

PAN AM BA A-1 SPANN **G-27**

Drilling Authority No. 292
Date issued 17 January 1968

WELL NAME Pan Am BA A-1 Spawm G-27

FIELD
LOCATION: Unit G Area: Section 27 Grid 60 10 118 15
Latitude 60 06 16.347 Longitude 118 19 34.958
From Established Reference Marker

UWI: 300G276010118150
UMLR: 60.10654N 118.32639W

Rig Release Date: 27/2/68
Status D-A
Information Release Date

CHANGE OF NAME:

DATE RECEIVED	INDEX
JANUARY 17, 68	Application for a Drilling Authority.
March 25/68	Well Completion Data. Well History Report.
	Application to Amend a Drilling Authority.
	Application to change a Well Name.
June 28/68	Application to Abandon a Well or Suspend Drilling.
	Application to Alter Condition of a Well. Well History Supplement. Well Completion Data. Work-over Report No.
	Application to Commingle Production before Measurement.
	Data for Back Pressure Test on Natural Gas Wells — Monograph 7 Method.
	Data for Back Pressure Test on Natural Gas Wells — Vittor's Method.
	A.P.R. — Oil — Calculations.
	New Oil Well Report.
	New Gas Well Report.
	Well Inspection Report.
	Rig Inspection Report.
	Battery Inspection Report.
	Equipment Report.
	Well Card.
	New Service Well Report.
	Monthly Water Flood Operations Report
	Monthly Water Receipts and Disposal of Fluids Report Logs. Large scale Small scale

Drilling Authority No. 292

Date Issued January 17, 1968

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

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

Well name and number **Pan Am BA A-1 Sperry G-27**

Perm. No. 3871 Lease No. _____

British American Oil Ltd. Exploratory Licence No. 1181
(Formerly, Lianco, Lococe)

Pan American Petroleum Corporation Exploratory License No. **1170**
(Operator)

Location Unit **G** Section **27** Grid **60° 10' 118° 15'**

Latitude 60° 6' 16.44" N Longitude 118° 19' 24.95" W

From Established Reference Number **NOV 1931**

Universal Well Location Reference: 60.20454°N 118.12639°W

	DATE	DEPTH	Pool(s)
Spudded	Jan. 28/68		Interval(s) open to production
Suspended			
Resumed Operations			
Finished Drilling	Feb. 24/68	5602'	
Deepened			Elevation: Gr. 2173 K.B. 2186
Complete (gas/oil)			Rig No. 39 H
Abandoned	Feb. 29/68		Drilling Contractor Brinkerhoff Bros.
Rig released	Feb. 29/68		Contractor's Business Licence No. 18177

CASING RECORD

Cooking Size (Inches)	Grade	Weight	Amount	Set at -	Section of Cement and Additives
1. 9-5/8"	J-55	36	995'	1003 KB	850 sk W/2% CaCl ₂
2.					
3.					
4.					
5.					
6.					

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec.	From	To	Rec.
2H. R. Line	1525	+ 648	5230	5234	0			
3rd H.R. Line	3202	-1029	Core bbl. jammed no recovery					
Hay N. Shale	3306	-1133						
Slave Pt	4747	-2574						
Watt Mtn	4944	-2772						
Sulphur Pt	4969	-2796						
Bircho Mbr	5030	-2857	LOG RECORD					
Keg River	5370	-3197	Run No.	Type of Log		From	To	
Chinohaga	5480	-3307	1	IES		1002	5601	
Detrital	5540	-3367	1	FDC		4700	5601	
Pre Cambrian	5582	-3409	1	BHC68		1002	5599	
			1	SNP		4700	5601	
			1	LITHOLOGY				
	The above are field figures							

Cementing Record (Plug Squeeze, etc.)				Perforating Record (Bullet, Jet)				Servicing Record (Acidizing, Fracking, etc.)			
Date	From	To	Remarks	Date	From	To	Remarks	Date	From	To	Remarks
2/28/68	5602	4900	375 sx (felt at 4905)								
2/28/68	1050	950	85 sx (felt at 840)								
Place ten sx cement in top of hole and weld on plate. Place metal well sign on marker 4' above ground.											

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Min.	L.S.L. Min.	F.S.L. Min.	L.S.L.B.H.P.	F.S.L.B.H.P.	L.P.B.H.P.	P.F.B.H.P.	L.H.P.	P.H.P.	REMARKS
1	2/22/68	Muskeg	5102	5234	60	60	60	1734	1732	972	1732	2359	2348	OIP, QAB Dried in 37 min. No OTS Recover 240' Drlg mud, 4440' Blk sulphurous slightly gasified salt water
2	2/26/68	Muskeg	4975	5100	60	60	60		NO READINGS OBTAINED			2307	2305	Miserun
3	2/27/68	Muskeg	4975	5100	120	60	60	1662	1663	167	1493	2314	2300	PAB in 3 min and steady thru flow period No OTS recover 620' water cut drilling mud 2560' blk sulphurous slightly gasified salt water

ANALYSIS

Lab. No.	Sample	From	To	Source	Remarks	PRESENT STATUS OF WELL			
C68-3383-1,2,3	Water	5102	5234	Drill Pipe DST #1	Solids by Evap 110.530 Gravity 1.076, Res. 0.072 PH 6.6 @ 65° F	Oil		(Interval)	
						Gas		(Interval)	
E68-6240-1,2,3	Water	4975	5100	Drill Pipe DST #3	Solids by Evap 91.770 Gravity 1.060, Res. 0.105, PH 6.5 @ 75° F H ₂ S 1.3497 @ 25° C	Dry YEB			
						Susp.			

Company Pan American Petroleum Corporation
 Signed by [Signature]
 Title Division Production Superintendent
 Date March 25, 1968
 Form to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.



File No. _____
Drilling Authority No. _____

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well or Suspend Drilling

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

Name and number of well Perm Am 21 A-1 Spans C-27

Location: Unit G Section 27 Grid 60° 10' 118° 15'

Latitude 60° 06' 16.347" Longitude 118° 19' 34.938"

From Established Reference Marker NW 1/4 3331

Universal Well Location Reference 60.10454 N 118.32639 W

Permit No. 3878 Lease No. _____

British American Oil Ltd.
(Production, Lease, License)

Date of commencement of proposed program February 20, 1968

OIL, GAS, AND WATER ENCOUNTERED
(Depth)

Oil at _____

Gas at _____

Water at 5100

Total Depth 5602 Date of last operations February 27, 1968

Present condition of well Well was drilled to 5602. After coring, testing, and logging, the well was abandoned due to no commercial pay.

CASING RECORD

Casing Size O.D. inches	Weight	Amount	Set At—	Sorts of Cement and Additives	Amount Poured
1. <u>9 5/8</u>	<u>36</u>	<u>995</u>	<u>1002.7</u>	<u>650 Sx + 2% Coal.</u>	
2.				<u>plus 200 Sx + 2% Co./A.</u>	
3.				<u>from surface.</u>	
4.					
5.					

PROPOSED ABANDONMENT PROGRAM

No.	Plug	Geological Formation	Number of Shells of Cement	Remarks
	Position			
1.	<u>4900 - 5602</u>	<u>Eng River</u>	<u>375</u>	<u>Felt @ 4905</u>
2.	<u>900 - 1100</u>	<u>Casing Point</u>	<u>85</u>	<u>Felt @ 840</u>
3.	<u>Surface Plug and Base Plate</u>			

The following logs have been run. Ind. Electrical, MCS w/CR Caliper, Sidwall Neutron Porosity,
Other operations proposed Nil Formation Density, Lithology

Operations to be carried out by Brinkerhoff Brothers Contractor Licence No. 18177

Address 5920-76 Ave., Edmonton, Alberta Address _____

Responsible Agent in field John D. Fenton

Dated at Edmonton, Alta. this 25th Day of June 19 68

Signed by [Signature] Company Pan American Petroleum Corporation

Title [Signature] Operator's Exploratory Licence No. 1181

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

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

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

Confirming oral approval given by Mr. P.H.J. Thoms
on the 27th February 1968.

Dated 28th June 19 68 [Signature]

(for) Oil Conservation Engineer

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

Drilling Authority No. 252

Project No. _____

File No. _____



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application for a Drilling Authority

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

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

Name and number of well Pan Am RA A-1 Spasm G-27

Location: Unit 6 Section 27 Quad 60° 10', 118° 15'

Latitude 80° 06' 14.347" Longitude 118° 19' 34.938"

From Established Reference Marker Mon. 0131

Universal Well Location Reference 60-10044 N 118-32699 W

Elevation: Ground 2173 K.B. N/A feet above sea-level.

Well is expected to produce from Eng. River formation at a depth

of about 3200 feet. Expected total final depth 5700

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

Permit No. 3878 Lease No. _____ Acreage 63834

Permittee, licensee, or lease British American Oil Ltd.

Exploratory Licence No. 1181 3878

Surface owned by Crown or Crown

Petroleum and natural-gas rights owned by British American Oil Ltd.

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

Casing Size O.D. (Inches)	Weight (Lbs./Ft.)	Grade	New or Used	Estimated Depth	Ends of Cement
1. <u>9 5/8"</u>	<u>340</u>	<u>J-55 ST&C</u>	<u>New</u>	<u>600</u>	<u>To Surface</u>
2. <u>7"</u>	<u>200, 230</u>	<u>J-55 ST&C</u>	<u>New</u>	<u>5700</u>	<u>Comply Regulations</u>
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment.

Hydril & Double Gate Sheffer with hand controls and Hydraulic controls with remote control panel.

Well will be drilled with Rotary Rig No. 394 by Brinkerhoff Bros. Ltd.
(Drilling Contractor or company)

Responsible agent of applicant:— Contractor's Business Licence No. 18177

At well H.J. Bullen At registered office same

Address 9916A - Richmond Avenue Address same

Grande Prairie, Alta.

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

Dated at Grande Prairie this 16 day of January 19 68

Signed by [Signature] Company Pan American Petroleum Corporation

Title Drilling Foreman Operator's Licence No. 1170

(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 17th January 19 68 [Signature]

Oil Conservation Engineer

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

LAND 52-90-1 (3-67)

UNIQUE WELL IDENTIFIER: 300G276010118150

60-11-4-64.

WELL HISTORY
REPORT

PAK AM BA A-1 SPAWN C-27

LOCATION: NORTHWEST TERRITORIES

I N D E X

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WELL HISTORY
REPORT

PAN AM BA A-1 SPAWN C-27

SECTION I - Summary of Well Data

(a) Name

Pan Am BA A-1 Spawn C-27

(b) Permittee

The British American Oil Company Limited
Exploratory Licence No. 1181

(c) Operator

Pan American Petroleum Corporation
444 - 7th Avenue S.W.,
Calgary 2, Alberta.

Exploratory Licence No. 1170

(d) Location

Unit C, Section 27, Grid 60° 10', 118° 15'

Lat. 60° 06' 16.347" N., Long. 118° 19' 34.958" W.

Universal Well Location Reference - Lat. 60.10454° N.
Long. 118.32639° W.

Unique Well Identifier - 300G276010118150

(e) Co-ordinates

Well is located 38,357.2' North and 9,467.8' East of
monument number 331 on NWT and Alberta border.

(f) Permit Number

3878

(g) Drilling Contractor

Name - Brinkerhoff Bros. Ltd.
Rig No. - 39H
Business Licence No. 18177

(h) Drilling Authority

Number - 292

Date - January 17, 1968

(i) Classification

Wildcat

(j) Elevations

Ground - 2173'

K.B. - 2185.8'

Datum - 2024.57'

(k) Spudded

28th January 1968

(l) Completed Drilling

24th February 1968

(m) Total Depth

TD - 5602'

(n) Well Status

Abandoned

(o) Rig Released Date

29th February 1968

(p) Hole Sizes to Total Depth

13 3/4" - Surface to 1003'

8 3/4" - 1003' to 5602'

(r) Casing

9 5/8" 36# J-55 casing set at 1003' with 650 sacks Oilwell cement + 2% CaCl₂. Recemented with 200 sacks Oilwell cement + 2% CaCl₂.

SECTION II - Geological Summary - See Attachment

SECTION III - Engineering Summary

(a) Report on Drill Stem Tests

DST #1 (5102-5234), Dual Bottom Hole
ISI - 60, TO - 63, PSI - 60
Good Initial Puff

IHP-2359, ISIP-1734, IFP-972, FHP-2348.

FSIP-1732, FFP-1732

Rec. 240' of drilling mud

4440' of black sulphurous slightly gassified
salt water

DST #2. (4975-5100) Dual Straddle Bypass.

Mis-Run, Tool did not open for flow period.

DST #3. (4975-5100) Dual Straddle Bypass

ISI-60, TO-123, FSI-60

Fair Initial Puff in 3 min. Fair airblow when
opened for flow period. Blow remained steady
throughout flow period.

IHP-2314, ISIP-1662, IFP-167, FHP-2300, FSIP-1663,
FFP-1493.

Rec. 620' water cut drilling mud

2560' black sulphurous slightly gassified salt water.

(b) Casing Record

Surface Casing

Hole Size - 13 3/4

Casing Size - 9 5/8

Weight - 36#

Grade - J-55

Manufacturer - Mannex

KB Setting Depth - 1003

Amount of Cement - Cmt. w/650 Sxs. Oilwell, 200 Sxs. Oilwell
- 2% CaCl₂.

Date Run - 2-5-68

Date Cemented - 2-6-68

(c) Tubing Record

Nil

(d) Xmas Tree

Nil

(e) Mud Report

Mud Type - Clay base

- low solids mud system

0 - 1000, Gel, Lime, Caustic, Sawdust

1000 - 3600, Water

3000 - TD, Gel Benex

(f) Bit Record

<u>Bit No.</u>	<u>Size</u>	<u>Type</u>	<u>Make</u>	<u>In</u>	<u>Out</u>	<u>Ftg.</u>	<u>Hrs.</u>
1-A	13 3/4		Hughes	0	134	134	4 3/4
2-A	8 3/4	DT	Smith	134	390	156	10
3-A	8 3/4	OSC-3J	Hughes	390	785	395	10 3/4
4-A	13 3/4	OSC-3	Hughes	90	433	343	11 3/4
5-A	13 3/4	OSC-3	Hughes	433	844	411	10 1/2
6-A	8 3/4	OSC-3	Hughes	844	1380	536	17
7-A	13 3/4	OSC-3	Hughes	844	1000	156	4 1/4
1	8 3/4	X3A	Hughes	1380	2528	1148	46 1/2
2	8 3/4	S3T	Sec.	2528	3845	1317	40 1/2
3	8 3/4	S3T	Sec.	3845	4764	919	49 3/4
4	8 3/4	SC5G-J	Reed	4764	5230	466	47 3/4
5	8 3/4	X55R	Hughes	5230	5602	372	39

(g) Deviation Record

100	1 1/2
220	7/8
305	3/4
390	5/8
482	1/2
539	7/8
740	1/2
628	1
841	1/2
958	3/4
1072	5/8
1679	1/2
1992	3/4
2084	1
2279	1
2419	2
2528	2
2734	3/4
2919	1/2
3168	1 1/2
3229	1
3631	7/8
3845	1

4035	2/3
4313	1 1/8
4528	1
4764	1 1/8
4992	1 1/2
5210	1 1/2
5602	1 1/3

(h) Report of Blowouts

Nil

(i) Lost Circulation Zone

1. 1570 - 1635, Hay River
Corrected with Gel, Sawdust, Lintex, and Fibertex.

IV COMPLETION SUMMARY

(a) Perforation Record

Nil

(b) Cementation Record

Plug #1. (5602-^{400'}4905) 2-28-68 Cmt. w/375 Sxs.
Felt after 8 hours @ 4905'

Plug #2. (1050-^{950'}840) 2-29-68 Cmt. w/85 Sxs. + 2% Ca¹²
Felt after 8 hours @ 840'

Surface Plug - 10 sacks placed in top of hole and plate welded on. Placed

(c) Acidization Record

metal well sign on marker 4' above ground.

Nil

(d) Chronological Daily Completion Report

<u>Date</u>	<u>TD</u>	<u>Operation</u>	<u>Wt.</u>	<u>Visc.</u>	<u>Fl. Loss</u>	<u>Filter Cake</u>	<u>Ph</u>
1-28-68	161	Drilling 13 3/4" hole	8.9	45			
1-29-68	691	Drilling 8 3/4" hole	9.2	41			

1-30-68	785	Drilling, Reaming to 13 3/4"	8.9	68			
1-31-68	785	Reaming	9.6	60			
2-01-68	785	Reaming					
2-02-68	844	Drilling 13 3/4" hole	9.2	70			
2-03-68	910	Drilling 8 3/4" hole, Recement Conductor	8.8	95			
2-04-68	1380	Drilling 8 3/4" hole					
2-05-68	1380	Reaming, Run 9 5/8" Casing	9.1	110			
2-06-68	1380	Cement Casing					
2-07-68	1380	Recement Casing from top down					
2-08-68	1815	Drilling 8 3/4" hole	Water				
2-09-68	2350	Drilling	Water				
2-10-68	2720	Drilling	Water				
2-11-68	3620	Drilling	Water				
2-12-68	3860	Drilling					
2-13-68	4295	Drilling	9.3	35	10	2/32	8.5
2-14-68	4708	Drilling	9.2	33	13	2/32	
2-16-68	4966	Drilling	9.2	50	9.2	2/32	8.5
2-17-68	5230	Drilling	9.2	48			
2-18-68	5230	Working stuck pipe	9.2	77	9.0	2/32	8.5
2-19-68	5230	Working stuck pipe	8.9	205	7.2	2/32	8.5
2-20-68	5230	Fishing	8.8	160	9.8	2/32	
2-21-68	5234	Cutting Core #1	8.8	74	9.8	2/32	
2-22-68	5255	Run DST #1					
2-23-68	5493	Drilling	8.6	62	9.6	2/32	10.5
2-24-68	5602	Drilling	8.6	87	8.2	2/32	9.0
2-25-68	5602	Logging					
2-26-68	5602	Preparing to Test					
2-27-68	5602	Run DST #2, #3					
2-28-68	5602	Ran Plug #1					
2-29-68	5602	Ran Plug #2					

Rig Release 10:00 A.M.

(e) Back pressure and Production Tests

N11

V ANALYSES

- (a) Core Analysis
Core #1, 5230-5234, Rec. 0
- (b) Gas Analysis
See Attachment
- (c) Oil Analysis
See Attachment
- (d) Water Analysis
See Attachment

VI LOGS

<u>Date</u>	<u>Run No.</u>	<u>Log</u>	<u>Interval</u>
2-25-68	1	BC Sonic w/G.R. Caliper	5599-1002
		Induction Electrical	5601-1002
		Sidewall Neutron Porosity	5601-4700
		Formation Density	5601-4700
		Porosity Lithology	5600-4750

Logged by Schlumberger



PAH AM-B.A. A-1 SPAWN LAKE G-27, 60°10'N, 118°15'W

Completion Report

Geological Summary

1) Formation Tops	Sample	Logs
Hay River Shales	955	
Tetcho	1504	1505
Trout River	2560	2552
Kakisa		3202
Fort Simpson		3306
Spence River (Muskwa)	4589	4595
Slave Point	4747	4745
Watt Mountain	4944	4944
Sulphur Point	4969	4965
Bistcho Member	5040	5034
Keg River	5380	5370
Chinchaga	5495	5487
Detrital	5542	5542
PreCambrian	5582	5582
T.D.	5602	5602

2) Cored Intervals

Core #1 5230 - 5234 Bistcho Member Recovered : 0'

3) Core Descriptions

None

4) Sample Descriptions

- 960 - 1100 Shale, dark grey, carbonaceous, pyritic.
- 1100 - 1470 Shale, dark grey, less carbonaceous, less pyritic.
- 1470 - 1500 Shale, dark grey-black, carbonaceous, white specks, fossil fragments.
- 1500 - 1530 Limestone, very light grey, argillaceous, very fine to cryptocrystalline, partly pelletal, skeletal, chalky, fossil fragments, crinoids. Poor earthy porosity.
- 1530 - 1980 Limestone, very light grey, cryptocrystalline, chalky, pelletal, fossil fragments, crinoids, brachiopods. Scattered earthy porosity.
- 1980 - 2110 Mudstone, blue, calcareous, pelletal, fossil fragments, crinoids, ostracods, brachiopods.
- 2110 - 2220 Limestone, white-light grey, cryptocrystalline, traces of dark brown limestone, cryptocrystalline, fossil fragments, crinoids, some pyrite.
- 2220 - 2520 Limestone, white-light grey, partly creamy, cryptocrystalline, fossil fragments, crinoids, brachiopods, ostracods. Interbedded siltstones, brown, calcareous, slightly argillaceous, floating sand grains, traces of green shale.
- 2520 - 2640 Siltstone, brown, partly sandy, calcareous, interbedded green shale, some fossil fragments, pyrite.
- 2640 - 2830 Siltstone, brown-light grey, very sandy. Argillaceous, calcareous, becoming more shaly and less calcareous. Some fossil fragments, pyrite, calcite filled vugs.
- 2830 - 3870 Shale, brown-green, probably interbedded, Some sandstone, light grey, brown, green, very fine grained, partly silty, trace of

glauconite. Some limestone, cream, fragmental, skeletal, brachiopods, pellets.

- 3670 - 4180 Marlstone, grey-greenish grey-brown, partly sandy. Some interbedded shales, brown-dark grey, traces of pyrite.
- 4180 - 4410 Shale, green, partly calcareous, partly sandy, interbedded siltstone, brown and shales, dark grey; some pyrite.
- 4410 - 4430 Limestone, brown, cryptocrystalline, slightly argillaceous, earthy.
- 4430 - 4580 Shale, green, calcareous, interbedded siltstone, grey-green, calcareous, partly sandy. Interbedded shale, grey. Some fossil fragments, brachiopods, pyrite.
- 4580 - 4700 Shale, dark grey-brown grey, mottled, silty. Some green shale streaks. Pyrite clusters.
- 4700 - 4720 Shale, brown, slightly micaceous, bituminous, traces of silt and pyrite, becoming limestone, white-light brown, cryptocrystalline. Brachiopods.
- 4720 - 4730 Limestone, white-light brown, cryptocrystalline fossil fragments, brachiopods, pyrite.
- 4730 - 4750 Shale, green, partly silty.
- 4750 - 4940 Limestone, medium-light brown, cryptocrystalline, partly calcarenite, mottled, pelletal, partly cherty, reefal, containing brachiopods, amphipora, stromatopora, fossil fragments. Traces of pyrite. No visible porosity. Oil staining.
- 4940 - 4960 Limestone, brown-light brown, interbedded shales, turquoise green, pyritic, slightly calcareous.
- 4960 - 5040 Limestone, brown-light brown, crypto to microcrystalline, partly calcarenite, pelletal, scattered fossil fragments, amphipora, brachiopods; traces of vuggy porosity. Oil staining.

- 4
- 5240 - 5290 Dolomite, medium-dark brown, fine crystalline; white crypto-crystalline dolomite, mottled, pelletal, partly calcareous, vuggy, scattered fossil fragments, ghost structures, amphipora. Visible poor porosity throughout. Oil staining.
- 5290 - 5420 Dolomite, dark brown, mottled, fine crystalline, vuggy, calcareous, argillaceous, fossil fragments, amphipora, crinoids; traces of vuggy porosity.
- Grading into limestone, brown, cryptocrystalline, abundant fine fossil fragments, crinoids, brachiopods.
- 5420 - 5490 Limestone, light-medium brown, mottled, earthy, cryptocrystalline, argillaceous, partly dolomitic, fossil fragments, crinoids, brachiopods.
- 5490 - 5560 Anhydrite, white-buff-light brown, partly dolomitic, interbedded green shales, pyrite.
- 5560 - 5580 Sandstone, quartzite, white, very fine-coarse grained, clean, quartz matrix. Interbedded green shales, pyritic.
- 5580 - 5602 Granite, coarse crystalline, pink, alkaline, containing quartz, orthoclase, minor biotite.

T.D.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. C68-3383-3

Received March 5, 1968 Reported March 8, 1968

Well: Location: Pan Am, B.A., A-1 Spawm 160° 10' N - 118° 13' W

Operator: Pan American Petroleum Corporation

Field or Area: Wildcat

Elev.: K.R. 2186' Grid: 2173'

Zone/Formation

Sample Interval: 3102' - 3224'

Method of Production: D.S.T. #1

Sampled from: Bottom

Sampled by: J.D. Fenton

Date: Feb. 22, 1968

OTHER PERTINENT DATA

(Signed)

Na	K	Ca	Mg	SO ₄	Cl	CO ₃	HCO ₃
29931		7449	1213	850	61800		790
1301.98		371.71	99.71	17.68	1742.76		12.96
36.71		10.48	2.81	0.50	49.14		0.36

Total Solids Mg/L:

By Evaporation 110,530

Fe Present Specific Gravity 1.076

@ 60°F @ 68°F

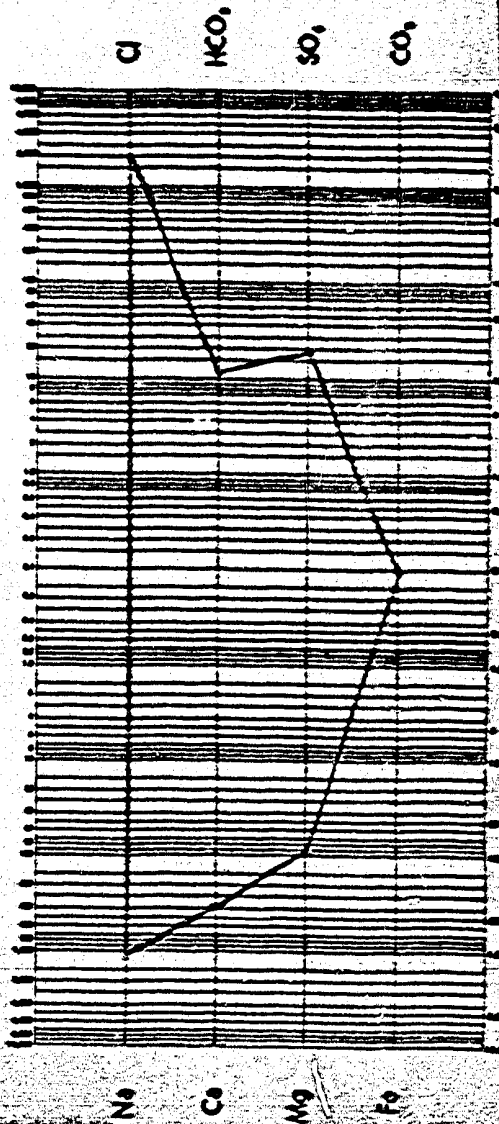
Calculated 102,032

After Ignition 95,620

H₂S Present Refractive Index

@ 25°C @ 68°F

Pattern Unit Meq/L



Remarks and Conclusions Sample as received contained a large amount of ferrous sulfide precipitate. Filtered sample was clear and light yellowish-green in colour.

Laboratory Number: C68-3383-1; Sampled from top. RESISTIVITY: 0.541 Ohm-Meters at 68°F.

Laboratory Number: C68-3383-2; Sampled from middle. RESISTIVITY: 0.074 Ohm-Meters at 68°F.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. 268-6240-3

Received: March 6, 1968 Reported: March 12, 1968

Well Location: Pan Am, B.A. 4-1 Spasm 0-27

60° 10' N - 118° 15' W

Operator: Pan American Petroleum Corporation

Field or Area:

Elev.: K.O. 2186' Grd.

Zone/Formation: Huskey

Sample Interval: 4973' - 5100'

Method of Production: D.S.T. #3

Sampled from: Bottom

Sampled by: John Panton

Date: Feb. 27, 1968

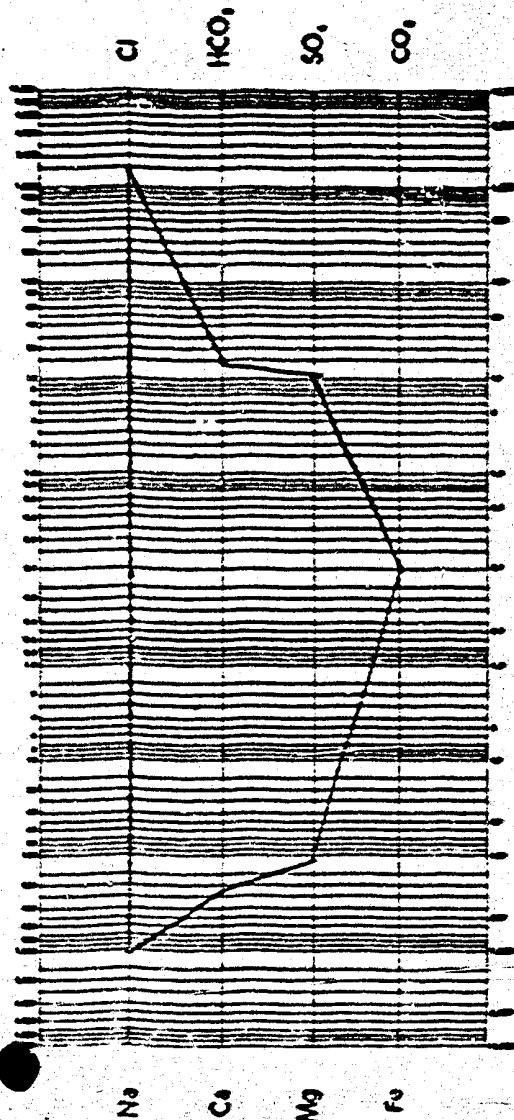
OTHER PERTINENT DATA Recovered: 620' mud, 2560' salty sulfurous water.

(Signed)

	Na	K	Ca	Mg	SO ₄	Cl	CO ₃	HCO ₃	
Mg./L	26293		4973	1521	556	52850		913	
Meq./L	1143.76		248.15	125.03	11.56	1430.37		15.01	
Meq. %	37.70		8.18	4.12	0.38	49.12		0.50	

Total Solids Mg./L: By Evaporation 91,770 Fe Present Specific Gravity 1.060 @60°F Observed pH 6.5 @ 75 °F
 Calculated 87,108 After Ignition 77,760 H₂S Present Refractive Index 1.3497 @25°C Resistivity 0.105 ohm meters @ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions: Sample consisted of greenish coloured water with some sediment.

Laboratory Number: 268-6240-1; Sampled from top. RESISTIVITY: 0.229 Ohm-Meters at 68°F.

Sample consisted of yellowish coloured water filtered from heavy muddy water. Trace hydrogen sulfide detected.

Laboratory Number: 268-6240-2; Sampled from middle. RESISTIVITY: 0.120 Ohm-Meters at 68°F.

Sample consisted of light green coloured water with some sediment. Hydrogen sulfide detected.

DRILL STEM TESTING & CORING LTD.

EDMONTON PHONE 424-7282

CALGARY PHONE 244-0985

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

1

Date FEBRUARY 22, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION
444 - 7th AVE. S.W.
CALGARY, ALBERTA.
 Well Name PAN AM B.A. A-1 SPAN 9-27-60
 Location ISD G-27-60-108-15
 Area SPAIN LAKE, N.V.T.
 Formation MUSKEG
 Est. Pay Thick _____
 Ticket No. 3-556
 Purchase Order No. 3625-7

Interval 5102' TO 5234'
 Test Duration 183 MINUTES
 Initial Hydrostatic 2359
 Final Hydrostatic 2348
 PRE- 676
 Initial Flowing 972
 Final Flowing 1732 after 60 min.
 Initial Shut-In 1734 after 60 min.
 Final Shut-In 1732 after 60 min.
 Blow GOOD
 Recovery 4680'

Mud Type GEL - BENEY Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.5 Size Rat Hole _____ O.D. Drill Collar 6"
 Vis. 80 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W. L. 10.0 Time Circulated CORING Mrs. Tool Length 161.97'
 pH 8.0 Where Circulated _____ Rat Hole Length _____
 F. C. 2/32 Bit off Bottom 6.45 P.M. Difference _____
 Condition FAIR Formation MUSKEG Total Depth 5234'
 TEST EXTRAS: SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. PAIL SAFE HEAD.
FLOOR KAYCOLD L-EX. PACKER.

Type of Test DUAL BOTTOM HOLE Wt. to Set Packer 28,000 16,000 To Full Loss
 Initial Perf. GOOD Gas Flow NIL Size 1/2" Fluid Cushion NONE
 Temp. 146° Gravity _____ No. Drill Collars 19(43H90) Length 544.87' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 1.15 A.M. Recorder No. _____
 Tool Open 6.22 A.M. Depth Run _____
 - Closed 6.25 A.M. Hydrostatic _____
 - Open 7.25 A.M. Flow _____
 - Closed 8.25 A.M. Initial S.I.P. _____
 - Loose 9.25 A.M. Final S.I.P. _____
 - Out 3.00 P.M. Difference _____

2484	2370	
5110'	5115'	
2356-2343	2359-2348	
957-1730	972-1732	
1733	1734	
1730	1732	
3	2	

Mud 240'
 Oil _____
 Water 4440'
 Total 4680'
 Sampled at TOP, MIDDLE, BOTTOM.

Description of Fluid 240' OF DRILLING MUD.
4440' OF BLACK SULPHUROUS, SLIGHTLY GASSIFIED SALT WATER.

Witnessed By: JOHN FENTON, LARRY PENNINGTON, CARL CAZES.

REMARKS: GOOD INITIAL PUFF. GOOD AIR BLOW WHEN OPENED FOR FLOW. BLOW DECREASING SLOWLY IN 25 MINUTES THEN DIESING COMPLETELY IN 37 MINUTES. NO GAS TO SURFACE.

TEST SATISFACTORY.

RICK PEDIRCHUCK.

Testing Supervisor

Customer's Representative

D.S.T. # 1 WELL NAME PAN AM B.A. A-1 SPAN 9-27-60-108-15

DEFINITIONS

P_w = Shut in well pressure, particularly F.S.L.P. psi
 P_f = Flowing well pressure, particularly F.P. psi
 P_o = Reservoir pressure from F.S.L.P. or plot psi
 T = Time of test influence on reservoir usually flowing time - minutes
 t = Convenient incremental time - minutes
 Q = Daily rate of flow - mcf/day or bbls/day
 m = Slope of build up curve
 EDR = Estimated damage ratio

μ = Viscosity - centipoise
 k = Permeability - millidarcy
 h = Pay thickness - feet
 Z = Gas deviation factor
 $A.O.F.$ = Absolute open flow - million cubic feet/day
 $P.I.$ = Productivity index - mcf. or bbls./day/psi
 $g.o.$ = Subscript denotes gas or oil
 B = Formation volume factor

BUILD UP PRESSURE						FLOWING PRESSURE					
Rec. # 2484		Rec. # 2370		P_w	t	Rec. # 2484		Rec. # 2370		P_f	Q
Initial	Final	Initial	Final			Initial	Final	Initial	Final		
1733	1730	1734	1732	10		642	1323	676	1334	10	
1733	1730	1734	1732	20			1577		1586	20	
1733	1730	1734	1732	30			1706		1708	30	
1733	1730	1734	1732	40			1730		1731	40	
1733	1730	1734	1732	50			1730		1732	50	
1733	1730	1734	1732	60			1730		1732	60	

m = slope of straight line portion of build up curve

$$k h = \frac{162.6 Q \mu B}{m_o} \quad \text{or} \quad \frac{1637 Q g \mu Z \text{ temp}}{m_g}$$

$$EDR = \frac{P_o - P_f}{m_o (\log T + 1.75)} \quad \text{or} \quad \frac{P_o^2 - P_f^2}{m_g (\log T + 3.85)}$$

$$\frac{k}{h} = \frac{k h}{h^2}$$

$$P.I. = \frac{Q_o}{P_o - P_f} \quad \text{or} \quad \frac{Q_g}{P_o^2 - P_f^2}$$

psi
 cycle
 md ft

no dimension

md

bbls/day/psi
 mcf/day/psi

ASSUMPTIONS AND LIMITATIONS

Interpretation calculations require necessary assumptions to provide a quick estimation of many of the factors involved. Consequently, the calculations herein should be used as an estimate only, pending more complete analysis and testing. Drill Stem Testers make no warranty express or implied as to the accuracy of such calculations, evaluations, or opinions, and shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

DRILL STOM TESTING & CORING LTD.

EDMONTON: PHONE 423-7388

CALGARY: PHONE 340-8725

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

2

Date FEBRUARY 26, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION
444 - 7th AVE. S.W.
CALGARY, ALBERTA.
 Well Name PAN AM E.A. A-1 SPAVN G-27-60
 Location ISD G-27-60-10N-118-15
 Area SPAVN LAKE, N.W.T.
 Formation MUSKEG
 Est. Pay Thick _____
 Ticket No. B-558
 Purchase Order No. 3625-7

Interval 4975' TO 5100'
 Test Duration TEST MIS-RUN (184 MIN.)
 Initial Hydrostatic 2307
 Final Hydrostatic 2305
 Initial Flowing _____
 Final Flowing _____ after _____ mins.
 Initial Shut-In _____ after _____ mins.
 Final Shut-In _____ after _____ mins.
 Blow _____
 Recovery 20'

Mud Type GEL. BENEK Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.6 Size Rat Hole _____ O.D. Drill Collar 6"
 Vis. 88 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W. L. 8.2 Time Circulated 8-3/4 Hrs. Tool Length 667.46'
 pH 8. Where Circulated BOTTOM Rat Hole Length _____
 F. C. 2/32 Bit off Bottom 12.30 P. M. Difference _____
 Condition _____ Formation MUSKEG Total Depth 5602'
 TEST EXTRAS: SAFETY JT. JARS. PUMP OUT SUB. FLOOR MANIFOLD. FAIL SAFE HEAD.
3-EX. PACKERS. BY-PASS EQUIP. 30' EX. TAIL PIPE.

Type of Test DUAL STRADDLE BY-PASS Wt. to Set Packer 30,000 To Pull Loose _____
 Initial Puff NIL Gas Flow _____ Size Bore 1/2" Fluid Cushion NONE
 Temp. _____ Gravity _____ No. Drill Collars 10(42890) Length 296.81' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 7.45P.M. Recorder No. _____
 Tool Open 12.36A.M. Depth Run _____
 " Closed 12.40A.M. Hydrostatics _____
 " Open 1.40 A.M. Flow _____
 " Closed 2.40 A.M. Initial S.I.P. _____
 " Loose 3.40 A.M. Final S.I.P. _____
 " Out 7.15 A.M. Difference _____

2484	2370	
2307-2305	2316-2308	

Mud 20'
 Oil _____
 Water _____
 Total 20'
 Sampled at _____

Description of Fluid 20' OF DRILLING MUD.

Witnessed By: JOHN FENTON, CARL CAZES, DRILLER & CREW.

REMARKS: NO BLOW ON PRE-FLOW. PULLED TOOL LOOSE AND RESET WITH NO BLOW. SEUT
TOOL IS FOR INITIAL SHUT IN PERIOD. NO BLOW WHEN OPENED FOR FLOW PERIOD.
CHARTS SHOW THAT TOOL DID NOT OPEN.

TEST MIS-RUN.

RICK FEDIRCHUCK.

Testing Supervisor

Customer's Representative

D.S.T. # 2 WELL NAME PAN AM E.A. A-1 SPAVN G-27-60-10N-118-15

DRILL STON TESTING & CORING LTD.

EDMONTON PHONE 423-7788

CALGARY PHONE 268-3123

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

3

Date FEBRUARY 27, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION.
444 - 7th AVE. S.W.
CALGARY, ALBERTA.
 Well Name PAN AM B.A. A-1 SPAN 0-27-60
 Location ISD 0-27-60-101-118-15
 Area SPAN LAKE, N.V.T.
 Formation MUSKEG
 Est. Pay Thick.
 Ticket No. B-559
 Purchase Order No. 3625-7

Interval 4975' TO 5100'
 Test Duration 243 MINUTES
 Initial Hydrostatic 2314
 Final Hydrostatic 2300
PRE- 56
 Initial Flowing 167
 Final Flowing 1493 after 120 mins.
 Initial Shut-In 1662 after 60 mins.
 Final Shut-In 1663 after 60 mins.
 Blow PAIR
 Recovery 3180'

Mud Type GEL BENEX. Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.9 Size Ret Hole O.D. Drill Collar 6"
 Visc. 88 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W.L. 8.2 Time Circulated Hrs. Tool Length 667.46'
 pH 8. Where Circulated TESTING Ret Hole Length
 F.C. 2/32 Bit off Bottom 12.30 P.M. Difference
 Condition PAIR Formation MUSKEG Total Depth 5602'
 TEST EXTRAS. SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FLOOR MANIFOLD.
FAIL SAFE HEAD BY PASS EQUIP. 3 EX PACKERS 30" EX TAIL PIPE.

Type of Test DUAL STRADDLE BY-PASS Wt. to Set Packer 35,000 18,000 To Pull Loose
 Initial Puff PAIR Gas Flow Size 1/2" Fluid Cushion NIL
 Temp. 142° Gravity No. Drill Collars 10(4-1/2" H90) Length 296.81' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 7.45 A.M. Recorder No.
 Tool Open 10.37 A.M. Depth Run
 " Closed 10.40 A.M. Hydrostatics
 " Open 11.40 A.M. Flow
 " Closed 1.40 P.M. Initial S.I.P.
 " Loose 2.40 P.M. Final S.I.P.
 " Out 10.15 P.M. Difference

2484	2370
4987'	4992'
2311-2296	2314-2300
165-1494	167-1493
1662	1662
1663	1663
1	1

Mud 620'
 Oil
 Water 2560'
 Total 3180'
 Sampled at TOP, MIDDLE, BOTTOM.

Description of Fluid 620' WATER CUT DRILLING MUD.
2560' OF BLACK SULPHUROUS SLIGHTLY GASIFIED SALT WATER.

Witnessed By: JOHN FENTON, CARL CAZES, DRILLER & CREW.
 REMARKS: PAIR INITIAL AIR PUFF IN 3 MINUTES. PAIR AIR BLOW WHEN OPENED FOR FLOW
PERIOD. BLOW REMAINED STEADY THROUGHOUT FLOW PERIOD.
NO GAS TO SURFACE.

TEST SATISFACTORY.

RICK FEDIRCHUCK.

Testing Supervisor

Customer's Representative

DST. # 3 WELL NAME PAN AM B.A. A-1 SPAN 0-27-60-101-118-15

DEFINITIONS

P_w = Shut in well pressure, particularly F.S.I.P. psi
 P_f = Flowing well pressure, particularly F.F.P. psi
 P_o = Reservoir pressure from F.S.I.P. or plot psi
 T = Time of test influence on reservoir usually flowing time - minutes
 t = Convenient incremental time - minutes
 Q = Daily rate of flow - mcf/day or bbls/day
 m = Slope of build up curve
 $ED.R.$ = Estimated damage ratio

μ = Viscosity - centipoise
 k = Permeability - millidarcy
 h = Pay thickness - feet
 Z = Gas deviation factor
 $A.O.F.$ = Absolute open flow - million cubic feet/day
 $P.I.$ = Productivity index - mcf. or bbls./day/psi
 $g.o.$ = Subscript denotes gas or oil
 B = Formation volume factor

BUILD UP PRESSURE							FLOWING PRESSURE						
Rec. # 2484		Rec. # 2370		P _w	t	T+1	Rec. # 2484		Rec. # 2370		P _f	t	Q
Initial	Final	Initial	Final			†	Initial	Final	Initial	Final			
1661	1663	1660	1663		30		28	459	36	447		10	
1662	1663	1662	1663		20			527		519		20	
1662	1663	1662	1663		30			743		737		30	
1662	1663	1662	1663		40			850		845		40	
1662	1663	1662	1663		50			952		950		50	
1662	1663	1662	1663		60			1053		1049		60	
								1140		1136		70	
								1224		1223		80	
								1299		1302		90	
								1371		1374		100	
								1436		1437		110	
								1494		1493		120	

m = slope of straight line portion of build up curve

$$k h = \frac{162.6 Q \mu B}{m_o} \quad \text{or} \quad \frac{1637 Q g \mu Z \text{ temp}}{m_g}$$

$$ED.R. = \frac{P_o - P_f}{m_o (\log T + 1.75)} \quad \text{or} \quad \frac{P_o^* - P_f^*}{m_g (\log T + 3.85)}$$

$$\frac{k}{h} = \frac{k h}{h^2}$$

$$P.I. = \frac{Q_o}{P_o - P_f} \quad \text{or} \quad \frac{Q_g}{P_o^* - P_f^*}$$

psi
cycle
md ft

no dimension

md

bbls/day/psi
mcf/day/psi

ASSUMPTIONS AND LIMITATIONS

Interpretation calculations require necessary assumptions to provide a quick estimation of many of the factors involved. Consequently, the calculations herein should be used as an estimate only, pending more complete analysis and testing. Drill Stem Testers makes no warranty express or implied as to the accuracy of such calculations, evaluations, or opinions, and shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 433-7383

CALGARY: PHONE 384-3925

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

1

Date FEBRUARY 22, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION
444 - 7th AVE. S.W.
CALGARY, ALBERTA.
 Well Name PAN AM B.A. A-1 SPAN G-27-60
 Location USD G-27-60-10E-11B-15
 Area SPANH LAKE, E.W.T.
 Formation MUSKEG
 Est. Pay Thick. _____
 Ticket No. B-556
 Purchase Order No. 3625-7

Interval 5102' TO 5234'
 Test Duration 183 MINUTES
 Initial Hydrostatic 2359
 Final Hydrostatic 2348
PRE- 676
 Initial Flowing 972
 Final Flowing 1732 after 60 mins.
 Initial Shut-in 1734 after 60 mins.
 Final Shut-in 1732 after 60 mins.
 Blow GOOD
 Recovery 4680'

Mud Type GEL. BENEK. Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.5 Size Rat Hole --- O.D. Drill Collar 6"
 Vis. 80 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W. L. 10.0 Time Circulated CORING Hrs. Tool Length 161.97'
 pH 8.0 Where Circulated --- Rat Hole Length ---
 F. C. 2/32 Bit off Bottom 6.45 P. M. Difference ---
 Condition FAIR Formation MUSKEG Total Depth 5234'
 TEST EXTRAS: SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FAIL SAFE HEAD.
FLOOR MANTLED. L-EX. PARKER.

Type of Test DUAL BOTTOM HOLE Wt. to Set Packer 28,000 16,000 To Pull Loose
 Initial Puff GOOD Gas Flow NIL Size Bore 1/2" Fluid Cushion NONE
 Temp. 146° Gravity --- No. Drill Collars 15(4H90) Length 544.87' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 1.15 A.M. Recorder No. _____
 Tool Open 5.22 A.M. Depth Run _____
 " Closed 5.25 A.M. Hydrostatics _____
 " Open 7.25 A.M. Flow _____
 " Closed 8.25 A.M. Initial S.I.P. _____
 " Loose 9.25 A.M. Final S.I.P. _____
 " Out 3.00 P.M. Difference _____

2484	2370
5110'	5115'
2356-2343	2359-2348
957-1730	972-1732
1733	1734
1730	1732
3	2

Mud 240'
 Oil _____
 Water 4440'
 Total 4680'
 Sampled at _____
TOP, MIDDLE, BOTTOM.

Description of Fluid 240' OF DRILLING MUD.
4440' OF BLACK SULPHUROUS, SLIGHTLY GASSIFIED SALT WATER.

Witnessed By: JOHN FENTON, LARRY PEMBERTON, CARL CAZES.

REMARKS: GOOD INITIAL PUFF. GOOD AIR BLOW WHEN OPENED FOR FLOW. BLOW DECREASING SLOWLY IN 25 MINUTES THEN DURING COMPLETELY IN 37 MINUTES. NO GAS TO SURFACE.

TEST SATISFACTORY.

RICK FEDIRCHUCK.

Testing Supervisor

Customer's Representative

D.S.T. # 1 WELL NAME PAN AM B.A. A-1 SPAN G-27-60-10E-11B-15.

DEFINITIONS

P_v = Shut in well pressure, particularly F.S.I.P. psi
 P_f = Flowing well pressure, particularly F.F.P. psi
 P_o = Reservoir pressure from F.S.I.P. or plot psi
 T = Time of test influence on reservoir usually flowing time - minutes
 t = Convenient incremental time - minutes
 Q = Daily rate of flow - mcf/day or bbls./day
 m = Slope of build up curve
 $E.D.R.$ = Estimated damage ratio

μ = Viscosity - centipoise
 k = Permeability - millidarcy
 h = Pay thickness - feet
 Z = Gas deviation factor
 $A.O.F.$ = Absolute open flow - million cubic feet/day
 $P.L.$ = Productivity index - mcf. or bbls./day/psi
 $g.o.$ = Subscript denotes gas or oil
 B = Formation volume factor

BUILD UP PRESSURE							FLOWING PRESSURE						
Rec. # 2484		Rec. # 2570		P _v	t	T+t	Rec. # 2484		Rec. # 2570		M	t	Q
Initial	Final	Initial	Final			t	Initial	Final	Initial	Final			
1733	1730	1734	1732	10			642	1523	676	1534		10	
1733	1730	1734	1732	20				1577		1586		20	
1733	1730	1734	1732	30				1706		1708		30	
1733	1730	1734	1732	40				1730		1731		40	
1733	1730	1734	1732	50				1730		1732		50	
1733	1730	1734	1732	60				1730		1732		60	

m = slope of straight line portion of build up curve

$$k h = \frac{162.6 Q \mu B}{m_o} \quad \text{or} \quad \frac{1637 Q g \mu Z \text{ temp}}{m_g}$$

$$E.D.R. = \frac{P_o - P_f}{m_o (\log T + 1.75)} \quad \text{or} \quad \frac{P_o - P_f}{m_g (\log T + 3.85)}$$

$$\frac{k}{h} = \frac{k h}{h^2}$$

$$P.L. = \frac{Q_o}{P_o - P_f} \quad \text{or} \quad \frac{Q_g}{P_o - P_f}$$

psi
cycle
md ft

no dimension

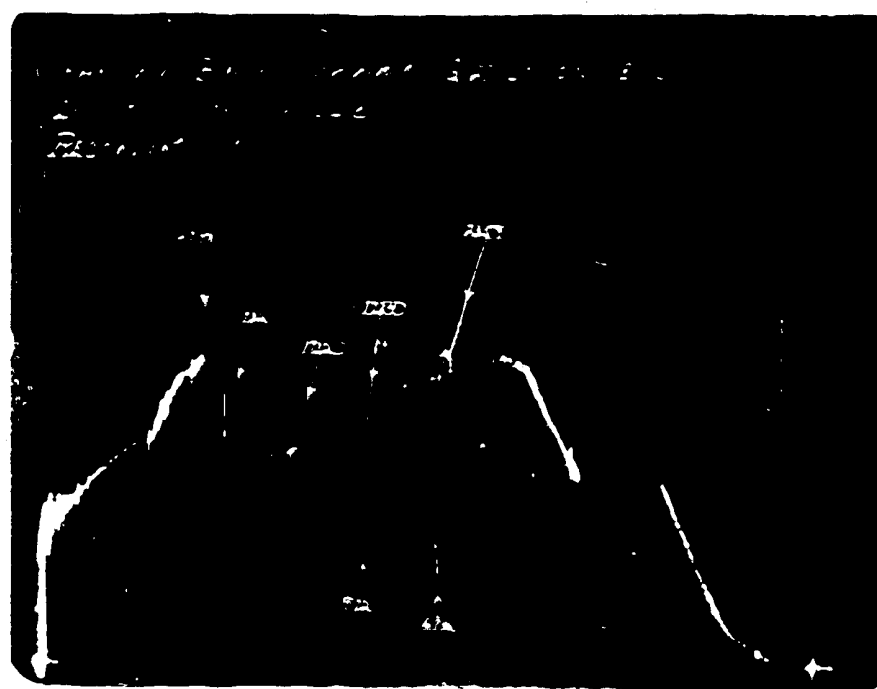
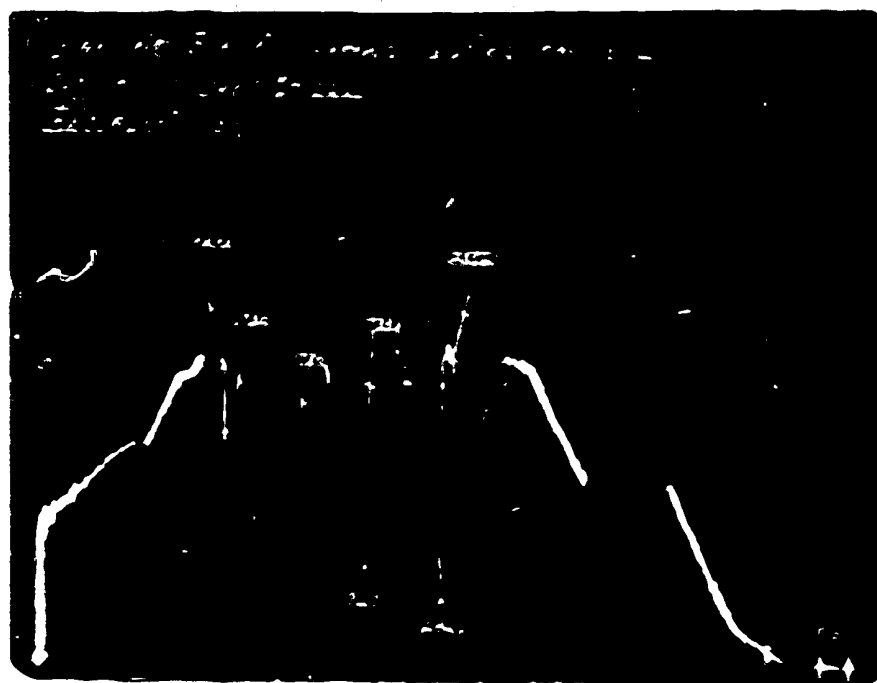
md

bbls/day/psi
mcf/day/psi

ASSUMPTIONS AND LIMITATIONS

Interpretation calculations require necessary assumptions to provide a quick estimation of many of the factors involved. Consequently, the calculations herein should be used as an estimate only, pending more complete analysis and testing. Drill Stem Testers makes no warranty express or implied as to the accuracy of such calculations, evaluations, or opinions, and shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.





DRILL STEM TESTING & CORING LTD.

EDMONTON: PHONE 488-728

CALGARY: PHONE 288-3925

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

2

Date FEBRUARY 26, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION
444 - 7th AVE. S.V.
CALGARY, ALBERTA.
 Well Name PAN AM B.A. A-1 SPAN 0-27-60
 Location ISD 0-27-60-108-118-25
 Area SPAN 1 AREA, N.V.A.
 Formation MUSKEG
 Est. Pay Thick. _____
 Ticket No. B-558
 Purchase Order No. 3625-7

Interval 4975' TO 5100'
 Test Duration TEST MIS-RUN. (184 MIN.)
 Initial Hydrostatic 2307
 Final Hydrostatic 2305
 Initial Flowing _____
 Final Flowing _____ after _____ mins.
 Initial Shut-In _____ after _____ mins.
 Final Shut-In _____ after _____ mins.
 Blow _____
 Recovery 20°

Mud Type GEL, BSNK Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.6 Size Ret Hole _____ O.D. Drill Collar 6"
 Vis. 88 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W.L. 8.2 Time Circulated 8-3/4 Hrs. Tool Length 667.46'
 pH 8. Where Circulated BOTTOM Ret Hole Length _____
 F.C. 2/32 Bit off Bottom 12.30 P.M. Difference _____
 Condition _____ Formation MUSKEG Total Depth 5602'
 TEST EXTRAS: SAFETY JT. JARS. PUMP OUT SUB. FLOOR MANIFOLD. FALL SAFE HEAD.
3-EX. PACKERS. BY-PASS EQUIP. 30" EX. TAIL PIPE.

Type of Test DUAL STRADDLE BY-PASS Wt. to Set Packer 30,000 To Pull Loose _____
 Initial Puff NIL Gas Flow _____ Size Bore 1/2" Fluid Cushion NONE
 Temp. _____ Gravity _____ No. Drill Collars 20(4 1/2" H90) Length 296.81' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 7.45P.M. Recorder No. _____
 Tool Open 12.36A.M. Depth Run _____
 " Closed 12.40A.M. Hydrostatics _____
 " Open 1.40 A.M. Flow _____
 " Closed 2.40 A.M. Initial S.I.P. _____
 " Loose 3.40 A.M. Final S.I.P. _____
 " Out 7.25 A.M. Difference _____

2484	2370	
2307-2305	2316-2308	

Mud 20°
 Oil _____
 Water _____
 Total 20°
 Sampled at _____

Description of Fluid 20° OF DRILLING MUD.

Witnessed By: JOSE PECTON, CARL CAZES, DRILLER & CREW.

REMARKS: NO BLOW ON PRE-FLOW. PULLED TOOL LOOSE AND RESET WITH NO BLOW. SHUT
TOOL IN FOR INITIAL SHUT IN PERIOD. NO BLOW WHEN OPENED FOR FLOW PERIOD.
CHARTS SHOW THAT TOOL DID NOT OPEN.

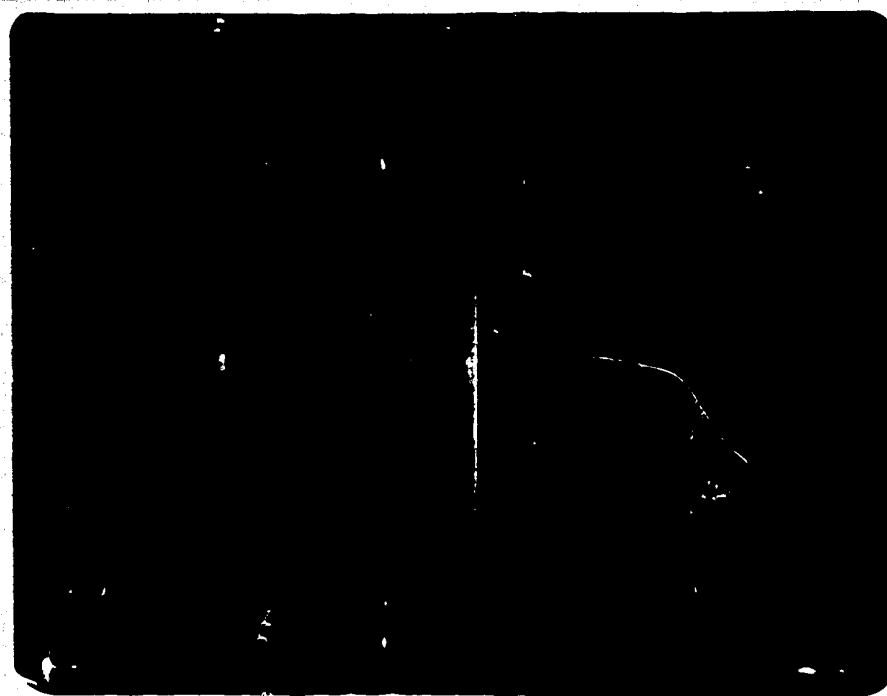
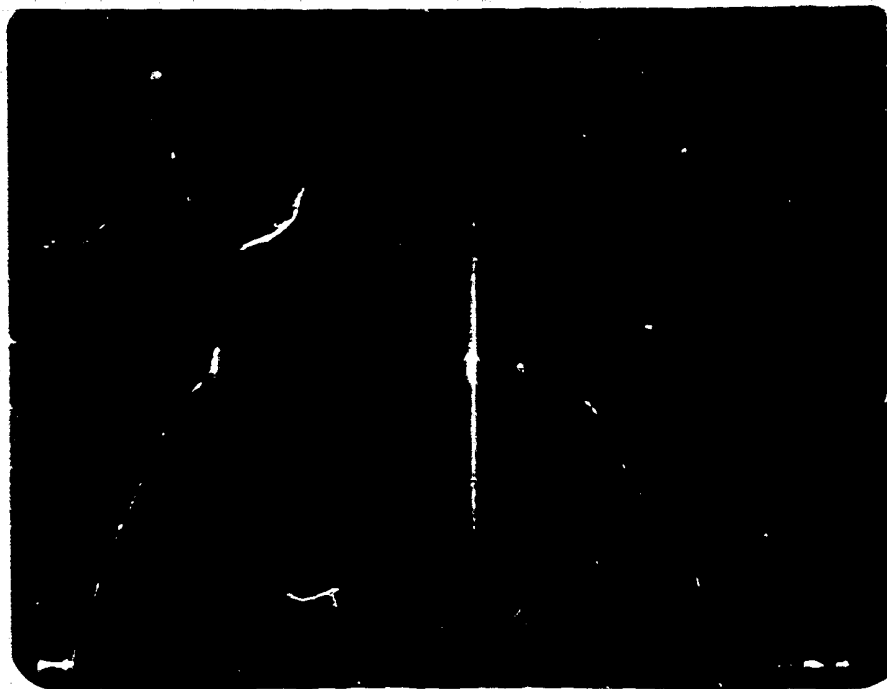
TEST MIS-RUN.

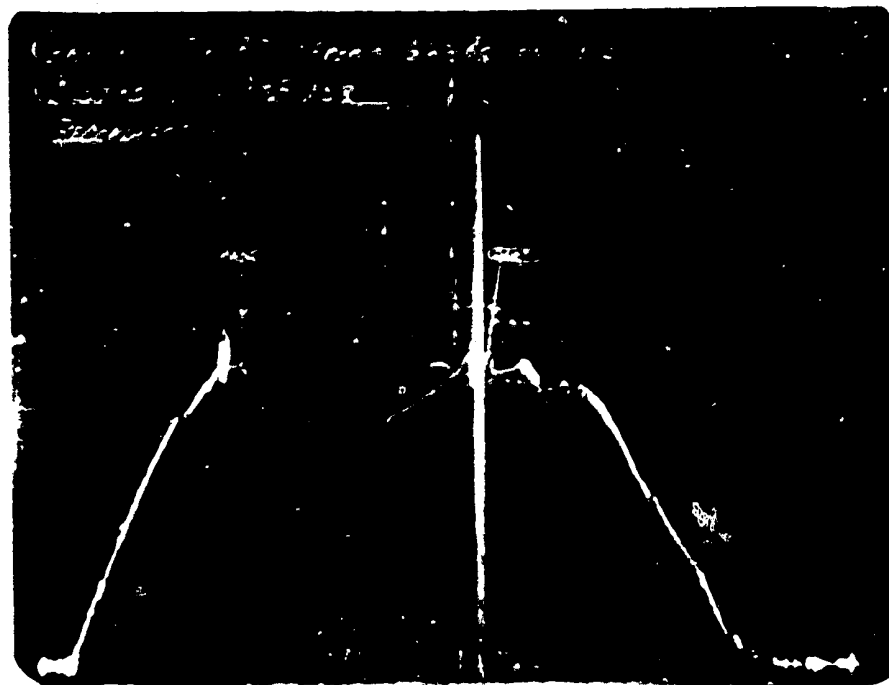
RICK FEDIRCHUCK.

Testing Supervisor

Customer's Representative

D.I.T. # 2 WELL NAME PAN AM B.A. A-1 SPAN 0-27-60-108-118-25





DRILL STEM TESTING & CORING LTD.

EDMONTON PHONE 433-7383

CALGARY PHONE 269-8925

P.O. BOX 4188, EDMONTON, ALBERTA

TEST NUMBER

3

Date FEBRUARY 27, 1968.
 Customer PAN AMERICAN PETROLEUM CORPORATION.
444 - 7th AVE. S.W.
CALGARY, ALBERTA.
 Well Name PAN AM B.A. A-1 SPARK 0-27-60
 Location ISD 6-27-60-10N-11B-15
 Area SPARK LAKE, N.W.T.
 Formation MUSKEG
 Est. Pay Thick _____
 Ticket No. B-559
 Purchase Order No. 3625-7

Interval 4975' TO 5100'
 Test Duration 243 MINUTES
 Initial Hydrostatic 2314
 Final Hydrostatic 2300
PRE- 56
 Initial Flowing 167
 Final Flowing 1493 after 120 mins.
 Initial Shut-In 1662 after 60 mins.
 Final Shut-In 1663 after 60 mins.
 Blow FAIR
 Recovery 3180'

Mud Type GEL BENEK. Size Full Hole 8-3/4" Size Rubber 7-3/4"
 Mud Wt. 8.9 Size Rat Hole — O.D. Drill Collar 6"
 Vis. 88 Size & Type Pipe 4-1/2" P.H. O.D. Sub or T.J. 5-3/4"
 W. L. 8.2 Time Circulated — Hrs. Tool Length 667.46'
 pH 8. Where Circulated TESTING Rat Hole Length —
 F. C. 2/32 Bit off Bottom 12.30, P.M. Difference —
 Condition FAIR Formation MUSKEG Total Depth 5602'
 TEST EXTRAS SAFETY JT. DOUBLE SHUT IN. JARS. PUMP OUT SUB. FLOOR MANIFOLD.
FULL SAFE HEAD BY-PASS EQUIP. 3 EX. PACKERS. 30' EX. TAIL PIPE.

Type of Test DUAL STRADDLE BY-PASS Wt. to Set Packer 35,000 18,000 To Pull Loose
 Initial Puff FAIR Gas Flow — Size Bore 1/2" Fluid Cushion NIL
 Temp. 142° Gravity — No. Drill Collars 10(4 1/2 H90) Length 296.81' I.D.'s 2-7/8"

PRESSURES

FLUID RECOVERY

Started In 7.45 A.M. Recorder No. _____
 Tool Open 10.37 A.M. Depth Run _____
 " Closed 10.40 A.M. Hydrostatics _____
 " Open 11.40 A.M. Flow _____
 " Closed 1.40 P.M. Initial S.I.P. _____
 " Loose 2.40 P.M. Final S.I.P. _____
 " Out 10.15 P.M. Difference _____

2484	2370	
4987'	4992'	
2311-2296	2314-2300	
165-1494	167-1493	
1662	1662	
1663	1663	
1	1	

Mud 620'
 Oil _____
 Water 2560'
 Total 3180'
 Sampled at _____
TOP, MIDDLE, BOTTOM.

Description of Fluid 620' WATER CUT DRILLING MUD.
2560' OF BLACK SULPHUROUS SLIGHTLY GASIFIED SALT WATER.

Witnessed By: JOHN FERTON, CARL CAZES, DRILLER & CREW.

REMARKS: FAIR INITIAL AIR PUFF IN 3 MINUTES. FAIR AIR BLOW WHEN OPENED FOR FLOW
PERIOD. BLOW REMAINED STEADY THROUGHOUT FLOW PERIOD.
NO GAS TO SURFACE.

TEST SATISFACTORY.

RICK PEDIRCHUCK,

Testing Supervisor

Customer's Representative

D.S.T. # 3 WELL NAME PAN AM B.A. A-1 SPARK 0-27-60-10N-11B-15

DEFINITIONS

P_w = Shut in well pressure, particularly F.S.I.P. psi
 P_f = Flowing well pressure, particularly F.F.P. psi
 P_o = Reservoir pressure from F.S.I.P. or plot psi
 T = Time of test influence on reservoir usually flowing time - minutes
 t = Convenient incremental time - minutes
 Q = Daily rate of flow - mcf/day or bbls./day
 m = Slope of build up curve
 $E.D.R.$ = Estimated damage ratio

μ = Viscosity - centipoise
 k = Permeability - millidarcy
 h = Pay thickness - feet
 Z = Gas deviation factor
 $A.O.F.$ = Absolute open flow - million cubic feet/day
 $P.I.$ = Productivity index - mcf. or bbls./day/psi
 $g.o.$ = Subscript denotes gas or oil
 B = Formation volume factor

BUILD UP PRESSURE							FLOWING PRESSURE						
Rec. # 2484		Rec. # 2370		P _w	t	T+t	Rec. # 2484		Rec. # 2370		P _f	t	Q
Initial	Final	Initial	Final			t	Initial	Final	Initial	Final			
1661	1663	1660	1663		10		28	459	56	447		10	
1662	1663	1662	1663		20			527		519		20	
1662	1663	1662	1663		30			743		737		30	
1662	1663	1662	1663		40			850		845		40	
1662	1663	1662	1663		50			952		950		50	
1662	1663	1662	1663		60			1053		1049		60	
								1140		1136		70	
								1224		1223		80	
								1299		1302		90	
								1371		1374		100	
								1436		1437		110	
								1494		1493		120	

m = slope of straight line portion of build up curve

$$k h = \frac{162.6 Q \mu B}{m_o} \quad \text{or} \quad \frac{1637 Q g_a Z \text{ temp}}{m_g}$$

$$E.D.R. = \frac{P_o - P_f}{m_o (\log T + 1.75)} \quad \text{or} \quad \frac{P_o^2 - P_f^2}{m_g (\log T + 3.85)}$$

$$L = \frac{k h}{h}$$

$$P.I. = \frac{Q_o}{P_o - P_f} \quad \text{or} \quad \frac{Q_g}{P_o^2 - P_f^2}$$

psi
cycle
md ft

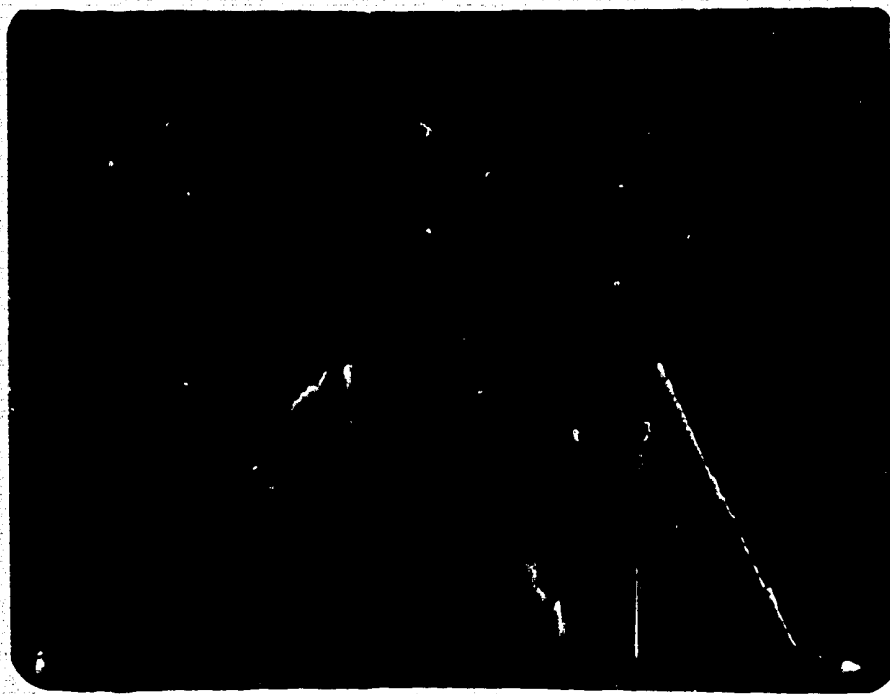
no dimension

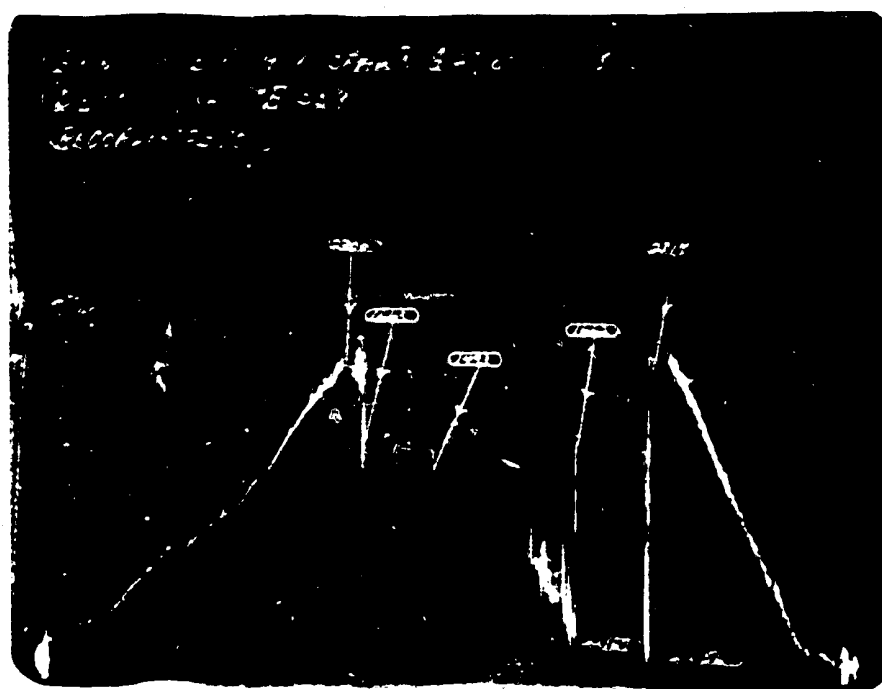
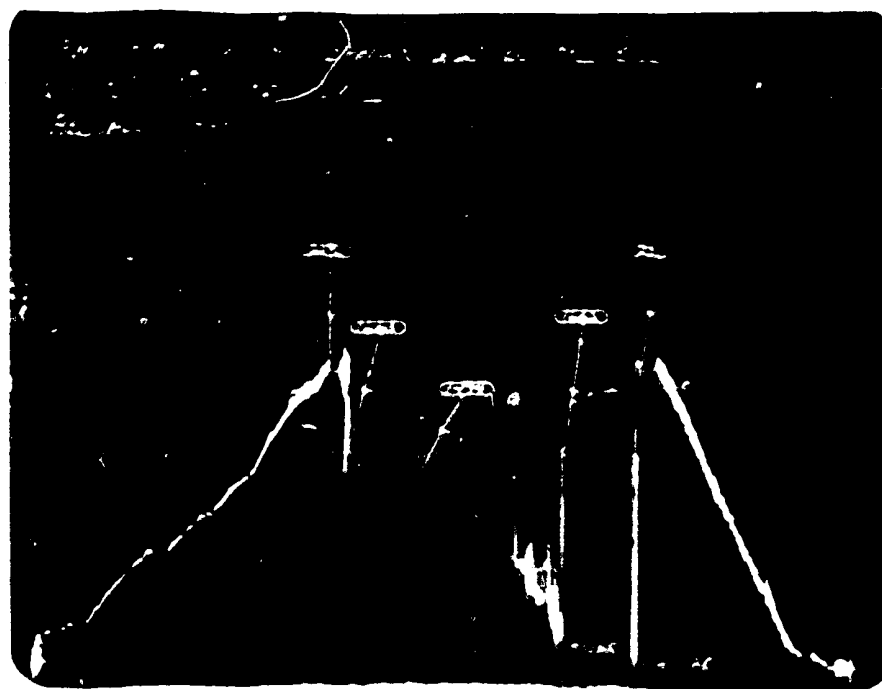
md

bbls./day/psi
mcf/day/psi

ASSUMPTIONS AND LIMITATIONS

Interpretation calculations require necessary assumptions to provide a quick estimation of many of the factors involved. Consequently, the calculations herein should be used as an estimate only, pending more complete analysis and testing. Drill Stem Testers makes no warranty express or implied as to the accuracy of such calculations, evaluations, or opinions, and shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.





PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER:

RIG NUMBER 39-4 CONTRACTOR'S NAME SPINER HOFF Bros

24 HOUR PERIOD
ENDING AT MIDNIGHT

Feb. 29

1048

LEASE NAME

LEASE NAME Pan Am - B.A. A-1 SPANISH HAKO

WELL NO. G 27

FIELD - Spawns in AK.

FIRST TOUR FROM 6 AM. TO 5 PM.

[illegible]

DAYWORK: HOURS

RATE

HOLIBS

RATE

HOURS W/D PIPE

QUANTITY		MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
			DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
									DRILLER'S <i>[Signature]</i>		

SECOND TOUR FROM 800 A.M. TO 400 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	9:00				laying Down BOP
9:00	10:00				Run Plug 3 10 SA
10:00	11:00				TEAR OUT
					REL RELEASED 10:00 AM. Camp Sh. Border Sh.
					2/25/67 JMA

DAYWORK: HOURS

RATE

HOLIDAYS

RATE

HOURS W/D PIPE

QUANTITY		MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
				DEVIATION INSTRUMENT			DEPTH	DEGREES OFF				
										DRILLER'S <i>[Signature]</i> TIME <i>[Signature]</i>		

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
2:00	4:00				TEAR OUT
					4:00 - PA 12:00 AM Camp 8th
					Under 8th

DAYWORK: 4 HOURS

-RATE.

HOLERS

RATE

HOLERS W/D PIPE

[illegible]

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39-H CONTRACTOR'S NAME BRUNER HOFF BROS 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 23 1968
LEASE NAME Pan Am - B-A-A-1 SPAWN LAKE WELL NO. G-27 FIELD _____

FIRST TOUR FROM 1200 A.M. TO 800 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	145				BREK DOWN @ LOAD OUT TESTING TOOLS
145	200				Rig SCR.
200	330				LAY DOWN DRILL COLLAR'S
330	630				RUN IN OPEN END TO Plug Boiler &h
630	645				C.P.C. Camp &h
645	800				Rig to Run Plug
					WATER COST \$55.00

[illegible]

DAYWORK: HOURS		RATE		HOURS				RATE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE <i>Walter B...</i>		

SECOND TOUR FROM 8⁰⁰ A.M. TO 4⁰⁰ P.M.

[illegible][illegible][illegible]

THIRD TOUR FROM 4⁰⁰ P.M. TO 12⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	5 ³⁰				WLOC @ Run id To FEEL Plug
5 ²⁰	7 ⁰⁰				FIGHT Plug #1 @ 4905' @ Heave to Run Plug
7 ⁰⁸	7 ³⁰				Run Plug #2 25 Sx 2% Caluz
7 ³⁰	12 ⁰⁰				Lay Down Drill pipe @ WLOC
					CAMP & Co.
					Baker & Co.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS		RATE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND	
		DEVIATION INSTRUMENT			DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE		<i>Bud Sands</i>	

APPROVED [Signature]
DEAL AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39H CONTRACTOR'S NAME BRINKERHOFF BROS LTD. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 27 1968
LEASE NAME PAN AM BA A-1 SPAWN LAKE WELL NO. G-27-60-10N-118W15 FIELD

FIRST TOUR FROM 12 P. M. TO 8 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215		5602		Rig SERVICE & CHECK B.O.P.s.
1215	1230				HEAD UP TEST TOOL.
1230	345				TESTING.
345	400				BREAK DOWN TEST TOOL HEAD & CHECK SANS.
400	700				Pull out
700	745				BREAKING DOWN & CHECKING TEST TOOL.
745	800				Run in to TEST

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
										Baker She
										Camp She
		WATER COST \$8.00								
		DEVIATION INSTRUMENT			DEPTH		DEGREES OFF			
		EASTMAN			5602		1 1/2			
								DRIILLER'S SIGNATURE	Walter Bess	

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15	Service			Rig Service & B.O.P.
8:15	10:30	Trip			Run in to test
10:30	10:45				Head up testing tools
10:45	3:45	Test			Testing
3:45	4:00				Pull Test
					Boiler Thump
					Camp Thump

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								 DRILLER'S SIGNATURE	

THIRD TOUR FROM 2:00 P M. TO 12:00 H M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED Walt Gay
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39-H CONTRACTOR'S NAME Beinkaphs BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB. 26 1968
LEASE NAME Pool Am. BAAI Sparrow Lk. WELL NO. C-27 FIELD Sparrow Lk.

FIRST TOUR FROM 12 P M. TO 7 A M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Big Service & B-up.
12 ¹⁵	12 ⁴⁵				Pay Down 9 D Calkers
12 ⁴⁵	3 ¹⁵				Run in Hole To Circ
3 ¹⁵	8 ⁰⁰	T.D 5602			Wait on orders Circ
					Water lost \$5.00 Camp 8 hours Bailor 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

SECOND TOUR FROM 5 A M. TO 4 P M

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15	Service			Rig Service v B-OP
8:15	1230				PIPE (wait on orders)
1230	330				Pull out To TEST
330	400				Making up Testing Tools
					Boiler 8 hours
					Comp 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

THIRD TOUR FROM 4 P. M. TO 12 P. M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VOL.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE	<i>L. Ramstad</i>	

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED _____
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR'S NAME BANKERHOFF BROS LTD. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 25 19 68
LEASE NAME PAN AM B-A A-1 SPAWN LAKE G-27-60-10N-11E-W15 WELL NO. _____ FIELD SPAWN LAKE

FIRST TOUR FROM 12 M. TO 8 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				Rig SERVICE & CHECK BOPs.
1215	200				FINISH STRAPPING OUT
200	215				Rig. to Log.
215	800				5602 Logging w/ SCHLUMBERGER.
					CAMP 8 HOURS
					Water test 5500 BOILER 8 HOURS.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		EASTMAN		5602		1 1/2			
								DRILLER'S SIGNATURE: <i>Walter Berns</i>	

DRILLER'S SIGNATURE: Walter Berge

SECOND TOUR FROM 8 A M. TO 4 P M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

DRILLER'S SIGNATURE _____

THIRD TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION. WORK PERFORMED. CONDITION OF HOLE. DIFFICULTIES ENCOUNTERED. UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD. ETC.
FROM	TO		FROM	TO	
400	500				Logging (SCHLUMBERGER) WAIT ON ORDERS UNLOAD BAGGED CEMENT LOADING OUT MUD.
500					
	1200				
</					

Baker She
Cano She

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

DRILLER'S SIGNATURE *Paul S. Smith*

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED Carl Gage
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR'S NAME SPUNKERHOFF BROS LTD 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 29 19 68
LEASE NAME PAN AM B-A H-1 SPAWN LAKE WELL NO. G27-60'0N-118'W5 FIELD SPAWN LAKE

FIRST TOUR FROM 12 M. TO 8 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				RIG SERVICE & CHECK B.O.P.S.
1215	800		5493	5568	DRILLING 8 7/8" HOLE
					CAMP 8 Hours
					BOILER 8 Hours
					Water Cost \$55.00 FUEL 5500 GAL.

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	PH.	BIT NO.	SIZE	KIND
1250 LB.	CELLEX	1230	8.8	64	10.	3/2	10.5	5	8 1/2" HW	1558794673
									324 FT in	3234 HRS.
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE <i>Walter B...</i>		

SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15	Service			Rig Service & B.O.P.
8:15	2:30	DRLg	5558	5602	Drilling 7 3/4 hole
2:30	4:00				(C.M.) Condition mud.
			T.R	5602-	
					Boiler hours.
					Camp hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
100 #	SODA ASH							5	8 3/4	H.W. X 6 1/2" 24673
100 #	GEL									
150 #	DETRID	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		367 ft. W. 32 1/2 hours.		
100 #	GEL							DRILLER'S SIGNATURE <i>[Signature]</i>		

THIRD TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	500				CIRCULATE TO LOG.
500	700				MAKE 20 STAND DUMMY TRIP.
700	1000				CIRCULATE TO LOG.
1000	1115				SURVEY @ 5602
1015	1200			5602	STRAP OUT TO LOG.
					CAMP 8 HOURS
					BOILER 8 HOURS

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	P.H.	BIT NO.	SIZE	KIND
500 ⁰⁰	SODA ASH.	900	8.6	87	82	$\frac{2}{32}$	9	5	83	H.W. X55R#94673
10	DEXTRID.									368 FT IN 38 $\frac{1}{2}$ Hours
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		5602		143				
								DRILLER'S SIGNATURE		

APPROVED *John D. Firth*
PAN AMERICAN REPRESENTATIVE

APPROVED Carl C. Carr
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39.4 CONTRACTOR'S NAME BRINKERHOFF BROS. LTD. 24 HOUR PERIOD LENDING AT MIDNIGHT FEB. 22 1968
LEASE NAME PAN AM B A A-1 SPAWN LAKE 627-60-10N-19W WELL NO. SPAWN LAKE FIELD SPAWN LAKE

FIRST TOUR FROM 12 A. M. TO 1 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				Rig SERVICE & CHECK B.O.P.S.
1215	115				MAKE UP TEST TOOL.
115	215				RUN IN D.C. CAMP 8 HOURS
215	230				SLIP 15' DRILLING LINE BOILER 8 HOURS
230	615				RUN IN + HEAD UP TEST TOOLS.
615	800		5230		TESTING.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS _____ RATE _____

QUANTITY		MUD MATERIAL ADDED	HOURS RATE						HOURS W/D PIPE		
			TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
			DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		4200 GALS FUEL.		
			EASTMAN		5210		1 1/2.				
									DRILLER'S NAME R...		

SECOND TOUR FROM 8 A M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	9:30	Test			Testing (D.S.T.)
9:30	3:00				Pull out (D.S.T.)
3:00	4:00				Service & Lay down Test Tools.
					Comp 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____

[illegible]

THIRD TOUR FROM 4 P. M. TO 6 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	500				RUN IN DRILL COLLARS.
500	745				SLIP NEW DRILLING LINE
745	1015				RUN IN W/NEW B.T.I
1015	1200				DRILLING 8 3/4" HOLE
					CAMP 8 Hours
					BOILER 8 Hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS _____ RATE _____

DAY WORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
								5	8 3/4	HW X55R #94673.
										21 FT IN 13 1/2 HOURS.
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		5210		1 1/2.				
								DRILLER'S	1-15	P

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED _____
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39th CONTRACTOR'S NAME BRIKHERRHOFF BROS 24 HOUR PERIOD ENDING AT MIDNIGHT Feb 21 1968
LEASE NAME Panama BAA1 Sparin Lake WELL NO. G-27-60-702114-415 FIELD Sparin Lake

FIRST TOUR FROM 12 9 M. TO 8 1 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	2 ³⁰				Run in
2 ³⁰	4 ⁰⁰				Pick up Kelly Broke CIRC & Pick up 7 JOINTS DAIL PIPE
4 ⁰⁰	6 ⁰⁰				CIRC
6 ⁰⁰	8 ⁰⁰				Hoist to CIRC
					Bottom 8 HOURS
					Camp 8 HOURS
					Water Cost \$55.00 - Fuel 53.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE		

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	915				HOIST TO CORE
915	930				Rig SERVICE & CHECK B.O.P.S.
930	1015				PICK UP & MAKE UP CORE BBL & JARS.
1015	115				RUN IN TO CORE
115	300				REAM & CLEAN 150 FT TO BOTTOM
300	315				CIRCULATE
315	400		5230	5232	CUTTING CORE #1
					Boiler 8 Hours CAMP 8 Hours.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

THIRD TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	630		5232	5234	CUTTING CORE # 1
630	645				Rig SERVICE & CHECK B.O.P.S.
645	1030				ALL JAMMED CORE BBL.
1030	1100				SERVICE & STAND BACK CORE BBL.
1100	1200				MAKE UP TESTING TOOLS. CAMP 8 HOURS
					BOILER 8 HOURS

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		5210		1 1/2				
								DRILLER'S SIGNATURE	Lionel Rensford	

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED Carl Hays
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39-H CONTRACTOR'S NAME BRINKERHOFF BROS. LTD. 24 HOUR PERIOD FEB. 20 1968
SENDING AT MIDNIGHT
LEASE NAME Don Am B.A. #1 Lessor G-27 WELL NO. _____ FIELD _____

FIRST TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				Rig SERVICE & CHECK ROPS.
1215	130				PICK UP & MAKE UP JARS.
130	400				RUN TO WITHIN 10 STANDS OF BOTTOM.
400	630				CHANGE DRUM CLUTCH & THAW OUT KELLY
630	700				RUN IN BREAK CIRC.
700	800				CIRC.

Boiler: 8 hrs
W/2 End ← 1500 (1500) 8 hrs

	Boiler	8 hrs
Water Cost \$5.00	Camp	8 hrs

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE <i>Bill Smith</i>		

DRILLER'S SIGNATURE Bill Gandy

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	1115				WORKING PIPE WITH JARS. TRY TO CATCH FISH.
1115	1215				WORK PIPE WITH FISH + JARS.
1215	130				PULL OUT W/ FISH (SPINNING OUT W/ CHAIN)
130	330				WORK ON BOILER & STEAM LINES.
330	400				CONTINUE PULLING OUT.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	PL LOSS	CAKE	P.H.	BIT NO.	SIZE	KIND
200 3 SAK	SODA ASH. BENEX	200	90	175	8	$\frac{3}{8}$ "	9	4	9 ^{3/4}	REED SCISS # 12112
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		S210		1 $\frac{1}{2}$.				
								DRILLER'S SIGNATURE		
								Walter Bane		

DRILLER'S SIGNATURE Walter Renge

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	415				Rig 500 ✓ 1200?
415	730				Trip out w/ fish
730	830				lay down fishing Tools
830	900				Rey down D.C. & finish out.
900	1000				Run in D.Cs
10	1115				Ship & cut line
1115	1200		5230		Run in

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			8.8	160	9.8	4/12			
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								P. Ramstad	
								DRILLER'S SIGNATURE	

DRILLER'S
SIGNATURE _____

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED _____
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 39H CONTRACTOR'S NAME BRINKERHOFF BROS. LTD. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 19 1958
 LEASE NAME PAN AM BAH SPAWN LAKE WELL NO. G27-60-10N-118-415 FIELD SPAWN LAKE

FIRST TOUR FROM 12 A. M. TO 8 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				Rig SERVICE
1215	800				STUCK IN HOLE
					WORKING PIPE AS REQUESTED BY ENGINEER
					Boiler 8 hrs
					Camp 8 hrs
					Water Cal 55.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	P.H.	BIT NO.	SIZE	KIND
		9.2	60	8	32	8	4	834	REED	SCS 63, 17122
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		5210		1 1/2		DRILLER'S SIGNATURE <u>Bill Sands</u>		

SECOND TOUR FROM 12 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	1100				WORKING PIPE OCCASIONALLY
1100	145				CIRC. CONDITION MUD (WORKING PIPE) SOME
145	400				Logging DC. JOINTS FOR BACK OFF W/B.S. & B.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	P.H.	BIT NO.	SIZE	KIND
CEL	2.000	8.30	9.2	60	8.0	32	3.5	4	834	REED SCS 63, 17122
CEL-EX	1.5 KLS	12.30	8.9	205	7.2	32	8.5		456	FT IN 47 HOURS
CEL-EX	100	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
BARON	15.00	EASTMAN		5210		1 1/2		DRILLER'S SIGNATURE <u>Walter Burger</u>		

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1100	1145				Logging (B.S. & B.)
4:00	5:15				Threw up pipe for To Back off D.C.
5:15	8:10				Run string shot + back off 6 D.B.s from Bottom.
8:30	11:15				Hoisting
11:15	12:00		5230		key down D.C.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								DRILLER'S SIGNATURE <u>Samuel Remsted</u>	

APPROVED John W. Sturtevant

PAN AMERICAN REPRESENTATIVE

APPROVED Carl Case

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39H CONTRACTOR'S NAME BRINKERHOFF BROS 24 HOUR PERIOD Feb 18 1968
ENDING AT MIDNIGHT
LEASE NAME DAN AM BAIT SODA LAKE WELL NO. 527-60-10N-18-W15 FIELD SODA LAKE

FIRST TOUR FROM 12 7 M. TO 8 4 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Big SERV
12 ¹⁵					Stuck in Hole
	8 ⁰⁰				Waiting For Oil Truck
					Water Cost \$55.00
					Boiler 8 Hours
					Fuel 14.00

DAYWORK: HOURS _____ RATE _____ HO'RS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	P/L	BIT NO.	SIZE	KIND
3000	Water	12 30	98	51	8.1	8.5	8.5	4	8 3/4	FEED SC56J
3000	Water	7 00	92	77	90	3 1/2	85			177122
10#	Berex	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
5:00	9:30				WAIT FOR OIL TRUCK
7:30	10:30				SPOT OIL IN TIGHT SPOT.
10:30	11:30				WAIT FOR SPOTTED OIL TO WORK
11:30	4:00				PUMPING AND WORKING PIPE AS REQUESTED
					CAMP 8 HOURS
					BOILER 8 HOURS.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	RIND
1700	GEL						4	8 3/4	REED SOSEX 177
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
		EASTMAN	5210	1 1/2					
							DRILLER'S SIGNATURE	Walter Berger	

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Rig SERD & Check BOPs
4 ¹⁵	12 ⁰⁰				Working pipe as requested by Engineer (Stack)
					Boiler 8 Hours Camp 8 Hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

APPROVED: *[Signature]*
PAN AMERICAN REPRESENTATIVE

APPROVED _____
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39th CONTRACTOR'S NAME BR. ZIK-RNOFF RPOS 24 HOUR PERIOD ENDING AT MIDNIGHT Feb 17 19 68
LEASE NAME PAWAM PAWAM SPAWN LAKE WELL NO. G27-60 FIELD SPAWN LAKE

FIRST TOUR FROM 12 A M. TO 4 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				RIG SERV + Check BOPS
12 ¹⁵	12 ⁴⁵		4983	4992	DRLG 8 3/4 Hole
12 ⁴⁵	1 ¹⁵				SERV + Grease Survival
1 ¹⁵	8 ⁰⁰		4992	5065	DRLG 8 3/4 Hole
					Fuel 7000 Boiler 8 Hours Camp 8 Hours
					Water Cost \$7.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	PH	BIT NO.	SIZE	KIND
		2:00	92	49	94	22	85	4	8 3/4	RFED SE56J
		7:00	92	45	11	3/2	85			177122
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		301 FEET IN 35 HOURS		
				4792		1 1/2°				
								DRILLER'S SIGNATURE <i>Bill Spool</i>		

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15				Rig SERVICE & CHECK B.O.P.S. Drilling 8 3/4" Hole
8:15	4:00		5065	5164	
					CAMP 8 Hours
					BOILER 8 Hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
1000	GEL	8 ³⁰ AM	9.2	52	12	3/2	4	8 ^{3/4}	REED SCSSG 177122
500	BAROID	3 PM	9.2	49			400 FEET		IN 12 ^{3/4} HOURS.
500	BAROID	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		EASTMAN		499.2		1 ³⁰		466 FEET	IN 47 HOURS
								DRILLER'S SIGNATURE	Walter Burr

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION. WORK PERFORMED. CONDITION OF HOLE. DIFFICULTIES ENCOUNTERED. UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD. ETC.
FROM	TO		FROM	TO	
400	415		5164		Rig Set Back BOPs
415	800			5210	DRAG 8 3/4 Hole
800	815				SealVey
815	945		5210	5230	DRAG 8 3/4 Hole
945	1045				Circ Sample
1045	1100				Pulled out To Core
1100	1203				STUCK IN Hole

CAMP 8 HOURS

BOILER 8 HOURS

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							4	8 3/4	RED SCISS
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		Hole Feet in 47 Hours	
							DRILLER'S SIGNATURE		

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

FIRST TOUR FROM 12 9 M. TO 8 4 M.

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	PH	BIT NO.	SIZE	KIND
		11:30	9.1	74	8.4	3/2	8.5	4	8 3/4	Reed SPS5J
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		108 Feet in 13 1/4 Hours		
								DRILLER'S SIGNATURE Bill Sands		

[illegible]

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	PH	BIT NO.	SIZE	KIND
9100	WT mat	1100	92	49				4	8 3/4	REED SC5GT
3500	Gel	1200	92	50	93	2 1/2	85			
16"	Donex	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		219 FEET IN 27 3/4 HOURS		
300	Soda Ash							J. Hammett DRILLER'S SIGNATURE		

APPROVED: [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 3814 CONTRACTOR'S NAME BRINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 15 1964
LEASE NAME Perm. Am. A-1 GA Spawin Lk. WELL NO. G-27 FIELD Spawin Lk.

FIRST TOUR FROM 12 P M. TO 8 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12.00	12.15	SERVICE			Rig Service ✓ BOP.
12.15	2.30	DRG	4708		Drilling 8 3/4 hole
2.33	2.45				work on pump (change pumps)
2.45	4.30	DRG			Drilling 8 3/4 hole
4.30	6.45				clear out pumps. (Clean section) ^{Tank} FUEL 8497
6.45	7.30	DRG	4764		Drilling 8 3/4 hole Boiler 8 hours
7.30	8.00				Mix mud. (Water cost \$87.00) Camp 8 hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
								3	8 1/2	Sec. 53 IS R casing #120524
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		919 H in. 49 hours.		
								DRILLER'S SIGNATURE <i>Fleming</i>		

SECOND TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:20	8:45				Rig Set + 230 Ps
8:45	10:30				Con mud to Raising Volume TO Trip
10:30	2:00				Trip FOR BIT
2:00	4:00				Made up BIT Running 1.77
					Boiler 8 hours
					Camp 8 hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
180#	GEL	9.30	92	48	8	3/2				
50#	CYPAN									
6#	BENEX									
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		4764		1 1/2				
								DRILLER'S SIGNATURE	Bill [Signature]	

THIRD TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	415				Rig Service & Check B.O.P.s.
415	545				FINISH RUNNING IN
545	615				CLEAN OUT 33 FT To BOTTOM.
615	1200		4764	4805	DRILLING
					CLEANED OUT Tight Spot
					④ 4470.
					CAMP 8 Hours
					Boiler 8 Hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	V.S.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
1800	GEL	11 ³⁰	9.2	H8	7	7/2		4	8 ³⁴	REED SC5GT
3555	BENEX							#177122	4"	FL. W. 54/HK
200	SODA ASA.	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		EASTMAN		4764		1 ¹ / ₈ .				
								DRILLER'S SIGNATURE		Walter Berge

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED Test bases
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR'S NAME Brinkhoff Bros Ltd 24 HOUR PERIOD ENDING AT MIDNIGHT Feb 14 1968
 LEASE NAME PAN AM. B.A. A. SPAWN LAKE WELL NO. 627-60-10N-18W15 FIELD SPAWN LK.

FIRST TOUR FROM 12 A. M. TO 8 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	100		4295		DRILLING.
100	115				Rig SERVICE + CHECK B.O.P.S.
115	130				SURVEY.
130	800		4427		DRILLING.
					CAMP 8 Hours Boiler 8 Hours.
					Water Cost \$151.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2200#	GEL						3	8 3/4	SEC 33T
50#	CUPAN								582 FT IN 29 1/2 HRS
12#	BENEX.								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		EASTMAN		4313		1 1/4			
							DRILLER'S SIGNATURE <u>Lionel Penetral</u>		

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	815				Rig SERVICE + CHECK B.O.P.S.
815	245		4427	4528	DRILLING 8 3/4" HOLE
245	300				SURVEY
300	400		4529	4550	DRILLING.
					CAMP 8 Hours Boiler 8 Hours.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2000#	GEL.						3	8 3/4	SEC 33T
8#	BENEX						#120501		705 FT IN 36 1/2 HRS
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		EASTMAN		4528		1°			
							DRILLER'S SIGNATURE <u>Bill Sande</u>		

THIRD TOUR FROM 4 P. M. TO 12 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	415				Rig SERVICE + CHECK B.O.P.S.
415	1200		4550	4708	DRILLING
					CAMP 8 Hours Boiler 8 Hours. FUEL 6500 GALS

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
5000#	GEL	415	92	33	13.	3/4	85	3	8 3/4 53T SEC.
1050#	BENEX.	1130	73	38	11.	3/2	85	#120501	863 FT IN 44 Hours
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
							DRILLER'S SIGNATURE <u>Walter Berge</u>		

APPROVED _____

PAN AMERICAN REPRESENTATIVE

APPROVED _____

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 30⁺ CONTRACTOR'S NAME F. F. Ruffin Bros 24 HOUR PERIOD ENDING AT MIDNIGHT 5-13-68 1968

LEASE NAME Pan Am G A S Spana LK WELL NO. G 27 FIELD Spana Lake

FIRST TOUR FROM 12 A M. TO 8 A M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ⁰⁰				Rig EARLY & BOOPS
12 ⁰⁰	3 ⁰⁰		3860		DELEG 8 3/4 Hole
3 ⁰⁰	4 ⁰⁰				Change head 121 pump
4 ⁰⁰	9 ⁰⁰			4020	DELEG 8 3/4 Hole
					Ballast 8 HRS
					Comp 8 HRS
					Water test \$151.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2000	Red	12:00	9.2	30			3	7 3/4	Sec SST
6	B-MER								
50	CYPAN								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								175' 121 2 NRS	
								DRILLER'S SIGNATURE	

SECOND TOUR FROM 8 7 M. TO 4 0 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ²²	L	4020	4035	DRLG 8 ³⁶ Hole
8 ⁴⁰	9 ¹²				Rig Setup & Survey
9 ¹³			4035		DRLG 8 ³⁶ Hole
					Bail at 8 Hours Casing 8 Hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2400#	GEL	10:00	9'	33'			3	8 3/4"	Sec SAT S.S.
8#	PENEX								
200#	CYPAN								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
				403'		2 1/2°			
							DRILLER'S SIGNATURE		

THIRD TOUR FROM 4 P. M. TO 12 A. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	5:30	DRlg.	4170	4190	
5:30	5:45	Rig SEPI.			
5:45	12:00	DRlg.	4190	4255	CAMP 8 HRS. BOILER 8 HOURS.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
4000 ⁰⁰	GEL.	400	9.3	35	10	$\frac{3}{32}$	5	8 3/4	SEC. SST. S.B.
75 AX	BENEX	1100	9.0	34	9.2	$\frac{3}{32}$		450 FT	IN 2 1/4 Hours
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		EASTMAN							
								DRILLER'S SIGNATURE	Walter Bural

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 304 CONTRACTOR'S NAME BRINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB. 12 1968
 LEASE NAME PAN AM. EA A1 SPOON L.K. WELL NO. 427 FIELD Spoon L.K.

FIRST TOUR FROM 12:15 M. TO 8:00 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12:00	12:15	Service			Rig Service v B.O.P.
12:15	12:30	Survey			Survey
12:30	2:45	Drilling	3620		Drilling 8 3/4 hole
2:45	3:00				Work on Kelly Bushing
3:00	7:05	Drilling	3757		Drilling 8 3/4 hole
7:15	8:00				Work on pump
					Water cost \$175.00
					Fuel 12400 Boiler 8 hours Camp 8 hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2000	Gel						2	8 3/4	Sec. 53T 120502
10	BENEX								
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
			3631	7/8					
							DRILLER'S SIGNATURE		

SECOND TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15	Rig San.			Rig San v B.O.P.
8:15	2:00	Drilling	3757	3845	Drilling
2:00	4:00				Survey + HORIZ FOR BIT 202
					Camp 8 hours Boiler 8 hours

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
1500	Gel	9:30	7	36			2	8 3/4	Sec 53T
100	Cypria								
10	BENEX								
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
			3845	1.0					
							DRILLER'S SIGNATURE		

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	4:15				Rig Service - Check B.O.P.
4:15	5:00				Run in collars
5:00	8:00				Backed by down 4" Kelly & pick up 3"
8:00	9:00				Kelly made up
9:00	10:00				Run in
10:00	11:00				Clear 90ft to bottom
			3845	3860	Drilling 8 3/4 hole

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
							DRILLER'S SIGNATURE		

APPROVED [Signature] PAN AMERICAN REPRESENTATIVE

APPROVED [Signature] CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 3714 CONTRACTOR'S NAME B. Rinkhoff Bros 24 HOUR PERIOD ENDING AT MIDNIGHT Feb. 11
 LEASE NAME Pan. Am. B.A. Spaworth Lk. A1 WELL NO. 527 FIELD Spaworth Lk.

FIRST TOUR FROM 12 PM M. TO 8 AM M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12.00	12.15	Service			Rig Service & B.O.P.
12.15	12.30	Survey			Drilling 8 3/4 hole
12.30	4.00	DRlg	2720		
4.00	4.15	Survey			Survey
4.15	8.00	DRlg	3090		Drilling 8 3/4 hole
					Water Cost 345.00
					Fuel 132.00 Boiler 8 hours Camp 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
	WATER		84	28			2	8 3/4	Sec. 53T 120502
		DEVIATION IN	UMENT	DEPTH	DEGREES OFF				562 ft in. 13 1/2 hours
				2734	3/4				
				2919	1/2				
							DRILLER'S SIGNATURE		L. Rinkhoff

SECOND TOUR FROM 8 M. TO 4 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8.00	9.12				Rig Service Check B.O.P.
9.12	10.00		3090		DRlg 8 3/4 Hole
10.00	10.15		3068		Survey
10.15	12.00		3068		DRlg 8 3/4 Hole
12.00	12.15		3028		Survey
12.15	4.00		3028		DRlg 8 3/4 Hole
					Boiler 8 hours Camp 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
	WATER						2	8 3/4	Sec 53T
		DEVIATION IN	UMENT	DEPTH	DEGREES OFF				799 ft in. 20 3/4 hours
				3168	1/2				
				3229	10				
							DRILLER'S SIGNATURE		L. Rinkhoff

THIRD TOUR FROM 4 A M. TO 12 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4.00	4.15	Service			Rig Service & B.O.P.
4.15	7.15	DRlg	3322		Drilling
7.15	7.30	Survey			Survey
7.30	12.00	DRlg	3620		Drilling
					Camp 8 hours Boiler 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
601	2500						2	8 3/4	Sec. 53T
BREX	5345								1092 ft in. 77 1/2 hr.
		DEVIATION IN	UMENT	DEPTH	DEGREES OFF				
							DRILLER'S SIGNATURE		L. Rinkhoff

APPROVED _____

PAN AMERICAN REPRESENTATIVE

APPROVED _____

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 304 CONTRACTOR'S NAME Pinkert Bros 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 10 1962
LEASE NAME Port. Rd. B.A. Spawd LK. A1 WELL NO. G-27 FIELD Spawd LK.

FIRST TOUR FROM 12.00 P M. TO 8.00 A M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							1	8 3/4	H.2 13.0
	WATER.								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
							DRILLER'S SIGNATURE		

SECOND TOUR FROM 7 4 M. TO 4 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	7:15				Rig SUBMIT BOPS
8:12	10:20		2458	2519	DRILL 6 3/4 Hole
10:20	10:30				Seveya Chang RUBBERS in FOR 12 inch Valve pump
10:30	4:50		2519	2525	DRILL 6 3/4 Hole
11:45	12:45				HOLET FOR Bit no 1
12:45	1:12				Run in Collars
1:12	3:47				Chang Kelly Hose Slip 15' line

DAYWORK	HOURS	RATE	HOURS	RATE	HOURS W/D PIPE
8	12	1.00	12	1.00	12

DAYWORK LOGS									
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							1	8 3/4	HW X 3 3/4
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		1148 FT 12 49 1/2 HOURS	
				2419		2.0			
				0528		2.0		DRILLER'S SIGNATURE <i>Bill Sand</i>	

THIRD TOUR FROM 4 AM M. TO 12 PM M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4.00	4.15	Service			Rig Service & B.O.P.
4.15	4.30	Trip			Run IN
4.30	5.05				Work on Pump Clutch
5.05	5.45				Brake cric. Clean 40 ft To Bottom
5.45	12.00	Drilling	2528	2720	Drilling
					Boiler 8 hours Comp 8 hours

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	IFL. LOSS	CAKE	BIT NO.	SIZE	KIND
							F.	8 3/4	53T 120507.
Water ✓									
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		192 6 1/4 hours.	
								DRILLER'S SIGNATURE Walter Berge	

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED Bob L. Bage
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR'S NAME Brinkley Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT 7/9 1968
LEASE NAME Tan Am-B.A. Spawm Lk A1 WELL NO. 927 FIELD Spawm Lk.
FIRST TOUR FROM 12 P.M. TO 2 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION. WORK PERFORMED. CONDITION OF HOLE. DIFFICULTIES ENCOUNTERED. UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD. ETC.
FROM	TO		FROM	TO	
12.00	12.15	Service			Rig Service ✓ R.O.P.
12.15	7.00	DRG	1815		Drilling 8 3/4 hole
7.00	7.5	Survey			Survey
7.15	8.00	DRG	2020		Drilling 8 3/4 hole
					Fuel 72.00 Camp 8 hours Bailer 8 hours
					WATER COST 343.00

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
			420					4	8 3/4	H.V. X3A.
			229							
WATER		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		640 ft. W. 22 1/2 hours.		
				19.92.		34		DRILLER'S SIGNATURE L. Remick		

SECOND TOUR FROM 4 4 M. TO 4 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15		2070	2054	Big Spurt - BOPS
8:15	9:15				Drill 8 3/4" Hole
9:15	10:10				Survey + Work on Dr. 2 WORKS
10:10	7:15		2054	2206	Drill 8 3/4" Hole
					Boiler 8 HOURS
					Camp 8 HOURS

DAYWORK: HOURS		RATE		HOURS #		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
			H2O					1.	8 3/4	X 3A-XV120
			84	29						
Water		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		826 Feet in 29 1/4 Hours		
				20 84		1.0		DRILLER'S SIGNATURE		
								Willard		

THIRD TOUR FROM 4 P M. TO 12 A M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	4:30	Service			Rig Service & B.O.P.
4:30	8:30	Drilling	2206		Drilling 8 3/4" hole
8:30	8:45	Surfing			Surfing
8:45	12:00		2350		Drilling 8 3/4" hole
					Barrel 8 hours
					Camp 8 hours

[illegible]

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED _____ CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39-14 CONTRACTOR'S NAME R. P. McKel. H. BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 8. 1961
LEASE NAME POV. AM. B.A. A. I. SPAWN. L.K. WELL NO. G-27 FIELD SPAWN. LAKE
FIRST TOUR FROM 12 P.M. M. TO 8 A.M. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD. ETC.
FROM	TO		FROM	TO	
1200	125	Service			Rig Service @ Check Motor KILL
1215	2.15	Drilling			Drilling out shoe @ Cement
2.15	3.30				Clean out To Bottom. 1380
3.30	8.00	1380	1380	1570	Drilling 2 3/4 hole
					Water Cool 347.00
					Camp 8 hours Boiler 8 hours.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAY WORK - HOURS									
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	PIT NO.	SIZE	KIND
WATER							1	8 3/4	H.W. - Y3A
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		190 ft 4 1/2 hours	
								DRILLER'S SIGNATURE <i>J. Hamster</i>	

SECOND TOUR FROM 9 A M. TO 4 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:05	8:15				Run SERU
8:15	8:30		1570	1581	DRUG 8 3/4 Hole
8:30					LOSS CIRCULATION & mixing LOSSING MATERIAL
	9:30				
9:30	10:30		1581	1635	DRUG 8 3/4 Hole
10:30	10:45				SERU
10:45	2:00				DRUG 7 3/4 Hole
2:00	4:00				

TRIP FOR plug BIT Cleanout Run 100
 HOURS RATE HOURS RATE HOURS W/D PIPE

400 Trip for plug bit Cleanout Run 1st

DAYWORK: HOURS	RATE	HOURS	RATE	HOURS W/D PIPE

QUANTITY		MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
21	Bags Sand	WT								1	8 3/4	HW X3A-XU120
4000	Gel											
25	865 Lix Tex	DEVIATION INSTRUMENT			DEPTH		DEGREES OFF					
62	865 Fiber Tex				1679		1/2°		244 FEET IN 8 3/4 HOURS			
										DRILLER'S SIGNATURE <i>Bill [Signature]</i>		

THIRD TOUR FROM 4 A.M. M TO 12 A.M. M

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	4:15	Service			Rig Service & Bump
4:15	4:30		16 3/5		Regain Circ
4:30	10:00	Drilling			Drilling 8 3/4 hole
10:00	10:15	Survey			Survey
10:15	10:30	Drilling	18.15		Drilling 8 3/4 hole
10:30	12:00				Work on pump
					Comp 8 hours Boiler 8 hours

[illegible]

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
									8 3/4	H.V. X3A
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		424 ft in. 14 3/4 hours.		
								DRILLER'S W. H. B. 1000		

100/100/100

100

Miller

FIRST TOUR FROM 17⁰⁰ H. M. TO 18⁰⁰ H. M.

Water Cost 206.00

SECOND TOUR FROM 7 A.M. TO 12 M.

Maple up to 2000 ft
 Pine to 1000 ft - Camp 10
 1000 ft - Camp 10

THIRD TOUR FROM 7:00 M. TO 11:00 M.

Laying Flat - Linds Co Hook up manafure
Pick up bottom. Hole. Collar to Rindels
manuf. Hole
Pick up 5. Pick up 5. Delli. Collar
Picks just 4.

DRILLER'S SIGNATURE *Walter Sengel*
E. D. Satter
 CONTRACTOR'S REPRESENTATIVE

APPROVED: [Signature]
CONTRACTOR'S REPRESENTATIVE

FIRST TOUR FROM 12⁰⁰ A.M. TO 8⁰⁰ P.M.

Water Cost. 297.50

DRILLER'S
SIGNATURE

SECOND TOUR FROM 8:00 A.M. TO 1:00 P.M.

1202

DRILLER'S
ELECTRIC

THIRD TOUR FROM 4:05 P.M. TO 7:00 P.M.

Let's do a check on: Char

DRILLER*

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

R/G NUMBER 3911 CONTRACTOR'S NAME DRILLER: KLOFF & SONS 24 HOUR PERIOD ENDING AT MIDNIGHT FEB 5 1968
LEASE NAME Pan. Ind. B-A - SPANW LAKE A-1 WELL NO. G-31 FIELD SPANW LAKE

FIRST TOUR FROM 12⁰⁰ P.M. TO 8⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215	<i>Cut.</i>			<i>Rig set.</i>
1215	330	<i>Ny</i>	870	1000	<i>Run 8³/_{4"} To 13³/_{4"} hole Circ. @ mixing Mud</i>
330	800	<i>Cir.</i>			<i>Circ. Camp Site Baker Site.</i>
					<i>Water Cost. 247.00</i>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY		MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
2000	Gal				91	60				7A	12 3/4	no oil - 92976
				DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		156' - 18 4/8		
										DRILLER'S SIGNATURE <i>Walter Benge</i>		

SECOND TOUR FROM 8 M. TO 4 P M

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	9:00				Rig down
9:00	10:30				and a mixing mud
10:30	11:45	1000 - 1341			Rig up
11:45	4:00				Rig to run 9 5/8 casing - 5000 casing @ Kearney Production's
					Camp 8th Boiler 8th.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAYWORK RECORD									
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
9000	Coke	1080	91	116			7A	13 3/4	160 OSC-3 94976
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		156' - 12 4/8 -	
								DRILLER'S SIGNATURE <i>[Signature]</i>	

THIRD TOUR FROM 4:30 P. M. TO 12:00 A. M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

PIPE TALLY AND CEMENTING RECORD

LEASE Pan Am B.A. A-1 SPAWN WELL NO. E-27 DATE FEBRUARY 5 19 68

PIPE RUN. SIZE 2 5/8 WEIGHT 36 GRADE J TYPE JOINT STC MAKE MANWEX NO. FT. _____

PIPE RUN. SIZE _____ WEIGHT _____ GRADE _____ TYPE JOINT _____ MAKE _____ NO. FT. _____

NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		TALLY OF JOINTS NOT RUN		
	FEET	IN.		FEET	IN.		FEET	IN.		FEET	IN.		FEET	IN.			
1	30	89	51			101			151			201			NO.	LENGTH OF JOINT	
2	31	89	52			102			152			202					
3	30	33	53			103			153			203			1	31	13
4	29	19	54			104			154			204			3		
5	31	80	55			105			155			205			4		
6	28	20	56			106			156			206			5		
7	28	80	57			107			157			207			6		
8	30	28	58			108			158			208			7		
9	30	27	59			109			159			209			8		
10	28	17	60			110			160			210			9		
11	30	62	61			111			161			211			10		
12	30	08	62			112			162			212			11		
13	31	04	63			113			163			213			12		
14	33	76	64			114			164			214			13		
15	33	52	65			115			165			215			14		
16	31	62	66			116			166			216			15		
17	28	60	67			117			167			217			16		
18	30	53	68			118			168			218			17		
19	30	28	69			119			169			219			18		
20	32	28	70			120			170			220			19		
21	31	03	71			121			171			221			20		
22	30	79	72			122			172			222			21		
23	33	08	73			123			173			223			22		
24	32	50	74			124			174			224			23		
25	32	82	75			125			175			225			24		
26	29	26	76			126			176								
27	25	44	77			127			177								
28	33	72	78			128			178								
29	30	42	79			129			179								
30	33	17	80			130			180								
31	31	29	81			131			181								
32	32	24	82			132			182								
33	33	58	83			133			183								
34	31	13	84			134			184								
35			85			135			185								
36			86			136			186								
37			87			137			187								
38			88			138			188								
39			89			139			189								
40			90			140			190								
41			91			141			191								
42			92			142			192								
43			93			143			193								
44			94			144			194								
45			95			145			195								
46			96			146			196								
47			97			147			197								
48			98			148			198								
49			99			149			199								
50			100			150			200								

NO. JOINTS DELIVERED 34 1050.96
 NO. JOINTS RUN 33 1027.28
 FLOAT & SNOW 3.13
 TOTAL RUN - OVERALL 1030.39
 OFF FOR THREADS 9.28
 TOTAL - THREADS OFF 1021.11
 TOP PIPE BELOW: 1000.00
☒ ROTARY DRIVE BUSHING 14.30
☐ DERRICK FLOOR 1000.70
 DEPTH LANDED 1000.00
 CEMENT - MAKE ONLAND OILWELL
 KIND USED OILWELL BULK
 NO. SACKS 650 2% CEMENT
 METHOD _____

REMARKS:
Ran 650 SACKS CEMENT
RETURNS 10' FROM SURFACE
RECEMENTED WITH 200
SACKS 2% CEMENT TO FILL
HOLE UNDER FRONT END
OF R.C.

APPROVED _____

PAN AMERICAN REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 59-H CONTRACTOR'S NAME Overkoff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT Feb 4 1958
 LEASE NAME Pan Am - B.A. Spaw Lake A-1 WELL NO. G-21 FIELD Spaw Lake

FIRST TOUR FROM 12 P.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵	dr.			Rig sch.
12 ¹⁵	1 ³⁰	dr.	910	958	Drilling Pocket Hole 8 ³ / ₄
1 ³⁰	1 ⁴⁵	dr.			Survey @ 958
1 ⁴⁵	2 ⁰⁰	dr.	958	1072	Drilling 8 ³ / ₄ Hole
2 ⁰⁰	2 ¹⁵	dr.			Survey @ 1072
2 ¹⁵	2 ³⁰	dr.	1072	1134	Drilling

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
	Water		9.0	45			6A	8 ³ / ₄	HW OSC-3-93070
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
		Eastman	958	7 ¹ / ₂	290 - 12 ¹ / ₂ hr.				
		"	1072	7 ¹ / ₂	DRILLER'S SIGNATURE <u>Walter Buge</u>				

SECOND TOUR FROM 8 P.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵	dr.			Rig sch.
8 ¹⁵	9 ³⁰	dr.	1134		Drilling 8 ³ / ₄ Hole
9 ³⁰	9 ⁴⁵	dr.			Survey @ 1196 1/2
9 ⁴⁵	1 ¹⁵	dr.		1350	Drilling 8 ³ / ₄ Hole
1 ¹⁵	1 ³⁰	dr.			Survey
1 ³⁰	3 ⁰⁰	trip			TRIP OUT
3 ⁰⁰	4 ⁰⁰	ream			Reamed to Ream Cement

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		12 ⁰⁰	9.0	46			6A	8 ³ / ₄	HW OSC-3-93070
							7A	13 ³ / ₄	HW OSC-3-94976
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
		Eastman	1196	1 ¹ / ₂	DRILLER'S SIGNATURE <u>Ranstead</u>				
		"	1350	3 ¹ / ₄					

THIRD TOUR FROM 4 P.M. TO 12 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ³⁰	dr.			Rig service @ THAW OUT SECTION
4 ³⁰	5 ⁰⁰	ream			Ream out Cement
5 ⁰⁰	11 ⁰⁰	trip			Shift in to Ream out @ Ream Buge's
11 ⁰⁰	12 ⁰⁰	ream	844	870	Ream 8 ³ / ₄ To 12 ³ / ₄ Hole

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							7A	13 ³ / ₄	HW OSC-3-94976
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
					DRILLER'S SIGNATURE <u>Bill Sands</u>				

APPROVED

PAN AMERICAN REPRESENTATIVE

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CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 29-H CONTRACTOR W. J. Hoff Bros.24 HOUR PERIOD
ENDING AT MIDNIGHTFeb 31968LEASE NAME Pan Am - B-A Spaw Lake - A-1WELL NO. G-27FIELD SPAWN LAKEFIRST TOUR FROM 12⁰⁰ A.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>12⁰⁰</u>	<u>8⁰⁰</u>	<u>TD 844</u>			<u>WAIT ON CEMENT</u> <u>MIXING MUD</u> <u>Comp 8hr</u> <u>Bailer 8hr</u>
		<u>RECOMMENDED</u>			<u>CONDUCTION WITH 100 SACKS CEMENT PLUS 50 SACKS</u>
		<u>CIP-SE-11</u>			<u>Water Cool</u>

DAYWORK: HOURS

RATE

HOURS

RATE

HOURS W/D PIPE

DRY WORK LOGS									
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
5480	Gels		88	82			6A	8 3/4	HW 93070
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
						DRILLER'S SIGNATURE		W. J. Hoff	

SECOND TOUR FROM 8⁰⁰ A.M. TO 4⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>8⁰⁰</u>	<u>8¹⁵</u>				<u>Rig set</u>
<u>8¹⁵</u>	<u>12⁰⁰</u>				<u>Clear out 40' Cement</u>
<u>12⁰⁰</u>	<u>3⁰⁰</u>				<u>Clean, Shaker Tank</u> <u>Start in hole work on pump</u> <u>Comp 8hr</u> <u>Bailer 8hr</u>
<u>3⁰⁰</u>	<u>3³⁰</u>		<u>844</u>	<u>860</u>	<u>Drilling 8 3/4 hole</u>
<u>3³⁰</u>	<u>4⁰⁰</u>				<u>Work on pump (suction hose)</u>

DAYWORK: HOURS

RATE

HOURS

RATE

HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							6A	8 3/4	HW OSC-3 93070

THIRD TOUR FROM 4⁰⁰ P.M. TO 12⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>4⁰⁰</u>	<u>4¹⁵</u>	<u>Rig set</u>			<u>Rig service</u>
<u>4¹⁵</u>	<u>4⁴⁵</u>	<u>Shaker Tank</u>			<u>Clear suction tank</u>
<u>4⁴⁵</u>	<u>5³⁰</u>	<u>Clear</u>			<u>Clear, Conditioning mud (Suction freezing off)</u>
<u>5³⁰</u>	<u>12⁰⁰</u>	<u>Drilling</u>	<u>845</u>	<u>910</u>	<u>Drilling 8 3/4</u> <u>Comp 8hr</u> <u>Bailer 8hr</u>

DAYWORK: HOURS

RATE

HOURS

RATE

HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			88	95			6A	8 3/4	HW OSC-3 93070

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 39-H CONTRACTOR'S NAME Storkhoff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT Feb. 2 1968
 LEASE NAME Pan Am - A-1 Spinn Lake WELL NO. G-21 FIELD Spinn Lake

FIRST TOUR FROM 12⁰⁰ M. TO 8⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig service
12 ¹⁵	2 ³⁰		661	785	Run from 661 to 785'
2 ³⁰	7 ¹⁵		785	841	Drilling 13 3/4 lbs
7 ¹⁵	7 ³⁰				Survey @ 841 1/2°
7 ³⁰	8 ⁰⁰				Change Celler Bits
Water lost. \$93.00					

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
14 ⁰⁰	Gellb	2 ⁰⁰	92	55			5A	13 3/4	HW OSC-3 94973
		5 ³⁰	92	75					
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
				841		1/2°			
						DRILLER'S SIGNATURE		Walter Breyer	

SECOND TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				Rig service
8 ¹⁵	8 ⁴⁵		841	844	Drilling 13 3/4 lbs
8 ⁴⁵	11 ⁴⁵				Tap run to segment Conductor at Camp Sh.
11 ⁴⁵	4 ⁰⁰				Ball Conductor bbl to segment. Bailer Sh.

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			92	70			5A	15 3/4	HW OSC-3 94973
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
						DRILLER'S SIGNATURE		Hawthorn	

THIRD TOUR FROM 4⁰⁰ P.M. TO 12⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Rig service
4 ¹⁵	8 ⁰⁰				Ball Conductor bbl to Cement. Camp Sh.
8 ⁰⁰	8 ⁴⁵				McCement. Conductor bbl. Bailer Sh.
8 ⁴⁵	11 ⁰⁰				Clean Mud Tank Refill w/water
11 ⁰⁰	12 ⁰⁰				Mixing Mud

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
350	Gellb								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
						DRILLER'S SIGNATURE		Bill Sands	

APPROVED [Signature]
 PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
 CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 39-H CONTR. BOYD'S OFF. Bros 24 HOUR PERIOD ENDING AT MIDNIGHT Feb 1 1968
 LEASE NAME Pan Am. B-A Spaul Lake - A-1 WELL NO. 627 FIELD Spaul Lake

FIRST TOUR FROM 12⁰⁰ A.M. TO 6⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig service
12 ¹⁵	5 ³⁰				Rem from 60' to 433 (Clean out)
5 ³⁰	7 ³⁰		433	510	Seaming 8 ³ / ₄ to 13 ³ / ₄
7 ³⁰	8 ⁰⁰				Change collar bet. & work on Pump
					Camp sh Baker sh
					Water Cost \$167.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			9.2	75'			51	13 ³ / ₄	Hw. OSC-3 9497-3
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Walter B. ...		

SECOND TOUR FROM 8⁰⁰ A.M. TO 4⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				Rig service
8 ¹⁵	9 ³⁰				Work on pumps
9 ³⁰	12 ⁰⁰	2	510		Work on Collar bet
12 ⁰⁰	2 ⁰⁰				Clean mud tank
2 ⁰⁰	4 ⁰⁰				Max mud & Cere
					Camp sh Baker sh

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
50	CAUSTIC	10	92	95'					
900	Gel								
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		

THIRD TOUR FROM 4⁰⁰ P.M. TO 12⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Rig service
4 ¹⁵	8 ⁴⁵				Seaming & work on Pump
8 ⁴⁵	11 ⁰⁰		510		Rem 8' to 13 ³ / ₄
11 ⁰⁰	11 ⁴⁵				Seaming @ 628 10
11 ⁴⁵	12 ⁰⁰		661		Ready 13 ³ / ₄ hole
					Camp sh Baker sh

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
50	Lime		528	80			51	13 ³ / ₄	Hw. OSC-3 9497-3
2800	Gel								
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
		Evalu		628	10		Bill Sanders		

APPROVED [Signature]
 PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
 CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 39-H CONTINENTAL NAME BRINKERHOFF Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 31 1962
 LEASE NAME Pan Am-B-A - SPAWN LAKE - A-1 WELL NO. G-27 FIELD Spawn Lake

FIRST TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Reg sea.
12 ¹⁵	6 ⁰⁰		310	433	Reaming 13 ^{3/4} From 8 ^{3/4}
6 ⁰⁰	6 ³⁰				Change Cella Leds
6 ³⁰	8 ⁰⁰				hoist plug Bit
					Camp 8hr Boiler 8hr.
					Water Cont. # 127.00

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			96	60			4A	13 ^{3/4}	Hw osc-3 94656
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Walter Buge		

SECOND TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				Reg sea.
8 ¹⁵	4 ⁰⁰		433		Clear mud tank mixing mud
					WALDER WORKING CELLAR Leds
					Mud tank Frose 1/2 Full GRAVITY
					Camp 8hr Boiler 8hr.

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
1500	Gcl						5A	13 ^{3/4}	Hw osc-3 94973
200	CAUSTIC								
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Ranstad		

THIRD TOUR FROM 4⁰⁰ M. TO 12⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Reg sea
4 ¹⁵	6 ³⁰				Mixing mud load up Cellar Leds
6 ³⁰	9 ⁰⁰		433		Tallow Kelly & Kelly Hose Kelly Frose in RAINHOL
9 ⁰⁰	9 ³⁰				Change Plug Bit
9 ³⁰	11 ⁰⁰				Run in a Chem Bit
11 ⁰⁰	12 ⁰⁰				WORK ON CELLAR Leds
					Camp 8hr Boiler 8hr.

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
100	Limé						5A	13 ^{3/4}	Hw osc-3 94973
2000	Gcl								
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Bull Sands		

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 PAN AMERICAN REPRESENTATIVE

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 CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 39-H CONTRACTOR ROBERT HOFF-BROS 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 30 1968
 LEASE NAME PAN-AM-B-A-SPAWN LAKE - A-1 WELL NO. G-27 FIELD SPAWN LAKE

FIRST TOUR FROM 1200 M. TO 800 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1245				MIXING MUD
1245	100				LOG SERVICE
100	430		691	740	Drilling 8 1/4 hole
430	500				SURVEY @ 740
500	730		740	785	Drilling 8 3/4 hole
730	800				MIXING MUD
					Water Cost \$127.00

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
100	CASITE		91	65			3A	8 1/4	HW OSC-3 15766
1200	Gels								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
		Cutter		740		120		Walter Benge	

SECOND TOUR FROM 800 A.M. TO 400 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	815				LOG SERV.
815	1100				LOG. CORR. - MIXING MUD
1100	1200				TRIP OUT
1200			740	785	MIXING MUD
					LOG DOWN B.H. COLLAR
300	330				CLEAN HOLE FROM 60' TO 90'
330	400				WORK ON PUMP @ TETS

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
50	LIME		91	65			4A	13 1/4	HW OSC-3 94656
2000	SAND DUST								
45000	Gels								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
								R. R. Strand	

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	500				Rig set @ work on Pump (Gravel in Pump)
500	600				MIXING MUD @ work on COLLAR TST
600	1200		90	310	Beam 12 3/4 hole
					Camp 8th
					Bill Sand @ RD-242 work 6 hr. over Boiler 8th.
					Daily Gravel @ Boulder

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2000	Gels		89	68			4A	13 1/4	HW OSC-3 94656
350	CASITE								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
								Paul Sands	

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PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

 RIG NUMBER 394 CONTRACTOR'S NAME DRINKERHOFF Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 28/ 1968

 LEASE NAME SPAWA LAKE - A-1 WELL NO. G27 FIELD SPAWA LAKE

 FIRST TOUR FROM 8⁰⁰ P.M. TO 8⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	1 ³⁰				WORK ON Pumps @ Rig to Spud
1 ³⁰	5 ³⁰				DRILLING RAT HOLE
5 ³⁰	6 ³⁰				WORK ON LIGHT PLAND
6 ³⁰	8 ⁰⁰		0	74	DRILLING 13 ^{3/4} HOLE
					Camp 8 hr.
					Barber 8 hr.
					CHOW WORK OVER 4 hr.
					K.B. 12.80
					Water Cost \$196.00 2 TRUCKS

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
Spud	6:30	AM		WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE
K.B. to Gr	12.80							1-A	13 ^{3/4} HW 85629 Tip
Gr Elev	2173.0								
				DEVIATION INSTRUMENT		DEPTH	DEGREES OFF	DRILLER'S SIGNATURE	
								Walter Benge	

 SECOND TOUR FROM 8⁰⁰ A.M. TO 4⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵	See			Rig see
8 ¹⁵	10 ⁰⁰	Drill	74		Drilling 13 ^{3/4} hole
10 ⁰⁰	11 ⁰⁰	Repair			Change Wash pipe @ Bottom
11 ⁰⁰	12 ⁰⁰	Repair			Subsiding @ work on frozen fluid
12 ⁰⁰	3 ⁰⁰	Drill	134		Drilling 13 ^{3/4} hole
3 ⁰⁰	4 ⁰⁰	Stop			Lost Plug Bit
					Drill Gravel @ Boulder's

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							1-A	13 ^{3/4}	HW 85679 - OSC-3
		DEVIATION INSTRUMENT			DEPTH	DEGREES OFF			
					100	1/4	DRILLER'S SIGNATURE <i>L. Hamilton</i>		

 THIRD TOUR FROM 4⁰⁰ M. TO 12⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	5 ⁰⁰				Lost Plug Bit @ Clean cut
5 ⁰⁰	5 ¹⁵				Rig see
5 ¹⁵	6 ³⁰				Rig in @ Clean to Bottom
6 ³⁰	9 ⁰⁰		134	161	Drill 8 ^{3/4} hole
9 ⁰⁰	12 ⁰⁰				Cure @ mixing
					Drill Gravel @ Boulder's

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
Gel	35 ⁰⁰		8.9	85			2A	8 ^{3/4}	DT 51689
LINE	195 ⁰⁰								
Sand Dose	20 DAs	DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								DRILLER'S SIGNATURE	
								Bill Gault	

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PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR NAME WALTER HOFF Bros 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 29 1968
 LEASE NAME Pan Am-B-P. Spaul Lake - A-1 WELL NO. G 27 FIELD Spaul Lake
 FIRST TOUR FROM 12⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				rig ser.
12 ¹⁵	2 ³⁰		161	220	Only 8 ³ / ₄ hole
2 ³⁰	2 ⁴⁵				Survey @ 220
2 ⁴⁵	5 ⁴⁵		220	305	Only 8 ³ / ₄ hole
5 ⁴⁵	6 ⁰⁰				Survey @ 302
6 ⁰⁰	8 ⁰⁰		305	380	Only 8 ³ / ₄ hole

Camp Ltr.
Baker Ltr.

water Cost \$27.13

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
1000 ⁺	Gel		89	45			2A	8 ³ / ₄	Smith DT 51689
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
		Eastman		220	7/8				
				305	3/4		DRILLER'S SIGNATURE <u>Walter Hoff</u>		

SECOND TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				rig ser.
8 ¹⁵	8 ³⁰		380	390	Only
8 ³⁰	8 ⁴⁵				Turn off pin on 4 ¹ / ₂ Kelly - Drop Survey @ Trip-o-
8 ⁴⁵	12 ⁰⁰				lay down 4 ¹ / ₂ Kelly & Pick up 3 ¹ / ₂ Kelly
12 ⁰⁰	2 ³⁰				Run in clear 10' To Bottom
2 ³⁰	4 ⁰⁰		390	440	DR. L. Long

Camp Ltr.
Baker Ltr.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			89	45			3A	8 ³ / ₄	NW OSC-3-A 15762
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
		Eastman		390	3/8		DRILLER'S SIGNATURE <u>J. Rasmussen</u>		

THIRD TOUR FROM 4⁰⁰ M. TO 12⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ³⁰				rig ser. @ survey @ 480' min
4 ³⁰	7 ³⁰		440		Only 8 ³ / ₄ hole
7 ³⁰	7 ⁴⁵				Survey
7 ⁴⁵	11 ⁰⁰				Only 8 ³ / ₄ hole
11 ⁰⁰	11 ¹⁵				Survey
11 ¹⁵	11 ³⁰		691		Only 8 ³ / ₄ hole
11 ³⁰	12 ⁰⁰				work light hole

Camp Ltr.
Baker Ltr.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2000 lime 25"	Gel	10 ⁰⁰	92	41			3A	8 ³ / ₄	NW OSC-3-A 15762
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
				482	1/2				
				539	7/8		DRILLER'S SIGNATURE <u>Paul Sands</u>		

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PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 37H CONTRACTOR NAME BANKER KELLEY BROS 24 HOUR PERIOD ENDING AT MIDNIGHT Tue 2/1 19 21
LEASE NAME LA-AM-B-A-A-1 SPAWN LAKE WELL NO. 3-27 FIELD SPAWN LAKE
FIRST TOUR FROM 8:00 A.M. TO 4:00 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	4 ⁰⁰				R.g. up
					Fuel 6500 Camp 8 ⁰⁰ Baker 8⁰⁰
					START Baker @ 8 ⁰⁰ AM
					JAN 27/68

[illegible][illegible]

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE	<i>L. R. [Signature]</i>	

[illegible][illegible]

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PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 37H CONTRACTOR'S NAME W. H. HOFF BROS 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 26 19 68
LEASE NAME F. M. B. A. - A-1 SPAWN LAKE - 627 WELL NO. 927 FIELD Spawn Lake

FIRST TOUR FROM 6:30 M. TO 0 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					Laying MATING @ Rigging up
					Camp 8 hr.
					Water Cost \$55.00

Water Cost \$55.00

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE <i>Walter Dugg</i>		

SECOND TOUR FROM 5:30 P.M. TO M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

THIRD TOUR FROM 8 1/2 M. TO M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT			DEPTH	DEGREES OFF				
								DRILLER'S SIGNATURE <i>[Signature]</i>		

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PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 39-14 CONTRACTOR'S NAME Franklin Off Prop. 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 25 1968
LEASE NAME San Antonio - A.A. Schmitt Lake G-27 WELL NO. G-27A FIELD SPAW'S LAKE
FIRST TOUR FROM 8 P. M. TO 8 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC
FROM	TO		FROM	TO	
					MOVING Rig w/ 5 TRACKS
					Camp 8 hr.
					Water Cost. \$103.00

DAYWORK: HOURS _____ RATE _____		HOURS _____ RATE _____		HOURS W/D PIPE _____						
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE <i>Walter Dwyer</i>		

SECOND TOUR FROM 6:45 A M TO 8:30 P M

TIME.		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					MOVING RIG & LEVEL UP CAMP
					CAMP 8th

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
							DRILLER'S <i>[Signature]</i>			

THIRD TOUR FROM 8:00 A M TO 8:00 P M

[illegible]

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT			DEPTH		DEGREES OFF			

APPROVED *John R. Hartman*
PAN AMERICAN REPRESENTATIVE

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CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 394 CONTRACTOR'S NAME Brankerhoff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT JAN 24 19 68
LEASE NAME Pan Am B-A Spauld Kato WELL NO. 627 FIELD SPAND LAKES

FIRST TOUR FROM 8⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>8⁰⁰</u>	<u>8⁰⁰</u>				<u>Making Camp @ Rig set up Camp</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

SECOND TOUR FROM 8⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					<u>Making Camp @ Rig - set up Camp</u>
					<u>Camp 24 hr</u>
					<u>water cost \$55.00</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

THIRD TOUR FROM 8⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>8⁰⁰</u>	<u>8⁰⁰</u>				<u>Making Camp @ set up Camp</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

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