

10E SWAN LAKE

K-28

Drilling Authority No. ... 256
Date Issued ... 10-1-67

WELL **IOE** Swan Lake K-28
FIELD **Wildcat** Area:
LOCATION: Unit **K** Section **28** Grid **67-10; 133-30**
Latitude **67-07-42** Longitude **133-34-44**
From Established Reference Marker

U. W. L. R. 67-12834 — 133-57889
U. W. I. No. 300 K28 6710 133300

Rig Release Date: **2-3-67**
Status **D-A**
Information Release Date

CHANGE OF NAME:

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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 Swan Lake K-28.....

Permit No. 3637 Lease No. WB 37-63

Imperial Oil Enterprises Ltd...... **Exploratory Licence No.**..... **1019**
(Permittee, Licensee, Lessee)

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

Location: Unit K Section 28 Grid 67° 10' 133° 30'

Latitude 67° 07' 42" N Longitude 133° 34' 44" W

From Established Reference Marker. Position of outline and shot points from seismic
Survey, verified by airphotos, wellsite plotted in relation to shot point (26-3956).
Lat. & Long. determined by scaling.

	DATE	DEPTH
Spudded.....	Jan. 28/67	
Suspended.....		
Resumed.....		
Finished Drilling.....	Feb. 27/67	6031
Deepened.....		
Complete (gas/oil).....		
Abandoned.....	Mar. 2/67	6031
Rig released.....	Mar. 2/67	6031

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

Elevation: Gr..... 279

K.B..... 294

Drilling Contractor & Rig No. Imperial Oil Nat. 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	N80	40.0	604.40	619.90	300 ÷ 4% CaCl ₂
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depths	Sub-Sea	From	To	Rec.	From	To	Rec.
Imperial	30	+264	4872	4884	10.7	Not	Analysed	
Carol-Hare	4420	-4126	5014	5044	29			
Indian								
Hume	4670	-4376						
Bear Rock	4992	-4698						

LOG RECORD

[illegible]

SERVICING RECORD (Acidizing, Fracing, etc.)

CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORATING RECORD (Bullet, Jet)				SERVICING RECORD (Acidizing, Fracing, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
March 1/67	6031'	5800'	120 sacks cement								
	670'	570'	60 " + 2% CaCl ₂ . Felt @ 546'. Cut casing off 3' below ground. 10 sack plug in top of casing. 5 sacks rat hole & mouse hole Welded on plate.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.I. Mins.	F.S.I. Mins.	I.S.I.B.H.P.	F.S.I.B.H.P.	I.F.B.H.P.	F.F.B.H.P.	I.H.P.	F.H.P.	REMARKS
		Nil												

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks
	Nil				

PRESENT STATUS OF WELL

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

Company Imperial Oil Enterprises
 Signed by *Peter Steinfeld*
 Title Manager North West Territories Exploration Division
 Date March 8, 1967

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



DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
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 Swan Lake K-28-67-10-133-30
Location: Unit K Section 28 Grid 67° 10' N 133° 30' W
Latitude 67° 07' 42" N Longitude 133° 34' 44" W
From Established Reference Marker Air photos of existing cutlines and seismic control. Also air photos of rig on location.
Permit No. 3637 Lease No. WB 37-63

Imperial Oil Enterprises Ltd.,
(Permitter, Licensee, Lessee)

Date of commencement of proposed program March 1, 1967

OIL, GAS, AND WATER ENCOUNTERED (Depths)

Oil at None encountered
Gas at None encountered
Water at 5846 to F.T.D. from log analysis
Total Depth 6031' Date of last operations February 28th 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	604.40'	619.90' KB	300 sacks + 4% CaCl ₂	None
2.					
3.					
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

No.	Plug	Geological Formation	Number of Sacks of Cement	Remarks
	Position			
1	6031'-5800'	Bear Rock	120 sacks	Do not feel for this plug
2	670 - 570'	Imperial	60 sacks + 2% CaCl ₂	Feel in 8 hours

The following logs have been run Induction E-Log; Sonic Gamma Log; Micro Log Caliper Velocity Surv.

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 Ent. Ltd. Contractor Licence No.
Address 11160 Jasper Ave., Edmonton Alberta. Address

Responsible Agent in field A.L. LaBerge
Dated at Edmonton this 2 Day of March 1967

Signed by J. H. Nichols Company Imperial Oil Enterprises Ltd.
Title Division Production Manager Operator's Exploratory Licence No. 1019

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 B. E. J. Thoms on 1-3-67.

Dated 3rd March, 1967

B. E. J. Thoms
Oil Conservation Engineer

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



~~NOT TO BE USED FOR ANY OTHER PURPOSES~~
~~EXCEPT AS AUTHORIZED BY THE DEPARTMENT~~

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 Swan Lake K-28-67-10-133-30
Location: Unit K Section 28 Grid 67°10'N133°30'W
Latitude 67°07'42"N Longitude 133°34'44"W
From Established Reference Marker Air photos of existing cutlines and seismic control. Location will be verified with photos of rig.
Elevation: Ground 275' K.B. _____ feet above sea-level.
Well is expected to produce from Bear Rock formation at a depth of about 5,000 feet.

Area assigned to well _____
(for Oil Conservation Engineer's use only)

Permit No. 3637 Lease No. WB 37-63 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.						
2. <u>9 5/8</u>	<u>40</u>	<u>N-80</u>	<u>Seamless</u>	<u>Used</u>	<u>600</u>	<u>To surface</u>
3.						
4.						
5.						

Expected water, gas, and oil horizons and type of control equipment possible Bear Rock oil or water at 5000 feet and possible oil in Hume at approximately 4600 feet. Hydril and double gate mechanical blowout preventer.

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

Responsible agent of applicant:— Contractor's Business Licence No. _____
At well A. L. LaBerge At registered office D. D. Lougheed
Address 11160 - Jasper Ave. 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 3 day of January, 19 67.
Signed by Copy (Original) 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 10th January, 19 67 Oil Conservation Engineer B. S. Thomas

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

NANR 52-90-1 (7-65)

UNIVERSAL WELL LOCATION REFERENCE: 67.12834° N 133.57889° W

also, re: This well in Monthly Activities Report H/W

IOE SWAN LAKE K-28

January 31, 1967

Spudded

February 4, 1967

W.O.C. 636'

(19 jts.) 9 5/8" casing landed at 620' / 300 sacks
cement, and plug down, February 3, 1967, 10:00 p.m.

67°10'

IMPERIAL OIL LIMITED
WELLSITE LOCATION SKETCH

IOE Swan Lake

K-28-67-10-133-30

SCALE: 2" = 1 MI.

SEISMIC CUT LINE

IOE SWAN LAKE
LAT. 67°07'42" N.
LONG. 133°34'44" W.

S.P. 26-3956

28

133°30'

A. B. Jarnack
SURVEY SUPERVISOR

A.L.S.

TOPOGRAPHY FROM 1/250000 NAT. TOPO MAP.

POSITION OF CUTLINE AND SHOT POINTS FROM SEISMIC SURVEY, VERIFIED BY AIR PHOTOS.

WELLSITE PLOTTED IN RELATION TO SHOT POINT. (26-3956) (185' S29°W FROM S.P.)

LATITUDE AND LONGITUDE DETERMINED BY SCALING.

IOE Swan Lake

K-28-67-10-133-30

DERRICK

S.P. 26-3956

26-3955

PHOTO SCALE APPROX 4" TO 1 MILE
JAN 30, 1967

26-3954

67°10'

IMPERIAL OIL LIMITED

WELLSITE LOCATION SKETCH

IOE Swan Lake

K-28-67-10-133-30

SCALE: 2" = 1 MI.

SEISMIC CUT LINE

IOE SWAN LAKE
LAT. 67°07'42" N.
LONG. 133°34'44" W.

SP. 26-3956

283

133°30'

TOPOGRAPHY FROM 1/250000 NAT. TOPO MAP.

POSITION OF CUTLINE AND SHOT POINTS FROM SEISMIC SURVEY, VERIFIED BY AIR PHOTOS.

WELLSITE PLOTTED IN RELATION TO SHOT POINT. (26-3956)

LATITUDE AND LONGITUDE DETERMINED BY SCALING.



File No.
Drilling Authority No. 256

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

OIL AND MINERAL DIVISION

WELL-SITE INSPECTION REPORT

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

TO: The Oil Conservation Engineer:

RE: IOE SWAN LAKE K-28 67-10-133-30

Location: 67.12834°N., 133.57889°W. Status: D&A Mar. 1967

This location was inspected by the undersigned on 10th July 1971

The location is in satisfactory/unsatisfactory condition. TD 6031

The following items require attention:

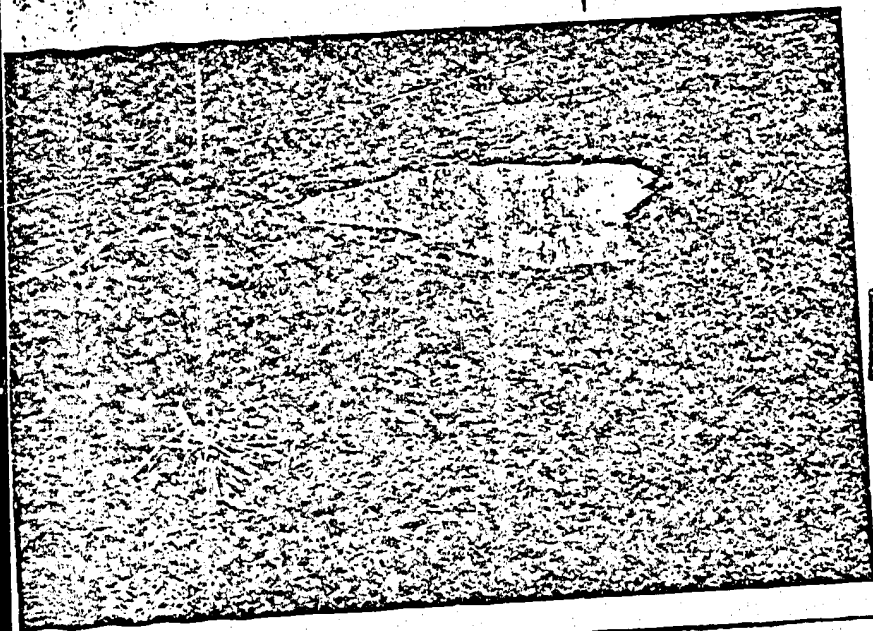
1. Burn piles of wood.
2. Either reweld 2" pipe to casing or set in concrete above casing.
3. Paint identifier pipe and plate fluorescent orange.
4. _____
5. _____
6. _____

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

Clean lease.

Marker broken off and lying on ground.

Wood piled to be burned.



Inspected by M. D. Thomas

M. D. Thomas
District 2

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Company: Imperial Oil Enterprises Ltd.

Signed by: Peter Stauff

Title: Manager N.W.T. Exploration District

Date: March 17 1967

SECTION I

Section 1. Summary of Well Data

- (a) Well Name and Number
IOE Swan Lake K-28
- (b) Permittee - Imperial Oil Enterprises Ltd.
- (c) Operator - Imperial Oil Enterprises Ltd.
11160 - Jasper Avenue, Edmonton, Alberta
- (d) Location - 67 10 133 30
Latitude 67°07'42" N Longitude 133°34'44" W
- (e) Co-ordinates - Not applicable
- (f) Permit Number - 3637
- (g) Drilling Contractor - Imperial Oil Enterprises Ltd.
National #3
- (h) Drilling Authority - 256 Jan. 10/67
- (i) Classification - NFW
- (j) Elevations - Gr 279 K.B. 294
- (k) Spud - Jan. ²⁸31/67
- (l) Completed Drilling - Feb. 27/67
- (m) Total Depth - 6031
- (n) Well Status - Dry & Abandoned
- (o) Rig Release - March 2/67
- (p) Hole Size - Surface to 636' 12 1/4"
636 to 6031 8 5/8"
- (q) Casing - Ran 19 joints 604.40ft. 9 5/8" 40.0 lbs.
N80 8 thread casing. Landed at 619.90 K.B.
Cemented with 300 sacks plus 4% CaCl₂

Section 2. Geological Summary

(a) Formation Tops

<u>Formation</u>	<u>Sample</u>	<u>Log</u>	<u>Sub-Sea</u>
Imperial		30	+264
Canol-Hare Indian	4420	4420	-4126
Hume	4670	4670	-4376
Bear Rock	4990	4992	-4698

(b) Cored Intervals

	<u>Interval</u>	<u>Recovery</u>	<u>Formation</u>
#1	4872-4884	10.7	Hume
#2	5014-5044	29	Bear Rock

(c) Core Description

Core #1 4872-4884 Rec. 10.7/12

4872-4882.7 Limestone, micritic, dark hard cryptocriptalline with thin 1" to 1½" argillaceous laminations. Argillaceous infill of fractures. Skeletal - tubes brizozoa and crinoid fragments. Abundant thin shelled bachiopods in micritic matrix. Minor stylolitic junctions and bondinage.

Fractures appear to be devication cracks in a calcareous mudstone facies, but presence of stylotic junctions and bondinage suggests slight movement. These cracks are infilled with darker argillaceous material containing derived brachiopod. Bedding is horizontal.

Coring rates mins./foot 25, 20, 21, 18, 20, 18, 19, 19, 18, 18, 16, 19

Core #2 5014-5044 Rec. 29.5/30

5014-5028 (14') Limestone, dark grey, pelletal, pellets from approximately .03-.09 MM, 10% clear calcite surrounding the oval pellets. Approximately 5% clear crystalline calcite is present. Several stylolites and shale partings are present. Trace of pyrite. No porosity or staining. Pellet limestone.

5028-5043.5
(15.5')

Limestone, dark grey, micritic, containing 5% brachiopod shells replaced by clear crystalline calcite, brachiopods vary from less than 1/4" to nearly 1" in length and appear to have a preferred orientation. A few crinoids were noted at 5040'. A trace of pyrite throughout. No porosity or staining, 5% shale partings and interbeds throughout micrite shale, black, slightly calcareous and the parting range from a very thin film to 1/4" and more in thickness. The core breaks readily along these surfaces which while highly irregular are essentially horizontal.

Micrite with 5% brachiopods

Coring rates mins./foot 6, 9, 8, 8, 8, 7, 7, 6, 6, 7, 6, 5, 5,
6, 7, 6, 7, 7, 7, 7, 6, 6, 7, 7, 6, 7,
6, 6, 8, 7.

(d) Sample Description

DEPTH	QUALITY	ROCK NAME	WET COLOR DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE		
20-30	F	100 Sandstone	M.D.G. mott	v. fine to fine grained quartz s/s. Poorly sorted (lenticular) Sub-angular. Med. well cemented, in diatomitic matrix. Abundant lithic lithumens. Trace glauconite. Tight.	-				quartz lithumens clot.	10
30-40	F	100 Sandstone	M.D.G. mott	v. fine to fine grained feldspathic quartzose Texture a.a.					feldspar quartz lithumens clot.	5
40-50	F	100 Sandstone	M.D.G. mott	quartzose v. fine to fine grained. Lithic lithumens, texture a.a.					quartz lithumens clot.	1
50-60	F	100 siltstone	M.G.	quartzose with abundant lithumens material (plant remains) micromicaceous diatomitic. Low angill.					quartz clot. lithumens	
60-70	F	100 Sandstone	M.D.G. mott	v. fine grained, quartzose. Finely laminated lithumens (plant remains)					quartz lithumens clot.	
70-80	F	100 Sandstone	M.D.G. mott	v. fine s/s. quartzose feldspathic, with finely laminated lithumens. Sub-ang med well sorted					quartz feldspar lithumens clot.	
80-90	F	75 Sandstone	M.D.G. mott.	a.a.					quartz feldspar lithumens clot.	
		25 Siltst.	M.G.	quartzose lithumens micromicaceous, waxy					quartz	

AUTHOR I.T. Hawkins

DATE

Feb 1/67

FORM

DEPTH	QUALITY	ROCK NAME	☒ WET ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.		
90-100	P 100	Sandstone	MDC	v. fine grained quartzose feldspar lithomene Mott. well sorted s-angular base glauconite, light	-					quartz feldspar dol.	
100-110	P 100	Siltstone	HG	quartzose micaceous base only dol. waxy. low argill.						quartz	
110-120	P 100	Siltstone	HG	a a						quartz	
120-130	P 100	Sandstone	HDC	v. fine s. quartzose little lithomene Poorly sorted, arg to sub-angular.						quartz lithomene dol.	
130-140	P 100	Sandstone		v. fine s. well sorted. a a						quartz lithomene dol.	
140-150	P 100	Sandstone	HDC	v. fine grained quartzose Mott well sorted sub-ang lithomene base only dol. in matrix Bimodal						quartz lithomene	
150-160	F 100	Sandst.	HDC	v. fine grained, v. th sub-rounded quartz grains in sub-ang matrix (quartz) Carbonaceous material throughout.						quartz Carbon	
160-170	F 100	Sandst.	HDC	a a						quartz Carbon	
170-180	F 100	Sandst.	HDC	a a						quartz Carbon	
180-190	F 100	Siltst.	HG	quartzose micaceous waxy						quartz argill	
190-200	F 100	Sandst.	HDC	v. fine grained med. well sorted angular to sub-ang						quartz Carbon dol.	

DEPTH	QUALITY	ROCK NAME	☒ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT
					TYPE	%	NET FT.	TYPE	AMT.
50- 190	F 70	Sandst.	HG	v. fine grained quartzose bituminous					quartz carbon dol
	30	siltst.	HOG	quartzose waxy micromic					quartz
190- 200	F 100	Sandst.	H.DC mott	v. fine grained sulf-arg well sorted, clean quartzose. Lithic Carbonaceous. Dol. matrix finely dis. pyrite (trace)					quartz carbon dol.
200- 210	F 100	Sandst.	H.DC mott	aa					quartz carbon dol
210- 220	F 100	Sandst.	H.DC mott	aa					quartz carbon dol
220- 230	F 100	Sandst.	H.DC mott	aa					quartz carbon dol
230- 240	F 100	Sandst.	H.DC mott	aa					quartz carbon dol
240- 250	F 100	Sandst.	H.DC	aa increase in pyrite slightly fine grained trace glauconite					quartz carbon dol
	30	siltst.	HG	quartzose, micromic					quartz
250- 260	F 100	Sandst.	H.DC mott	v. fine - fine grained poorly sorted quartz lithic. S.S. with lithic carbonaceous G. arg. sulf arg Partially dol. matrix					quartz lithic carbon dol
260- 270	F 100	Sandst.	H.DC mott	aa					quartz lithic carbon dol

AUTHOR T.J. HawleyDATE Feb 2/67

FORM

DEPTH	QUALITY	ROCK NAME	WET COLOR DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
280- 290	F 50	Sandst.	MDC mott	v. fine grained quartz, feldspar, etc., with little carbonaceous Poorly sorted, sub- angular grains Glauconitic, matrix dolomitized.						quartz feldspar carbonaceous dol	
	30	Sandst.		aa grading to siltst.							
	20	Shale.	DC	Quartzose carbonac- eous 'low' argill. Waxy							
290- 300	F 100	Sandstone	MDC mott	v. fine to fine grained sandstone - angular quartz & carbonaceous in matrix of v. fine quartz grains, cemented by dolomite						quartz carbon dol	15
300- 310	F 90	Sandst	MDC mott	aa						quartz carbon dol	15
	20	siltst	MDC	siltst. texture constit. aa. Micaceous							
310- 320	F 100	siltst Sandst	MDC mott	fine grained aa.						quartz Carbon dol	15
320- 330	70	Sandst.	MDC mott	aa						quartz carbonaceous dol	15
	30	siltst		aa							
330- 340	F 50	Shale	MDC	Soft fine, micaceous						argill	100
	60	siltst	MDC mott	aa						quartz carbonaceous dol	15
340- 350	50	Shale	MDC	aa						argill	100
	50	siltst	MDC mott	aa						quartz Carbonaceous dol	15

DEPTH	QUALITY	ROCK NAME	☐ WET ☐ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
355- 360	F 70	siltst	MDC	siltst to v. fine s/s. Partly with lithic carbonaceous (this may be lithic argill)						quartz argill? clst	5
	30	shale	MDC	aa						argill	30
360- 370	50	siltst	MDC mott	aa						quartz argill clst	5
	50	shale	MDC	aa						argill	100
370- 380	70	siltst	MDC mott	siltst to v. fine s/s aa. clst. ma. lux.						quartz argill clst	5
	30	shale	MDC	aa						argill	100
380- 390	70	siltst	MDC mott	aa						quartz argill clst	5
	30	shale	MDC mott	aa						argill	100
390- 400	70	sandst	MDC mott	v. fine grained well sorted, quartz, with lithic argill. Some non stained						quartz argill clst	5
	30	siltst	MDC mott	quartz grains. siltst. texture, constit. aa							
400- 410m	50	siltst	MDC mott	aa						quartz argill	
	50	shale	MDC	aa						clst argill	5 50
410- 420	70	siltst	MDC mott	aa						quartz argill clst	5
	30	shale		sub-fine micromic						argill	100
420- 430	70	siltst	MDC mott	aa						quartz argill clst	5
	30	shale	MDC	aa						argill	100

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AUTHOR

T.J. Howlings

DATE

Feb 3 '57

FORM

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT
					TYPE	%	NET FT.	TYPE	AMT.
430- 440	F 100	Sandst.	MDC mott	v. fine sandstone, sub-angular quartz & lithic argill fragments matrix					quartz argill det
440- 450	70	sandst.	MDC mott	v. fine to fine grained a a					quartz argill det
	30	shale	MDC	sub-fine, micro mic.					argill
450- 460	70	Sandst.	MDC mott	a a					quartz argill det
	30	shale	MDC	a a					argill
460- 470	70	shale	MDC	a a					argill
	30	siltst	MDC mott	quartz, argill siltst. Some qtz grains skinned det. matrix					quartz argill det
470- 480	70	siltst	MDC mott	a a					quartz argill det
	30	shale	MDC	a a					argill
480- 490	50	siltst	MDC mott	a a					quartz argill det
	40	shale	MDC	a a					argill
490- 500	X	siltst	MDC mott	a a					quartz argill det
	25	shale	MDC	a a					argill
500- 510	80	siltst	MDC mott	a a					quartz argill det
	20	shale	MDC	a a					argill
510- 520	75	siltst	MDC mott	siltst. to v. fine s/s. a a					quartz argill det
	?	shale	MDC	a a					argill

DEPTH	QUALITY	ROCK NAME	☒ WET ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT
			TYPE		%	NET FT.	TYPE	AMT.		
520- 530	85	siltst	MDC mott	siltst to v. fine sandstone. Well sorted sub-aq base glauconite Matrix deformed						quartz argill clst
	15	shale	MDC	sub-fine, mica- micaceous						argill
530- 540	100	siltst	MDC mott	siltst - v. fine s/s aa						quartz argill clst
540 550	80	sandst	MDC mott	v. fine s/s. aa						quartz argill clst
	20	shale	MDC	aa						argill
550- 560	75	sandst.	MDC mott	v. fine s/s aa						quartz argill clst
	25	shale	MDC	aa						argill
560 570				MISSING						
570- 580	85	Sandst.	MDC mott	v. fine aa						quartz argill clst
	15	shale	MDC	aa						argill
580- 590	70	sandst	MDC mott	v. fine aa						quartz argill clst
	30	shale	MDC	aa						argill
590- 600	100	sandst	MDC mott	aa grading to siltst						quartz argill clst
600- 610	100	sandst	MDC mott	aa						quartz argill clst
610- 620	80	sandst.	MDC mott	aa						quartz argill clst
	20	shale	MDC	aa						argill

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DEPTH	QUALITY	ROCK NAME	WET COLOR □ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
620- -630	100	Sandst	MDC not	v. fine grained, med well sorted, sub-ang. clean with lithic argill fragments.						quartz argill clay	
630- 660		MISSING - NO SAMPLES									
660- 670		Canning									
670- 680	F 100	Sandstone	MDC not	v. fine, quartzose with lithic argill. Sub angular, med well sorted, have only det. cement. Trace to 5% disseminated pyrite Φ 1.9 3%-5%	19.5					quartz argill pyrite	
690- 690	F 10	Sandstone	MDC not	aa						quartz argill	
	40	shale	MDC	hard, compact						argill	10
690- 700	70	Sandst	MDC not	aa						quartz argill	
	80	shale	MDC	Sub-fine, waxy						argill	5
700- 710	70	Sandst	MDC not	aa						quartz argill	
	30	shale		aa						argill	10
710- 720	80	siltst	MDC not	quartzose with lithic argill. Sub- ang. well sorted occ. bituminous partings.						quartz argill	
	20	shale	MDC	shale - waxy, fine, soft.						argill	10
720- 730	30	siltst	MDC not	aa						quartz argill	
	20	shale	MDC	aa						argill	10

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DEPTH	QUALITY	ROCK NAME	☐ WET	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	
			COLOR		TYPE	%	NET FT.	TYPE		
730-	50	siltst	MDC	aa					quartz argill	
740			mott						argill	100
	20	shale	MDC	aa						
740-	80	siltst	MDC	aa					quartz argill	
750			mott						argill	100
	20	shale	MDC	aa						
750	90	siltst	MDC	aa					quartz argill	
760			mott						argill	100
	0	shale	MDC	argill						
760-	90	siltst	MDC	aa					quartz argill	
770			mott						argill	100
	10	shale	MDC	argill						
770-	90	siltst	MDC	aa					quartz argill	
780			mott						argill	100
	0	shale	MDC	aa						
780-	90	siltst	MDC	aa					quartz argill	
790			mott						argill	100
	10	shale	MDC	aa						
790-	90	siltst	MDC	aa. Some					quartz argill	
800			mott	coarser, v. fine s.s. of similar comp. & texture. Pyrite disseminated through matrix						
	10	shale	MDC	aa					argill	100
800	90	siltst	MDC	aa trace					quartz argill	
810			mott	I.G. Ø.					argill	100
	10	shale	MDC	aa						
810-	80	siltst	MDC	aa trace					quartz argill	
820			mott	glauconite					argill	100
	20	shale	MDC	aa						
820-	30	siltst	MDC	aa micaceous					quartz argill	
830									argill	100
	20	shale	MDC	aa						
830	70	siltst	MDC	aa					quartz argill	
840			mott						argill	100
	40	shale	MDC	waxy, fine					argill	100

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
840 -	A	70 siltst	MDC	quartz, with lithic						quartz	
850			mott	argill. Med well						argill	
				sorted, sub-ang							
				to angular. Trac							
		30 shale		i.g. leached &						argill	100
				fine, waxy,							
				soft							
850 -		70 siltst	MDC	aa						quartz	
860			mott							argill	
		30 shale	MDC	aa						argill	100
860 -		70 siltst	MDC	aa						quartz	
870			mott							argill	
		30 shale	MDC	aa						argill	100
870 -		70 siltst	MDC	aa						quartz	
880			mott							argill	
		30 shale	MDC	aa						argill	100
880 -		60 siltst	MDC	aa grading to						quartz	
890			mott	shale						argill	
		40 shale	MDC	aa						argill	100
890 -		0 siltst	MDC	aa						quartz	
900			mott							argill	
		20 shale	MDC	aa						argill	100
900 -		70 siltst	MDC	aa						quartz	
910			mott							argill	
		30 shale	MDC	aa						argill	100
910 -		60 siltst	MDC	aa						quartz	
920			mott							argill	
		40 shale	MDC	aa						argill	100
920 -		60 siltst	MDC	aa						quartz	
930			mott							argill	
		40 shale	MDC	aa						argill	100
930 -	F	60 siltst	MDC	aa						quartz	
940			mott							argill	
		40 shale	MDC	aa						argill	100
940 -		30 siltst	MDC	aa						quartz	
950			mott							argill	
		50 shale	MDC	aa						argill	100



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DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
950- 960	F70 30	shale siltst	MDC MDC mott	soft, friable, waxy quartz with mott. thin siltst. med. well sorted, arg. to sub arg. Med. well cemented, trace leached lg. ①						argill quartz argill	100
960- 970	70 30	shale siltst	MDC MDC mott	aa aa						argill quartz argill	100
970- 980	60 40	shale siltst	MDC MDC mott	aa aa						argill quartz argill	100
980- 990	F60 40	shale siltst	MDC MDC mott	aa aa						argill quartz argill	100
990- 1000	F60 40	shale siltst	MDC MDC mott	aa aa						argill quartz argill	100
1000- 1010	60 40	shale siltst	MDC MDC mott	aa aa						argill quartz argill	100
1010- 1020	50 50	shale siltst	MDC MDC mott	aa aa, trace feldspar, glau- conite.						argill quartz argill	100
1020- 1030	70 30	siltst shale	MDC MDC mott	aa aa						quartz argill argill	100
1030- 1040	50 20	siltst shale	MDC MDC mott	aa aa						quartz argill argill	100
1040- 1050	30 20	siltst shale	MDC MDC mott	aa aa						quartz argill argill	100

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DEPTH	QUALITY	ROCK NAME	WET COLOR □ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	ANT.		
1050	70	siltst	MDC	quartzose with l. the						quartz	8
1060			moft	argill. Mod. w. l.						argill	2
				Silted, sub arg.							
				has leached							
				(G. & O. Clay conch.							
				(trace) & feldspar							
		10' shale	MDC	soft, fine wavy						argill	100
1060	80	siltst	MDC	aa grading						quartz	8
1070			moft	to v. fine s/s.						argill	2
		20' shale		aa						argill	100
1070	80	siltst	MDC	lex fine aa, has						quartz	8
1080			moft	fine grained. Semi-						argill	2
				litic feldsp.						argill	100
		20' shale	MDC	aa							
1090	80	siltst	MDC	aa						quartz	8
1090			moft							argill	2
		20' shale	MDC							argill	100
1090	80	siltst	MDC	aa v. fine						quartz	8
1100			moft	grained, uniform						argill	2
		20' shale	MDC	aa						argill	100
1100	70	siltst	MDC	aa Carbonaceous						quartz	8
1110			moft	material - wood						argill	2
		20' shale	MDC	aa						argill	100
1110	60	siltst	MDC	aa						quartz	8
1120			moft							argill	2
		40' shale	MDC	aa						argill	100
1120	60	siltst	MDC	aa						quartz	8
1120			moft							argill	2
		40' shale	MDC	aa						argill	100
1130	60	siltst	MDC	aa						quartz	8
1140			moft							argill	2
		40' shale	MDC	hard, quartzose						argill	100
1140	50	siltst	MDC	aa						quartz	8
1150			moft							argill	2
		50' shale	MDC	aa						argill	100

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DEPTH	QUALITY	ROCK NAME	SWET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.	
1150 - 1160	40	siltst	MDC mott	quartzose med well sorted sub ang w. a. lithic argill. Some bituminous platey material. trace papites					quartz argill	
	60	shale	MDC	med hard sub- fine					argill	100
1160 - 1170	30	siltst	MDC mott	aa					quartz argill	
	70	shale	MDC	aa					argill	100
1170 - 1180	20	siltst	MDC mott	aa					quartz argill	
	80	shale	MDC	aa					argill	100
1180 - 1190	20	siltst	MDC mott	aa					quartz argill	
	80	shale	MDC	aa					argill	100
1190 - 1200	10	siltst	MDC mott	aa oee.					quartz	
	90	shale	MDC	feldspathic ss. aa					argill	20
1210 - 1220	30	shale	MDC	aa					argill	80
	20	siltst	MDC mott	aa dismembered papite in matrix					quartz	
1210 - 1220	90	shale	MDC	aa					argill	10
	10	siltst	MDC mott	aa					quartz	
1220 - 1230	80	shale	MDC	aa					argill	10
	20	siltst	MDC	aa					quartz	
1230 - 1240	70	shale	MDC	aa					argill	20
	30	siltst	MDC mott	sub- rounded well sorted med well cemented. trace mica					quartz argill	
1240 - 1250	60	shale	MDC	aa					argill	10
	40	siltst	MDC mott	aa					quartz argill	

DEPTH	QUALITY	ROCK NAME	☐ WET ☐ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
1260-	10	shale	MDC	hard (quartzose)						argill	100
1260			and	sub-fine							
	40	siltst	MDC	quartzose well						quartz	
			not	sorted silt						limestone	
				rounded with							
				chaumontite.							
				Bituminous							
1260	50	shale	MDC	aa						argill	100
1270	40	siltst	MDC							quartz	
			not	aa						limestone	
1270	60	shale	MDC	aa						argill	100
1280	40	siltst	MDC	aa						quartz	
			not							limestone	
1280	60	shale	MDC	aa						argill	100
1290	40	siltst	MDC	aa						quartz	
			not							limestone	
1290	60	shale	MDC	aa						argill	100
1300	40	siltst	MDC	aa						quartz	
			not							limestone	
1290	60	shale	MDC	aa						argill	100
1300	40	siltst	MDC	aa						quartz	
			not							limestone	
1300	60	shale	MDC	aa						argill	100
1310	40	siltst	MDC	aa						quartz	
			not							limestone	
1310	50	shale	MDC	aa, shale						argill	100
1320	40	siltst	not	grading to siltst						quartz	
										limestone	
1320	70	shale	MDC	aa						argill	60
1330	30	siltst	MDC	aa						quartz	
			not							limestone	
1330	70	shale	MDC	aa						argill	100
1340	70	siltst	MDC	aa						quartz	
			not							limestone	
1340	80	shale	MDC	aa						argill	100
1350	20	siltst	MDC	aa						quartz	
			not							limestone	
1350	70	shale	MDC	aa						argill	100
1360	30	siltst	MDC	aa						quartz	
			not							limestone	

DEPTH	QUALITY	ROCK NAME	WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.		
1360	50	shale	MDC	hard sub-fine						argill	100
1370	40	siltst	MDC mott	quartz, angular to sub-ang. poorly sorted, clean with bituminous beads. Glauconitic						quartz bitumen	95
1370	60	shale	MDC	aa						argill	100
1380	40	siltst	MDC mott	aa trace I.G. ϕ						quartz bitumen	95
1380	50	shale	MDC	aa						argill	100
1390	40	siltst	MDC mott	aa						quartz bitumen	95
1390	70	shale	MDC	aa						argill	100
1400	30	siltst	MDC mott							quartz bitumen	95
1400	80	shale	MDC	aa						argill	100
1410	20	siltst	MDC mott	aa						quartz bitumen	95
1410	30	shale	MDC	aa						argill	100
1420	20	siltst	MDC mott							quartz bitumen	95
1420	90	shale	MDC	aa						argill	100
1430	10	siltst	MDC mott	aa						quartz bitumen	95
1430	90	shale	MDC	aa						argill	100
1440	10	siltst	MDC mott	aa						quartz bitumen	95
1440	100	shale	MDC	aa						argill	100
1450											
1450	90	shale	MDC	aa						argill	100
1460	10	siltst	MDC mott	aa						quartz bitumen	95
1460	70	shale	MDC	aa						argill	100
1470	10	siltst	MDC mott	aa						quartz bitumen	95

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DEPTH	QUALITY	ROCK NAME	☐ WET ☐ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.	
1470-980	80	shale	MDC	aa					argill	500
1480	20	siltst	MDC mott	aa					quartz argill limestone	15
1480	20	shale	MDC	aa					argill	100
1490	30	siltst	MDC mott	aa					quartz limestone	5
1490	70	shale	MDC	aa					argill	100
1500	30	siltst	MDC mott	aa					quartz limestone	5
1500-980	80	shale	MDC	aa					argill	100
1510	20	siltst	MDC mott	aa					quartz argill limestone	5
1510-980	80	shale	MDC	aa					argill	100
1520	20	siltst	MDC mott	5% fine grained sls, leached 1.9 7% clean quartzose	fine	1.9			quartz limestone	5
1520-980	80	shale	MDC	aa					argill	100
1530	10	siltst	MDC mott	siltstone aa					quartz limestone	5
1530-980	80	shale	MDC	aa					argill	100
1540-980	80	shale	MDC	aa					argill	100
1550	10	siltst	MDC mott	siltstone aa					quartz limestone	5
1550-980	80	shale	MDC	aa					aa	100
1560	60	siltst	MDC mott	quartzose, grading to v. fine sls. Clean with high limestone content. Glauconitic					quartz limestone	10
1560-1580				NO SAMPLES						
1580-40	40	shale	MDC	aa					argill	100
1590	60	siltst	MDC mott	aa					quartz limestone	10

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROS	
						TYPE	%
1590 -	5	40	shale	MDC	aa		
1600		60	siltst	MDC	aa		
				not			
1600		60	shale	MDC	aa		
1610		40	siltst	MDC	aa with 5-10% s/s, sandstone grains		
				not			
1610 -		80	shale	MDC	aa		
1620		20	siltst	MDC	aa with siltst.		
				not	texture, texture		
1620 -	5	60	shale	MDC	aa		
1630		40	siltst	MDC	aa grading to v. fine s/s. base cracked i.e. of face feldspathic		
				not			
1630 -		60	shale	MDC	aa		
1640		40	siltst	MDC	aa		
				not			
1640		80	shale	MDC	aa		
1650		20	siltst	MDC	siltstone texture		
				not			
1650		100	shale	MDC	aa more friable		
1660							
1660		100	shale	MDC	aa siltst		
1670							
1670		100	shale	MDC	aa		
1680							
1680		100	shale	MDC	aa		
1690							
1690		100	shale	MDC	aa		
1700							
1700		100	shale	MDC	aa		
1710							
1710		100	shale	MDC	aa		
1720							
1720 -		100	shale	MDC	aa		
1730							
1730 -		80	shale	MDC	aa		
1740							
1740		80	shale	MDC	aa		
1750		5	siltst	MDC	aa		
				not			

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO	
						TYPE	
1750-1760		95	shale	Mic	Hard fine ore arenaceous		
		5	siltst	Mic mott	granulose l.uminous med. well sorted, silt rounded gran. ang. l. k. f. b. flauconitic grading to v. fine s/s.		
1760-1770		100	shale		aa		
1770-1780		90	shale		aa		
		0	siltst		aa		
1780-1790		95	shale		aa		
		5	siltst		aa		
1790-1800		100	shale		aa		
1800-1810		100	shale		aa, trace disseminated phyllite		
1810-1820		100	shale		aa		
1820-1830		100	shale		aa		
1830-1840		100	shale		aa		
1840-1850		100	shale		aa		
1850-1860		100	shale		aa		
1860-1870		100	shale		aa		
1870-1880		100	shale		aa		
1880-1890		100	shale		aa		
1890-1900		95	shale		aa		
		5	siltst		aa		
1900-1910		100	shale		aa		
1910-1920		100	shale		aa		

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO	
						TYPE	
1930 - 1930	5	100	Shale	MDC	fine siltst.		
1930 - 1940	95	5	Shale siltst.	MDC MDC	fine		
1940 - 1950	70	10	Shale siltst.	MDC MDC mott	fine		
1950 - 1960	70	10	Shale siltst.	MDC MDC mott	fine		
1960 - 1970	90	10	Shale siltst.	MDC MDC mott	fine		
1970 - 1980	60	40	siltst. argill.	MDC mott	angular, lamination. Grading to fine sandstone. Well sorted angular grains. glauconitic micaceous.		
1980 - 1990	70	30	siltst. shale	MDC mott	fine		
1990 - 2000	10	40	siltst. shale	MDC mott	fine sandstone.		
2000 - 2010	70	30	siltst. shale	MDC mott	fine		
2010 - 2020	60	40	Shale siltst.	MDC mott	fine		
2020 - 2030	60	40	Shale siltst.	MDC mott	fine		
2030 - 2040	60	40	Shale siltst.	MDC mott	fine siltst, grading to shale		
2040 - 2050	50	50	Shale siltst.	MDC mott	fine		
2050 - 2060	60	40	Shale siltst.		as 2030 - 2040		

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INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO	
				☐ WET	☐ DRY		TYPE	
2050		10	Shale	MIX		v. fine siltst in beds		
2060		30	siltst	moist		Grading to shale		
2060		100	Shale	MIX		med band, brittle. hard		
2070						siltst.		
2070		100	Shale	MIX		oa		
2080								
2080		100	Shale	MIX		oa		
2090								
2090		100	Shale	MIX				
2100								
2100		90	Shale	MIX		oa		
2110		10	siltst	moist		oa		
2110		80	Shale	MIX		oa		
2120		20	siltst	moist		oa		
2120		50	Shale	MIX		oa		
2130		50	siltst	moist		oa		
2130		80	siltst	MIX		oa v. fine, grading		
2140		20	Shale	moist		to shale		
2190		80	siltst	MIX				
2150		30	Shale	MIX		oa		
2150		90	siltst	MIX		oa		
2160		10	Shale	moist		oa		
2160		90	siltst	MIX		oa		
2170		10	Shale	moist		oa		
2170		80	siltst	MIX		oa		
2180		20	Shale	moist		oa		
2180		70	siltst	MIX		p. fine siltst, grading		
2190		30	Shale	moist		to shale		
2190		50	siltst	MIX		oa		
2200		50	Shale	moist		oa		

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PO
				COLOR ☐ DRY		
2200 -		60	siltst	MLG	fine quartz siltstone	
2210				MHC	laminar grading	
		40	shale	MHC	shale texture	
2210 -		70	siltst	MLG	ac	
2220						
		30	shale	MHC	ac	
2220 -		60	siltst	MLG	ac	
2230						
		40	shale	MHC	ac	
2230 -		40	siltst	MLG	ac	
2240						
		60	shale	MHC	ac	
2240 -		60	siltst	MHC	ac	
2250						
		40	shale	MHC	ac	
2250 -		60	siltst	MLG	ac	
2260						
		40	shale	MHC	ac	
2260 -		70	siltst	MLG	ac	
2270						
		30	shale	MHC	ac	
2270 -		85	siltst	MLG	ac	
2280						
		15	shale	MHC	ac	
2280 -		30	siltst	MLG	ac	
2290						
		70	shale	MHC	ac	
2290 -		40	siltst	MLG	ac	
2300						
		60	shale	MHC	ac	
2300 -		40	siltst	MLG	ac	
2310						
		60	shale	MHC	ac	
2310 -		50	siltst	MLG	ac	
2320						
		50	shale	MHC	ac	
2320 -		70	siltst	MLG	ac	
2330						
		50	shale	MHC	ac	
2330 -		50	siltst	MLG	ac	
2340						
		70	shale	MHC	ac	

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INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POR	
				☐ WET	☐ DRY		TYPE	
2340		20	siltst	MLG		fine granular, clean,		
2350		80	shale	MDC		with thinning in hill grading to silty shale & shale		
2350		90	shale	MDC		aa		
2360		10	siltst	MLG				
2360		100	shale	MDC		fine silty shale		
2370		95	shale	MDC		aa		
2380		5	siltst	MLG				
2390		95	shale	MDC		aa		
2390		5	siltst	MLG		aa		
2390		90	shale	MDC		aa		
2400		10	siltst	MLG				
2410		90	shale	MDC		aa		
2420		10	siltst	MLG		aa		
2420		85	shale	MDC		aa		
2430		15	siltst	MLG		aa		
2430		95	shale	MDC		aa		
2440		5	siltst	MLG		aa		
2440		95	shale	MDC		aa		
2450		5	siltst	MLG		aa		
2450		100	shale	MDC		fine micaceous, med hard, trace silty shale & fine siltstone		
2460		100	shale	MDC		med hard, fine		
2470		100	shale	MDC		grading to silty shale		
2480		85	shale	MDC		aa		
2490		15	siltst	MLG		aa		

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INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO TYPE
				☐ WET	☐ DRY		
2490		85	shale	MDC		aa	
2500		15	siltst	MDC		aa	
2510		40	siltst	MDC		aa	
2520		60	shale	MDC		aa	
2530		40	siltst	MDC		aa	
2530		60	shale	MDC		aa	
2530		40	siltst	MDC		aa	
2540		60	shale	MDC		aa	
2540		50	siltst	MDC		aa	
2550		40	shale	MDC		aa	
2550		60	siltst	MDC		aa	
2560		40	shale	MDC		aa	
2560		50	siltst	MDC		aa	
2570		50	shale	MDC		aa	
						graduation between siltst - silty shale to shale	
2570		60	siltst	MDC		aa	
2580		40	shale	MDC		aa	
2580		80	siltst	MDC		aa	
2590		20	shale	MDC		aa	
2590		50	siltst	MDC		aa	
2600		20	shale	MDC		aa	
2600		40	siltst	MDC		aa	
2610		10	shale	MDC		aa	
2610		80	shale	MDC		aa	
2620		20	siltst	MDC		aa	
2620		100	shale	MDC		have siltst.	
2630							
2630		50	siltst	MDC		aa	
2640		20	shale	MDC		aa	
						have leached 10	

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY	
						TYPE	
2640	60		siltst	MLC	fine well sorted sub ang		
-2650	40		shale	MDC	quartz grains with large angular matrix. Bitumen filling. shale fine, med. hard, micaceous.		
2650	60		siltst	MLC	aa		
-2660	40		shale	MDC	aa		
2660	100		shale	MDC	fine micaceous, med. hard.		
-2670							
2670	100		shale	MDC	fine siltst.		
-2680							
2680	100		shale	MDC	aa		
-2690							
2690	95		shale	MDC	fine quartz siltst.		
-2700	5		siltst.	MDC	Micaceous, bituminous, hard. I.G.O.		
2700	90		shale	MDC	aa		
-2710	10		siltst	MDC	aa		
2710	90		shale	MDC	aa		
-2720	10		siltst	MDC	aa		
2720	70		shale	MDC	aa		
2730	70		siltst	MDC	aa		
2730	60		shale	MDC	aa		
-2740	40		siltst	MDC	laminated siltst, clean, quartzose.		
2740	60		siltst	MDC	aa		
-2750	40		shale	MDC	aa		
2750	60		siltst	MDC	aa		
-2760	40		shale	MDC	aa		
2760	70		siltst	MDC	aa		
-2770	40		shale	MDC	aa		
2770	70		siltst	MDC	aa		
-2780	40		shale	MDC	aa		

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO	
						TYPE	
2780- 2790		70	siltst.	MLC	v. fine well sorted sub-aq quartzose with bituminous mud. trace glauconitic Med. hard fine micaceous		
		30	Shale	MDC			
2790- 2800		70	siltst	MLC	as ϕ leached i.c. 10%		
		30	Shale	MDC			
2800- 2810		80	siltst	MLC	as		
		20	Shale	MDC	as		
2810- 2820		70	siltst	MLC	as		
		30	Shale	MDC	as		
2820- 2830		70	siltst	MLC	as		
		30	Shale	MDC	as		
2830- 2840		70	siltst	MLC	as		
		30	Shale	MDC	as		
2840- 2850		70	siltst	MLC	clean quartzose sub-aq- sub-sorted well sorted glauconitic bituminous, leached i.c. ϕ 10%		
		30	Shale	MDC			
2850- 2860		70	siltst	MLC	as		
		30	Shale	MDC	as		
2860- 2870		60	siltst	MLC	as fine siltst.		
		40	Shale	MDC	as		
2870- 2880		40	siltst	MLC	as		
		60	Shale	MDC	as		
2880- 2890		10	Shale	MDC	fine fine med hard, micaceous shale slight more coarse grained trace siltst.		
2890- 2900		40	siltst	MLC	as		
		60	Shale	MDC	as		
2900- 2910		20	siltst	MLC	as		
		80	Shale	MDC	as		

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROS	
						TYPE	%
2910		50	siltst	MLC	laminated siltst		
2920		70	shale		argill etc		
2920		100	siltst	MLC	v. fine band well		
2930		90	shale	MBC	cemented		
2930		10	siltst	MLC	ac		
2940		90	shale	MBC	thinly banded, soft		
2940		70	siltst	MLC	quartz, bituminous, well sorted		
2950		30	shale	MBC	silt rounded, poorly cemented; 1. G. @ 10%		
2950		60	siltst	MLC	ac		
2960		40	shale	MBC	med hard, sub-fine, silty		
2960		50	siltst	MBC	ac		
2970		50	shale	MBC	ac		
2970		50	siltst	MBC	gradation from siltst to		
2980		70	shale	MBC	silty shale to shale		
2990		30	siltst	MLC	ac		
2990		70	shale	MBC	ac		
2990		20	siltst	MLC	ac		
3000		30	shale	MBC	ac		
3000		40	siltst	MLC	ac		
3010		60	shale	MBC	ac		
3010		30	siltst	MLC	ac		
3020		70	shale	MBC	ac		
3030		50	siltst	MLC	ac		
3030		50	shale	MBC	ac		
3030		40	siltst	MLC	ac		
3040		60	shale	MBC	ac		
3040		40	siltst	MLC	ac		
3050		60	shale	MBC	ac		

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INTERVAL	QUALITY	%	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	PORO	
						TYPE	
3050		40	siltst	MLG	aa		
-3060		60	shale	MXC	aa		
3060		50	siltst	MLG	aa		
-3070		60	shale	MXC	aa		
3070		40	siltst	MLG	aa		
-3080		60	shale	MXC	aa		
3080			MISSING				
3090							
3090		30	siltst	MLG	aa		
-3100		70	shale	MXC	aa		
3100		70	siltst	MLG	aa		
-3110		80	shale	MXC	aa		
3110		50	siltst	MLG	aa		
-3120		50	shale	MXC	aa		
3120		50	siltst	MLG	aa		
-3130		50	shale	MXC	aa		
3130		20	siltst	MLG	v. fine siltst		
-3140		70	shale	MXC	aa		
3140		20	siltst	MLG	aa		
-3150		80	shale	MXC	aa		
3150		20	siltst	MLG	aa		
-3160		70	shale	MXC	aa		
3160		30	siltst	MLG	aa v. fine		
-3170		70	shale	MXC	disseminated pyrite		
3170		40	siltst	MLG	v. fine siltst		
-3180		60	shale	MXC			
3180		70	siltst	MLG	aa		
-3190		90	shale	MXC	aa		

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INTERVAL	QUALITY	%	ROCK NAME	COLOR		REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	TYPE	PORO
				☐ WET	☐ DRY			
3540		60	Shale	MDC		Hard, finely fine, micaceous		
3200		40	Siltst	MDC		v. fine, granular, well sorted, sub-ang. to sub. rounded med. well cemented, trace calc. in matrix, trace glauconitic, l.g. lenticled to 7-10% grading to v. fine s/s.		
-3200		60	siltst	MDC		v. fine		
3210		40	shale	MDC		grading to silty shale		
3210		60	siltst	MDC		ae		
-3210		40	shale	MDC		ae		
3220		50	siltst	MDC		ae		
3230		50	shale	MDC		ae		
3230		60	shale	MDC		ae		
-3230		40	siltst	MDC		ae		
3240		30	shale	MDC		grading to silty shale		
-3250		20	siltst	MDC		v. fine siltst		
3250		90	shale	MDC		ae		
-3260		10	siltst	MDC		ae		
3260		40	shale	MDC		ae		
3270		10	siltst	MDC		ae		
3270		60	shale	MDC		trace siltst		
-3280		30	shale	MDC		Siltst - shale gradation		
-3290		20	siltst	MDC				
3290			MISSING					
-3300								
3300		90	shale	MDC		finely fine, soft, micaceous		
3310		10	siltst	MDC		ae		
3310		90	shale	MDC		ae		
-3320		10	siltst	MDC				

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					TYPE	%	NET FT.	TYPE	AMT.		
3320	70	shale	MDS	thinly bedded, soft, micaceous	-					argill	100
-3330	10	siltst.	MLG	v. fine siltst. large argill, grading to clean quartzose, silt - rounded well sorted, each 1.0. 10% non-silic.						quartz clay	5
3330	80	shale	MDS	grading to silt shale to siltst.						argill	100
-3340	20	siltst.	MLG							quartz clay	5
3340	30	shale	MDS	aa						argill	100
-3350	20	siltst.	MLG							quartz clay	5
3350	70	shale	MDS	aa						argill	100
-3360	30	siltst.	MLG	slightly more coarse grained						quartz clay	5
3360	50	shale	MDS	aa						argill	100
-3370	50	siltst.	MLG							quartz clay	5
3370	60	shale	MDS	aa finer						argill	100
-3380	40	siltst.	MLG							quartz clay	5
3380	80	shale	MDS	aa						argill	100
-3390	20	siltst.	MLG							quartz clay	5
3390	10	shale	MDS	aa						argill	100
-3400	40	siltst.	MLG	aa						quartz clay	5
3400	80	shale	MDS	aa						argill	100
-3410	20	siltst.	MLG	aa						quartz clay	5
3410	20	shale	MDS	aa						argill	100
-3420	10	siltst.	MLG	aa						quartz clay	5
3420	40	shale	MDS	aa						argill	100
-3430	20	siltst.	MLG	aa						quartz clay	5

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					TYPE	%	NET FT.	TYPE	AMT.		
3430	80	shale	MDC	ae						argill	100
-3440										quartz	
	20	siltst	MLC	v. fine siltst.						limestone	5
3440	80	shale	MDC	ae						argill	100
-3450										quartz	
	20	siltst	MLC	ae						limestone	5
3450	90	shale	MDC	ae						argill	100
-3460										quartz	
	10	siltst	MLC	ae						limestone	5
3460	80	shale	MDC	ae						argill	100
-3470										quartz	
	20	siltst	MLC	ae						limestone	5
3470	70	shale	MDC	ae						argill	100
-3480										quartz	
	30	siltst	MLC	ae						limestone	5
3480	70	shale	MDC	ae						argill	100
-3490										quartz	
	30	siltst	MLC	ae						limestone	5
3490	70	shale	MDC	grad. from shale to siltst.						argill	100
-3500										quartz	
	30	siltst	MLC	shale to siltst.						limestone	5
3500	10	shale	MDC	slightly more coarse grained						argill	100
-3510										quartz	
	40	siltst	MLC							limestone	5
3510	80	shale	MDC	thinly friable, soft.						argill	100
-3520										quartz	
	20	siltst	MLC							limestone	5
3520	70	shale								argill	100
-3530										quartz	
	30	siltst		v. fine						limestone	5
3530	95	shale		ae						argill	100
-3540										quartz	
	5	siltst		ae						limestone	5
3540	80	shale		coarse						argill	100
-3550										quartz	
	20	siltst								limestone	5

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.		
3550		60 shale	MDC	aa						argill	100
3560		40 siltst	MDC	aa						quartz bitumen	5
3560		70 shale	MDC	aa						argill	100
-3570		30 siltst	MDC	aa						quartz bitumen	5
3570		60 shale	MDC	aa						argill	100
-3580		40 siltst	MDC	aa						quartz bitumen	5
3580		80 shale	MDC	aa						argill	100
-3590		20 siltst	MDC	aa						quartz bitumen	5
3590		60 shale	MDC	aa						argill	100
-3600		40 siltst	MDC	aa						quartz bitumen	5
3600		70 shale	MDC							argill	100
3610		30 siltst	MDC	v. fine						quartz bitumen	5
3610		70 shale	MDC	aa						argill	100
-3620		30 siltst	MDC	aa						quartz bitumen	5
3620		20 shale	MDC	aa						argill	100
-3630		40 siltst	MDC	coarser grained						quartz bitumen	5
3630		70 shale	MDC	aa						argill	100
-3640		30 siltst	MDC	fine						quartz bitumen	5
3640		100 shale	MDC	aa						argill	100
3650		40 siltst	MDC	siltst to v. fine s.s.						quartz bitumen	5
3650		100 shale	MDC	aa						argill	100
-3660		30 siltst	MDC	fine						quartz bitumen	5
3660		50 shale		aa						argill	100
-3670		100 siltst		coarser aa						quartz bitumen	5

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.	
3670b	60	shale	MDC	ae					argill	10
3680a	40	siltst	MDC	ae					quartz lithum	5
3680	60	shale	MDC	ae					argill	10
-3690	40	siltst	MDC	ae					quartz lithum	5
3690	30	siltst	MDC	ae					quartz lithum	5
3700	70	shale	MDC	ae					argill	10
3700	30	siltst	MDC	v. fine siltst					quartz lithum	5
3710	70	shale	MDC	ae					argill	10
3710	30	shale	MDC	ae					quartz lithum	5
-3720	10	siltst	MDC	v. fine siltst					argill	10
3710	100	shale	MDC	med hard, fine grading to silty shale, base siltst.					argill	10
3730	95	shale	MDC	ae					argill	10
-3740	5	siltst	MDC	ae v. fine					quartz lithum	5
3740	95	shale	MDC	silty shale					argill	10
3810	5	siltst	MDC	ae					quartz lithum	5
3790	90	shale	MDC	ae					argill	10
3800	10	siltst	MDC	v. fine siltst, occ carbonaceous					quartz lithum	5
3800	100	shale	MDC	ae					argill	10
-3810										
3810	95	shale	MDC	ae					quartz lithum	5
-3820	5	siltst	MDC	ae					argill	10
3820	95	shale	MDC	ae					quartz lithum	5
3830	5	siltst	MDC	ae					argill	10

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DEPTH	QUALITY	ROCK NAME	☐ WET ☐ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT
					TYPE	%	NET FT.	TYPE	
3720	40	siltst	MLC	aa					argill 10
3730	60	shale	MDS	aa					quartz limestone 5
3730	30	siltst	MLC	aa					argill 10
3740	70	shale	MDS	plant remains					quartz limestone 5
3740	20	siltst	MDS	aa					quartz limestone 5
3750	80	shale	MDS	aa					argill 10
3750	90	shale	MDS	aa					argill 10
3760	5	siltst	MDS	aa					quartz limestone 5
3760	90	shale	MDS	aa					argill 10
3770	10	siltst	MDS	aa					quartz limestone 5

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DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT
					TYPE	%	NET FT.	TYPE	AMT.	
3830	80	shale	MDC	aa						argill 10
-3840	20	siltst	MLC	coarser, grading to v. fine s/s.						quartz in kumera
3840	90	shale	MDC	aa						argill 10
-3850	10	siltst	MLC	aa						quartz in kumera
3850	80	shale	MDC	aa						argill 10
-3860	20	siltst	MLC	aa						quartz in kumera
3860	80	shale	MDC	aa plant rem.						argill 10
-3870	20	siltst	MLC	aa						quartz in kumera
3870	60	shale	MDC	aa						argill 10
-3880	40	siltst	MLC	aa						quartz in kumera
3880	60	shale	MDC	aa						argill 10
-3890	40	siltst	MLC	aa						quartz in kumera
3890	60	shale	MDC	aa						argill 10
-3900	40	siltst	MLC	aa, fine grained siltst						quartz in kumera
3900	50	shale	MDC	aa						argill 10
-3910	50	siltst	MLC	aa						quartz in kumera
3910	70	shale	MDC	aa						argill 10
-3920	30	siltst	MLC	v. fine siltst.						quartz in kumera
3920	40	shale	MDC	aa						argill 10
-3930	40	siltst	MLC	coarser						quartz in kumera
3930	70	shale	MDC	aa						argill 10
-3940	30	siltst	MLC	aa						quartz in kumera

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					TYPE	%	NET FT.	TYPE	AMT.		
3940	80	shale	MDC	aa						argill 100	
3950	20	siltst	MLC	aa						quartz 5	
3960	50	shale	MDC	aa						argill 100	
3960	50	siltst	MLC	aa coarse						quartz 5	
3960	50	shale	MDC	shale - silty shale						argill 100	
3970	50	siltst	MLC	fine siltst						quartz 5	
3970	60	siltst	MLC	aa						quartz 95	
3980	70	shale	MDC	aa						argill 100	
3980	80	shale	MDC	soft, friable						argill 100	
3990	20	siltst	MLC	fine, quartz, laminar well cemented						quartz 5	
3990	90	shale	MDC	aa						argill 100	
4000	10	siltst	MLC	aa						quartz 5	
4000	70	shale	MDC	hard, compact						argill 100	
4010	40	siltst	MLC	aa						quartz 5	
4010	60	shale	MDC	silty grading to siltst.						argill 100	
4020	40	siltst	MLC							quartz 5	
4020	30	shale	MDC	aa						argill 100	
4030	30	siltst	MLC	fine, trace argill, glauconitic						quartz 5	
4030	40	shale	MDC							argill 100	
4040	60	siltst	MLC	coarser, clean quartzose						quartz 5	
4040	50	shale	MDC	aa						argill 100	
4050	50	siltst	MLC	aa						quartz 5	

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					TYPE	%	NET FT.	TYPE	AMT.	
4050	80	shale	MDC	hard compact						argill 100
4060				plant remains						
	20	siltst	MDC	quartzose bituminous						quartz 5
				feldspathic. v. fine						bitumen 5
				med well sorted,						feldsp
				sub ang.						
4060	90	shale	MDC	aa						argill 100
4070										quartz 5
	10	siltst	MDC	aa						bitumen 5
										feldsp
4070	90	shale	MDC	aa						argill 100
4080										quartz 5
	10	siltst	MDC	aa						bitumen 5
										feldsp
4080	60	shale	MDC	aa						argill 100
4090										quartz 5
	40	siltst	MDC	aa						bitumen 5
4090	80	shale	MDC	aa						argill 100
4100										quartz 5
	20	siltst	MDC	aa						bitumen 5
4100	90	shale	MDC	aa fine						argill 100
4110										quartz 5
	10	siltst	MDC	aa						bitumen 5
4110	90	shale	MDC	aa						argill 100
4120										quartz 5
	10	siltst	MDC	aa						bitumen 5
4120	90	shale	MDC	aa						argill 100
4130										quartz 5
	10	siltst	MDC	aa						bitumen 5
4130	80	shale	MDC	aa						argill 100
4140										quartz 5
	20	siltst	MDC	aa						bitumen 5
4140	70	shale	MDC	aa						argill 100
4150										quartz 5
	30	siltst	MDC	aa						bitumen 5

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					TYPE	%	NET FT.	TYPE	AMT.		
4150	90	shale	MDC	aa						argill	100
4160										quartz	
	10	siltst	MDC	aa						lignite	5
4160	70	shale	MDC	aa						argill	100
4170										quartz	
	20	siltst	MDC	aa						lignite	5
4170	70	shale	MDC	aa						argill	100
4180										quartz	
	30	siltst	MDC	aa						lignite	5
4180	90	shale	MDC	aa						argill	100
4190										quartz	
	10	siltst	MDC	aa						lignite	5
4190	70	shale	MDC	aa						argill	100
4200										quartz	
	30	siltst	MDC	aa						lignite	5
4200	70	shale	MDC	aa						argill	100
4210										quartz	
	30	siltst	MDC	aa						lignite	5
4210	80	shale	MDC	aa						argill	100
4220										quartz	
	20	siltst	MDC	aa						lignite	5
4220	70	shale	MDC							argill	100
4230										quartz	
	30	siltst	MDC	coarser						lignite	5
4230	100	shale	MDC	aa						argill	100
4240										quartz	
	40	siltst	MDC	banded						lignite	5
4240	80	shale	MDC	grading to silty						argill	100
4250				shale to						quartz	
	20	siltst	MDC	siltst						lignite	5
4250	80	shale	MDC	aa						argill	100
4260										quartz	
	20	siltst	MDC	aa						lignite	5
4260	70	shale	MDC	aa						argill	100
4270										quartz	
	30	siltst	MDC	aa						lignite	5

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	JT
			TYPE		%	NET FT.	TYPE	AMT.			
4380	50	shale	MDC	ae						argill 100	
4385										quartz	5
	50	siltst	MDC	ae						limestone	5
4390	70	shale	MDC	ae						argill 100	
4390										quartz	5
	70	siltst	MDC	ae						limestone	5
4390	90	shale	MDC	ae						argill 100	
4400										quartz	5
	10	siltst	MDC	ae						limestone	5
4400	30	shale	MDC	ae						argill 100	
4410										quartz	5
	20	siltst	MDC	ae						limestone	5
4410	70	shale	MDC	ae						argill 100	
4420										quartz	5
	30	siltst	MDC	Grading to v. fine s/s						limestone	5
4420	90	shale	MDC	Silt darker						argill 100	
4430				siliceous, blocky, hard						quartz	5
	10	siltst	MDC	ae finer, darker						limestone	5
4430	100	shale	MDC	have siltst						argill 100	
4440				siliceous blocky hard						silt	5
4440	100	shale	MDC	ae						argill 100	
4450										silica	15
4450	100	shale	DC	hard siliceous						argill 100	
4460				blocky, shows ool.						silica	15
				slightly siding. silt							
4460	100	shale	DC	ae						argill 100	
4470										silica	15
4470	100	shale	DC	ae siliceous						argill 85	
4480				laminated, silt						silica	15
4480	100	shale	DC	ae						argill 85	
4490										silica	15
4490	100	shale	DC	ae poplar						argill 85	
4500				dissiminated						silica	15
				homogeneous							

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DEPTH	QUALITY	ROCK NAME	☐ WET ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.		
4440										argill	95
4500	100	Shale	DS	soften friable, shows slickensiding						silicea	5
4510											
4510	100	Shale	DS	dark, hard silty siliceous, blocky						argill	85
4520										silicea	15
4520	100	Shale	DS	aa						argill	85
4530										silicea	15
4530	100	Shale	DS	aa						argill	85
4540										silicea	15
4540	100	Shale	DS	aa						argill	85
4550										silicea	15
4550	100	Shale	DS	aa						argill	85
4560										silicea	15
4560	100	Shale	DS	aa						argill	85
4570										silicea	15
4570	100	Shale	DS	aa						argill	85
4580										silicea	15
4580	100	Shale	DS	aa						argill	85
4590										silicea	15
4590	100	Shale	DS	aa						argill	85
4600										silicea	15
4600	100	Shale	DS	aa						argill	85
4610										silicea	15
4610	100	Shale	DS	aa						argill	85
4620										silicea	15
4620	80	Shale	DS	aa						argill	85
4630										silicea	15
4630	20	Shale	DS	dark grey, brown, soft, lustrous, calcareous.						argill	85
4630										calc.	2
4630	100	Shale	DS	dark, hard, silty, siliceous, fissile						argill	85
4640										sil	10
4640										calc. shale	

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.	
4640	P	100 shale	DC	hard siliceous, blocky					argill	95
4650									siliceous	5
4650	P	100 shale	DC	as dark hard blocky					argill	100
4660										
4660		100 shale	MC	calcareous med-fine, med hard, trace calcite					argill	95
4670									mic	5
4670	P	70 shale	MC	as					argill	100
4680		30 mic slt	BC	mottled brown, white micrite replacement of slt. Calcite veining.					slt	50
4680	P	60 limestone	MC	micrite, med hard microp. fine, uniform texture					micrite	100
4690										
		40 shale	MC	med hard med fine, as banded non calc.					argill	100
4690	P	50 limestone	MC	as buff to brown					micrite	100
4700		50 shale	MC	as					argill	100
4700	P	40 slt	MC	as					micrite	100
4710										
		60 shale	MC	as micaceous					argill	100
4710										
4710		60 slt	MC	as					micrite	100
4720										
4720		40 shale	MC	as					argill	100
4720										
4720		60 slt	MC	as micritic fine to micrograined as, trace siltst.					micrite	100
4730										
4730		50 slt	MC	trace slt?					argill	100
4740										
		50 shale	MC	as					micrite	100

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DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.	
4740	10	lst	lnH	ae					micrite	100
4750			ln						argill	100
	40	shale	MC	ae					micrite	100
4750	50	lst	lnH	ae					argill	100
4760			ln						micrite	100
	40	shale	MC	ae					argill	100
4760	70	lst	lnH	ae					micrite	100
4770			ln						argill	100
	30	shale	MC	ae					micrite	100
4770	60	lst	lnH	ae					argill	100
4780			ln						micrite	100
	40	shale	MC	ae					argill	100
4780	50	lst	lnH	structure less					micrite	100
4790			ln	ae					argill	100
	40	shale	MC						micrite	100
4790	80	lst	lnH	ae					argill	100
4800			ln						micrite	100
	20	shale	MC	ae					argill	100
4800	80	lst	lnH	ae shell - thin					micrite	100
4810			ln	shelled brachiopods, corals,					argill	100
	20	shale	MC	brachiopods - hyozos?					micrite	100
4810	70	lst	lnH	ae					argill	100
4820			ln						micrite	100
	30	shale	MC	ae					argill	100
4820	90	lst	lnH	ae					micrite	100
4830			ln						argill	100
	10	shale	MC	ae					micrite	100
4830									argill	100
4840									micrite	100
4840									argill	100
4850									micrite	100
4850	80	lst	lnH	ae					argill	100
4860			ln						micrite	100
	20	shale	MC	ae					argill	100

DEPTH	QUALITY	ROCK NAME	☐ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	AMT.		
4860	P 30	lst		ae. trace						micrite	100
4870		70 shale		non pelitic						argill	100
4870	P	Cone #1		4872 - 4884						limestone	
4880										argill	100
4880										micrite	100
4890										argill	100
4890	P 90	lst	B	dark micritic micritic pellet.						micrite	90
4900				laminar,						pellet	
		10 shale	DS	ae with debris of sh.						argill	100
4900	P 90	lst	B	ae						micrite	90
4910		10 shale	DS	ae						argill	100
4910	P 90	lst	B	ae no pellet mic. lst						micrite	100
4920		10 shale	DS	ae, laminated						argill	100
4920	P 95	lst	B	micritic & mic. shells, trace pellet.						mic	95
4930				mic						shells	
		15 shale	DS	ae grading to argill micritic lst						argill	100
4930	P 90	lst	B	ae, micritic						mic	90
4940										shells	100
		20 argill	DS	ae						argill	100
4940		60 shale	DS	ae						argill	100
4950											
		40 lst	B	ae						mic	90
										shells	100
4950		70 shale	HLC	med light grey v. soft non calc.						argill	100
4960		30 lst	B	ae						mic	90
										shells	100

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DEPTH	QUALITY	ROCK NAME	☐ WET ☒ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
5014	C 100	Pellet lmsst	dkgy	pellets .02-.25 mm in clear calcite, stylolites & shale partings, tr. pyrite	-	-	-	-	-	pellets calcite	
5028	C 100 E										
		tr shale	blk	sl. cat						shale calcite	90 10
5028	C 95	Micrite	dkgy	brach shells ^{1/4" - 1"} replaced by Δ calcite tr. crinoids, tr. pyrite	-	-	-	-	-	micrite brachs crinoids pyrite shale	85 75 75 100
5044	C 95 E										
		5 shale	blk	partings & interbeds, sl. calcareous forms highly irregular surfaces more or less horizontal							
5050	P 85	Micrite	lt brn to gy brn	argillaceous in part, tr. pyrite clear calcite interpreted to be brach shells as in core	-	-	-	-	-	micrite argillaceous pyrite brachs shale	85 10 75 100
5130	F										
		* shale	blk	bituminous? partings in micrite							
5130	F 20	Pellet limestone	brn	Pellets .02-.25 mm in clear calcite, round to oval						pellet calcite	
5140											
		20 Micrite	brn to gy brn	As 5050-5130 stylolites						micrite argillaceous pyrite brachs	85 10 75 100
		* shale	blk	partings in micrite						shale	100
5140	F 100	Micrite	lt brown colored to dk brown							micrite brachs argillaceous	85 75 10
5320	P			argillaceous in part, tr. pyrite, stylolites & shaly partings							
		tr shale	blk							shale	100
		Scattered occasional chip at pellet lmsst									
		5280 - 5290 Dial area rhombs noted									
		5290 - 5300 tr. pellet lmsst									
		5310 - 5320 " " "									

DEPTH	QUALITY	ROCK NAME	☒ WET ☐ DRY COLOR	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE	ANT.		
5320	F 70	Pellet limestone	brn	pellets 20-40 mm in stone calcite	-	-	-	-	-	pellet calcite	
5330											
		30 Micrite	lt brn to brn	argillaceous in part shaly partings	-	-	-	-	-	micrite argillaceous pyrite	25 15 tr
		tr shale	blk	partings in micrite							
5330	F 60	Micrite	brn	argillaceous in part. Variably dolomitic (Dol chombs .03-.06mm replacing micrite - from no dol to 60% dol ^{more} - average ~30%)	-	-	-	-	-	micrite dol argillaceous	60 10
5340											
		40 Dolomite	lt brn	chombs .03-.06 from partial replacement of some micrite it would appear to have resulted from replacement of micrite	-	-	-	-	-	Dol	
5340	F 60	Micrite	lt green to brn	argillaceous, ^{congl. & fine n.s.m.} brachs, tr pyrite, tr dol chombs	-	-	-	-	-	micrite argillaceous brachs dol	25 10
5350											
		10 Dolomite	lt brn	chombs	-	-	-	-	-		
5350	C 100	Micrite	lt cream colored to brown	stylolites tr pyrite & argillaceous in part						micrite argillaceous pyrite	25 5 tr
5360	F 70	Micrite	lt cream to brown	sl. argillaceous in part, in part replaced by dol. chombs						micrite dol argillaceous	70 5
5370											
		30 Dol	white	chombs						dol micrite	5
5370	F 100	Micrite	cream-brn	tr pyrite clear calcite replacing brachiopod shells? being replaced in part by dol chombs - from scattered lls to nearly complete replacement lt massive stylolites	-	-	-	-	-	micrite argillaceous dol chombs pyrite brachs	25 10 tr
5380											

DEPTH	QUALITY	ROCK NAME	☒ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY			STAIN		COMPONENT	
					TYPE	%	NET FT.	TYPE	AMT.		
5380	F 70	Micrite	brn	argillaceous, some dol replacement	-	-	-	-	-	micrite	25
5390				bituminous stylolites brachs shells replaced by clear calcite						argillaceous dol rhombs brachs	15
		30 Pellet limestone	brn	rounded to oval in shape, calcite cement vague to well defined						pellet calcite	
5390	F 100	Micrite	cream to brn	argillaceous, tr pyrite	-	-	-	-	-	micrite	75
5450				dol replacing micrite in part. bituminous & shaly stylolites & partings brachs replaced by clear calcite						argillaceous dol brachs	15
		tr Pellet limestone		As above							
5450	F 30	Micrite	cream to brown	argillaceous, tr pyrite	-	-	-	-	-	micrite	30
5460				bituminous shaly stylolites & partings brachs, tr of dol rhombs						argillaceous brachs	15
		20 Pellet limestone	brn	oval or rounded calcite cement poorly to well defined	-	-	-	-	-	pellet calcite	
5460	F 90	Micrite	cream to brn	argillaceous, dol partially replacing micrite, thin shelled brachs, tr pyrite, appears slightly shaly in part, stylolites	-	-	-	-	-	micrite	55
5480				calcite cement, oval						argillaceous dol brachs	10
		10 Pellet	brn							pellets calcite	
5480	F 100	Micrite	cream to brn	argillaceous, tr dol brachs, bituminous & shaly partings chalky in part	-	-	-	-	-	micrite	90
5490										argillaceous brachs	5
5490	F 100	Micrite		As 5480-5490 except 35% dol	-	-	-	-	-	argillaceous micrite dol brachs	3
5500											55
5500	F 100	Micrite	lt gray, salt brn	argillaceous, tr pyrite dol replacement, stylolitic brachs, & tr crinoids						micrite	85
5520										argillaceous dol brachs & crinoid	5
		tr Pellet	brn	12-2 mm 25% calcite cement							
5520	F 90	Micrite	cream to brn	30% dol replacement stylolitic As before						micrite dol argillaceous brachs	50
5530											10
		10 Pellet	brn	vague to well defined						pellet calcite	

DEPTH	QUALITY	ROCK NAME	WET COLOR □ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROSITY		STAIN		COMPONENT	.01
					TYPE	%	NET FT.	TYPE		
5530	E 100	Micrite	cream to brn	argillaceous, brachs	-	-	-	-	micrite	85
5540									argillaceous brachs	10
	tr	Pellet	brn	vague						
5540	F 60	Micrite	brn	bituminous, wshly, partings of stylolites, brachs, some dol	-	-	-	-	micrite argillaceous brach	80 10
5550									dol	
	40	Pellet	brn	maybe some lumps, vague to well defined, calcite cement	-	-	-	-	pellet calcite	
5550	G 100	Micrite Skeletal	lt gy	tr pyrite, thin fragile brachs of indeterminate skeletal, some dol	-	-	-	-	micrite argillaceous brachs	85 10
5560									skeletal dol	
5560	F 80	Micrite	cream to medium brn	argillaceous tr pyrite bituminous stylolites, tr dol replacement some brach skeletal material	-	-	-	-	micrite argillaceous brach	85 10
5600									pellet calcite	
	100	Pellet	cream brn	generally vaguely defined calcite cement some maybe lumps rather than pellets	-	-	-	-		
5600	F 100	Micrite	cream to brown	argillaceous tr pyrite bituminous stylolites, brachs, tr. dol replacement.	-	-	-	-	micrite argillaceous brachs	85 10
5660										
	tr	Pellets		vaguely defined						
	tr	chalky skeletal	lt gy	20% skeletal (mainly brachs?) tr pyrite	-	-	-	-		
5660	F 100	Micrite	cream to brown	As 5600 - 5660 but 20% dol replacing calcite - cream to brown gy	-	-	-	-	dol	
5690	G 100	Micrite	cream to brown	tr pyrite 10% dol replacement, argillaceous, stylolites brachs	-	-	-	-	micrite argillaceous dol brachs	80 5
5710										
5710		Missed sample							micrite argillaceous dol	75 10
5720	F 100	Micrite		As 5690 - 5710					dol brachs?	
5740										
5740	P 100	Micrite	cream to brown	argillaceous tr pyrite argillaceous, tr dol, bituminous stylolites brachs	-	-	-	-	micrite argillaceous brachs	85 10
5850										
	tr	Pellet	brn	generally very vague						
5850 - 5870		Missed samples								
5870	F 100	Dolomite	white to lt brown	about 5% clear Xln calcite apparently replacing skeletal material. Dol replacing micrite? tight	-	-	-	-	dol skeletal calc brachs	
5880	F 100	Micrite	cream to brown	argillaceous, skeletal brachs + indeterminate calcite, tr pyrite, stylolitic, dol replacement	-	-	-	-	micrite dol argillaceous skel	75 10
5900										
	tr	Pellet		mainly vague						
5900	F	Dolomite	lt brn	Fast drilling - 5898 - 5907 in sufficient log time for circulation Sample?	-	-	-	-	dol	
5910										

Cough
Sample

* Porosity
with circulation
2508

LOGGED BY: _____

DATE: _____

UNIT: _____

LOCAT
NAME: _____

INTERVAL	QUALITY	%	ROCK NAME	☒ WET COLOR ☐ DRY	REMARKS SEDIMENTARY STRUCTURES, DIAGENESIS, ENVIRONMENT, FRACTURES, ETC.	POROS	
						TYPE	%
5910 5950	F	100	Micrite	cream to brown	argillaceous, bituminous stylolites variably dolomitic, skeletal-brachs tr pyrite anhedra-euhedral	-	-
5950 5960	F	100	Micrite	cream to brown	argillaceous, dolomitic, stylolitic, some skeletal drilling break 5952-5954 anhedra-euhedral	-	-
5960 6010	F	100	Micrite	cream to brown	argillaceous stylolitic variably dolomitic - anhedra to euhedral Appears to be some black solid bitumen in some of dolomite tr pyrite 5960-5970 5962-5972 faster drilling 6000-6010 Tr Pellet limestone - vague pellets 5983-5993 Fast drilling	-	-
6010 6031	F	100	Dolomite	brown	euhedral, subhedral, trace of skeletal material, stylolites present but not abundant	-	-
			Micrite	brown			
			6031	FTD			

(f) Abandonment Plugs

March 1/67 Plug #1 6031-5800 with 120 sacks

March 2/67 Plug #2 670-570 with 60 sacks + 2% CaCl₂

Felt at 546

Cut casing off 3' below ground level. Dropped 5 sack plug welded plate.

(g) Lost Circulation Zones

No lost circulation was encountered.

(h) Report of Blowouts

No blowouts were encountered.

Section 3. Engineering Summary

(a) Drill Stem Tests - none run

(b) Casing Record

Ran 19 joints 604.40 ft. of 9 5/8" 40.0 lbs. N 80 8-thread casing. Landed at 619.90 K.B. Cemented with 300 sacks plus 4% CaCl₂.

Swan Lake
Section 3.

(c) Bit Record

Bit #	Size	Type	Conventional or Jet	Hrs. on Btm.	Footage Drilled	Depth Pulled	Remarks
1A	12 1/4	S6J	Jet	15 1/4	113	113	
2A	12 1/4	M4N	Conventional	13 3/4	171	284	
3A	12 1/4	YTL	"	19 3/4	351	636	
1	8 5/8	YTL	Jet	9	338	974	
2	8 5/8	YTL	"	20 1/4	575	1569	
3	8 5/8	YTL	"	19 3/4	420	1989	
4	8 5/8	YTLA	"	18 1/2	396	2385	
5	8 5/8	SV2	"	22 1/4	475	2860	
6	8 5/8	YS1	"	23 3/4	439	3299	
7	8 5/8	M4N	"	23 1/4	432	3731	
8	8 5/8	M4N	"	20	349	4080	
9	8 5/8	SV2	"	20 3/4	335	4415	
10	8 5/8	SV2	"	11 1/2	148	4563	
11	8 5/8	M4L	"	12	122	4685	
12	8 5/8	M4L	"	17	187	4872	
Core Bit #1	7 13/16	Boyles Diamond	Diamond	4	12	4884	Core #1 Reamed 12'
13	8 5/8	M4N	Jet	10	130	5014	
Core Bit #2	7 13/16	Boyles	Diamond	3 1/2	30	5044	Core #2 Reamed 30'
14	8 5/8	M4L	Jet	15 1/2	155	5199	
15	8 5/8	M4L	"	18 3/4	180	5379	
16	8 5/8	M4L	"	18 3/4	186	5565	
17	8 5/8	M4L	"	18	157	5722	
18	8 5/8	T2	"	15 3/4	148	5870	
19	8 5/8	T2	"	13 3/4	161	6031	FTD

Section 3.

(d) Mud Record

Gel 43,200#
CMC 1325#
Caustic Soda 1925#
Hydrogel 1200#
Peltex 300#
Barites 6500#
Quick Vis 1 1/2 gals.
Acrysol 8 1/4 gals.

Swan Lake

Section 3.

(e) Deviation Record

Totco at	80'	Degrees off	1/2
	164		3/4
	240	1	1/4
	280	1	
	365	1	
	465	1	
	550	1	
	630	1	
	1000		3/4
	1450	1	1/2
	1760	1	1/2
	1985	1	1/2
	2180	1	1/2
	2380	1	3/4
	2571	1	3/4
	2850	1	1/2
	3020	1	7/8
	3273	1	7/8
	3492	2	
	3725	2	
	4060	1	1/2
	4410	1	1/3
	4550	1	3/4
	4685	1	1/2
	4872	1	3/4
	5000	1	1/2
	5140	1	1/2
	5360		Misrun
	5560	1	7/8
	5720		Misrun
	5865	2	
	6025	2	1/8
	FTD		6031

SECTION IV

Section 4. Logs

<u>Date</u>	<u>Type</u>	<u>From</u>	<u>To</u>
Feb. 28/67	Ind. E	619	6033
Feb. 28/67	Micro Caliper	619	6032
Feb. 28/67	BHC SGRC	619	6033
Feb. 28/67	Velocity Survey	619	6031

SECTION IV

Section 5. Analysis

- (a) Core Analysis - none run
- (b) Water Analysis - none run
- (c) Gas Analysis - none run
- (d) Oil Analysis - none run

SECTION II

Section 6. Completion Summary

- (a) Tubing Record - none run
- (b) Perforation Record - not perforated
- (c) Cementation Record - for abandonment plugs - see Sec.3. (f)
- (d) Acidization and Fracturing Record - none
- (e) Back Pressure and Production Tests - none run

Section 6. Completion Summary

- (a) Tubing Record - none run
- (b) Perforation Record - not perforated
- (c) Cementation Record - for abandonment plugs - see Sec.3. (f)
- (d) Acidization and Fracturing Record - none
- (e) Back Pressure and Production Tests - none run

Day 5 1967

Approved by

YES _____ NO _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 33

~~WAB LAKE~~ LSD 67 SEC 10 TWN 133 RGE 30 W

Contractor I.O.E

Type Rig Nat 100 #3

Month March

Day 4 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																									
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																																																																
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.															
	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																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.	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																																																																
	Tearing out.																Tearing out.																Tearing out.																															
																	Remove mud tanks, pumps																																															
																	strip derrick																																															
Driller.....																Driller.....																Driller.....																																

Driller _____

Driller.....

Driller... Clifford Kipper

CLASSES OF TIME BREAKDOWN										Dinner: <u>1:00pm - 1:30pm</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 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

Approved by

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY**

YES _____ NO _____

SWAN LAKE LSD N-28 SEC 67 TWN 10 RGE 133 W 30

Contractor I.O.E. NAT # 3

Type Rig NAT. 100

Month MARCH

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															DEPTH															DEPTH														
6231																																												
DRILLING STRING															DRILLING STRING															DRILLING STRING														
BIT RECORD															BIT RECORD															BIT RECORD														
SURVEYS															SURVEYS															SURVEYS														
MUD RECORD															MUD RECORD															MUD RECORD														
CORING															CORING															CORING														
DETAIL OF OPERATIONS AND REMARKS															DETAIL OF OPERATIONS AND REMARKS															DETAIL OF OPERATIONS AND REMARKS														
Driller: <u>Ray Horneman</u>															Driller: <u>J. E. Lat... 0</u>															Driller: <u>Bill K...</u>														

CLASSES OF TIME BREAKDOWN

LOGGING:

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

106
SWAN LAKE LSD. 67 SEC. 10 TWN. 133 RGE. 30 W.

IMPERIAL OIL LIMITED

Contractor LHP. OIL ENTERPRISE

RIG NHT. 3

Type Rig NHT. 100

DAILY DRILLING REPORT No. 30

Month MARCH

Day 1 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									
6031				8 5/8		6031			8 5/8		6031			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.						
	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	
	Kind	at	Ft.	Deg. off			Kind	at	Ft.	Deg. off			Kind	at	Ft.	Deg. off								
PUSH PUMP RECORD	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						
	2	2	1350	14"	37	5 3/4																		
	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	49	9.4		10		RAN ABANDONMENT PLUG #1																	
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	50	9.4				6031-5800 120 SAX NEAT																	
							CONST CEMENT																	
							PLUG DOWN @ 2 3/4 PM																	
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.	From	To	Hrs.												
	CIRCULATE	12:00		12:00	8:00	8:30	1/2	TRIP OUT	4:00	5:00	1													
	CONDIT. HOLE	2:00	2	PICK UP 9 SINGLES	8:30	9:15	3/4	Run in 7 stands	5:00	5:15	1/4													
	THAW FROZEN AIRLINES	2:30	1/2	TRIP IN WITH OPEN PIPE	9:15			Prepare to run Plug #2 Plug	5:15	6:00	3/4													
TRIP OUT	2:30	2 1/2	TO RUN PLUG #1		10:45	1 1/2	Pull 4 stands circulate Hole	6:00	7:00	1														
THAW FROZEN AIRLINES	5:00	1/2	PREPARE TO RUN PLUG (CIRC)	10:45	1:45	3	Laying down Pipe	7:00	12:00	5														
LAY DOWN D.C.	5:30	2 1/2	RUN PLUG #1	1:45	2:30	3/4																		
		8	PULL 12 STANDS	2:30	3:00	1/2																		
			ESTABLISH CIRCULATION	3:00	3:15	1/4																		
			TRIP OUT	3:15	4:00	3/4																		
Driller	KORDONICHAN						Driller	L. J. Patach						Driller	Clifford 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 Timehrs.

Total Company Timehrs.

Toolpusher

Hockney

Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 29

1.0 E SWAN LSD 67 SEC 10 TWN 133 RGE 30 W.

Contractor 140.E. S. N. 51 #3

Type Rig NAT. 100

Month FEB.

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.

[illegible]

Driller..... W. C. G. H. L.

Driller.....Kosmenov

Driller.....*[Signature]*

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN
 TOTCO: CONDITIONING
 FISHING: TRIPPING:
 CIRCULATING: CORING:

CONDITIONING MUD.

TRIPPING:

CORING:

CASING.

CASING:
WOC

W.O.C.
D.S. TEST

LOGGING

LOGGING:
W. C. CBB

W. C. ORD
BIG BEND

Discussion

RIG MAINTENANCE:

ERS: MISCELLANEOUS:

[illegible]

REAMING CLEANING:

WORKING PIPE:

MNER DRILLING LINE IN USE

NUMBER OF KELLY HOSE IN USE

REF. SERIAL N.

LOSS FUNCTION

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY**

YES NO

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by

YES NO

LAKE
1.0 E SWAN LSD 6.7 SEC 10 TWN 133 RGE 30 W Contractor 1.0 E NHT #3 Type Rig NHT 100 Month FEB Day 27 1967

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 28

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											
		5936	6015	79	8 7/8							6015	6031	16	8 5/8							6031			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	58	2	17	145.96				4 1/2		58	2	DOWN	645.96				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		23	6 3/4	2 3/4		DRILLING STRING				COLLAR			23	6 3/4	2 3/4	DRILLING STRING				COLLAR						DRILLING STRING											
DATA						157M				DATA							160M				DATA							56M									
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								
		19	T2	4 45 PM				48M			19		T2	4 45 PM	12 30 PM	13 30	6031	50M	161																		
SURVEYS		Bit Serial No. 58374				Table R.P.M. 65				Bit Serial No. 58374		Table R.P.M. 60				Bit Serial No.		Table R.P.M.																			
		Jet or Conventional - JET				Nozzle Size 3-1/2				Jet or Conventional -		Nozzle Size 3-1/2				Jet or Conventional -		Nozzle Size																			
PUSH PUMP RECORD		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							
No. 1		On Line		Circulating		12.50		18		3.4		6 1/4		On Line		Circulating		12.50		18		3.4		6 1/4		On Line		Circulating		12.50		18		3.4		6 1/4	
No. 2		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												
		12:30	42	9.6	12.5	11	CMC 100*				8:00		43	9.6			Water				4:00		46	9.5	8.6	10											
		2:00	42	9.6			Water				10:00		45	9.6	8.4	11.0	1800 lbs. GEL				6:00		43	9.5													
		4:30	42	9.6							12:00		48	9.6																							
		6:00	43	9.6	8.4	11																															
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.												
											CONDIT. BIT # 19		T 7-138-G1																								
						LOCKED 1 CONE																															
DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.									From	To	Hrs.									From	To	Hrs.							
		DRILLING				12	4	4					DRILLING				8:00	9:15	1 1/4					3 1/2 HRS LOGGING TOOLS				4:00	5:00	2							
		CIRCULATE SAMPLE @ 5936				4	5:30	1 1/2					CIRC. TO LOG, CONDIT. MUD				9:15	12:30	3 1/4					LOGGING - INDUCTION LOG				6:00	10:00	4							
		DRILLING				5:30	8	2 1/2					TRIP OUT (MOTOR)				12:30	3:00	2 1/2					MIS RUN													
								8					TOTCO				3:00	3:15	1/4					RE RUN INDUCTION LOG				10:00									
													RIG UP TO LOG				3:15	4:00	3/4																		
																			8																		

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 27

1.0.E. SWAN. LSD. 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor 1.0.E. NAT. #3 Type Rig NAT. 100 Month FEB 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										
	5767	5842	75	8 7/8		5842	5870	28	8 5/8		5870	5936	60	8 7/8											
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	56	2	14	650.35		4 1/2	57	-	12	650.35		4 1/2	57	2	7	645.76								
	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 7/8	2 1/4	30-05	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 3/4	2 3/4	645.76	DRILLING STRING	DRILL COLLARS	COLLAR	23	6 3/4	2 3/4	645.76	DRILLING STRING	DRILL COLLARS				
BIT RECORD	DATA	22	6 3/4	2 3/4	62010	154	56M	DATA				160.4	56M	DATA				159M	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	
	18	T2	7 PM				48M		18	T2	7 PM	10:45	7:54	5870	50M	148		19	T2	4:45 PM		6		25-48	60
	19	T2							19	T2									19	T2					
SURVEYS	Bit Serial No.	59026				Table R.P.M.	65	Bit Serial No.	59026 - 58374				Table R.P.M.	60	Bit Serial No.	58374				Table R.P.M.	65				
	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				
	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				
PUSH PUMP RECORD	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							
	8			1350	18"	36	6 1/4	2 3/4			1350	18"	36	6 1/4	7 1/4			1300	18"	35	6 1/4				
	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	42	9.6		11.	QAL 1300	8:00	42	9.7		11.0	Water	6:00	48	9.6		9	Water							
MUD RECORD	3:00	41	9.6			Water	10:00	44	9.7			600lb/gal	8:00	46	9.5		100	Caustic Soda							
	5:00	41	9.6		11.						1/2 GAL Gypsum	10:00	43	9.5	12.9	10.5	100# Pellet								
	7:00	42	9.7									11:30	42	9.5			50# CMC								
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	8	8	DRILLING	8:00	10:45	2 3/4	TRIP IN	4:00	4:45	3/4													
	TOTCO				TOTCO	10:45	11:00	1/4	DRILLING	4:45	7:45	3													
	TRIP OUT				TRIP OUT	11:00	1:30	2 1/2	Circ. Samples for GEO.	7:45	9:00	1 1/4													
DETAIL OF OPERATIONS AND REMARKS	1:47 DOWN SQUIRE DC.				1:30			DRILLING	9:00	12:00	3														
	PICK UP BOT. DC.																								
	SERVICE RIG. CHECK BOSS	2:15	2:30	1/4																					
	TRIP IN	2:30	4:00	1 1/2																					
DETAIL OF OPERATIONS AND REMARKS																									
DETAIL OF OPERATIONS AND REMARKS	Driller	W. Leahy					Driller	K. Anonimus					Driller	J. L. L.											

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:
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
MNF. OF KELLY HOSE IN USE

REEL SERIAL No.
HOSE SERIAL No.

DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY

Total Contract Time _____ hrs.

Total Company Time _____ hrs.

Toolpusher _____ Approved by _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 26

LAKE
 10.E SWAN LSD 67 SEC 10 TWN 133 RGE 30 W Contractor 10.E NAT #3 Type Rig NAT 100 Month FEB Day 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.															
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation									
		5610	5678	8 68	8 7/8							5678	5722	44	8 5/8							5722	5767	45	8 7/8										
		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	55	—	28	650.35						4 1/2	55	1	16	650.35						4 1/2	56	—	29	650.35									
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 9/16	2 1/4		DRILLING STRING	DRILL COLLARS					COLLAR	110	8 9/16	2 1/4	30.05	DRILLING STRING	DRILL COLLARS					COLLAR	110	8 9/16	2 1/4	30.05	DRILLING STRING	DRILL COLLARS					
		DATA	22	6 3/4	2 3/4		151 M	56					DATA	22	6 3/4	2 3/4	620.10	155	56 M					DATA	22	6 3/4	2 3/4	620.10	158	56 M					
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. <u>740779</u> Table R.P.M. <u>65</u>										Bit Serial No. <u>740779</u> Table R.P.M. <u>60</u>										Bit Serial No. <u>59026</u> Table R.P.M. <u>65</u>													
		Jet or Conventional - <u>JET</u> Nozzle Size <u>3-1/32</u>										Jet or Conventional - <u>JET</u> Nozzle Size <u>3-1/32</u>										Jet or Conventional - <u>JET</u> Nozzle Size <u>3-1/32</u>													
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								
		No. 1			1850	14"	70	5 3/4					No. 1			1850	14"	70	5 3/4					No. 1			1850	14"	70	5 3/4					
		No. 2			1350	14"	70	5 3/4					No. 2			1350	14"	70	5 3/4					No. 2			1350	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						
		1230	42	9.6		11.	DEH 1000						800	46	9.6		10.5	Water						200	45	9.6			WATER						
		200	43	9.6			ACRYSOL 5 gal						1000	46	9.6	9.6		50 lbs caustic soda						1000	42	9.5		10	Caustic Soda 50 lbs						
		400	43	9.6			Water						1200	46	9.6			50 lbs Polter						1130	45	9.6									
		200	44	9.6		11.																													
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.							
				12	8	8	DRILLING								800	130	5 1/2	SERVICE RIG - CHECK 30 P								400	415	1 1/2							
								TOTO								130	145	1 1/4	WORK ON BRAKES								455	430	1 1/4						
								TRIP OUT								145	400	2 1/4	TRIP IN								430	645	2 1/4						
																		8	WORK ON G700								645	700	1 1/4						
																	DRILLING								700	1200	5								

Driller W. CoghillDriller KernementDriller J. F. S. S. S.

CLASSES OF TIME BREAKDOWN
 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 _____

DAILY DRILLING REPORT No. 25

DATE DRILLING REPORT NO. 214

10 E SW ^{2nd} QN LSD. 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor L.O.E. NAT #3 Type Rig NAT 100 Month FEB 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									DEPTH		From	To	Hole Made	Hole Size	Formation									DEPTH		From	To	Hole Made	Hole Size	Formation															
		5231	5508	77	8 7/8												5508	5565	57	8 5/8												5565	5610	45	8 7/8																
		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	53	—	17	650.35											4 1/2	53	2	20	650.35											4 1/2	54	—	5	650.35															
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	1.59	8 9/16	2 1/4	30.05	DRILLING STRING											COLLAR	1.0	8 9/16	2 1/4	30.05	DRILLING STRING											COLLAR	1.0	8 9/16	2 1/4	30.05	DRILLING STRING												
		DATA	2.2	6 3/4	2 3/4	620.10	150 M											DATA	2.2	6 3/4	2 3/4	620.10	152 M											DATA	2.2	6 3/4	2 3/4	620.10	154 M												
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	MAL	7:15 PM				48 M									16	MAL	7:15 PM	7:20 PM	18 3/4	5565	50 M	186								17	MAL	7:30 PM		4 1/2		48 M	45												
		Bit Serial No. 741337 Table R.P.M. 65															Bit Serial No. 741337 Table R.P.M. 60															Bit Serial No. 740779 Table R.P.M. 65																			
		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																			
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.	Length of Pump Stroke	Strokes Per Min.	Liner Size												
				1900	14"	70	5 3/4													1800	14	66	5 3/4													1850	14"	68	5 3/4												
				1350	18"	44	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												
		1230	45	9.6			GEL 1000											8:00	44	9.6			Water											8:00	45	9.6			WATER												
		2:00	44	9.6			ACRYDOL 2 gal											10:00	45	9.6			75 lbs caustic soda											10:00	43	9.5	9.8		100# CAUSTIC SODIA												
		4:00	43	9.6		9.	SODIUM											12:00	44	9.6														11:30	43	9.5		9.5	50# PCLTEX												
		6:00	44	9.6														145	44	9.6																															
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.												
																																CHANGE SINGLE TOP OF DKS																			
DETAIL OF OPERATIONS AND REMARKS		DRILLING															DRILLING															TRIP OUT																			
		T.O.T.C.O.															T.O.T.C.O.															TRIP IN																			
		TRIP OUT															TRIP OUT															DRILLING																			
		Driller: W. C. Coghlan															Driller: K. O. M. M. M.															Driller: J. E. B. T. A. C. L.																			

CLASSES OF TIME BREAKDOWN

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 KENNY HOSE IN USE	HOSE SERIAL No.	

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

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 22

I.O.E. SWAN LAKE LSD 67 SEC 10 TWN 133 RGE 30 W

Contractor I.O.E.

Type Rig Nat. 100 #3

Month Feb

Day 21 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																							
		4982	5014	32	8 5/8"							5014	5044	30	7 13/16"							5044	5066	22	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"	47	2	23'	650.35						4 1/2"	50	8	396-29	62.49						4 1/2"	48	1	29	650.35																							
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 26	8 5/8"	2 1/4	30.05	DRILLING STRING				DRILL COLLARS				COLLAR		14	6 3/4"	2 3/4	DRILLING STRING				DRILL COLLARS				COLLAR		10	8 1/16"	2 1/4	30.05	DRILLING STRING				DRILL COLLARS												
DATA		22	6 3/4"	2 3/4	620.10	144M				56M				DATA					130 M				DATA		22	6 3/4"	2 3/4	620.10	146 M				56 M																
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																				
		13	M4N	3 30	2 15	10	5014	47M	130	12			2	Boyles	9 45	1 30	3 1/2	5044	16M					14	H4L	9 30			40 M		30																		
		Bit Serial No. 814886 Table R.P.M. 65										Bit Serial No. 29-66 Table R.P.M. 90										Bit Serial No. 741336 Table R.P.M. 3 1/2																											
		Jet or Conventional - Nozzle Size 3 1/2										Jet or Conventional - DIAMOND Nozzle Size										Jet or Conventional - Nozzle Size 6.5																											
SURVEYS		Kind Totco at 5000 Ft. 1 1/2° Deg. off										Kind at Ft. Deg. off										Kind at Ft. Deg. off																											
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	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				On Line		Circulating																					
		4 1/4	3 1/2	1700	14"	66	5 3/4	4 1/4		3 1/2	1450	14"	59	5 3/4	4 3/4		1300	14"	67	5 3/4	4 3/4		1300	14"	67	5 3/4	4 3/4		1300	14"	67	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																		
		12:00	41	9.6	9.8	9.5	WATER		10:30		43	9.6		9.5			9:00		43	9.6		9.0	Water		11:00		43	9.6	9.5	50 lbs. CAUSTIC SOD																			
		2:00	40	9.6			GEL - 1000 #		12:00		44	9.6																																					
		4:00	39	9.6			ARYSOL - 1/2 gal.																																										
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.																		
		Bit # 13 Condition T 4 B 4 G 1								50 14 5044 30 29 2 HYCALOG																																							
DETAIL OF OPERATIONS AND REMARKS		Check Kelly Cocks.								From To Hrs.								From To Hrs.								From To Hrs.																							
		Drilling								12 20 2 15 2 1/4								TRIP IN TO CORE @ 5014								8 9 15 1 1/4								SERVICE & LAY DOWN CORE BBL								4 5 5 1							
		Circulating sample.								2 15 3 15 1								CIRCULATE BEFORE CORING								9 15 9 45 1/2								SERVICE RIG, CHECK BOP'S								5 5 5 1/4							
		Circulating to Core.								3 15 4 15 1								CORING								9 45 1 15 3 1/2								TRIP IN								5 15 7 15 2							
		Totco at 5000'								4 15 4 30 1/4								TRIP OUT								1 15 3 15 2								REAM FROM 5014-5044								7 15 9 30 2 1/4							
		Trip out								4 30 6 00 1 1/2								RECOVER - BOX CORE								3 15 4 3/4								DRILLING								9 30 12 00 2 1/2							
		Laydown Square D.C.								6 00																8																							
		Pick up Bottom Hole D.C, Core																																															
		Barrel Jars Make up C. Barrel								7 15 7 30 1 1/4																																							
		Service Rig Check B.O.Ps								7 15 7 30 1/4																																							
		Trip in Hole								7 30 8 00 1/2																																							
		Driller: Clifford Kipper																Driller: W. Coghill																Driller: Konniemen															

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. 21.

F.O.S. SWAN LAKE L.S.D. 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor I.O.E. Type Rig Nat 100*3 Month Feb. 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.												
DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation				DEPTH		From	To	Hole Made	Hole Size	Formation						
		4872	4884	12	1 1/4							4884	4892	8	8 5/8							4892	4982	90	8 5/8	LIME-SHALE.						
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	49	1	18	310.57				4 1/2		46	1	20	650-35				4 1/2		47	1	23	650-35								
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	310.57	DRILLING STRING				DRILL COLLARS				COLLAR		10	8 7/8	2 1/4	30.05	DRILLING STRING				DRILL COLLARS								
DATA		123M								DATA		2.2 6 3/4 2 3/4 620.30 142 56M								DATA		22 6 3/4 2 3/4 620.30 144M 56M										
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	Boyles 2 3/8			4	4884	20M	12		13		MAN 3 3/8						40M			13		MAN 3 3/8						45M		
		Bit Serial No. 0-9-66. Table R.P.M. 88.										Bit Serial No. 814886 Table R.P.M. 65										Bit Serial No. 814886 Table R.P.M. 65										
		Jet or Conventional - Diamond Nozzle Size										Jet or Conventional - JET Nozzle Size 3 1/2										Jet or Conventional - Nozzle Size 3 1/2										
SURVEYS		Kind	at		Ft.		Deg. off		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		1 1/2					14"		5 3/4	No. 2		1 1/2					14"		5 3/4	No. 3		1 1/2					14"		5 3/4			
No. 2		4 1/2				1500	18"	45	6 1/4	No. 4		4 1/2				1300	14	4	5 3/4	No. 5		4 1/2				1300	14	4	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					
		3:00	39	9.7		9	WATER				3:30		38	9.6		9	WATER				4:30		38	9.6		9.0	WATER					
		4:00	40	9.7			GEL - 600#														1:30		38	9.6			1000# GEL					
							ARYSOL 1/4 gal														8:30		39	9.6	9.8		50 lbs. CMC					
							CAUSTIC - 56#														10:00		39	9.6		9.5	1/2 gal. ARYSOL					
																					11:00		41	9.6			50 lbs. CAUSTIC SODA					
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.					
		4872	4884	12	10 1/2	1	Hycalog																									
DETAIL OF OPERATIONS AND REMARKS		Picked up Bottom D.C. Jars										GREASE BLOCKS CHECK KELLY COCK										Picked up Bottom D.C. Jars										
		Trip in Hole with Core Barrel										TRIP OUT										REPAIR DMS OIL PUMP										
		Circulating Drop Ball										RECOVER CORE										DRILLING										
		Coring										WAIT ON ORDERS										REPAIR DMS OIL PUMP										
		Repairing Pump (valve gaskets)										SERVICE Rig - CHECK B.O.P										DRILLING										
		Coring										CUT 67' OFF D.LINE										DRILLING										
		Repairing Pump (Head gasket)										LAY DOWN CORE BBL.										DRILLING										
		Coring										LAY DOWN 1-6 3/4 COLLAR										DRILLING										
		Trip out (Barrel jammed)										PICK UP SQUARE D COLLAR										DRILLING										
												TRIP IN										DRILLING										
												REPAIR C-3500 Pump										DRILLING										
												REPAIRING 4872-4884										DRILLING										

HEADING UP & DRG. OUT: TOTCO: CONDITIONING MUD: CASING: LOGGING: RIG: DRILLING LINE: 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 USE HOSE SERIAL No. YES NO

REAMING: CIRCULATING: CORING: D.S. TESTING: RIG REPAIRS: CONDITION HOLE: LOST CMC: MNFR. OF KELLY HOSE USE HOSE SERIAL No. YES NO

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 30.

DESIGN LK# LSD. 67 SEC. 10 TWN. 133 RGE. 30 W Contractor T.O.E. Type Rig 11 at 100 #3. Month Feb. 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.

[illegible]

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 19.

LOC. SW 1/4 SEC. 10 TWN. 133 RGE. 30 W.

Contractor I.O.E.

Type Rig Nat 100#3.

Month Feb.

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							
		4536	4566	30	8 3/4"							4566	4664	98	8 7/8"							4664	4685	21	8 7/8"	SHALE-CHERT							
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"	42	2	18	650.35	Reamer 5.52					4 1/2"	44	13	650-35	REAMER 5.52					4 1/2"	43	2	19	650-35	REAMER 5.52							
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 1/4"	8 3/4"	2 1/4"	30.05	DRILLING STRING				COLLAR		1 1/4"	8 3/4"	2 1/4"	30.05	DRILLING STRING				COLLAR		1 1/4"	8 3/4"	2 1/4"	30.05	DRILLING STRING							
DATA		22	6 3/4"	2 1/4"	620.30	138M 56M				DATA		22	6 3/4"	2 1/4"	620.30	138M 56M				DATA		22	6 3/4"	2 1/4"	620.30	140M 56M							
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				
		10	SV3	3 PM	2 45	11 1/2	4563	47	148				11	MAL	7 45 AM				46M					11	MAL	7 45 AM	12	4680	47	122			
		11	MAL	7 45 AM				47																									
Bit Serial No.		85793 743598				Table R.P.M. 66				Bit Serial No.		743598				Table R.P.M. 65				Bit Serial No.		743598				Table R.P.M. 65							
Jet or Conventional		Jet				Nozzle Size 3 1/2"				Jet or Conventional		JET				Nozzle Size 3 1/2"				Jet or Conventional		Conventional				Nozzle Size 3 1/2"							
SURVEYS		Kind Totco at 4550 Ft. 1 3/4" Deg. off				HOURS				Kind at Ft. Deg. off		HOURS				Kind Totco at 4685 Ft. 1 1/2" Deg. off		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										
No. 1		3 1/2		43/4	2	14"	68	5 3/4	No. 2		8		1850	14	68	5 3/4	No. 1		4		1850	14	68	5 3/4									
		3				12"		6 1/4					18"		6 1/4						12		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	27	9.7		9.5	WATER						9:00	38	9.7									4:00	36	9.8			Water				
		2:30	36	9.7			GEL-500*						11:00	37	9.7									6:30	37	9.7		9.5	14M 16S GEL				
		7:30	41	9.7			ACRYSOL-1/4 gal						12:00	37	9.7		9.5							8:00	37	9.7		10.0	3/4 GAL ACRYSOL				
													3:30	36	9.9														5A 16S CAUSTIC SODA				
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.						
			Br 10	Condition		T 7 B4	G 0 1/2"																						BIT CONDITION # 11 T7 B8 G 0 1/2"				
DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.					From				To	Hrs.					From				To	Hrs.					
		Drilling				12:00	2 45	2 3/4	DRILLING				8				4	8	DRILLING				4:00				7 45	3 3/4					
		Totco at 4550				2 45	3 00	1/4												Totco				7 45				8 00	1/4				
		Trip out				3 00	5 00	2												TRIP OUT				8 00				10 00	2				
		Service Rig Check B.O.Ps.				5 00	5 15	1/4												SERVICE RIG.				10 00				10 30	1/2				
		Trip in Hole Picked up Reamer				5 15	7 00	1 3/4												TRIP IN - MEASURE PIPE				10 30				12 00	1 1/2				
		Unplugged Bit Fill Pipe				7 00	7 15	1/4																									
		Reaming to Bottom				7 15	7 45	1/2																									
		Drilling				7 45	8 00	1/4																									
Driller		Clifford Kippa								Driller				W. Longhill								Driller				H. Hockley							

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 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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 18.

D. P. WILKINS L.S.D. 67 SEC. 10 TWN. 133 RGE. 30 W.

Contractor I.O.E

Type Rig Nat 100 #3

Month Feb

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	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															
4380	4394	114	8 5/8"			4394	4426	32	8 5/8"		4426	4536	110	8 5/8"	SILT-SHALE															
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"	41	—	30	650-35		4 1/2"	41	—	DOWN	650-35	BIT 348 1.67	4 1/2"	42	1	11	650-35													
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 1/4"	8 5/8"	2 1/4"	30.05	DRILLING STRING				COLLAR	1 1/4"	8 5/8"	2 1/4"	30.05	DRILLING STRING				COLLAR	1 1/4"	8 5/8"	2 1/4"	30.05	DRILLING STRING							
DATA	22	6 3/4"	2 3/4"	620.30	13617				DATA	22	6 3/4"	2 3/4"	620.30	13517				DATA	22	6 3/4"	2 3/4"	620.30	13617							
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				
	9	SV2	11:30 AM		18 3/4		45M			9	SV2	11:30 AM	9:45 AM	20 3/4	4415	45M	335			10	SV2	3:50 PM				45-47				
SURVEYS	Bit Serial No. 85802					Table R.P.M. 66-70					Bit Serial No. 85802-85793-3411					Table R.P.M. 66					Bit Serial No. 85793					Table R.P.M. 65				
	Jet or Conventional -					Nozzle Size 2-11					Jet or Conventional - JET - JET					Nozzle Size 2-11					Jet or Conventional -					Nozzle Size 32				
PUMP RECORD	Kind at Ft. Deg. off					Kind at 4410 Ft. 1/3					Kind at 4410 Ft. 1/3					Kind at 4410 Ft. 1/3					Kind at 4410 Ft. 1/3					Kind at 4410 Ft. 1/3				
	HOURS					HOURS					HOURS					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	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
	6 1/4		1850	14"	66	5 3/4			1850	14	66	5 3/4			1850	14	66	5 3/4			1850	14	66	5 3/4			1850	14	66	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				
	1:00	38	9.8	10	9.5	WATER					9:00	39	9.6		9.5						4:00	38	9.7			WATER				
	3:00	37	9.8			GEL- 600#															6:00	37	9.7			1000 lbs. GEL				
	6:00	40	9.8			ACRYSOL- 1/4 gal															8:00	36	9.6		9.0	1/2 GAL. ACRYSOL				
	7:30	40	9.8			CAUSTIC- 25#															10:30	38	9.7			50 lbs CAUSTIC SODA				
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	CHECK & GREASE KELLY COCK.					GREASE BLOCKS & CROWN					CHECK & GREASE KELLY COCK.					GREASE BLOCKS & CROWN					CHECK & GREASE KELLY COCK.					GREASE BLOCKS & CROWN				
	DRILLING					DRILLING					DRILLING					DRILLING					DRILLING					DRILLING				
	THAWING, REPAIRING AIR LINES					REPLACE VALVE CAP STUD- E-500					THAWING, REPAIRING AIR LINES					REPLACE VALVE CAP STUD- E-500					THAWING, REPAIRING AIR LINES					REPLACE VALVE CAP STUD- E-500				
	DRILLING					DRILLING					DRILLING					DRILLING					DRILLING					DRILLING				
	TOTCO					TOTCO					TOTCO					TOTCO					TOTCO					TOTCO				
	TRIP OUT					TRIP OUT					TRIP OUT					TRIP OUT					TRIP OUT					TRIP OUT				
	SERVICE RIG-CHECK B.O.P					SERVICE RIG-CHECK B.O.P					SERVICE RIG-CHECK B.O.P					SERVICE RIG-CHECK B.O.P					SERVICE RIG-CHECK B.O.P					SERVICE RIG-CHECK B.O.P				
	TRIP IN					TRIP IN					TRIP IN					TRIP IN					TRIP IN					TRIP IN				
	UNPLUG BIT					UNPLUG BIT					UNPLUG BIT					UNPLUG BIT					UNPLUG BIT					UNPLUG BIT				
	DRILLING					DRILLING					DRILLING					DRILLING					DRILLING					DRILLING				
	Driller: Clifford K. Kasper					Driller: W. C. Coghill					Driller: Clifford K. Kasper					Driller: W. C. Coghill					Driller: Clifford K. Kasper					Driller: W. C. Coghill				

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 by

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 17

DATE 2-16-67 SEC 10 TWN 133 RGE 30. W

Contractor I.O.E.

Type Rig Nat 100 #3

Month Feb

Day 16 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															
		4026	4080	5'4"	8 5/8"							4080	4155	75	8 5/8"							4155	4280	125	8 7/8"	SILT-SHALE															
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"	37	1	17'	650.35						4 1/2"	38	1	29	650.35	BIT SUB 1.67					4 1/2"	39	2	26	650.35															
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 3/8"	8 7/8"	2 1/4"	30.05	DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING											
DATA		22	6 3/4"	2 3/8"	650.30	128' 17"				54M				DATA		22	6 3/4"	2 3/8"	650.30	130M				56M				DATA		22	6 3/4"	2 3/8"	650.30	136M				56M			
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	7:25	4:25	20	4080	4517	349'				9	SV2	11:30				46M					9	SV2	11:30				45M											
SURVEYS		Bit Serial No. 658683 Table R.P.M. 66- Jet or Conventional - Nozzle Size 2-11 1-10 Kind Totco at 4050 Ft. 1 1/2 Deg. off										Bit Serial No. 85802 Table R.P.M. 65 Jet or Conventional - JET Nozzle Size 2-11 1-10 Kind at Ft. Deg. off										Bit Serial No. 85802 Table R.P.M. 65 Jet or Conventional - Nozzle Size 2-11 1-10 Kind at Ft. Deg. off																			
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																			
No. 1		3 1/2 1850 18" 68 5 3/4										4 3/4 1350 16" 64 5 3/4										8 1850 14" 65 5 3/4																			
No. 2		2 1/2 18" 68 6 1/4										1 1/2 16" 6 1/4										1 1/2 16" 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																
		12:00	40	9.5	10.3	9	WATER				12:00	39	9.7		9.5					4:00	39	9.6		9.5	Water																
		2:30	40	9.6		9.5	CAUSTIC SODA-25				2:00	38	9.6							6:00	38	9.6			25lb Caustic Soda																
																				8:00	37	9.7	10.0	9.5	600lb GELL																
																				10:00	37	9.7			4 GAL GYPSO																
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 #8 Condition T5 B6 G1																																							
DETAIL OF OPERATIONS AND REMARKS		Drilling 18:22 1:45 1 1/4										CHANGED SINGLE ON D. COLLARS 8										DRILLING 4:00 7:00 3																			
		Replasing 4" Union Mudline 1:45 2:15 1/2										STEAM LINE 8										INSTALL VALVE ON MUD LINE 7:00 7:30 1/2																			
		Drilling 2:15 4:00 1 3/4										WORK ON 4" MUD LINE 8:45 3/4										DRILLING 7:30 12:00 4 1/2																			
		Totco at 4060' Floatsub 4:00 4:15 1/4										TRIP IN 8:45 11:15 2 1/2																													
		Trip out Laid down Reamer 4:15 6:15 2										TAKE OFF KELLY BLOW DOWN VALVE 11:15 11:30 1/4																													
		Service Rig Check B.O.Ps 6:15 6:30										DRILLING 11:30 4 4 1/2																													
		Changing 4" Sweepall on mudline 6:30 8:00 1 1/2																																							
		Driller Clifford Thigpen										Driller [Signature]										Driller [Signature]																			

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

Total Contract Time hrs. Total Company Time hrs. Toolpusher [Signature] Approved by [Signature]

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 16

Loc. Q.E. SPANISH 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor I.O.E. Type Rig Nat 100 #3 Month Feb. 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																									
		3679	3748	69	8 5/8"							3748	3901	153	8 7/8"							3901	4026	125	8 5/8"	SHALE - SILT																									
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	33	2	15	650.35	Reamer 5.52					4 1/2	35	1	13	650.35	REAMER 5.52					4 1/2	36	2	10	650.35																									
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		1.39	8 9/16	2 1/4	30.05	DRILLING STRING				COLLAR		1.50	8 9/16	2 1/4	30.05	DRILLING STRING				COLLAR		1.0	8 9/16	2 1/4	30.05	DRILLING STRING																									
DATA		22	6 3/4	2 3/4	620.30	124M				DATA		22	6 3/4	2 3/4	620.30	126M				DATA		22	6 3/4	2 3/4	620.30	54M																									
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																						
		7	M4H	3:28	2:28	23 1/4	3731	45M	432				8	M4H	7:15				46M					8	M4H	7:15				46																					
Bit Serial No.		650743				659683				Table R.P.M.		66				Bit Serial No.		659683				Table R.P.M.		65				Bit Serial No.		659683				Table R.P.M.		65															
Jet or Conventional		-				Nozzle Size 2-11				Jet or Conventional		JET				Nozzle Size 2-11				Jet or Conventional		-				Nozzle Size 2-11				Jet or Conventional		-				Nozzle Size 2-11															
SURVEYS		Kind Totco at 3725				Ft. 20				Kind		at				Ft.				Kind		at				Ft.				Kind		at				Ft.															
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		1 1/4				4 1/4				1850				14"				68		5 3/4																															
No. 2		2				1 AN				1200				18"				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																								
		2:00	40	9.5			WATER						8:30	37	9.5			Water						4:00	37	9.5			Water																						
		7:30	37	9.5									10:00	37	9.5									6:00	37	9.4			50 lbs caustic soda																						
													12:00	37	9.5									8:00	36	9.4			1000 lbs. GEL																						
													3:00	37	9.5									10:00	36	9.4	10.2	9.0	1/2 GAL. ACRYL																						
																								11:00	40	9.5																									
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 # 7 Condition T.4 B6 G1.																																																	
DETAIL OF OPERATIONS AND REMARKS		Changing Pumps (Blow Head - 12 00 gaskets)										DRILLING										DRILLING																													
		Drilling										WORK ON E-500 pump																																							
		Totco at 3725										DRILLING																																							
		Tripout (4 stands tight)																																																	
		Service Rig. Check B.O.Ps																																																	
		Trip in Hole																																																	
		Drilling																																																	
Driller		Chaffard Hopper										Driller										W. G. Hill										Driller										Lockery									

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

Total Contract Time _____ hrs.

Total Company Time _____ hrs.

Toolpusher _____

Approved by _____

YES _____ NO _____

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 15

1025 ~~SW~~ LSD. 6.7 SEC. 13 TWN. 133 RGE. 30 W.

Contractor 102

Type Rig 14-130

Month FEB

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.

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									
3277	3390	91	8 7/8			3390	3520	130	8 7/8		3520	3679	159	8 7/8										
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	29	2	10	650.35	REAMER 5.52	4 1/2	31	1	30	650.35	REAMER 5.52	4 1/2	33	—	24	650-35	REAMER 5.52						
	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 7/8	2 1/4	30.05	DRILLING STRING	DRILL COLLARS	COLLAR	10	8 7/8	2 1/4	30.05	DRILLING STRING	DRILL COLLARS	COLLAR	150	8 7/8	2 1/4	30-05	DRILLING STRING	DRILL COLLARS			
DATA	22	6 3/4	2 3/4	620.30	120M	54M	DATA	22	6 3/4	2 3/4	620.30	120M	54M	DATA	22	6 3/4	2 3/4	620.30	120M	54M				
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
	7	MAN	3 AM		5	28M	71		7	MAN	3 AM		12 1/4	28.35	221		7	MAN	3 AM			35-45		
	Bit Serial No.	680743				Table R.P.M.	66-88		Bit Serial No.	680743				Table R.P.M.	66		Bit Serial No.	680743				Table R.P.M.	66	
	Jet or Conventional	JET				Nozzle Size	2-11		Jet or Conventional	JET				Nozzle Size	2-11		Jet or Conventional	JET				Nozzle Size	2-11	
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	
	5	3	19.00	14"	66	5 1/4		7 3/4	8	18.50	14"	68	5 1/4							18.50	14"	68	5 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		
	4:00	36	9.5	7.9	9.5	1000# GEL			8:00	37	9.5	7.8	9	WATER			4:30	38	9.5			QUICK MISTGAL		
	6:00	38	9.5			50# CMC.			10:00	45	9.5			GEL-1000#			7:00	37	9.5					
	7:30	45	9.5			WATER			12:00	41	9.5			CMC-50#			9:00	40	9.5		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.				
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.					From	To	Hrs.					From	To	Hrs.							
	ASSEMBLE ROTARY CHAIN & CHAIN GUARD	1200						Drilling	8:00	3 1/2	7 3/4				TOTCO	4	4 1/5	1 1/4						
	TRIP IN	145	300	1 1/4				Totco at 3492'	3 45	4 00	1/4				DRILLING	4 1/5	12	7 3/4						
	DRILLING	300	800	5																				
Driller	L. J. Patel						Driller	Clifford K. Hopper						Driller	W. C. Giff									

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

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. 14

W. 34 1/2 Sec. 10 T. 33 R. 30 W.

Contractor 100

Type Rig NAT 100

Rig No. 3

Month FEB

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.

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						
		3035	3137	102	8 7/8							3137	3253	116	8 5/8							3253	3299	46	8 7/8							
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	27	-	14	650.35				4 1/2		28	1	20	650.35				4 1/2		28	2	5	650.35	REAMER 5-52							
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 7/8	2 1/4	30.05	DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING				DRILLING STRING						
DATA		22	6 3/4	2 3/4	620.30	116M				54M				54M				54M				54M				54M						
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			
		6	YSI	2:35		14		22-25	277		6		YSI	2:35		14		22-25	277		6		YSI	2:35		14		22-25	277			
SURVEYS		Bit Serial No. N24442 Table R.P.M. 88										Bit Serial No. N24442 Table R.P.M. 88										Bit Serial No. N24442 - 680743 Table R.P.M. 64										
		Jet or Conventional - JET Nozzle Size 2-11 1-10										Jet or Conventional - JET Nozzle Size 2-11 1-10										Jet or Conventional - JET Nozzle Size 2-11 1-10										
PUMP RECORD		Kind TOTCO at 3020 Ft. 1 7/8 Deg. off										Kind at Ft. Deg. off										Kind TOTCO at 3273 Ft. 1 7/8 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			
		4 3/4	3 1/4	1700	14	66	5 3/4				6			6	1850	14	68	5 3/4				3			5	1850	14	68	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	38	9.5	8.2	9.5	WATER				8:00		36	9.5	7.8	9	WATER				5:00		37	9.5								
		2:00	37	9.4			50# Caustic Soda				9:30		38	9.5			GEL 1000#				6:00		37	9.5								
		4:00	37	9.4			30#				11:30		36	9.5			CML 50#															
		6:00	36	9.5							2:00		36	9.5			CAUSTIC SODA 25#															
		7:30	36	9.5							3:30		37	9.5																		
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 12:30 2:30 2 1/2										Drilling 8:00 12:00 4										CHECKED KELLY COCK										
		TOTCO - UNTANGLE SAND 2:30 5:45 3 1/4										Changed Pumps 12:00 12:15 1/4										DRILLING 4 7 3										
		LINE ON DRUM 5:45 8:00 2 1/4										Drilling 12:15 12:30 1/4										TOTCO @ 3293 7 7:15 1/4										
												Spooling Sandline, removing twists and snags 3:00 4:00 1										TRIP OUT 7:15										
																						Hole Tight 3000-3180 9:30 2 1/4										
																						SERVICE Rig & B.O.P. 9:30 10 1/2										
																						Ran in D. COLLARS 10										
																						PICKED UP STEP REAMER 10:45 3/4										
																						INSTALL ROTARY TORQUE 10:45 12 1 1/4										
																						8										
Driller		J. E. ...										Driller										M. ...										

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 13

105 S. 10th St. LSD. 67 SEC. 10 TWN. 33 RGE. 30 W.

Contractor LOFType Rig NAT 100Month FebDay 12 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									
	2646	2817	171	8 7/8		2817	2882	65	8 7/8		2882	3035	153	8 7/8										
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	23	1	4	651.88		4 1/2	24	1	28	651.88		4 1/2	26	1	25	650-35							
	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	107	8 9/16	2 1/4	31.58	DRILLING STRING	DRILL COLLARS	COLLAR	107	8 9/16	2 1/4	31.58	DRILLING STRING	DRILL COLLARS	COLLAR	150	8 9/16	2 1/4	30.05	DRILLING STRING	DRILL COLLARS			
DATA	22	6 3/4	2 3/4	620.30	110 M	54 M	DATA	22	6 3/4	2 3/4	620.30	112 M	54 M	DATA	22	6 3/4	2 3/4	620.30	112 M	54 M				
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
	5	SV2	11:34		20	208	208		5	SV2	11:34	10:34	20.4	2860	20M	475		6	YS1	2:45			22 M	
	Bit Serial No.	85800	Table R.P.M.	88	Jet or Conventional	JET	Nozzle Size	2-11	Kind	Toten	at 2850	Ft.	1 1/2	Deg. off	Kind	et	Ft.		Deg. off					
	Kind	Toten	at 2850	Ft.	1 1/2	Deg. off	Kind	et	Ft.		Deg. off	Kind	et	Ft.		Deg. off								
SURVEYS	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						
	8	8	1800	14"	66	5 3/4	3 1/2	4 1/2	1850	14"	66	5 3/4	8		1800	14	66	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	1200	35	9.5	7.8	9	WATER	2:00	38	9.5	9	WATER	8:00	39	9.5										
	2000	37	9.4			1000 GEL	10:00	39	9.5			6:00	37	9.6										
	400	38	9.3			50 CMC	3:00	41	9.5			9:00	36	9.5	9.0									
	600	38	9.4									10:00	36	9.4	7.6	8.0								
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						From						From											
	To						To						To											
	Hrs.						Hrs.						Hrs.											
	8:00						8:00						4:12											
Drilling						Drilling						Drilling												
Toten at 2850'						Toten at 2850'						Toten at 2850'												
Trip out						Trip out						Trip out												
Service Rig Check B.O.Ps						Service Rig Check B.O.Ps						Service Rig Check B.O.Ps												
Removed Bit Sub (Thredds galled)						Removed Bit Sub (Thredds galled)						Removed Bit Sub (Thredds galled)												
Break and make up float sub						Break and make up float sub						Break and make up float sub												
Trip in Hole (C.B.S.)						Trip in Hole (C.B.S.)						Trip in Hole (C.B.S.)												
Drilling						Drilling						Drilling												
Driller: <u>De la Cruz</u>						Driller: <u>Clifford Thompson</u>						Driller: <u>W. Goshill</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 CIR:

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

Day 11 1967

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

Day. 11 1967

Approved by _____

745-211

YES ☒ NO

Contractor IMP. CIV. ENTERPR

Type Riq NIT-100

Month **MARCH**

Day 3. 19 67

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

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 21

10E SWAN LAKE LSD 67 SEC 10 TWN 133 RGE 30 W Contractor ICE Type Rig 216 NAT 3 Month FEB 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 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																									
		1948	1989	41	8 5/8							1989	2129	144	8 5/8							2129	2279	150	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	14	1	18	651.88						4 1/2	16	-	30	651.88						4 1/2	17	2	30	651.88																									
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																						
		3	YTL	4:45	2:00	19 3/4	1989	1500	420				3	YTL	9:30 AM	6:45	20M	144					4	YTL	9:30 AM			20M																							
SURVEYS		Kind TOTCO at 1985 Ft. 1 1/2 Deg. off								Kind at Ft. Deg. off								Kind TOTCO at 2180 Ft. 1 1/2 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																								
		2 1/4	5 3/4	1850	14"	70	5 3/4					6 1/4	182	1850	14"	70	5 3/4					5 1/2		1400	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																								
		12:00	35	9.3			200# GEL						10:00	38	9.3	7.8	8	WATER						14:00	38	9.3		9	GEL 600 #																						
													1:00	40	9.3			GEL-500 #						1:00	37	9.3			C.M.C 25 #																						
													3:30	38	9.3		9	C.M.C-25 #						9:00	37	9.3	8.9	9	CAUSTIC 50 #																						
																		CAUSTIC-50 #						10:00	36	9.2			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		DRILLING										Trip in Hole (Fill Pipe)										DRILLING																													
		TOTCO										Drilling										CIRC. & TOTCO @ 2180																													
		TRIP OUT										Repairing Indicator										DRILLING																													
		STRING SAND LINE										Drilling										REPAIR LEAK- E-500 Pump																													
		REPAIR 4" CAMERON VALVE																				DRILLING																													
		OIL #1 PUMP																																																	
		TRIP IN																																																	
Driller		J. P. K. L.										Driller										Clifford H. Jagan										Driller										W. E. G. Hill									

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

Total Contract Time hrs. Total Company Time hrs. Toolpusher L. J. Lockyer Approved by

865 S. LANE LSD. 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor 102 Type Rig RIG NAT 3 NAT 100 DAILY DRILLING REPORT No. 10 Month FEB Day 9 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					
		1569	1618	51	8 5/8							1618	1804	186	8 5/8							1804	1948	144	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	10	1	22	648.25				4 1/2		12	1	18	648.25				4 1/2		14	1	26	648-25							
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		17	8 9/16		30.05	DRILLING STRING				COLLAR		17	8 9/16		30.05	DRILLING STRING				COLLAR		15	8 9/16		30.05	DRILLING STRING					
DATA		22	6 3/4		68.20	92				DATA		22	6 3/4		68.20	96M				DATA		22	6 3/4		68.20	96M					
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		
		3	YTL	4 1/2		2 1/4		20.25	51		3		YTL	4 1/2		9 3/4		20.22			3		YTL	4 1/2		9 3/4		20.16			
SURVEYS		Bit Serial No. ED 4413 Table R.P.M. 64										Bit Serial No. ED 4413 Table R.P.M. 64										Bit Serial No. ED 4413 Table R.P.M. 64									
		Jet or Conventional - JET Nozzle Size 2-10										Jet or Conventional - JET Nozzle Size 2-10										Jet or Conventional - JET Nozzle Size 2-10									
PUMP RECORD		Kind at Ft. Deg. off										Kind at 1760 Ft. 1 1/2 Deg. off										Kind at 1760 Ft. 1 1/2 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				
		24	5 3/4	1850	14"	70	5 3/4				7 1/2		8	1850	14"	70	5 3/4				8		1800	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				
		5:00	37	9.4			WATER				9:30		37	9.3	8.4	8	WATER				4:30		37	9.3			GEL 500 #				
		6:30	37	9.4			500# GEL				11:00		36	9.3			GEL - 400#				6:00		36	9.3			CMC 25 #				
		7:30	37	9.3			25# CMC				2:00		35	9.3			CMC - 25#				8:00		36	9.2			Water				
											3:30		37	9.3							10:00		36	9.2	7.8	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.				
DETAIL OF OPERATIONS AND REMARKS		TRIP OUT										Drilling										DRILLING									
		1200 130 1 1/2										8:00 2 1/2 6 3/4										4 12 8									
		130										2 1/2																			
		REPLACE KELLY STEAM BLOW DOWN										Service Rig (Circulating)																			
		TAKE OUT ROTARY TORQUE CHECK										Drilling																			
		FOR LEAKS										3 1/2 4 00 3 1/4																			
		TRIP IN										11 3 1/2																			
		300 4 45 1 1/4																													
		445 700 2 1/4																													
		700																													
		800 1																													
		Driller: J. E. P. F. L. C.										Driller: Clifford H. Hagen										Driller: L. C. Coghill									

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 L. C. Coghill Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 9

185 SW 1/4 LANE LSD. 67 SEC. 10 TWN. 133 RGE. 30 W.

Contractor 10E

Type Rig

Rig No. 3
NAT 100

Month

FEB

Day

8

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	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									
1034	1235	201	8 5/8			1235	1440	205	8 5/8		1440	1569	129	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	6	-	6	648.25		4 1/2	8	1	16	648.25		4 1/2	9	2	10	648.25							
	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	12	8 9/16		30.05	DRILLING STRING	DRILL COLLARS	COLLAR	12	8 9/16		30.05	DRILLING STRING	DRILL COLLARS	COLLAR	150	8 9/16		30.05	DRILLING STRING	DRILL COLLARS			
BIT RECORD	DATA	22	6 3/4		618.20	88M	DATA	22	6 3/4		618.20	92M	DATA	22	6 3/4		618.20	92M						
	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
	2	YTL	1 5/8		6 3/4	25-30	201		2	YTL	1 5/8		1 1/2	25-30	406		2	YTL	1 5/8	11 PM	20 1/4	1569	25-30	535
	Bit Serial No. E33127	Table R.P.M. 60-70	Jet or Conventional - JET	Nozzle Size 1-11	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	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	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
SURVEYS	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	On Line	Circulating	On Line	Circulating	On Line	Circulating	On Line	Circulating								
	6 3/4	14	1800	14"	70	5 3/4	7 1/4	4	1800	14"	70	5 3/4	6 1/2	1800	14"	70	5 3/4							
	6 3/4	2		16"	6 3/4	4		16"	6 1/4	6 1/2		1800	14"	70	5 3/4									
MUD RECORD	Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS	Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS	Time	Visc.	Wt.	WL	pH	ADDITIVES - POUNDS						
	200	39	9.3	8	10	WATER	9:00	37	9.3			WATER	4:30	37	9.2			Water						
	330	36	9.2			500# GEL	12:00	36	9.3			GEL - 800#	6:00	37	9.1		9.5							
	430	36	9.2			25# CMC	3:30	37	9.2			CMC - 50#	8:00	37	9.2									
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.															
	Service Rig - Check 30P	1200	12:15	1/4	Drilling	8:00	1:20	5 1/2	DRILLING	4	4:30	1/2												
	LAY DOWN DAMAGED D/C	12:15	12:30	1/4	Service Rig	1:20	1:43	1/4	WORK ON PUMP	4:30	4:45	1/4												
	TRIP IN	12:30	1:15	3/4	Change Packing in Pump	1:45	2:00	1/4	DRILLING	4:45	6:15	1 1/2												
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.	From	To	Hrs.	From	To	Hrs.															
	DRILLING	1:15	8:00	6 3/4	Drilling	2:00	3:00	1	CIRCULATE & TOTCO @ 1450	6:15	6:45	1/2												
				Turn Kelly Hose	3:00	3:15	1/4	DRILLING	6:45	11	4 1/4													
				Drilling	3:15	4:00	3/4	CIRC. & TOTCO @ 1549	11	11:15	1/4													
DETAIL OF OPERATIONS AND REMARKS	From	To	Hrs.	From	To	Hrs.	From	To	Hrs.															

Driller

R. J. Patrice

Driller

Clifford H. Jipson

Driller

W. G. Gough

S. J. Jipson

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

H. J. Jipson

Approved by

SWIM LARFLSD 67 SEC. 10 TWN. 133 RGE. 30 W. Contractor **IMPERIAL OIL LIMITED** RIG NAT. 3 DAILY DRILLING REPORT No. 8
 Type Rig **NAT. 100** Month **FEB** Day **7** 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							
		636	702	66	8 5/8							702	974	272	8 5/8							974	1034	60	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	-	2	22	577.90	66-503					4 1/2	3	2	K.D.	577.70						4 1/2	4	1	1	676.76							
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 7/16				30.05				COLLAR		1 1/2 8 7/16				30.65				COLLAR		1 1/2 8 7/16				30.05							
DATA		20 6 3/4				562.05 80M 49M				DATA		20 6 3/4				562.05 81M 49M				DATA		23 6 3/4				646.71 82M							
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	YTL	7:30				20M					1	YTL	7:30		9		20-25	338				2	YTL								
SURVEYS		Bit Serial No. ED4414				Table R.P.M. 75				SURVEYS		Bit Serial No. ED4414				Table R.P.M. 60-75				SURVEYS		Bit Serial No. F33127				Table R.P.M. 75							
		Jet or Conventional -				Nozzle Size 10-10-11						Jet or Conventional -				Nozzle Size 2-10-11						Jet or Conventional -				Nozzle Size 2-10-11							
PUSH PUMP RECORD		Kind		at		Ft.		Deg. off		PUSH PUMP RECORD		Kind		at		Ft.		Deg. off		PUSH PUMP RECORD		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					
		4						1650		14		71		5 3/4		7 1/2						1750		14"		71		5 3/4					
		No. 1																															
		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						
		100	34	8.4		11.0	Water						800	35	8.7		11	150# By-CARB						5:00	40	9.2			25# CMC				
		730	34	8.5			50 lbs. CMC						1000	33	8.8		11	50# CMC											400 GEL				
							200 lbs. bicarb						12:00	39	9.2		11	500# GEL											WATER				
													200	38	9.2																		
													330	35	9.2			1 SACK OFF SAND JUST FOR															
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.				
		PRESSURE TEST TO 500 PSI.																															
		BLEND OFF PRESSURE 475 PSI.																															
DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.		DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.		DETAIL OF OPERATIONS AND REMARKS						From	To	Hrs.					
		DRILL OUT PLUG, FLOAT + SHOE				12:00	1:00	1				DRILLING				8:00	4:00	8				Drilling				4:00	5:45	1 3/4					
		DRILL 10' PRESSURE TEST				1:00	1:15	1/4														Totco				5:45	6:00	1/4					
		DRILL TO 685'				1:15	1:45	1/2														Sandline stuck in top of				6:00							
		TRIP OUT				1:45	3:00	1 1/4														square D.C. pulled sandline											
		PICK 15-6 3/4" D.C.				3:00	6:00	3														intwo				7:00		1					
		TRIP IN				6:00	7:00	1														Trip out Cut sandline at 90'				7:00							
		DRILLING				7:00	8:00	1														intervals Working sinker Bars											
								8														Loose and removing catcher				10:00		3					
																						Trip in Pick up 3 6 3/4" Drill Collars				12:00		2					
Driller		Kornman								Driller		Figgs								Driller		Cliff Kuppen											

CLASSES OF TIME BREAKDOWN
 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 by

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

10E SWAN LAKE LSD 67 SEC 10 TWN 133 RGE 30 W Contractor IMP. OIL ENTERPR. Type Rig NAT. 100 Month FEB. Day 5 1967

IMPERIAL OIL LIMITED

RIG. NAT. 3

DAILY DRILLING REPORT No. 6

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															
636						636																								
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													
								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	Kind	at	Ft.	Deg. off	HOURS					Kind	at	Ft.	Deg. off	HOURS					Kind	at	Ft.	Deg. off	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	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				
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.									
	12 ⁰⁰					8 ⁰⁰	8	HEAD UP					8 ⁰⁰	4 ⁰⁰	8	HEAD UP					4 ⁰⁰	12 ⁰⁰	8							
Driller					K. K. K.					Driller					J. J. J.					Driller					E. K. K.					

CLASSES OF TIME BREAKDOWN

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

Contractor IMP. OIL ENTERPR

Type Rtg N12T.100

Month FEB.

Day 4 - 1967

Колетман

Driller.....

Driller..... Clifford R. Hays

CLASSES OF TIME BREAKDOWN

TOTCO: CONDITIONING MUD:
FISHING: TRIPPING:
CIRCULATING: CORING:

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

LOGGING:
W. O. ORD
BIG BEARD

LOGGING: 216 MAINTENANCE:
W. O. ORDERS: MISCELLANEOUS:
BIG REPAIRS: CONDITION: 1015

REAMING CLEANING:
WORKING PIPE:
1075 0120

MNFR. DRILLING LINE IN USE

REF: SERIAL No.

MNFR. OF KELLY HOSE IN USE

HOSE SERIAL No. _____

**DID YOU CHECK BLOWOUT
PREVENTER EQUIPMENT TODAY**

YES _____ NO _____

Total Contract Timehrs.

Total Company Timehrs.

Toolpusher

Approved by

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 USE _____	REEL SERIAL No. _____ HOSE SERIAL No. _____	DID YOU CHECK BLOWOUT PREVENTER EQUIPMENT TODAY YES _____ NO _____
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Total Contract Time _____ hrs.

Total Company Time _____ hrs.

Toolpusher *[Signature]*

Approved by _____

IDE. SWAMP LAKE L.S.D. 67 SEC. 10 TWN. 133 RGE. 30 W.

IMPERIAL OIL LIMITED

Contractor IMP OIL ENT.

RIG. NAT. 3

Type Rig NAT. 100

DAILY DRILLING REPORT No. 3

Month FEB 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.

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																			
209		280		71		12 1/4						280		375		95		12 1/4				375		530		155		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		4		194.80		5 1/2		4 1/2		1		1		K.D.		194.85		5 1/2		4 1/2		3		-		25																			
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"				28.62		DRILLING STRING		DRILL COLLARS		COLLAR		1		9"				28.62		DRILLING STRING		DRILL COLLARS		COLLAR		1		9"				28.62		DRILLING STRING		DRILL COLLARS									
DATA		6		6 3/4				166.23		21 M		DATA		6		6 3/4				166.23		21 M		DATA		6		6 3/4				166.23		21 M		DATA		6		6 3/4				166.23		21 M			
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	
2 A		H4N		11 1/2 AM				13 1/4		11 M 7 M								2 A		H4N		11 1/2 AM		8 30		13 1/4		284		7 M		171				3 A		YTL		10 30 AM		12 3/4		10-25					
Bit Serial No.		765687		Table R.P.M.		70		Bit Serial No.		765687		E35502		Table R.P.M.		80		Bit Serial No.		765687		E35502		Table R.P.M.		100		Bit Serial No.		765687		E35502		Table R.P.M.		100		Bit Serial No.		765687		E35502		Table R.P.M.		100			
SURVEYS		Kind		T6TCO		at 240' Ft.		1 1/4		Deg. off		Kind		T6TCO		at 280' Ft.		1		Deg. off		Kind		T6TCO		at 365' 465' Ft.		1° - 1°		Deg. off		Kind		T6TCO		at 365' 465' Ft.		1° - 1°		Deg. off									
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		On Line		Circulating		Pump Press		Length of Pump Stroke		Strokes Per Min.		Liner Size	
8		8		250		14"		60		7 1/4		6 1/4		5 3/4		2 1/4		400		14"		60		7 1/4		6 1/4		7 1/2		8		400		14"		60		7 1/4		6 1/4		6 1/4							
MUD RECORD		Time		Visc.		Wt.		WL		pH		ADDITIVES - POUNDS		Time		Visc.		Wt.		WL		pH		ADDITIVES - POUNDS		Time		Visc.		Wt.		WL		pH		ADDITIVES - POUNDS		Time		Visc.		Wt.		WL		pH		ADDITIVES - POUNDS	
12:30		95		9.1								WATER		9:00		9.0		9.2		6.4		10		WATER		4:00		105		9.3				10		WATER		4:00		105		9.3				10			
3:00		110		9.1								400# HYPON GEL		10:00		7.7		9.3						800# GEL		6:00		82		9.2						GEL - 600#		6:00		82		9.2							
5:30		95		9.2										12:00		79		9.4						50# CMC		8:00		94		9.3						CMC 50#		8:00		94		9.3							
7:00		97		9.2										2:00		120		9.4						50# Caustic		10:00		85		9.4								10:00		85		9.4							
7:30		90		9.2										3:30		113		9.3								11:30		98		9.4								11:30		98		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.		From		To		Ft. Cored		Ft. Rec'd.		Core No.		Type Bbl.	
DETAIL OF OPERATIONS AND REMARKS		DRILLING		12:00		4:00		4:00		DRILLING		8:00		8:30		1/2		DRILLING		8:00		8:30		1/2		DRILLING		8:00		8:30		1/2		DRILLING		8:00		8:30		1/2		DRILLING		8:00		8:30		1/2	
T6TCO		4:00		4:30		1/2		T6TCO		8:30		9:00		1/4		T6TCO		9:00		9:30		1/4		T6TCO		9:30		10:00		1/4		T6TCO		9:30		10:00		1/4		T6TCO		9:30		10:00		1/4			
DRILLING		4:30		6:00		1 1/2		DRILLING		9:00		9:30		1		DRILLING		9:30		10:00		1/4		DRILLING		10:00		10:30		3/4		DRILLING		10:30		11:00		3/4		DRILLING		11:00		11:30		3/4			
WORK ON E500 PUMP		6:00		6:30		1/2		WORK ON E500 PUMP		10:00		10:30		3/4		WORK ON E500 PUMP		10:30		11:00		3/4		WORK ON E500 PUMP		11:00		11:30		3/4		WORK ON E500 PUMP		11:30		12:00		3/4		WORK ON E500 PUMP		12:00		12:30		3/4			
DRILLING		6:30		8:00		1 1/2		DRILLING		10:30		11:00		3/4		DRILLING		11:00		11:30		3/4		DRILLING		11:30		12:00		3/4		DRILLING		12:00		12:30		3/4		DRILLING		12:30		1:00		3/4			
8								8								8								8								8						8											

Driller. K. K. K.

Driller. J. J. J.

Driller. C. C. C.

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

67-10N-133-30W

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. 2

10E-SW-1/4-1/4-1/4-1/4

SEC.

TWN.

RGE.

W.

Contractor IMP OIL ENT. NAT 3. Type Rig NAT. 100

Month FEB

Day 1 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															
50		87	39	12 1/4						89		134	43 1/2	12 1/4						134		209	75	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.																
					24	56.11								8	84.71	Su 33 15.41								10	144.15																
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"		28.62	DRILLING STRING				DRILL COLLARS				COLLAR		1	9"		28.62	DRILLING STRING				DRILL COLLARS				COLLAR		1	9"		28.62	DRILLING STRING				DRILL COLLARS			
DATA		1	6 3/4		27.47					DATA		2	6 3/4		56.09					DATA		5	6 3/4		144.15	57.17															
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														
		1A	36	7:00 PM							1A	56J	7:00 AM	10:00 AM	15 1/4	113	7-11	113			2A	M4N	11:00 AM		5 1/4		16-12														
Bit Serial No.		685093				Table R.P.M. 45-70				Bit Serial No.		685093-765687				Table R.P.M. 70				Bit Serial No.		765687				Table R.P.M. 70															
Jet or Conventional		JET				Nozzle Size				Jet or Conventional		CONV				Nozzle Size				Jet or Conventional		CONV				Nozzle Size															
Kind		TOTCO at 80'				Ft. 1/2 Deg. off				Kind		at				Ft. Deg. off				Kind		TOTCO at 164'				Ft. 3/4 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		7		1		400	14"	50	7 1/4	No. 1		7		1		50	14	54	7 1/4	No. 1		4 1/4		1			14"	50	7 1/4												
No. 2		8					16"		6 1/4	No. 2		8					16		6 1/4	No. 2		2					16"														
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														
		8:20	58	9.0							8:00		105	9.3			WATER				8:00		90	9.0																	
		1:30	85	9.1			1 sac C.M.C.				10:00		84	9.3			2900 # Gel				10:00		85	9.1																	
		3:30	110	9.2			800 # Hydrogel				12:00		62	9.0			3200 Weight Material																								
		5:30	105	9.2							2:00			88			150 C.M.C.																								
		7:30	105	9.3							4:00			89			1/2 quick-vis																								
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	12:00	7:00	7				DRILLING		8:00	10:30	2 1/2				Unplugging Flow Line		4:00	5:00	1 1/4																				
		TOTCO	7:00	7:15	1/4				TRIP OUT		10:30	10:45	1/2				Hooking up Jet line		5:15	5:30	1/4																				
		DRILLING	7:15	8:00	3/4				SERVICE RIG		10:45	11:00	1/5				Drilling		5:30	6:00	3/4																				
					8				TRIP IN		11:00	11:15	1/4				Totco		6:00	6:15	1/4																				
									DRILLING		11:15	12:15	1				Drilling		6:15	9:15	3																				
									SOUND FROZE OFF								THAWING OUT Drawworks (oil sump)		9:15	10:45	1 1/2																				
									CELLULAR LEAKING FLUID		12:15						Drilling		9:45	11:15	1 1/2																				
									SOUND PUMP FROZE OFF								Clean shaker Box. Repairing		11:15																						
									DRAIN UP - PULL OUT - WORK ON TIE			4:00	3 1/4				Sump Pump. Valves Dirty		12:00		3/4																				
									BEING USED																																
Driller		Kernerman								Driller		L. J. Botz								Driller		Clifford H. Hagan																			

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 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

DAILY DRILLING REPORT No.

10 E SW AN LAKE K-28

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

Contractor I.O.E. NAT #3

Type Rig NET 100

.. Month JAN

Day 31 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									
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 DRILL COLLARS										COLLAR: DRILLING STRING DRILL COLLARS										COLLAR: DRILLING STRING DRILL COLLARS									
DATA										DATA										DATA									
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									
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									
Time Visc. Wt. W L pH ADDITIVES — POUNDS										Time Visc. Wt. W L pH ADDITIVES — POUNDS										Time Visc. Wt. W L pH ADDITIVES — POUNDS									
MUD RECORD										MUD RECORD										MUD RECORD									
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									
Driller: W. Coghill										Driller: Kamenich										Driller: J. P. P.									

HEADING UP & DRLG. OUT:
DRILLING:
REAMING:

CLASSES OF TIME BREAKDOWN

TOTCO:
FISHING:
CIRCULA

CONDITIONING MUD:
TRIPPING:
CORING:

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

LOGGING:
W. O. ORD
BIG BEAR

LOGGING:
W. O. ORDERS:
BIG REPAIRS

RIG MAINTENANCE
MISCELLANEOUS:
CONDITION: 100%

REAMING CLEANING:
WORKING PIPE:

MNFR. DRILLING LINE IN USE

MNFR. DRILLING LINE 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 _____

Approved by _____

IMPERIAL OIL LIMITED

NAT #3

DAILY DRILLING REPORT No. 2

10E SWAN LAKE LSD

SEC.

TWN.

RGE.

W.

Contractor 10-E NAT. #3

Type Rig NAT-100

Month JAN

Day 30 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

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
COLLAR DRILLING STRING DRILL COLLARS
DATADRILL Number OD ID Length INDICATOR WEIGHT OF TOTAL
COLLAR DRILLING STRING DRILL COLLARS
DATADRILL 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

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

WASH PUMP RECORD

HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
14" 7 1/4
16" 6 1/4HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
14 7 1/4
16 6 1/4HOURS On Line Circulating Pump Press Length of Pump Stroke Strokes Per Min. Liner Size
14 7 1/4
16 6 1/4No. 1
No. 2

MUD RECORD

Time Visc. Wt. W L pH ADDITIVES - POUNDS
100 60 GEL 3400#
200 50Time Visc. Wt. W L pH ADDITIVES - POUNDS
GEL 1600 LBS.

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.
MIX MUD CLEAN OUT RAT HOLE 12
RIG TO SPUD IN 8 8
PIPE. WASHED OUT COND.
PIPE. RIG UP TO MIX
GEL - DIESEL PLUG 4 00 8 00From To Hrs.
RIG UP TO SPUD IN 8 00 10 30 2 1/2
CLEAN OUT CONDUCTOR 10 30
PIPE. WASHED OUT COND.
PIPE. RIG UP TO MIX
GEL - DIESEL PLUG 4 00 8 00From To Hrs.
DIESEL PLUG - WOULDN'T HOLD 100 100 3
RIG UP TO RUN CEMENT PLUG 100 1030 3 1/2
RUN CEMENT PLUG 1030 1115 3/4
DRAIN UP 1115 1200 3/4

Driller J. W. Coghill

Driller K. M. Menden

Driller J. P. P. P.

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

Approved by

IMPERIAL OIL LIMITED

DAILY DRILLING REPORT No. _____

Contractor J.O.E. Type Rig NAT #3 Month JAN Day 29 1962

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																																						
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						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																																			
SURVEYS	Bit Serial No.					Table R.P.M.					Bit Serial No.					Table R.P.M.																																					
	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		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																																			
MUD RECORD	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	Cleaning up rig					From	To	Hrs.	Requing up to drill					From	To	Hrs.	Finished drilling rat hole 4																																				
	Large washed under rig										8 12 4					6 12 6																																					
	from drilling co. dust										12 4 4																																										
	to fill hole																																																				
Driller <u>W. Coyhill</u>																		Driller <u>K. N. M. D. N.</u>																		Driller <u>W. J. J. J. J.</u>																	

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 W. J. J. J. Approved by _____

DAILY DRILLING REPORT No.

Imperial Oil Limited
 DAILY DRILLING REPORT No. _____
 SWAN HALL, ALB. SEC. _____ TWN. _____ RGE. _____ W. _____ Contractor I.O.F. Type Rig Hot #3 Month Jan. Day 28 1962
 1st Tour From: 12-00 Midnight To: 2-00

	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																			
DEPTH																																																
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					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		HOURS			Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	Kind	at		Ft.		Deg. off		HOURS			Pump Press	Length of Pump Stroke	Strokes Per Min.	Liner Size	Kind	at		Ft.		Deg. off		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 OPERATIONS AND REMARKS	From To Hrs.						From To Hrs.						From To Hrs.																																			
	Regrinding up						Regrinding up						Regrinding up																																			
	preparing to dig						preparing to dig						preparing to dig																																			
	conductor hole						conductor hole						conductor hole																																			
Driller.....						Driller.....						Driller.....																																				

HEADING UP & DRLG. OUT: DRILLING: REAMING:		CLASSES OF TIME BREAKDOWN TOTCO: CONDITIONING MUD: FISHING: TRIPPING: CIRCULATING: 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 _____				