FLORENE,

PLEASE SET FOR
HEARING.

PRODUCTION WITHIN
A 2 mile RADIUS.

THANKS,

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

RECEIVED
AUG 13 1984
OIL CONSERVATION DIVISION
SANTA FE

FORM C-108
Revised 7-1-81

Case 8332

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: TENNECO OIL EXPLORATION AND PRODUCTION

Address: 7990 IH 10 West, San Antonio, Texas 78230

Contact party: Leticia Samudio Phone: (512) 366-8003

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: Leticia Samudio Title Production Engineer

Signature: Leticia Samudio Date: August 3, 1984

* 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. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III

JENNINGS FEDERAL #1
WELL DATA

A) Jennings Federal #1
660 FNL & 1980 FWL
SEC. 14, T24S, R32E

8 5/8" 24# J55 CSA 315' in a 12 1/4" hole w/ 200 sx. cement circulated to surface.

4 1/2" 9.5# J55 CSA 5017' in a 7 7/8" hole w/200 sx. cement. Top of cement @ 4400' by temperature survey.

2 3/8 8rd J55 internally plastic coated tubing set at ± 4850'.

Guiberson UNI-PAK I plastic coated packer set at ± 4850'.

B) 1. Injection Formation - Delaware
2. Injection Interval -4956-70' (Perforated)
3. Original Purpose - Oil Well
4. No other Perforations

2185F/blr/LS

JENNINGS FEDERAL #1

DOUBLE X DELAWARE

660 FNL & 1980 FWL

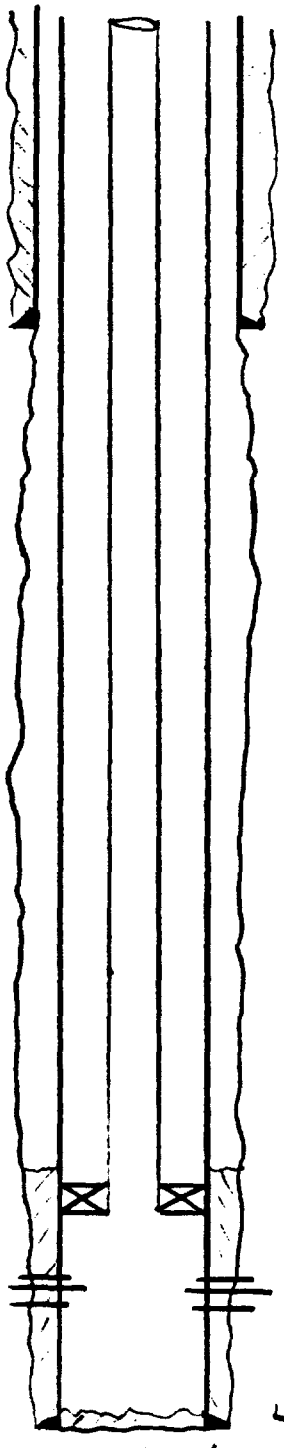
SEC. 14, T24S, R32E

LEA COUNTY, NEW MEXICO

ORIGINALLY: OIL WELL

ELEV. 3635 KB

KB TO GRD. – 8'



TBG: 2 3/8" 8RD J55
PLASTIC COATED

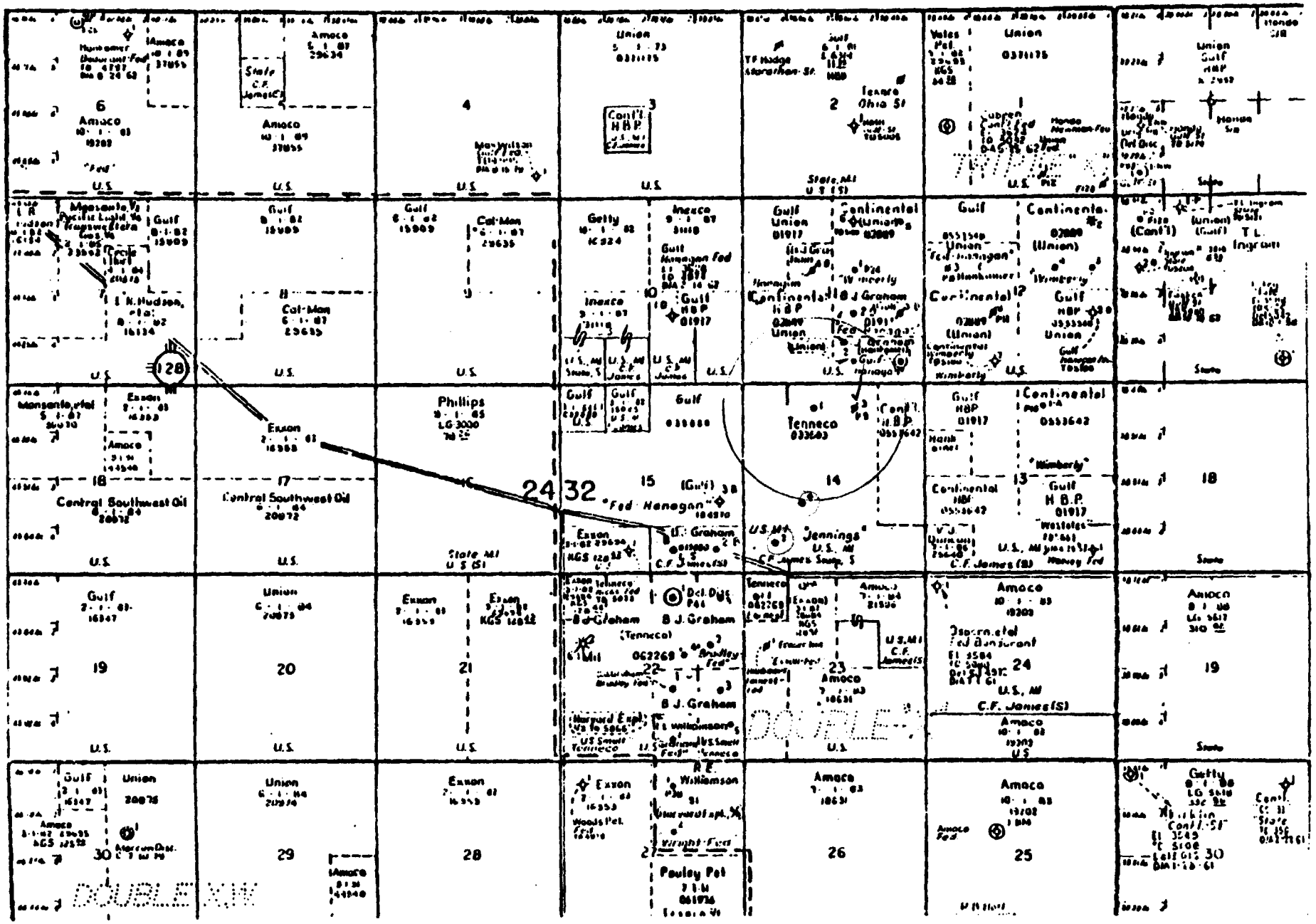
PACKER: GUIBERSON
UNI-PACK I
PSA ± 4850'

8 5/8" 24# CSA 315' w/200 sx
CIRCULATED TO SURFACE

DELAWARE: 4956-4970 (2SPF)

4 1/2" 9.5# J55 CSA 5017' w/200 s
TOP OF CEMENT: 4400'

TD: 5019'
PBTD: 4986'



DOUBLE X DELAWARE

VI

Well Name	Type	Construction	Date Drilled	Location	Depth	Record of Completion
Gulf-Hanagan-Federal #2	Oil	8 5/8" CSA 316' w/ 200sx 5 1/2" CSA 5042' w/ 200sx	5/1/62	660 FS & 1980 FE SEC 11, T24S, R32E	5076	6/1/62
Jennings Federal #3	P&A	8 5/8" CSA 348 w/225sx 5 1/2" CSA 5029' w/ 200sx	10/3/62	660 FNL & 1980 FEL SEC 14, T24S, R32E	5030	11/23/62

2195F/blr/LS

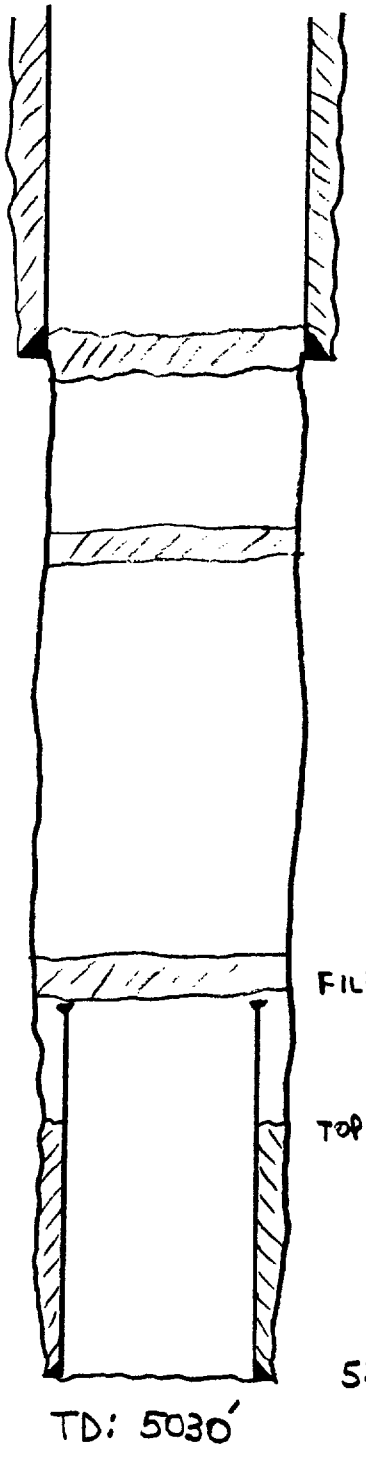
JENNINGS FEDERAL 3 T&A a

DOUBLE X DELAWARE

660 FNL + 1980 FEL

SEC. 14, T24S, R32E

LEA COUNTY, NEW MEXICO



PLUGGED w/ 50 sx (343'-400')

PLUGGED w/ 50 sx (1350-1450)

PLUGGED w/ 50 sx (4024'-4124')

BAD CASING TOP - PROBABLY SHOT OFF - AT 4124'

8 5/8" CSA 348' w/225 sx IN 12 1/4" HOLE

FILL UP TO THIS POINT (4124')

TOP OF CEMENT AT 4198'

5 1/2" CSA 5029' w/200 sx IN 7 7/8" HOLE

TD: 5030'

VII

1. Average daily rate - 100 BWPD
   Maximum daily rate - 200 BWPD
   Volume (22 years) - 803,000 BBLS

2. System is closed

3. Average injection pressure - 550 psi
   Maximum injection pressure - 750 psi

VIII

Injection zone - Delaware sand, fine - grained sandstone, 65' thick and depth 4956' Aquifer - Carlsbad water Basin, Santa Rosa (300' and up).

IX - Xylene/HCL cleanup

X - Logs already on file

XI - Not applicable

XII - Attached

XIII - Proof of Notice - attached

July 25, 1984

Re: CONVERSION JENNING FED. #1
TO SALT WATER DISPOSAL WELL

In the area of the subject well there are two water aquifers, the Ogalalla Formation (approximately 100' below ground level) and the Triassic (500-600' below G.L.). There are a few wells which produce water from shallow alluvial deposits. Examination of geological data, including well logs, shows no faulting from the Delaware to surface in the area of the subject well. The perfs at 4956'-70' would be of no hazard to the aquifers previously mentioned; as the Lamar Lime, which is over 30' thick (including shale sections) and low porosity due to the shale content, would block upward migration of the injected water. Over 200' of anhydrite above the Lamar Lime, plus the physical distance of over 4000' between the injection zone and the aquifers, should also preclude the possibility of aquifer contamination. (Assuming a good cement job).

The following is a list of water wells within a 4 mile radius of the subject well:

LOCATION	TO	HORIZON-AQUIFER
T24S R32E Sec. 3, NW NE SE	500'	Ogalalla
T24S R32E Sec. 3, NE NE SW	550'	Ogalalla
T24S R32E Sec. 10, SE SE SW	60'	N.A. (Alluvium)
T24S R32E Sec. 33, NE NE SE	367'	N.A. (Not available)
T24S R33E Sec. 9, SE SW NE	N.A.	N.A.
T24S R33E Sec. 10, NW SW NW	36'	Alluvium
T24S R33E Sec. 17, SE SE SE	N.A.	Ogalalla
T24S R33E Sec. 23, SW NW SW	230' (Plugged)	N.A.
T24S R33E Sec. 33, NE SW NE	N.A.	Ogalalla

Data on water aquifers and water wells was obtained from Jim Wright, New Mexico State Engineers Office, Roswell, New Mexico (505-622-6521).

Dave Breedon
Geological Engineer

CLR/dt/0098B

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

I, _____

Robert L. Summers

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

One weeks.

Beginning with the issue dated

July 26, 19 84

and ending with the issue dated

July 26, 19 84

Robert L Summers
Publisher.

Sworn and subscribed to before me this 30 day of July 1984

Jane Paulowsky
Notary Public.

My Commission expires

3-24, 1987
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

OFFICIAL SEAL
Signature Jane Paulowsky
JANE PAULOWSKY
NOTARY PUBLIC - NEW MEXICO
NOTARY BOND FILED WITH SECRETARY OF STATE
My Commission Expires 3-24-87

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LEGAL NOTICE
July 26, 1984
"NOTICE OF INJECTION"

Tenneco Oil intends to convert the Jennings Federal #1 to a salt water injection well. The well is located at T24S, R32E, Section 14, 660 ft. North and 1980 ft. West.

The injection formation is the Delaware at a depth of 4956 feet. THe maximum injection rate is 200 BPD at a maximum pressure of 700 psi.

All interested parties need to file objection or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Questions concerning the project should be addressed to the following:

Tenneco Oil
Exploration and Production
7990 IH-10 West
San Antonio, Texas 78230
(512) 366-8003
ATTN: Letty Samudio