



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

February 7, 1991

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Robert L. Bayless
P.O. Box 168
Farmington, New Mexico 87499

Attention: Tom McCarthy

*Re: Tocito SWD Well Nos. 1 & 2 Unit L, Section 21 & Unit
G Section 20, respectively, T-26 North, R-18 West,
NMPM, San Juan County, New Mexico.*

Dear Mr. McCarthy:

I have reviewed your application dated December 4, 1990, whereby you requested authorization to utilize the subject salt water disposal wells for commercial water disposal. It is our understanding that the subject wells were authorized for injection into the Pennsylvanian "D" formation by Division Order Nos. R-3558 and SWD-136. The application and information submitted is sufficient to grant your request. When it is determined which waters will be accepted for disposal at the two sites, I would request that you provide the Division an analysis of such waters.

Please be advised that the subject wells are located on Indian Lands and as such are also subject to EPA regulations and permitting procedures. It is likely that under EPA regulations, you will have to obtain EPA approval for your proposal. The EPA contact person, address, and phone number are as follows:

Mr. George Robin
Environmental Protection Agency-Region 9
1235 Mission Street
San Francisco, California 94103
Telephone Number: (415) 744-1843

If you should have any questions, please contact Mr. David Catanach at (505) 827-5800.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. LeMay".

William J. LeMay
Director

xc: OCD-Aztec
File SWD-136, Case File 3913

ROBERT L. BAYLESS

P. O. BOX 168
FARMINGTON, NM 87499

FAX NO
(505) 326-6911

DIVISION
'90 DEC 6 AM 9 07
OFFICE NO
(505) 326-2659

December 04, 1990

State of New Mexico
Oil Conservation Division
ATTN: DAVID CATANACH
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Bayless Operated
Tocito SWD Nos. 1 & 2
San Juan County, NM

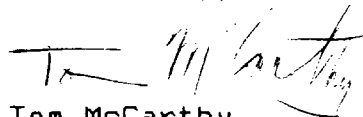
Dear Mr. Catanach:

Please refer to your letter dated August 1, 1990, concerning authorization to use the Tocito SWD Nos. 1 & 2 for off lease commercial disposal. In that letter you requested current form C-108 data be supplied to you. This data is attached. Since these wells are already permitted and since your request is for updated data, only the informational portions of the form C-108 are completed.

As you are aware, the subject wells are quite isolated relative to other production in San Juan County. As a result, their possible use for commercial disposal will be very limited. It is envisioned that commercial use will be on rare and temporary occasions only.

Please advise me if you require any additional information.

Yours truly,



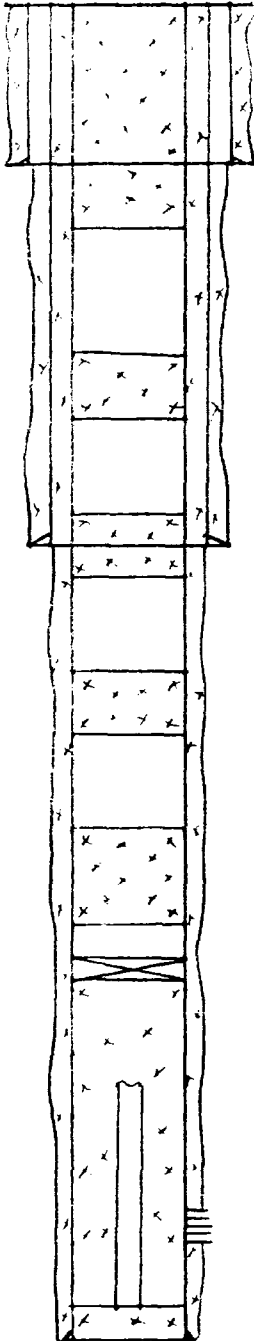
Tom McCarthy
Petroleum Engineer

TM/gb

Enclosure

WELLBORE DIAGRAM - PRODUCED & ABANDONED WELL

NAVAJO TRIBAL N NO. 9
NW/4, SECTION 20, T26N, R18W
SAN JUAN CO., N.M.



50 SX CEMENT PLUG FROM 0 TO 165'
17 1/4" HOLE
100 SX CEMENT

13 3/8" CASING SET AT 115'

11" HOLE

500 SX CEMENT
70 SX CEMENT PLUG FROM 1052 TO 818'

8 5/8" CASING SET AT 1512'
30 SX CEMENT PLUG FROM 1550 - 1450'

30 SX CEMENT PLUS FROM 1870 TO 1770'

7 7/8" HOLE

60 SX CEMENT PLUG FROM 2295 TO 2095'

CEMENT RETAINER SET AT 2738'. PUMP 500 SX
CEMENT THROUGH RETAINER. CIRCULATED
CEMENT TO SURFACE.

FISH AT 3370' TO TO

PERFS 6312 - 6330'
5 1/2" CASING SET AT 6435' & CEMENT WITH 500 SX.
PLUG BACK DEPTH 6400'
TOTAL DEPTH 6435'

NOT TO SCALE

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

200' plug from 2295'-2095' (60 sx)
100' plug from 1870'-1770' (30 sx)
100' plug from 1550'-1450' (30 sx)
234' plug from 1052'-818' (70 sx)
165' to surface (50 sx)
Total cement = 740 sx.

Cleaned up location and erected PxA marker.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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 Form 9-331-C for such proposals.)

1. oil well gas well other

2. NAME OF OPERATOR
Amoco Production Company

3. ADDRESS OF OPERATOR
501 Airport Dr., Farmington, NM 87401

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 600' FNL x 1200' FWL (Unorthodox)
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE
14-20-603-5035

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo Tribe

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Navajo Tribal "N"

9. WELL NO.
9

10. FIELD OR WILDCAT NAME
Tocito Dome Penn "D"

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
NW/4, NW/4, Section 20, T26N, R18W

12. COUNTY OR PARISH
San Juan

13. STATE
New Mexico

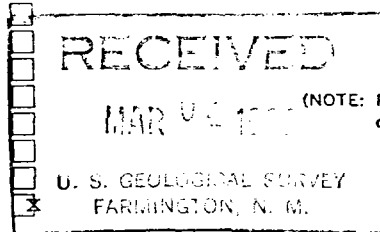
14. API NO.
30-045-11946

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5822' G.L.

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

- TEST WATER SHUT-OFF
- FRACTURE TREAT
- SHOOT OR ACIDIZE
- REPAIR WELL
- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- CHANGE ZONES
- ABANDON*
- (other)



(NOTE: Report results of multiple completion or zone change on Form 9-330.)

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.)*

Operations commenced on 2-25-82. Moved in and rigged up pulling unit. Tripped out with 88 joints of 2-7/8" tubing. Rigged up and ran cement retainer. Hit tight spot at 2738'. Loaded tubing with water and pressure tested tubing. Set cement retainer at 2738'. Loaded casing with water and pressure tested to 500 PSI. Test was good. Stung into retainer and started pumping water. Water circulated to surface through 8-5/8" casing at 10 barrels pumped. Shut down for the day. Operations commenced again on 2-26-82. Pumped cement through retainer and 2-7/8" tubing and circulated back to surface through 8-5/8" casing. Pumped 500 sx class "B" neat cement. Pulled out of retainer and spotted 10 sx on top of retainer. Tripped out and spotted cement plugs as follows:

(OVER)

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

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

SIGNED _____ TITLE Dist. Admin. SUPERV DATE MAR 3 1984

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE DEC 10 1984

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
AS AMENDED

John W. Miller
MILLENBACH
AREA MANAGER

NOTE: Sundry Notice dated 2-18-82 indicated operations would commence 2-22-82.

Approved as to plugging of the well bore.
Liability under bond is retained until
surface restoration is completed.

*See Instructions on Reverse Side

OPERATOR

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TRUE VERT. DEPTH
LOG TOPS						
Toddico	2130'	2145'				
Raderda	2145'	2055'				
Chiale	2855'	3815'				
DoChelly	3815'	4400'				
Cuelar	4400'	5000'				
Hertosa	5000'	6310'				
Lower Hertosa	6310'	6315'				
Pennsylvania	6315'	6360'				

ILLEGIBLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

File

5. LEASE DESIGNATION AND SERIAL NO.

14-20-602-5035

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tribe

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tribal

9. WELL NO.

9

10. FIELD AND ZONE FOR WILDCAT

Yocite Rose Perm. #1

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

R/4 S/4 Section 20,
2-20-60 E-100

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other Re-entry

2. NAME OF OPERATOR
ARMA PRODUCTION COMPANY

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 600' FWL & 1200' FWL
At top prod. interval reported below 600'
At total depth 6435'

14. PERMIT NO. DATE ISSUED

Re-entry dates

15. DATE SPUNDED 5-6-72 16. DATE T.D. REACHED 5-25-72 17. DATE COMPL. (Ready to prod.) 6-2-72 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 3634' FWL 19. ELEV. CASINGHEAD 3622'

20. TOTAL DEPTH, MD & TVD 6435' 21. PLUG, BACK T.D., MD & TVD 6435' 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY → 24.35' 25. WAS DIRECTIONAL SURVEY MADE 0

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
6312-6350' Pennsylvania "F" porosity 27. WAS WELL CORED No

26. TYPE ELECTRIC AND OTHER LOGS RUN Induction, density, neutron 27. WAS WELL CORED No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-5/8"	468	115'	17-1/4"	100 sz.	None
8-5/8"	241	1500'	11"	500 sz.	None
5-1/2"	13.58	6435'	7-7/8"	500 sz.	None

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	6350'	None

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
INTERVAL	NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
6312-6350	2 SPT	6312-6350'	500 gal. 15% HCl

33. PRODUCTION
DATE FIRST PRODUCTION 6-2-72 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flooding WELL STATUS (Producing or shut-in) Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6-4-72	24	40/64"	→	140	600	0	4280
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
80 psig	300 psig	→	140	600	0	45°	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) None TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED _____ TITLE Area Engineer DATE JUNE 9, 1972

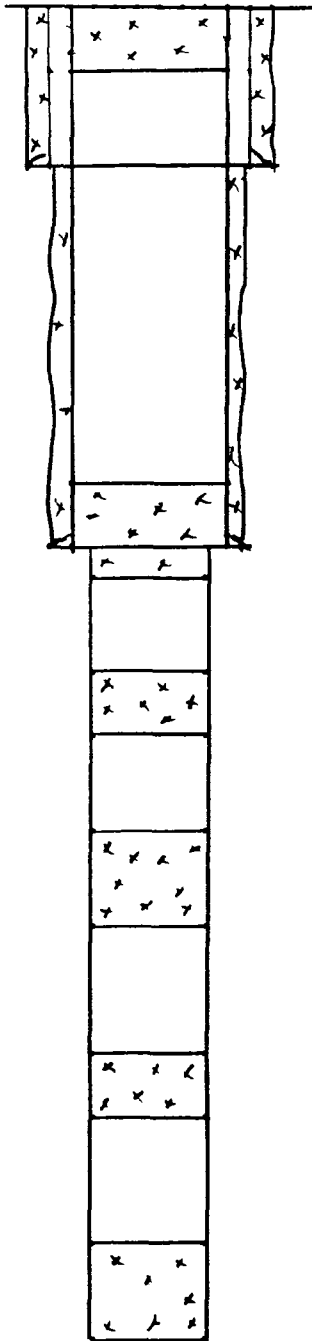
*(See Instructions and Spaces for Additional Data on Reverse Side)

ILLEGIBLE

WELLBORE DIAGRAM - DRY HOLE

=====

NAVAJO TRIBAL N NO. 5
SE/4, SECTION 20, T26N, R18W
SAN JUAN CO., N.M.



10 SX CEMENT PLUG FROM 0 TO 30'
17 1/2" HOLE
100 SX CEMENT

13 3/8" CASING SET AT 90'

11" HOLE

500 SX CEMENT

8 5/8" CASING SET AT 1512'
60 SX CEMENT PLUG FROM 1560 TO 1411'

40 SX CEMENT PLUG FROM 2190 TO 2090'

7 7/8" HOLE

60 SX CEMENT PLUG FROM 3910 TO 3760'

40 SX CEMENT PLUG FROM 5075 TO 4975'

60 SX CEMENT PLUG FROM 6460 TO 6290'

TOTAL DEPTH 6460'

NOT TO SCALE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPL
(Other instructions
verse side)

Form approved.
Budget Bureau No. 42-W1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-5035

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tribe

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tribal #N

9. WELL NO.

5

10. FIELD AND POOL, OR WILDCAT

Tocito Dome Pennsylvanian #D

11. SEC., T., R., M., OR B.L.K. AND SURVEY OR AREA

NE/4 SE/4 Section 20,
T-26-N, R-18-W

12. COUNTY OR PARISH 13. STATE

San Juan

New Mexico

1. OIL WELL GAS WELL OTHER Dry Hole

2. NAME OF OPERATOR
PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR
P. O. Box 480, Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface 2130 FSL and 660 FEL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5807 (RDB)

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

NOTICE OF INTENTION TO:

- TEST WATER SHUT-OFF
- FRACURE TREAT
- SHOOT OR ACIDIZE
- REPAIR WELL
- (Other)
- PULL OR ALTER CASING
- MULTIPLE COMPLETE
- ABANDON*
- CHANGE PLANS

SUBSEQUENT REPORT OF:

- WATER SHUT-OFF
- FRACURE 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.)*

The above well was plugged and abandoned December 2, 1964 as follows:

1. Spotted 60 sack cement plug from Total Depth 6160 to 6290 (Lower Hermosa 6344) (Perm #D).
2. Spotted 40 sack cement plug from 5075 to 4975 (Pennsylvanian (Hermosa) 5025).
3. Spotted 60 sack cement plug from 3910 to 3760 (DeChelly 3815).
4. Spotted 40 Sack cement plug from 2190 to 2090 (Todilto 2120 and Entrada 2140).
5. Spotted 60 sack cement plug from 1560 to 1411 (8-5/8" casing set at 1512).
6. Spotted 10 sack cement plug from 0 to 30.
7. Cleaned up location and erected abandonment marker.

RECEIVED
OCT 28 1965
FARMINGTON
AREA

RECEIVED
DEC 9 1964
U. S. GEOLOGICAL SURVEY
FARMINGTON, N.M.

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

Fred L. Nabors, District Engineer

SIGNED

ORIGINAL SIGNED BY
F. H. MOLLINGSWORTH

DATE December 7, 1964

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL IF ANY:
25 1965
P. T. ...
DISTRICT ...

TITLE

DATE

*See Instructions on Reverse Side

NUMBER	COPY	RECEIVED
DISTRIBUTION		
SANTA FE		
FILE		
U.S.S.		
LAND OFFICE		
TRANSPORTER	OIL	
	GAS	
PROMOTION OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

(Form C-104)
Revised 7/1/57

REQUEST FOR ~~REVISION~~ - (GAS) ALLOWABLE

New Well:
~~XXXXXXXXXX~~

This form shall be submitted by the operator before an initial allowable will be assigned to any completed Oil or Gas well. Form C-104 is to be submitted in QUADRUPPLICATE to the same District Office to which Form C-101 was sent. The allowable will be assigned effective 7:00 A.M. on date of completion or recompletion, provided this form is filed during calendar month of completion or recompletion. The completion date shall be that date in the case of an oil well when new oil is delivered into the stock tanks. Gas must be reported on 15.025 psia at 60° Fahrenheit.

Farmington, New Mexico October 16, 1964
(Place) (Date)

WE ARE HEREBY REQUESTING AN ALLOWABLE FOR A WELL KNOWN AS:

PAN AMERICAN PETROLEUM CORP. Navajo Tribal "N", Well No. 3, in SW 1/4 SE 1/4,
(Company or Operator) (Lease)
0 Sec. 17, T. 26-N, R. 18-W, NMPM, Tesito Dome Pennsylvanian "D" Pool
Unit Letter

San Juan

County. Date Spudded August 25, 1964 Date Drilling Completed October 1, 1964

Please indicate location:

Elevation 5754 (FSL) Total Depth 6450 PBD 6386

Top Oil/Gas Pay 6253 Name of Prod. Form. Pennsylvanian "D"

PRODUCING INTERVAL -

Perforations 6253-6265 with 4 shots per foot

Open Hole None Depth Casing Shoe 6450 Depth Tubing 6340

OIL WELL TEST -

Natural Prod. Test: _____ bbls. oil, _____ bbls. water in _____ hrs, _____ min. Size _____ Choke

Test After Acid or Fracture Treatment (after recovery of volume of oil equal to volume of load oil used): _____ bbls. oil, _____ bbls. water in _____ hrs, _____ min. Size _____ Choke

GAS WELL TEST -

Natural Prod. Test: _____ MCF/Day; Hours flowed _____ Choke Size _____

Method of Testing (pitot, back pressure, etc.): _____

Test After Acid or Fracture Treatment: 5120 MCF/Day; Hours flowed 24

Choke Size 5/16" Method of Testing: Pitot Tube

Acid or Fracture Treatment (Give amounts of materials used, such as acid, water, oil, and sand): 250 gallons sand and acid

Casing 2617 Tubing 2437 Date first new Shut-In
Press. Press. oil run to tanks

Oil Transporter Plateau, Inc.

Gas Transporter El Paso Natural Gas Company

Remarks: Well completed October 12, 1964 as Tesito Dome Pennsylvanian "D" Field Development Well. Copy of Deviation Survey attached.

I hereby certify that the information given above is true and complete to the best of my knowledge.

Approved: OCT 19 1964, 19.

PAN AMERICAN PETROLEUM CORPORATION
ORIGINAL SIGNED BY
L. R. Turner
(Company or Operator)

By: _____ (Signature)

Title: Administrative Clerk

Send Communications regarding well to:

Name: G. D. Spear, Jr.

OIL CONSERVATION COMMISSION

By: _____

Title: PETROLEUM ENGINEER, DIST. NO. 3

Form 104, Farmington, New Mexico

ILLEGIBLE

5754' EDB
5745' 6r

13-3/8" 48# CSA 93' w/100 SX

8-5/8" 24# CSA 146' w/800 SX ⁴⁰⁰

Stage Collar
@ 5590' - cent
w/500 SX 670 gal
w/2[#]/SX. TP

To test organ Rock
4342' to 4544'

Retainer @ 5500'
+ 50 w/50 SX

5/4/88
2 sg Holes @ 4600
3 sg - @ 4310

5551-58' w/4 JSEP
sg w/50 SX

Retainer @ 6080
+ 50 w/50 SX

6128-34' w/4 JSEP

2-3/8" Tbg. @ 0'

PBTD - 6386

TD -

4-1/2" 10.5# CSA 6428' w/1100 SX

1st stage 500 SX 670 gal + 2[#]/SX TP
+ 100 SX. Next

Amoco Production Company

SCALE:

NAVAJO TRIBAL NO. 3 (SI)

DRG.
NO.

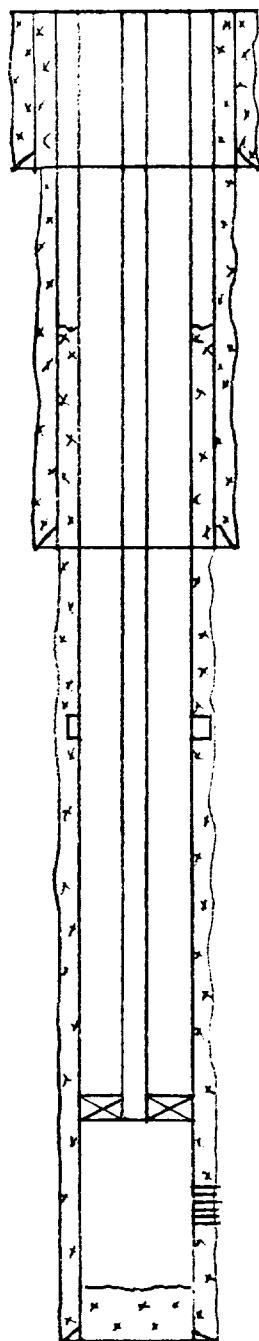
VI. Tabulation of Data for Wells in Area of Review:

<u>WELL</u>	<u>STATUS</u>	<u>DATA</u>
Navajo Tribal "N" #3	Shut In Oil	See Attached
Navajo Tribal "N" #5	Dry Hole	See Attached
Navajo Tribal "N" #9	Plugged & Abandoned Oil	See Attached

WELLEDGE DIAGRAM

=====

TOCITO SWD NO. 2
(FORMERLY NAVAJO TRIBAL N NO. 2)
NE/4, SECTION 20, T26N, R18W
SAN JUAN CO., N.M.



17 1/4" HOLE
100 SX CEMENT CIRCULATED TO SURFACE

13 3/8" CASING SET AT 95'

11" HOLE
400 SX CEMENT WITH CALCULATED TOP AT SURFACE

8 5/8" CASING SET AT 1520'

11" HOLE
500 SX CEMENT WITH CALCULATED TOP AT 933'

7 7/8" CASING SET AT 3628'

7 7/8" HOLE
800 SX CEMENT WITH CALCULATED TOP AT 3628'

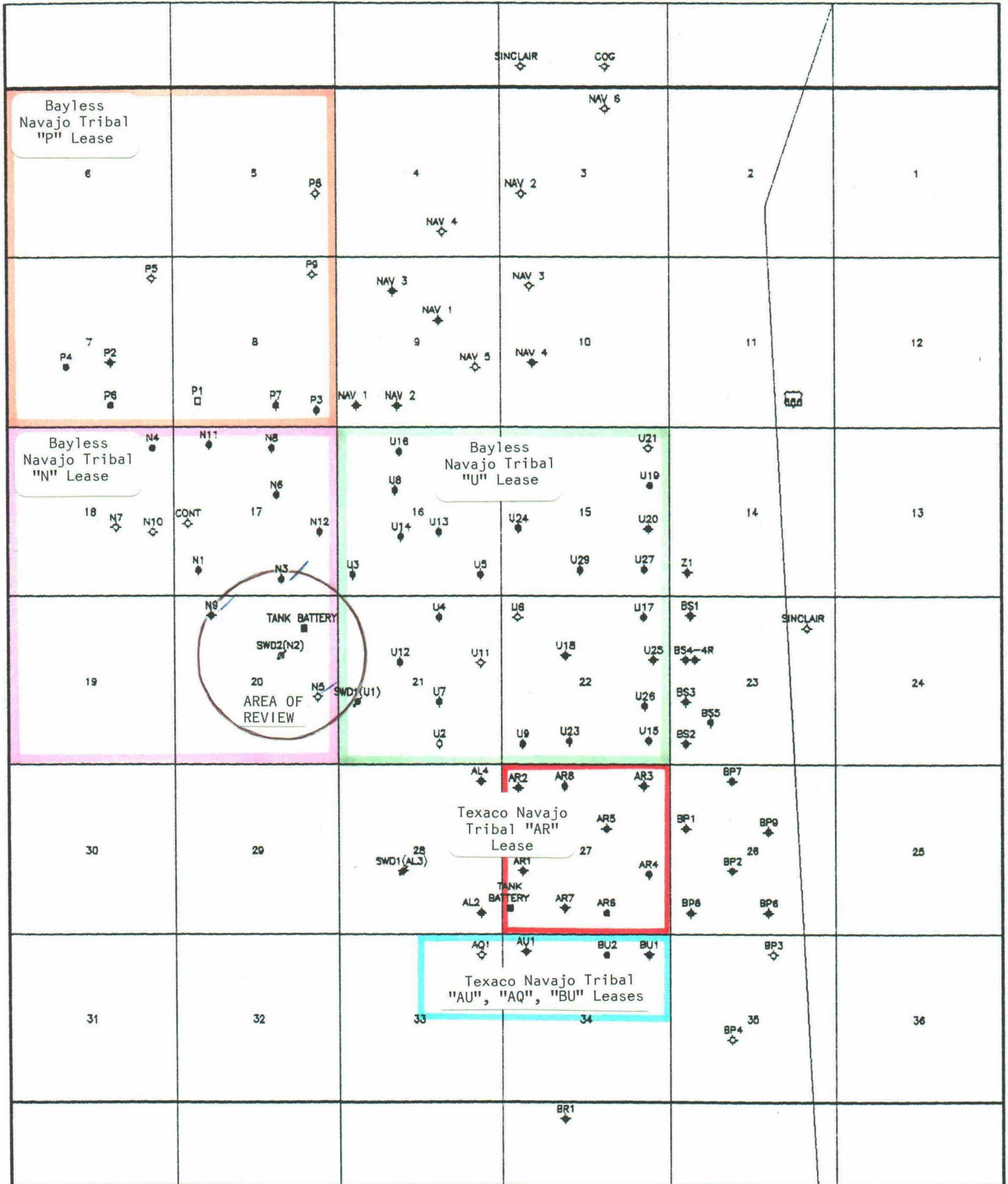
2 7/8" TUBING SET AT 6160' IN MODEL 6
RETAINER-PRODUCTION PACKER
PERFS 6237-6252' : 4 SPF

4 1/2" CASING SET AT 6417'

NOT TO SCALE

AREA OF REVIEW & LEASE MAP

TOCITO AREA BASE MAP - T26N R18W
 San Juan County, New Mexico



- D. Water produced in the Tocito Field will be consistently injected into the subject well and the Tocito SWD #1. The sources of commercially injected water are not known currently. Therefore, water analysis is not available.
- E. Injection is for disposal purposes into an oil and gas productive zone. Therefore, a water analysis for disposal zone water is not applicable.

VIII. Geologic Data:

The injection zone is the Barker Creek Cycle of the Paradox Formation, also known as the Tocito Dome Pennsylvanian "D" Oil Pool. It is a vuggy limestone at a depth of 6237'. The Pennsylvanian "D" injection zone is 15' thick, from 6237-52'.

Fresh water is possibly available at depths down to 1300', from the Gallup, Dakota and Morrison Westwater formation. No fresh water is known to exist below the injection zone.

- IX. No stimulation is currently proposed. Historically, acid jobs consisting of 250 gallons of 15% HCL are pumped to remove scale buildup. Scale buildup causes injection pressure to increase from 0 to as high as 200 psi.
- X. Well logs should be on file with the Division.
- XI. Bayless does not possess fresh water sample analyses for wells in the Tocito area.

III. Well Data:

- A. (1) Tocito SWD #2 (formerly Navajo Tribal N #2)
Sec. 20, T26N, R18W
1850' FNL & 1850' FEL

(2) Casing Size	:	13-3/8"	8-5/8"	4-1/2"
Setting Depth	:	95'	1520'	6417'
Sacks Cement	:	100	400	1100
Hole Size	:	17-1/4"	11"	7-7/8"
Top of Cement	:	Surface	Surface	933'
Top Determined By:		Circulated	Calculated	Calculated

(3) Tubing Size : 2-7/8"
Lining Material : plastic
Setting Depth : 6160'

(4) Packer : Baker Model "P" set at 6160'

- B. (1) Injection Formation: Pennsylvanian "D" Limestone
Pool Name : Tocito Dome-Pennsylvanian "D"

(2) Injection Interval : Perforated at 6237'-6252' with 4 SPF.

(3) Original Purpose of Well: Oil Well

(4) Other Perforated Intervals: None

(5) Other than the injection zone, no other deeper or shallower zones are productive in the Area of Review.

V. See attached map identifying all wells and leases within two miles of the proposed injection well with a one-half mile radius circle drawn around proposed injection well.

VI. See attached well tabulation and data package.

VII. Data on proposed operation:

A. Proposed average daily injection rate is 400 BWPD;
Proposed maximum daily injection rate is 1400 BWPD

B. Closed system

C. Average pressure for injection is 0 psi (gravity flow).
Maximum pressure for injection is 200 psi.
Historically, a small acid job to remove scale returns the injection pressure to 0 psi.

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: Robert L. Bayless

Address: PO Box 168, Farmington, NM 87499

Contact party: Kevin H. McCord Phone: 505-326-2659

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: _____ Title _____

Signature: _____ Date: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

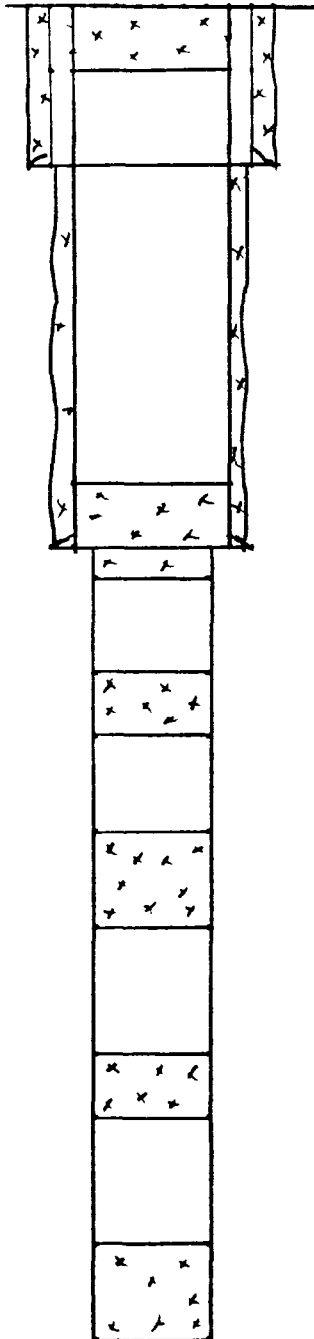
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

WELLBORE DIAGRAM - DRY HOLE

=====

NAVAJO TRIBAL N NO. 5
SE/4, SECTION 20, T26N, R18W
SAN JUAN CO., N.M.



10 SX CEMENT PLUG FROM 0 TO 30'
17 1/2" HOLE
100 SX CEMENT

13 3/8" CASING SET AT 90'

11" HOLE

500 SX CEMENT

8 5/8" CASING SET AT 1512'
60 SX CEMENT PLUG FROM 1560 TO 1411'

40 SX CEMENT PLUG FROM 2190 TO 2090'

7 7/8" HOLE

60 SX CEMENT PLUG FROM 3910 TO 3760'

40 SX CEMENT PLUG FROM 5075 TO 4975'

60 SX CEMENT PLUG FROM 6460 TO 6290'

TOTAL DEPTH 6460'

NOT TO SCALE

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN TRIPL
(Other instructions
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-5035

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo Tribe

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo Tribal "N"

9. WELL NO.

5

10. FIELD AND POOL, OR WILDCAT

Tocito Dome Pennsylvanian "D"

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

**NE/4 SE/4 Section 20,
T-26-N, R-18-W**

12. COUNTY OR PARISH 13. STATE

San Juan New Mexico

1. OIL WELL GAS WELL OTHER **Dry Hole**

2. NAME OF OPERATOR
PAN AMERICAN PETROLEUM CORPORATION

3. ADDRESS OF OPERATOR
P. O. Box 480, Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface **2130 FSL and 660 FEL**

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, OR, etc.)

5807 (RDB)

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" 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.)*

The above well was plugged and abandoned December 2, 1964, as follows:

1. Spotted 60 sack cement plug from Total Depth 6460 to 6290 (Lower Hermosa 6344) (Perm "D").
2. Spotted 40 sack cement plug from 5075 to 4975 (Pennsylvanian (Hermosa) 5025).
3. Spotted 60 sack cement plug from 3910 to 3760 (DeChelly 3815).
4. Spotted 40 Sack cement plug from 2190 to 2090 (Todilto 2120 and Entrada 2140).
5. Spotted 60 sack cement plug from 1560 to 1411 (8-5/8" casing set at 1512).
6. Spotted 10 sack cement plug from 0 to 30.
7. Cleaned up location and erected abandonment marker.

RECEIVED
OCT 28 1965
FARMINGTON
AREA

RECEIVED
DEC 9 1964
U. S. GEOLOGICAL SURVEY
FARMINGTON, N.M.

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

Fred L. Nabors, District Engineer

SIGNED
ORIGINAL SIGNED BY
F. H. HOLLINGSWORTH

TITLE

DATE **December 7, 1964**

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

85 1965
P. T. ...
DISTRICT ...

[Signature]

*See Instructions on Reverse Side

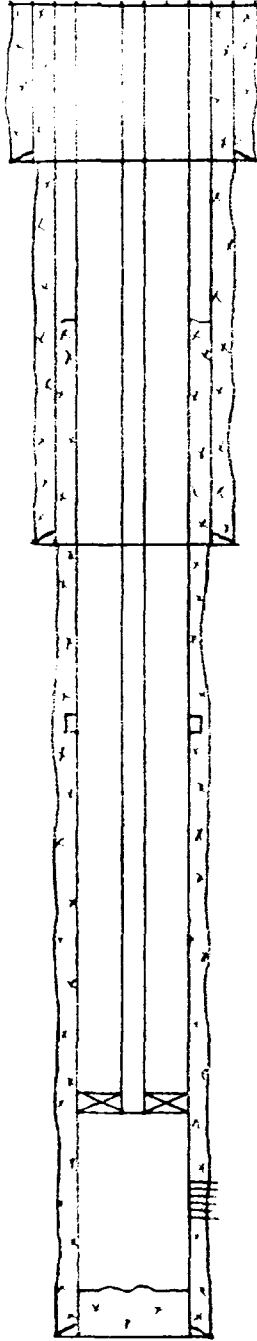
Form C-108
Tocito SWD #1
Robert L. Bayless
Page 7

VI. Tabulation of Data for Wells in Area of Review:

<u>WELL</u>	<u>STATUS</u>	<u>DATA</u>
Navajo Tribal "N" #5	Dry & Abandoned	See Attached
Navajo Tribal "U" #7	Producing	See Attached
Navajo Tribal "U" #12	Producing	See Attached

WELLSBore DIAGRAM

TOCITO SWD NO. 1
(FORMERLY NAVAJO TRIBAL U NO. 1)
S1/4, SECTION 21, T26N, R18W
SAN JUAN CO., N.M.



17 1/4" HOLE
100 BX CEMENT CIRCULATED TO SURFACE

13 3/8" CASING SET AT 87'

11" HOLE

400 BX CEMENT CIRCULATED TO SURFACE

8 5/8" CASING SET AT 1510'

500 BX CEMENT WITH CALCULATED TOP AT 900'

STAGE CEMENTING TOOL AT 3646

7 7/8" HOLE

600 BX CEMENT WITH CALCULATED TOP AT 3646'

2 7/8" TUBING SET AT 6215' IN MODEL P
RETAINER-PRODUCTION PADYER

PERF 6267-6286' ; A 89F

4 1/2" CASING SET AT 6440'

NOT TO SCALE

- D. Water produced in the Tocito Field will be consistently injected into the subject well and the Tocito SWD #2. The sources of commercially injected water are not known currently. Therefore, water analysis is not available.
- E. Injection is for disposal purposes into an oil and gas productive zone. Therefore, a water analysis for disposal zone water is not applicable.

VIII. Geologic Data:

The injection zone is the Barker Creek Cycle of the Paradox Formation, also known as the Tocito Dome Pennsylvanian "D" Oil Pool. It is a vuggy limestone at a depth of 6267'. The Pennsylvanian "D" injection zone is 19' thick, from 6267-86'.

Fresh water is possibly available at depths down to 1300', from the Gallup, Dakota and Morrison Westwater formation. No fresh water is known to exist below the injection zone.

- IX. No stimulation is currently proposed. Historically, acid jobs consisting of 250 gallons of 15% HCL are pumped to remove scale buildup. Scale buildup causes injection pressure to increase from 0 to as high as 200 psi.
- X. Well logs should be on file with the Division.
- XI. Bayless does not possess fresh water sample analyses for wells in the Tocito area.

III. Well Data:

- A. (1) Tocito SWD #1 (formerly Navajo Tribal U #1)
Sec. 21, T26N, R18W
1980' FSL & 660' FWL
- | | | | | |
|--------------------|---|------------|------------|-----------------------------------|
| (2) Casing Size | : | 13-3/8" | 8-5/8" | 4-1/2" |
| Setting Depth | : | 87' | 1510' | 6440' |
| Sacks Cement | : | 100 | 400 | 1100 |
| Hole Size | : | 17-1/4" | 11" | 7-7/8" |
| Top of Cement | : | Surface | Surface | 1st Stage 3646'
2nd Stage 800' |
| Top Determined By: | | Circulated | Calculated | Calculated |
- (3) Tubing Size : 2-7/8" with slim hole couplings
Lining Material : plastic PA400 5-10 mills
Setting Depth : 6215'
- (4) Packer : Baker Model "P" retainer production packer set at 6215'
- B. (1) Injection Formation: Pennsylvanian "D" Limestone
Pool Name : Tocito Dome-Pennsylvanian "D"
- (2) Injection Interval : 6267'-6286'
perforated with 4 SPF
- (3) Original Purpose of Well: Oil Well
- (4) Other Perforated Intervals: None
- (5) Other than the Injection Zone, no other deeper or shallower zones are productive in the area of review.

V. See attached map identifying all wells and leases within two miles of the proposed injection well with a one-half mile radius circle drawn around each proposed injection well.

VI. See attached well tabulation and data package.

VII. Data on proposed operation:

- A. Proposed average daily injection rate is 400 BWPD;
Proposed maximum daily injection rate is 1400 BWPD
- B. Closed system
- C. Average pressure for injection is 0 psi (gravity flow).
Maximum pressure for injection is 200 psi.
Historically, a small acid job to remove scale returns the injection pressure to 0 psi.

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Robert L. Bayless
Address: PO Box 168, Farmington, NM 87499
Contact party: Kevin H. McCord Phone: 505-326-2659
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project _____.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: _____ Title _____
Signature: _____ Date: _____
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

5670' GL
5682' RDB

13-3/8" 48# CSA 92' w/100 sx

8-5/8" 24# CSA 1495' w/500 sx

6191-6199' w/2 spf

6207-6213' w/4 jspf

2-3/8" Tbg. @ 6214'

PBTD - 6219'

TD - 6226'

4-1/2" 10.5# CSA 6226' w/1000 sx

Amoco Production Company

SCALE:

NAVAJO TRIBAL U NO. 7 (SI)

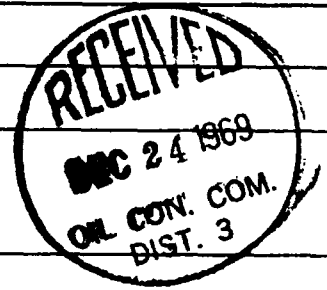
DRG.
NO.

NO. OF COPIES RECEIVED	5
DISTRIBUTION	
SANTA FE	/
FILE	/
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL /
	GAS /
OPERATOR	/
PRORATION OFFICE	/

**NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS**

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

RECEIVED	
JAN 2 1970	
FARMINGTON	
AREA	
AS	
AAS	
AE	
AA	



Operator PAN AMERICAN PETROLEUM CORPORATION	
Address 501 Airport Drive, Farmington, New Mexico 87401	
Reason(s) for filing (Check proper box)	
New Well <input checked="" type="checkbox"/>	Change in Transporter of: Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>
Recompletion <input type="checkbox"/>	Casinghead Gas <input type="checkbox"/> Condensate <input type="checkbox"/>
Change in Ownership <input type="checkbox"/>	

If change of ownership give name and address of previous owner _____

I. DESCRIPTION OF WELL AND LEASE

Lease Name Navajo Tribal "U"	Well No. 12	Pool Name, including Formation Tocito Dome Penn "D"	Kind of Lease State, Federal or Fee Federal	Lease No. 14-20-603-5034
Location Unit Letter F ; 2050 Feet From The North Line and 2050 Feet From The West				
Line of Section 21 Township 26-N Range 18-W , NMPM, San Juan County				

II. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> Four Corners Pipeline	Address (Give address to which approved copy of this form is to be sent) Box 1588, Farmington, New Mexico 87401				
Name of Authorized Transporter of Casinghead Gas <input checked="" type="checkbox"/> or Dry Gas <input type="checkbox"/> El Paso Natural Gas Co.	Address (Give address to which approved copy of this form is to be sent) Box 990, Farmington, New Mexico 87401				
If well produces oil or liquids, give location of tanks.	Unit B	Sec. 20	Twp. 26N	Rge. 18W	Is gas actually connected? When No

If this production is commingled with that from any other lease or pool, give commingling order number: _____

V. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well <input checked="" type="checkbox"/>	Gas Well	New Well <input checked="" type="checkbox"/>	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
Date Spudded 11-20-69	Date Compl. Ready to Prod. 12-16-69		Total Depth 6256'		P.B.T.D. 6220'			
Elevations (DF, RKB, RT, GR, etc.) 5670' RDB, 5656' GL	Name of Producing Formation Penn. "D"		Top Oil/Gas Pay 6182'		Tubing Depth 6202'			
Perforations 6182-89' & 6192-6200'					Depth Casing Shoe 6256'			
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET		SACKS CEMENT			
17-1/4"	13-5/8"		110'		150 sacks			
11"	8-5/8"		1506'		500 sacks			
7-7/8"	5-1/2"		6256'		1050 sacks			
	2-7/8"		6202'					

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks 12-16-69	Date of Test 12-20-69	Producing Method (Flow, pump, gas lift, etc.) Flow	
Length of Test 24 hr.	Tubing Pressure 725	Casing Pressure 1275	Choke Size 15/64"
Actual Prod. During Test	Oil-Bbls. 469	Water-Bbls. 0	Gas-MCF 974

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure (shut-in)	Casing Pressure (shut-in)	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

ORIGINAL SIGNED BY
G. W. Eaton, Jr.

(Signature)

Area Engineer

(Title)

December 22, 1969

(Date)

OIL CONSERVATION COMMISSION

APPROVED

DEC 24 1969

BY

TITLE

SUPERVISOR DIST. #3

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

NO. OF COPIES RECEIVED	5
DISTRIBUTION	
SANTA FE	1
FILE	1
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL 1 GAS 1
OPERATOR	1
PRORATION OFFICE	1

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

I. OPERATOR

PEN AMERICAN PETROLEUM CORPORATION

Address
P. O. Box 400, Farmington, New Mexico

Reason(s) for filing (Check proper box) Other (Please explain)

New Well Change in Transporter of:
 Recompletion Oil Dry Gas
 Change in Ownership Casinghead Gas Condensate

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name Navajo Tribal #7	Well No. 7	Pool Name, Including Formation Toledo Base Pennsylvania #7	Kind of Lease State, Federal or Fee Federal
Location Unit Letter J ; 1900 Feet From The South Line and 1900 Feet From The East Line of Section 21 , Township 24-N Range 10-W , NMPM, San Juan County			

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input type="checkbox"/> Four Corners Pipeline Company	Address (Give address to which approved copy of this form is to be sent) P. O. Box 1900, Farmington, New Mexico
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/> El Paso Natural Gas Company	Address (Give address to which approved copy of this form is to be sent) P. O. Box 990, Farmington, New Mexico
If well produces oil or liquids, give location of tanks. Unit B Sec. 20 Twp. 24-N Rge. 10-W	Is gas actually connected? yes When June 22, 1965

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well <input checked="" type="checkbox"/>	Gas Well	New Well <input checked="" type="checkbox"/>	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
Date Spudded May 23, 1965	Date Compl. Ready to Prod. June 9, 1965	Total Depth 4224	P.B.T.D. 4219					
Pool Toledo Base	Name of Producing Formation Pennsylvania #7	Top Oil/Gas Pay 6170	Tubing Depth 4214					
Perforations 6207-13 with 4 shots per foot.							Depth Casing Shoe 4226	
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT					
17-1/2"	10-5/8"	92'	100					
21"	8-1/2"	1494'	900					
7-7/8"	4-1/2"	4224'	1000					
	2-7/8"	4214'						

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks June 8, 1965	Date of Test June 8, 1965	Producing Method (Flow, pump, gas lift, etc.) Flow	
Length of Test 26 hours	Tubing Pressure 1285	Casing Pressure 1175	Choke Size 1 1/2"
Actual Prod. During Test	Oil - Bbls. 366	Water - Bbls. .	Gas - MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure	Casing Pressure	Choke Size

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

ORIGINAL SIGNED BY
L. R. Turner

Administrative Clerk
(Signature)

June 11, 1965
(Title)

(Date)

ILLEGIBLE

OIL CONSERVATION COMMISSION

APPROVED **JUN 14 1965**
BY **[Signature]**
TITLE **PETROLEUM ENGINEER DIST. NO. 3**

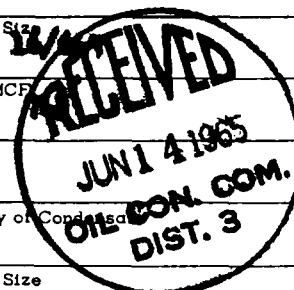
This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out Sections I, II, III, and VI only for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.



FARMINGTON DISTRICT WORKOVER

DATE: 2-1-84

OPERATIONS TO BE PERFORMED: (Circle One)

Recompletion

Repair

Service

LEASE AND WELL Navajo Tribal U No. 12

FIELD Tocito Dome

FORMATION Barker Creek

LOGS GR-Induction-sonic

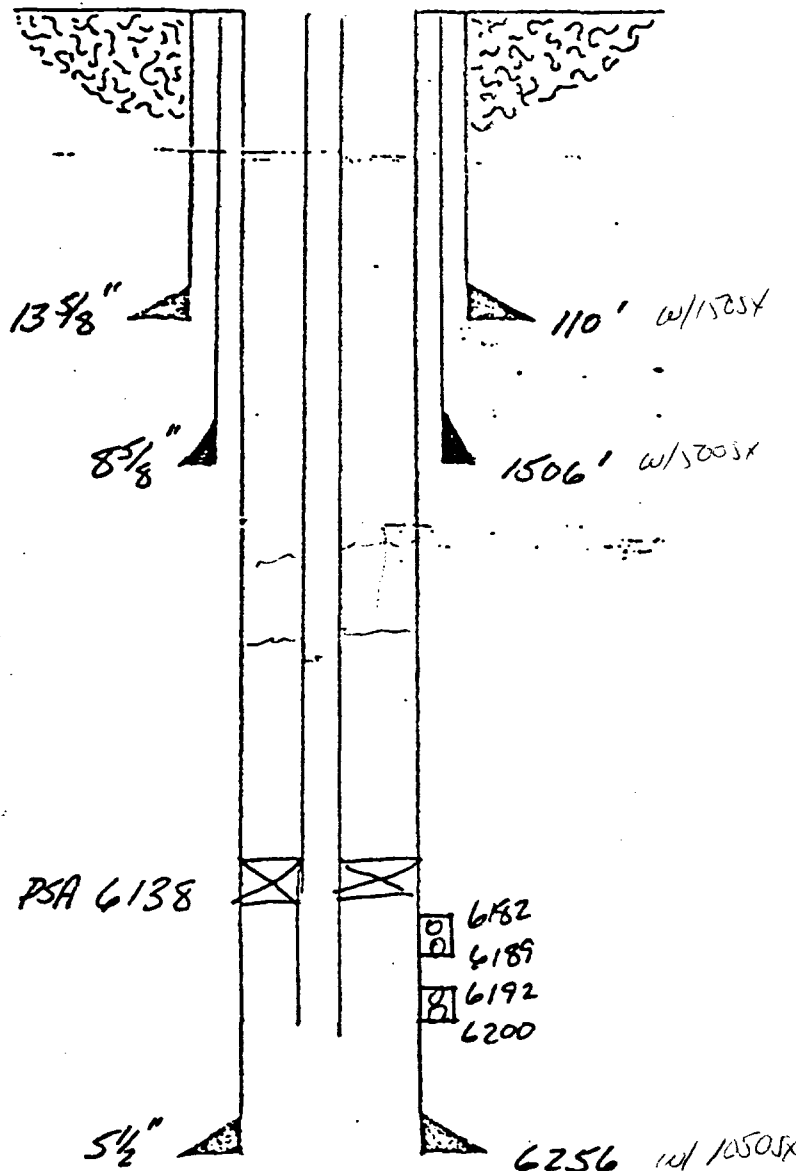
LOCATION 2050 FWL X 2050 FWL Sec 21, T26 N, R18 W, San Juan County, NM

COMP. DATE 12-16-69 EL: 5670 ROB TD: 6256 PRD: 6220

CSG: " " " " " " " "

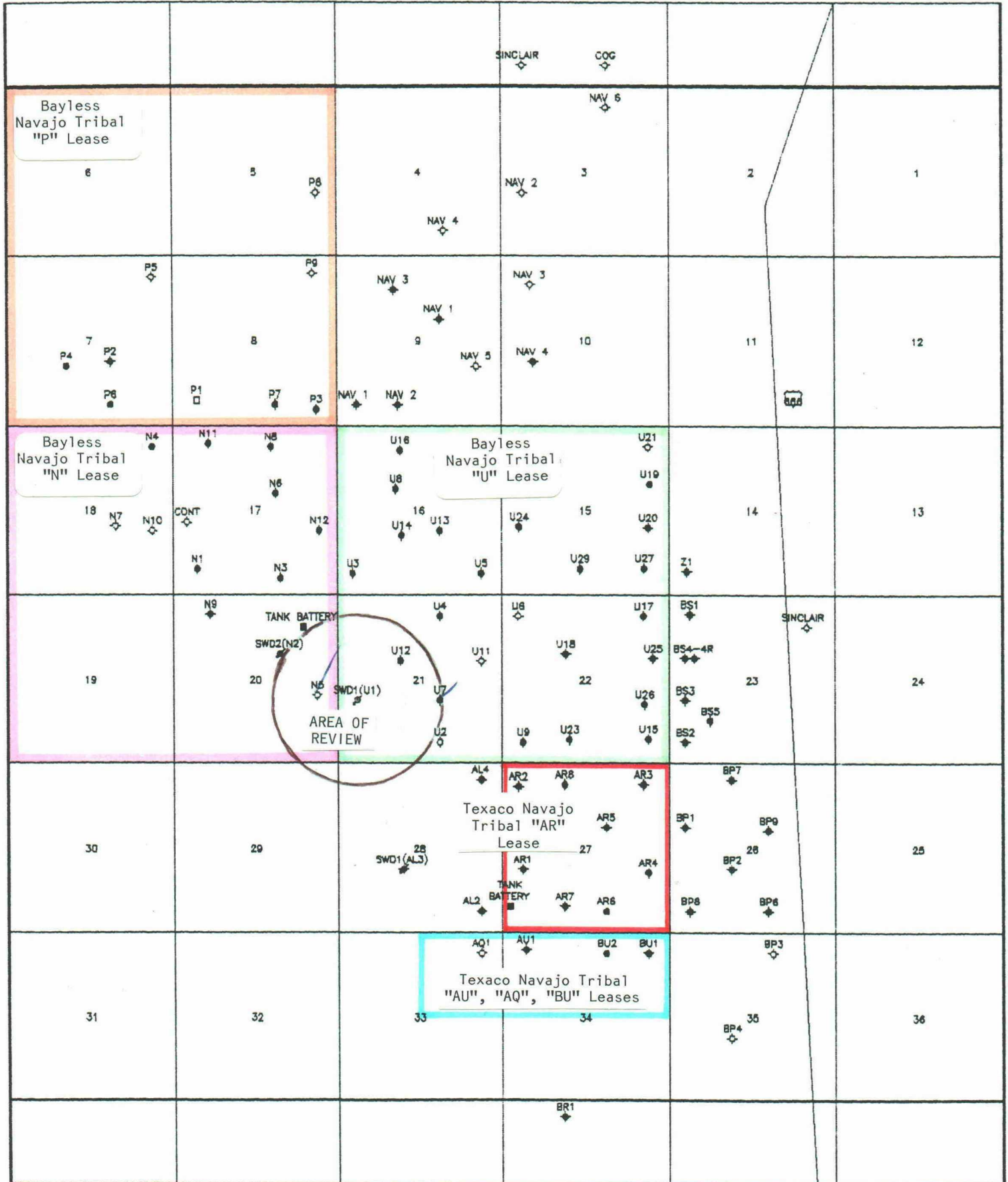
COMP. INT. 6182-6200 ORIG. STIM. 500 gal HCL

WELLBORE SKETCH



AREA OF REVIEW & LEASE MAP

TOCITO AREA BASE MAP - T26N R18W
 San Juan County, New Mexico



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3913
Order No. R-3558

APPLICATION OF PAN AMERICAN PETROLEUM
CORPORATION FOR SALT WATER DISPOSAL,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 7, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 18th day of November, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Pan American Petroleum Corporation, is the owner and operator of the Navajo Tribal "U" Well No. 1, located in Unit L of Section 21, Township 26 North, Range 18 West, NMPM, Tocito Dome-Pennsylvanian "D" Pool, San Juan County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Pennsylvanian "D" formation, with injection into the perforated interval from approximately 6267 feet to 6286 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 6200 feet; that the casing-tubing annulus should

CASE No. 3913
Order No. R-3558

be filled with an inert fluid; and that a pressure gauge should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

(6) That the applicant further seeks the establishment of an administrative procedure whereby additional wells in the Tocito Dome-Pennsylvanian "D" Pool could be placed on salt water disposal.

(7) That an administrative procedure should be established for the approval of additional salt water disposal wells in the Tocito Dome-Pennsylvanian "D" Pool, provided that such additional salt water disposal wells are completed in a manner similar to the subject well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to utilize its Navajo Tribal "U" Well No. 1, located in Unit L of Section 21, Township 26 North, Range 18 West, NMPM, Tocito Dome-Pennsylvanian "D" Pool, San Juan County, New Mexico, to dispose of produced salt water into the Pennsylvanian "D" formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 6200 feet, with injection into the perforated interval from approximately 6267 feet to 6286 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) That as an exception to Rule 701 of the Commission Rules and Regulations, the Secretary-Director is hereby authorized to approve additional salt water disposal wells in the Tocito Dome-Pennsylvanian "D" Pool when an application for such authority

-3-

CASE No. 3913

Order No. R-3558

has been filed in accordance with the requirements of Rules 701-B and 701-C of the Commission Rules and Regulations and the Secretary-Director determines that approval of the application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights;

PROVIDED HOWEVER, that any such additional salt water well shall be completed in a manner similar to the subject well, and provided further, that such disposal shall be into the Pennsylvanian "D" formation below the oil-water contact.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

esr/

SUBJECT: SALT WATER DISPOSAL WELL

ORDER NO. SWD-136

THE APPLICATION OF AMOCO PRODUCTION
COMPANY FOR A SALT WATER DISPOSAL
WELL.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701 (C) Amoco Production Company, made application to the New Mexico Oil Conservation Commission on February 22, 1973, for permission to complete for salt water disposal its Navajo Tribal "N" Well No. 2 located in Unit G of Section 20, Township 26 North, Range 18 West, NMPM, San Juan County, New Mexico.

The Secretary-Director finds:

1. That application has been duly filed under the provisions of Rule 701 (C) of the Commission Rules and Regulations;
2. That satisfactory information has been provided that all offset operators, surface owners, and the New Mexico State Engineer Office have been duly notified; and
3. That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (C) will be met.
4. That waivers of objection have been received from offsetting operators and the waiting period prescribed by said rule may be dispensed with in this instance.

IT IS THEREFORE ORDERED:

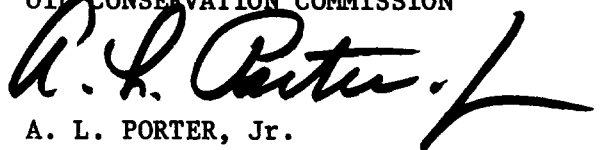
That the applicant herein, Amoco Production Company, is hereby authorized to complete its Navajo Tribal "N" Well No. 2 located in Unit G of Section 20, Township 26 North, Range 18 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Pennsylvanian "D" formation at approximately 6237 feet to approximately 6252 feet through 2-7/8 inch tubing with a packer set at approximately 6150 feet.

IT IS FURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission' for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing the Commission may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operation in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 6th day of March, 1973.

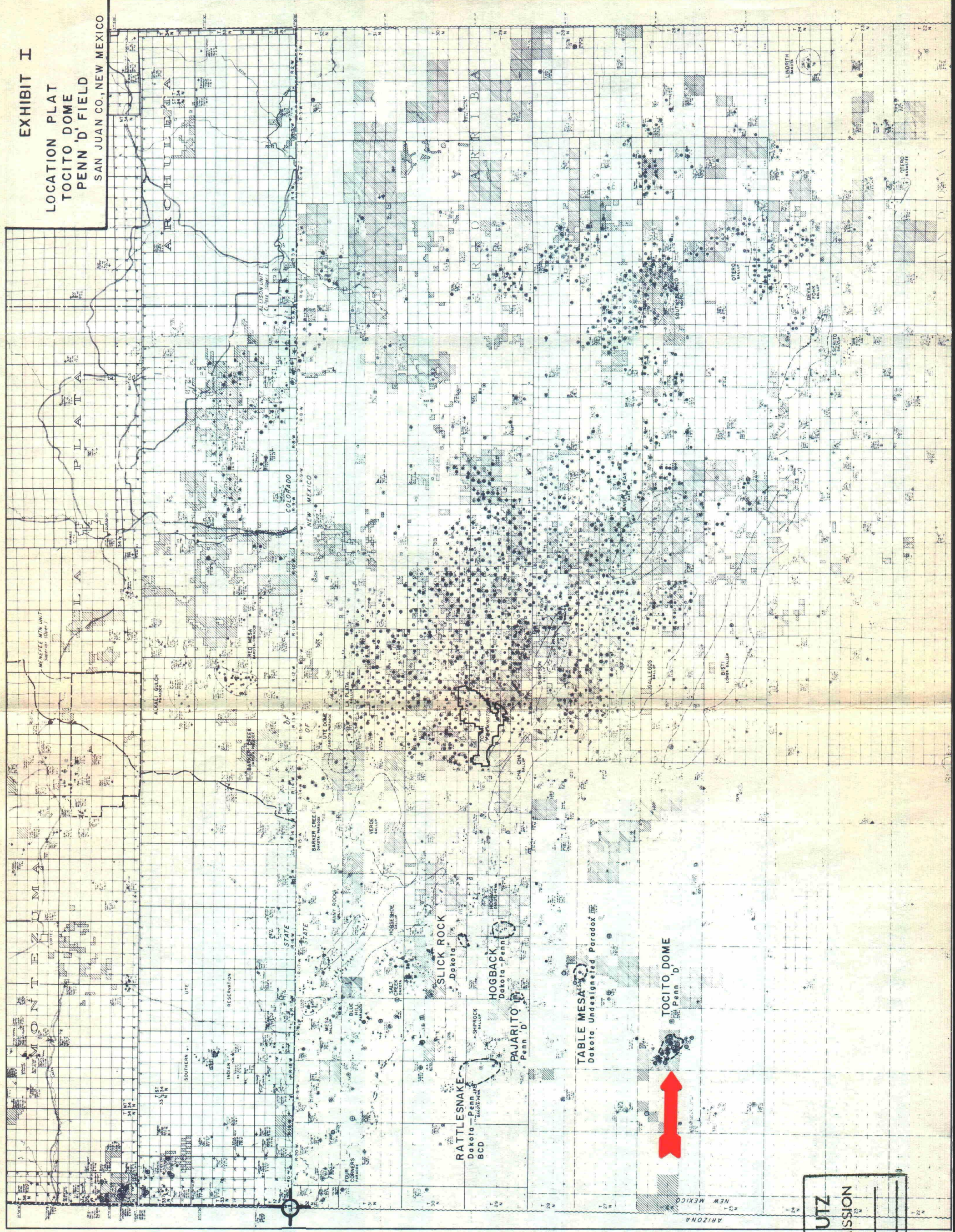
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


A. L. PORTER, Jr.
Secretary-Director

SEAL

EXHIBIT I

LOCATION PLAT
TOCITO DOME
PENN 'D' FIELD
SAN JUAN CO., NEW MEXICO

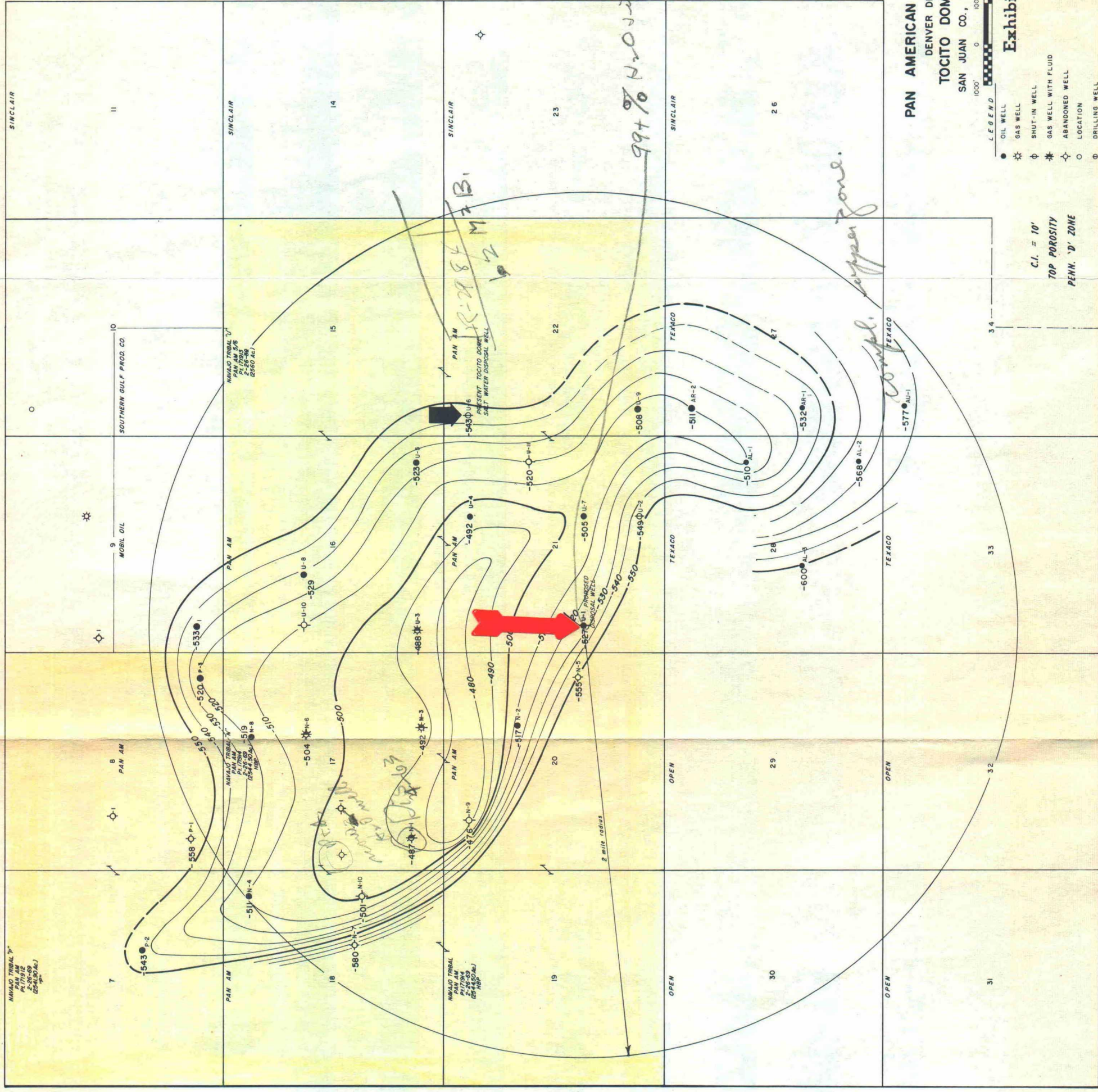


FOUR
CORNERS

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Applied EXHIBIT NO. 1
CASE NO. 3913

R 18 W

T 26 N



NOTE: ALL ACREAGE ON PLAT IS NAVAJO TRIBAL LAND

PAN AMERICAN PETR. CORP.
 DENVER DIVISION
 TOCITO DOME AREA
 SAN JUAN CO., NEW MEXICO



Exhibit II

- LEGEND
- OIL WELL
 - ★ GAS WELL
 - ⊙ SHUT-IN WELL
 - ⊗ GAS WELL WITH FLUID
 - ⊘ ABANDONED WELL
 - LOCATION
 - ⊙ DRILLING WELL

C.I. = 10'
 TOP POROSITY
 PENN. 'D' ZONE

BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
 Exhibit EXHIBIT NO. 2
 CASE NO. 3913

PAN AMERICAN PETROLEUM CORPORATION
 NAVAJO TRIBAL "U" NO. 1
 TOCITO DOME - PENN "D" FIELD
 SAN JUAN COUNTY, NEW MEXICO

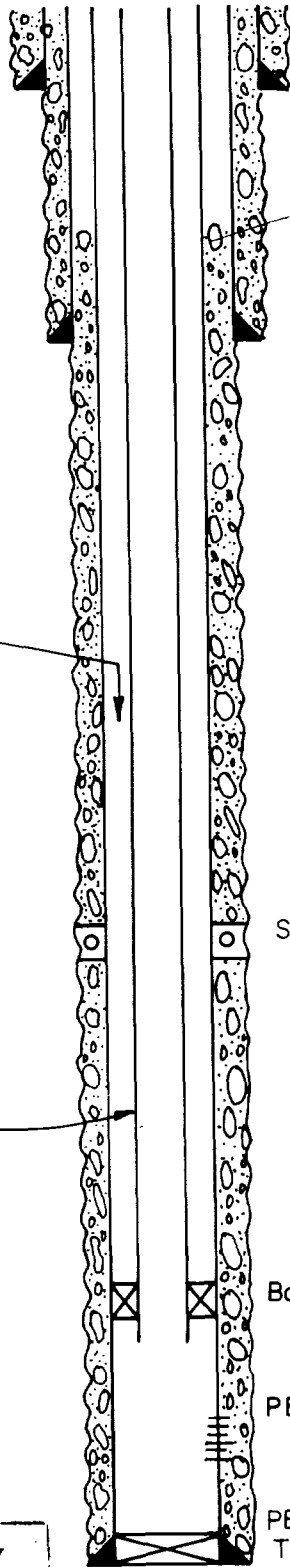
EXHIBIT III

ELEV. GL 5727
 RDB 5740

Calculated top of cement
 (Second Stage) - 800'

Casing - tubing annulus
 to be filled with inert
 fluid

2 3/8" Tubing (Plastic
 coated internally)



13 3/8" Csg. set at 87' w/100sacks cement
 (in 17 1/4" hole). Cement circulated
 to surface.

8 5/8" Csg. set at 1510' w/350 sacks cement
 (in 11" hole). Cement circulated
 to surface.

Stage cementing tool set at 3646'.
 Second stage was 500sacks cement with
 6% gel and 2# Tuf Plug/sack.

Baker Model "D" Packer set at approx. 6200'.

PENN "D" ZONE 6266'-6292' (Present perms. 6283'-6286').
 Will be re-perf. 6267'- 6286'.

PBD 6400
 TD 6440

4 1/2" Csg. set at 6440' w/1100 sacks cement
 (in 7 7/8" hole). First stage was 500 sacks
 cement with 6% gel and 2# Tuf Plug/sack
 followed by 100 sacks neat cement.

BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
Apple EXHIBIT NO. 3
 CASE NO. 3913

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Pan American Petroleum Corporation		ADDRESS Security Life Building, Denver, Colorado	
LEASE NAME Navajo Tribal "U"	WELL NO. 1	FIELD Tocito Dome - Penn. "D"	COUNTY San Juan
LOCATION UNIT LETTER <u>L</u> ; WELL IS LOCATED <u>1980</u> FEET FROM THE <u>South</u> LINE AND <u>660</u> FEET FROM THE <u>West</u> LINE, SECTION <u>21</u> TOWNSHIP <u>26 N</u> RANGE <u>18 W</u> NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	87'	100	Surface	Circulated
INTERMEDIATE	8-5/8"	1,510'	350	Surface	Circulated
LONG STRING Stage cementing tool set at 3646'	4-1/2"	6,440'	1,100	1st Stage 3646' 2nd Stage 800'	Calculated Calculated
TUBING	2-3/8"	to be set approx. 6200'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Model "D" - to be set about 6200'		

NAME OF PROPOSED INJECTION FORMATION Pennsylvanian "D"	TOP OF FORMATION 6266'	BOTTOM OF FORMATION 6292'
---	---------------------------	------------------------------

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing	PERFORATIONS OR OPEN HOLE? Perforations	PROPOSED INTERVAL(S) OF INJECTION 6267-6286'
--	--	---

IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
--	--	---

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH
Original perfs 6267-6285 were squeezed off with 100 sacks of diesel oil cement. Present perfs 6283-6286' will be re-perf 6267-6286'.

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Est. 1300'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Not Known
--	---	--

ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 500	MINIMUM 2500	MAXIMUM Closed	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE? As Necessary	APPROX. PRESSURE (PSI) 150 psi'
---	-----------------	-------------------	----------------------------	--	------------------------------------

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Unfit	WATER TO BE DISPOSED OF Unfit	NATURAL WATER IN DISPOSAL ZONE Unfit	ARE WATER ANALYSES ATTACHED? Yes
--	----------------------------------	---	-------------------------------------

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Navajo Tribe c/o U.S. Geological Survey, P. O. Box 965, Farmington, New Mexico two (2) Drawer 1857, Roswell, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF MILE OF THIS INJECTION WELL
Texaco, Inc., P. O. Box 2100, Denver, Colorado 80201
Texaco, Inc., P. O. Box 810, Farmington, New Mexico 87401

Mobil Oil Corporation, P. O. Box 1652, Casper, Wyoming 82602

Sinclair Oil & Gas Company, 501 Lincoln Tower Building, Denver, Colorado 80203

Southern Gulf Production Company, C & I Building, Houston, Texas

two

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? yes	SURFACE OWNER yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL yes	THE NEW MEXICO STATE ENGINEER NA
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) yes	PLAT OF AREA yes	ELECTRICAL LOG yes	DIAGRAMMATIC SKETCH OF WELL yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

R.B. Miles
(Signature)

Engineer
(Title)

10/3/68
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

Appt. EXHIBIT NO. 4

CASE NO. 3913

PAN AMERICAN PETROLEUM CORPORATION
NAVAJO TRIBAL "U" NO. 1
TOCITO DOME - PENN "D" FIELD
SAN JUAN COUNTY, NEW MEXICO

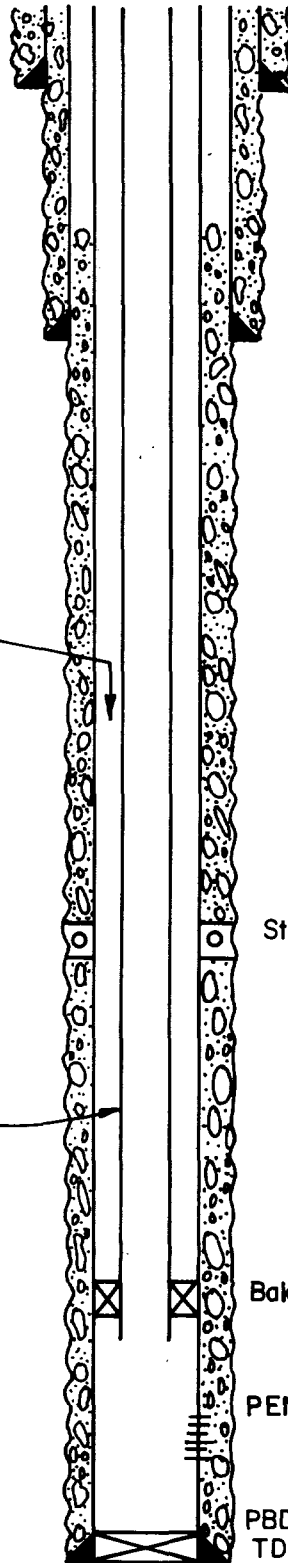
Case 3913

ELEV. GL 5727
RDB 5740

Calculated top of cement
(Second Stage) - 800'

Casing-tubing annulus
to be filled with inert
fluid

2 3/8" Tubing (Plastic
coated internally)



13 3/8" Csg. set at 87' w/100sacks cement
(in 17 1/4" hole). Cement circulated
to surface.

8 5/8" Csg. set at 1510' w/350 sacks cement
(in 11" hole). Cement circulated
to surface.

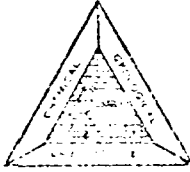
Stage cementing tool set at 3646'.
Second stage was 500sacks cement with
6% gel and 2# Tuf Plug/sack.

Baker Model "D" Packer set at approx. 6200'.

PENN "D" ZONE 6266'-6292' (Present perms. 6283'-6286').
Will be re-perf. 6267'-6286'.

PBD 6400
TD 6440

4 1/2" Csg. set at 6440' w/1100 sacks cement
(in 7 7/8" hole). First stage was 500 sacks
cement with 6% gel and 2# Tuf Plug/sack
followed by 100 sacks neat cement.



Case 3913
 CHEM LAB Test Done

File
 WATER ANALYSIS EXCHANGE REPORT
 Toci to Dome
 525.11

FEB 18 1968
 10318
 2-18-68
 3-RWS

MEMBER	Pan American Petroleum Corp.	LAB NO.	24020	REPORT NO.	
OPERATOR	Pan American Petroleum Corp.	LOCATION	SW SW 22-26N-18W		
WELL NO.	Navajo Tribal "U" No. 9	FORMATION	Pennsylvanian "D"		
FIELD	Tocito Dome	INTERVAL	6182 - 6188		
COUNTY	San Juan	SAMPLE FROM	Flow test (1-24-68)		
STATE	New Mexico	DATE	February 6, 1968		

REMARKS & CONCLUSIONS: Rusty colored water, clear filtrate.

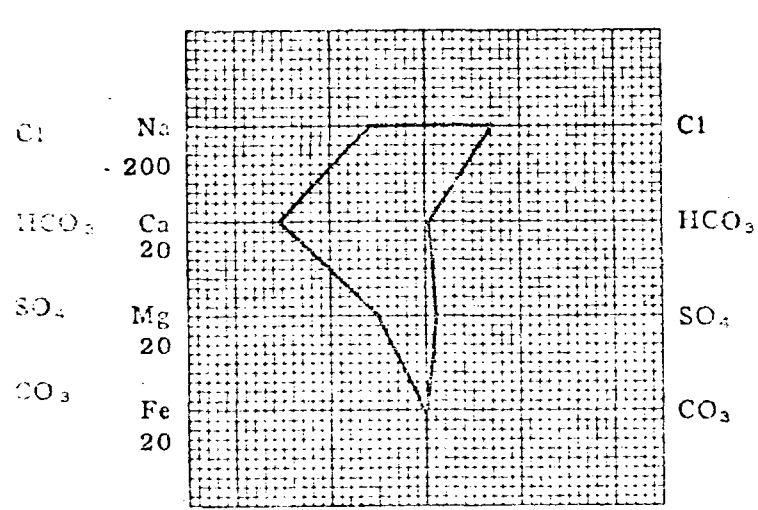
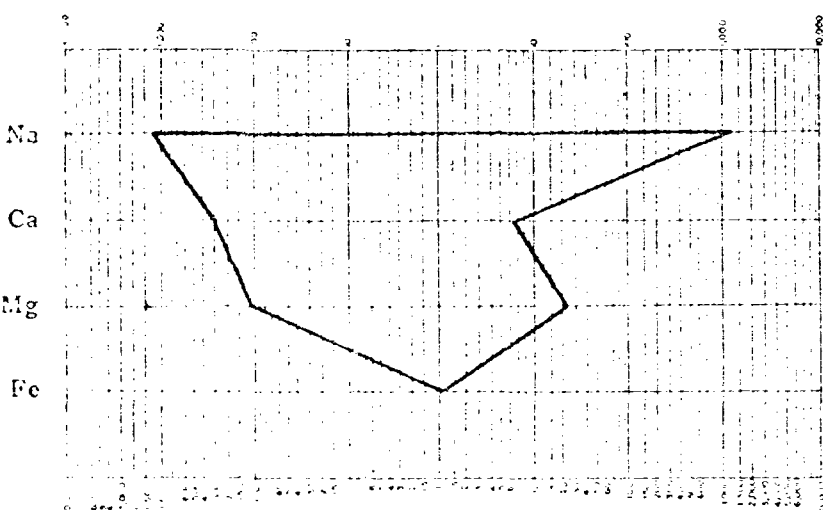
Cations			Anions		
	mg/l	meq/l		mg/l	meq/l
Sodium	27,490	1195.74	Sulfate	1,147	23.86
Potassium	95	2.43	Chloride	56,000	1579.20
Lithium	-	-	Carbonate	-	-
Calcium	6,075	303.14	Bicarbonate	427	7.00
Magnesium	1,323	108.75	Hydroxide	-	-
Iron	present	-	Hydrogen sulfide	absent	-
Total Cations		1610.06	Total Anions		1610.06

Total dissolved solids, mg/l	92,340	Specific resistance @ 68° F.:	
NaCl equivalent, mg/l	92,671	Observed	0.095 ohm-meters
Observed pH	7.3	Calculated	0.092 ohm-meters

WATER ANALYSIS PATTERNS
 MEQ per unit

LOGARITHMIC

STANDARD



(Na value in above graphs includes Na, K, and Li)
 NOTE: Mg/l = Milligrams per liter Meq/l = Milligram equivalents per liter
 Sodium chloride equivalent = by Dunlop & Hawthorne calculation from components

AN AMERICAN PETROLEUM CORPORATION
RESEARCH DEPARTMENT
WATER ANALYSIS

Case
3913

Lease Navajo Tribal "U" Well No. 2 Lab. No. T-16,697
 Field Tocito Dome Pennsylvanian "D" County San Juan State New Mexico
 Quarter or Survey SE/4 Blk. 21 Section 21 T. 26N R. 18W
 Exact Location _____ Sample Series No. HQ-34-1
 Producing Stratum _____ PBT.D. 6388 Total Depth 6425
 Stratum Yielding Sample Penn "D" From 6280 To 6284
 Condition of Well _____
 Sample Collected From Flow line Method Used _____
 Collected by J. C. Holt Date Collected 10-11-64 Date Received 10-15-64
 Transmittal Letter by L. O. Speer, Jr. Date 10-13-64 File N-1182-535.11

Radicle	Per Cent by Analysis	(a) P. P. M.	(b)	(a) X (b)	Per Cent Reacting Value	Calculated Compound	P. P. M.	
Na	31.31	26,766	.0435	1,164.26	39.28	Na ₂ SO ₄		
Ca	4.76	4,050	.0499	202.59	6.84	NaCl	67,580	
Mg	1.64	1,400	.0822	115.08	3.88	Na ₂ CO ₃		
Fe						NaHCO ₃	680	
						CaSO ₄	1,274	
						CaCl ₂	10,205	
SO ₄	1.06	900	.0208	18.72	.63	CaCO ₃		
Cl	60.55	51,600	.0282	1,455.12	49.10	Ca(HCO ₃) ₂		
CO ₂	0	0	.0333	0	0	MgSO ₄		
HCO ₃	.58	493	.0164	8.09	.27	MgCl ₂	5,480	
H ₂ S						MgCO ₃		
						Mg(HCO ₃) ₂		
Total solids as a summation of radicles							85,219	P.P.M.
Total solids by evaporation and ignition of residue at low red heat							88,360	P.P.M.
Sample as received: Resistivity: ohms/M ² M, <u>.084</u> at <u>77°F.</u> pH Value <u>6.4</u> Specific Gravity 60°/60°F. <u>1.063</u>								

PROPERTIES OF REACTION IN PER CENT

PRIMARY SALINITY: SO₄ + Cl = with equal value Na (K) = 78.56 %
 SECONDARY SALINITY: If SO₄ + Cl is greater than Na (K) = %
 Then SO₄ + Cl = with equal value of Ca + Mg = 20.90 %
 PRIMARY ALKALINITY: Excess Na (K) over SO₄ + Cl = with equal value of CO₂ + S = %
 SECONDARY ALKALINITY: Excess Ca + Mg over SO₄ + Cl = with equal value of CO₂ + = .54 %
 CHLORIDE SALINITY: Cl ÷ (SO₄ + Cl) = X 100% = 98.73 %
 SULPHATE SALINITY: SO₄ ÷ (SO₄ + Cl) = X 100% = 1.27 %

NOTE: Multiply Parts per Million by .0583 to obtain Grains per Gallon.

REMARKS:

Resistivity ohms/M²M = .093 at 70°F
 " " " = .054 at 130°F

- J. L. Hoyt, Jr.
- W. T. Smith
- R. M. Curtis
- L. O. Speer, Jr.
- G. W. Schmidt

Analyst James J. Elliott Date 10-23-64

AMERICAN PETROLEUM CORPORATION
RESEARCH DEPARTMENT
WATER ANALYSIS

BFA 535.11
File
Case 3913

Lease Navajo Tribal "U" Well No. 6 Lab. No. T-17,220
 Field Tecito Dome Penn. D County San Juan State New Mexico
 Quarter or Survey _____ Blk. 22 Section 22 T. 28N R. 18W
 Exact Location 660' ENL X 510' FWL Sample Series No. HC-65
 Producing Stratum _____ PBD. 6343 Total Depth 6386
 Stratum Yielding Sample Lower Hermosa From 6238 To 44
 Condition of Well _____ Method Used Direct
 Sample Collected From Flow Line
 Collected by D. R. Hogan Date Collected 6-2-65 Date Received 6-8-65
 Transmittal Letter by L. O. Speer, Jr. Date 6-2-65 File N-1063-535.11

Radicle	Per Cent by Analysis	(a) P. P. M.	(b)	(a) X (b)	Per Cent Reacting Value	Calculated Compound	P. P. M.
Na	29.12	26,207	.0435	1,130.97	36.26	Na ₂ SO ₄	
Ca	6.93	6,240	.0499	311.38	9.90	NaCl	66,271
Mg	1.63	1,470	.0822	120.83	3.84	Na ₂ CO ₃	
Fe						NaHCO ₃	521
						CaSO ₄	1,020
						CaCl ₂	16,450
SO ₄	.80	720	.0208	14.98	.48	CaCO ₃	
Cl	61.10	55,000	.0282	1,551.00	49.32	Ca(HCO ₃) ₂	
CO ₂	0	0	.0333	0	0	MgSO ₄	
HCO ₃	.42	378	.0164	6.20	.20	MgCl ₂	5,753
H ₂ S						MgCO ₃	
						Mg(HCO ₃) ₂	
Total solids as a summation of radicles					90,015		P.P.M.
Total solids by evaporation and ignition of residue at low red heat					93,480		P.P.M.
Sample as received: Resistivity: ohms/MM, 083 at 77°F.					pH Value 6.2	Specific Gravity 60°/60°F. 1.008	

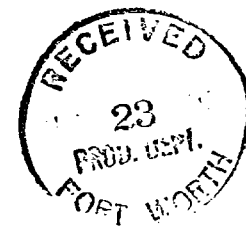
PROPERTIES OF REACTION IN PER CENT

PRIMARY SALINITY: SO₄ + Cl = with equal value Na (K) = 72.52 %
 SECONDARY SALINITY: If SO₄ + Cl is greater than Na (K) = %
 Then SO₄ + Cl = with equal value of Ca + Mg = 27.08 %
 PRIMARY ALKALINITY: Excess Na (K) over SO₄ + Cl = with equal value of CO₂ + S = 0 %
 SECONDARY ALKALINITY: Excess Ca + Mg over SO₄ + Cl = with equal value of CO₂ + = .40 %
 CHLORIDE SALINITY: Cl ÷ (SO₄ + Cl) = X 100% = 99.04
 SULPHATE SALINITY: SO₄ ÷ (SO₄ + Cl) = X 100% = .96

NOTE: Multiply Parts per Million by .0583 to obtain Grains per Gallon.

REMARKS:

- J. L. Hoyt, Jr.
- W. T. Smith
- L. O. Speer, Jr.
- G. W. Schmidt



Analyst James D. Elliott Date 6-17-65

Case 3913

FORM 48740

LANE WELLS *Induction Electrolog*

FILE NO.	COMPANY PAN AMERICAN PETROLEUM CORP	
	WELL <u>NAVAJO TRIBAL U N° 1</u>	
	FIELD <u>TOCITO DOME - PARADOX</u>	
	COUNTY <u>SAN JUAN</u>	STATE <u>NEW MEXICO</u>
	LOCATION: <u>1980' FSL & 660' FWL</u>	Other Services <u>GR A/L CAL</u>
	SEC <u>21</u>	TWP <u>26 N</u> RGE <u>18 W</u>

Permanent Datum <u>G. L.</u>	Elev. <u>5727</u>	Elevations: KB <u>5740</u>
Log Measured from <u>K. B. OR 13</u>	Ft. Above Permanent Datum	DF <u>5739</u>
Drilling Measured from <u>K. B.</u>		GL <u>5727</u>

Date	8-21-64				
Run No.	ONE				
Depth—Driller	6440				
Depth—Logger	6436				
Bottom Logged Interval	6432				
Top Logged Interval	1510				
Casing—Driller	8 5/8 @1510	@	@	@	@
Casing—Logger	1510				
Bit Size	7 7/8				
Type Fluid in Hole	CHEM. GEL.				
Density and Viscosity	11.8	75			
pH and Fluid Loss	9.0	8.1 cc	cc	cc	cc
Source of Sample	FLOW LINE				
Rm @ Meas. Temp.	2.1 @ 70 °F	@	@	@	@
Rmf @ Meas. Temp.	1.9 @ 72 °F	@	@	@	@
Rmc @ Meas. Temp.	4.0 @ 70 °F	@	@	@	@
Source of Rmf and Rmc	MEASURED				
Rm @ BHT	1.1 @ 133 °F	@	@	@	@
Time Since Circ.	3 HRS.				
Max. Rec. Temp. Deg. F.	133 °F	°F	°F	°F	°F
Equip. No. and Location	L-5170 FARM				
Recorded By	MALONE				
Witnessed By	MR. EASLEY				

THIS HEADING AND LOG (CONFORMS TO API RECOMMENDED STANDARD PRA. PISE RP 2)

REMARKS

Scale Changes	Scale Up Hole	Scale Down Hole
	NO CHANGES	
Depth	Type log	
	IES	
Changes in Mud Type or Additional Samples	Date	Sample No.
		Depth-Driller

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE