TOUR No. 3 FROM 4:00 P.M. TO 12:00 P.M. DRILLING 7 1/2 HRS. TRIPPING 3 HRS. REPAIRS 3 HRS. OTHER: 4 1/2
4:00-4:20 Drilling; 4:20-4:45 Set wire log; 4:45-12:00 Drilling

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. K. Walker

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY
LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRACT N.W. 1 WELL NO. 1 DATE 2/18/61
Name to be same as shown in permit to drill Designation
FIELD Glacier Project CONTRACTOR Tri-City Drilling Ltd.
SIZE HOLE 6 1/4" REDUCED AT 240' KIND OF TOOLS Kelly
KIND OF FUEL Desol FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR		
	FROM	TO		TOUR 1	TOUR 2	TOUR 3
I	2362	2386	-24'-Drilling	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>
				LENGTH DRILL COLLARS <u>452.0</u>	<u>452.0</u>	<u>452.0</u>
				LENGTH DRILL PIPE <u>1924.0</u>	<u>1934.0</u>	<u>1954.0</u>
				KELLY DOWN <u>10.0</u>	<u>14.0</u>	<u>19.0</u>
				TOTAL IN HOLE <u>2386.0</u>	<u>2420.0</u>	<u>2425.0</u>
II	2386	2450	-34'-Drilling	DRILL BIT: SERIAL NO. <u>67839</u>	<u>67839</u>	<u>67839</u>
				DRILL BIT: NUMBER <u>19</u>	<u>19</u>	<u>19</u>
				MAKE <u>HTC</u>	<u>HTC</u>	<u>HTC</u>
				TYPE <u>OWN</u>	<u>OWN</u>	<u>OWN</u>
III	2450	2455	-5'-Drilling & DST #3	CORE BARREL: KIND		
				SIZE		
				CORE BIT: SERIAL NO.		
				CORE BIT: NUMBER		
				KIND		
				SIZE		
				STRAIGHT HOLE TEST AT		
				DEGREES OFF		
				MUD MATERIAL: KIND	AMOUNT	AMOUNT
				1		
				2		
				3		
				CHEMICAL: KIND	AMOUNT	AMOUNT
				1		
				2		
				3		
				4		
				MUD TYPE <u>White FWG</u>		
				MUD WEIGHT <u>9.9</u>	<u>9.9</u>	<u>9.9</u>
				VISCOSITY: 1500 cc IN <u>48</u>	<u>48</u>	<u>48</u>
				1 quart OUT <u>9</u>	<u>9</u>	<u>9</u>
				PH <u>9.4</u>	<u>9.4</u>	<u>9.4</u>
				WATER LOSS: cc <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
				FILTER CAKE		
				FOR COMPANY REPRESENTATIVE ONLY		
				DRILLING <u>7 1/2</u>	<u>7 1/2</u>	<u>1 1/2</u>
				CORING		
				DST. OPEN HOLE		<u>4 1/2</u>
				LOGGING		
				CASING & WOC		
				DOWNTIME <u>1 1/2</u>	<u>1 1/2</u>	<u>2</u>
				COMPLETING		
				LOSS CIRCULATION		
				FISHING		
				CO. TIME w/DP <u>8</u>	<u>8</u>	<u>8</u>
				CO. TIME w/o /DP		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 7 1/2 HRS. TRIPPING 1/2 HRS. REPAIRS 1/2 HRS. OTHER: 12:00-2:45 Drilling; 2:45-3:00 Work on Pump; 3:00-8:00 Drilling

SIGNED K. McCoy DRILLER
TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 7 HRS. TRIPPING 1/2 HRS. REPAIRS 1/2 HRS. OTHER: 8:00-8:30 Service Log & Check BOP's; 8:30-10:30 Drilling; 10:30-11:00 Work on Pump; 11:00-4:00 Drilling

SIGNED G. Pearson DRILLER
TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 1 1/2 HRS. TRIPPING 1/2 HRS. REPAIRS 2 HRS. OTHER: 4:00-5:00 Drilling; 5:00-6:00 Pull 2 Sds & Circulate hole; 6:00-8:00 Work on Log; 8:00-9:00 Run in 2 Sds & Circulate hole; 9:00-11:00 Pull out to run test and lay down S.D.C's.

SIGNED B. Huber DRILLER
COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility. SIGNED H. Huber
Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/17/64
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co. Ltd
 SIZE HOLE 6 1/4 REDUCED AT 340' KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	NO. OF HOURS			
	FROM	TO		DATA AT END OF TOUR	TOUR 1	TOUR 2	TOUR 3
<u>I</u>	<u>2281</u>	<u>2309</u>	<u>-28'-Drilling</u>	DRILL PIPE IN USE: SIZE	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>
				LENGTH DRILL COLLARS	<u>452.0</u>	<u>452.0</u>	<u>452.0</u>
				LENGTH DRILL PIPE	<u>1831.0</u>	<u>1862.0</u>	<u>1893.0</u>
				KELLY DOWN	<u>26.0</u>	<u>10.0</u>	<u>17.0</u>
				TOTAL IN HOLE	<u>2309.0</u>	<u>2324.0</u>	<u>2366.0</u>
				DRILL BIT: SERIAL NO.	<u>57266</u>	<u>67819</u>	<u>67839</u>
				DRILL BIT: NUMBER	<u>18</u>	<u>19</u>	<u>19</u>
				MAKE	<u>HTC</u>	<u>HTC</u>	<u>HTC</u>
				TYPE	<u>OWV</u>	<u>OWV</u>	<u>OWV</u>
				CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1.			
				2.			
				3.			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1.			
				2.			
				3.			
				4.			
				MUD TYPE	<u>White FINE</u>		
				MUD WEIGHT	<u>9.8</u>	<u>9.8</u>	<u>9.8</u>
				VISCOSITY: 1500 cc IN 1 quart OUT	<u>29</u>	<u>45</u>	<u>47</u>
				PH	<u>9</u>	<u>9</u>	<u>9</u>
				WATER LOSS: cc	<u>8.8</u>	<u>9.1</u>	<u>9.2</u>
				FILTER CAKE	<u>2/32"</u>	<u>2/32"</u>	<u>2/32"</u>
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	<u>8</u>	<u>7</u>	<u>8</u>
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME		<u>1</u>	
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	<u>8</u>	<u>8</u>	<u>8</u>
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 7 HRS. TRIPPING 3 1/2 HRS. REPAIRS 1/4 HRS. OTHER: 1/4
12:00-12:30 Drilling; 12:30-12:45 Service Rig; 12:45-1:15 Drilling; 1:15-1:45 Circulating; 1:45-2:00 Trip for bit at 2309

SIGNED K. Miller DRILLER

TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 2 1/2 HRS. TRIPPING 4 1/2 HRS. REPAIRS 1 HRS. OTHER: 1
8:00-9:00 Pullout for bit; 9:00-9:30 Service Rig; 9:30-10:00 Run in Dr. G; 10:00-11:00 300' feed drilling hole; 11:00-12:00 Run in hole; 12:00-1:00 Throw out Kelly; 1:00-1:30 Run 8'6 bottom; 1:30-2:00 Drilling

SIGNED G. Pearson DRILLER

TOUR No. 3 FROM 12:00 P.M. TO 12:00 A.M. DRILLING 7 1/2 HRS. TRIPPING 1 HRS. REPAIRS 1/4 HRS. OTHER: 1/4
12:00-12:30 Drilling; 12:30-1:00 Service Rig; 1:00-1:30 Drilling

SIGNED B. Heber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

SIGNED A. K. Walker

PRINTED IN U.S.A.

3B-10B-4-57

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACK WV WELL NO. 1 DATE 2/16/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Ten City Drilling, Inc.
 SIZE HOLE 6 1/4 REDUCED AT 210' KIND OF TOOLS Kelly
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2220	2220	- 0' Tripping	DRILL PIPE IN USE: SIZE	3 1/2 IF	3 1/2 IF	3 1/2 IF
				LENGTH DRILL COLLARS	452.0	452.0	452.0
				LENGTH DRILL PIPE	1739.0	1768.0	1500.0
				KELLY DOWN	29.0	30.0	29.0
				TOTAL IN HOLE	2230.0	2250.0	2281.0
II	2220	2250	- 30' Drilling	DRILL BIT: SERIAL NO.	37266	37266	37266
				DRILL BIT: NUMBER	18	15	15
				MAKE	HTC	HTC	HTC
				TYPE	OWV	OWV	OWV
III	2250	2281	- 31' Drilling	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE	White FWG		
				MUD WEIGHT	9.7	9.7	9.9
				VISCOSITY: 1500 cc IN 1 quart OUT	45	48	48
				PH	9.6	9	9.0
				WATER LOSS: cc	8.6	8.6	8.8
				FILTER CAKE	2/32	2/32	2/32
			2220 to 2281 cream and brown limestone	FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	9	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME		1	
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			
			Temp. - 48 - Clear				

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 8 HRS. TRIPPING 8 HRS. REPAIRS 8 HRS. OTHER: 12:00-8:00 Tripping for bit and run to bottom

TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 6 HRS. TRIPPING 6 HRS. REPAIRS 1 HRS. OTHER: 4
8:00-8:15 Run 3 ft. to bottom; 8:15-9:00 Drilling; 9:00-10:30 Work on pump-chamber gland packing; 10:30-4:00 Drilling

TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 HRS. TRIPPING 7 HRS. REPAIRS 7 HRS. OTHER: 4
4:00-4:15 Service Rig; 4:15-12:00 Drilling

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED H. H. Walker DRILLER

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

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THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Cucke River TRACT N.N.T. WELL NO. 1 DATE 2/15/61
 Name to be same as shown in permit to drill Designation
 FIELD Glaizer Project CONTRACTOR Tr City Drilling Ltd.
 SIZE HOLE 6 1/2 REDUCED AT 240' KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2155	2179	- 24' - Drilling	DRILL PIPE IN USE: SIZE	3 3/4	3 3/4	3 3/4
				LENGTH DRILL COLLARS	452.0	452.0	452.0
				LENGTH DRILL PIPES	1705.0	1735.0	1728.0
				KELLY DOWN	19.0	19.0	30.0
				TOTAL IN HOLE	2179.0	2107.0	2250.0
II	2179	2207	- 28' - Drilling	DRILL BIT: SERIAL NO.	23609	23609	23609
				DRILL BIT: NUMBER	17	17	17
				MAKE	HTC	HTC	HTC
				TYPE	ONV	ONV	ONV
III	2207	2250	- 13' - Drilling	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			2500
				DEGREES OFF			1 1/2
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1 <u>Supercel</u>			11544
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1 <u>Kaylo</u>			50
				2			
				3			
				4			
			2155 to 2179 - Green sand	MUD TYPE	White Flk 6		
			1st dolomite and cream	MUD WEIGHT	9.8	9.8	9.8
			dense limestone	VISCOSITY: 1500 cc IN	43	43	50
				1 quart OUT			
			2179-2250 Green-grey	PH	10	10	10
			dolomite limestone	WATER LOSS: cc	9.4	9	9.4
				FILTER CAKE	2/32	2/32	2/32
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of "delays and reasons therefor" SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company lay rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING 5 1/2 HRS. TRIPPING 2 1/2 HRS. REPAIRS HRS. OTHER: HRS.

12:00-1:30 Running in hole; 1:30-2:15 Running to bottom and circulation
2:15-3:00 Drilling

SIGNED K. Moore

DRILLER

TOUR No. 2 FROM 8:00 PM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: HRS.

8:00-10:00 Drilling; 10:00-10:30 Service Rig & Check ROPS; 10:30-11:00 Drilling

SIGNED G. Pearson

DRILLER

TOUR No. 3 FROM 4:00 PM TO 12:00 PM DRILLING 3 HRS. TRIPPING 1 1/2 HRS. REPAIRS HRS. OTHER: HRS.

4:00-4:45 Drilling; 4:45-5:15 Service Rig; 5:15-5:45 Drilling; 5:45-6:00 Condition mud; 6:00-6:15 Drilling
10:00-10:15 Circulate Hole; 10:15-11:00 Run Survey; 11:00-12:00 Trip for bit

SIGNED R. Huber

DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. D. Miller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.

INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back, carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/14/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co.
 SIZE HOLE 6 1/2 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR		
	FROM	TO		TOUR 1	TOUR 2	TOUR 3
I	2108	2142	- 34' Drilling	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>
				LENGTH DRILL COLLARS <u>452.0</u>	<u>452.0</u>	<u>452.0</u>
				LENGTH DRILL PIPE <u>1675.0</u>	<u>1675.0</u>	<u>1675.0</u>
				KELLY DOWN <u>12.0</u>	<u>25.0</u>	<u>25.0</u>
				TOTAL IN HOLE <u>2442.0</u>	<u>3155.0</u>	<u>3155.0</u>
II	2142	2155	- 13' Drilling & GIH	DRILL BIT: SERIAL NO. <u>37210</u>	<u>37210</u>	<u>23609</u>
			<u>Wiflowco Test Tool for</u>	DRILL BIT: NUMBER <u>16</u>	<u>16</u>	<u>17</u>
			<u>DET #2</u>	MAKE <u>HTC</u>	<u>HTC</u>	<u>HTC</u>
III	2155	2155	- 0' Made DET #2	TYPE <u>ONV</u>	<u>ONV</u>	<u>ONV</u>
			<u>of Ben Rock Formation</u>	CORE BARREL: KIND		
			<u>from 2155' to 2108'</u>	SIZE		
			<u>w/ dual 5 1/2" packers</u>	CORE BIT: SERIAL NO.		
			<u>set at 2108' & 2100 w/</u>	CORE BIT: NUMBER		
			<u>1/2" B.C. Tool 30 min</u>	KIND		
			<u>ISI, 1 hr. Tool Open</u>	SIZE		
			<u>and 30 min FSI.</u>	STRAIGHT HOLE TEST AT		
			<u>Tool opened with good</u>	DEGREES OFF		
			<u>air blow, continued</u>	MUD MATERIAL: KIND	AMOUNT	AMOUNT
			<u>throughout test but</u>	1		
			<u>decreased at end of</u>	2		
			<u>test. Recovered 50'</u>	3		
			<u>drilling mud & 700'</u>	CHEMICAL: KIND	AMOUNT	AMOUNT
			<u>sulfur water:</u>	1		
				2		
				3		
				4		
				MUD TYPE <u>White FNG</u>		
				MUD WEIGHT <u>9.5</u>	<u>9.8</u>	<u>9.8</u>
				VISCOSITY: 1500 cc IN	<u>48</u>	<u>47</u>
				1 quart OUT	<u>49</u>	<u>49</u>
				PH <u>10</u>	<u>10</u>	<u>10</u>
				WATER LOSS: cc <u>9.4</u>	<u>9.2</u>	<u>9.2</u>
				FILTER CAKE <u>2 1/2"</u>	<u>2 1/2"</u>	<u>2 1/2"</u>
				FOR COMPANY REPRESENTATIVE ONLY		
				DRILLING	<u>8</u>	<u>2 1/2</u>
				CORING		
				DST. OPEN HOLE		<u>5 1/2</u>
				LOGGING		<u>8</u>
				CASING & WOC		
				DOWNTIME		
				COMPLETING		
				LOSS CIRCULATION		
				FISHING		
				CO. TIME w/DP	<u>8</u>	<u>8</u>
				CO. TIME w/o /DP		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 8 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____
12:00-8:00 - Drilling

SIGNED R. Moore DRILLER
 TOUR No. 2 FROM 8:00 A.M. TO 12:00 P.M. DRILLING 2 1/2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 5 1/2
8:00-10:30 Drilling; 10:30-11:00 Circulate to test; 11:00-12:30 P.M. to test; 12:30-1:30
Pull Tool; 1:30-3:00 Run In; 3:00-4:00 Testing

SIGNED G. Pearson DRILLER
 TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
4:00-5:30 Testing; 5:30-9:15 Pull Packers; 9:15-12:00 Clean off log; 12:00-12:01
Run in with bit

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W. 1 WELL NO. 1 DATE 2/13/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Talbot Drilling Co.
 SIZE HOLE 6 1/4 REDUCED AT 240' KIND OF TOOLS Kelly
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	2055	2071	-16'-Drilling	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>	
				LENGTH DRILL COLLARS <u>234.0</u>	<u>234.0</u>	<u>452.0</u>	
				LENGTH DRILL PIPE <u>1830.0</u>	<u>1830.0</u>	<u>1642.0</u>	
				KELLY DOWN <u>7.0</u>	<u>21.0</u>	<u>12.0</u>	
				TOTAL IN HOLE <u>2071.0</u>	<u>2085.0</u>	<u>2108.0</u>	
II	2071	2085	-14'-Drilling & Trip	DRILL BIT: SERIAL NO. <u>37267</u>	<u>37210</u>	<u>37210</u>	
				DRILL BIT: NUMBER <u>15</u>	<u>16</u>	<u>16</u>	
				MAKE <u>HTC</u>	<u>HTC</u>	<u>HTC</u>	
				TYPE <u>CMV</u>	<u>CMV</u>	<u>CMV</u>	
III	2085	2108	-23'-Drilling & Trip	CORE BARREL: KIND			
			for bit. Also pulled up 7 new drill collars making a total of 15 with a weight of 26,600 pounds.	SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
			2017 to 2071 - grey-brown Dolomite & limestone	MUD TYPE <u>White FALG</u>			
			2071 to 2108 - Creamy grey Limestone & Dolomite	MUD WEIGHT <u>9.7</u>	<u>9.7</u>	<u>9.8</u>	
				VISCOSITY: 1500 cc IN 1 quart OUT <u>50</u>	<u>50</u>	<u>48</u>	
				PH <u>11</u>	<u>11</u>	<u>10</u>	
				WATER LOSS: cc <u>8.8</u>	<u>8.5</u>	<u>9.6</u>	
				FILTER CAKE <u>2/32"</u>	<u>2/32"</u>	<u>2/32"</u>	
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	<u>8</u>	<u>8</u>	<u>8</u>
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	<u>8</u>	<u>8</u>	<u>8</u>
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained. Drilled requiring X-Ray and time lost.

TOUR No. 1 FROM 12:00 AM TO 8:00 PM DRILLING 8 HRS. TRIPPING 8 HRS. REPAIRS 8 HRS. OTHER: 12:00-8:00 Drilling

SIGNED R. Dierie DRILLER
 TOUR No. 2 FROM 8:00 AM TO 12:00 PM DRILLING 6 HRS. TRIPPING 12 HRS. REPAIRS 12 HRS. OTHER: 8:00-9:00 Drilling; 9:00-9:30 Service Rig & Check PPS; 9:30-2:00 Drilling; 2:00-4:00 Trip for bit

SIGNED G. P. Brown DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 4 1/2 HRS. TRIPPING 3 1/2 HRS. REPAIRS 3 1/2 HRS. OTHER: 4:00-7:00 Run in hole & PPS. 7:00-7:30 Drilling

SIGNED B. Huber DRILLER
 SIGNED J. H. Watson
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Rock River TRACT N.W.T. WELL NO. 1 DATE 2/12/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR T. G. Drilling Co.
 SIZE HOLE 6 1/2 REDUCED AT 240' KIND OF TOOLS Kelly
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	2008	2017	9' - Drilling		334.0	1964.0	3 1/2 IF	3 1/2 IF	3 1/2 IF
II	2017	2038	21' - Drilling				234.0	234.0	234.0
III	2038	2055	17' - Drilling				1800.0	1800.0	1800.0
				KELLY DOWN			19.0	4.0	21.0
				TOTAL IN HOLE			2017.0	2038.0	2055.0
				DRILL BIT: SERIAL NO.			37267	37267	37267
				DRILL BIT: NUMBER			15	15	15
				MAKE			HTC	HTC	HTC
				TYPE			DNV	DNV	DNV
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT DEGREES OFF					
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1.					
				2.					
				3.					
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1.					
				2.					
				3.					
				4.					
				MUD TYPE	White FWG				
				MUD WEIGHT	9.6	9.6	9.6	9.6	9.6
				VISCOSITY: 1500 cc IN 1 quart OUT	46	50	47	47	47
				PH	11	11	11	11	11
				WATER LOSS: cc	9.6	9.4	9.2	9.2	9.2
				FILTER CAKE	2/32"	2/32"	2/32"	2/32"	2/32"
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING	8	8	8	8	8
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP	8	8	8	8	8
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 PM DRILLING 5 1/2 HRS. TRIPPING 2 1/2 HRS. REPAIRS 0 HRS. OTHER: 0
12:00-5:15 Drilling; 5:15-8:00 Trip for bit

SIGNED R. Moore DRILLER
 TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING 1 1/2 HRS. REPAIRS 0 HRS. OTHER: 0
8:00-8:30 Run in hole with bit; 8:30-8:45 Service Rig & Check BOP's;
8:45-9:00 Survey; 9:00-4:00 Drilling

SIGNED G. Hansen DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 1/2 HRS. TRIPPING 1 1/2 HRS. REPAIRS 0 HRS. OTHER: 0
4:00-4:15 Drilling; 4:15-4:30 Service Rig; 4:30-12:00 Drilling

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. H. Haller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W. 1 WELL NO. 1 DATE 2/11/64
 Name to be same as shown in permit to drill
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co., Ltd.
 SIZE HOLE 6 3/4 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	1967	1972	25' Drilling	DRILL PIPE IN USE: SIZE	3 1/2 IF	3 1/2 IF	3 1/2 IF
				LENGTH DRILL COLLARS	234.0	234.0	234.0
				LENGTH DRILL PIPE	1908.0	1737.0	1763.0
				KELLY DOWN	30.0	19.0	6.0
				TOTAL IN HOLE	1972.0	1990.0	2008.0
II	1972	1990	18' Drilling	DRILL BIT: SERIAL NO.	23178	23178	23178
				DRILL BIT: NUMBER	14	14	14
				MAKE	HTC	HTC	HTC
				TYPE	ONV	ONV	ONV
III	1990	2008	18' Drilling	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE	Milwhite Fine		
				MUD WEIGHT	9.5	9.5	9.6
				VISCOSITY: 1500 cc IN 1 quart OUT	46.0	47	48
				PH	11.0	11	11
				WATER LOSS: cc	10.2	9.2	9.8
				FILTER CAKE	2 1/2"	2 1/2"	2 1/2"
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING 8 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
12:00 - 8:00 - Drilling

SIGNED G. Pearson DRILLER
 TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 1 1/2
8:00 - 10:15 Drilling; 10:15 - 10:30 Service Rig & Check TD's; 10:30 - 4:00 Drilling

SIGNED B. Huber DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 8 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
4:00 - 12:00 - Drilling

SIGNED G. Pearson DRILLER
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility. SIGNED A. B. Walker
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT NW 1/4 WELL NO. 1 DATE 2/10/64
 Name to be same as shown in permit to drill
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co. Ltd.
 SIZE HOLE 6 1/4 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	1911	1920	9'-Drilling				33TF	33TF	33TF
II	1920	1935	15'-Drilling				2340	2340	2340
III	1935	1947	12'-Drilling & Trip				16800	16800	16800
				KELLY DOWN			6.0	21.0	33.0
				TOTAL IN HOLE			1920.0	1925.0	1942.0
				DRILL BIT: SERIAL NO.			23611	23611	73178
				DRILL BIT: NUMBER			13	13	14
				MAKE			HTC	HTC	HTC
				TYPE			ONV	ONV	ONV
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT					
				DEGREES OFF					
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1.					
				2.					
				3.					
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1.					
				2.					
				3.					
				4.					
				MUD TYPE	White FWG				
				MUD WEIGHT	9.5	9.5	9.5		
				VISCOSITY: 1500 cc IN 1 quart OUT	45.0	48.0	48.0		
				PH	11.0	11.0	11.0		
				WATER LOSS: cc	11.0	10.0	10.0		
				FILTER CAKE	2/32"	2/32"	2/32"		
			1941-1947- Brown dense Limestone	FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING	8	8	8		
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP	8	8	8		
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 4 1/2
12:00-12:15 Service Rig; 12:15-8:00 Drilling - very hard & rough

SIGNED G. Prisson DRILLER
 TOUR No. 2 FROM 8:00 PM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 4 1/2
8:00-9:15 Drilling; 9:15-9:30 Service Rig & Check BOPs; 9:30-4:00 Drilling

SIGNED B. Huber DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 8 HRS. TRIPPING 3 HRS. REPAIRS HRS. OTHER:
4:00-7:30 Drilling; 7:30-10:30 Trip for bit; 10:30-12:00 Drilling

SIGNED G. Prisson DRILLER
 SIGNED A. H. Hutton
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT W-1 WELL NO. 1 DATE 9/9/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co.
 SIZE HOLE 6 1/4 REDUCED AT 240' KIND OF TOOLS Kellogg
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	1865	1885	-20'-Drilling	DRILL PIPE IN USE: SIZE 3 3/4 IF	3 3/4 IF	3 3/4 IF	
				LENGTH DRILL COLLARS 234.0	234.0	234.0	
				LENGTH DRILL PIPE 1608.0	1608.0	1608.0	
				KELLY DOWN 3.0	13.0	29.0	
				TOTAL IN HOLE 1856.0	1895.0	1911.0	
II	1885	1895	-10'-Drilling & Tripping	DRILL BIT: SERIAL NO. 77281	23611	23611	
				DRILL BIT: NUMBER 12	13	13	
				MAKE HTC	HTC	HTC	
				TYPE OSC	OWN	OWN	
III	1895	1911	-16'-Drilling	CORE BARREL: KIND SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT DEGREES OFF	1890		
				MUD MATERIAL: KIND 1 Supercol	AMOUNT	AMOUNT	AMOUNT
				2		105.1	
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1 Kaylo		50"	
				2 Caustic		25"	
				3			
				4			
				MUD TYPE 1111 White FHLG			
				MUD WEIGHT 9.4	9.4	9.4	
				VISCOSITY: 1500 cc IN 1 quart OUT	40.0	55.0	118
				PH 11.0	11.0	11.0	
				WATER LOSS: cc 10.0	10.3	10.0	
				FILTER CAKE 2 1/2"	2 1/2"	2 1/2"	
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be full, explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 8 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
12:00-8:00 Drilling

TOUR No. 2 FROM 8:00 AM TO 1:00 PM DRILLING 4 HRS. TRIPPING 2 HRS. REPAIRS 0 HRS. OTHER: 1
8:00-10:00 Drilling; 10:00-10:15 Service Rig; 10:15-11:00 Drilling; 11:00-11:45 Survey;
11:45 to 12:15 PCH for P.T. 12:15-1:00 H.C. dog cellar from N.C.H. #1 Core Hole; 130-362

TOUR No. 3 FROM 1:00 PM TO 5:00 PM DRILLING 8 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
PCH #105 & 6TH #105 3:00-4:00 Drilling
4:00-5:00 Drilling - Very Hard & rough.

TOUR No. 4 FROM 5:00 PM TO 11:00 PM DRILLING 0 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
5:00-11:00 Drilling - Very Hard & rough.

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 SIGNED G. P. Boyd DRILLER
 SIGNED A. B. H. H. H.

Tabulate drilling time, when taken, on Form 38-741 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/8/61
 Name to be same as shown in permit to drill
 FIELD Glacier Project DESIGNATION
 SIZE HOLE 6 3/4 REDUCED AT 340' CONTRACTOR Tri-City Drilling Co.
 KIND OF FUEL Diesel FURNISHED BY TAKCO KIND OF TOOLS Rotary
 WATER FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
<u>I</u>	<u>1807</u>	<u>1821</u>	<u>14' - Drilling</u>		<u>234.0</u>	<u>1552.0</u>	<u>35IF</u>	<u>35IF</u>	<u>35IF</u>
<u>II</u>	<u>1821</u>	<u>1843</u>	<u>22' - Drilling</u>	KELLY DOWN		<u>1585.0</u>	<u>24.0</u>	<u>234.0</u>	<u>234.0</u>
<u>III</u>	<u>1843</u>	<u>1865</u>	<u>22' - Drilling</u>	TOTAL IN HOLE		<u>1617.0</u>	<u>18.0</u>	<u>1843.0</u>	<u>1865.0</u>
				DRILL BIT: SERIAL NO.		<u>1821.0</u>	<u>1843.0</u>	<u>1865.0</u>	
				DRILL BIT: NUMBER		<u>77280</u>	<u>77287</u>	<u>77287</u>	
				MAKE		<u>11</u>	<u>12</u>	<u>12</u>	
				TYPE		<u>HTC</u>	<u>HTC</u>	<u>HTC</u>	
				CORE BARREL: KIND		<u>CSL</u>	<u>CSL</u>	<u>CSL</u>	
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT		<u>1800</u>			
				DEGREES OFF		<u>1 3/4</u>			
				MUD MATERIAL: KIND		AMOUNT	AMOUNT	AMOUNT	
				1					
				2					
				3					
				CHEMICAL: KIND		AMOUNT	AMOUNT	AMOUNT	
				1					
				2					
				3					
				4					
				MUD TYPE		<u>White FWG</u>			
				MUD WEIGHT		<u>9.3</u>	<u>9.3</u>	<u>9.3</u>	
				VISCOSITY: 1500 cc IN 1 quart OUT		<u>42.0</u>	<u>40.0</u>	<u>40.0</u>	
				PH		<u>10.0</u>	<u>11.0</u>	<u>11.0</u>	
				WATER LOSS: cc		<u>10.0</u>	<u>10.0</u>	<u>10.0</u>	
				FILTER CAKE		<u>2/32"</u>	<u>2/32"</u>	<u>2/32"</u>	
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING		<u>8</u>	<u>8</u>	<u>8</u>	
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP		<u>8</u>	<u>8</u>	<u>8</u>	
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 5 HRS. TRIPPING 2 1/2 HRS. REPAIRS 0 HRS. OTHER: 0
12:00-3:00 Drilling; 3:00-5:00 Trip for bit; 5:00-5:15 Survey; 5:15-6:00 Lean 10' to bottom; 6:00-8:00 Drilling

SIGNED G. P. Pison

DRILLER

TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 7 1/2 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
8:00-8:15 Service Rig & Check BOPs
8:15-4:00 Drilling

SIGNED B. Hubert

DRILLER

TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 1/2 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 0
4:00-8:00 Drilling; 8:00-8:15 Service Rig; 8:15-12:00 Drilling

SIGNED G. P. Pison

DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED J. H. Miller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY
LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT NW WELL NO. 1 DATE 2/7/61
Name to be same as shown in permit to drill
FIELD Glacier Project CONTRACTOR Tec City Drilling Co.
SIZE HOLE 6 1/4 REDUCED AT 240' KIND OF TOOLS Rotary
KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
<u>I</u>	<u>1739</u>	<u>1765</u>	<u>-26'-Drilling</u>	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>	
				LENGTH DRILL COLLARS <u>234.0</u>	<u>234.0</u>	<u>234.0</u>	
				LENGTH DRILL PIPE <u>1522.0</u>	<u>1523.0</u>	<u>1554.0</u>	
				KELLY DOWN <u>9.0</u>	<u>29.0</u>	<u>19.0</u>	
				TOTAL IN HOLE <u>1765.0</u>	<u>1786.0</u>	<u>1807.0</u>	
<u>II</u>	<u>1765</u>	<u>1786</u>	<u>-21'-Drilling</u>	DRILL BIT: SERIAL NO. <u>77280</u>	<u>77280</u>	<u>77280</u>	
				DRILL BIT: NUMBER <u>"</u>	<u>"</u>	<u>"</u>	
				MAKE <u>HTL</u>	<u>HTL</u>	<u>HTL</u>	
				TYPE <u>OSL</u>	<u>OSL</u>	<u>OSL</u>	
				CORE BARREL: KIND <u>"</u>	<u>"</u>	<u>"</u>	
				SIZE <u>"</u>	<u>"</u>	<u>"</u>	
				CORE BIT: SERIAL NO. <u>"</u>	<u>"</u>	<u>"</u>	
				CORE BIT: NUMBER <u>"</u>	<u>"</u>	<u>"</u>	
				KIND <u>"</u>	<u>"</u>	<u>"</u>	
				SIZE <u>"</u>	<u>"</u>	<u>"</u>	
				STRAIGHT HOLE TEST AT DEGREES OFF <u>"</u>	<u>"</u>	<u>"</u>	
				MUD MATERIAL: KIND <u>"</u>	<u>"</u>	<u>"</u>	
				AMOUNT <u>"</u>	<u>"</u>	<u>"</u>	
				1 <u>"</u>	<u>"</u>	<u>"</u>	
				2 <u>"</u>	<u>"</u>	<u>"</u>	
				3 <u>"</u>	<u>"</u>	<u>"</u>	
				CHEMICAL: KIND <u>Rayflo</u>	<u>"</u>	<u>"</u>	
				AMOUNT <u>"</u>	<u>"</u>	<u>"</u>	
				1 <u>"</u>	<u>"</u>	<u>"</u>	
				2 <u>"</u>	<u>"</u>	<u>"</u>	
				3 <u>"</u>	<u>"</u>	<u>"</u>	
				4 <u>"</u>	<u>"</u>	<u>"</u>	
				MUD TYPE <u>Oilwhite FHE</u>	<u>"</u>	<u>"</u>	
				MUD WEIGHT <u>9.0</u>	<u>9.1</u>	<u>9.2</u>	
				VISCOSITY: 1500 cc IN 1 quart OUT <u>46.0</u>	<u>44.0</u>	<u>44.0</u>	
				PH <u>11.0</u>	<u>11.0</u>	<u>11.0</u>	
				WATER LOSS: cc <u>11.0</u>	<u>12.0</u>	<u>12.0</u>	
				FILTER CAKE <u>2/32"</u>	<u>2/32"</u>	<u>2/32"</u>	
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING <u>8</u>	<u>8</u>	<u>8</u>	
				CORING <u>"</u>	<u>"</u>	<u>"</u>	
				DST. OPEN HOLE <u>"</u>	<u>"</u>	<u>"</u>	
				LOGGING <u>"</u>	<u>"</u>	<u>"</u>	
				CASING & WOC <u>"</u>	<u>"</u>	<u>"</u>	
				DOWNTIME <u>"</u>	<u>"</u>	<u>"</u>	
				COMPLETING <u>"</u>	<u>"</u>	<u>"</u>	
				LOSS CIRCULATION <u>"</u>	<u>"</u>	<u>"</u>	
				FISHING <u>"</u>	<u>"</u>	<u>"</u>	
				CO. TIME w/DP <u>8</u>	<u>8</u>	<u>8</u>	
				CO. TIME w/o /DP <u>"</u>	<u>"</u>	<u>"</u>	
			<u>1739-1807'-Gray Shale</u>				
			<u>& Limestone.</u>				
			<u>Temp: -22+ clear</u>				

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 P.M. DRILLING 8 HRS. TRIPPING " HRS. REPAIRS " HRS. OTHER: "
12:00-8:00 Drilling

TOUR No. 2 FROM 8:00 P.M. TO 4:00 P.M. DRILLING 2 1/4 HRS. TRIPPING " HRS. REPAIRS " HRS. OTHER: "
8:00-9:00 Drilling; 9:00-9:15 Service Rig; 9:15-4:00 Drilling

TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING 2 1/4 HRS. TRIPPING " HRS. REPAIRS " HRS. OTHER: "
4:00-4:15 Service Rig; 4:15-12:00 Drilling

SIGNED G. P. Henson DRILLER
SIGNED B. Huber DRILLER
SIGNED G. P. Henson DRILLER
COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/6/61
 Name to be same as shown in permit to drill
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co.
 SIZE HOLE 6 3/4 REDUCED AT 340' KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	1679	1704	- 35' - Drilling		234.0	1462.0	3 3/4 IF	3 3/4 IF	3 3/4 IF
II	1704	1725	- 21' - Drilling			8.0			
III	1725	1739	- 14' - Drilling			1704.0			
				KELLY DOWN		1725.0			
				TOTAL IN HOLE		1739.0			
				DRILL BIT: SERIAL NO.		72668			
				DRILL BIT: NUMBER		10			
				MAKE		HTC			
				TYPE		QSC			
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT					
				DEGREES OFF					
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT		
				1. <u>Supercol</u>					
				2.					
				3.					
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT		
				1. <u>Caustic</u>					
				2.					
				3.					
				4.					
				MUD TYPE	<u>Melville: F.W.G.</u>				
				MUD WEIGHT	9.7	9.7	9.0		
				VISCOSITY: 1500 cc IN 1 quart OUT	39.0	39.0	44.0		
				PH	11.0	11.0	11.0		
				WATER LOSS: cc	12	11.0	10.0		
				FILTER CAKE	2/32"	2/32"	2/32"		
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING	8	8	4		
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP	8	8	7 1/2		
				CO. TIME w/o /DP			3/4		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 7 1/2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 4
12:00-12:15 Service Rig; 12:15-8:00 Drilling

SIGNED G. P. Rosen DRILLER
 TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 7 1/2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 4 1/2
8:00-9:00 Drilling; 9:00-9:15 Service Rig & Check BOP
7:15-4:00 Drilling

SIGNED B. Huber DRILLER
 TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING 4 HRS. TRIPPING 2 1/2 HRS. REPAIRS _____ HRS. OTHER: 1 1/2
4:00-6:00 Drilling; 6:00-6:30 Drain Mud Tank; 6:30-7:15 Drilling; 7:15-8:15 P.O.H. 1st Bit; 8:15-9:30 clean out and tank; 9:30-10:45 G.H. 4th Bit; 10:45-12:00 Drilling

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.H. WELL NO. 1 DATE 2/5/61
 Name to be same as shown in permit to drill
 FIELD Glacier Project CONTRACTOR The City Drilling Co.
 SIZE HOLE 6 1/2 REDUCED AT 240 KIND OF TOOLS Kelly
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	1569	1622	-53'-Drilling				331F	331F	331F
II	1622	1659	-37'-Drilling				234.0	234.0	234.0
III	1659	1679	-50'-Drilling				1363.00	1406.0	1031.0
				KELLY DOWN			20.0	24.0	14.0
				TOTAL IN HOLE			1622.0	1659.0	1679.0
				DRILL BIT: SERIAL NO.			77286	77286	72663
				DRILL BIT: NUMBER			9	9	10
				MAKE			HTC	HTC	HTC
				TYPE			OSC	OSC	OSC
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT DEGREES OFF					1667 14
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				4					
				MUD TYPE	Mildwhite FWG				
				MUD WEIGHT	9.5	9.6	9.6		
				VISCOSITY: 1500 cc IN 1 quart OUT	36.0	36.0	37.0		
				PH	11.0	14.0	10.0		
				WATER LOSS: cc	10.0	11.0	10.0		
				FILTER CAKE	2 1/2"	2 1/2"	2 1/2"		
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING	8	8	8		
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP	8	8	8		
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 4
12:00-12:30-Drilling; 12:30-12:45 Service Lg; 12:45-8:00 Drilling

SIGNED G. P. Benson DRILLER
 TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 7 1/2 HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 4
8:00-8:30 Drilling; 8:30-8:45 Service Lg & Check BOP's; 8:45-4:00 Drilling

SIGNED P. H. Weber DRILLER
 TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING 5 HRS. TRIPPING 2 1/2 HRS. REPAIRS HRS. OTHER: 4
4:00-6:00 Drilling; 6:00-8:45 Trip for B.T.; 8:45-9:00 Surley; 9:00-12:00 Drilling

SIGNED G. P. Benson DRILLER
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 SIGNED J. D. Miller
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MAKE LAST REPORT "FINAL"
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

Mr. - Thomas

UNIT or LEASE Martin Creek River TRACT SW 1/4 WELL NO. 1 DATE 2/3/61
Name to be same as shown in permit to drill Designation
FIELD Glacier Project CONTRACTOR The City Drilling Co. Ltd.
SIZE HOLE 6 3/4 REDUCED AT 240 KIND OF TOOLS Rotary
KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Chicago NO. OF HOURS 24
WATER FURNISHED BY TAKCO FROM LAKE NO. OF HOURS 24

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

SIGNED K. H. H. H. DRILLER

SIGNED G. H. S. S. C. DRILLER

SIGNED B. Hixler DRILLER

SIGNED [Signature]
The bit pulled and reason for pulling and depth sharp bit run.

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 2/3/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri City Drilling Co. Ltd.
 SIZE HOLE 6 1/2 REDUCED AT 200 KIND OF TOOL Rotary
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR		
	FROM	TO		TOUR 1	TOUR 2	TOUR 3
I	1401	1432	-21'-Drilling	DRILL PIPE IN USE: SIZE <u>3 1/2 IF</u>	<u>3 1/2 IF</u>	<u>3 1/2 IF</u>
				LENGTH DRILL COLLARS <u>234.0</u>	<u>234.0</u>	<u>234.0</u>
				LENGTH DRILL PIPE <u>1185.0</u>	<u>1210.0</u>	<u>1245.0</u>
				KELLY DOWN <u>3.0</u>	<u>28.0</u>	<u>27.0</u>
				TOTAL IN HOLE <u>1422.0</u>	<u>1472.0</u>	<u>1506.0</u>
II	1432	1472	-50'-Drilling	DRILL BIT: SERIAL NO. <u>72653</u>	<u>77283</u>	<u>77283</u>
				DRILL BIT: NUMBER <u>7</u>	<u>8</u>	<u>8</u>
				MAKE <u>HTC</u>	<u>HTC</u>	<u>HTC</u>
				TYPE <u>CSC</u>	<u>CSC</u>	<u>CSC</u>
III	1472	1506	-34'-Drilling	CORE BARREL: KIND		
				SIZE		
				CORE BIT: SERIAL NO.		
				CORE BIT: NUMBER		
				KIND		
				SIZE		
				STRAIGHT HOLE TEST AT		
				DEGREES OFF		
				MUD MATERIAL: KIND <u>Supercol</u>	AMOUNT <u>1050</u>	AMOUNT
				2		
				3		
				CHEMICAL: KIND	AMOUNT	AMOUNT
				1 <u>Caustic</u>	<u>50"</u>	<u>50"</u>
				2 <u>Caustic</u>	<u>20"</u>	
				3		
				4		
				MUD TYPE <u>Milwaukee FWG</u>		
				MUD WEIGHT <u>9.2</u>	<u>9.2</u>	<u>9.2</u>
				VISCOSITY: 1500 cc IN 1 quart OUT <u>37</u>	<u>38</u>	<u>38</u>
				PH <u>11</u>	<u>11</u>	<u>11</u>
				WATER LOSS: cc <u>10</u>	<u>10</u>	<u>10</u>
				FILTER CAKE <u>2 1/2"</u>	<u>2 1/2"</u>	<u>2 1/2"</u>
				FOR COMPANY REPRESENTATIVE ONLY		
				DRILLING		
				CORING		
				DST. OPEN HOLE		
				LOGGING		
				CASING & WOC		
				DOWNTIME		
				COMPLETING		
				LOSS CIRCULATION		
				FISHING		
				CO. TIME w/DP		
				CO. TIME w/o /DP		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 4 1/2 HRS. TRIPPING 3 HRS. REPAIRS 0 HRS. OTHER: 1 1/2
12:00-12:30 Drilling; 12:30-3:30 Trip for bit; 3:30-8:00 Drilling and mix mud

SIGNED R. Miller DRILLER
 TOUR No. 2 FROM 8:00 PM TO 4:00 AM DRILLING 7 1/2 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 1 1/2
8:00-12:30 Drilling; 12:30-12:45 Service Rig & Check BOPs; 12:45-4:00 Drilling

SIGNED G. Pearson DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 HRS. TRIPPING 0 HRS. REPAIRS 0 HRS. OTHER: 1
4:00-4:15 Service Rig; 4:15-6:00 Drilling 6:00-6:30 Circulate hole 6:30-8:15 Drilling 8:15-8:30 Work on pump; 8:30-12:00 Drilling

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. T. Miller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"

IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

HOLE NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	1295	1336	41'-Drilling	DRILL PIPE IN USE: SIZE	3 1/2" IF	3 1/2" IF	3 1/2" IF
				LENGTH DRILL COLLARS	1340	2340	2340
				LENGTH DRILL PIPE	1087.0	1121.0	1149.0
				KELLY DOWN	15.0	20.0	18.0
				TOTAL IN HOLE	1335.0	1550.0	1406.0
II	1336	1375	39'-Drilling	DRILL BIT: SERIAL NO.	72653	72653	72653
				DRILL BIT: NUMBER	7	7	7
				MAKE	HTC	HTC	HTC
				TYPE	QSC	QSC	QSC
				CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT	1325		
				DEGREES OFF	1/2		
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1 Superficial	3050	1750	
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1 Caustic	100	20	
				2 Bayllo	100	50	
				3			
				4			
			1320-Top Lower	MUD TYPE	Milwh. 10: F W Gel		
			Kamparts	MUD WEIGHT	9.2	9.2	9.2
			Grey Limestone	VISCOSITY: 1500 cc IN 1 quart OUT	36	35	36
				PH	11	11	11
				WATER LOSS: cc	14	12	11
				FILTER CAKE	1/32"	2/32"	2/32"
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING			
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP			
				CO. TIME w/o DP			
			Temp-32 & Clean				

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 3 FROM 11⁰⁰ P M TO 12⁰⁰ A M DRILLING 8 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: _____

SIGNED G. H. Wilson DRILLER

11:00-12:00-Drilling

SIGNED P. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility. SIGNED J. K. Walker
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-457

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE Feb. 1, 1961
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co.
 SIZE HOLE 6 1/4 REDUCED AT 240 KIND OF TOOLS Kelly
 KIND OF FUEL Diesel FURNISHED BY TRKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TRKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	950	1096	- 146' - Drilling	3 1/2 IF	364.0	807.0	35 IF	364.0	35 IF
II	1096	1227	- 131' - Drilling			931.0			
III	1227	1295	- 68' - Drilling & Tripping			995.0			
				KELLY DOWN	250	30.0			
				TOTAL IN HOLE	1096.0	1227.0			
				DRILL BIT: SERIAL NO.	72742	72742			
				DRILL BIT: NUMBER	6	6			
				MAKE	HTE	HTE			
				TYPE	OSC	OSC			
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT					
				DEGREES OFF					
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
			950' to 1295' - Grey silt & limestone	CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				4					
				MUD TYPE	Native				
				MUD WEIGHT	9.5	9.5			
				VISCOSITY: 1500 cc IN 1 quart OUT	36	36			
				PH					
				WATER LOSS: cc					
				FILTER CAKE	/32"	/32"			
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING					
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP					
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 P.M. TO 8:00 A.M. DRILLING 7 1/2 HRS. TRIPPING 1 1/2 HRS. REPAIRS 1 1/2 HRS. OTHER 1 1/2 HRS.
12:00-12:15 Drilling; 12:15 to 12:30 Service Rig; 12:30-1:00 Drilling

SIGNED R. Morris DRILLER
 TOUR No. 2 FROM 8:00 P.M. TO 4:00 P.M. DRILLING 7 1/2 HRS. TRIPPING 1 1/2 HRS. REPAIRS 1 1/2 HRS. OTHER 1 1/2 HRS.
8:00-8:30 Drilling; 8:30-9:00 Service Rig & Check BOPs 9:00-4:00 Drilling

SIGNED G. Poisson DRILLER
 TOUR No. 3 FROM 4:00 P.M. TO 12:00 P.M. DRILLING 4 1/2 HRS. TRIPPING 2 HRS. REPAIRS 1 1/2 HRS. OTHER 1 1/2 HRS.
4:00-8:30 Drilling 8:30-9:30 Pull For Rpt 9:30-11:00 Draw Drill Tank 12:00-12:00 Pull in hole & lay down one D.C.

SIGNED B. Hubert DRILLER
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 SIGNED T. K. Mott
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W. 1/4 WELL NO. 1 DATE 1/31/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tec City Drilling Ltd.
 SIZE HOLE 6 1/2 REDUCED AT 240 KIND OF TOOLS Kelary
 KIND OF FUEL Diesel FURNISHED BY TEKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TEKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	654	767	- 113' - Drilling	3 1/2 IF	264.0	267.0	3 1/2 IF	264.0	3 1/2 IF
II	767	858	- 91' - Drilling	KELLY DOWN	267.0	267.0	36.0	36.0	35.0
III	858	950	- 92' - Drilling	TOTAL IN HOLE	767.0	767.0	858.0	858.0	950.0
				DRILL BIT: SERIAL NO.	60391	60391	60391	60391	73744
				DRILL BIT: NUMBER	5	5	5	5	6
				MAKE	HTC	HTC	HTC	HTC	HTC
				TYPE	OSC-16	OSC-16	OSC-16	OSC-16	OSC-16
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT			830		
				DEGREES OFF			1		
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				4					
			537 to 767' Grey Shale & Limestone	MUD TYPE	Water	Water	Water	Water	Water
			767' - Grey Shale	MUD WEIGHT	9.4	9.4	9.4	9.4	9.4
			576' - Top Upper Kanabats	VISCOSITY: 1500 cc IN 1 quart OUT	35	35	35	35	36
			655' - Top Middle Kanabats	PH					
				WATER LOSS: cc					
				FILTER CAKE	/32"	/32"	/32"	/32"	/32"
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING	8	8	5 1/2		
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME				2 1/2	
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP	8	8	5 1/2		
				CO. TIME w/o /DP			2 1/2		

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 7 1/2 HRS. TRIPPING 1 HRS. REPAIRS 1 HRS. OTHER: 1 1/2
12:00 - 12:30 Drilling; 12:30 - 12:45 Service Rig; 12:45 - 8:00 Drilling

SIGNED R. Miller DRILLER
 TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 7 1/2 HRS. TRIPPING 1 HRS. REPAIRS 1 HRS. OTHER: 1 1/2
8:00 - 8:30 Service Rig & Check BOP; 8:30 - 3:45 Drilling; 3:45 - 4:00 Survey

SIGNED G. P. Brown DRILLER
 TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING 3 1/2 HRS. TRIPPING 1 1/2 HRS. REPAIRS 1 1/2 HRS. OTHER: 1 1/2
4:00 - 4:30 Pull out; 4:30 - 7:00 Work on Rig; 7:00 - 8:15 Run in with Bit; 8:15 - 12:00 Drilling

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED B. Huber DRILLER

SIGNED J. H. Miller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 1/30/61
 FIELD Glacier Project Name to be same as shown in permit to drill
 SIZE HOLE 6 3/4 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Direct FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	388	537	- 149' - Drilg				34IF	34IF	34IF
II	537	576	- 39' - Drilling				264.0	264.0	264.0
III	576	654	- 78' - Drilling				250.0	258.0	375.0
				KELLY DOWN			230	24.0	150
				TOTAL IN HOLE			537.0	576.0	654.0
				DRILL BIT: SERIAL NO.			60395	60394	60391
				DRILL BIT: NUMBER			4	5	5
				MAKE			HTC	HTC	HTC
				TYPE			CSC-16	CSC-16	CSC-16
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
				STRAIGHT HOLE TEST AT				520	
				DEGREES OFF				3/4	
				MUD MATERIAL: KIND			AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				CHEMICAL: KIND			AMOUNT	AMOUNT	AMOUNT
				1					
				2					
				3					
				4					
				MUD TYPE			Native		
				MUD WEIGHT					9.4
				VISCOSITY: 1500 cc IN 1 quart OUT					34
				PH					
				WATER LOSS: cc					
				FILTER CAKE			/32"	/32"	/32"
				FOR COMPANY REPRESENTATIVE ONLY					
				DRILLING			8	8	8
				CORING					
				DST. OPEN HOLE					
				LOGGING					
				CASING & WOC					
				DOWNTIME					
				COMPLETING					
				LOSS CIRCULATION					
				FISHING					
				CO. TIME w/DP			8	8	8
				CO. TIME w/o /DP					

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 AM TO 8:00 AM DRILLING 7 1/4 HRS. TRIPPING 4 HRS. REPAIRS 4 HRS. OTHER: 4
12:00-12:15 Drilg; 12:15-12:30 Set. Rig; 12:30-8:00 Drilling

SIGNED R. Moore DRILLER
 TOUR No. 2 FROM 8:00 AM TO 4:00 PM DRILLING 3 1/4 HRS. TRIPPING 4 HRS. REPAIRS 4 HRS. OTHER: 4
8:00-10:15 Drilling; 10:15-10:30 Survey; 10:30-2:00 Trip for Bit; 2:00-2:30 Beam out of gauge. hole; 2:30-4:00 Drilling

SIGNED G. Pearson DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 8 HRS. TRIPPING 4 HRS. REPAIRS 4 HRS. OTHER: 4
4:00-12:00 - Drilling

SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. H. Miller

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, it well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 11/29/64
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Co. Ltd.
 SIZE HOLE 6 1/4 REDUCED AT 240 KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		DRILL PIPE IN USE: SIZE	TOUR 1	TOUR 2	TOUR 3
I	240	240	-0'-W.O.C. Finish in- Stalling 8" double gate & Hydril BOPs checked operation of both - O.K. Started drilling out plug but progress retarded by overheated rotary seizing	LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE CORE BARREL: KIND SIZE CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE			2 1/2 IF 340.0 92.0 28.0 288.0 60295 4 HTC CSC-16
II	240	240	-0'-Drilling out plug & waiting on rotary table to cool off	STRAIGHT HOLE TEST AT DEGREES OFF MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
III	240	388	-148'-Drilling	1. 2. 3. CHEMICAL: KIND 1. 2. 3. 4. MUD TYPE MUD WEIGHT VISCOSITY: 1500 cc IN 1 quart OUT PH WATER LOSS: cc FILTER CAKE			
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING			4 1/2
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC	8	1 1/2	3 1/4
				DOWNTIME		6 1/2	2
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	4	1 1/2	8
				CO. TIME w/o /DP	4	6 1/2	

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING 8 HRS. TRIPPING 8 HRS. REPAIRS 8 HRS. OTHER: 8
12:00-12:15 Finish N.W.T. & putting on table. 2:15-3:30 Run in hole and then
cut Kelly 3:30-4:00 Test Hydril BOP to 1000 psi O.K. 4:00-8:00 Drilling out plug.
Rotary table seizing
 SIGNED K. Hickey DRILLER

TOUR No. 2 FROM 8:00 PM TO 4:00 PM DRILLING 8 HRS. TRIPPING 8 HRS. REPAIRS 8 HRS. OTHER: 8
8:00-2:30 Repair Rotary Table. 3:30-3:45 Drilling out plug 3:45-4:00
Drilling on shoe and letting Rotary Table cool off
 SIGNED G. Poirer DRILLER

TOUR No. 3 FROM 4:00 PM TO 12:00 AM DRILLING 7 1/2 HRS. TRIPPING 2 1/2 HRS. REPAIRS 2 1/2 HRS. OTHER: 2 1/2
4:00-7:15 Drilling. Cut 7:15-9:15 Drilling. 9:15-9:45 Work on the plant.
9:45-12:00 Drilling
 SIGNED B. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED B. Huber

DRILLER

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 1/28/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR The City Drilling Co.
 SIZE HOLE 8 3/4 REDUCED AT Surface KIND OF TOOLS Rotary
 KIND OF FUEL Diesel FURNISHED BY TARCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TARCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	240	240	0' - Ran 7 Hs. 30 lb. 55-8K-LT & C casing as follows: 7 Hs. Casing 225.0 Howco Guide Sine 1.0 Total Pipe 226.0 R.K.P. + C.H.F. 10.0 Pipe Set @ 236.0 Halliburton cemented w/ 75 sac Inland Cement plus 2% Colb. Cement circulated. Plug down at 2:20 AM at 203 feet. Note: 55 sac originally figured for job but malfunction of pump at start of job required additional cement to be run.	DRILL PIPE IN USE: SIZE LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE CORE BARREL: KIND SIZE CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE STRAIGHT HOLE TEST AT DEGREES OFF MUD MATERIAL: KIND AMOUNT AMOUNT AMOUNT CHEMICAL: KIND AMOUNT AMOUNT AMOUNT MUD TYPE MUD WEIGHT VISCOSITY: 1500 cc IN 1 quart OUT PH WATER LOSS: cc FILTER CAKE / 32" / 32" / 32"			
II	240	240	0' - W.O.C.	FOR COMPANY REPRESENTATIVE ONLY			
III	240	240	0' - W.O.C.				
				DRILLING			
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC	8	8	8
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP			
				CO. TIME w/o /DP	8	8	8

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 8:00 A.M. to 8:00 P.M. DRILLING HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 8
12:00-1:30 Running Casing; 1:30-2:30 Cementing; 2:30-8:00 W.O.C.

SIGNED R. Moore DRILLER
 TOUR No. 2 FROM 8:00 A.M. to 4:00 P.M. DRILLING HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 8
8:00-4:00 - W.O.C. Stacked off casing at 2:30 P.M.

SIGNED G. P. Sisson DRILLER
 TOUR No. 3 FROM 4:00 P.M. to 8:00 P.M. DRILLING HRS. TRIPPING HRS. REPAIRS HRS. OTHER: 8
4:00-8:00 W.O.C.

SIGNED B. Huber DRILLER
 SIGNED T. H. McLean
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
 Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run.
 INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL".
 IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

PRINTED IN U.S.A.

3B-108-4-57

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each four'

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	240	240 - 0'	Reaming 6 1/4 inch to 8 3/4	DRILL PIPE IN USE: SIZE LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE			210.0 30.0 240.0
II	240	240 - 0'	Reaming - had considerable pump trouble due to gravel	DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE	Kenn 3 HTC OSC	Kenn 3 HTC OSC	Kenn 3 HTC OSC
III	240	240 - 0'	Reamed to 240'. Made clean trip and Rigged up to run casing	CORE BARREL: KIND SIZE CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE STRAIGHT HOLE TEST AT DEGREES OFF MUD MATERIAL: KIND 1 2 3 CHEMICAL: KIND 1 2 3 4 MUD TYPE MUD WEIGHT VISCOSITY: 1500 cc IN. 1 quart OUT PH WATER LOSS: cc FILTER CAKE			
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING	8	8	8
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP	8	8	8
				CO. TIME w/o /DP			

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

SIGNED *K. Moore* DRILLER

SIGNED G. Hanson DRILLER

SIGNED E. Huber DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED J. D. Miller
The bit pulled and reason for pulling and depth sharp bit run.

INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"
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3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT OF LEASE Atlantic Circle River TRAC N.H.T. WELL NO. 1 DATE 1/26/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri-City Drilling Ltd.
 SIZE HOLE 6 1/4 REDUCED AT _____ KIND OF TOOLS Kelly: failing 2500
 KIND OF FUEL Diesel FURNISHED BY TAKCO FROM Storage NO. OF HOURS 24
 WATER FURNISHED BY TAKCO FROM Lake NO. OF HOURS 24

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			TOUR 1	TOUR 2	TOUR 3
	FROM	TO		DRILL PIPE IN USE: SIZE	LENGTH DRILL COLLARS	LENGTH DRILL PIPE			
I	0	38	-38'-Finished Kothole Well Spudded at 3:00 P.M.	KELLY DOWN	38.0	10.0	28.0		
				TOTAL IN HOLE	38.0	110.0	248.0		
II	38	110	-72'-Drilling. Had considerable trouble with large boulders in hole and pea gravel in pump	DRILL BIT: SERIAL NO.	60389	60389	60395		
				DRILL BIT: NUMBER	1	1	2		
				MAKE	HRC	HRC	HRC		
				TYPE	CSC-16	CSC-16	CSC-16		
				CORE BARREL: KIND					
				SIZE					
				CORE BIT: SERIAL NO.					
				CORE BIT: NUMBER					
				KIND					
				SIZE					
III	110	240	-130'-Drilling. Bit came out very dull due to Pyrite in Glacial Till	STRAIGHT HOLE TEST AT DEGREES OFF		125	240		
				MUD MATERIAL: KIND	Supercol	AMOUNT 8501	AMOUNT	AMOUNT	
				2					
				3					
				CHEMICAL: KIND		AMOUNT	AMOUNT	AMOUNT	
				1					
				2					
				3					
				4					
				MUD TYPE	White: Native				
				MUD WEIGHT					
				VISCOSITY: 1500 cc IN 1 quart OUT					
				PH					
				WATER LOSS: cc					
				FILTER CAKE		/32"	/32"	/32"	
FOR COMPANY REPRESENTATIVE ONLY									
TIME ANALYSIS CO. TIME	DRILLING	2							
	CORING								
	DST. OPEN HOLE								
	LOGGING								
	CASING & WOC								
	DOWNTIME	6							
	COMPLETING								
	LOSS CIRCULATION								
	FISHING								
	CO. TIME w/DP	5							
	CO. TIME w/o /DP	3							

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 A.M. TO 8:00 A.M. DRILLING 2 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 6
12:00-2:30 Ream Kothole & run mud; 2:30-3:00 Repairing Rig Kelly Hose; 3:00-5:00 Drilling; 5:00-8:00 Work on pump;
 SIGNED R. Moore DRILLER

TOUR No. 2 FROM 8:00 A.M. TO 4:00 P.M. DRILLING 7 HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 1
8:00-8:30 - Reaming past boulders; 8:30-9:00 Service Rig & work on air lines; 9:00-11:00 Drilling - gravel from 40' to 98'.
 SIGNED G. P. Brown DRILLER

TOUR No. 3 FROM 4:00 P.M. TO 12:00 A.M. DRILLING 6 HRS. TRIPPING 34 HRS. REPAIRS _____ HRS. OTHER: 18
4:00-4:15 Service Rig; 4:15-6:15 Drilling; 6:15-7:00 Trip for bit; 7:00-7:15 Run Survey; 7:15-7:30 Work on pump; 7:30-11:30 Drilling; 11:30-11:45 circulate hole; 11:45-12:00 Run Survey
 SIGNED R. H. Miller DRILLER

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

SIGNED A. H. Walters

Tabulate drilling time, when taken, on Form 3B-744 and mail with this form. Note depth each time bit pulled and reason for pulling and depth sharp bit run. INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL". IMPORTANT: ALL APPLICABLE SPACES MUST BE FILLED BEFORE MAILING. REPORT TO BE MAILED EACH DAY

3B-10B-4-57

PRINTED IN U.S.A.

THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Creek River TRACT N.W.T. WELL NO. 1 DATE 1/25/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR Tri City Drilling Co.
 SIZE HOLE _____ REDUCED AT _____ KIND OF TOOLS _____
 KIND OF FUEL _____ FURNISHED BY _____ FROM _____ NO. OF HOURS _____
 WATER FURNISHED BY _____ FROM _____ NO. OF HOURS _____

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR	NO. OF HOURS		
	FROM	TO			TOUR 1	TOUR 2	TOUR 3
<u>I</u>	<u>0</u>	<u>0</u>	<u>Rigging up and wait on water</u>	DRILL PIPE IN USE: SIZE LENGTH DRILL COLLARS LENGTH DRILL PIPE KELLY DOWN TOTAL IN HOLE			
<u>II</u>	<u>0</u>	<u>0</u>	<u>Rigging up and wait on steam. Roads have been dozed to 3 different lakes to the west and north and all of the lakes were found to have 14 inches of ice with 6 to 8 inches muddy water. Found good water one mile S.E. of location.</u>	DRILL BIT: SERIAL NO. DRILL BIT: NUMBER MAKE TYPE CORE BARREL: KIND SIZE CORE BIT: SERIAL NO. CORE BIT: NUMBER KIND SIZE STRAIGHT HOLE TEST AT DEGREES OFF MUD MATERIAL: KIND 1 <u>Supercal</u> 2 3	AMOUNT	AMOUNT	AMOUNT <u>12.50</u>
<u>III</u>	<u>0</u>	<u>0</u>	<u>Mixed mud & started drilling Rot hole</u>	CHEMICAL: KIND 1 <u>Caustic</u> 2 3 MUD TYPE <u>White; Native Gel</u> MUD WEIGHT VISCOSITY: 1500 cc IN 1 quart OUT PH WATER LOSS: cc FILTER CAKE <u>1/32"</u> <u>1/32"</u> <u>1/32"</u>	AMOUNT	AMOUNT	AMOUNT <u>25</u>
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING			
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP			
				CO. TIME w/o /DP	<u>8</u>	<u>8</u>	<u>8</u>

Concise explanation of all delays and reasons therefor SHALL be indicated by each driller and verified by Company representative. Time chargeable to Company on day rate basis SHALL be fully explained.

TOUR No. 1 FROM 12:00 P.M. TO 2:00 P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
Rigging up & wait on water

SIGNED R. Moore DRILLER
 TOUR No. 2 FROM 8:00 P.M. TO 1:00 P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
Rigging up & wait on steam

SIGNED G. Arison DRILLER
 TOUR No. 3 FROM 11:00 P.M. TO 1:00 P.M. DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
11:00-1:00 Drilling Rot Hole

SIGNED B. Miller DRILLER
 SIGNED H. H. Miller
 COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.
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THE ATLANTIC REFINING COMPANY

LOG: DRILLING WELL ☒ WORKOVER ☐

(Place "X" in proper space above. After TD is reached, if well is plugged back carry TD and Plugged Back Depth, each tour)

UNIT or LEASE Atlantic Circle River TRACT N.W.T. WELL NO. 1 DATE 1/24/61
 Name to be same as shown in permit to drill Designation
 FIELD Glacier Project CONTRACTOR The City Drilling Co.
 SIZE HOLE _____ REDUCED AT _____ KIND OF TOOLS Kelly
 KIND OF FUEL _____ FURNISHED BY _____ FROM _____ NO. OF HOURS _____
 WATER FURNISHED BY _____ FROM _____ NO. OF HOURS _____

TOUR NO.	DEPTH		FORMATION OR CORE CORE INTERPRETATION MUST BE SIGNED	DATA AT END OF TOUR			
	FROM	TO		TOUR 1	TOUR 2	TOUR 3	
I	0	0	Moving from North Circle River No. 1 rigging up	DRILL PIPE IN USE: SIZE			
				LENGTH DRILL COLLARS			
				LENGTH DRILL PIPE			
				KELLY DOWN			
				TOTAL IN HOLE			
II	0	0	Rigging up	DRILL BIT: SERIAL NO.			
				DRILL BIT: NUMBER			
				MAKE			
				TYPE			
III	0	0	Rigging up	CORE BARREL: KIND			
				SIZE			
				CORE BIT: SERIAL NO.			
				CORE BIT: NUMBER			
				KIND			
				SIZE			
				STRAIGHT HOLE TEST AT			
				DEGREES OFF			
				MUD MATERIAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				CHEMICAL: KIND	AMOUNT	AMOUNT	AMOUNT
				1			
				2			
				3			
				4			
				MUD TYPE			
				MUD WEIGHT			
				VISCOSITY: 1500 cc IN			
				1 quart OUT			
				PH			
				WATER LOSS: cc			
				FILTER CAKE	/32"	/32"	/32"
				FOR COMPANY REPRESENTATIVE ONLY			
				DRILLING			
				CORING			
				DST. OPEN HOLE			
				LOGGING			
				CASING & WOC			
				DOWNTIME			
				COMPLETING			
				LOSS CIRCULATION			
				FISHING			
				CO. TIME w/DP			
				CO. TIME w/o /DP	8	8	8

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TOUR No. 1 FROM 12:00 PM TO 8:00 PM DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
12:00-8:00 moving & rigging up

SIGNED B. Huber DRILLER
 TOUR No. 2 FROM 8:00 PM TO 4:00 PM DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
8:00-4:00 Rigging up

SIGNED Emore DRILLER
 TOUR No. 3 FROM 4:00 PM TO 12:00 PM DRILLING _____ HRS. TRIPPING _____ HRS. REPAIRS _____ HRS. OTHER: 8
4:00-12:00 Rigging up

SIGNED G. Russell DRILLER
 SIGNED A. B. Miller

COMPANY REPRESENTATIVE: Accuracy and Completeness are your responsibility.

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INDICATE DATE AND HOUR RIG RELEASED AND MARK LAST REPORT "FINAL"

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3B-10B-4-57

PRINTED IN U.S.A.

246-11-6-18

VELOCITY DETERMINATION REPORT

ON

THE ATLANTIC REFINING COMPANY

CIRCLE RIVER NO. 1

NORTHWEST TERRITORIES, CANADA

BY

THE ATLANTIC REFINING COMPANY

1961



C O N T E N T S

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Enclosure:

Geophysical Log

1. Sonic Log
2. Index Map
3. Shooting Plan
4. Up-Hole Time Plots
5. Velocity Determination
6. Time-Depth and Velocity Curves
7. Velocity Survey Records
8. Reflection Records

GENERAL INFORMATION

A sonic log and velocity survey were run in The Atlantic Refining Company, Circle River No. 1 well on February 23 and 24, 1961 by Schlumberger and Electronic Logging and Velocity Co., Ltd. The well is located 66°26'38" north latitude and 130°8'50" west longitude, Northwest Territories, Canada.

Kelly block elevation was 285 feet above sea level. Total depth of the well is 2660 feet.

Observations were made at 10 detector levels, ranging from 300 feet to 2656 feet below the kelly block.

A total of 13 records were taken, of which 11 are considered reliable and are reproduced with this report.

GEOPHYSICAL TECHNIQUE

Shots were made in a hole 130 feet east of the well. Depth of shot and charges are indicated on the velocity records.

Trace arrangement on the well records is as follows:

- 1st trace - - - - Time Break
- 2nd trace - - - - Up-Hole Time
- 3rd trace - - - - Well Geophone (High Gain)
- 4th trace - - - - Well Geophone (Medium Gain)
- 5th trace - - - - Well Geophone (Low Gain)
- 6th trace - - - - Geophone on Cable at Kelly Block
- 7th trace - - - - Reference Geophone

The check-fork signal appears on the bottom of the records.

COMPUTATION

Seismic times are referred to a plane of 250 feet above sea level using an elevation correctional velocity of 8500 feet per second. The method of computation is described by a diagram appearing on the velocity determination sheet.

DISCUSSION OF RESULTS

Breaks were good except for shot number I at the 2400 foot depth, which is questionable.

The results are shown graphically by plotting vertical time, average velocity, and interval velocity against depth below the datum plane.

For the purpose of comparison the interval velocities were converted to interval transit time in microseconds and plotted on the sonic log.

THE ATLANTIC REFINING COMPANY


C. H. HIGHTOWER
Chief Geophysicist

R. E. Whitmore
District Geophysicist

Compiled by:
C. A. Petersen