

Drilling Authority No. 260
Date Issued 13-2-67

WELL NAME IOE Tree River H-38
FIELD Wildcat Area:
LOCATION: Unit H Section 38 Grid 67-20; 132-15
Latitude 67-17-21 Longitude 132-21-00
From Established Reference Marker
U.W.I.P. 67-28916 - 132-35000
U.W.I. No. 300 H386720132150
Rig Release Date: 23-4-67
Status D-A
Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
13-2-67	Application for a Drilling Authority.
18-5-67	Well Completion Data. Well History Report.
6-4-67	Application to Amend a Drilling Authority. Application to change a Well Name.
27-4-67	Application to Abandon a Well or Suspend Drilling. Application to Alter Condition of a Well. Well History Supplement. Well Completion Data. Work-over Report No.
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	Data for Back Pressure Test on Natural Gas Wells — Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells — Vitter's Method.
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	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report
	Logs. Large scale Small scale

Drilling Authority No.....260.....

Date Issued...Feb....13/67.....

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

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

Well name and number..... IOE Tree River H-38

Permit No. 3650..... Lease No. WB 32-63

Imperial Oil Enterprises Ltd. Exploratory Licence No. 1019 (1966) 1045 (1967)
(Permittee, Licensee, Lessee)

Imperial Oil Enterprises Ltd. Exploratory Licence No. 1019 (1966) 1045 (1967)
(Operator)

Location: Unit..... H..... Section..... 38..... Grid 67-20-132-15

Latitude 67°17'21" N..... Longitude 132°21'00" W

From Established Reference Marker..... Shot Point 4552 on cut line..... Plotted from
Air Photos with Sketchmaster.....

	DATE	DEPTH
Spudded Conductor Hole	Mar. 18/67	
Spudded.....	Mar. 19/67	
Suspended.....		
Resumed.....		
Finished Drilling.....	Apr. 18/67	4197
Deepened.....		
Complete (gas/oil).....		
Abandoned.....	Apr. 23/67	4197
Rig released.....	Apr. 23/67	4197

Pool (s).....

Interval(s) open to production.....

Elevation: Gr..... 247.1

K.B..... 261.1

Drilling Contractor & Rig No. IOE National 3

Contractor's Business Licence No.

CASING RECORD

CASING RECORD					
Casing Size (Inches)	Grade	Weight	Amount	Set at—	Sacks of Cement and Additives
1. 9 5/8	N 80	40.0	606.61	622.01	375 + 4% CaCl ₂
2. 13 3/8			396		65
3.					
4.					
5.					
6.					

[illegible]



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well or Suspend Drilling

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

Name and number of well TOE Tree River H-38-67-20-132-15
Location: Unit..... Section 38 Grid 67° 20' 132° 15'
Latitude 67° 17' 21" N Longitude 132° 21' 00" W
From Established Reference Marker Air photos of existing cutlines and seismic location. Location verified with photos of rig in place.
Permit No. 3650 Lease No. WB 39-63
Imperial Oil Enterprises Ltd.
(Permittee, Licensee, Lessee)

Date of commencement of proposed program April 20, 1967

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at None Encountered
Gas at Gas blew at 2,383' KB. Gas could be coming from 1,580' - 1,790' KB.
Water at Water encountered from 2,850' - 4,197' KB (FTD) in 2 - 3 foot stringers
Total Depth 4,197' Date of last operations April 20, 1967
Present condition of well Standing ready to abandon.

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sack of Cement and Additives	Amount Pulled
1. 9 5/8	40.0	606.61	622.01	375 sacks + 4% CaCl ₂	None
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
1	4,197' - 3,700'		250 sacks + 2% CaCl ₂	Feel in 8 hours
2	1,850' - 1,500'		200 sacks + 2% CaCl ₂	Feel in 8 hours
3	670' - 570'		60 sacks + 2% CaCl ₂	Feel in 8 hours
4	Surface		5 sacks & Name Plate	

The following logs have been run. Induction E-log, Sonic Gamma log (BHC), Micro Log Caliper, Other operations proposed. All operations in accordance with the (and Velocity Survey) "Canada Oil and Gas Drilling and Production Regulations".

Operations to be carried out by Imperial Oil Enterprises Contractor Licence No.
Address 11160 Jasper Ave., Edmonton, Alberta. Address

Responsible Agent in field A. L. LaBerge
Dated at Edmonton, this 21st Day of April, 1967.

Signed by *A. L. LaBerge* Company Imperial Oil Enterprises
Title Division Production Manager Operator's Exploratory Licence No. 1019 (1966) 1045 (1967)

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

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

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

Confirming oral approval given by Mr. B.H.J. Thoms on the 20th of
April 1967.

Dated 27th April, 1967

B.H.J. Thoms
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer, Calgary, Alberta



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well or Suspend Drilling

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

Name and number of well... IOE Tree River H-38-67-20-132-15
Location: Unit... Section... 38... Grid... 67° 20' 132' 15'
Latitude... 67° 17' 21" N... Longitude... 132° 21' 00" W
From Established Reference Marker. Air photos of existing cutlines and seismic location. Location verified with photos of rig in place.
Permit No. 3650... Lease No. WB 39-63
Imperial Oil Enterprises Ltd.
(Permitter, Licensee, Lessee)

Date of commencement of proposed program... April 20, 1967

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at... None Encountered
Gas at... Gas blew at 2,383' KB. Gas could be coming from 1,580' - 1,790' KB.
Water at... Water encountered from 2,850' - 4,197" KB (FTD) in 2 - 3 foot stringers
Total Depth... 4,197'... Date of last operations... April 20, 1967
Present condition of well... Standing ready to abandon.

CASING RECORD

Casing Size O.D. Inches	Weight	Amount	Set At—	Sack of Cement and Additives	Amount Pulled
1. 9 5/8	40.0	606.61	622.01	375 sacks + 4% CaCl ₂	None
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

Plug		Geological Formation	Number of Sacks of Cement	Remarks
No.	Position			
1	4,197' - 3,700'		250 sacks + 2% CaCl ₂	Feel in 8 hours
2	1,850' - 1,500'		200 sacks + 2% CaCl ₂	Feel in 8 hours
3	670' - 570'		60 sacks + 2% CaCl ₂	Feel in 8 hours
4	Surface		5 sacks & Name Plate	

The following logs have been run... Induction E-log, Sonic Gamma log (PHC), Micro Log Caliper, (and Velocity Survey)
Other operations proposed... All operations in accordance with the "Canada Oil and Gas Drilling and Production Regulations".

Operations to be carried out by... Imperial Oil Enterprises Contractor Licence No.
Address... 11160 Jasper Ave., Edmonton, Alberta. Address...
Responsible Agent in field... A. L. LaBerge

Dated at... Edmonton, this... 21st... Day of... April, 1967.

Signed by... [Signature]... Company... Imperial Oil Enterprises
Title... Division Production Manager... Operator's Exploratory Licence No. 1019 (1966) 1045 (1967)

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

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

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

Confirming oral approval given by Mr. B.H.J. Thoms on the 20th of
April 1967

Dated... 27th April... 1967

[Signature]
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer, Calgary, Alberta

67°20'

67°20'

IMPERIAL OIL ENTERPRISES LTD.

WELLSITE LOCATION SKETCH

IOE Tree River H-38-67-20-132-15

SCALE: 2" TO 1 MILE

MACKENZIE RIVER

LOCATION
LAT. 67°17'21" N.
LONG. 132°21'00" W.

TOPOGRAPHY FROM BLOWUP OF 1/250,000 NAT. TOPO. MAP.
POSITION OF CUT LINE AND SHOT POINTS PLOTTED FROM AIR PHOTOS WITH SKETCHMASTER.
WELL TO BE STAKED 700' SOUTH OF S.P. 4552 ON CUT LINE.
LATITUDE AND LONGITUDE DETERMINED FROM SCALING ON THIS MAP.
LOCATION PLOTTED BY SKETCHMASTER FROM AIR PHOTO OF RIG.

H. Burnock A.L.S.
SURVEY SUPERVISOR



TREE RIVER H 38-37-20-25

4" 1000'

EF30
9

IOE TREE RIVER H-38

April 10, 1967

Depth 3,747' - mixing lost circulation material

Sour gas odour @ 3,280'

Deviation @ 2,110' - 3°

2,462' - $4 \frac{3}{4}^{\circ}$

2,643' - $5 \frac{7}{8}^{\circ}$

2,815' - 6°

IOE TREE RIVER H-38

April 4, 1967

Depth 2,929' - mixing lost circulation material

CORE #1 - 2,608' - 2,638'. Recovered 30'

CORE #2 - 2,860' - 2,890'. " 30'

Well blew sweet gas when tripping out of hole @
2,366' - about 500 Mcf/d - maximum pressure recorded
600 psi - sample taken

IOE TREE RIVER H-38

March 28, 1967

Depth 2,366' - drilling

9 5/8" casing landed at 622' - cemented with 375 sacks

ELEVATIONS:	K.B.	261'
	GR.	247'

IOE TREE RIVER H-38

March 21, 1967

Depth 448' - drilling

SFUDD: 19th March 1967

File No.
Drilling Authority No. 260

Department of Indian Affairs and Northern Development
Resource & Economic Development Group



~~DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT~~
~~RESOURCE MANAGEMENT DIVISION~~

Application to Amend a Drilling Authority

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

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made to amend Drilling Authority No. 260, concerning

IOE Tree River H-38-67-20-132-15

(Name and Number of Well)

The following amendments are required: Lat. 67° 17' 21"N

Long. 132° 21' 00"W

Reasons for the amendments: Corrected longitude calculated from aerial photographs.

Dated at Edmonton, this 5th day of April, 1967.

Signed by Copy (Signed) A. L. LaBerge

Title Production Manager

Company Imperial Oil Enterprises Ltd.

(For Resource Management Division use only)

APPROVED

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

Date 6th April, 1967

Oil Conservation Engineer

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

NANR 52-90-3 (7-65)

UNIVERSAL WELL LOCATION REFERENCE: 67.28916° North Latitude
132.35000° West Longitude



~~CONFIDENTIAL - INFORMATION FOR THE RESOURCES MANAGEMENT DIVISION~~
~~RESOURCES MANAGEMENT DIVISION~~

Application for a Drilling Authority

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

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

Name and number of well **IOE Tree River H-38-67-20-132-15**
Location: Unit **H** Section **38** Grid **67°20'132°15'**
Latitude **67°17'21" N** Longitude **132°21'03" W**
From Established Reference Marker **Air photos of existing cutlines and seismic control. Location will be verified with photos of rig in place**
Elevation: Ground **243 (Est.)** K.B. feet above sea-level.
Well is expected to produce from **Bear Rock** formation at a depth of about **3,000** feet.
Area assigned to well

(for Oil Conservation Engineer's use only)

Permit No. **3650** Lease No. **WB 39-63** Acreage

Permittee, licensee, or lessee **Imperial Oil Enterprises Ltd.**
Exploratory Licence No. **1019**
Surface owned by Crown or **Crown** (If alienated submit name and address of owner and occupant.)
Petroleum and natural-gas rights owned by **Crown**

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

Casing Size O.D. (Inches)	Weight (Lb./Ft.)	Grade	Brand	New or Used	Estimated Depth	Sacks of Cement
1. 9 5/8	40	N80	Seamless	Used	600	To surface
2.						
3.						
4.						
5.						

Expected water, gas, and oil horizons and type of control equipment **possible oil 2700 in Bear Rock possible oil or water at about 5300 in Bonning. To bottom at 6000'. Hydril and double gate mechanical blowout preventer.**

Well will be drilled with (Rotary) Rig No. **NAT 3** by **Imperial Oil Enterprises Ltd.**
(Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No.
At well **A. L. LaBerge** At registered office **D. D. Loughheed**
Address **11160 Jasper Avenue, Edmonton** Address **500 - 6th Avenue S.W., Calgary**
It is understood that if changes become necessary, notice of the change of plan will be submitted.
Dated at **Edmonton**, this **8** day of **February**, 19 **67**
Signed by **Copy (Original Signed) A. L. LaBerge** Company **Imperial Oil Enterprises Ltd.**
Title **Production Manager** Operator's Licence No. **1019**

(For Resource Management Division use only)

APPROVED

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

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

Dated **13th February**, 19**67**

Oil Conservation Engineer

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

UNIVERSAL WELL LOCATION REFERENCE: **67.28916° N. 132.35083° W.**

67°20'

132°15'

67°20'

IMPERIAL OIL LIMITED

WELLSITE LOCATION SKETCH

IOE Tree River H-38-67-20-132-15

SCALE: 2" TO 1 MILE

MACKENZIE RIVER

SEISMIC LINE

38

4552

H

4551

LOCATION

LAT. 67°17'21"
LONG. 132°21'03"

4550

AP 4550
300' W. OF L.A.M.

4549

4548

132°15'

TOPOGRAPHY FROM BLOWUP OF 1/250,000 NAT. TOPO. MAP.

POSITION OF CUT LINE AND SHOT POINTS PLOTTED FROM AIR PHOTOS WITH SKETCHMASTER.

WELL TO BE STAKED 700' SOUTH OF S.P. 4552 ON CUT LINE.

LATITUDE AND LONGITUDE DETERMINED FROM SCALING ON THIS MAP.

B. Zurnack A.L.S.
SURVEY SUPERVISOR



File No.....
Drilling Authority No.....260.....

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

WELL-SITE INSPECTION REPORT

FROM: Field Office or Area: Inuvik Date: 10th July 1971

TO: The Oil Conservation Engineer:

RE: IOE Tree River H-38 67-20-132-15

Location: 67.28916°N., 132.35000° W. Status: D & A April 1967

This location was inspected by the undersigned on 10th July 1971
T.D. 4197'

The location is in satisfactory/~~unsatisfactory~~ condition.

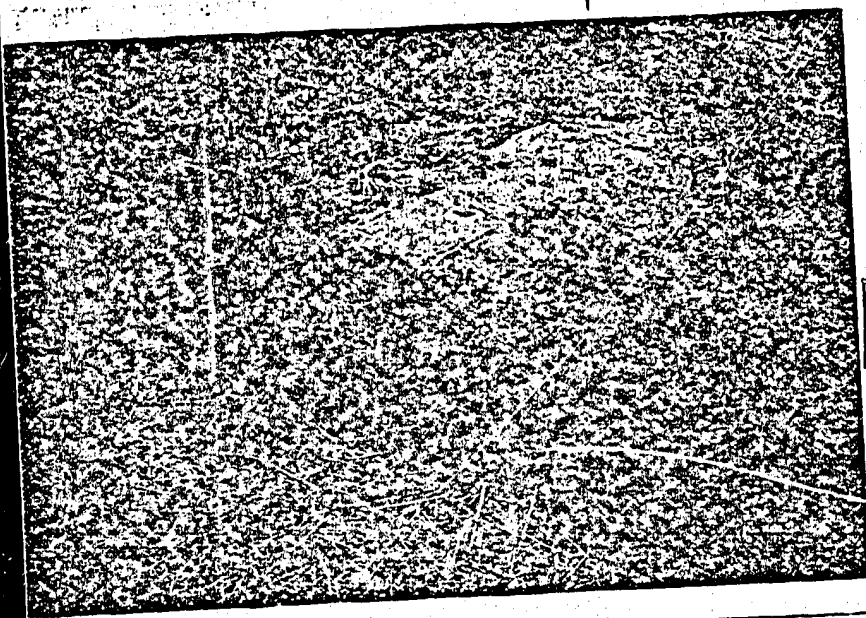
The following items require attention:

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

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

Clean lease.

Wood piled



Inspected by *M. D. Thomas*
M. D. Thomas

Original to Oil Conservation Engineer, Dept of IA & ND, Duplicate to Field Office or Inspecting Engineer. District 2
TAND 52-90-14 (9-60)



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- (d) Acidization and Fracturing Record
- (3) Back Pressure and Production Tests

Company: Imperial Oil Enterprises Ltd.
Signed by: Peter Schaffr.
Title: Manager N.W.T. Exploration District
Date: May 18 1967

SECTION I

E

Section 1. Summary of Well Data

- (a) Well Name and Number - IOE Tree River H-38
- (b) Permittee - Imperial Oil Enterprises Ltd.
- (c) Operator - Imperial Oil Enterprises Ltd.
11160 - Jasper Avenue, Edmonton, Alberta
- (d) Location - 67-20 - 132-15
Latitude 67°17'21" N, Longitude 132°21'00" W, *Unit M, Section 28*
- (e) Co-ordinates - not applicable
- (f) Permit Number - 3650
- (g) Drilling Contractor - Imperial Oil Enterprises Ltd.
National 3
- (h) Drilling Authority - 260 - Issued 13-2-67 Amended 6-4-67
- (i) Classification - NFW
- (j) Elevations - Kelly Bushing 261.1
New Ground 247.1
- (k) Spud - March 19/67 5:00 A.M. - *Spudded Conductor Hole March 18/67
3 1/2" 13 3/8" cond pipe / 655 lbs. cement.*
- (l) Completed Drilling - April 18/67
- (m) Total Depth - 4197
- (n) Well Status - Dry and Abandoned
- (o) Rig Release - April 23/67 MIDNIGHT
- (p) Hole Size - 12 1/2" to 640'
8 5/8" to 4197'
- (q) Casing - Ran 19 joints 606.61' of 9 5/8 N80 LT & C
40.0# casing landed at 622.01. Cemented with 375
sacks plus 4% CaCl₂.

SECTION II

Section 2. Geological Summary

(a) Formation Tops

<u>Formation</u>	<u>Sample</u>	<u>Log</u>	<u>Sub-Sea</u>
Imperial	280		
Canol-Hare Indian	2180	2177	-1916
Hume	2560	2300	-2039
Bear Rock	2883	2588	-2327

(b) Cored Intervals

	<u>Interval</u>	<u>Recovery</u>	<u>Formation</u>
#1	2606-2636	29.7	Bear Rock
#2	2860-2890	30	Bear Rock
#3	3758-3778	19	Bear Rock

(c) Core Description

Core #1 2606-2636 Rec. 29.7

Limestone - Micritic pellet to pellet micrite. Pellets .06 to .15 MM in diameter, medium well preserved, well cemented in micritic matrix with 15% argillaceous material. Occasional thin argillaceous laminations. Minor skeletal in the form of brachiopods, thin shelled, gasteropods crinoids. Minor bondinage structures.

Coring times minutes per foot 9, 16, 12, 11, 7, 6, 6, 6, 6, 8, 11, 7, 7, 6, 9, 9, 8, 8, 8, 8, 8, 7, 6, 6, 6, 5, 5, 6, 6, 6.

Core #2 2860-2890 Rec. 30
Smell of H₂S throughout core.

2860-2862
2' Limestone, micritic pellet. Pale brown. Part of micrite is enlarged to chalk size but all pore space is filled with clear cemented, slightly argillaceous cement. A few ostracods. Trace of black bitumen?

2862-2868
6' Limestone, micritic cemented. Pale yellowish brown. Part of micrite is enlarged to vague pellets and lumps all tightly cemented. Vague bedding 5° dip. Cement is mostly present in small patches and veinlets. Scattered ostracods. Trace of finely disseminated pyrite.

2868-2870
2' Limestone, micritic, argillaceous. Pale brown in part with bondinage structure. Some vague pellets. Trace of clear calcite cement in small patches. Scattered ostracods.

2870-2873
3'

Limestone, micritic, cemented. Pale yellowish brown as interval 2862-2868.

2873-2883
10'

Limestone, micritic, argillaceous. Pale brown. Bondinage structures common. Much of the micrite is enlarged to vague pellets. Ostracods common.

2883-2888
5'

Limestone, micritic, trace cemented. Pale yellowish brown. Completely dense. In part vaguely bedded. Also well marked approximate horizontal laminae 1/8" of enlarged micrite with incipient dolomitisation. All of this core is quiet water limestone. The bottom 5 feet are quiet water shelf limestone. Cementation appears syngenetic in micrites. This degree of cementation is common in Beaverhill platform limestones and off reef limestones close to Swan Hills reef.

2888-2890
2'

Micritic limestone. Pale yellowish brown. Buff in small part. Streaks of enlarged micrite, with incipient dolomitisation. Trace of finely disseminated pyrite.

Coring times minutes per foot 8, 8, 7, 6, 6, 6, 7, 6, 6, 7, 6, 5, 5, 5, 4, 4, 5, 5, 5, 4, 5, 4, 5, 5, 6, 6, 6, 6, 7, 8.

Core #3

3758-3778 Rec. 19.

Dark brown skeletal micritic limestone. Argillaceous, Brachiopods, gastropods, tentaculites, crinoid fragments tight.

Coring times minutes per foot 4, 6, 6, 9, 10, 8, 11, 10, 11, 11, 12, 12, 14, 15, 11, 14, 11, 13, 12, 10.

Section 2.

(d) Sample Description

10E Tree River

H-38

IOE TREE RIVER H-38

67° 20' 132° 15'

7-11-6-63

LOGGED BY: B. BrisslerDATE: April 1967UNIT: Shume

2

INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.
				☒ WET	☐ DRY	
2815- 20	F	100	micrite	buff		to pale brown 60% is enlarged micrite and resembles both pitted and shelled micritic limestone. Darker chips are all completely light, often contain small patches of clear calcite cement
2820- 40	F	100	micrite	buff		25% pale yellow brown 25% pale brown all dense. Small patches of clear calcite near cement patches often some vague pet. indications of stylolites
2840- 50	F	80	micrite	buff		and pale yellow brown Essentially as above some enlarged micrite
		20	cemented pitted ls	pale		brown

LOGGED BY:

Brancher

DATE:

April 1967

UNIT:

Home / Bear Rock

3
LOCAL
NAME:

INTERVAL	QUALITY	%	ROCK NAME	WET COLOR DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORC TYPE
Core #2			2860-2890		recovery 30/30 Small of the 5 diameters	
2860-62	100		limestone micritic pitted; cemented, slightly argillaceous	pale brown	Part of micrite is enlarged to chert size but all pore space is filled with clear cement. A few ostracods. Trace of black bitumen?	
2862-68	100		limestone, micritic cemented	pale yellow brown	part of micrite is enlarged to vagus pellets and lumps all slightly cemented. Vague bedding 5° dip. Cement is mostly present in small patches and ventral scattered ostracods. Trace of finely disseminated pyrite	
2868-70	100		limestone, micritic argillaceous	pale brown	In part with bounding structures some vagus pellets, trace of clear cement in small patches scattered ostracods	
2870-73	100		limestone, micritic cemented	pale yellow brown	as interval 2862-68	
2873-83	100		limestone, micritic argillaceous	pale brown	bounding structures common. Much of the micrite is enlarged to vagus pellets. Ostracods common	
2883-88	100		limestone, micritic trace cemented	pale yellow brown	Completely dense. In part vaguely bedded; also well marked approx horizontal laminae 1/8" of enlarged micrite with incipient dolomitization. all of this core is quiet water limestone. The bottom 5 ft are quiet water shelf limestone. cementation appears syngenetic. This degree of cementation is common in in micrites Beaverhill platform limestones and off reef lim	

LOGGED BY:

B. Brucher

DATE: April 1967

UNIT: Bear Rock

33
HAN

INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	TYPE
				☒ WET	☐ DRY		
2840-1	L	100	micritic ls	pale		yellow brown, buff in small part streaks of enlarged micrite with incipient dolomitisation buffed one foot (2828-29) at 2 mm and lost circulation Trace of finely disseminated pyrite	
2950-1	F	70	micritic ls dense	pale		yellow brown. Samples collected from ditch because of lost circulation and in mud	
		30	enlarged micrite	pale		yellow brown and pale brown. In part with incipient dolomitisation	
		tr	cemented pitted ls				
2980-1	C	100	micritic ls dense	buff		50% pale yellow brown 50%	
		tr	dolomite	pale		yellow brown	
3030-1	G	90	micritic ls	buff		50% cherty but < 0.01, pale yellow brown	
		5	pitted ls	pale		yellow brown	
		5	dolomite	buff		dolomitised micrite	tr
						small patches of clear calcite throughout Presence of <i>Campylopus</i> at 3050 ostracods indications of stylolites	
3070-1	G	100	micritic ls, slightly dolomite	mostly		pale yellow brown, small part buff dolomite probably in laminae	
3110-1	G	95	micrite dense	pale		yellow brown	
		5	cemented pitted ls	pale		brown	
3130-1	G	100	micrite	mostly		buff, small part pale brown	
3140-1	G	95	micrite as above			small patches of clear calcite cement	
		5	dolomite	pale		brown dolomitised micrite	

LOGGED BY: PennerDATE: April 1967UNIT: Bowl RockNAME: Penner

INTERVAL	QUALITY	%	ROCK NAME	WET		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POR. TYPE	
				COLOR	DRY			
3170	F	90	micrite, dense	pale		yellow brown, partly buff		
		10	dolomite,	pale		brown, dolomitized micrite		
3200	F	90	micrite dense	pale		brown		
		10	dolomite	pale		brown	I	
		5	concreted pitted ls.					
3210	F	85	micrite as above					
		10	dolomite	pale		brown dolomitized micrite		
		5	concreted pitted ls.	pale		brown		
		5	green waxy shale					
3230	G	80	micrite	pale		yellow brown, small part buff		
		20	dolomite	pale		brown, dolomitized micrite		
			From 3240 resumed using shale shaker instead of taking samples from ditch					
3240	G	70	micrite	buff		dense		
		30	dolomite	pale		yellow brown, dolomitized micrite		
3260	G	80	micrite as above					
		20	dolomite as above					
3280	G	100	dolomite, slightly calcareous	pale		brown strong smell of sour crude, strong fluorescence.		
3290	G	60	dolomite as above					
		40	micrite as above					
3300	G	60	micrite as above					
		40	dolomite as above					
3310	G	80	micrite, dense	pale		yellow brown		
		20	dolomite as above					
3330	G	60	micrite dense	buff		strong smell of sour crude		
		40	dolomite slightly calcareous	buff		strong fluorescence.		

LOGGED BY: G. GruescherDATE: April 1967UNIT: Boor Rock2
LOCAL
NAME

INTERVAL	QUALITY	%	ROCK NAME	WET		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY	
				COLOR	DRY		TYPE	V
3340-	G	60	dolomite as above	buff		dolomitized micrite	condensed smell and fluorescence	
		40	micrite dense	buff				
3350-	G	90	micrite	buff		partly cherty 20%	no oil smell	
		10	dolomite	buff				
3360-	G	100	micrite	buff		dense		
3370-	G	80	micrite	buff		Drilling times suggest porosity 3329-91		
		20	dolomite	buff		not visible in samples		
3390-	G	100	micrite, dolomitized	buff		some chips 100% dol; some partly dol		
						most 100% micrite		
3400-	G	70	dolomite	buff		to pale yellow brown		
		30	micrite	buff		dense		
3410-	G	90	micrite as above	buff		to pale yellow brown		
		10	dolomite as above					
3430-	G	80	micrite			mostly pale yellow brown, small part buff		
		20	dolomite	buff		dolomitized micrite		
3440-	G	70	micrite as above			Porosity indicated by drilling break 50-51		
		30	dolomite as above					
3460-	G	70	dolomite	pale yellow brown to buff		Per 64-65	dense	I
		30	micrite	pale yellow brown to buff				
3470-	F	80	dolomite	pale brown, pale yellow brown, buff		On the average darker than above	Porosity 3429-90	
		20	micrite	buff		dense		
3500-	G	90	dolomite	pale brown		(dolomitized micrite)	Porosity 3523-25	I
		10	micrite	pale yellow brown		Some white calcite from vein fillings		
3540-	G	80	dolomite	pale brown		N.B. the dolomite is often calcareous		I
		20	micrite	pale yellow brown		this line contrast is maintained with the micrite because the dolomite is apparently a dolomitized micrite		
						Some white vein calcite		

LOGGED BY: B. BrasherDATE: April 1967UNIT: Beer Rock

NAME

PC

TYPE

INTERVAL	QUALITY	%	ROCK NAME	☒ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PC
3570-	G	100	dolomite, calcareous	brownish grey		
3590-	G	100	dolomite slightly calcareous	brownish grey to pale brown	Trace of porosity in coarser part	I
3610-	G	100	dolomite, calcareous	yellow brown	Colour and texture of yellow brown	I
3630-	G	100	dolomite calcareous	partly pale brown as @ 3590 partly light coloured as @ 3610		T
3640-	G	100	dolomite, calcareous	brownish grey	Considerably darker than above. Vein calcite, white 2%	
3670-	G	76	dolomite as above			
		20	micrite	pale yellow brown		
		2	white vein calcite			
3720-	G	60	dolomite, calcareous	brownish grey and pale yellow brown		
		40	micrite	pale yellow brown to buff		
N.B. Thin section in samples @ 3450 3500 3520 3540 3560 3560 3570 3580 3630 3650 3680 3700						
3740-			No sample.			
3750-78	G	100	Core # 3.		dark brown skeletal micritic limestone. Argillaceous. Brachs, gastropods, tentaculites, crinoids fragments tight.	
3780	P		Limestone-micritic skeletal. slight dolomitization.		Samples poor but skeletal limestone lithology general. Tight. trace of pellet micritic limestone. Color is light buff.	
3860						
3860-3940	P	50	Coarsely Dolomite		Light brown, saccharine dolomite with trace of relic skeletal material. Intergranular porosity is fair.	II

LOGGED BY: _____

DATE: _____

UNIT: _____

2
LOCAL
NAME

INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORC	
						TYPE	
3860			continued.		as above.		
3940		50	limestone matrix skeletal				
3940		100	Dolomite	Brown	as above, brown, saccharine texture dolomite with some argillaceous material		
4197					appears to be little change in in dolomite to 4197.		

SECTION III

23

Section 3. Engineering Summary

(a) Drill Stem Tests - None run

(b) Casing Record

Ran 19 joints 606.61' of 9 5/8 N80 LT & C 40.0#
Casing Baker float shoe landed at 622.01. Cemented
with 375 sacks plus 4% CaCl₂.

Section 3. (c) Bit Record

Bit #	Size	Type	Conventional or Jet	Hrs. on Bottom	Footage Drilled	Depth Pulled	Remarks
1A	12 1/4	K2P	Jet	11	228	228	
2A	12 1/4	YS1	"	11 1/2	184	412	
3A	"	K2P	"	15 1/2	228	640	
1	8 5/8	YT1A	"	18 1/4	1014	1654	
2	"	"	"	13 3/4	456	2110	
3	"	M4L	"	8 3/4	256	2366	
4	"	T2	"	7 1/2	96	2462	
5	"	YH	"	11	128	2590	
*6	"	M4N	"	3 3/4	16	2606	
Core Bit							
1	7 13/16	Boyles	Diamond	4 1/4	30	2636	
*6	8 5/8	M4N	Jet	15 3/4	73	2709	Reamed 30'
7	"	"	"	18	106	2815	Reamed 103'
*8	"	"	"	8 1/4	45	2860	
Core Bit							
1	7 13/16	Boyles	Diamond	3 1/4	30	2890	
*8	8 5/8	M4N	Jet	1/4	2	2892	Reamed 30'
9	"	YH	"	6 1/2	37	2929	
*10	"	W7	Cut Out	14 3/4	64	2993	
11	"	W7	Jet	20 1/2	164	3157	
12	"	M4N	"	21 1/4	162	3319	
13	"	"	"	24 1/4	261	3580	
14	"	"	"	14 1/4	167	3747	
*10	"	W7	Cut Out	1 1/2	11	3758	
Core Bit							
1	7 13/16	Boyles	Diamond	3 1/2	20	3778	
15	8 5/8	W7	Cut Out	23 3/4	274	4052	Reamed 20'
16	"	YH	Jet	6 3/4	145	4197	FTD

Section 3.

(d) Mud Report

Ge1 113,450 lbs.

Soda Ash 550 lbs.

Caustic Soda 700 lbs.

CMC 1150 lbs.

Peltex 600 lbs.

Cronox 16 1/2 gals.

Quick Vis 16 3/4 gals.

Acrysol 14 1/2 gals.

Sawdust 1094 sacks

Fibretext 112 sacks

Weight Material 26,600 lbs.

Sparton Barytes 3000 lbs.

Diesel Fuel 2 1/2 gals.

3

Section 3. (e) Deviation Record

Totco at	Degrees off
90	7/8
150	1/2
240	1/2
340	1/2
440	1/2
540	1
630	1 1/4
1100	1 1/2
1600	1 3/4
1637	2
2110	3
2330	4
2452	4 3/4
2590	5 1/2
2643	5 7/8
2705	5 7/8
2770	5 3/4
2815	6
2855	5 3/4
2890	5 1/4
2920	5 1/4
3044	4 7/8
3130	5
3300	4 1/4
3406	3 3/4
3560	4
3680	3 1/4

B

Section 3.

(f) Abandonment Plugs

April 20/67 Plug #1 Ran 50 sacks cement plus 2% CaCl₂ on bottom
felt for plug - no sign of cement.

April 21/67 Plug #2 4197-3750 with 200 sacks cement plus 2% CaCl₂

April 21/67 Plug #3 Ran 30 sacks cement plus 20 sacks Cal-seal
on bottom. Felt top of plug at 4147. Set on
plug with 15000#.

April 21/67 Plug #4 4147-3750 with 150 sacks cement.

April 21/67 Plug #5 3700-3575 with 50 sacks cement plug 2% CaCl₂
Felt at 3694

April 22/67 Plug #6 1850-1500 with 200 sacks cement plug 2% CaCl₂
Felt at 1358

April 22/67 Plug #7 670-570 with 60 sacks cement plus 2% CaCl₂
Felt at 627

April 23/67 Plug #8 with 60 sacks cement plus 2% CaCl₂
Felt at 486

April 24/67 Cut off casing 3' below ground level. Dropped
5 sack plug. Welded plate - 3 sacks in mouse
hole - 5 sacks in rat hole.

Section 3.

(g)

Lost Circulation Zones

April 3/67

Lost circulation at 2929' in Bear Rock.
Pumped down 200 bbls. lost circulation material - no returns.
Pumped down 20 bbls. lost circulation material - no returns.
Pumped down 150 bbls. lost circulation material - mud 60'
from top.
Pumped down 90 bbls. lost circulation material.
Regained circulation at 4:00 A.M. April 4 - 27 1/2 hrs.

April 8/67

Lost 3" of mud in 3 hrs. between 3460-3490 Bear Rock.
Mixed 14 bags of sawdust.

April 9/67
9:15 A.M.

Lost circulation at 3747 - Bear Rock.
Pumped down 148 bbls. lost circulation material - no returns.
Pumped down mixture of gunny sacks and plastic.
Pumped down 110 bbls. lost circulation material - no returns.
Pumped down in stages - plastic, tar paper and gunny sacks.

April 10/67

Pumped down 152 bbls. lost circulation material. No returns.
Pumped 125 bbls. mud (VIS 47 WT 8-9) down annulus.
Got returns but lost circulation.
Pumped down 48 bbls. lost circulation material.
Pumped down 112 bbls. lost circulation material.
Pumped down 32 bbls. lost circulation material - small
returns with pump on.

Plug #1

15 sacks cement 15 sacks Cal-Seal displaced with 51 bbls.
mud (VIS 55-60) - good returns 5 stands from bottom. Hit
top of plug at 3717 - no returns.

April 11/67
Plug #2

20 sacks cement 20 sacks Cal-Seal
Felt plug at 3687' - no returns.

Plug #3

25 sacks cement 25 sacks Cal-Seal
Drilled to 3753 - no returns.

Plug #4

20 sacks cement 20 sacks Cal-Seal 25 gunny sacks ahead.
Felt top of plug at 3693 - no returns.

April 12/67
Plug #5

40 sacks cement plus 4% CaCl₂.
Felt plug at 3688
Regained circulation at 6:15 P.M.

April 13/67

Trip out 22 stands. Hole flowing gained 8".
Broke circulation - no returns. Pumped 64 bbls.
Annulus full. Ran in to 2929 and mud dropped in hole
Pumped 152 bbls. lost circulation material at 2929 - no
returns.

3

Plug #6 35 sacks cement plus 3% CaCl₂ at 2905
Felt at 2832
Drilled out and ran in on top of Plug #5 at 3688'

April 14/67 Drilled out Plug #5. Drilled to 3758 and lost 8" mud
in 5' of hole.

Plug #7 25 sacks Gel 10 bbls. diesel fuel followed by 30 sacks
cement plus 2% CaCl₂ - no returns.

Plug #8 50 sacks Gel 10 bbls. diesel fuel followed by 70 sacks
cement plus 4% CaCl₂.

April 15/67 Trip out to 1500' broke circulation
Ran 7 stands - broke circulation at 2135'
Ran 5 stands to 2590 - losing mud
Ran 5 stands to 3045 - losing mud
Ran in to top of plug at 3753'.

Plug #9 65 sacks cement plus 4% CaCl₂ with 20 gunny sacks ahead.
Felt plug at 3748'
Regained circulation at 5:30 P.M.

.. April 17/67 Drilling with steady 2" stream of water - partial returns.

April 18/67 Lost circulation at 4197 Bear Rock.
Pumped 144 bbls. lost circulation material - no returns.
Pulled 30 stands
Pumped 80 bbls. lost circulation material.
Tripped in to bottom (4197)
Pumped 25 bbls. lost circulation material - no returns.
Pumped 54 bbls. lost circulation material - no returns.
Tripped out to log.

B

Section 3.

(h)

Report of Blowouts

March 27/67

A break had been taken for lunch, during a trip out of the hole and the hole had been left full. Three stands of pipe were pulled after lunch, and the well blew in, with three stands of drill collars in the hole.

The well was shut in, and a pressure of 600 PSI was recorded on the mud gauge. A gas sample was taken at the stand pipe. All the risers on the flare line were frozen open, and for safety reasons it was not possible to take a pitot tube pressure reading. The gas is sweet and was estimated at half a million cubic feet per day.

The mud weight was raised and pipe was run in the hole to circulate at successively lower levels. The gas flow was not killed until circulating off bottom.

SECTION II

Section 4.

Logs

April 18/67	Induction E	622-4200
April 19/67	Borehole Compensated Sonic Gamma Ray Caliper	0-4199
April 19/67	Microcaliper	622-4200
April 19/67	Velocity Survey	622-4199

Section 5.

(a) Core Analysis

Core #2 and Core #3



CORE LABORATORIES - CANADA LTD.

Petroleum Reservoir Engineering

COMPANY IMPERIAL OIL ENTERPRISES FIELD RED ARTIC R FILE CNP-1-8747
LIMITED
WELL 10E TREE RIVER H-38 DATE _____
LOCATION 67° 20'N 132° 15'W PROV NWT ELEV. _____

CORE-GAMMA CORRELATION

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories - Canada Ltd. (all errors and omissions excepted); but Core Laboratories - Canada Ltd. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or used in connection with such report so used or relied upon.

TC 9 SECS VERTICAL SCALE: 5" = 100' SENS 5000 CPM

2850

CORE No. 2 2860.0'-2890.0' (REC. 25.0')

3750

CORE No. 3 3758.0'-3778.0' (REC. 19.0')

CORE ANALYSIS CODE KEY

I Permeability (md) Columns F, G, H

Code

- (m) when K max, and K_H are measured
- (r) when K radial is measured
- (h) when a single horizontal K is measured

II Plug Quality (Column N)

Code Condition (Subcolumn 1)

- 1 - Fractured
- 2 - Missing (includes cement plugs)
- 3 - Broken or unconsolidated
- 4 - Uncored
- 5 - Portion of core not analyzed

Texture (Subcolumns 2)

- 1 - Dense

Interpretation (Subcolumns 3)

- 1 - Same as
- 2 - Interpreted Value (editing stage)
- 3 - Assigned footage
- 4 - Interpreted Values for footage, permeability, porosity and lithology

III Plug Type (Column O)

Code

- 1 - Full Diameter (includes 4 3/8", 3 1/2", 2 5/8", 2 3/4" Diameter)
- 2 - Slim hole (less than 2 1/2" diameter)
- 3 - Cubes - any size
- 4 - Horizontal test plugs - any size
- 5 - Vertical test plugs - any size
- 6 - Test plugs - all sizes - undifferentiated position
- 7 - Unconsolidated technique
- 8 - Combined plugs - Full diameter, plus cubes test plugs, etc.
- 9 - All measurements except vertical permeability on horizontal test plugs, vertical permeability taken on vertical test plugs
- 10 - Horizontal permeabilities run on small diameter plugs (other meas. full diameter)
- 11 - Full diameter (glazed surface removed)

CORE LABORATORIES-CANADA LTD.
CALGARY ALBERTA

KEY TO DESCRIPTION OF CARBONATE SAMPLE

ROCK POROSITY

- | | |
|-----------------|-----------------|
| (A) Large Vugs | (6) Shales |
| (B) Vugs | (7) Iron Stains |
| (C) Cracks | (8) Pyrites |
| (D) Fine Pores | (9) Sand Grains |
| (E) Impermeable | (10) Hard |

CHARACTER OF ROCK

- | | |
|----------------|------------------|
| (1) Dark Grey | (11) Medium |
| (2) Grey | (12) Soft |
| (3) Light Grey | (13) Oil Stains |
| (4) White | (14) Pyrobitumin |
| (5) Anhydrite | (15) Stylolites |

G. Glazed surface removed

CORE LABORATORIES-CANADA LTD.
EDMONTON ALBERTA

Company - IMPERIAL O.I.L ENTERPRISES LTD.
Well - IOE TREE RIVER
Field - RED ARCTIC R AREA
Province - NORTHWEST TERRITORIES

Date Report - MAY 17, 1967
Location - 67° 20'N 132° 15' W
Formation -
D. Fluid - WATER BASE MUD

Page - 1 of 2
File - CNP-1-8747
Analysts - WD SM JP OK CH
Remarks - FULL DIAMETER

Note: All samples sandblasted prior to analysis

Note: All samples sandblasted prior to analysis.																	
Plug No. (Card Field)	Interval Represented				Permeability (md)			Porosity		Density		Plug Quality		Plug Type	Description		
	Top B	Base C	Thick. D	Maximum F	90° G	Vertical H	%	Bulk J	Grain K	Con- dition (1)	Texture (2)	Interpre- tation (3)					
CORED INTERVAL 2860' - 2890'																	
CORE NO. 2 2860 - 2890' (Rec. 25.0') (6 boxes)																	
1	2860.0	2861.1	1.1	0.23	0.25	<0.01	5.7	2.55	2.70	-	-	-	11	C,D,2,11,15	-	Not analyzed	
-	2861.1	2862.5	1.4	-	-	-	-	-	-	5	-	-	-	-	by request	-	Dense Sty.
-	2862.5	2871.6	9.1	-	-	-	-	-	-	5	1	-	-	11	C,D,2,11,15	-	Not analyzed
2	2871.6	2874.3	2.7	0.13	<0.01	<0.01	4.8	2.58	2.71	-	-	-	-	-	by request	-	by request
-	2874.3	2876.3	2.0	-	-	-	-	-	-	5	-	-	-	11	0,2,11,15	-	Not analyzed
3	2876.3	2878.6	2.3	<0.01	<0.01	<0.01	4.2	2.58	2.68	-	-	-	-	11	0,2,11,15	-	Not analyzed
4	2878.6	2880.8	2.2	<0.01	<0.01	<0.01	1.6	2.66	2.70	-	-	-	-	11	0,2,11,15	-	Not analyzed
-	2880.8	2885.0	4.2	-	-	-	-	-	-	5	-	-	-	-	by request	-	by request
-	2885.0	2890.0	5.0	-	-	-	-	-	-	2	-	-	-	-	Lost core	-	Lost core

CORE LABORATORIES-CANADA LTD.
EDMONTON
ALBERTA

Page ~ 2 of 2
File ~ CNP-1-8747
Analysts ~ WD SM JP OK CH
Remarks ~ FULL DIAMETER

Company ~ IMPERIAL OIL ENTERPRISES LTD.
Well ~ IOE TREE RIVER
Field ~ RED ARCTIC R AREA
Province ~ NORTHWEST TERRITORIES

Date Report ~ May 17, 1967
Location ~ 67° 20' N 132° 15' W
Formation ~
D. Fluid ~ WATER BASE MUD

Note: All samples sandblasted prior to analysis

Note: All samples sandblasted prior to analysis.														
Plug No/ (Card Field)	Interval Represented			Permeability (md)		Porosity		Density		Plug Quality N		Interpre- tation (3)	Plug Type 0	Description
	Top B	Base C	Thick D	Maximum F	90° G	Vertical H	I	Bulk J	Grain K	Con- dition (1)	Texture (2)			
CORED INTERVAL 3758' - 3778'														
CORE NO. 3 3758' - 3778' (Rec. 19.0') (4 boxes)														
-	3758.0	3760.5	2.5	<0.01	<0.01	<0.01	7.7	-	-	5	-	1	-	Appears similar to No. 1
1	3760.5	3762.9	2.4	<0.01	<0.01	<0.01	7.7	2.54	2.74	-	-	-	11	D, 2, 11, 15
2	3762.9	3764.6	1.7	<0.01	<0.01	<0.01	0.5	2.70	2.71	-	-	1	11	D, 2, 11, 15
-	3764.6	3766.3	1.7	<0.01	<0.01	<0.01	0.5	-	-	5	-	-	-	Appears similar to No. 2
-	3766.3	3770.3	4.0	<0.01	<0.01	<0.01	0.5	2.67	2.69	5	-	1	-	Appears similar to No. 3
3	3770.3	3772.1	1.8	<0.01	<0.01	<0.01	0.5	2.67	2.69	-	-	-	11	D, 2, 11, 15
4	3772.1	3774.1	2.0	<0.01	<0.01	<0.01	1.3	2.66	2.69	-	-	1	11	D, 2, 11, 15
-	3774.1	3777.0	2.9	<0.01	<0.01	<0.01	1.3	2.66	2.69	5	-	-	-	Appears similar to No. 4
-	3777.0	3778.0	1.0	-	-	-	-	-	-	2	-	-	-	Lost core

(b) Water Analysis - none

FORMATION WATER ANALYSIS

Report No. L-29167

Date May 1, 1967

Sample: I.O.E. Tree River H-38
H-38 67° 20' N 132° 15' W
Sample taken from salt water contaminated mud,
salt water coming in at 2929' and 3747', or both.

Specific Gravity 60/60 = 1.025

pH = 12

H₂S = nil

Chemical Analysis

Ion		Pts/million	Per Cent	Reacting Value	Per Cent
Sodium	Na	<u>9,488</u>	<u>29.44</u> x	<u>412.5</u>	<u>36.70</u>
Calcium	Ca	<u>2,940</u>	<u>9.13</u> x.04990	<u>146.7</u>	<u>13.05</u>
Magnesium	Mg	<u>34</u>	<u>0.11</u> x.08224	<u>2.8</u>	<u>0.25</u>
Sulphate	SO ₄	<u>1,835</u>	<u>5.70</u> x.02082	<u>38.2</u>	<u>3.40</u>
Chloride	Cl	<u>17,021</u>	<u>52.82</u> x.02820	<u>480.0</u>	<u>42.70</u>
Carbonate	CO ₃	<u>360</u>	<u>1.12</u> x.03333	<u>12.0</u>	<u>1.07</u>
Bicarbonate	HCO ₃	<u>-</u>	<u>-</u> x.01639	<u>-</u>	<u>-</u>
Hydroxide	OH	<u>541</u>	<u>1.68</u> x.05879	<u>31.8</u>	<u>2.83</u>
Salinity =		<u>32,219</u>	<u>100.0</u>	<u>1124.0</u>	<u>100.0</u>
Totals =					

a = 36.70
b = 13.30
c = 46.10

Class No. _____

Primary salinity	= alkali salinity	= <u>73.40</u>
Secondary salinity	= permanent hardness	= <u>18.80</u>
Tertiary salinity	= acidity	= <u>-</u>
Primary alkalinity	= permanent alkalinity	= <u>-</u>
Secondary alkalinity	= temporary alkalinity	= <u>7.80</u>

Total = 100.0

Remarks: _____

Analysis by: BEF

(c)

Gas Analysis

Sampled from blowout - see Section 3. (h)

CONFIDENTIAL

GAS ANALYSIS REPORT

Laboratory Report No. L-26367Date: April 13, 1967Date Sampled: March 27, 1967Date Analysis: April 11/67Sample of: IOE TREE RIVER 67° 20' 132° 15'Sample No. Bomb #G-1200-2366' Bottomed in CanalGas Sample from Blowout

<u>Component</u>	<u>Mols. %</u>	<u>Wt. %</u>	<u>G.P. Mcf.</u>
Carbon dioxide	<u>4.22</u>		
Hydrogen Sulphide	<u>-</u>		
Hydrogen	<u>.02</u>		
Helium	<u>.02</u>		
Nitrogen	<u>0.49</u>		
Methane	<u>92.77</u>		
Ethane	<u>1.27</u>		
Propane	<u>0.77</u>		<u>.176</u>
Iso Butane	<u>0.15</u>		<u>.041</u>
Normal Butane	<u>0.15</u>		<u>.039</u>
Iso Pentane	<u>0.08</u>		<u>.024</u>
Normal Pentane	<u>0.02</u>		<u>.006</u>
Hexanes plus	<u>0.04</u>		<u>.015</u>
Total	<u>100.00</u>		
Total Hydrocarbons	<u>95.25</u>		<u>.301</u>

S. G. air = 1 (calculated) .6184

S. G. air = 1 (observed)

Gross Calorific ValueB. T. U./cu. ft.at 60°F, 14.65 psia. dryat 60°F, 14.73 psia. & water sat.

calculated

996984

by Junker Calorimeter

Remarks: _____

Operator: Jim Szarka

File: _____

CONFIDENTIAL

GAS ANALYSIS REPORT

Laboratory Report No. L-26367Date: April 13, 1967Date Sampled: March 27, 1967Date Analysis: April 11/67Sample of: IOE TREE RIVER 67° 20' 132° 15'Sample No. Bomb #G-1140-2366', Bottomed in CanolGas Sample from Blowout

<u>Component</u>	<u>Mols. %</u>	<u>Wt. %</u>	<u>G.P. Mcf.</u>
Carbon dioxide	<u>4.30</u>	<u> </u>	<u> </u>
Hydrogen Sulphide	<u>-</u>	<u> </u>	<u> </u>
Hydrogen	<u>0.02</u>	<u> </u>	<u> </u>
Helium	<u>0.02</u>	<u> </u>	<u> </u>
Nitrogen	<u>0.67</u>	<u> </u>	<u> </u>
Methane	<u>92.48</u>	<u> </u>	<u> </u>
Ethane	<u>1.24</u>	<u> </u>	<u> </u>
Propane	<u>0.79</u>	<u> </u>	<u>.181</u>
Iso Butane	<u>0.16</u>	<u> </u>	<u>.043</u>
Normal Butane	<u>0.15</u>	<u> </u>	<u>.039</u>
Iso Pentane	<u>0.08</u>	<u> </u>	<u>.024</u>
Normal Pentane	<u>0.02</u>	<u> </u>	<u>.006</u>
Hexanes plus	<u>0.07</u>	<u> </u>	<u>.027</u>
Total	<u>100.00</u>	<u> </u>	<u> </u>
Total Hydrocarbons	<u>94.99</u>	<u> </u>	<u>.320</u>

S. G. air = 1 (calculated) .6212S. G. air = 1 (observed) Gross Calorific ValueB. T. U./cu. ft.at 60°F, 14.65 psia. dryat 60°F, 14.73 psia. & water sat.

calculated

995983

by Junker Calorimeter

Remarks: Operator: Jim SzarkaFile:

5

(d) Oil Analysis - none

SECTION VI

Section 6. Completion Summary

- (a) Tubing Record - none run
- (b) Perforation Record - not perforated
- (c) Cementation Record - See Section 3. (f) & (g)
- (d) Acidization and Fracturing Record - none
- (e) Back Pressure and Production Tests - none

Total Contract Timehrs. Total Company Timehrs. Toolpusher W. E. Beckman Approved by

LSD..... SEC..... TWN..... RGE..... W.....

Contractor
$$I_{2,5} \quad N-f=3$$

Type Rtg 14 2 100

Month April

Day 27 19 67

[illegible]

CLASSES OF TIME BREAKDOWN										Driller: <u>H. J. J.</u>	
HEADING UP & DRLG. OUT:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.	DID YOU CHECK BLOWOUT		
DRILLING:	FISHING:	TRIPPING:	W.O.C.	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:			PREVENTER EQUIPMENT TODAY		
REAMING:	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC.:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.			

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by _____

YES _____ NO _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 39
Day 26 1967

LSD..... SEC..... TWN..... RGE..... W.....

Contractor I.O.E. NAT 2Type Rig NAT 100Month APRILDay 26 19671st Tour From: 12:00 Midnight To: 8:00 a.m.2nd Tour From: 8:00 a.m. To: 4:00 p.m.3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.																
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation												
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.									
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL									
	COLLAR					DRILLING STRING	COLLAR					DRILLING STRING	COLLAR					DRILLING STRING									
	DATA					DRILL COLLARS	DATA					DRILL COLLARS	DATA					DRILL COLLARS									
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			
								Drilled	Reamed																		
	Bit Serial No.					Table R.P.M.					Bit Serial No.					Table R.P.M.					Bit Serial No.					Table R.P.M.	
	Jet or Conventional -					Nozzle Size					Jet or Conventional -					Nozzle Size					Jet or Conventional -					Nozzle Size	
SURVEYS	Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off							
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size						
	No. 1							No. 1							No. 1												
	No. 2							No. 2							No. 2												
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS			
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.									
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.					From	To	Hrs.					From	To	Hrs.										
	<u>HAUL & SET IN BOILER</u>							<u>TEAR OUT & HAUL</u>							<u>Tear out Remove motors</u>												
	<u>CHECK BOILERS</u>							<u>DERRICK - MUD VANS</u>							<u>Draw marks.</u>												

Driller Hornberger?Driller FitzpatrickDriller Kupper

HEADING UP & DRLG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: CIRCUITING: CORING: W.O.C. D.S. TESTING: W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

Total Contract Time _____ hrs.

Total Company Time _____ hrs.

Toolpusher W. H. H. H.

Approved by _____

DAILY DRILLING REPORT No. 21

LSD. SEC. TWN. RGE. W. Contractor I.O.E. NAT-3 Type Rig NAT 100 Month APRIL Day 25 19

	1st Tour From: 12:00 Midnight To: 8:00 a.m.						2nd Tour From: 8:00 a.m. To: 4:00 p.m.						3rd Tour From: 4:00 p.m. To: 12:00 p.m.														
DEPTH	From		To	Hole Made	Hole Size	Formation	From		To	Hole Made	Hole Size	Formation	From		To	Hole Made	Hole Size	Formation									
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.									
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL									
	COLLAR						COLLAR						COLLAR														
	DATA						DATA						DATA														
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE										
								Drilled	Reamed								Drilled	Reamed									
	Bit Serial No.						Table R.P.M.						Bit Serial No.						Table R.P.M.								
	Jet or Conventional -						Nozzle Size						Jet or Conventional -						Nozzle Size								
SURVEYS PUSH PUMP RECORD No. 1 No. 2	Kind		at		Ft.	Deg. off	Kind		at		Ft.	Deg. off	Kind		at		Ft.	Deg. off									
	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size									
	On Line	Circulating					On Line	Circulating					On Line	Circulating													
MUD RECORD	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS			Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS			Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS					
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.									
DETAIL OF OPERATIONS AND REMARKS							From	To	Hrs.							From	To	Hrs.									
	PREPARE RIG BUILDINGS FOR SHIPMENT									TEAR OUT 4 HALL MUD TANKS, PUMPS & MOTOR									HALL & PACK MISC EQUIPMENT								
																			30% TORE OUT								
Driller.....Kernerman						Driller.....Filipatris						Driller.....															

CLASSES OF TIME BREAKDOWN										Driller.....	
HEADING UP & DRLG. OUT:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.	DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY		
DRILLING:	FISHING:	TRIPPING:	W.O.C.	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:					
REAMING:	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC.:	MNER. OF KELLY HOSE IN USE	HOSE SERIAL No.			

Total Contract Timehrs. Total Company Timehrs. Toolpusher Scott A. Burt Approved by _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. *37*LSD..... SEC..... TWN..... RGE..... W..... Contractor *I.O.E. NAT #3* Type Rig *NAT 100* Month *APRIL* Day *24* 19*67*

1st Tour From: 12:00 Midnight To: 8:00 a.m.															2nd Tour From: 8:00 a.m. To: 4:00 p.m.															3rd Tour From: 4:00 p.m. To: 12:00 p.m.															
DEPTH		From	To	Hole Made	Hole Size	Formation									DEPTH		From	To	Hole Made	Hole Size	Formation									DEPTH		From	To	Hole Made	Hole Size	Formation									
		<i>4197</i>			<i>8 7/8</i>																																								
		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.										Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.										Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.								
		<i>4 1/2</i>																																											
DRILLING STRING	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL										DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL										DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL									
	COLLAR					DRILLING STRING										COLLAR					DRILLING STRING										COLLAR					DRILLING STRING									
	DATA															DATA															DATA														
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE																	
								Drilled	Reamed									Drilled	Reamed									Drilled	Reamed																
Bit Serial No. _____ Table R.P.M. _____															Bit Serial No. _____ Table R.P.M. _____															Bit Serial No. _____ Table R.P.M. _____															
Jet or Conventional - _____ Nozzle Size _____															Jet or Conventional - _____ Nozzle Size _____															Jet or Conventional - _____ Nozzle Size _____															
SURVEYS	Kind	at				Ft.				Deg. off				Kind	at				Ft.				Deg. off				Kind	at				Ft.				Deg. off									
	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size													
	On Line	Circulating								On Line	Circulating								On Line	Circulating								On Line	Circulating																
MUSH PUMP RECORD	No. 1									No. 1									No. 1									No. 1																	
	No. 2									No. 2									No. 2									No. 2																	
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS										Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS										Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS									
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.															
DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.						From	To	Hrs.						From	To	Hrs.																					
	<i>TEARING OUT</i>					<i>12</i>	<i>8</i>	<i>8</i>	<i>TEARING OUT</i>					<i>9:50</i>	<i>4:00</i>	<i>8</i>	<i>STRIP DERRICK TO LAY DOWN - TEAR OUT LAY DOWN DERRICK</i>					<i>4:00</i>	<i>12:00</i>	<i>8</i>																					
Driller <i>W. Coghill</i>															Driller <i>K. Kormanian</i>															Driller <i>P. P. P.</i>															

HEADING UP & DRG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY
DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO
REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.:
Total Contract Time _____ hrs. Total Company Time _____ hrs. Toolpusher *W. Coghill* Approved by _____

LSD..... SEC..... TWN..... RGE..... W..... Contractor 1.0.E. NAT #3 Type Rig NAT. 100 Month APRIL Day 23 1967

1st Tour From: **12:00** Midnight To: **9:00** a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: **4:00** p.m. To: **12:00** p.m.

DEPTH		From		To		Hole Made		Hole Size		Formation		From		To		Hole Made		Hole Size		Formation		From		To		Hole Made		Hole Size		Formation																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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DRILLING STRING	Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.		Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.		Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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	DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL		DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL		DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	COLLAR										DRILLING STRING		DRILL COLLARS		COLLAR										DRILLING STRING		DRILL COLLARS		COLLAR						DRILLING STRING		DRILL COLLARS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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BIT RECORD	No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE		No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE		No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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CLASSES OF TIME BREAKDOWN										DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY	
HEADING UP & DRLG. OUT:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.			
DRILLING:	FISHING:	TRIPPING:	W.O.C:	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:					
REAMING:	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.			

Total Contract Timehrs. Total Company Timehrs. Toolpusher W. K. King Approved by

LSD..... SEC..... TWN..... RGE..... W..... Contractor I.O.E. NAT 3 Type Rig NAT 100 Month APRIL Day 22 1967
1st Tour From: 12:00 Midnight To: 8:00 a.m.

	1st Tour From: 12:00 Midnight To: 8:00 a.m.						2nd Tour From: 8:00 a.m. To: 4:00 p.m.						3rd Tour From: 4:00 p.m. To: 12:00 p.m.																							
DEPTH	From	To	Hole Made	Hole Size	Formation		From	To	Hole Made	Hole Size	Formation		From	To	Hole Made	Hole Size	Formation																			
	4197			8 5/8			4177			8 5/8			4177			8 5/8																				
	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.																		
DRILLING STRING	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL																		
	COLLAR					DRILLING STRING	COLLAR					DRILLING STRING	COLLAR					DRILLING STRING																		
	DATA					DRILL COLLARS	DATA					DRILL COLLARS	DATA					DRILL COLLARS																		
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed												
	Bit Serial No.						Table R.P.M.						Bit Serial No.						Table R.P.M.						Bit Serial No.						Table R.P.M.					
	Jet or Conventional -						Nozzle Size						Jet or Conventional -						Nozzle Size						Jet or Conventional -						Nozzle Size					
SURVEYS	Kind	at		Ft.	Deg. off						Kind	at		Ft.	Deg. off						Kind	at		Ft.	Deg. off											
PUSH PUMP RECORD	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size						HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size						HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size								
No. 1	On Line	Circulating										On Line	Circulating										On Line	Circulating												
No. 2																																				
MUD RECORD	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS					Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS					Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS										
	6 AM	45				2 1/2 GAL. CRONOX-235 2 1/2 GAL DIESEL FUEL IN DRILL PIPE										5 GAL. CRONOX										2 1/2 GAL CHROMOX										
	Felt for plug #5										Plug #6. 1850-1500 w/200 cement 2% Cal. Cl. Plug down										Plug #7 - Interval 670'-570' WITH CEMENT 2% CAL															
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.								
DETAIL OF OPERATIONS AND REMARKS	W.O.C.	From	To	Hrs.						RUN PLUG #6	From	To	Hrs.						WOC	From	To	Hrs.														
	PULLED OUT	12								LAY DOWN 20 STD. DR PIPE	800	900	1						Run In FEEL FOR PLUG	745	745	3 3/4														
	MEASURED IN HOLE									WOC.	900	1030	1 1/2						PULL OUT	745	815	1/2														
	FELT FOR PLUG #5	715	730	1/4							1030	400	5 1/2						PREPARE TO RUN PLUG #7	815	845	1/2														
	PULLED 20 STANDS	730	8	1/2									8						RUN PLUG #7	845	1000	1 1/4														
																			PULL OUT LAY DOWN D/P	1000	1030	1/2														
																			WOC	1030	1100	1/2														
																				1100	1200	1														
	Driller.....						Driller.....						Driller.....																							

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:	CONDITIONING MUD:	CASING:
FISHING:	TRIPPING:	W.O.C.
CIRCULATING:	CORING:	D.S. TEST

LOGGING:
W. O. ORD
RIG REPAIR

RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:

REAMING CLEANING
WORKING PIPE:
LOST CIRC.

~~MANFR.~~ DRILLING LINE IN USE

---REEL SERIAL No.

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY**

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

MNFR. OF KELLY HOSE IN USE

HOSE SERIAL No.

YES _____ NO _____

Driller..... Leptail

REEL SERIAL No.

HOSE SERIAL No. _____

五

Approved by _____

LSD..... SEC..... TWN..... RGE..... W..... Contractor **I.O.E. NAT #3** Type Rig **NAT 100** Month **APRIL** Day **21** 19**67**

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.															
From		To		Hole Made		Hole Size		Formation		From		To		Hole Made		Hole Size		Formation		From		To		Hole Made		Hole Size		Formation							
4197						8 5/8				4197						8 5/8				4197						8 5/8									
Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.		Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.		Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.	
4 1/2												4 1/2		45		1		20 IN						4 1/2											
DRILLING STRING										DRILLING STRING										DRILLING STRING															
DRILL										DRILL										DRILL															
COLLAR										COLLAR										COLLAR															
DATA										DATA										DATA															
BIT RECORD										BIT RECORD										BIT RECORD															
No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed										No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed										No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed															
Bit Serial No. Table R.P.M. Jet or Conventional - Nozzle Size										Bit Serial No. Table R.P.M. Jet or Conventional - Nozzle Size										Bit Serial No. Table R.P.M. Jet or Conventional - Nozzle Size															
SURVEYS										SURVEYS										SURVEYS															
Kind at Ft. Deg. off										Kind at Ft. Deg. off										Kind at Ft. Deg. off															
HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size										HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size										HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size															
No. 1 No. 2										No. 1 No. 2										No. 1 No. 2															
MUD RECORD										MUD RECORD										MUD RECORD															
Time Visc. Wt. W L pH ADDITIVES - POUNDS										Time Visc. Wt. W L pH ADDITIVES - POUNDS										Time Visc. Wt. W L pH ADDITIVES - POUNDS															
GEL 1000# ACRYSOB 1/2 GAL										Run Plug #3, 30 sacks cement Plus 20 sacks Cal-seal on bottom. Felt 50' plug in 6 hrs. H.T. top of plug @ 4147										8:00 71 8.7 1500# GEL 3/4 gal ACRYSOB WATER															
Run plug #2, 4197-3750 200 cement 200 Cal. cl/2										Set on plug with 1500 lbs.										Run plug #4, 4147-3750 w/150 cement. Plug down.															
CORING										CORING										CORING															
From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.										From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.										From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.															
Plug down @ 1.15 H.M.																																			
DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS															
From To Hrs.										From To Hrs.										From To Hrs.															
RAN CEMENT PLUG										WOC.										Run in 41 1/2 STANDS															
PULLED 10 STANDS										FEEL FOR PLUG RUN										CONDITION MUD															
W.O.C.										PLUG #3										PREPARE TO RUN PLUG #4															
										TRIP OUT										Run PLUG															
																				PREPARE TO RUN PLUG #5															
																				Run PLUG															
																				Plug #5, 3700-3575															
																				With 50' Cement 200 Cal. cl/2															
																				Plug down 11:45 P.M.															
Driller W. Coggett										Driller K. Romanich										Driller J. Poter															

HEADING UP & DRG. OUT: DRILLING: REAMING: CLASSES OF TIME BREAKDOWN: TOTCO: FISHING: CIRCULATING: CONDITIONING MUD: TRIPPING: CORING: CASING: W.O.C. D.S. TESTING: LOGGING: W. O. ORDERS: RIG REPAIRS: RIG MAINTENANCE: MISCELLANEOUS: CONDITION HOLE: REAMING CLEANING: WORKING PIPE: LOST CIRC.: MNFR. DRILLING LINE IN USE: REEL SERIAL No.: MNFR. OF KELLY HOSE IN USE: HOSE SERIAL No.: DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY: YES NO

Total Contract Time _____ hrs. Total Company Time _____ hrs. Toolpusher **W. Coggett** Approved by _____

LSD. SEC. TWN. RGE. W. Contractor I.O.E. N.H.T. #3 Type Rig N.H.T. 100 Month APRIL Day 20 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: **4:00** p.m. To: **12:00** p.m.

Day...20... 19.67

[illegible]

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:	CONDITIONING MUD:	CASING:
FISHING:	TRIPPING:	W.O.C.
CIRCULATING:	CORING:	D.S. TEST

CASING:
W.O.C.
D.S. TEST

LOGGING:
W. O. ORDI
RIG REPAIR

LOGGING: RIG MAINTENANCE:
W. O. ORDERS: MISCELLANEOUS:
RIG REPAIRS: CONDITION: _____

REAMING CLEANING:
WORKING PIPE:

MNFR. DRILLING LINE IN USE

MNFR. OF KELLY HOSE IN USE

REEL SERIAL No.

HOSE SERIAL No.

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY?**

YES _____ NO _____

Total Contract Timehrs.

Total Company Time hrs.

Toolpusher

Approved by

Day 19 1967

3rd Tour From: **4:00** p.m. To: **12:00** p.m.

Driller *Lehman*

Toolpusher Bennett Approved by

Approved by _____

H-38-67-20-132-5

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 31

OETA RIVER LSD SEC TWN RGE W Contractor I.O.E Type Rig Nat 100#3 Month April Day 18 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.												2nd Tour From: 8:00 a.m. To: 4:00 p.m.												3rd Tour From: 4:00 p.m. To: 12:00 p.m.																					
DEPTH		From	To	Hole Made	Hole Size	Formation						DEPTH		From	To	Hole Made	Hole Size	Formation						DEPTH		From	To	Hole Made	Hole Size	Formation															
		4145	4197	52	8 5/8"									4197			8 5/8"									4197			8 5/8"																
DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.																
		4 1/2	38	-	9	650-63						4 1/2		45	1								4 1/2		45	1																			
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL															
COLLAR		23	6 3/4	2 3/4	650-63	DRILLING STRING						COLLAR						DRILLING STRING						COLLAR						DRILLING STRING															
DATA		128M						56M						DATA								DATA																							
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE														
		16	YH	5:00 PM	2:00 AM	6 3/4	4197	40-45	145																																				
SURVEYS		Bit Serial No. E23125 Table R.P.M. 60											Bit Serial No. Table R.P.M.											Bit Serial No. Table R.P.M.																					
PUSH PUMP RECORD		Jet or Conventional - Nozzle Size 3 1/16											Jet or Conventional - Nozzle Size											Jet or Conventional - Nozzle Size																					
No. 1		Kind at Ft. Deg. off											Kind at Ft. Deg. off											Kind at Ft. Deg. off																					
No. 2		HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size											HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size											HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size																					
		200 14" 36 5 3/4																																											
MUD RECORD		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS														
		12:00	34	8.7			WATER												GEL 3400								8:00	70	8.7			Water													
		2:00	34	8.7			GEL 2500#												Quick Vis 1/2 gal													12 1/2 lbs weight MTR													
							WT. MAT. 3300#												SAW DUST 105 Bags													2000 lbs													
							CMC 50#																									160L. Tarryol													
CORING		From	To	Ft. Cored	Ft. Rec'd	Core No.	Type Bbl.						From		To	Ft. Cored	Ft. Rec'd	Core No.	Type Bbl.						From		To	Ft. Cored	Ft. Rec'd	Core No.	Type Bbl.														
DETAIL OF OPERATIONS AND REMARKS		Drilling											From To Hrs.											From To Hrs.											From To Hrs.										
		Lost circulation at 4197											12:00 2:00 2 3/4											8 11 3											TRIP IN TO BOTTOM PUMP 4"										
		Shut pump of well flowing back											2 45											11 12 1											AWAY 25 BBLs MUD, NO RETURNS										
																																			MIXING MUD, PUMP DOWN										
		Mixing weigh material											5:00 2 1/4											12 12:45 3/4											HOLE 54 BLS. NO RETURNS										
		Trip out											5:00 1 3/4											12 3 2 1/4											TRIP OUT										
		Run in with open pipe											5:00 1 1/4											3 3:30 1/2											RIG UP TO LOG										
													6:00 1 1/4											3:30 4 1/2											LOGGING - INDUCTION										
																								8											ELECTR. SURVEY										
		Driller: Clifford Huggins											Driller: L. C. Egbert											Driller: K. O. Moman																					

HEADING UP & DRLG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

Total Contract Time hrs. Total Company Time hrs. Toolpusher Approved by

I-DE TREE RIVER LSD

SEC

TWN

RGE

W

Contractor

I.O.E

Type Rig

IVation #3

Month

APRIL

Day

17

1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	From		To		Hole Made	Hole Size	Formation					
	From	To	From	To								
	3810	3960	90	8 5/8"								
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.						
	4 1/2	35	2	30	650.63							
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						
	COLLAR	23	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS					
	DATA				192M	56M						
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE Drilled Reamed				
	15	WT	2 30 PM		17 1/4		45M	184				
	Bit Serial No.	40419		Table R.P.M.		60						
	Jet or Conventional	Cut out		Nozzle Size								
SURVEYS	Kind	at		Ft.		Deg. off						
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					
	7 3/4	8	100	14"	36	5 3/4						
	No. 1	No. 2										
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						
	12:00	33	8.7			WATER						
	2:00	33				GEL-4700*						
	4:00	34	8.8			CMC-225*						
CORING	From	To	Ft. Cored	Ft. Rec'd	Core No.	Type Bbl.						
	DRILLING WITH STEADY 2" STREAM OF WATER PARTIAL RETURNS											
	CONDIT. BIT #15 T 6-B7-G1											
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.	From	To	Hrs.	From	To	Hrs.			
	Drilling	12:00	4:30	4 1/2	DRILLING	8	11:00	3:4	TRIP OUT	4:00	4:45	3/4
	Cleaning crud out of E500	4:30	4:45	1/4	PULLED 5 STANDS - RUN BACK IN	11:00	11:45	1/2	SERVICE RIG CHECK BOP'S	4:45	5:15	1/2
	Drilling	4:45	8:00	3 1/4	DRILLING	11:45	3	3 1/4	RUN IN DC. + 5 STDS.	5:15	5:45	1/2
				TRIP OUT	3	4	1	MIXING MUD	5:45	6:45	1	
								TRIP IN - SLOW - DRILLING	6:45	8:00	1 1/4	
									8:00	12:00	4	
											8	

Driller: Clifford H. Hagan

Driller: W. Boghiff

Driller: H. Hagan

HEADING UP & DRG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING: CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.

Total Contract Time _____ hrs.

Total Company Time _____ hrs.

Toolpusher

Approved by

H-38-67-20-132.5

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 28.

I.O.E. BRENNER LSD

SEC

TWN

RGE

W

Contractor

I.O.E.

Type Rig

Natio. #3

Month

APRIL

Day 15 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.																			
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation															
3758						3758			8 7/8		3758			7 13/16																
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.												
	4 1/2	40	2				4 1/2	40	2				4 1/2																	
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL												
	COLLAR					DRILLING STRING	DRILL COLLARS	COLLAR					DRILLING STRING	DRILL COLLARS	COLLAR	11	6 3/4	2 3/4	313.31	62.49 INRS										
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE						
								Drilled	Reamed								Drilled	Reamed						Drilled	Reamed					
	Bit Serial No.					Table R.P.M.					Bit Serial No.					Table R.P.M.					Bit Serial No.					Table R.P.M.				
	Jet or Conventional -					Nozzle Size					Jet or Conventional -					Nozzle Size					Jet or Conventional -					Nozzle Size				
SURVEYS	Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off										
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						
						WATER									GEL 2400 #									water						
						GEL 2100 #									Quick vis 1/2 gal															
						Quick-Vis-3/4 gal									Water															
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.					From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.					From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.					From	To	Hrs.					From	To	Hrs.													
Trip out to 1500'				12:00	12:30	1/2	PREPARE TO RUN PLUG #9				8	9:30	1 1/2	WOC.				4:00	5:30	1 1/2										
W.O.C. Mixing Mud.				12:30	4:00	3 1/2	CEMENTING				9:30	10:30	1	TRIP IN FEEL PLUG #9 @ 3748				5:30												
Break circulation at 1500'				4:00	4:30	1/2	PULLED 19 STANDS				10:30			CIRCULATE					8:00	2 1/2										
Run 7 stands Break cir 2135'				4:30	5:30	1	W. O.C.				10:30			TRIP OUT					9:30	1 1/2										
Run 5 stands 2590' losing mud.				5:30	6:00	1/2	MIX MUD							PICK UP & SERVICE CORE					9:30											
Run 5 stands 3045' losing mud.				6:00	7:00	1	CLEAN UP CEMENT UNIT							BBL					10:45	1 1/4										
Run to top of Plug 3753'				7:00	7:30	1/2	SERVICE Rig							WORKING ON REPAIR					10:45											
Mixing Mud.				7:30	8:00	1/2	CHECK KELLY COCK					4	5 1/2	DRUM CLUTCH CONTROL LEVER					11:30	3/4										
												8		TRIP IN WITH CORE BBL					11:30	1 1/2										
Driller: Clifford K. Kagan								Driller: L. O. Goghil								Driller: K. K. K. K. K.														

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:
FISHING:
CIRCULATING:CONDITIONING MUD:
TRIPPING:
CORING:CASING:
W.O.C.
D.S. TESTING:LOGGING:
W. O. ORDERS:
RIG REPAIRS:RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:REAMING CLEANING:
WORKING PIPE:
LOST CIRC.:MNFR. DRILLING LINE IN USE
MNFR. OF KELLY HOSE IN USEREEL SERIAL No.
HOSE SERIAL No.DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY
YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher

Approved by

H 38-67-20-132-5

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 37

 L. DE LA RIVERA, LSD..... SEC..... TWN..... RGE..... W..... Contractor I. P. E. Type Rig W. 1100 #3 Month APRIL Day 14 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.															2nd Tour From: 8:00 a.m. To: 4:00 p.m.															3rd Tour From: 4:00 p.m. To: 12:00 p.m.																				
From		To		Hole Made		Hole Size		Formation							From		To		Hole Made		Hole Size		Formation							From		To		Hole Made		Hole Size		Formation												
3753		3758		5'		8 5/8"									3758				8 7/8"									3758																						
Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.							Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.							Size-D.P.		Stands		Singles		Kelly		Drill. Collar Ft.		Core Bbl. Ft.						
4 1/2		40		2													4 1/2								650.63																									
DRILLING STRING															DRILLING STRING															DRILLING STRING																				
DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL							DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL							DRILL		Number		OD		ID		Length		INDICATOR WEIGHT OF TOTAL						
COLLAR										DRILLING STRING							COLLAR		2.3		6 3/4						DRILLING STRING							COLLAR								DRILLING STRING								
DATA																	DATA										56M							DATA																
BIT RECORD															BIT RECORD															BIT RECORD																				
No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE			No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE			No.		Type		Time On Bottom At		Time Pulled At		Total Hours Run		Depth Pulled		Weight On Bit M Pounds		FOOTAGE		
														Drilled Reamed																	Drilled Reamed											Drilled Reamed								
Bit Serial No.															Bit Serial No. 40919															Bit Serial No.																				
Table R.P.M.															Table R.P.M.															Table R.P.M.																				
Jet or Conventional -															Jet or Conventional - CUT OUT															Jet or Conventional -																				
Nozzle Size															Nozzle Size															Nozzle Size																				
SURVEYS															SURVEYS															SURVEYS																				
Kind		at		Ft.		Deg. off									Kind		at		Ft.		Deg. off									Kind		at		Ft.		Deg. off														
HOURS															HOURS															HOURS																				
On Line		Circulating													On Line		Circulating													On Line		Circulating																		
1 1/2																																																		
Pump Press															Pump Press															Pump Press																				
350																																																		
Length of Pump Stroke															Length of Pump Stroke															Length of Pump Stroke																				
14																																																		
Strokes Per Min.															Strokes Per Min.															Strokes Per Min.																				
1470																																																		
Liner Size															Liner Size															Liner Size																				
5 3/4																																																		
MUD RECORD															MUD RECORD															MUD RECORD																				
Time		Visc.		Wt.		W L		pH		ADDITIVES — POUNDS							Time		Visc.		Wt.		W L		pH		ADDITIVES — POUNDS							Time		Visc.		Wt.		W L		pH		ADDITIVES — POUNDS						
										WATER																	GEL 400 #															2500 #								
										GEL- 2500 #																	Gel 1066 lb diesel															4000 lbs Gel.								
										QUICK-VIS- 3/4 gal																	Sack plug followed by 30															50 sack gel 1066 lb								
																											Cement plug 50 Cal ch.															20 Cement 40 Cal ch.								
																											Plug down 10 PM.															Plug down 11 PM.								
CORING															CORING															CORING																				
From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.							From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.							From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.						
DETAIL OF OPERATIONS AND REMARKS															DETAIL OF OPERATIONS AND REMARKS															DETAIL OF OPERATIONS AND REMARKS																				
From		To		Hrs.											From		To		Hrs.											From		To		Hrs.																
Drilling out Plug #5 3688'		12:00		1:30		1 1/2									PREPARE TO RUN PLUG		8		9:30		1 1/2		MIXING MUD + CIRC. 13 STDS.									4:00																		
Drilled 5' Hole. taking mud.		1:30													Run PLUG		9:30		10:15		3/4		OFF BOTTOM									5:30		1 1/2																
8" mud lost 5 feet of Hole.		2:00				1/2									STANDS DOWN W.O.C		10:15						TRIP OUT									5:30		1																
Trip out		2:00		3:30		1 1/2									TRIP OUT		11:15		1				RUN IN WITH OPEN END									6:30		2 1/2																
Trip in with open end pipe		3:30		4:30		1									CLEAN UP CEMENT UNIT		11:15		12:30		3/4		RIG UP TO RUN PLUG									8:30		1																
Conditioning mud.		4:30													SERVICE Rig - CHECK B.O.P		12:30		12:30		1/2		RUN DIESEL GEL + PLUG #8									9:30		1 1/2																
Hooking up cement Unit		8:00		3:1/2		3 1/2									TRIP IN WITH BIT		12:30		2		1 1/2		TRIP OUT									11:15		1																
															NO. CIRCULATION		2																																	
															PULLED 5 STANDS		4		2																															
Driller: <u>Clifford Kiepp</u>															Driller: <u>W. 694</u>															Driller: <u>Kernerman</u>																				

HEADING UP & DRG. OUT: TOTCO: FISHING: CIRCULATING: LOGGING: W. O. ORDERS: RIG REPAIRS: RIG MAINTENANCE: MISCELLANEOUS: CONDITION HOLE: REAMING CLEANING: WORKING-PIPE: LOST CIRC.: MNFR. DRILLING LINE IN USE: REEL SERIAL No.: MNFR. OF KELLY HOSE IN USE: HOSE SERIAL No.: DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY: YES ☒ NO ☐

Total Contract Time _____ hrs. Total Company Time _____ hrs. Toolpusher W. 694 Approved by _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 26

LOFTAGE RIVER LSD. SEC. TWN. RGE. W. Contractor I.O.F. Type Rig Nat'lco #3 Month APRIL Day 13 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.															
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation											
3753						3753					3753															
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.								
	4 1/2						4 1/2						4 1/2	36	1	25	313.31									
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL								
	COLLAR					DRILLING STRING	DRILL COLLARS	COLLAR					DRILLING STRING	DRILL COLLARS	COLLAR	11	6 3/4	2 1/4	313.31	DRILLING STRING	DRILL COLLARS					
BIT RECORD	DATA						DATA						DATA													
	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		
								Drilled	Reamed								Drilled	Reamed							Drilled	Reamed
SURVEYS	Bit Serial No.	Table R.P.M.				Bit Serial No.	Table R.P.M.				Bit Serial No.	Table R.P.M.														
	Jet or Conventional -	Nozzle Size				Jet or Conventional -	Nozzle Size				Jet or Conventional -	Nozzle Size														
	Kind	at	Ft.	Deg. off	Kind	at	Ft.	Deg. off	Kind	at	Ft.	Deg. off														
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS								
						WATER						GEL 1900#						Water								
						GEL- 1600#						Quick vis 3 gal						200 lbs. PELTEX								
						FIBRE-TEX- 12 Bags						3 1/2 sack cement plug +						200 lbs. soda ash								
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.								
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.	From	To	Hrs.	From	To	Hrs.																	
	Trip out (Measure Pipe) 22 stands	12:00		GREASED BLOCKS	8	8:30	1/2	CIRC. 5 STDS. TOP OF PLUG	4:00																	
	Hole flowing gained 8" 22 stands			MIXED MUD	8:30	10:30	2	#6																		
	Broke circulation no returns.			PREPARE TO RUN PLUG #6	10:30	11	1/2	TRIP OUT WITH OPEN END DR	6:00	7:00	1															
Pumped 64 Bbls. (annulus full)	2:00	2	CEMENTING	11	11:15	1/4	RUN IN WITH BIT + FEEL FOR	7:00																		
Run into 2929' mud dropped in hole	2:30	2	PULLED 5 STANDS	11:15	4	4 3/4	PLUG #6 @ 2832 DRILL CUT	8:30	1 1/2																	
Mixing lost circulation material	4:30	2	W. O. C.				RUN IN ON TOP OF PLUG	9:30	1																	
Pump same at 2929' 152 Bbls.	4:30	6	MIXED MUD				#5 @ 3688	9:30	12:00	2 1/2																
No returns. sandust			SERVICED Rig				CIRC. CONDITIONING MUD																			
Mixing mud, Clean out both pumps	6:00	8:00	2																							
Driller	Clifford H. Siger						Driller	Kornemann																		

 CLASSES OF TIME BREAKDOWN
 HEADING UP & DRUG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY
 DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO
 REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.:

Total Contract Time hrs. Total Company Time hrs. Toolpusher Approved by

I.O.E. FINEALSD SEC. TWN. RGE. W. Contractor *I.O.E.* Type Rig *Not 100 #3* Month *APRIL* Day *12* 19*67*

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.																									
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation																			
		3753										3753										3753																							
DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.																		
		4 1/2										4 1/2	40	1								4 1/2	39	2	3																				
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL																	
COLLAR						DRILLING STRING				DRILL COLLARS						COLLAR					DRILLING STRING				DRILL COLLARS						COLLAR					DRILLING STRING				DRILL COLLARS					
DATA																DATA															DATA														
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE				No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE				No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE														
									Drilled	Reamed										Drilled	Reamed										Drilled	Reamed													
		Bit Serial No.				Table R.P.M.						Bit Serial No.				Table R.P.M.						Bit Serial No.				Table R.P.M.																			
		Jet or Conventional -				Nozzle Size						Jet or Conventional -				Nozzle Size						Jet or Conventional -				Nozzle Size																			
SURVEYS		Kind	at	Ft.		Deg. off						Kind	at	Ft.		Deg. off								Kind	at	Ft.		Deg. off																	
USH PUMP RECORD		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size							HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size																
No. 1		On Line	Circulating									On Line	Circulating											On Line	Circulating																				
No. 2																																													
MUD RECORD		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS						Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS																
							WATER												GEL 1400 #						11:00	56	8.7			2500 lbs. GEL															
							GEL-3500 #												Quick vis 1/2 gal.											1 GAL Quick Vis															
							QUICK-VIS- 3/4 GAL.												Run plug #5. 40 sack cement											250 lbs. soda ash															
																			+ 4% Cal Cl											Water															
CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.																
DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.											From	To	Hrs.											From	To	Hrs.											
		Trip out Plugged Pipe				12 ⁰⁰	12 ³⁰	1/2							CLEAN OUT PLUG				8	8 ³⁰	1/2							W.O.C.				4 ⁰⁰	5 ¹⁵	1 1/4											
		Layed down 5 singles				12 ³⁰	12 ⁴⁵	1/4							PREPARE TO RUN PLUG				8 ³⁰	10 ³⁰	2							RUN IN + FEEL FOR PLUG #5				5 ¹⁵	6 ⁰⁰	3/4											
		Picked up 5 singles				12 ⁴⁵	1 ⁰⁰	1/4							RUN PLUG #5				10 ³⁰	11	1/2							CIRCULATE. REGAINED CIRC																	
		Run in 4 stands of Bottom				1 ⁰⁰	2 ⁰⁰	1							TRIP OUT				11	12	1							@ 6:15 PM.																	
		W.O.C. Conditioning Mud.				2 ⁰⁰	4 ⁰⁰	2							W.O.C.				12	4	4							CIRC. + DUMP CONTAMINATED				6 ⁰⁰													
		Broke Cir. 4 stands of Bottom.				4 ⁰⁰	4 ³⁰	1/2							MIX MUD													MUD + SALT WATER																	
		Mud 30' From Flow nipple no returns. Mixing Mud.				4 ³⁰	7 ³⁰	3							SERVICED RIG													CONDIT. HUD				11 ⁰⁰	5												
		Run into top of plug 60' of Bottom				7 ³⁰	8 ⁰⁰	1/2							CHECK & GREASE KELLY COCK													MEASURE OUT				11 ⁰⁰	12 ⁰⁰	1											
		Driller <i>Clifford K. Lippin</i>														Driller <i>W. L. G. Smith</i>														Driller <i>K. M. M. M. M. M.</i>															

HEADING UP & DRLG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY
DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO
REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.: Approved byTotal Contract Time _____ hrs. Total Company Time _____ hrs. Toolpusher *A. B. Smith* Approved by _____

3rd Tour From: **4:00** p.m. To: **12:00** p.m.

Approved by

YES ☒ NO

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 22

101.166.166 LSD 438-67-20-132-5

SEC TWN RGE W

Contractor 105

Type Rig NAT 100

Month APRIL

Day 10 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 a.m.

DEPTH	From	To	Hole Made	Hole Size	Formation
3747					

DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.
4 1/2	40	1				

DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL

BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE

SURVEYS	Kind	at	Ft.	Deg. off

PUMP RECORD	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size

MUD RECORD	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS
						5600# LF Material 3000# GEL 1/2 Quick-Vis 132 bags of Sawdust Water.

CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.

DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.
Pump 152 Bbl - No Returns	12:00	1:00	1
Mix Mud - Vis 47 - Wt 8.9	1:00	3:30	1 1/2
Pump 125 Bbl Down Annulus	3:30		
Good Returns But Lost Circ.		4:30	1
Mix Lost Circ. Material	4:30	7:15	2 3/4
Pump Down 48 Bbl	7:15	8:00	3/4
			8

HEADING UP & DRG. OUT:
DRILLING:
REAKING:

CLASSES OF TIME BREAKDOWN

TOTCO:
FISHING:
CIRCULATING:CONDITIONING MUD:
TRIPPING:
CORING:CASING:
W.O.C.
D.S. TESTING:LOGGING:
W. O. ORDERS:
RIG REPAIRS:RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:REAMING CLEANING:
WORKING PIPE:
LOST CIRC.:

MNFR. DRILLING LINE IN USE

REEL SERIAL No.

MNFR. OF KELLY HOSE IN USE

HOSE SERIAL No.

DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY

YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher

Approved by

IMPERIAL OIL LIMITED

RIG NAT 3

DAILY DRILLING REPORT No. 1819

100% ~~WATER~~ H38-67-20-132-15

SEC.

TWN.

RGE.

W.

Contractor 104

Type Rig NAT 100

Month APRIL

Day 6 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.													
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation									
	3068	3141	73	8 5/8		3141	3181	40	8 5/8		3181	3242	61	8 5/8										
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.						
	4 1/2	26	1	2	650.63		4 1/2	27	-	23	650.63		4 1/2	27	2	22	650-63							
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						
	COLLAR	23	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS	COLLAR	25	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 3/4	2 3/4						
BIT RECORD	DATA	107 56M					DATA	108M 56M					DATA	110M 56M										
	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE
	11	W7	1 5/8		18 1/2		40	148	11	W7	1 5/8	10 5/8	20 1/2	3157	35 M	164		12	MAN	1 PM			30 M	
	Bit Serial No.	44598 Table R.P.M. 60					Bit Serial No.	44598 680744 Table R.P.M. 60					Bit Serial No.	680744 Table R.P.M. 60										
SURVEYS	Jet or Conventional	JET Nozzle Size 3-1/2					Jet or Conventional	JET Nozzle Size 3-1/2					Jet or Conventional	JET Nozzle Size 3-1/2										
	Kind	at	Ft.	Deg. off	Kind					at	Ft.	Deg. off	Kind					at	Ft.	Deg. off				
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			
	8			650	14"	70	5 3/4	5			650	14"	70	5 3/4	8			650	14"	70	5 3/4			
MUD RECORD	Time	Visc.	Wt.	W L	pH	Time					Visc.	Wt.	W L	pH	Time					Visc.	Wt.	W L	pH	
	12:00	66	9.3	9.2	10.5	8:30					65	9.1		10.5	4:30					52	9.1		11.5	
	2:00	62	9.3			10:00					65	9.1			6:00					50	9.1			
	4:00	67	9		10.5	2:00					58	9.1			8:00					50	9.1			
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						
	Bit #11 Condition T4 B4 G1						Checked Kelly Cock						CHECKED ALL FIRE EXTINGUISHERS OK											
	Drilling						Totco at 3130						Drilling											
DETAIL OF OPERATIONS AND REMARKS	From						From						From											
	To						To						To											
	Hrs.						Hrs.						Hrs.											
	8:00						4:00						8:00											

Driller: J. P. ...

Driller: Clifford ...

Driller: ...

HEADING UP & DRG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO: CONDITIONING MUD: CASING:
FISHING: TRIPPING: W.O.C.:
CIRCULATING: CORING: D.S. TESTING:LOGGING: RIG MAINTENANCE: REAMING CLEANING:
W. O. ORDERS: MISCELLANEOUS: WORKING PIPE:
RIG REPAIRS: CONDITION HOLE: LOST CIRC.:

MNFR. DRILLING LINE IN USE

R-FL SERIAL No.

MNFR. OF KELLY HOSE IN USE

HOSE SERIAL No.

DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAYYES ☒ NO

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by

TREC RIVER LSD

SEC.

TWN.

RGE.

W.

Contractor IMP. OIL ENTERPRISE

Type Rig NAT. 100

Month APRIL

Day 4 19 67

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.												
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation						
2929										2929					8 5/8					2929		2953		24	8 5/8							
Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.						
4 1/2		31	1	15						4 1/2					397.96					4 1/2		27	1	27	397.96							
DRILLING STRING		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILLING STRING		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILLING STRING		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL			
COLLAR						DRILLING STRING				COLLAR						DRILLING STRING				COLLAR						DRILLING STRING						
DATA						92 M				DATA						90 M				DATA						90 M						
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	
Bit Serial No.		Table R.P.M.				Bit Serial No.		Table R.P.M.				Bit Serial No.		Table R.P.M.																		
Jet or Conventional -		Nozzle Size				Jet or Conventional -		Nozzle Size				Jet or Conventional -		Nozzle Size																		
Kind		at				Kind		at				Kind		at																		
HOURS		Pump Press				HOURS		Pump Press				HOURS		Pump Press																		
On Line		Circulating				On Line		Circulating				On Line		Circulating																		
3 1/2		4 1/2				3 1/2		2 1/2				4 3/4		6																		
MUD RECORD		Time				Time				Time				Time																		
7:30		130				10:00				8:00				130																		
8.6		8.8				9.8				8.6				8.7																		
2500# GEL		50# CAUSTIC				50# CAUSTIC				10.5				WT MATERIAL - 2200#																		
80 SACKS SANDUST		50# PELTEX				50# PELTEX				10.5				PELTEX - 100#																		
20 SACKS FIBERTEX		400# WT. Material				400# WT. Material				11:00				CAUSTIC 50#																		
CORING		From				From				From				From																		
		To				To				To				To																		
		Ft. Cored				Ft. Cored				Ft. Cored				Ft. Cored																		
		Ft. Rec'd.				Ft. Rec'd.				Ft. Rec'd.				Ft. Rec'd.																		
		Core No.				Core No.				Core No.				Core No.																		
		Type Bbl.				Type Bbl.				Type Bbl.				Type Bbl.																		
DETAIL OF OPERATIONS AND REMARKS		From				From				From				From																		
MIXING 1ST CIRC. MUD		12:00				CONDITION MUD				8:00				Trip in with cut out Bit, Bottom																		
PUMP 90 BBL. DOWN HOLE		3:00				TRIP OUT				1:00				Circulating Mixing sandust																		
REGAINED CIRC. @ 4:00 AM		4:00				TRIP IN CHECK BOPs - SERVICE RIG				3:00				Replaced weight Indicator																		
BUILD UP VOLUME CONDIT. MUD		4:00				TRIP IN				3:15				Drilling																		
CLEAN SANDUST OUT OF PUMPS		6:30								4:00				Repairing E 500 Pump.																		
		8:00												Drilling																		
		8																														
Driller		K. M. M. M. M.				Driller		J. E. P. T. A. Q.				Driller		Clifford K. J. J.																		

HEADING UP & DRLG. OUT: TOCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE: REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY?

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE: HOSE SERIAL No. YES ☒ NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by

1000
TRIP RIVER LSD SEC. TWN. RGE. W. Contractor IMP. OIL ENTERPR. Type Rig NAT. 100 Month APRIL Day 3 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.																	
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation													
2926	2929	3	8 5/8			2929			8 5/8		2929			8 5/8														
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.										
	4 1/2	24	1	24	650.63		4 1/2	28	-	31			4 1/2	31	1													
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL										
	COLLAR	23	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS	COLLAR	11				DRILLING STRING	DRILL COLLARS	COLLAR				DRILLING STRING	DRILL COLLARS								
BIT RECORD	DATA				136M	52M	DATA						DATA															
	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE				
	9	YH	5:00 AM	4:00 AM	6 1/2	2929	25	37		11	M.H.M.																	
	PR8	M.H.M.	7:00 AM																									
SURVEYS	Bit Serial No.	F23127				Table R.P.M.	60	Jet or Conventional -	Nozzle Size	Kind	at	Ft.	Deg. off	Bit Serial No.	F23127				Table R.P.M.		Jet or Conventional -	Nozzle Size	Kind	at	Ft.	Deg. off		
	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size
	2	6	1600	14"	70	5 3/4	1 1/2	6	0-200	14	40	5 3/4																
	MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS			
						100 SACKS SAW DUST						WATER						WATER										
						3900# GEL						120# Fibertex						16 BAGS FIBERTEX										
						WATER						64 bags of Saw dust						110 BAGS SAW DUST										
						1 CRYSOLO 2 GAL.						1 1/2 gal of Quikvis						1000# GEL										
						FIBERTEX 20						3200# GEL.						1/2 GAL Quikvis										
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.										
	PUMPED	50	BBLs	MUD																								
DETAIL OF OPERATIONS AND REMARKS	DRILLING	12:00	12:30	1/2	Mixing lost circ. material	8:00	10:05	2 Hrs. 3/4	TRIP OUT	4:00	4:30	1/2																
	LOST CIRC. @ 2929 MIXING	12:30			Run H STANDS - Fluid on pipe 280'	10:05	11:00	1	TRIP IN WITH OPEN END PIPE	4:30	5:25	3/4																
	LOST CIRC. MATERIAL		4:00	3 1/2	Run DOWN 200 BBL - No Returns	11:00	12:00	1	Mixing lost circulation material	5:15	6:00	3/4																
	TRIP OUT WITH PLUGGED BIT	4:00			Mixing lost circ. material	12:00	1:15	1 1/4	Pump down 150 BBLs mud from top	9:00	11:00	2																
	TRIP IN CONVENT. BIT	5:30	7:00	1 1/2	Work on rig SNAKES &	1:15	3:05	2	Fill tank with water	11:00																		
	MIXING LOST CIRC. MATER	7:00	8:00	1	EXPOSED AIR LINES	3:05	3:45	1/2	Clean sawdust out of C-350		12:00	1																
					PUMPED DOWN 20 BBLs - No Returns	3:45	4:00	1/4	Mixing lost circulating mat.																			
					TRIP IN	4:00																						

Driller: K. J. J. J. J.

Driller: J. J. J. J. J.

Driller: Clifford H. J. J.

HEADING UP & DRUG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.: LOST CIRC.:

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher

Approved by

10E. TREE RIVER LSD. SEC. TWN. RGE. W. Contractor IMP. OIL ENTER PR. Type Rig NAT. 100 Month APRIL Day 2, 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.																								
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation																				
2860	2890	30	7 1/16			2890	2892	2	8 5/8		2892	2926	34	8 5/8																					
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.																	
	4 1/2	25	2	DOWN	396.33	62.49	4 1/2	23	2	7	650.63	REPAIR 5.45	4 1/2	24	1	27	650.63																		
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL																	
	COLLAR	14	6 3/4	2 3/4	396.33	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 3/4	2 3/4	650.63	DRILLING STRING	DRILL COLLARS														
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M. Pounds	FOOTAGE											
	8	M4N	3:30 PM	12:30 AM	8 1/4	2880	15	45		8	M4N	1:30 PM	1:30 PM	1/4	2892	5-15	2	30		9	YH	5:00 PM		6 1/4	20-25										
	2	DIA.	4:25 AM				164			9	YH																								
	Bit Serial No.	29-66					Table R.P.M.	60-88					Bit Serial No.	659321-E22127					Table R.P.M.	88-60					Bit Serial No.	E23127					Table R.P.M.	60			
SURVEYS	Kind	TOTCO at 2855 Ft. 5 3/4					Deg. off	Kind	TOTCO at 2890 Ft. 5 1/4					Deg. off	Kind	TOTCO at 2920 Ft. 5 1/4					Deg. off														
	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size																	
	3 1/2	4 1/2	1250	14	60	5 3/4	2 1/2	5 1/2	1600	14	70	5 3/4	6	3 1/2	1650	14	70	5 3/4																	
	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	WL	pH	ADDITIVES — POUNDS																	
MUD RECORD	5:30	44	9.3			WATER	12:00	43	94			WATER	6:00	42	9.3		105	WATER																	
	5:30	44	9.4										8:00	42	9.3			GEL-100																	
	6:30	44	9.4										10:00	40	9.3			Gum-R-VIS-1/2 GAL																	
	7:00	43	9.4																																
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.																	
	2860	2890	30	30	TL	MICROLOG																													
DETAIL OF OPERATIONS AND REMARKS	CIRC. TO CORE						12:00	12:15	1/4	TRIP OUT						8:00	9:00	1	Trip in																
	TOTCO @ 2855						12:15	12:30	1/4	RECOVER CORE						9:00	9:30	1/2	Repair Pop Valve.																
	TRIP OUT TO CORE						12:30	2:30	1 1/2	SET BACK CORE BBL.						9:30	9:45	1/4	Drilling																
	SERVICE RIG, CHECK BOP'S						2:00	2:30	1/2	SERVICE RIG - CHECK BOP'S						9:45	10:00	1/4	Change Packing Clean out oil sum																
	PICK UP & SERVICE CORE AR						2:30	3:00	1/2	PICK UP REPAIR - TRIP IN						10:00	11:00	1	Drilling																
	TRIP INTO CORE						3:00	4:00	1	REPAIR 7 1/16 TO 8 5/8						11:00	1:15	2 1/4	Totco at 2920'																
	CIRC. TO CORE						4:15	4:15	1/4	DRILLING						1:15	1:30	1/4	Drilling																
	CORING						4:15	7:30	3 1/4	TOTCO						1:30	1:45	1/4	Repairing E500 Pump																
	TRIP OUT						7:30	8:00	1/2	TRIP OUT						1:45	3:15	1 1/2																	
										TRIP IN						3:15	4:00	3/4																	

Driller: K. M. M. M. M.

Driller: J. S. S. S. S.

Driller: Clifford K. K. K.

HEADING UP & DRLG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W.O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.: YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher: K. K. K.

Approved by:

Form 34402 (300 bks.-10-64)-P.P.Co. **H 38-67-20-132-15**
1 DE. TREE RIVER LSD..... SEC..... TWN..... RGE..... W.....

IMPERIAL OIL LIMITED

RIG. NAT. 3

DAILY DRILLING REPORT No. 12

Contractor **IMP. OIL ENTERPRISE**

Type Rig **NAT. 100**

Month **MARCH**

Day **31** 19**67**

1st Tour From: **12:00** Midnight To: **8:00** a.m.

2nd Tour From: **8:00** a.m. To: **4:00** p.m.

3rd Tour From: **4:00** p.m. To: **12:00** p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.												
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation						
		2652	2709	27	8 5/8							2709	2712	3	8 5/8							2712	2765	53	8 5/8							
DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					
		4 1/2	21	2	9	1	1660	55				4 1/2		21	2	6	654	16	Reamer 5.45			4 1/2		22	1	14	654	16	Reamer 5.45			
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						
COLLAR		10	8 3/4	2 1/4	30.04	DRILLING STRING				COLLAR			23	6 3/4	2 3/4	654	DRILLING STRING			COLLAR			23	6 3/4	2 3/4	654	DRILLING STRING					
DATA		22	6 3/4	2 3/4	132M	52M				DATA						130				52			DATA						132M			
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	
		RR 6	M4N	3:55	5:00	15 3/4	2709	15	43	30			7	M4N	3:00				15					7	M4N	3:00		8 3/4	15			
		Bit Serial No. 680610 - 826566 Table R.P.M. 60										Bit Serial No. 826566 Table R.P.M. 88										Bit Serial No. 826566 Table R.P.M. 60										
		Jet or Conventional - Nozzle Size 3 1/2										Jet or Conventional - 5.5" Nozzle Size 3 1/2										Jet or Conventional - Nozzle Size 3 1/2										
SURVEYS		Kind	TOTCO at 2705		Ft. 5 7/8		Deg. off				SURVEYS		Kind	at		Ft.		Deg. off				SURVEYS		Kind	at		Ft.		Deg. off			
PUMP RECORD		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			PUMP RECORD		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			PUMP RECORD		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					
No. 1		5	3	1550	14"	68	5 3/4			No. 1		3	5	1650	14"	70	5 3/4			No. 1		8		1650	14"	70	5 3/4					
No. 2										No. 2										No. 2												
MUD RECORD		Visc.	Wt.	W L	pH	ADDITIVES - POUNDS				MUD RECORD		Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS				MUD RECORD		Time	Visc.	Wt.	W L	pH	ADDITIVES - POUNDS				
		12:00	44	9.2	10							3:30	43	9.4			WATER						4:00	43	9.4	10.8	9.5	WATER				
		3:30	43	9.3																			6:00	45	9.4			GEL - 500				
		4:30	43	9.3																			8:00	45	9.4	CLEANED		ARYSOL - 1/4 Gal.				
																							10:00	43	9.4	NO. 2 TANK		PELTEX - 50				
																							11:30	40	9.4			CAUSTIC - 50				
CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.			CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.			CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.					
		CONDIT. BIT # 6 T 5 - B 4 - G 1																														
DETAIL OF OPERATIONS AND REMARKS		From	To	Hrs.				DETAIL OF OPERATIONS AND REMARKS			From	To	Hrs.				DETAIL OF OPERATIONS AND REMARKS			From	To	Hrs.										
		12:00	5:00	5	DRILLING						8:00		9:00	1	TRIP IN						4:00		12:00	8	Drilling							
		5:00	5:15	1/4	TRIP OUT						9:00				PUMP OUT 3 SINGLES &																	
		5:15	6:45	1 1/2	LAY DOWN BOIT. DC. PICK UP SQUARE DC.						10:00		11:30	1 1/2	REMAINING FROM 2606 TO 2709																	
		6:45	7:15	1/4	SERVICE RIG CHECK BOIS						11:30		12:30	1	TRIP IN																	
		7:15	7:30	1/4	TRIP IN						12:30		2:00	1 1/2	REMAINING FROM 2606 TO 2709																	
		7:30	8:00	1/2	DRILLING						2:00		3:15	1 1/4	DRILLING																	
											3:15		4:00	3/4																		

Driller **KORANOMU**

Driller **CLIFFORD H. JAMES**

Driller **CLIFFORD H. JAMES**

HEADING UP & DRLG. OUT:	CLASSES OF TIME BREAKDOWN	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.	DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY
DRILLING:	TOTCO:	W. O. ORDERS:	W. O. C.:	WORKING PIPE:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.	YES NO
REAMING:	FISHING:	D.S. TESTING:	RIG REPAIRS:	LOST CIRC.:			
	CIRCULATING:						
Total Contract Time		Total Company Time		Toolpusher		Approved by	

DEPTH	2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.													
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation				
	2606	2629	23	7 ¹³ / ₁₆		2629	2639	10	8 ⁵ / ₈		2639	2682	43	8 ⁵ / ₈					
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	
	4 ¹ / ₂	24	-	30	308.07	62.49	4 ¹ / ₂	21	-	14	654.16		4 ¹ / ₂	21	2	30	654.16		
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	
	COLLAR	11	6 ³ / ₄	2 ³ / ₄	308.07	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 ³ / ₄	2 ³ / ₄	654.16	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 ³ / ₄	2 ³ / ₄	654.16
	DATA							DATA							DATA				

BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE
	1	DIA.	4 1/2			18			1	DIA	4 1/2	8 30	4 1/4	2636	18	30		AB6	M4N	8 1/2			10-15	

SURVEYS	Jet or Conventional - DIAMOND					Nozzle Size					Jet or Conventional - DIAMOND					Nozzle Size					Table R.P.M. 88					Bit Serial No. 680610					Table R.P.M. 88-60				
	Kind at Ft. Deg. off					Kind at Ft. Deg. off					Kind at Ft. Deg. off					Kind at Ft. Deg. off					Kind at Ft. Deg. off					Kind at Ft. Deg. off					Kind at Ft. Deg. off				
	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size					
	On Line	Circulating					On Line	Circulating					On Line	Circulating					On Line	Circulating															
WASH PUMP RECORD	4		1350	18	50	5 3/4	3		1550	14"	70	5 3/4	7 1/4		1550	14"	70	5 3/4	7 1/4		1550	14"	70	5 3/4	7 1/4		1550	14"	70	5 3/4					
No. 1																																			
No. 2																																			

MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS
	4:30	44	9.2				8:00	42	9.3				4:00	41	9.3	8.8	9.5	WATER
	6:00	44	9.2		9.5		2:00	41	9.3		9.5		6:00	41	9.4			GEL 500*
	7:30	42	9.3				3:30	41	9.4				8:00	40	9.4	9.2	9.5	PELTEX-25*
													10:00	43	9.4		10	CAUSTIC-50*
													11:30	43	9.4			

CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.
	2606	2629	23		1	HYCALOG	2629	2636	30'	30'	1	HYCALOG						

DETAIL OF OPER- ATIONS AND REMARKS	From To Hrs.			From To Hrs.			From To Hrs.					
	TRIP OUT TO CORE-MEASURE	12 ¹⁴	1 ⁰⁰	1	CORING	8 ⁰⁰	8 ³⁰	1/2	Drilling	4 ⁰⁰	6 ³⁰	2 1/2
	LAY DOWN SQUARE DC. PICK	1 ⁰⁰			PULL CORE	8 ³⁰	10 ⁰⁰	1 1/2	Totco at 2643' (sandline)	6 ³⁰	8 ⁰⁰	1 1/2
	UP BOTTOM DC.		1 ⁴⁵	3/4	RECOVER CORE	10 ⁰⁰	10 ⁴⁵	3/4	Drilling	8 ⁰⁰	11 ⁴³	3 3/4
	PICK UP + SERVICE CORE BAR	1 ⁴⁵	2 ³⁰	3/4	SET BACK CORE 3 1/2	10 ⁴⁵	11 ⁰⁰	1/4	Totco at 2673 5 3/4	11 ⁴⁵	12 ⁰⁰	1/4
	TRIP IN TO CORE	2 ³⁰	4 ⁰⁰	1 1/2	SERVICE RIG - CHECK BOR	11 ⁰⁰	11 ³⁰	1/2				
	CIRC. TO CORE	4 ⁰⁰	4 ¹⁵	1/4	TRIP IN	11 ³⁰	1 ⁰⁰	1 1/2				
	CORING	4 ¹⁵	8 ⁰⁰	3 3/4	REAM 7 1/16 TO 8 5/8	1 ⁰⁰	3 ¹⁵	2 1/4				
				8	DRILLING	3 ¹⁵	4 ⁰⁰	3/4				

Driller: KODMENCHU Driller: J. P. Fatah Driller: Clifford Huppen

67°-20'N-132°-15'W

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 9

DE.TREE RIVER SD. H. 38. SEC.

TWN.

RGE.

W.

Contractor I.O.E. NAT #3

Type Rig NAT 100

Month MARCH

Day 28 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.													
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation							
2366				8 5/8						2366		2462	96	8 5/8					2462				8 5/8										
Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.							
4 1/2		18		26	658.90	REAMER 5.45				4 1/2		19		21	658.90	REAMER 5.45				4 1/2		19		21	658.90	REAMER 5.45							
DRILLING STRING										DRILLING STRING										DRILLING STRING													
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL							
COLLAR		150	8 7/16	2 1/4	30.04	DRILLING STRING				COLLAR				150	8 7/16	2 1/4	30.04	DRILLING STRING				COLLAR				150	8 7/16	2 1/4	30.04	DRILLING STRING			
DATA		22	6 3/4	2 3/4	628.86	52M				DATA		22	6 3/4	2 3/4	628.86	130M 52M				DATA		22	6 3/4	2 3/4	628.86	130M 52M							
BIT RECORD										BIT RECORD										BIT RECORD													
No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE					
4		T2								4		T2	8 30 PM					20-25			4		T2	8 30 PM	11 20 AM	7 1/2	2462		96				
* Bit Serial No. 59020										* Bit Serial No. 59020										* Bit Serial No. 59020													
Table R.P.M.										Table R.P.M. 60										Table R.P.M. 60													
Jet or Conventional - JET										Jet or Conventional -										Jet or Conventional - JET													
Kind at Ft. Deg. off										Kind at Ft. Deg. off										Kind at Ft. Deg. off													
HOURS										HOURS										HOURS													
On Line		Circulating		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			On Line		Circulating		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			On Line		Circulating		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size						
7 1/2		1/2		1600	14	70	5 1/4			7 1/2		1/2		1600	14	70	5 1/4			7 1/2		1/2		1600	14	70	5 1/4						
MUD RECORD										MUD RECORD										MUD RECORD													
Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS							
1:00		43	8.9							9:00		52	8.8			WATER				4:00		42	8.9	20.6	9.2	400# GEL.							
3:00		44	8.9							10:00		48	8.8			100# CAUSTIC				6:00		40	8.9			3000# SPARTON							
										11:00		44	8.8	20						8:00		40	8.9										
										1:00		43	8.8							10:00		38	8.9										
										3:30		42	8.9	9.5						11:00		39	9.1										
CORING										CORING										CORING													
From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.							
CIRCU LATE										CIRCU LATE										CIRCU LATE													
From		To	Hrs.								From		To	Hrs.								From		To	Hrs.								
12		5:30	5 1/2	WAIT ON WT. MATERIAL							8:00		8:30	1/2	TRIP IN							4:00				Circ. With Drill Bit Waiting							
5:30		6:30	1	TRIP OUT							8:30		4:00	7 1/2	DRILLING							8:15		4 1/4	ON WT. MATERIAL								
6:30		6:45	1/4	CHANGE BIT - CHECK B.O.P																		8:15		11:15	3	Circ. Mix With Material							
6:45		8	1 1/4	TRIP IN																		11:15		11:30	1/4	TOTCO							
																						11:30		12:00	1/2	TRIPPING							
DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS													
Driller: <i>Lo Egghill</i>										Driller: <i>Kernerman</i>										Driller: <i>John Lane</i>													

HEADING UP & DRLG. OILT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC. Approved by

Total Contract Time hrs. Total Company Time hrs. Toolpusher Approved by

1.0.E. TREE RIVER RD. H. 38 SEC.

TWN

RGE

W

Contractor 1.0.E. NAT #3

Type Rig NAT 100

Month MARCH

Day 27 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH

From 2110 To 2305 Hole Made 195 Hole Size 8 7/8 Formation

From 2305 To 2366 Hole Made 61 Hole Size 8 5/8 Formation

From 2366 To 2400 Hole Made 34 Hole Size 8 5/8 Formation

DRILLING STRING

Size-D.P. 4 1/2 Stands 17 Singles 1 Kelly 24 Drill. Collar Ft. 658-90 Core Bbl. Ft. REAMER 5-45
DRILL Number 150 OD 8 7/16 ID 2 1/4 Length 30-04 INDICATOR WEIGHT OF TOTAL
COLLAR 150 8 7/16 2 1/4 30-04 DRILLING STRING DRILL COLLARS
DATA 22 6 3/4 2 3/4 628.86 124M 52MSize-D.P. 4 1/2 Stands 18 Singles - Kelly 26 Drill. Collar Ft. 658.90 Core Bbl. Ft. REAMER 5-45
DRILL Number 10 OD 8 7/16 ID 2 1/4 Length 30-04 INDICATOR WEIGHT OF TOTAL
COLLAR 10 8 7/16 2 1/4 30-04 DRILLING STRING DRILL COLLARS
DATA 22 6 3/4 2 3/4 628.86 130M 52MSize-D.P. 4 1/2 Stands 18 Singles 1 Kelly Drill. Collar Ft. Core Bbl. Ft.
DRILL Number 150 OD 8 7/16 ID 2 1/4 Length 30-04 INDICATOR WEIGHT OF TOTAL
COLLAR 150 8 7/16 2 1/4 30-04 DRILLING STRING DRILL COLLARS
DATA 22 6 3/4 2 3/4 628.86 130M 52M

BIT RECORD

No. 3 Type MAL Time On Bottom At 2 AM Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed 35-40

No. 3 Type MAL Time On Bottom At 2 AM Time Pulled At 11:30 Total Hours Run 8 3/4 Depth Pulled 2366 Weight On Bit M Pounds 35 FOOTAGE Drilled Reamed 256

No. 3 Type MAL Time On Bottom At 2 AM Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed 256

Bit Serial No. 74717 Table R.P.M. 60
Jet or Conventional - JET Nozzle Size 3-1/32Bit Serial No. 74717 Table R.P.M. 60
Jet or Conventional - Nozzle Size 3-1/32Bit Serial No. 74717 Table R.P.M. 60
Jet or Conventional - Nozzle Size 3-1/32

SURVEYS

PUMP RECORD

No. 1

No. 2

Kind at Ft. Deg. off
HOURS
On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
1600 14" 69 53 1/2
18" 53 1/2Kind at 2330 Ft. 40
HOURS
On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
14 69 53 1/4Kind at Ft. Deg. off
HOURS
On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
47 400 14 34 53 1/2

MUD RECORD

Time Visc. Wt. W L pH ADDITIVES - POUNDS
3:00 35 8.8 9. GEL 1000
5:00 34 8.8 9. ACRYSO 1/2 GAL
7:00 35 8.8 9. 1000# GEL
1/2 GAL ACRYSO
WATER.Time Visc. Wt. W L pH ADDITIVES - POUNDS
8:00 37 8.8 9.0 water
10:00 36 8.8 9.0 50 lbs caustic soda
4500 lbs weight material
1000 lbs gelTime Visc. Wt. W L pH ADDITIVES - POUNDS
7:00 47 9 1/2 GAL ACRYSO
10:00 47 9. 1000# GEL
1/2 GAL ACRYSO
WATER.

CORING

From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.
6' EFrom To Ft. Cored Ft. Rec'd. Core No. Type Bbl.
Hole made 26, 67.

From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.

DETAIL OF OPERATIONS AND REMARKS

From To Hrs.
TRIP IN 12 1 1
REAM TO BOTTOM 1 1 1/4
REPAIR STAND PIPE UNION 1 1/2 2 1/4
DRILLING 2 8 6
8From To Hrs.
DRILLING 8 9 1 3/4
REPAIR SAND LINE 9 10 1/4
TOTCO @ 2330 10 10 1/2
DRILLING 10 11 1
Pulling out of hole 11 12 1
Well started to blow 12 12 3/2
effort in a bad gas at
to stand line pressure held at
to zero. Started back on hole usingFrom To Hrs.
Run 7 D/C 210' 5 STANDS D/P 15 SINGLE
MAKE UP CIRC. LINE 130 500 1/2
CIRC. OUT GAS 400 PSI BACK PRESS 500 730 2 1/2
THRO BLOW DOWN LINE - SHAKER
CIRC 9.2 RETURNS 9.0 730
WAITING ON LINE. MISCELLANEOUS 945 2 1/4
RUN IN 13 STANDS - CIRC @ 1860 10 1200 1 3/4
WITH 400 PSI BACK PRESS

Driller: M. Logg

Driller: K. Memmen

Driller: J. B. ...

CLASSES OF TIME BREAKDOWN

HEADING UP & DRLG. OUT: TOTCO: DRILLING: REAMING:

FISHING: CIRCUATING:

CONDITIONING MUD: TRIPPING: CORING:

CASING: W.O.C. D.S. TESTING:

LOGGING: W. O. ORDERS: RIG REPAIRS:

RIG MAINTENANCE: MISCELLANEOUS: CONDITION HOLE:

REAMING CLEANING: WORKING PIPE: LOST CIRC.:

MNFR: DRILLING LINE IN USE MNFR. OF KELLY HOSE IN USE

REEL SERIAL No. HOSE SERIAL No.

DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher: A. B. ...

Approved by

1.0 E. TREE RIVER H. 38 SEC. TWN. RGE. W. Contractor I.O.E. NAT 3 Type Rig NAT 100 Month MARCH Day 26 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

DEPTH	1st Tour From: 12:00 Midnight To: 8:00 a.m.					2nd Tour From: 8:00 a.m. To: 4:00 p.m.					3rd Tour From: 4:00 p.m. To: 12:00 p.m.																		
	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation	From	To	Hole Made	Hole Size	Formation														
	1616	1706	90	8 5/8		1706	2026	320	8 5/8		2026	2110	84	8 5/8															
DRILLING STRING	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.											
	4 1/2	11	—	28	658.90	REAMEX 5.45	4 1/2	14	1	21	658.90	REAMEX 5.45	4 1/2	15	—	K.D.	658.90	REAMEX 5.45											
	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL											
	COLLAR	150	8 9/16		30.04	DRILLING STRING	DRILL COLLARS	COLLAR	10	8 9/16	2 1/4	30.04	DRILLING STRING	DRILL COLLARS	COLLAR	10	8 9/16	2 1/4	30.04	DRILLING STRING	DRILL COLLARS								
DATA	2.2	6 3/4	2 3/4	628.86	118M	52M	DATA	22	6 3/4	2 3/4	628.86	122M	52M	DATA	22	6 3/4	2 3/4	628.86	122M	52M									
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE					
	1	YTIA	6 AM	1 PM	18 1/4	1634	30M	1014	2	YTIA	6 PM					30-35	2	YTIA	6 PM	8 PM	13 1/4	2110	25-30	456					
	2	YTIA	6 PM							3	A14L																		
	Bit Serial No. E74084-E74085					Table R.P.M. 60					Bit Serial No. E74085					Table R.P.M. 60-90					Bit Serial No. E74085-74717					Table R.P.M. 60-90			
Jet or Conventional - JET					Nozzle Size 3-1/32					Jet or Conventional - JET					Nozzle Size 3-1/32					Jet or Conventional - JET					Nozzle Size 3-1/32				
SURVEYS	Kind	TOTCO	at	1637	Ft.	2	Deg. off		Kind	at	Ft.	Deg. off		Kind	TOTCO	at	2110	Ft.	30	Deg. off									
	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size											
	On Line	Circulating					On Line	Circulating					On Line	Circulating															
	No. 1						No. 2						No. 1						No. 2										
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS									
	12:30	37	8.8		9.	CMC	50	8:00	36	8.8				Water	4:00	35	8.9	124	9		WATER								
	7:00	36	8.8					10:00	35	8.7		9.0	1000 lbs GEL	6:00	34	8.8													
								12:00	37	8.8				50 lbs CMC	8:00	34	8.8												
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.											
	CONDITION BIT #1 TA-B5-G1												BIT #2 TS-B8-G0 1/2																
	CHECK KELLY COCK						DRILLING						DRILLING																
	CIRCULATE & TOTCO						CIRCULATE & TOTCO						CIRCULATE & TOTCO																
DETAIL OF OPERATIONS AND REMARKS	TRIP OUT						TRIP OUT						TRIP OUT																
	SERVICE RIG & B.O.P						SERVICE RIG & B.O.P						SERVICE RIG & B.O.P																
	REPAIR 4" CAMERON VALVE						REPAIR 4" CAMERON VALVE						REPAIR 4" CAMERON VALVE																
	TRIP IN						TRIP IN						TRIP IN																
FILL PIPE & CLEAN OUT 15'						FILL PIPE & CLEAN OUT 15'						FILL PIPE & CLEAN OUT 15'																	
REPAIR STAND PIPE UNION						REPAIR STAND PIPE UNION						REPAIR STAND PIPE UNION																	
DRILLING						DRILLING						DRILLING																	
Driller: W. G. Gifford						Driller: Kernerman						Driller: J. P. L. L.																	

HEADING UP & DRG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR DRILLING LINE IN USE REEL SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.: MNFR DRILLING LINE IN USE HOSE SERIAL No. YES NO

Total Contract Time _____ hrs. Total Company Time _____ hrs. Toolpusher: J. P. L. L. Approved by: J. P. L. L.

67°-20'N-132°-15'W

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 9

I.O.E. TREE RIVER LSD. H. 38. SEC.

TWN.

RGE.

W.

Contractor I.O.E. NAT 3Type Rig NAT 100Month MARCHDay 25 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.																															
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation																									
		640	827	187	8 5/8							827	1259	432	8 5/8							1259	1616	357	8 5/8																										
DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.																										
		4 1/2	1	1	DOWN	658.90				4 1/2		6	-	DOWN	658.90				4 1/2		10	-	21	658.90																											
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL																									
COLLAR		1 SQ	8 7/8	2 1/4	30.04	DRILLING STRING				DRILL COLLARS				COLLAR		1 SQ	8 7/8	2 1/4	30.04	DRILLING STRING				DRILL COLLARS																											
DATA		22	6 3/4	2 3/4	628.86	52 M				DATA		22	6 3/4	2 3/4	628.86	110 M				52 M				DATA		22	6 3/4	2 3/4	628.86	118																					
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE																						
		1	YTIA	6 AM				25 M			1		YTIA	6 AM				25-30			1		YTIA	6 AM					30 M																						
SURVEYS		Bit Serial No. <u>E74084</u> Table R.P.M. <u>95</u>										Bit Serial No. <u>E74084</u> Table R.P.M. <u>95</u>										Bit Serial No. <u>E74084</u> Table R.P.M. <u>95-60</u>																													
		Jet or Conventional - <u>JET</u> Nozzle Size <u>3 1/2</u>										Jet or Conventional - <u>JET</u> Nozzle Size <u>3 1/2</u>										Jet or Conventional - <u>JET</u> Nozzle Size <u>3 1/2</u>																													
PUMP RECORD		Kind <u>TOTCO</u> at <u>1100</u> Ft. <u>1 1/2</u> Deg. off										Kind <u>TOTCO</u> at <u>1100</u> Ft. <u>1 1/2</u> Deg. off										Kind <u>TOTCO</u> at <u>1600</u> Ft. <u>1 3/4</u> Deg. off																													
		HOURS										HOURS										HOURS																													
		On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size				On Line		Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size				On Line		Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size																								
				1500	14"	86	5 3/4				7 1/2		1600	14	70	5 3/4				8		1600	14	70	5 3/4																										
MUD RECORD		Time	Visc.	Wt.	W.L.	pH	ADDITIVES - POUNDS				Time		Visc.	Wt.	W.L.	pH	ADDITIVES - POUNDS				Time		Visc.	Wt.	W.L.	pH	ADDITIVES - POUNDS																								
		6:00	28	8.4			GEL 1000#				8:00		33	8.4			Water				4:00		38	8.9			9.6 WATER																								
		7:30	31	8.4			ACRY SOL 2 gal				10:00		35	8.4			100 lbs. Soda Ash				6:00		33	9.3			1000# GEL																								
							6 3/4"				12:00		40	8.5			50 lbs. Soda Ash				8:00		34	8.8			2 gal Acr sol																								
							6 3/4"				2:00		38	8.6			1000 lbs. GEL				10:00		34	8.9																											
CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.																								
		CHECK KELLY COCK																																																	
DETAIL OF OPERATIONS AND REMARKS		PRESSURE TEST FORMATION										DRILLING										DRILLING																													
		TO 500 PSI. OK										CIRC. TOTCO										CIRC. TOTCO																													
		DRILLED 30' NEW HOLE.										DRILLING										DRILLING																													
		PULL OUT PICKED UP										DRILLING										DRILLING																													
		1 SQUARE & 16-6 3/4 D. COLLARS										DRILLING										DRILLING																													
		WORK ON WT. INDICATOR										DRILLING										DRILLING																													
		SERVE RIG										DRILLING										DRILLING																													
		DRILLING										DRILLING										DRILLING																													
Driller		<u>W. C. Hill</u>										Driller										<u>K. M. M. M.</u>										Driller										<u>J. P. L. C.</u>									

HEADING UP & DRG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:
FISHING:
CIRCULATING:CONDITIONING MUD:
TRIPPING:
CORING:CASING:
W.O.C.
D.S. TESTING:LOGGING:
W. O. ORDERS:
RIG REPAIRS:RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:REAMING-CLEANING:
WORKING PIPE:
LOST CIRC.:MNFR. DRILLING LINE IN USE
MNFR. OF KELLY HOSE IN USE

REEL SERIAL No.

HOSE SERIAL No.

DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY

YES NO

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by

Form 34402 (300 bks.-10-64)-P.P.Co. *67°-20'N-132°-15'W*

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 6

1.0.E TREE RIVER SD. H-39 SEC. TWN. RGE. W. Contractor 1.0.E. NAT 3 Type Rig NAT 100 Month MARCH Day 24 1967

	1st Tour From: 12:00 Midnight To: 8:00 a.m.						2nd Tour From: 8:00 a.m. To: 4:00 p.m.						3rd Tour From: 4:00 p.m. To: 12:00 p.m.																				
DEPTH	From		To	Hole Made	Hole Size	Formation	From		To	Hole Made	Hole Size	Formation	From		To	Hole Made	Hole Size	Formation															
	640						640						640					798															
	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.	Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.															
													4 1/2	4	1	20	199.																
DRILLING STRING	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL															
	COLLAR					DRILLING STRING DRILL COLLARS	COLLAR					DRILLING STRING DRILL COLLARS	COLLAR	7	6 3/4		199.51	DRILLING STRING DRILL COLLARS															
	DATA						DATA						DATA				74																
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE Drilled Reamed									
	Bit Serial No.						Table R.P.M.			Bit Serial No.						Table R.P.M.			Bit Serial No.						Table R.P.M.								
	Jet or Conventional -						Nozzle Size			Jet or Conventional -						Nozzle Size			Jet or Conventional -						Nozzle Size								
SURVEYS	Kind	at				Ft.	Deg. off		Kind	at				Ft.	Deg. off		Kind	at				Ft.	Deg. off										
ASH PUMP RECORD	HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size		HOURS		Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size													
No. 1	On Line	Circulating						On Line	Circulating						On Line	Circulating																	
No. 2																																	
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS									
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.														
DETAIL OF OPERATIONS AND REMARKS	W. O. C.						From	To	Hrs.	HEADING UP						From	To	Hrs.	HEAD UP						From	To	Hrs.						
	PUT GRAVEL AROUND CASING						12	8	8							8:00	4:00	8	PICK UP BOTTL. D/C.						400	700	3						
	BACK OFF LANDING TT.																		TRIP IN (MEASURE)							9'5"	2						
	CUT OFF COLLAR																		CIRC ON HEAVY M.C.						9'5"	930	1						
																			MARK ON GTON						930	1000	1						
																			PRESS TEST CHSING						1000	10'5"	1						
																			DRILL OUT FLOOR & SHOE						10'5"	1200	1						
	Driller: W. Coghill						Driller: Kormenich						Driller: J. Spatzice																				

HEADING UP : DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:	CONDITIONING MUD:	CASING:
FISHING:	TRIPPING:	W.O.C.
CIRCULATING:	CORING:	D.S. TEST

LOGGING:
W. O. ORD
RIG REPAIR

RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:

REAMING CLEANING:
WORKING PIPE:
LOST CIRC.:

MNFR. DRILLING LINE IN USE

REEL SERIAL No.

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY**

MNFR. OF KELLY HOSE IN USE

...HOSE SERIAL No.

YES _____ NO _____

Total Contract Timehrs.

Total Company Time _____ hrs.

Toolpusher

Approved by:

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 4

10°E TREE RIVER SD H. 39 SEC. TWN. RGE. W. Contractor 10°E NAT#3 Type Rig NAT 100 Month MARCH Day 22 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.														
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation								
		625	640	19	12 1/4							640			12 1/4							640			12 1/4									
		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.					Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.							
		4 1/2	4	1	21	224-29						4 1/2	4	1	21	224-29						4 1/2	4	1	21	224-29								
DRILLING STRING		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL						DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL					
		COLLAR	1	9"		28.65	DRILLING STRING						COLLAR	1	9"		28.65	DRILLING STRING						COLLAR	1	9"		28.65	DRILLING STRING					
		DATA	6	7"	2 3/4	195.64	74M						DATA	6	7"									DATA	6	7"		195.64	76					
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE				No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE				No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE			
		3A	K-2P	5:30 AM	1:30 PM	15 1/2	640	15M	228																3A	K-2P	9:30 AM							
SURVEYS		Bit Serial No. 29877 Table R.P.M. 90										Bit Serial No. Table R.P.M.										Bit Serial No. 29877 Table R.P.M.												
		Jet or Conventional - JET Nozzle Size 3-13/32										Jet or Conventional - Nozzle Size										Jet or Conventional - JET Nozzle Size 3-13/32												
		Kind TOTCO at 630 Ft. 1 1/4 Deg. off										Kind at Ft. Deg. off										Kind at Ft. Deg. off												
PUMP RECORD		HOURS										HOURS										HOURS												
		On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size										On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size										On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size												
MUD RECORD		Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS						Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS						Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS					
		12:00	90				GEL 1000+											1/2 Gal. Clearant						10:00	47									
CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.						From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.					
DETAIL OF OPERATIONS AND REMARKS		From To Hrs.										From To Hrs.										From To Hrs.												
		DRILLING 12 1:30 1 1/2										TRIP IN. CLEAN 25' TO 8:00										DULL & SET BACK 4 STANDS 4:00 7:00 3												
		CIRCULATE - CLEAN HOLE 1:30 2:15 3/4										BOTTOM 9:45 1:14										OF CASING												
		WORK ON SHALE SHAKER 2:15 2:45 1/2										CIRCULATE TO RUN CASING 9:45 10:45 1										PICK UP 9" D/C 7:00 8:00 1												
		TOTCO @ 630 2:45 3:00 1/4										TRIP OUT 10:45 12:00 1 1/4										TRIP IN TO CLEAN OUT 8:00 9:30 1 1/2												
		Pulled out. Tight hole 3:00 6:30 3 1/2										LAY DOWN 9" COLLAR + SUBS 12:00 12:45 3/4										DRILLING ON BOULDERS 9:30												
		Laid down conductor pipe 6:30 7:30 1										RIG UP TO RUN CASING 12:45 1:15 1/2										@ 620'												
		Service rig 7:30 8:00 1/2										RUN 13 JTS. 9 5/8 CHSING 1:15 3:30 2 1/4										TAKE OFF SHAKER SCREEN 10:00 11:00 1/4												
												HOLE TIGHT, RIG UP TO 3:30										CIRC. HOLE CLEAN 11:00 11:45 3/4												
												CIRCULATE CHSING 4:00 1/2										BRING VISCOSITY UP TO 100 11:45 12:00 1/4												
		Driller M. Leggett										Driller R. Monahan										Driller J. G. B. 8												

HEADING UP & DRG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG MAINTENANCE: REAMING CLEANING: MNFR. DRILLING LINE IN USE REEL SERIAL No. DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

DRILLING: FISHING: TRIPPING: W.O.C. W. O. ORDERS: MISCELLANEOUS: WORKING PIPE: MNFR. OF KELLY HOSE IN USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CIRC.: Approved by

Total Contract Time hrs. Total Company Time hrs. Toolpusher Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 3

2. DE. T. R. R. River. LSD. SEC. TWN. RGE. W. Contractor T.O.E. Type Rig Nation #3 Month March Day 21 19.67

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.											
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation					
		413	448	35	12 1/4"							448	563	115	12 1/4"	GRAVEL SHALE						563	625	62	12 1/4"						
DRILLING STRING		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.						
		4 1/2"	2	1	26	224.29.				4 1/2"		3	1	5	224-29				4 1/2"		4	-	6	224.29							
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL					
COLLAR		1	9"		28.65	DRILLING STRING				COLLAR		1	9"		28.65	DRILLING STRING				COLLAR		1	9"		28.65	DRILLING STRING					
DATA		6	6 3/4"	2 3/4"	195.64					DATA		6	6 3/4"	2 3/4"	195.64	72M				DATA		6	6 3/4"	2 3/4"	195.64	74					
BIT RECORD		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		
		3A	K2P	5:30 PM				16-18"			3A		K2P	5:30 PM				15-20			3A		K2P	5:30 PM				10-12			
SURVEYS		Bit Serial No. 29877 Table R.P.M. 60										Bit Serial No. 29877 Table R.P.M. 60-90										Bit Serial No. 29877 Table R.P.M. 100									
		Jet or Conventional - Nozzle Size 3 1/32										Jet or Conventional - Nozzle Size 3 1/32										Jet or Conventional - Nozzle Size 3 1/32									
PUSH PUMP RECORD		Kind at Ft. Deg. off										Kind at 440 Ft. 1/2° Deg. off										Kind at 540 Ft. 1° Deg. off									
		HOURS										HOURS										HOURS									
		On Line	Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size				On Line		Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size				On Line		Circulating	Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size				
				850	14		8 1/4							550	14	38	8 7/8								1100	14	40	7 1/4			
				400	18		6 1/4							350	18	28	6 1/4								250	28	28	6 1/4			
MUD RECORD		Time	Visc.	Wt	W L	pH	ADDITIVES — POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES — POUNDS				
		1:00	60				ACRYSOL 1/2 GAL				8:30		90				Water				4:00		95				Water				
		1:30	90				1600* GEL				10:00		95								6:00		105				600 lbs Gell				
							WATER				12:00		130								8:00		90								
											2:00		95								10		95								
CORING		From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				From		To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.				
DETAIL OF OPERATIONS AND REMARKS		Replacing jet nozzle, 4" Tee.										REPAIR JET LINE										T6TCO									
		1/4" nipple 22" nipples										DRILLING										DRILLING									
		Cleaning out 96' gravel										T6TCO @ 440 1/2°										DRILLING									
		Replacing jet discharge line										DRILLING										REPAIR CELLAR JET									
		changed pump packing										REPAIR JET LINE										DRILLING									
		Cleaning out Hole										DRILLING										REPAIR ROTARY CHAIN									
		Repairing jet change pump										DRILLING										DRILLING									
		Cleaning out Hole																													
		Drilling																													
		Repairing jet line																													
		Driller: Chaffin, H. J.										Driller: W. Loggins										Driller: K. M. M. M.									

HEADING UP & DRG. OUT:
DRILLING:
REAMING:CLASSES OF TIME BREAKDOWN
T6TCO:
FISHING:
CIRCULATING:CONDITIONING MUD:
TRIPPING:
CORING:CASING:
W.O.C.
D.S. TESTING:LOGGING:
W. O. ORDERS:
RIG REPAIRS:RIG MAINTENANCE:
MISCELLANEOUS:
CONDITION HOLE:REAMING CLEANING:
WORKING PIPE:
LOST CIRC.:

MNFR. DRILLING LINE IN USE

REEL SERIAL No.

MNFR. OF KELLY HOSE IN USE

HOSE SERIAL No.

DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY

YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher

Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 2

I.O.E. Tree River LSD 67 SEC. 20 TWN. 132 RGE. W. 15'

Contractor I.O.E.

Type Rig Mat 100*3

Month March

Day 20 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.

2nd Tour From: 8:00 a.m. To: 4:00 p.m.

3rd Tour From: 4:00 p.m. To: 12:00 p.m.

1st Tour From: 12:00 Midnight To: 8:00 a.m.										2nd Tour From: 8:00 a.m. To: 4:00 p.m.										3rd Tour From: 4:00 p.m. To: 12:00 p.m.									
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation			
228		288	60	12 1/4	Gravel				288		393	105	12 1/4	GRAVEL				393		413	20	12 1/4							
Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				Size-D.P.		Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			
4 1/2"		1	1	1	224.29					4 1/2"		1	2	20	224.29					4 1/2"		1	2	DOWN	224.29				
DRILLING STRING										DRILLING STRING										DRILLING STRING									
DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL				DRILL		Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL			
COLLAR		1	9"		28.65	DRILLING STRING				COLLAR		1	9"		28.65	DRILLING STRING				COLLAR		1	9"		28.65	DRILLING STRING			
DATA		6	6 3/4"	2 3/4"	195.69					DATA		6	6 3/4"	2 3/4"	195.69	70				DATA		6	6 3/4"	2 3/4"		72			
BIT RECORD										BIT RECORD										BIT RECORD									
No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.		Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	
2A		VSI	11:30 PM				10.1'			2A		VSI	11:55 PM				10-15M			2A		43-1	11:15	SPA	11:12	4:12	8-15	184	
Bit Serial No. E14259										Bit Serial No. E14259										Bit Serial No. E14259									
Table R.P.M. 60										Table R.P.M. 70-90										Table R.P.M. 60-90									
Jet or Conventional -										Jet or Conventional - JET										Jet or Conventional -									
Nozzle Size 3-13										Nozzle Size 3-13										Nozzle Size 3-13									
SURVEYS										SURVEYS										SURVEYS									
Kind		at		Ft.		Deg. off				Kind		at		Ft.		Deg. off				Kind		at		Ft.		Deg. off			
HOURS										HOURS										HOURS									
On Line		Circulating		Pump Press		Length of Pump Stroke		Strokes Per Min.		Liner Size		On Line		Circulating		Pump Press		Length of Pump Stroke		Strokes Per Min.		Liner Size		On Line		Circulating		Pump Press	
43/4				800		14"		51		7 1/4		43/4				750		14"		50		7 1/4		5				950	
43/4				450		18"		52		6 1/4		43/4				400		18"		50		6 1/4		5				950	
MUD RECORD										MUD RECORD										MUD RECORD									
Time		Visc.	Wt.	W L	pH	ADDITIVES - POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES - POUNDS				Time		Visc.	Wt.	W L	pH	ADDITIVES - POUNDS			
1:30		39				1 GAL ACRYSON				9:30		62								5:00		55				2000 lbs GEL			
4:00		50				GEL 1600#				10:30		48								8:00		45				1 GAL ACRYSON			
6:00		55								12:00		52								11:00		65				water			
7:30		63								2:00		55																	
CORING										CORING										CORING									
From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.		From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.		From		To		Ft. Cored	
DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS										DETAIL OF OPERATIONS AND REMARKS									
From		To		Hrs.						From		To		Hrs.						From		To		Hrs.					
Clean out Hole (to bottom)		12:00		1						REPAIR JET LINE		8		9:45		3/4				DRILLING		4:00		5:00		1			
Drilling		1:00		2						DRILLING		8:45		9		1/4				WORK STUCK PIPE, TRIP		5:00							
Repair Jet line (washed out)		2:00		3						TOTCO @ 240' 1/2"		9		9:15		1/4				OUT THROUGH GRAVEL		8:30		3 1/2					
Drilling		3:00		4		1 1/4				DRILLING		9:15		1:15		4				JACK UP SHALE SHAKER +		8:30							
Repair Jet line (washed out)		4:00		6		1 3/4				REPAIR JET LINE		1:15		2		3/4				MUD DITCH		9:30		1					
Drilling		6:00		7		1 1/2				DRILLING		2		2:30		1/2				TRIP IN HOLE, WORKING		9:30							
Repairing Jet line		7:00		8		1/2				TOTCO @ 340'		2:30		2:45		1/4				TO BOTTOM		11:00		1 1/2					
										DRILLING		2:45		4		1 1/4				REPAIR CELLAR JET		11:00		12:00		1			
Driller: Clifford Huggins										Driller: M. Corhill										Driller: Kamenian									

CLASSES OF TIME BREAKDOWN

TOTCO:

FISHING:

CIRCULATING:

CONDITIONING MUD:

TRIPPING:

CORING:

CASING:

W.O.C.

D.S. TESTING:

LOGGING:

W. O. ORDERS:

RIG REPAIRS:

RIG MAINTENANCE:

MISCELLANEOUS:

CONDITION HOLE:

REAMING CLEANING:

WORKING PIPE:

LOST CIRC:

MNFR. DRILLING LINE IN USE

MNFR. OF KELLY HOSE IN USE

REEL SERIAL No.

HOSE SERIAL No.

DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY

YES NO

Total Contract Time hrs.

Total Company Time hrs.

Toolpusher

Approved by

LSD 1138 SEC TWN RGE W Contractor J.O.E. Type Rig V-1 #3 Month March Day 19 1967									
1st Tour From: 12:00 Midnight To: 8:00 a.m.									
2nd Tour From: 8:00 a.m. To: 4:00 p.m.									
3rd Tour From: 4:00 p.m. To: 12:00 p.m.									
DEPTH									
From To Hole Made Hole Size Formation									
0 90 90 12 1/4 Sec. Clay & Gravel									
90 170 80 12 1/4 Gravel									
170 228 58 12 1/4 GRAVEL									
Size-D.P. Stands Singles Kelly Drill. Collar Ft. Core Bbl. Ft.									
3 subs 10.45									
30 129.87									
176.01									
DRILLING STRING									
DRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL									
COLLAR 1 9" 25.65 DRILLING STRING DRILL COLLARS									
DATA 1 6 3/4 22.85									
DRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL									
COLLAR 1 9" 28.65 DRILLING STRING DRILL COLLARS									
DATA 5 6 3/4 2 3/4 167.36 69 M									
BIT RECORD									
No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed									
1 K2P 5 AM 10 M									
1 K2P 5 AM 10 M									
1 K2P 5 AM 10 M									
2A 48-1 11'5"									
2A 48-1 11'5"									
2A 48-1 11'5"									
Bit Serial No. 24896 Table R.P.M.									
Jet or Conventional - Nozzle Size									
Kind at Ft. Deg. off									
HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size									
3 5 1100 14 60 7 1/4									
7 18 6 1/4									
HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size									
7 1000 14 60 7 1/4									
7 500 14									
Time Visc. Wt. W L pH ADDITIVES — POUNDS									
6:00 36									
8:00 35									
25 sacks									
Baroid weight									
around conductor									
p.p.o.									
Time Visc. Wt. W L pH ADDITIVES — POUNDS									
2 PM 60									
3:00 52									
2400 LBS. GEL.									
1/2 GAL. ACROSOL									
Time Visc. Wt. W L pH ADDITIVES — POUNDS									
8:00 70									
10 80									
800 LBS GEL									
1/2 GAL. ACROSOL									
CORING									
From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.									
Spudded in 5 AM.									
From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.									
6-6-1									
DETAIL OF OPERATIONS AND REMARKS									
From To Hrs.									
Rigging up									
Digging mouse									
hole									
Drilling									
12 5 5									
5 8 3									
DRILLING									
REPAIR JET - CLEAN OUT GRAVEL									
DRILLING									
TOTCO									
DRILLING									
CHANGE 4" UNION ON MUD									
DRILLING									
REPAIR JET LINE									
8 9 1									
9 10 15 1 1/4									
10 11 30 1 1/4									
11 30 11 45 1/4									
11 45 1 1/4									
1 2 45 1 3/4									
2 45 3 15 1/2									
3 15 4 3/4									
DRILLING									
TOTCO									
DRILLING									
REPAIR CELLAR JET									
DRILLING									
TRIPPING									
DRILLING									
4 00 6 15 2 1/4									
6 15 6 30 1/4									
6 30 8 00 1 1/2									
8 00 9 30 1 1/2									
9 10 1									
10 11 1/4									
11 12 3/4									
8									
Driller: J. O. E.									
Driller: J. O. E.									
Driller: J. O. E.									

CLASSES OF TIME BREAKDOWN										Driller: <u>R. W. H. Packer</u>	
HEADING UP & DRLS. OUT:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.	DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY		
DRILLING:	FISHING:	TRIPPING:	W.O.C.	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:					
REAMING:	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.			

Total Contract Timehrs. Total Company Timehrs. Toolpusher [Signature] Approved by

DAILY DRILLING REPORT No.

DATE OF DRILLING REPORT No. _____
 1400 81041 LSD 11.38 SEC. _____ TWN. _____ RGE. _____ W. _____ Contractor F.R.F. Type Rig NAT. #3 Month March Day 15 1967
 1st Tour From: 12:00 Midnight To: 2:00

Contractor						Type Rig	Month	Day	
1st Tour From: 12:00 Midnight To: 8:00 a.m.						2nd Tour From: 8:00 a.m. To: 4:00 p.m.		3rd Tour From: 4:00 p.m. To: 12:00 p.m.	
DEPTH From To Hole Made Hole Size Formation						From To Hole Made Hole Size Formation		From To Hole Made Hole Size Formation	
Size-D.P. Stands Singles Kelly Drill. Collar Ft. Core Bbl. Ft.						Size-D.P. Stands Singles Kelly Drill. Collar Ft. Core Bbl. Ft.		Size-D.P. Stands Singles Kelly Drill. Collar Ft. Core Bbl. Ft.	
DRILLING STRING DRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL COLLAR DRILLING STRING DRILL COLLARS DATA						DRILLING STRING DRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL COLLAR DRILLING STRING DRILL COLLARS DATA		DRILLING STRING DRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL COLLAR DRILLING STRING DRILL COLLARS DATA	
BIT RECORD No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed						BIT RECORD No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed		BIT RECORD No. Type Time On Bottom At Time Pulled At Total Hours Run Depth Pulled Weight On Bit M Pounds FOOTAGE Drilled Reamed	
Bit Serial No. Jet or Conventional - Kind at Ft. Deg. off						Bit Serial No. Jet or Conventional - Kind at Ft. Deg. off		Bit Serial No. Jet or Conventional - Kind at Ft. Deg. off	
HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size						HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size		HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size	
MUD RECORD Time Visc. Wt. W L pH ADDITIVES — POUNDS						MUD RECORD Time Visc. Wt. W L pH ADDITIVES — POUNDS		MUD RECORD Time Visc. Wt. W L pH ADDITIVES — POUNDS	
CORING From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.						CORING From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.		CORING From To Ft. Cored Ft. Rec'd. Core No. Type Bbl.	
DETAIL OF OPERATIONS AND REMARKS Rigging up Rat Hole equipment etc Drilling Rat Hole. Picking up Rat Hole, laying down Rat Hole digger Drilling Conductor Pipe Hole Picking up 9" Collar Drilling 12 1/4 Hole						DETAIL OF OPERATIONS AND REMARKS DRILLING 12 1/4 CONDUCTOR HOLE REAMING 12 1/4 TO 17 1/2 RUN 3 JTS 13 3/8 CONDUCTOR CIRCULATE & PREPARE TO RUN CEMENT		DETAIL OF OPERATIONS AND REMARKS CEMENTING CONDUCT. PIPE FINISH RIGGING UP JACKING DERRICK	
Driller						Driller		Driller	

HEADING UP & DRLG. OUT:		CLASSES OF TIME BREAKDOWN															
DRILLING:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.	DID YOU CHECK BLOWOUT								
REAMING:	FISHING:	TRIPPING:	W.O.C.	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:			PREVENTER EQUIPMENT TODAY								
	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC.:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.	YES		NO						
Total Contract Time		hrs.		Total Company Time		hrs.		Toolpusher		Approved by							

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1st Tour From: 12:00	Midnight	T	000	Contractor	J. C. L.	Type Rig	NAT 12	Month	Mar. 61	Day	16	1961
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Driller James M. [unclear]

MIN. OF REELT HOSE IN USE _____ HOSE SERIAL No. _____ YES _____ NO _____

Total Contract Time hrs Total Company Time hrs

Toolpusher Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No.....

416 KVO - LSD 1138 SEC. TWN. RGE. W. Contractor IAK Type Rig NAT #3 Month March Day 15 1967

1st Tour From: 12:00 Midnight To: 8:00 a.m.						2nd Tour From: 8:00 a.m. To: 4:00 p.m.						3rd Tour From: 4:00 p.m. To: 12:00 p.m.															
DEPTH		From	To	Hole Made	Hole Size	Formation	DEPTH		From	To	Hole Made	Hole Size	Formation	DEPTH		From	To	Hole Made	Hole Size	Formation							
		Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.			Size-D.P.	Stands	Singles	Kelly	Drill. Collar Ft.	Core Bbl. Ft.				
DRILLING STRING	DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL		DRILL	Number	OD	ID	Length	INDICATOR WEIGHT OF TOTAL							
	COLLAR					DRILLING STRING DRILL COLLARS			COLLAR					DRILLING STRING DRILL COLLARS		COLLAR					DRILLING STRING DRILL COLLARS						
	DATA								DATA							DATA											
BIT RECORD	No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE		No.	Type	Time On Bottom At	Time Pulled At	Total Hours Run	Depth Pulled	Weight On Bit M Pounds	FOOTAGE	
	Bit Serial No.							Table R.P.M.		Bit Serial No.							Table R.P.M.		Bit Serial No.							Table R.P.M.	
	Jet or Conventional -							Nozzle Size		Jet or Conventional -							Nozzle Size		Jet or Conventional -							Nozzle Size	
SURVEYS	Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off					Kind	at	Ft.	Deg. off							
	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	HOURS				Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size			
	On Line	Circulating							On Line	Circulating							On Line	Circulating									
MUD RECORD	Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS		Time	Visc.	Wt.	W L	pH	ADDITIVES — POUNDS							
CORING	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.	From	To	Ft. Cored	Ft. Rec'd.	Core No.	Type Bbl.									
DETAIL OF OPER- ATIONS AND REMARKS							From	To	Hrs.							From	To	Hrs.									
Driller.....						Driller.....						Driller.....															

CLASSES OF TIME BREAKDOWN										DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY	
HEADING UP & DRLG. OUT:	TOTCO:	CONDITIONING MUD:	CASING:	LOGGING:	RIG MAINTENANCE:	REAMING CLEANING:	MNFR. DRILLING LINE IN USE	REEL SERIAL No.		YES	NO
DRILLING:	FISHING:	TRIPPING:	W.O.C.	W. O. ORDERS:	MISCELLANEOUS:	WORKING PIPE:					
REAMING:	CIRCULATING:	CORING:	D.S. TESTING:	RIG REPAIRS:	CONDITION HOLE:	LOST CIRC.:	MNFR. OF KELLY HOSE IN USE	HOSE SERIAL No.			

Total Contract Timehrs. Total Company Timehrs. Toolpusher [Signature] Approved by

