

CASE 2979: Application of PAN AM.  
for a salt water disposal, Eddy  
County, New Mexico.

FORM 8 3-59

TO:

Examined

FLOOR NO.

REMARKS

Copy

FROM

### DISCUSSION

Pan American Petroleum Corporation respectfully requests that the New Mexico Oil Conservation Commission grant permission to dispose of produced salt water from the Abo Formation into its U.S.A. Malco Refineries "G" Well No. 13 located 2302' FSL and 1650' FWL of Section 10, T-18-S, R-27-E, Eddy County, New Mexico. Produced water will be disposed of into the Abo Formation perforated interval 6001-6093'.

The U.S.A. Malco Refineries "G" Well No. 13 was originally completed on September 23, 1960 as a temporarily abandoned well in the Empire Abo Field. The well was temporarily abandoned after unsuccessful attempts were made to obtain commercial oil production from the perforated intervals 5910-15', 5938-70', and 6001-18'. These three completion intervals all failed to produce commercial quantities of oil.

Exhibit No. 1 of this application is a plat showing all wells within a two mile radius of the proposed disposal well. Exhibit No. 1 also shows the formation from which these wells are producing or have produced from and the names of lessees, if any, within a two mile radius.

Exhibit No. 2 is a log of the proposed disposal well showing the proposed injection interval.

Exhibit No. 3 is a diagrammatic sketch showing the manner in which Pan American Petroleum Corporation proposes to complete the U.S.A. Malco Refineries "G" Well No. 13 for disposal purposes. The 4½" casing is adequately cemented to prevent communication with other formations and the use of internally coated tubing, a packer, and an inhibited annulus load fluid will adequately protect the 4½" casing from internal corrosion.

Exhibit No. 4 is a tabulation showing the lease names and well numbers of the 46 wells which will be initially connected to the proposed disposal well. Exhibit No. 4 also shows the current daily water production from each of these wells.

Exhibit Nos. 5 and 6 are log cross sections through the proposed disposal well. Traces of these cross sections are shown on Exhibit No. 1. These cross sections show pertinent completion data for the proposed disposal well and for other wells offsetting this well.

Approximately 365 barrels per day of Abo produced water will be initially injected into the Abo interval 6001-93'. The upper portion of this proposed injection interval was previously perforated in the interval 6001-18', acidized with 20,000 gallons of 15% hydrochloric acid and fraced with 71,000 gallons brine water and 65,000 lbs. of sand. The

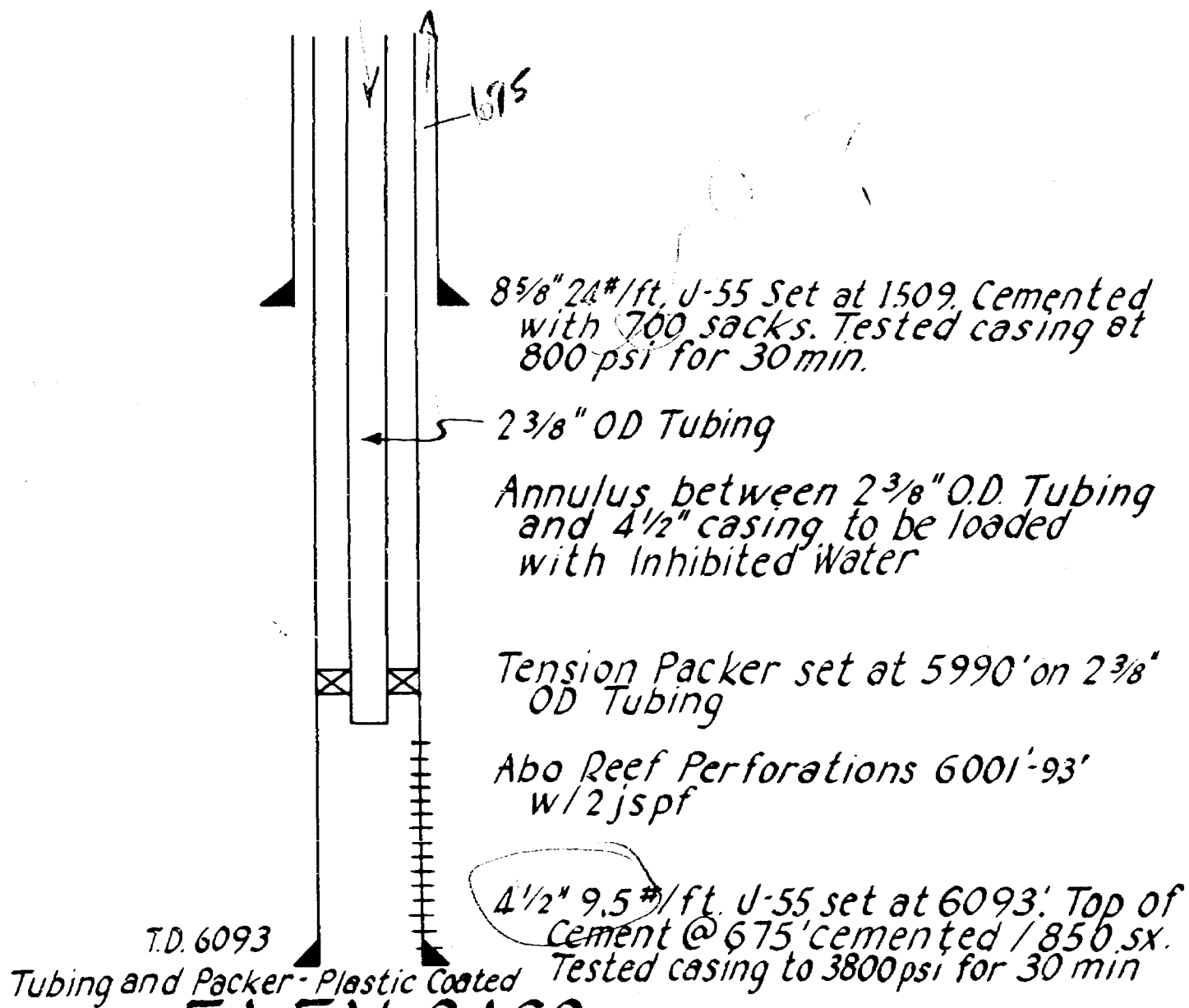
interval 6001-18' was pump tested for 66 days and produced a total of 751 barrels of formation water and 11 barrels of oil and last tested 25 barrels of water and 0 barrels of oil. The interval 5938-70' was perforated, treated with 15,000 gallons of 15% hydrochloric acid and produced 470 barrels of formation water and no oil in 13 days. The interval 5910-15' was perforated, treated with 5000 gallons of 15% hydrochloric acid and produced 498 barrels of formation water and no oil in 28 days.

EXHIBIT  
PAN AMERICAN PETROLEUM CORPORATION  
APPLICATION FOR PERMISSION TO DISPOSE  
OF PRODUCED WATER INTO THE ABO FORMATION  
THROUGH ITS USA MALCO REFINERIES "G"  
WELL NO. 13, EMPIRE ABO FIELD  
EDDY COUNTY, NEW MEXICO  
NEW MEXICO OIL CONSERVATION COMMISSION  
EXAMINER HEARING DATED  
FEBRUARY 19, 1964                      CASE 2979

# USA-Malco Refineries

## "G" Well No. 13

2302' FSL X 1650' FWL of Sec 10  
T 18 S, R 27 E, EDDY CO. NEW MEX.



**ELEV. 3463**

**RDB**

**Exhibit No. 3**

Pan American Petroleum Corp.

Schematic diagram showing proposed completion and hookup of USA-Malco Refineries "G" No. 13 for produced water disposal service

**EMPIRE ABO FIELD**  
Eddy County, New Mexico

APPENDIX NO. 4  
WATER PRODUCTION FROM WELLS TO BE CONNECTED TO  
USA MALCO REFINERY WELLS NO. 13 DISPOSAL WELL  
EMPIRE AND FIELD IN SIBBY COUNTY, NEW MEXICO

<u>Well</u>	<u>Barrels of Water Per Day</u>
<b>Storage System I</b>	
Malco "A" No. 1	0
Malco "A" No. 2	103
Malco "B" No. 1	24
Malco "B" No. 2	0
Malco "C" No. 1	29
Malco "D" No. 1	0
Malco "D" No. 2	0
Malco "D" No. 4	22
Malco "D" No. 5	0
Malco "E" No. 1	0
Malco "E" No. 2	0
Malco "H" No. 1	0
Malco "J" No. 1	20
	<u>198</u>
<b>Storage System III</b>	
Malco "G" No. 1	0
Malco "G" No. 2	0
Malco "G" No. 3	0
Malco "G" No. 4	0
Malco "G" No. 5	0
Malco "G" No. 6	0
Malco "G" No. 7	0
Malco "G" No. 8	0
Malco "G" No. 9	18
Malco "G" No. 10	0
Malco "G" No. 11	0
Malco "G" No. 12	28
Malco "H" No. 2	0
Malco "H" No. 3	0
Malco "H" No. 4	0
Malco "H" No. 5	0
Malco "H" No. 6	0
Malco "H" No. 7	0
Malco "H" No. 8	0
Malco "H" No. 9	0
Malco "K" No. 1	23
Malco "K" No. 2	0
Malco "L" No. 1	0
Mann Federal No. 1	0
Mann Federal No. 2	0
R. F. Windfohr No. 1	0
R. F. Windfohr No. 2	0
R. F. Windfohr No. 3	0
R. F. Windfohr No. 4	0
	<u>69</u>

<u>Well</u>	<u>Barrels of Water Per Day</u>
Separate Batteries	
Malco "N" No. 1	42
State "BR" No. 1	10
State "CE" No. 1	0
State "CE" No. 2	<u>44</u>
	96
Present total water production of leases to be connected to the proposed injection well, Malco Refineries 'G' No. 13	<u>363</u>



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 5, 1964

EXAMINER HEARING

**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

IN THE MATTER OF:

Application of Pan American Petroleum  
Corporation for salt water disposal, Eddy  
County, New Mexico.

Case No. 2979

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 5, 1964.

EXAMINER HEARING

-----  
IN THE MATTER OF: )

Application of Pan American Petroleum )  
Corporation for salt water disposal, )  
Eddy County, New Mexico. )

CASE NO. 2979

-----  
BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case 2979.

MR. DURRETT: Application of Pan American Petroleum Corporation for salt water disposal, Eddy County, New Mexico. If the Examiner please, we have received a telegram from Pan American to which reads as follows: "Pan American Petroleum requests that Case 2979 on the docket for February 5, 1964, be rescheduled for hearing. Adverse weather conditions make it impossible for Pan American's witnesses to attend February 5, 1964 hearing."

On the basis of this telegram, I would move the Examiner to continue this case.

MR. NUTTER: Case Number 2979 will be continued to the

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691



Examiner hearing to be conducted by Mr. Elvis A. Utz at this same place on February 19, 1964.

\* \* \* \*

STATE OF NEW MEXICO    ↓  
COUNTY OF BERNALILLO   ↓

I, ROY D. WILKINS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office, this 10th day of February, 1964.

*Roy D. Wilkins*  
NOTARY PUBLIC

My Commission Expires:  
September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2979 heard by me on 2/5, 1964.

*Elvis A. Utz*, Examiner  
New Mexico Oil Conservation Commission

DEARNLEY, MEIER, WILKINS and CROWNOVER

General Court Reporting Service

Phone 243-6691

Albuquerque, New Mexico

Suite 1120 Simms Building



# PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 268  
Lubbock, Texas 79401  
January 9, 1964

JAN 11 5 0

File: JET-4011-986.510.1

Subject: Application of Pan American  
Petroleum Corporation For  
Authority To Dispose of  
Produced Water in the Empire  
Abo Field Into the U.S.A. Malco  
Refineries 'G' Well No. 13,  
Eddy County, New Mexico

Mr. A. L. Porter, Jr. (3)  
Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Dear Sir:

Pan American Petroleum Corporation respectfully requests that a hearing be docketed to consider its application for disposal of produced water into the Abo Formation in the subject well, located 2302' FSL and 1650' FWL, Section 10, T-18-S, R-27-E, Eddy County, New Mexico, in accordance with Rule 701 of the New Mexico Oil Conservation Commission. The proposed well is presently temporarily abandoned after unsuccessful attempts to establish commercial Abo oil production at this location.

Attached hereto are the following exhibits in support of this application, as required by Rule 701:

Exhibit No. 1 - A plat showing the location of the proposed disposal well, USA Malco Refineries 'G' No. 13, and the location of all other wells located within a radius of two miles from the proposed injection well. Exhibit 1 also shows the formation from which these wells are producing, or have produced from, and the names of the lessees, if any, within the two-mile radius.

Exhibit No. 2 - A laterolog-Gammaray-Neutron log of the proposed injection well showing the proposed injection interval.

Exhibit No. 3 - A diagrammatic sketch of the proposed injection well showing all casing strings, including diameters and setting depths, quantities used and tops of cement, and the proposed injection interval to be perforated. Also shown is the size

DOCKET MAILED

Date

1-10-64

DOCKET MAILED

Date

1-24-64

Mr. A. L. Porter, Jr.

-2-

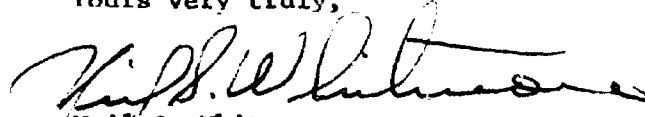
File: JET-4011-986.510.1

of the proposed tubing string and the location of a packer to be set above the proposed injection interval.

Exhibit No. 4 - The lease names and well numbers and estimated daily water production of those wells which will be connected to the proposed disposal well.

Approximately 365 barrels per day of Abo produced water will be injected into the Abo interval 6001-18'. This same interval was previously perforated, acidized with 15,000 gallons of 15% acid, fraced with 65,000 lbs. of sand and 71,000 gallons of water, and cement squeezed with 150 sacks of cement after testing 30 BWP. Unsuccessful completion attempts were also made in the intervals 5938-70' and 5910-15', both of which were also found to be water bearing, with no commercial oil shows.

Yours very truly,



Neil S. Whitmore  
District Superintendent

CFH:jb

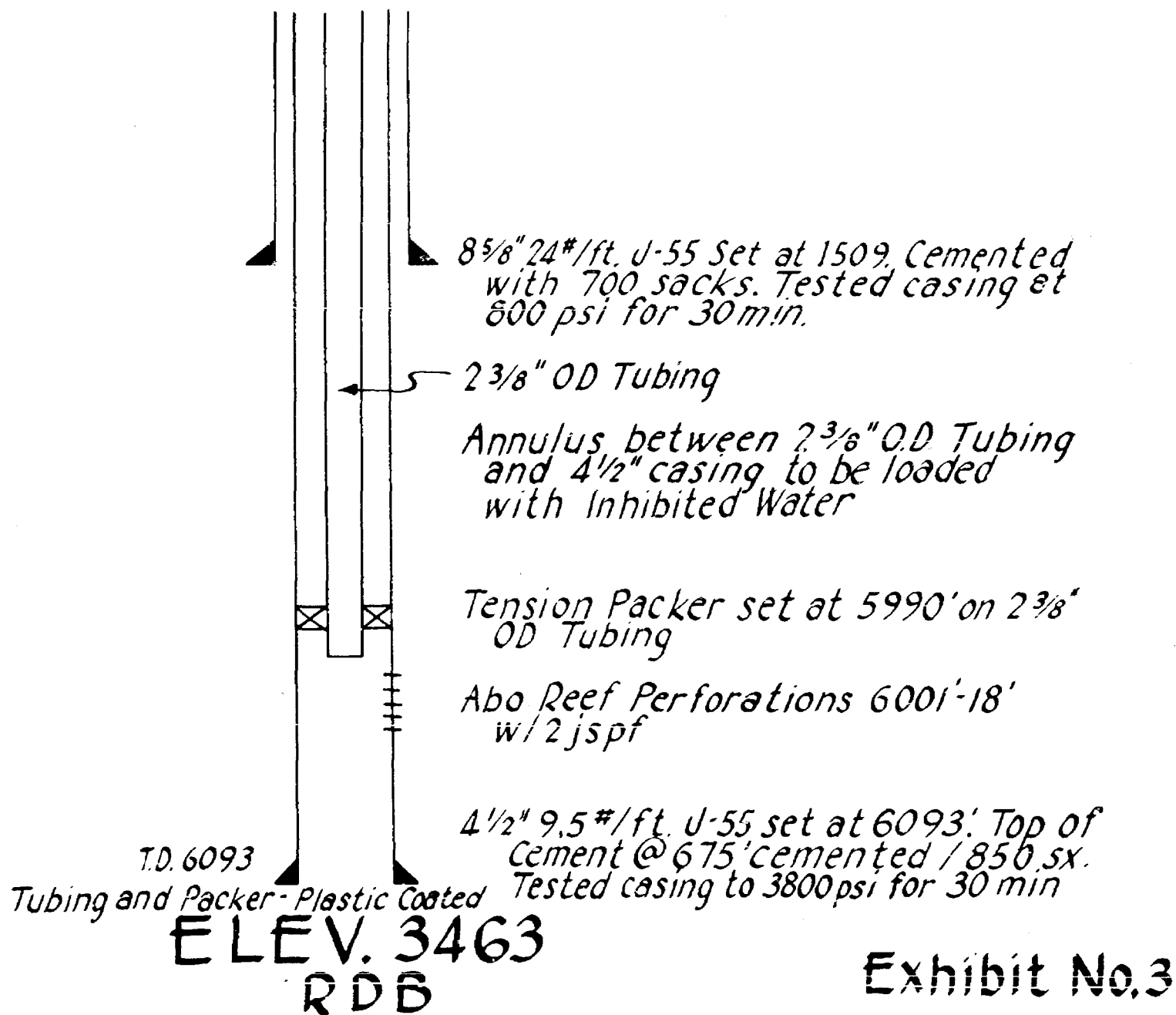
Attachments

cc: State Engineer Office  
Box 1079  
Santa Fe, New Mexico

# USA-Malco Refineries

## "G" Well No. 13

2302' FSL X 1650' FWL of Sec 10  
T 18 S, R 27 E, EDDY CO. NEW MEX.



Pan American Petroleum Corp.

Schematic diagram showing proposed completion and hookup of USA-Malco Refineries "G" No. 13 for produced water disposal service

EMPIRE ABO FIELD  
Eddy County, New Mexico

EXHIBIT NO. 4  
WATER PRODUCTION FROM WELLS TO BE CONNECTED TO  
USA MALCO REFINERIES 'G' NO. 13 DISPOSAL WELL  
EMPIRE ABO FIELD, EDDY COUNTY, NEW MEXICO

<u>Well</u>	<u>Barrels of Water Per Day</u>
<b>Storage System I</b>	
Malco "A" No. 1	0
Malco "A" No. 2	103
Malco "B" No. 1	24
Malco "B" No. 2	0
Malco "C" No. 1	29
Malco "D" No. 1	0
Malco "D" No. 2	0
Malco "D" No. 4	22
Malco "D" No. 5	0
Malco "E" No. 1	0
Malco "E" No. 2	0
Malco "H" No. 1	0
Malco "J" No. 1	20
	<u>198</u>
<b>Storage System III</b>	
Malco "G" No. 1	0
Malco "G" No. 2	0
Malco "G" No. 3	0
Malco "G" No. 4	0
Malco "G" No. 5	0
Malco "G" No. 6	0
Malco "G" No. 7	0
Malco "G" No. 8	0
Malco "G" No. 9	18
Malco "G" No. 10	0
Malco "G" No. 11	0
Malco "G" No. 12	28
Malco "H" No. 2	0
Malco "H" No. 3	0
Malco "H" No. 4	0
Malco "H" No. 5	0
Malco "H" No. 6	0
Malco "H" No. 7	0
Malco "H" No. 8	0
Malco "H" No. 9	0
Malco "K" No. 1	23
Malco "K" No. 2	0
Malco "L" No. 1	0
Mann Federal No. 1	0
Mann Federal No. 2	0
R. F. Windfohr No. 1	0
R. F. Windfohr No. 2	0
R. F. Windfohr No. 3	0
R. F. Windfohr No. 4	0
	<u>69</u>

<u>Well</u>	<u>Barrels of Water Per Day</u>
<b>Separate Batteries</b>	
Malco "N" No. 1	42
State "BR" No. 1	10
State "CE" No. 1	0
State "CE" No. 2	<u>44</u>
	96
Present total water production of leases to be connected to the proposed injection well, Malco Refineries 'G' No. 13	<u>363</u>



DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 5, 1964

9:00 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

- CASE 2976: Application of Midland Production Corporation for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Hill & Meeker Phillips Cryer Well No. 34-2 located 2310 feet from the South and West lines of Section 34, Township 10 South, Range 36 East, to bottom in the Devonian formation 1980 feet from the North and West lines of said Section 34, Lea County, New Mexico.
- CASE 2977: Application of Cities Service Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Brunson C Well No. 4, located in Unit J of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico, to produce oil from the Blinbry and Drinkard Oil Pools through parallel strings of 1 1/2 inch and 2 1/16 inch tubing, respectively.
- CASE 2978: Application of Union Oil Company of California for a waterflood expansion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its South Caprock Queen Unit Waterflood Project, Caprock Queen Pool, Chaves County, New Mexico, by the conversion of nine additional wells located in Sections 28, 29, and 33, Township 14 South, Range 31 East, and Sections 3 and 4, Township 15 South, Range 31 East, to water injection.
- CASE 2979: Application of Pan American Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation through its U. S. A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.
- CASE 2980: Application of Pioneer Production Corporation for force-pooling and an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin-Dakota Pool underlying the W/2 of Section 15, Township 29

*Cont to Feb 19*

-2- Case 2980 continued from page 1

North, Range 13 West, and authorizing the drilling of a well for said unit at an unorthodox location 1625 feet from the South line and 1250 feet from the West line of said Section 15, Town of Farmington, San Juan County, New Mexico.

- CASE 2981: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Northwest Eumont Unit Area comprising 2,760 acres, more or less, of State and fee lands in Township 19 South, Range 36 East, Lea County, New Mexico.
- CASE 2982: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Eumont Gas Pool by the injection of water into the Queen formation through 15 wells in Sections 11, 14, 15, 22 and 23, Township 19 South, Range 36 East, Lea County, New Mexico.
- CASE 2983: Application of The Pure Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Brinninstool Unit Area comprising 17,237 acres, more or less, of Federal and State lands in Townships 23 and 24 South, Ranges 32 and 33 East, Lea County, New Mexico.
- CASE 2984: Application of The Pure Oil Company and Continental Carbon Company to utilize natural gas in a carbon black plant, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to utilize approximately 7 MCF of Devonian gas per day in the Continental Carbon Company carbon black plant near Eunice, New Mexico, said gas to be produced from The Pure Oil Company Wilson Deep Unit Well No. 1, located in the SE/4 NW/4 of Section 13, Township 21 South, Range 34 East, Lea County, New Mexico.
- CASE 2985: Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bootleg Ridge Unit Area comprising 10,818 acres, more or less, of State and Federal lands in Townships 22 and 23 South, Ranges 32 and 33 East, Lea County, New Mexico.

CASE 2986: Application of Shell Oil Company to establish a GOR limit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a special gas-oil ratio limitation of 5,000 cubic feet of gas for each barrel of oil produced in the Mesa-Queen Pool, Lea County, New Mexico.

CASE 2987: Application of Shell Oil Company for a waterflood project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot waterflood project in the South Bitter Lake-San Andres Pool, by the injection of water into the San Andres formation through three wells at unorthodox locations in Sections 27 and 34, Township 10 South, Range 25 East, Chaves County, New Mexico.

CASE 2480 (Reopened):

In the matter of Case No. 2480 being reopened pursuant to the provisions of Order No. R-2182-A which continued for a period of one year the temporary 80-acre proration units established by Order No. R-2182, Henshaw-Wolfcamp Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2988: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit George E. Willett and all other interested parties to appear and show cause why the SDD Hare Well No. 7, located 600 feet from the South line and 1360 feet from the East line of Section 14, Township 29 North, Range 11 West, San Juan County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

# WESTERN UNION TELEGRAM

1201 (4-60)

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

LAT40 DA515

LUA295 PD=FAX LUBBOCK TEX 4 354P CST

A L PORTER, JR

NEW MEXICO OIL CONSERVATION COMMISSION SANTA FE NMEX

PAN AMERICAN PETROLEUM CORPORATION REQUESTS THAT CASE 2979 DOCKETED FOR FEBRUARY 5, 1964 BE RE-SCHEDULED FOR HEARING. ADVERSE WEATHER CONDITIONS MAKE IT IMPOSSIBLE FOR PAN AMERICANS WITNESS TO ATTEND FEBRUARY 5, 1964 HEARING

NEIL S WHITMORE, DISTRICT SUPT PAN AMERICAN PETROLEUM CORP LUBBOCK TEXAS

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 19, 1964

9 A. M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 2991: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Dwight L. Smith and all other interested parties to appear and show cause why the Walker Well No. 1, located 2290 feet from the South line and 500 feet from the East line of Section 21, Township 15 South, Range 11 East, Otero County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.
- CASE 2992: Application of Consolidated Oil & Gas, Inc., for an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the unorthodox location of their Hoyt Well No. 3-5, located 1850 feet from the North line and 110 feet from the West line of Section 5, Township 26 North, Range 4 West, Blanco Me averde Pool, Rio Arriba County, New Mexico.
- CASE 2993: Application of Sinclair Oil & Gas Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Southwest Jal Unit Area comprising 6401 acres, more or less, of State, Federal and fee lands in Townships 25 and 26 South, Range 36 East, Lea County, New Mexico.
- CASE 2994: Application of Skelly Oil Company for a pressure maintenance project, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in the Gallup formation underlying its Navajo "P" and "M" leases in Sections 25, 26, 33, 34, 35, and 36, Township 32 North, Range 17 West, Many Rocks-Gallup Oil Pool, San Juan County, New Mexico. Initial injection will be through applicant's Navajo "P" Well No. 6 located in Unit P of said Section 35. Applicant further seeks the promulgation of special rules governing the operation of said project.
- CASE 2995: Application of Deane H. Stoltz for two non-standard oil proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 80-acre non-standard oil proration units in the North Bagley-Upper Pennsylvanian Pool, Lea County, New Mexico, the first to comprise the SE/4 NE/4 and NE/4 SE/4 of Section 22, Township 11 South, Range 33 East, to be dedicated to a well completed in the SE/4 NE/4 of Section 22; the second to comprise the SW/4 NE/4 and the NW/4 SE/4 of

CASE 2995: said Section 22 to be dedicated to a well to be re-entered  
(Cont.) in the SW/4 NE/4 of said Section 22.

CASE 2984: (Continued from the February 5th Examiner Hearing)

Application of The Pure Oil Company and Continental Carbon Company to utilize natural gas in a carbon black plant, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to utilize approximately 7 million cubic feet of Morrow gas per day in the Continental Carbon Company carbon black plant near Eunice, New Mexico, said gas to be produced from The Pure Oil Company Wilson Deep Unit Well No. 1, located in the SE/4 NW/4 of Section 13, Township 21 South, Range 34 East, Lea County, New Mexico.

CASE 2996: Application of Nearburg & Ingram for the creation of a new gas pool and for special temporary pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for San Andres production in Sections 10, 11, 12, 13, 14 and 15, Township 8 South, Range 37 East, Roosevelt County, New Mexico, and for the establishment of temporary rules therefor, including provisions for 320 acre spacing.

CASE 2739: (Reopened)

In the matter of Case No. 2739 being reopened pursuant to the provisions of Order No. R-2421, which order established temporary 80-acre proration units for the North Vacuum-Abo Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2740: (Reopened)

In the matter of Case No. 2740 being reopened pursuant to the provisions of Order No. R-2422, which order established temporary 80-acre proration units for the Vacuum-Wolfcamp Oil Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2741: (Reopened)

In the matter of Case No. 2741 being reopened pursuant to the provisions of Order No. R-2423, which order established temporary 80-acre proration units for the Vacuum-Devonian Oil Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2742: (Reopened)

In the matter of Case No. 2742 being reopened pursuant to the provisions of Order No. R-2424, which order established temporary 80-acre oil proration units for the Fowler-Blinebry Oil Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2743: (Reopened)

In the matter of Case No. 2743 being reopened pursuant to the provisions of Order No. R-2425, which order established temporary 320-acre spacing units for the Fowler-Tubb Gas Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 160-acre spacing units.

CASE 2744: (Reopened)

In the matter of Case No. 2744 being reopened pursuant to the provisions of Order No. R-2426, which order established temporary 320-acre spacing units for the Fowler-Paddock Gas Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 160-acre spacing units.

CASE 2997: Application of Socony Mobil Oil Company, Inc., for the abolishment of an existing pool and the creation of two new oil pools, and for special temporary pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for lower Pennsylvanian production in Section 26, Township 17 South, Range 34 East, Lea County, New Mexico, and for the establishment of temporary rules therefor, including provisions for 80-acre units and for the establishment of a gas-oil ratio limitation of 6000 cubic feet of gas per barrel of oil produced. Said pool would be created by the abolishment of the Vacuum-Pennsylvanian Pool in Township 17 South, Range 34 East, and the subsequent creation of the Vacuum Upper Pennsylvanian and Vacuum Lower Pennsylvanian Pools.

CASE 2998: Application of Tenneco Oil Company for a gas well-water injection well, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Central Totah Unit Well No. 24 located in Unit O of Section 11, Township 28 North, Range 13 West, San Juan County, New Mexico, to produce gas from the Basin-Dakota Gas Pool through 1 1/2 inch tubing and to inject water into the Gallup formation, Totah-Gallup Oil Pool, through 2 1/16 inch tubing with separation of the zones by a packer set at 5766 feet.

CASE 2999: Application of Phillips Petroleum Company for two non-standard oil proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of an 80-acre non-standard oil proration unit for each of two pools, the Vacuum Wolfcamp Pool and the North Vacuum Abo Pool, said units to comprise the NW/4 SW/4 and the SW/4 NW/4 of Section 31, Township 17 South, Range 35 East, Lea County, New Mexico, to be dedicated to applicant's Santa Fe Well No. 87, located 2310 feet from the South line and 660 feet from the West line of said Section 31.

CASE 3000: Application of Franklin, Aston & Fair Inc. for the creation of a San Andres Gas Pool and for special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new San Andres Gas Pool comprising all or portions of Sections 22, 23, 25, 26, 27 and 28, Township 7 South, Range 35 East, and the establishment of special pool rules, including 320 acre spacing and fixed well locations, Roosevelt County, New Mexico.

CASE 2979: (Continued from February 5, 1964, Examiner Hearing)

Application of Pan American Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation through its U.S.A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.



Case

Heard 2-19-64

Res. 2-26-64

1. Grant. Pan Am. permission to inject Salt Water into the Lower abo formation of their A-S.O. Malco Refinery 'A' # 13-2302/S + 1650/W lines sec. 10-185-27E.
2. Injection zone shall be 6001 to 6093 in abo.
3. Well shall be equipped 2 3/8" ~~internally~~ internally plastic coated tubing set in a packer at 5980'. Annulus shall be filled with inert fluid with <sup>pressure</sup> gauge at surface to assist in detecting leaks of Salt water into annulus.

Thurston

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
C. B. JOHNNY WALKER  
MEMBER

P. O. BOX 871  
SANTA FE

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

March 13, 1964

Mr. Paul Cooter  
Atwood & Malone  
Attorneys at Law  
Box 700  
Roswell, New Mexico

Re: Case No. 2979  
Order No. R-2661  
Applicant:  
Pan American Petroleum Corp.

Dear Sir:

Enclosed herewith are two copies of the above-referenced  
Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC     x    

Artesia OCC     x    

Antec OCC           

OTHER                     Mr. Frank Irby

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. 2979  
Order No. R-2661

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on  
February 19, 1964, at Santa Fe, New Mexico, before Examiner  
Elvis A. Utz.

NOW, on this 13th day of March, 1964, 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 U.S.A. Malco Refineries 'G' Well  
No. 13, located 2302 feet from the South line and 1650 feet from  
the West line of Section 10, Township 18 South, Range 27 East,  
NMPM, Empire-Abo Pool, Eddy County, New Mexico.
- (3) That the applicant proposes to utilize said U.S.A.  
Malco Refineries 'G' Well No. 13 to dispose of produced salt  
water into the Abo formation, with the injection interval from  
6001 to 6903 feet.
- (4) That the injection should be accomplished through  
2 3/8-inch internally plastic-coated tubing installed in a  
packer set at approximately 5990 feet; that the casing-tubing  
annulus should be filled with an inert fluid; and that a pressure  
gauge should be attached to the annulus in order to determine  
leakage in the 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.

-2-

CASE No. 2979  
Order No. R-2661

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to dispose of produced salt water into the Abo formation through its U.S.A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico, injection to be accomplished through 2 3/8-inch internally plastic-coated tubing installed in a packer set at approximately 5990 feet, with the injection interval from 6001 to 6093 feet;

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

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

(3) 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



*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*E. S. Walker*  
E. S. WALKER, Member

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

esr/

Case 2779

# PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 268  
Lubbock, Texas 79401  
January 23, 1964

File: JET-4055-986.510.1

Subject: Application of Pan American  
Petroleum Corporation To Dispose  
Of Produced Water In The Empire  
Abo Field Into the USA Malco  
Refineries 'C' Well No. 13, Eddy  
County, New Mexico

Director  
United States Geological Survey  
c/o Oil and Gas Supervisor  
P. O. Box 6721  
Roswell, New Mexico

Dear Sir:

This is to advise you that Pan American Petroleum Corporation has requested authority from the New Mexico Oil and Gas Conservation Commission to dispose of produced water into the Abo Formation in the subject well. The New Mexico Oil and Gas Conservation Commission has docketed this case for hearing on February 5, 1964 in Santa Fe, New Mexico.

Yours very truly,

Original  
Signed By: Neil S. Whitmore  
Neil S. Whitmore  
District Superintendent

CJH:jb

cc: New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

The Atlantic Refining Company  
Roswell, New Mexico

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 19, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum  
for salt water disposal, Eddy County,  
New Mexico.

Case No. 2979

BEFORE: ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

**DEARNLEY-MEIER REPORTING SERVICE, Inc.**

SAN FRANCISCO, CA, U.S.A.  
PHONE 315-1182

SANTA FE, N.M.  
PHONE 983-3971

ALBUQUERQUE, N.M.  
PHONE 243-6691



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General Court Reporting Service

Suite 1120 Simms Building Albuquerque, New Mexico Phone 243-6691

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 19, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Pan American Petroleum Corporation for  
salt water disposal, Eddy County, New Mexico.

CASE NO. 2979

BEFORE: ELVIS A. UTZ: EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: Case 2979.

MR. DURRETT: Application of Pan American Petroleum  
Corporation for salt water disposal, Eddy County, New Mexico.

MR. COOTER: Paul Cooter, of Atwood and Malone, appearing  
for the applicant. We have one witness, Mr. Harpke.

(Witness sworn)

MR. UTZ: Are there other appearances in this case?

CARL F. HARPKE,

called as a witness herein, having been first duly sworn, on oath,



was examined and testified as follows:

DIRECT EXAMINATION

BY MR. COOTER:

Q Would you state your name for the record?

A Carl F. Harpke.

Q By whom are you employed and in what capacity?

A I am employed by Pan American Petroleum Corporation as a reservoir engineer in Lubbock, Texas.

Q Have you previously testified before this Commission and are your qualifications as a petroleum engineer a matter of record?

A Yes, sir.

Q Please describe the purpose of Pan American's application before the Oil Conservation Commission in this case?

A Pan American is requesting that the New Mexico Oil Conservation Commission grant permission to dispose of produced salt water from the Abo formation into Pan American's USA Malco Refineries "G" Well Number 13. This well is located 2302 feet from the South line and 1650 feet from the West line, Section 10, Township 18 South, Range 27 East, Eddy County, New Mexico.

Q Into what formation will the water be disposed?

A The produced water will be reinjected into the base of the Abo formation.

Q What depth will that be?

A We are proposing to perforate the interval at 6,001 to 6,093 feet.

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Q Is this proposed injection well now producing?

A No, this well is currently temporarily abandoned, after we made three unsuccessful attempts to establish commercial oil production from the Abo.

Q Mr. Harpke, your attention first to Exhibit Number One in the brochure that has been prepared. Please describe this exhibit, what it shows?

A Exhibit Number One is a base map of the portion of the Empire-Abo Field in which the proposed disposal well is located. I have the proposed disposal Malco "G" 13 indicated here by a red arrow. Also shown on the map is a large circle which describes the two mile radius from the injection well, as is required to be shown by Rule 701. Also shown on this map are the names of the leases and operators and all producing- - well, rather, all completions, both producing and dry holes, within this two mile radius. Also shown on Exhibit Number One is a heavily dashed border area which encloses the leases and wells, which will initially deliver produced water to the proposed disposal well. All of these wells within this bordered area are operated by Pan American, and most of the wells are owned jointly by Pan American and Hondo.

Q Next, invite your attention to Exhibit Number Two, would you relate that, please?

A Exhibit Number Two is a lateral log, Gamma Ray Nuetron log, of the proposed injection well. On Exhibit Number Two we have

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the top of the Abo Reef noted at 5910, which is minus 2447 Sub-C elevation, and we have shown the proposed injection interval from 6001 feet to 6,093 feet, which is TD of the well.

I would like to point out at this time that our initial letter to the New Mexico Oil Commission, which requested that this hearing be called, stipulated a proposed injection interval from 6,001 to 6,018 feet. After this letter was written, we had then further reviewed this thing, and we decided we would like to apply for injection into the entire interval from 6,001 to the TD of the well. The additional injection interval above that, which was noted in our initial application, or a letter of that application, is beneath the interval which had been described and shouldn't effect the State Engineer's approval of the project, which has been received.

Q Next, please describe Exhibit Number Three?

A Exhibit Number Three is a diagrammatic sketch of the proposed completion and hook up of the proposed injection well, Malco "G" Number 13. We have 8 5/8ths inch surface casing set at 1509 feet with 700 sacks of cement, cemented with 700 sacks, which was circulated to the surface. This surface casing was pressure tested to 800 PSI for 30 minutes. Production casing is 4 1/2 inch 9.5 pound J-55 casing set at 6,093 feet; the top of the cement behind the 4 1/2 inch casing was found to be at 675 feet from the surface of the well, as indicated by temperature survey. The 4 1/2 inch casing was cemented with 850 sacks of cement, pressure

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tested from 3150 PSI for 30 minutes. The well was perforated at the Abo interval of 6,001 to 6,093 feet. We will set, then, a tension packer with 2 3/8ths tubing. The packer will be set at approximately 5990 feet, approximately ten feet above the proposed disposal interval. This annulus between the 2 3/8ths tubing and the 4 1/2 inch production casing will be loaded with inhibited water to prevent internal casing corrosion and the tubing and the packer will be plastic coated for corrosion protection.

Q Would you describe Exhibit Four?

A Exhibit Number Four is a tabulation showing the lease names and well numbers of the wells which will be initially connected to the proposed disposal well. These are the lease names and well numbers of the area included in the bordered area that we have discussed on Exhibit Number One. Also shown on Exhibit Number Four is the daily water production of each well, as estimated from the latest available well tests. Initially, a total of approximately 365 barrels of water per day will be injected into the proposed disposal well. This water within this area, we have several storage systems. We have what we describe as our storage system number one, which is located in the Northwest Quarter of Section 11. We have wells, 13 wells, producing approximately 200 barrels of water to this storage system. We have another storage system located in the Southwest Quarter of Section Three, 29 wells producing approximately 70 barrels of water per day. Then, we have three separate batteries serving four



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wells, which are located in the East Half of Section 15, and the Northwest of the Northwest Quarter- - In the East Half of Section 16, and the Northwest-Northwest Quarter of Section 15. These four wells produce approximately 100 barrels of water per day.

Q How much water then will be initially injected into this proposed Malco "G" Number 13?

A Approximately 365 barrels of water per day from these 46 wells. However, there is a strong possibility that in the near future, we may be adding additional leases to this, such as our Humble Chalk Bluff Draw Unit, located to the west of the bordered area here. This unit is currently producing approximately 35 barrels of water per day. They are working- - a working interest in this unit, which Humble operates.

Q Next direct your attention to Exhibit Number Five, and would you relate to the Examiner why that is included?

A Exhibit Number Five is a cross section through the Abo Reef, which shows the structural comparison of the proposed disposal well with other offsetting wells. A trace of this cross section is shown in red on figure- - Exhibit Number One. This cross section goes through wells G-3, G-4 and G-13. Shown on Exhibit Five are the pertinent completion intervals for each of the wells. For the Malco "G" 13, we have noted the three intervals which Pan American tested, and which failed to produce commercial quantities of oil. The lower intervals, the two lower intervals,



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have been cemented and squeezed, however, the upper interval from 5910 to 5915, which is completed in the upper five feet of the Abo Reef, is still open. When we go in, if permission is granted to convert this well to disposal service, we will go in there.

Q The top of this proposed injection, I think it is 6,001, and this Malco "G" 13 is lower than the perforations in the Number "G" 4 well, is it not?

A Yes, the top of the proposed disposal interval at 6,001 feet. This Malco "G" 13 is at Sub-C elevation minus 2538. This is below the perforation in the Malco "G" Number 4.

Q Next, I invite your attention to the Exhibit Number Six. Please describe that exhibit and why is it included?

A Exhibit Number Six is another cross section, a tracing of which is also shown on Exhibit Number One. This cross section is through the Malco Refinery "G" Number 12, "G" Number 13, Number Nine and "D" Number Five. This is similar to to Exhibit Number Five. This exhibit also shows the completion intervals of the wells offsetting the proposed injection well. The proposed disposal interval in Malco "G" 13 is 29 feet below the bottom of the perforation interval in the Malco "D" Number Five, and it is approximately 100 feet below the bottom of the perforation or perforated interval in the Malco "G" Number Nine.

Q Has the upper portion of the proposed injection interval been perforated?

A Yes, sir. Our final completion attempt to establish



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commercial oil production from this oil well was in the interval 5910 to 15. I had previously described the top of the Abo Reef in the well as being at 5910, so that this final completion attempt was in the upper five feet of the Abo Reef. This perforated interval was acidized with 5,000 gallons of acid. We pump tested the formation for 28 days, produced all load water plus 498 barrels of formation water and no oil. So, we feel that the entire reef in this well is beneath the water-oil contact.

Q Were the exhibits, One through Six, either prepared by you or under your direction?

A Yes, sir.

Q Do you have any further evidence or testimony to offer in support of Pan American?

A No, sir, that concludes it.

MR. COOTER: We offer Exhibits One through Six, Mr. Examiner, into evidence.

MR. UTZ: Without objection, Exhibits One through Six will be entered into the record of this case.

#### CROSS EXAMINATION

BY MR. UTZ:

Q In your interval from 6,001 to 6,093 feet, what is its relative position in the Abo section?

A We did not penetrate the entire reef interval in this well. I would say that the TD of the well at 6,093 feet is probably



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within 50 to 100 feet from the base of the reef. So, this interval of 6,001 to 6,093 would be approximately in the lower half of the reef.

Q What relative position of the Abo section do you most generally get production in this pool?

A We have most of our production from the offsetting wells and most of the wells are perforated in approximately the middle of the reef, the Abo, where we think we would run into water, the lowest elevation before running into water.

Q Is this a water drive pool?

A No, sir, this is solution gas drive. We have no evidence of water drive, although we do have water drive present in this portion of the field.

Q This is on the low portion of the pool?

A Yes, sir.

Q Lower portion of the strike, in other words, the southeast edge of the pool?

A This is on the southwestern edge of the field.

Q You feel that the injection of water in this section here will definitely be low enough to where if it serves any purpose at all, it will assist production in offset wells?

A Yes, any effect that it has on the oil zone would probably be favorable, however, the amount of water that we are looking at here is less than the combined withdrawal rate of the five wells which offset the injection well. So, I don't think we



are going to get much in the way of any recovery benefit. Actually, we do have a large aquifer in this area, amount of water which would be injected to the well, but would be negligible compared to the size of it.

Q Did you test this particular interval here in trying to complete this well?

A We had tested the interval 6,001 to 6,018 feet, and failed to make commercial well out of it. We pump tested it for a considerable time. The interval 6,001 to 6,018 feet was perforated, acidized with 2,000 gallons of acid, was then fraced with 71,000 gallons of water after 65,000 pounds of sand. We pumped in 66 days on a pump test and we produced all of our load water, plus 751 of new water, plus only 11 barrels of oil.

Immediately prior to temporarily abandoning the well, the well pumped zero barrels of oil and 25 barrels of water, indicating that there was no commercial oil production present.

Q But, there was plenty of water?

A There was plenty of water, yes, sir.

Q So, this zone now you feel is actually water bearing?

A Yes, sir.

Q Did you state whether, or not your tubing would be plastic coated?

A Yes, sir, our tubing and packer both will be plastic coated.

Q I believe you stated that you will load the annulus with

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an inert water?

A Yes, sir.

Q With a pressure guage at the surface to detect any possible leaks?

A Yes, sir, install a pressure guage.

Q Now, your surface casing is 8 5/8ths, did the 800 sacks or rather, 700 sacks, did that circulate?

A Yes, sir, that was circulated.

Q And the cement behind your 4 1/2 went back up inside the 8 5/8ths?

A Yes, sir. The top of the cement behind the 4 1/2 casing was found to be at 875 feet from the surface.

Q So, it would appear that all zones behind the casing are well protected?

A Yes, sir.

MR. UTZ: Are there other questions of the witness?

CROSS EXAMINATION

BY MR. IRBY:

Q Was your surface casing set through the San Andres?

A I am afraid I cannot answer that, sir. I don't know the exact depth of the San Andres in this well.

MR. IRBY: That is all I have.

\* \* \* \*



## RE CROSS EXAMINATION

BY MR. UTZ:

Q The San Andres isn't marked on the log?

A No, sir.

Q I am afraid I couldn't look at that log and tell you, either.

A I may be able to find this in a well file. Well, I have an estimate. The top of the San Andres is approximately 1610, which is below where we have the surface casing set. Now, I will see if this is- - this is further verified. No, I am afraid I don't have the actual top of the San Andres noted here.

MR. IRBY: You estimate the top at 1610?

A Yes, this was on the- - I got this from the drilling procedure for the well before the well was drilled, and I don't have the actual top since we have the log.

MR. IRBY: Then, you would assume that this surface casing was set somewhere in the Artesian group?

A Yes, sir.

MR. IRBY: And possibly, or do you know, whether, or not it was set in one of the tighter members of this group?

A No, sir, I don't.

MR. IRBY: Thank you.

MR. UTZ: Are you a geologist, or engineer?

A Petroleum engineer.

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MR. UTZ: Are there other questions of the witness?

The witness may be excused. Is this the only witness you have?

MR. COOTER: Yes, sir.

MR. UTZ: Are there statements to be made in this case?

The case will be taken under advisement.

\* \* \* \*

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

I, ROY D. WILKINS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office this 29th day of February, 1964.

*Roy D. Wilkins*  
NOTARY PUBLIC

My Commission Expires:  
September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2879, heard by me on Feb 19, 1964.

*Shirley J. ...*, Examiner  
New Mexico Oil Conservation Commission



DRAFT

JMD/esr

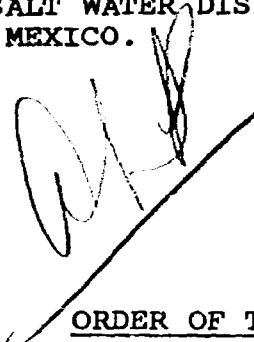
BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

 CASE No. 2979

Order No. R- 2661

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

  
ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 19, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Utz, ~~Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.~~

NOW, on this MARCH day of ~~February~~, 1964, the Commission, a quorum being present, having considered the ~~applicant's~~ testimony, the record, ~~and the recommendations of the Examiner,~~ 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 U.S.A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said U.S.A. Malco Refineries 'G' Well No. 13 to dispose of produced salt water into the Abo formation, with <sup>the</sup> injection interval from 6001 to 6093 feet.

(4) That the injection should be accomplished through 2 3/8-inch internally plastic-coated tubing installed in a ~~permanent type~~ packer set at approximately 5990 feet; that the ~~annulus~~ <sup>casing-tubing</sup> should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus in order to determine leakage in the tubing or packer.

*Drilling of unnecessary wells and otherwise prevent waste and protect*  
(5) That approval of the subject application will ~~not~~ <sup>prevent the</sup> ~~impair the producing formations, and will neither cause waste~~ nor impair correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Pan American Petroleum Corporation, is hereby authorized to dispose of produced salt water into the Abo formation through its U.S.A. Malco Refineries 'G' Well No. 13, located 2302 feet from the South line and 1650 feet from the West line of Section 10, Township 18 South, Range 27 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico, injection to be accomplished through 2 3/8-inch internally plastic-coated tubing installed in a ~~permanent type~~ packer set at approximately 5990 feet, with the injection interval from 6001 to 6093 feet;

PROVIDED HOWEVER, That the <sup>casing-tubing</sup> annulus shall be filled with an inert fluid, and that a pressure gauge shall be attached to the annulus in order to determine leakage in the tubing or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

(3) 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 herein-above designated.