

P-W

PAN AM #1 - NAVAJO-AF 468
SE NW 12-38N-30E Apache County

sl

COUNTY Apache AREA 35 mi W/Shiprock, NM LEASE NO. 14-20-0603-1568

WELL NAME PAN AM #1 NAVAJO-AF

LOCATION SE NW SEC 12 TWP 38N RANGE 30E FOOTAGE 1900' FNL 1900 FWL

ELEV 5868' GR 5881' KB SPUD DATE 7-22-68 STATUS _____ TOTAL DEPTH 4809' COMP. DATE 9-5-68

CONTRACTOR Loffland Brothers, Tulsa, Okla

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY
<u>16"</u>	<u>30'</u>	<u>5 yards</u>	<u>NA</u>	<u>x</u>
<u>10 3/4"</u>	<u>395'</u>	<u>250 SKS</u>		
				DRILLED BY CABLE TOOL _____
				PRODUCTIVE RESERVOIR _____
				INITIAL PRODUCTION <u>Dry</u>

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
DeChelly	786'		x	
Cutler	1052'			
Hermosa	2500'			
Ismay	3149'			
Akah	3279'			
Barker Creek	3383'			
Lower Hermosa	3574'			
Molas	3780'			
Sill	3826'			
Molas	4650'			
Mississippian	4680'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG <u>Am Strat</u>
<u>I-ES, SNP, BHC Sonic, GR-Density, AMP</u>	<u>NA</u>	<u>NA</u>	SAMPLE DESCRP. _____ SAMPLE NO. <u>1448*</u> CORE ANALYSIS _____ DSTs _____ <u>*Tucson 2527</u>

REMARKS	APP. TO PLUG	PLUGGING REP.	COMP. REPORT
	<u>x</u>	<u>x</u>	<u>x</u>

WATER WELL ACCEPTED BY _____

BOND CO. Seaboard Surety Company BOND NO. _____
 BOND AMT. \$ 25,000 CANCELLED _____ DATE _____
 FILING RECEIPT 9552 LOC. PLAT x WELL BOOK x PLAT BOOK x ORGANIZATION REPORT 6-16-67
 API NO. 02-001-20083 DATE ISSUED 7-18-68 DEDICATION E/2 NW/4

PERMIT NUMBER 468

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well Work-Over Deepen Plug Back Same Reservoir Different Reservoir Oil Gas Dry

DESCRIPTION OF WELL AND LEASE

Operator PAN AMERICAN PETROLEUM CORPORATION		Address 501 Airport Drive, Farmington, New Mexico	
Federal, State or Indian Lease Number or name of lessor if fee lease 14-20-0603-1568 Navajo Tribal "AF"		Well Number 1	Field & Reservoir Wildcat
Location 1900' FNL & 1900' FWL Sec. 12, T38N, R30E		County Apache	
Sec. TWP-Range or Block & Survey Section 12, T-38-N, R-30-E			
Date spudded 7-31-68	Date total depth reached 8-31-68	Date completed, ready to produce 9-5-68 (Dry)	Elevation (of RKB, RT or Gr.) 5868 GL, 5881 RKB
Total depth 4809'	P.B.T.D.	Single, dual or triple completion?	Elevation of casing hd. flange feet
Producing interval (s) for this completion Dry Hole		Rotary tools used (interval) 30-4809'	Cable tools used (interval) 0-30'
Was this well directionally drilled? No	Was directional survey made? No	Was copy of directional survey filed?	Date filed
Type of electrical or other logs run (check logs filed with the commission) I-ES, SNP, BHC Sonic, GR-Density, AMP			Date filed All will be filed

87401

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Conductor	20"	16"	65#	30'	5 yards	To surface
Surface	13-3/4"	10-3/4"	40.5#	395'	250 sacks	To surface

TUBING RECORD

LINER RECORD

Size in.	Depth set ft.	Packer set at ft.	Size in.	Top ft.	Bottom ft.	Sacks cement	Screen (ft.)

PERFORATION RECORD

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Number per ft.	Size & type	Depth Interval	Amt. & kind of material used	Depth Interval
None			None	

INITIAL PRODUCTION

Date of first production: **None** Producing method (Indicate if flowing, gas lift or pumping—if pumping, show size & type of pump):

Date of test	Hrs. tested	Choke size	Oil prod. during test bbls.	Gas prod. during test MCF	Water prod. during test bbls.	Oil gravity ° API (Corr)

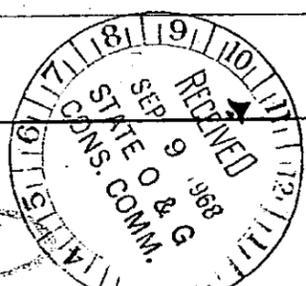
Tubing pressure	Casing pressure	Cal'd rate of Production per 24 hrs.	Oil bbls.	Gas MCF	Water bbls.	Gas-oil ratio

Disposition of gas (state whether vented, used for fuel or sold):

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Area Engineer of the PAN AMERICAN PETROLEUM CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date: **9-5-68**

Signature: *[Handwritten Signature]*



Permit No. **468**

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Well Completion or Recompletion Report and Well Log
Form No. 4 File One Copy

DETAIL OF FORMATIONS PENETRATED

468

Formation	Top	Bottom	Description*
DeChelley	786'		DST #1: 2963-3040' (Hermosa) Tool plugged.
Cutler	1052'		
Hermosa	2500'		DST #2: 2963-3040' (Hermosa) Tool plugged. Rec 120' mud and cuttings. Flow pressure 110.
Ismay	3149'		
Akah	3279'		
Barker Creek	3383'		DST #3: 4000-4049' (Sill) Tool open 3 hrs. Weak blow. No GTS. Rec 150' slightly oil cut water, and 1205' SW and trace oil. ISIP 1786, IFP 175, FFP 570, FSIP 1786.
Lower Hermosa	3574'		
Molas	3780'		
Sill	3826'		
Molas	4650'		DST #4: 2939-3120' (Hermosa) Tool open 1 hr. Weak blow for 12 min and died. Rec 15' mud, NS. ISIP 80, IFP 27, FFP 27, FSIP 27.
Mississippian	4680'		

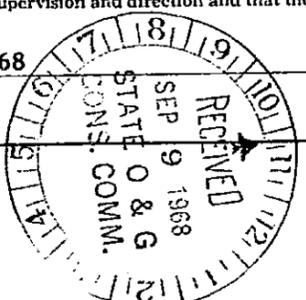
* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State of Arizona Oil & Gas Conservation Commission not later than 15 days after project completion.

PLUGGING RECORD

Operator PAN AMERICAN PETROLEUM CORPORATION		Address 501 Airport Drive, Farmington, New Mexico		87401
Federal, State, or Indian Lease Number. 14-20-0603-1568 or lessor's name if fee lease. Nava jo Tribal "AF"		Well No. 1	Field & Reservoir Wildcat	
Location of Well 1900' FNL & 1900' FWL Section 12, T-38-N, R-30-E			Sec-Twp-Rge or Block & Survey	County Apache
Application to drill this well was filed in name of	Has this well ever produced oil or gas No	Character of well at completion (initial production): Oil (bbls/day) Gas (MCF/day) Dry? X		
Date plugged: 9-5-68	Total depth 4809'	Amount well producing when plugged: Oil (bbls/day) Gas (MCF/day) Water (bbls/day)		
Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount cement	
No commercial shows encountered.		See reverse side for plugging details.		
CASING RECORD				
Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped, etc.)
10-3/4"	395'	None	395'	
16"	30'	None	30'	
Was well filled with mud-laden fluid, according to regulations? Yes			Indicate deepest formation containing fresh water. None	
NAMES AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE				
Name	Address		Direction from this well:	
Nava jo Tribe	Window Rock, Arizona		Owners of surface	
In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.				
Use reverse side for additional detail.				
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Area Engineer of the PAN AMERICAN PETROLEUM CORPORATION (company) and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.				
Date September 5, 1968	Signature <i>[Handwritten Signature]</i>			
Permit No. 468				
	STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Plugging Record File One Copy Form No. 10			

Plugging Details:

40 sacks cement 4600-4700'
40 sacks cement 4000-4100'
40 sacks cement 3800-3900'
80 sacks cement with 10% sand 3200-3040'. Dressed this plug to 3120 and ran
60 sacks 2950-3050' DST No. 4 from 2939-3120'.
100 sacks 730-830'
60 sacks 350-450'
30 sacks Surface - 50'

Erected abandonment marker

APPLICATION TO ABANDON AND PLUG

FIELD Wildcat
OPERATOR PAN AMERICAN PETROLEUM CORPORATION ADDRESS 501 Airport Drive, Farmington, New Mexico
Federal, State, or Indian Lease Number 14-20-0603-1568 Navajo Tribal "AF" WELL NO. 1
or Lessor's Name if Fee Lease
SURVEY T-38-N, R-30-E SECTION 12, NW/4 COUNTY Apache
LOCATION 1900' FNL & 1900' FWL, Section 12, T-38-N, R-30-E

TYPE OF WELL Dry Hole (Oil, Gas or Dry Hole) TOTAL DEPTH 4809'
ALLOWABLE (If Assigned)
LAST PRODUCTION TEST OIL (Bbls.) WATER (Bbls.)
GAS (MCF) DATE OF TEST

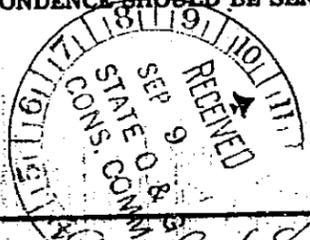
PRODUCING HORIZON PRODUCING FROM TO
1. COMPLETE CASING RECORD 16" casing set at 30' - cement to surface
10-3/4" casing set at 395' - cemented to surface

2. FULL DETAILS OF PROPOSED PLAN OF WORK It is proposed to plug and abandon this well
as follows: 40 sacks cement 4700-4600', 40 sacks cement 4100-4000', 40 sacks cement 3900-
3800', 30 sacks cement 3050-3000', 100 sacks cement 830-730', 60 sacks cement 450-350'
and 30 sacks cement 50' to surface. Verbal approval obtained 8-30-68 M. L. Seelinger (USGS)
to G. W. Eaton, Jr.

If well is to be abandoned, does proposed work conform with requirements of Rule 202? Yes If not, outline
proposed procedure above.

DATE COMMENCING OPERATIONS 9-3-68
NAME OF PERSON DOING WORK Pan American Petroleum Corp ADDRESS 501 Airport Dr., Farmington, N.M.

CORRESPONDENCE SHOULD BE SENT TO L. O. Speer, Jr.
Name
Area Superintendent
Title
501 Airport Drive, Farmington, New Mexico 87401
Address
September 5, 1968
Date



Date Approved 9-19-68
STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
By James J. [Signature]

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Abandon and Plug
File Two Copies
Form No. 9

Permit No. 468

Form 9-331
(May 1963)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.
14-20-0603-1568

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Nevajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Nevajo Tribal AP

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
**NW/4 Section 12,
T-30-N, R-30-E**

12. COUNTY OR PARISH 13. STATE
Apache Arizona

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR
501 Airport Drive, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface

1900' FWL & 1900' FWL

14. PERMIT NO.
468

15. ELEVATIONS (Show whether DP, ET, GR, etc.)
GL 5860'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF
FRACTURE TREAT
SHOOT OR ACIDIZE
REPAIR WELL
(Other)

PULL OR ALTER CASING
MULTIPLE COMPLETE
ABANDON*
CHANGE PLANS

SUBSEQUENT REPORT ON:

WATER SHUT-OFF
FRACTURE TREATMENT
SHOOTING OR ACIDIZING
(Other)

REPAIRING WELL
ALTERING CASING
ABANDONMENT*

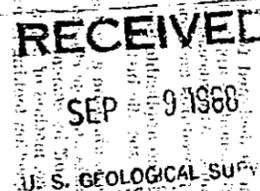
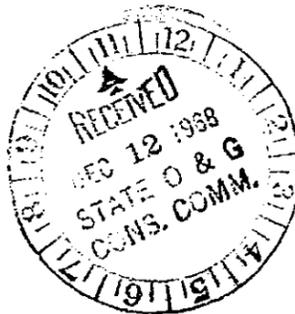
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markets and zones pertinent to this work.)*

**This well was plugged and abandoned as follows: Operations completed September 5, 1968.
Cement plugs set as below:**

- 40 sacks 4600-4700'
- 40 sacks 4000-4100'
- 40 sacks 3800-3900'
- 80 sacks with 10% sand 3200-3049'. Dressed this plug to 3120 and was DRZ No. 4 from 2935-3120'.
- 60 sacks 2950-3050'
- 100 sacks 730-830'
- 60 sacks 350-450'
- 30 sacks surface - 50'

Erected abandonment marker.



18. I hereby certify that the foregoing is true and correct ORIGINAL SIGNED BY

SIGNED G. W. Eaton, Jr.
G. W. Eaton, Jr.
(This space for Federal or State office use)

TITLE Area Engineer

DATE 9-5-68

APPROVED

DEC 3 1968
P. T. McGRATH
DISTRICT ENGINEER

*See Instructions on Reverse Side

468

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPlicate
(Other instructions
verse side)

Form approved
Budget Bureau No. 42-R1424

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO. 14-28-0603-1568	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo	
7. UNIT AGREEMENT NAME	
8. FARM OR LEASE NAME Navajo Tribal "A"	
9. WELL NO. 1	
10. FIELD AND POOL, OR WILDCAT Wildcat	
11. SEC., T., R. & M., OR B.L. AND SURVEY OR AREA SW/4 Section 12, T-38-N, R-30-E	
12. COUNTY OR PARISH Apache	13. STATE Arizona
1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> Wildcat	
2. NAME OF OPERATOR PAN AMERICAN PETROLEUM CORPORATION	
3. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, New Mexico 87401	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1900' FWL & 1900' FWL	
14. PERMIT NO. 468	15. ELEVATIONS (Show whether DF, RT, GR, etc.) GL 3868'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

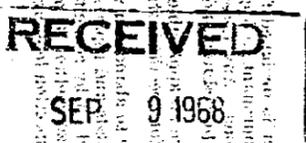
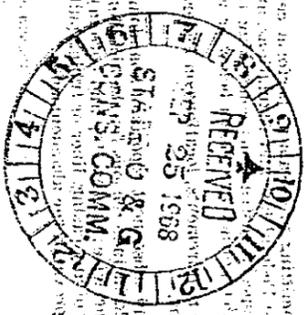
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input checked="" type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) <input type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

TD 5809. Having failed to find commercial shows of oil or gas it is proposed to plug and abandon this well as follows:

- 40 sacks cement 4700-4600' (T. Mississippian 4638')
- 40 sacks cement 4100-4000' (Porous zone in Hill 4035-35')
- 40 sacks cement 3900-3800' (T. Hill 3827')
- 30 sacks cement 3050-3000' (Upper Harwood porosity)
- 100 sacks cement 830-730' (T. DeChalley 785')
- 60 sacks cement 450-350' (10-3/4" casing set 395')
- 30 sacks cement 50' - Surface

Verbally approved 8-30-68 M. L. Seelinger to G. W. Eaton, Jr.



18. I hereby certify that the foregoing is true and correct

SIGNED G. W. Eaton, Jr. TITLE Area Engineer DATE 9-2-68

(This space for Federal or State office use)

APPROVED BY M. Seelinger TITLE _____ DATE _____

CONDITIONS OF APPROVAL IF ANY:
SEP 1 1968

*See Instructions on Reverse Side

468

8-30-68

George Eaton, Pan Am telephone:

Re: PamAm #1-AF Navajo
Permit 468

Expect to reach total depth this coming weekend.

Still undecided whether to plug or run casing.

Presently drilling at 4630' in igneous sill. This sill not like Dineh bi Keyah sill but is a dacite sill.

10-3/4" casing set at 395'

8-3/4" hole.

Tops:

DeChelly	790
Cutler	1235
Hermosa	2775
Desert Crk	3270
Molas	3750
Sill	3825

If casing is run:

(Had a gas kick in upper Hermosa) casing will be to test this.

If they do not run into porosity below present drilling depth (which geologist feels they will), will then plug as follows:

Plug at top of sill, 3825
A plug across attempted DST interval 2960-3040
across top of DeChelly at 790
across base of surface casing at 395
Surface with marker

DST #3 from 4000-4049
Tool open 3 hours. No gas to surface. Recovered 1355' of total fluid, 150' slightly oil cut water, 1205' salt water with trace of oil. Which was in sill or slight strat area of no sill.
IFP 175# FFP 570# onehour FSP 1181"

Above plugging approved by USGS. Gave our verbal permission.

468

MR. ushton
age

9

WELL SITE CHECK

Contractor LOFFLAND Person(s) Contacted AL CLEPPER By JRS
 Spud date _____ Date 8-14-68
 Type Rig _____ Rotary Cable Present Operations Drilling in
 _____ HERMOSA @ 3392
 Samples _____ Air _____
 Pipe SET 16" @ 30' CONDUCTOR Drilling with Mud
SET 10 3/4" @ 395 Circulate Cement
 Water Zones _____ Size Hole 8 3/4"
 Lost Circ. Zones _____ Size Drill Pipe _____
 Formation Tops CUTLER 1235 Type Bit Hughes X 55R
HERMOSA 2775
 Cores, Logs, DST _____ No. Bit 12 Drilling Rate _____
 _____ Formation HERMOSA
 Crews _____ Lithology _____

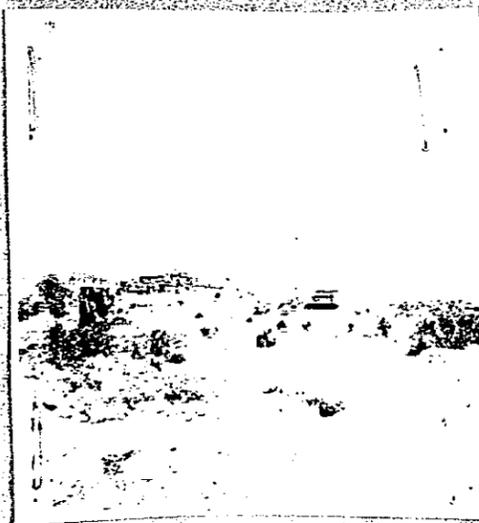
REMARKS, PHOTO, MAP

Had Mud logger (Century Engineering) on well.

Deviation 1 3/4

Have made 111' last 24 hrs.

Mud 52 Vis.
9.8 wt.



8-13-68

Paw Ann #1 AF
Navajo

dull depth 3160

DST #1 2963-3040
not mud recovered

DST #2 same interval
less mud recovered.

Doherty - Research and News.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN THIS CATEGORY
(Other instructions on reverse side)

Form approved
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0403-1948

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tribal "A"

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA

Section 12, 20/4,

T-10-N, R-10-E

12. COUNTY OR PARISH

Apache

13. STATE

Arizona

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL GAS WELL OTHER **Wildcat**

2. NAME OF OPERATOR
PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR
301 Airport Drive, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
1900' FWL & 1900' FWL

14. PERMIT NO.

458

15. ELEVATIONS (Show whether DP, WT, GR, etc.)

GL 3000'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

A 16" hole was spudded July 23, 1968 with cable tools.

RECEIVED
JUL 25 1968
OIL CON. COM.
DIST. 3

RECEIVED

JUL 24 1968

U. S. GEOLOGICAL SURVEY
FARMINGTON

18. I hereby certify that the foregoing is true and correct

SIGNED G. W. Eaton Jr.

TITLE Area Engineer

DATE July 23, 1968

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

468

11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER Wildcat SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR
 501 Airport Drive, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface 1900' FWL & 1900' FWL

At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 35 miles west of Shiprock, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)
 1900' No other wells on lease

16. NO. OF ACRES IN LEASE
 2560

17. NO. OF ACRES ASSIGNED TO THIS WELL
 80

18. DISTANCE FROM PROPOSED* LOCATION TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.
 4900'

19. PROPOSED DEPTH
 4900'

20. ROTARY OR CABLE-TOOL
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 Report Later

22. APPROX. DATE WORK WILL START*
 July 18, 1968

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	42.75#	40'	40 sacks
15"	10-3/4"	40.50#	400'	400 sacks
8-3/4"	5-1/2"	15.50#	4800'	400 sacks

Copies of Location Plat Attached.

Verbal Archaeological clearance given by Mr. Abel via telephone to Mr. Eaton July 17, 1968.

Verbal permission to commence operations given by Mr. McGrath via telephone to Mr. Eaton July 17, 1968.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone, present production, and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

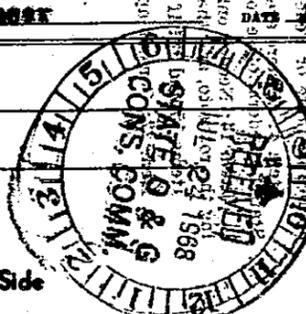
24. SIGNED G. V. Eaton, Jr. TITLE Area Engineer DATE July 17, 1968

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:



468

18

APPLICATION FOR PERMIT TO DRILL OR RE-ENTER

APPLICATION TO DRILL

RE-ENTER OLD WELL

PAN AMERICAN PETROLEUM CORPORATION
NAME OF COMPANY OR OPERATOR

501 Airport Drive **Farmington** **New Mexico 87401**
Address City State

Loffland Brothers
Drilling Contractor
Box 4567, Tulsa, Oklahoma
Address

DESCRIPTION OF WELL AND LEASE

Federal, State or Indian Lease Number, or if fee lease, name of lessor Navajo Tribal "AF" No. 14-20-0603-1568	Well number 1	Elevation (ground) Report Later
Nearest distance from proposed location to property or lease line: 1900 feet	Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: First Well feet	
Number of acres in lease: 2560	Number of wells on lease, including this well, completed in or drilling to this reservoir: First Well	
If lease, purchased with one or more wells drilled, from whom purchased: Not Applicable	Name	Address

Well location (give footage from section lines) 1900' FNL & 1900' FWL	Section—township—range or block and survey Section 12, T-38-N, R-30-E	Dedication (Comply with Rule 105) E/2 NW/4
Field and reservoir (if wildcat, so state) Wildcat	County Apache	

Distance, in miles, and direction from nearest town or post office 35 miles west of Shiprock, New Mexico		
Proposed depth: 4800'	Rotary or cable tools Rotary	Approx. date work will start July 18, 1968
Bond Status Statewide	Organization Report On file <input checked="" type="checkbox"/> Or attached	Filing Fee of \$25.00 Attached <input checked="" type="checkbox"/>
Amount \$25,000		

Remarks:
Certified Location Plat attached.
\$25.00 fee paid to Arizona Oil and Gas Conservation Commission on July 17, 1968 on Draft No. 44616.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Area Engineer of the PAN AMERICAN PETROLEUM CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature [Signature]
Date July 17, 1968

Permit Number: **468**
Approval Date: **7-18-68**
Approved By: John Bannister
Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Drill or Re-enter
File Two Copies

Form No. 3

RECEIVED
JUL 18 1968
STATE O & G
CONSERVATION COMMISSION

API No. 02-001-20083

- Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
- A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
- All distances shown on the plat must be from the outer boundaries of the Section.
- Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES NO
- If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES NO If answer is "yes," Type of Consolidation _____
- If the answer to question four is "no," list all the owners and their respective interests below:

Owner	Land Description																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">1900'</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td style="text-align: center;">1900'</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Sec. 12</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>		1900'			1900'					Sec. 12											<p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p style="text-align: right;"><i>G. W. Eaton, Jr.</i></p> <p>Name G. W. Eaton, Jr.</p> <p>Position Area Engineer</p> <p>Company PAN AMERICAN PETR. CORP.</p> <p>Date July 17, 1968</p> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed July 11, 1968</p> <p>Registered Professional Engineer and/or Land Surveyor</p> <p style="text-align: right;">Ernest V. Echohawk.</p> <p>Certificate No. 2311</p>
	1900'																				
1900'																					
	Sec. 12																				

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
16"	42.75	H-40	0	40'	0-40'	40
10-3/4"	40.50	J-55	0	400'	0-400'	400
5-1/2"	15.50	L-55	0	4800'	0-4800'	400

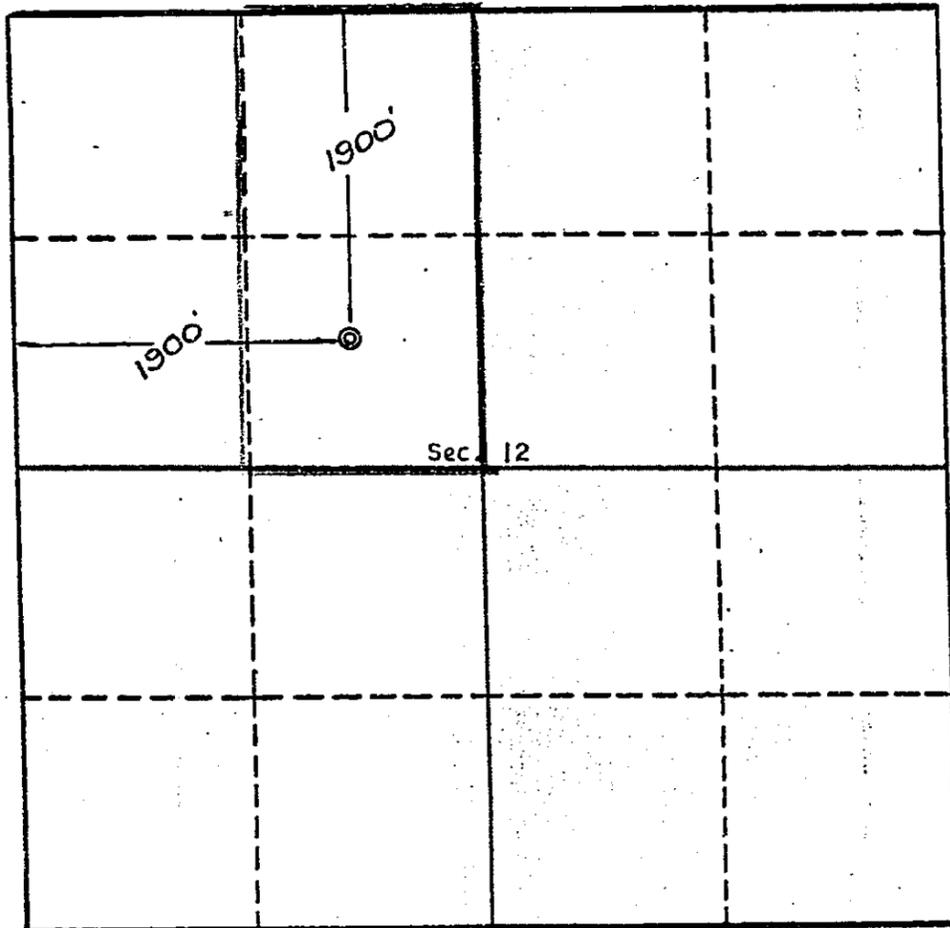
Company PAN AMERICAN PETROLEUM CORPORATION

Well Name & No. Navajo Tribal AF No. 1

Location 1900 feet from the North line and 1900 feet from the West line.

Sec. 12, T. 38 N., R. 30 E., G. & S. R. M., County Apache, Arizona

Ground Elevation Report Later



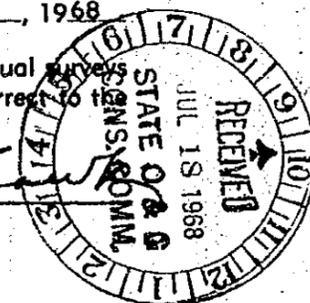
Scale, 1 inch = 1,000 feet

Surveyed July 11, 1968

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.



E. V. Echohawk
Ernest V. Echohawk
Registered Land Surveyor
Arizona Registration No. 2311





PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

PAN AMERICAN PETROLEUM CORPORATION

To: _____
(OPERATOR)

to drill a well to be known as

PAN AM #1-AP NAVAJO

(WELL NAME)

located **1900' FNL and FEL (SE/4 NW/4)**

Section **12** Township **38N** Range **30E**, **Apache** County, Arizona.

The **E/2 NW/4** of said

Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this **18th** day of **July**, 19**68**.

OIL AND GAS CONSERVATION COMMISSION

By John W. Bannister
EXECUTIVE SECRETARY

PERMIT No 468

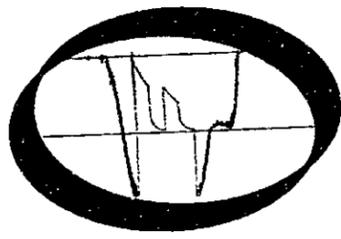
RECEIPT NO. 9552
API 02-001-20083

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

SAMPLES REQUIRED

Formation Testing Service Report

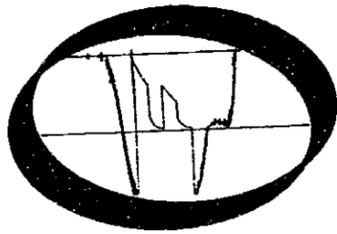


#468



HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

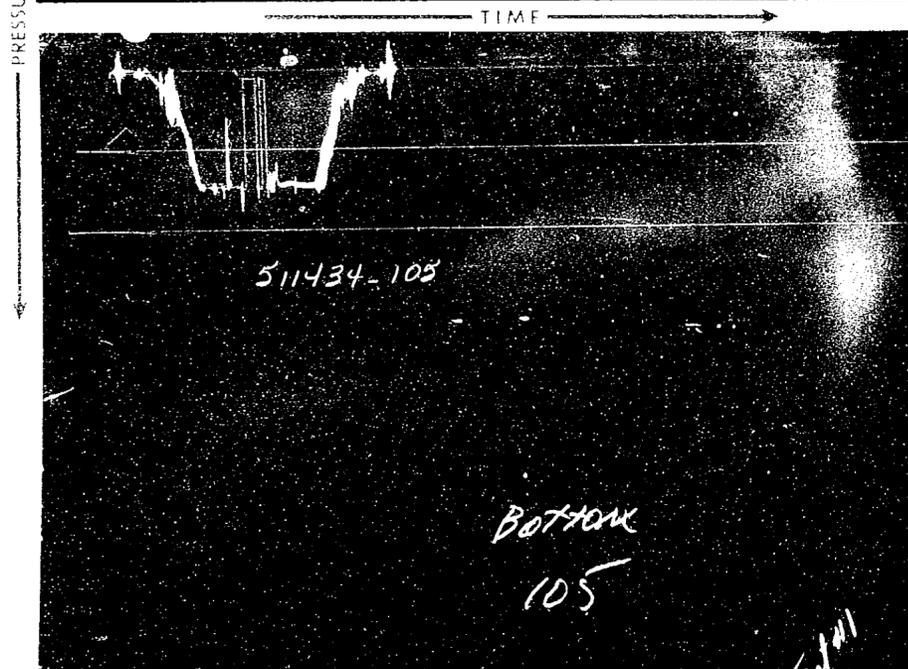
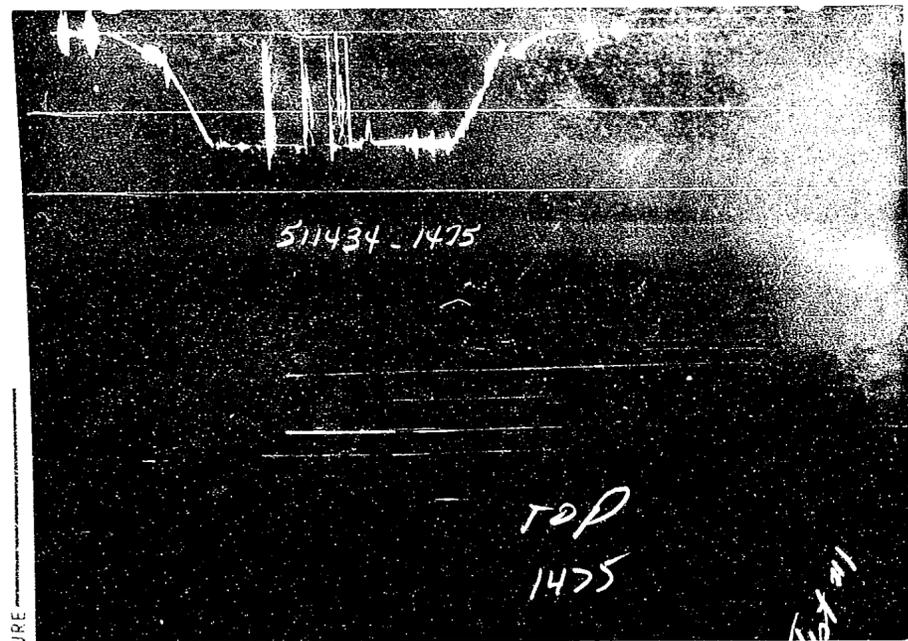
Formation Testing Service Report



#468



HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

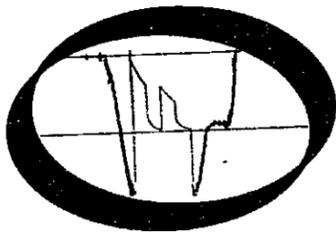


Each Horizontal Line Equal to 1000 p.s.i.

Well Name	Date	Operator	Location
511434-1475			
Pressure	Field	Office	Corrected
Depth	ft	ft	ft
Initial Hydro Mud Pres.			
Initial Closed in Pres.			
Initial Flow Pres.	2		
Final Flow Pres.	1		
Final Closed in Pres.			
Final Hydro Mud Pres.			
Depth	ft	ft	ft
BT P.R.D. No.			
Initial Hydro Mud Pres.			
Initial Closed in Pres.			
Initial Flow Pres.	2		
Final Flow Pres.	1		
Final Closed in Pres.			
Final Hydro Mud Pres.			
Depth	ft	ft	ft
BT P.R.D. No.			
Initial Hydro Mud Pres.			
Initial Closed in Pres.			
Initial Flow Pres.	2		
Final Flow Pres.	1		
Final Closed in Pres.			
Final Hydro Mud Pres.			

FORMATION TEST DATA

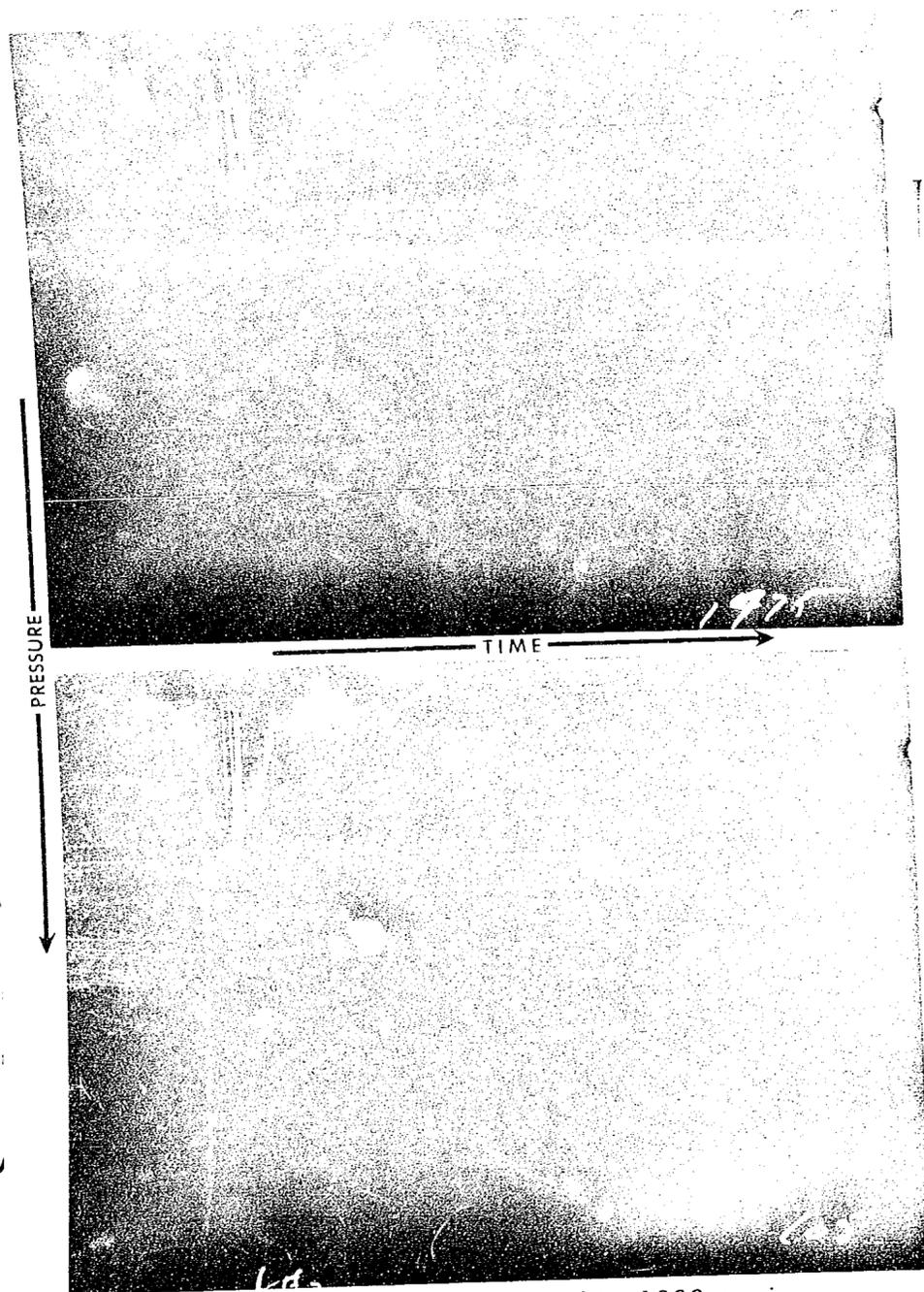
Formation Testing Service Report



#468



HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

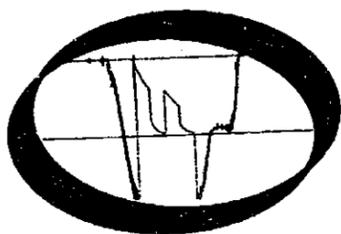


Flow Time	1st	Min.	2nd	Min.	Date	Well Number
Closed In Press. Time	1st	Min.	2nd	Min.	Kind of Job	Halliburton District
Pressure Readings	Field	Office Corrected			Tester	Witness
Depth Top Gauge	Ft.		Blanked Off		Drilling Contractor	Tap Packer
BT. P.R.D. No.			Hour Clock		Elevation	Bottom Packer
Initial Hydro Mud Pressure					Total Depth	Formation Tested
Initial Closed in Pres.					Interval Tested	Casing Top Perfs. Bot.
Initial Flow Pres.	1				Casing or Hole Size	Bottom Choke
Final Flow Pres.	2				Surface Choke	Drill Collars Above Tester
Final Closed in Pres.	1				Size & Kind Drill Pipe	Mud Viscosity
Final Hydro Mud Pressure	2				Mud Weight	Anchor Size & Length
Depth Cen. Gauge	Ft.		Blanked Off		Temperature	F Est. X
BT. P.R.D. No.			Hour Clock		Depths Meo. From	Depth of Tester Valve
Initial Hydro Mud Pres.					Cushion	Feet of
Initial Closed in Pres.					Recovered	Feet of
Initial Flow Pres.	1				Recovered	Feet of
Final Flow Pres.	2				Recovered	Feet of
Final Closed in Pres.	1				Recovered	Feet of
Final Hydro Mud Pres.	2				Oil A.P.I. Gravity	Water Spec. Gravity
Depth Bot. Gauge	Ft.		Blanked Off		Gas Gravity	Surface Pressure
BT. P.R.D. No.			Hour Clock		Tool Opened	A.M. P.M. Tool Closed
Initial Hydro Mud Pres.					Remarks	
Initial Closed in Pres.						
Initial Flow Pres.	1					
Final Flow Pres.	2					
Final Closed in Pres.	1					
Final Hydro Mud Pres.	2					

FORMATION TEST DATA # 465

Formation Testing Service Report

468



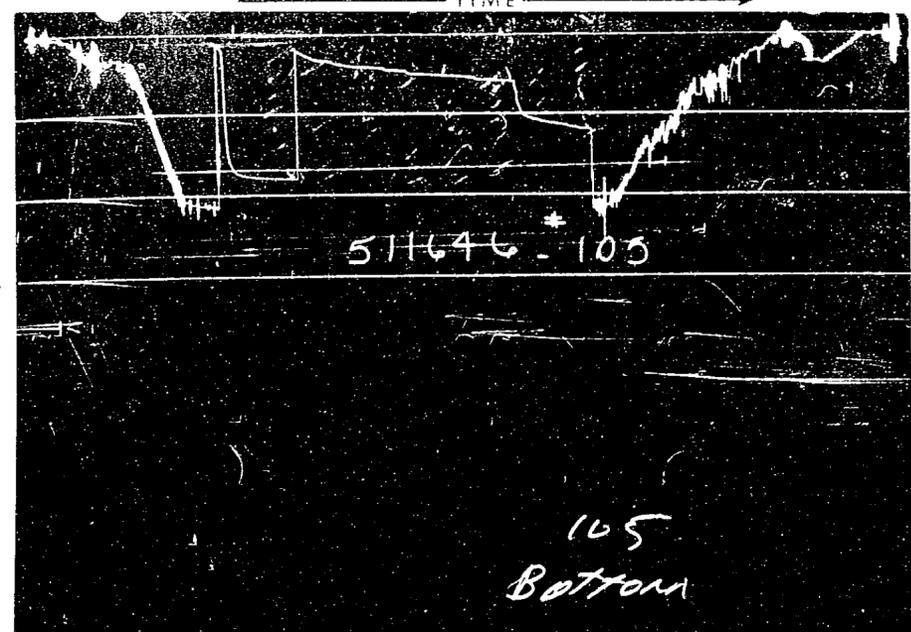
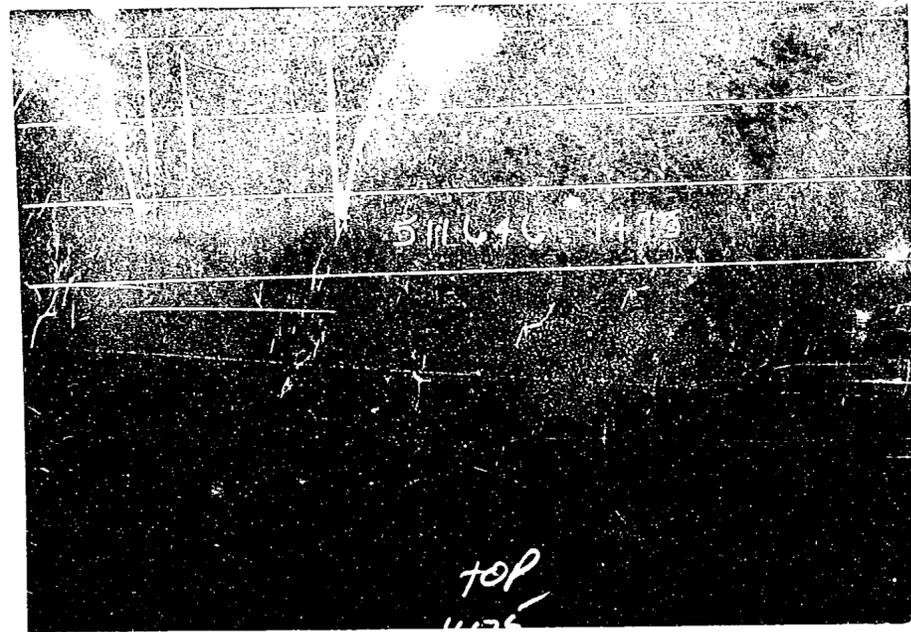
NAVAJO TRIBAL AP

1

3

PAN AMERICAN PETROLEUM CORPORATION

HALLIBURTON COMPANY
DUNCAN, OKLAHOMA



Each Horizontal Line Equal to 1000 p.s.i.

Flow Time	1st	Min	2nd	Min	Date	Ticket Number
Closed In Press Time	1st	Min	2nd	Min	Kind of Job	Halliburton District
Pressure Readings	Field			Office Corrected	Tester	Witness
Depth Top Gauge	Fr			Blanked Off	Drilling Contractor	
BT P.R.D. No.				Hour Clock	Elevation	Top Packer
Initial Hydro Mud Pressure					Total Depth	Bottom Packer
Initial Closed in Pres.					Interval Tested	Formation Tested
Initial Flow Pres.	1				Casing or Hole Size	Casing Top Perfs. 1 But
Final Flow Pres.	2				Surface Choke	Bottom Choke
Final Closed in Pres.					Size & Kind Drill Pipe	Drill Collars Above Tester
Final Hydro Mud Pressure					Mud Weight	Mud Viscosity
Depth Cen. Gauge	Fr			Blanked Off	Temperature	F. Est. Anchor Size & Length
BT P.R.D. No.				Hour Clock	Depths Mea. From	Depth of Tester Valve
Initial Hydro Mud Pres.					Cushion	Depth Back Pres. Valve
Initial Closed in Pres.					Recovered	Feet of
Initial Flow Pres.	1				Recovered	Feet of
Final Flow Pres.	2				Recovered	Feet of
Final Closed in Pres.					Recovered	Feet of
Final Hydro Mud Pres.					Oil A.P.I. Gravity	Water Spec. Gravity
Depth Bot. Gauge	Fr			Blanked Off	Gas Gravity	Surface Pressures
BT P.R.D. No.				Hour Clock	Tool Opened	A.M. Tool Closed
Initial Hydro Mud Pres.					Remarks	
Initial Closed in Pres.						
Initial Flow Pres.	1					
Final Flow Pres.	2					
Final Closed in Pres.						
Final Hydro Mud Pres.						

FORMATION TEST DATA



Gauge No. 1475		Depth 3973'			Clock 24 hour		Ticket No. 511646			
First Flow Period		Initial Closed In Pressure			Second Flow Period		Final Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	
P ₀	.000	138	.000		180	.000	162	.000		625
P ₁	.0026	145	.020		1657	.0987	333	.021		1004
P ₂	.0052	145	.040		1733	.1974	419	.042		1048
P ₃	.0078	143	.060		1753	.2961	482	.063		1076
P ₄	.0104	149	.080		1766	.3948	535	.084		1102
P ₅	.013	180	.100		1774	.4935	581	.105		1124
P ₆			.120		1781	.592	625	.126		1143
P ₇			.140		1785			.147		1163
P ₈			.160		1790			.168		1178
P ₉			.180		1796			.189		1193
P ₁₀			.200		1805			.210		1204
Gauge No. 105		Depth 4045'			Clock 12 hour					
P ₀	.000	129	.000		193	.000	246	.000		596
P ₁	.006	121	.0414		1616	.204	355	.0432		998
P ₂	.012	140	.0828		1736	.408	412	.0864		1048
P ₃	.018	162	.1242		1760	.612	463	.1296		1078
P ₄	.024	195	.1656		1773	.816	515	.1728		1104
P ₅	.030	193	.2070		1782	1.020	572	.2160		1121
P ₆			.2484		1786	1.224	596	.2592		1132
P ₇			.2898		1793			.3024		1160
P ₈			.3312		1797			.3456		1173
P ₉			.3726		1801			.3888		1188
P ₁₀			.414		1803			.432		1197
Reading Interval	1		6			30		6		Minutes
REMARKS:										

SPECIAL PRESSURE DATA

5

Each Horizontal Line Equal to 1000 p.s.i.

NAVAJO-AF
JOE Apache County



NOMENCLATURE

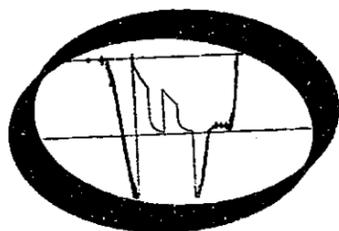
- b** = Approximate Radius of Investigation Feet
- b₁** = Approximate Radius of Investigation (Net Pay Zone h) Feet
- D.R.** = Damage Ratio
- E_l** = Elevation Feet
- GD** = B.T. Gauge Depth (From Surface Reference) Feet
- h** = Interval Tested Feet
- h₁** = Net Pay Thickness Feet
- K** = Permeability md
- K₁** = Permeability (From Net Pay Zone h) md
- m** = Slope Extrapolated Pressure Plot (Psi²/cycle Gas) psi/cycle
- OF₁** = Maximum Indicated Flow Rate MCF/D
- OF₂** = Minimum Indicated Flow Rate MCF/D
- OF₃** = Theoretical Open Flow Potential with/Damage Removed Max. MCF/D
- OF₄** = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
- P_s** = Extrapolated Static Pressure Psig.
- P_f** = Final Flow Pressure Psig.
- P_o** = Potentiometric Surface (Fresh Water*) Feet
- Q** = Average Adjusted Production Rate During Test bbls/day
- Q₁** = Theoretical Production w/Damage Removed bbls/day
- Q_g** = Measured Gas Production Rate MCF/D
- R** = Corrected Recovery bbls
- r_w** = Radius of Well Bore Feet
- t** = Flow Time Minutes
- t_o** = Total Flow Time Minutes
- T** = Temperature Rankine °R
- Z** = Compressibility Factor
- μ** = Viscosity Gas or Liquid CP
- Log** = Common Log

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

NAVJO-AF
SE 1/4 - 30N-30E Apache County
140



Formation Testing Service Report



468

HALLIBURTON COMPANY
DUNCAN, OKLAHOMA

DATE OF START 2 4 PAN AMERICAN PETROLEUM CORPORATION



Each Horizontal Line Equal to 1000 p.s.i.

Flow Time	1st Min.	2nd Min.	Min.	Date	Ticket Number
Closed In Press. Time	1st Min.	2nd Min.	Min.	Kind of Job	Halliburton District
Pressure Readings	Field	Office Corrected	Tester	Witness	
Depth Top Gauge	Ft.	Blanked Off	Drilling Contractor		
BT P.R.D. No.		Hour Clock	Elevation	Top Packer	
Initial Hydro Mud Pressure			Total Depth	Bottom Packer	
Initial Closed in Pres.			Interval Tested	Formation Tested	
Initial Flow Pres.	1		Casing or Hole Size	Casing Top Perfs. Bot.	
Final Flow Pres.	2		Surface Choke	Bottom Choke	
Final Closed in Pres.	1		Size & Kind Drill Pipe	Drill Collars Above Tester	
Final Hydro Mud Pressure	2		Mud Weight	Mud Viscosity	
Depth Cen. Gauge	Ft.	Blanked Off	Temperature	F. Est. Anchor Size & Length	10 00 X
BT P.R.D. No.		Hour Clock	Depths Mea. From	Depth of Tester Valve	
Initial Hydro Mud Pres.			Cushion	Feet of	
Initial Closed in Pres.			Recovered	Feet of	
Initial Flow Pres.	1		Recovered	Feet of	
Final Flow Pres.	2		Recovered	Feet of	
Final Closed in Pres.	1		Recovered	Feet of	
Final Hydro Mud Pres.	2		Oil A.P.I. Gravity	Water Spec. Gravity	
Depth Bot. Gauge	Ft.	Blanked Off	Gas Gravity	Surface Pressure	
BT P.R.D. No.		Hour Clock	Tool Opened	A.M. Tool Closed	
Initial Hydro Mud Pres.			Remarks		
Initial Closed in Pres.					
Initial Flow Pres.	1				
Final Flow Pres.	2				
Final Closed in Pres.	1				
Final Hydro Mud Pres.	2				

FORMATION TEST DATA
SPECIAL PRESSURE DATA

Gauge No.		730		Depth		2925'		Clock		12 hour		Ticket No.		511648	
First Flow Period		Initial Closed In Pressure				Second Flow Period		Final Closed In Pressure							
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.				
P ₀	.000	28	.000		27		.000	32		.000		29			
P ₁	.030	27	.0195		37		.424	29		.407		35			
P ₂			.0390		45										
P ₃			.0585		53										
P ₄			.0780		61										
P ₅			.0975		65										
P ₆			.1170		71										
P ₇			.1365		75										
P ₈			.1560		79										
P ₉			.1755		83										
P ₁₀			.1950		84										
Gauge No.		786		Depth		3116'		Clock		24 hour					
P ₀	.000	133	.000		132		.000	138		.000		136			
P ₁	.020	132	.0094		138		.222	136		.184		141			
P ₂			.0188		145										
P ₃			.0282		155										
P ₄			.0376		163										
P ₅			.0470		168										
P ₆			.0564		173										
P ₇			.0658		179										
P ₈			.0752		183										
P ₉			.0846		187										
P ₁₀			.0940		191										
Reading Interval				3								Minutes			
REMARKS:															

SPECIAL PRESSURE DATA 463 5

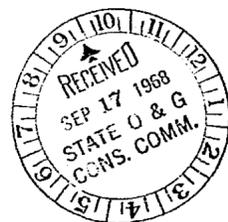
Each Horizontal Line Equal to 1000 p.s.i.

KAY - TAVAJO-AF
 SE. 1/4 - 30N - 30E Apache County
 1973

NOMENCLATURE

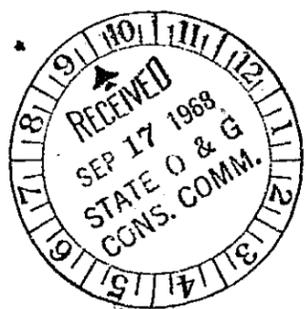
b	= Approximate Radius of Investigation	Feet
b₁	= Approximate Radius of Investigation (Net Pay Zone h)	Feet
D.R.	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h₁	= Net Pay Thickness	Feet
K	= Permeability	md
K₁	= Permeability (From Net Pay Zone h)	md
m	= Slope Extrapolated Pressure Plot (Psi ² /cycle Gas)	psi/cycle
OF₁	= Maximum Indicated Flow Rate	MCF/D
OF₂	= Minimum Indicated Flow Rate	MCF/D
OF₃	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF₄	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_o	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbbls/day
Q₁	= Theoretical Production w/Damage Removed	bbbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100° F.



Each Horizontal Line Equal to 1000 p.s.i.

PAVADO-AF
 SE. NW. 12-30N-30E Apache County





OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
ROOM 202
1624 WEST ADAMS
Phoenix, Arizona 85007
PHONE: 271-5161

October 7, 1970

Seaboard Surety Company
A 1820 - 175 West Jackson Boulevard
Chicago, Illinois 60604

Attention: Mr. R. J. Hyde

Re: Seaboard Surety Company Bond No. 672765 - \$25,000
Pan American Petroleum Corporation

Gentlemen:

Records of this office indicate that on October 7, 1970, Pan American Petroleum Company fulfilled their obligations to the State of Arizona as to the requirements pertaining to the captioned well. We authorize termination of the subject bond effective this date.

Very truly yours,

W. E. Allen
Director, Enforcement Section

WEA:jd

cc: Pan American Petroleum Company

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Operator PAN AMERICAN PETROLEUM CORP

Bond Company Seaboard Surety Co. Amount 25,000

Bond No. not shown Date Approved ~~11~~ 11-8-65

Permits covered by this bond:

<u>60</u>	
<u>76</u>	O.K.
<u>85</u>	A.P.A.
<u>98</u>	O.K.
<u>176</u>	O.K.
<u>179</u>	same as #60
<u>232</u>	O.K.
<u>247</u>	O.K.
<u>280</u>	O.K.
<u>428</u>	O.K.
<u>468</u>	O.K.

CANCELLED
DATE 12-6-70

SEE ORIGINAL
bond in
file
232

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September 13, 1970

Mr. T. M. Curtis
Pan American Petroleum Corporation
Security Life Building
Denver, Colorado 80202

Re: Blanket Drilling Bond
No. 672765

Pan American #1 Navajo "O"
SE/4 SW/4 Sec. 25-T41N-R30E
Apache County
Our File #232
Recently purchased by Clinton Oil Company

Dear Mr. Curtis:

In reply to your letter of September 10, 1970, requesting release of liability under the above referenced bond, we have this date notified Clinton Oil Company to furnish this Commission with their own bond covering their Arizona operations.

According to the terms as outlined in your Designation of Operator, it was stipulated that Pan American would retain the responsibility of the lessee; therefore, it was our understanding that Clinton would not be liable for the bonding responsibility.

As quickly as we receive an approved bond from Clinton, we will take the necessary measures to release Pan American from any further liability. We hope that this delay will cause no undo inconvenience.

Very truly yours,

W. E. Allen
Director, Enforcement Section

WEA:jd

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PAN AMERICAN PETROLEUM CORPORATION

SECURITY LIFE BUILDING
DENVER, COLORADO 80202

DISTRICT SUPERINTENDENTS
W. M. JONES
T. M. CURTIS

PRODUCING DEPARTMENT
H. T. HUNTER
DIVISION PRODUCTION
MANAGER

September 10, 1970

File: TMC-269-923

Re: Blanket Drilling
Bond No. 672765

*Bill
check & advise*

Mr. John Bannister
Executive Secretary
Oil & Gas Conservation Commission
1624 West Adams - Room 202
Phoenix, Arizona 85007

Dear Sir:

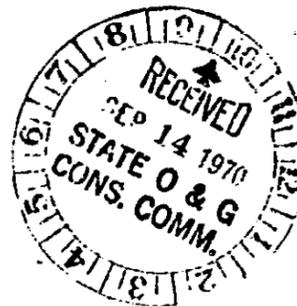
Pan American Petroleum Corporation no longer has any producing property in the State of Arizona.

Our \$25,000 Blanket Drilling Bond No. 672765 is no longer needed. Please furnish us a release of liability under the bond in order for us to cancel our coverage with our surety.

Yours very truly,

T. M. Curtis

cc: Mr. R. B. Parson - Tulsa
Mr. L. O. Speer, Jr. - Fmgt



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September 14, 1970

Mr. M. C. Lyons
Accounting Department
Clinton Oil Company
217 North Water Street
Wichita, Kansas 67202

Re: Pan American #1 Navajo "O"
SE/4 SW/4 Sec. 23-T41N-R30E
Apache County
Our File #232

Dear Mr. Lyons:

Please refer to our letter to you dated July 7, 1970, and your reply of July 17, 1970. We now have received from Pan American Petroleum Corporation a request to cancel their blanket bond No. 672785 presently covering your operations. A copy of their letter is enclosed.

This Commission cannot grant Pan American's request until such time as Clinton Oil Company furnishes us with a replacement bond signed by an Arizona Surety Agent. As you know, a bond on an individual well must be in the amount of \$5,000. A blanket bond in the amount of \$25,000 will cover your present operation and any future anticipated operations within this State.

We regret if we have caused you or your company any inconvenience as regards this bonding situation; however, it was our initial understanding that Pan American would keep their bond in full force and effect.

Should you need additional information, please let us know.

Very truly yours,

W. E. Allen
Director, Enforcement Section

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WEA:jd
Enc.

September 20, 1968

Mr. G. W. Eaton, Jr.
Pan American Petroleum Corporation
501 Airport Drive
Farmington, New Mexico 87401

Re: Pan Am #1-AF Navajo
T38N, R30E, G & SRM
Sec. 12: SE/4 NW/4
Apache County, Arizona
Permit #468

Dear Mr. Eaton:

A review of the file pertaining to the captioned well indicates there was a deviation survey made. Please furnish us a report on this matter.

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf

Recd 9/25/68

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August 12, 1968

Mr. G. W. Eaton, Jr.
Pan American Petroleum Corporation
501 Airport Drive
Farmington, New Mexico 87401

Re: Pan Am #1-AF Navajo
T38N, R30E, G & SRM
Sec. 12: SE/4 NW/4
Apache County, Arizona
Permit #468

Dear Mr. Eaton:

Thank you for the notice form advising us of the spud date. Please advise us of current progress on the captioned well. A copy of your daily drilling report pertaining to this well will suffice for our current needs.

Yours truly,

James A. Lambert
Administrative Assistant

JL:lf

4/68