

MAR 07 1983

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Storage
Application qualifies for administrative approval ☒ yes ☐ no
- II. Operator: Tenneco Oil E&P, WRMD
Address: Box 3249, Englewood, CO 80155
Contact party: Alex McLean Phone: 740-2582
- 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 R3325.
- 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: Alexander Mark McLean Title Production Engineer
Signature: Alexander Mark McLean Date: February 11, 1983
- * 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.

Memo

From
Gilbert P. Quintana
Petroleum Engineer

To File / WFX -

Conversations with Alex McLean
on 4/20/83 at @ 11:00 A.M.
indicate he will send me
proof of offset producer notification
within the next few days. Approval
of the application is contingent
on him providing this information.

Also, he indicates wells No. 77 & 79
offsetting to the north of the
lease are wells drilled prior to
institution of the subject waterflood
and should be included in the
original order.

Gilbert Quintana

FORM C-108 APPLICATION FOR AUTHORIZATION TO INJECT

VII. 1. Proposed average and maximum daily rate of fluids to be injected:

Proposed average daily rate: Initially, to be limited to 25 BWIPD.
Maximum daily rate = 1200 BWIPD

2. System is to be closed.

3. Average Inj. pressure = 650 psi.

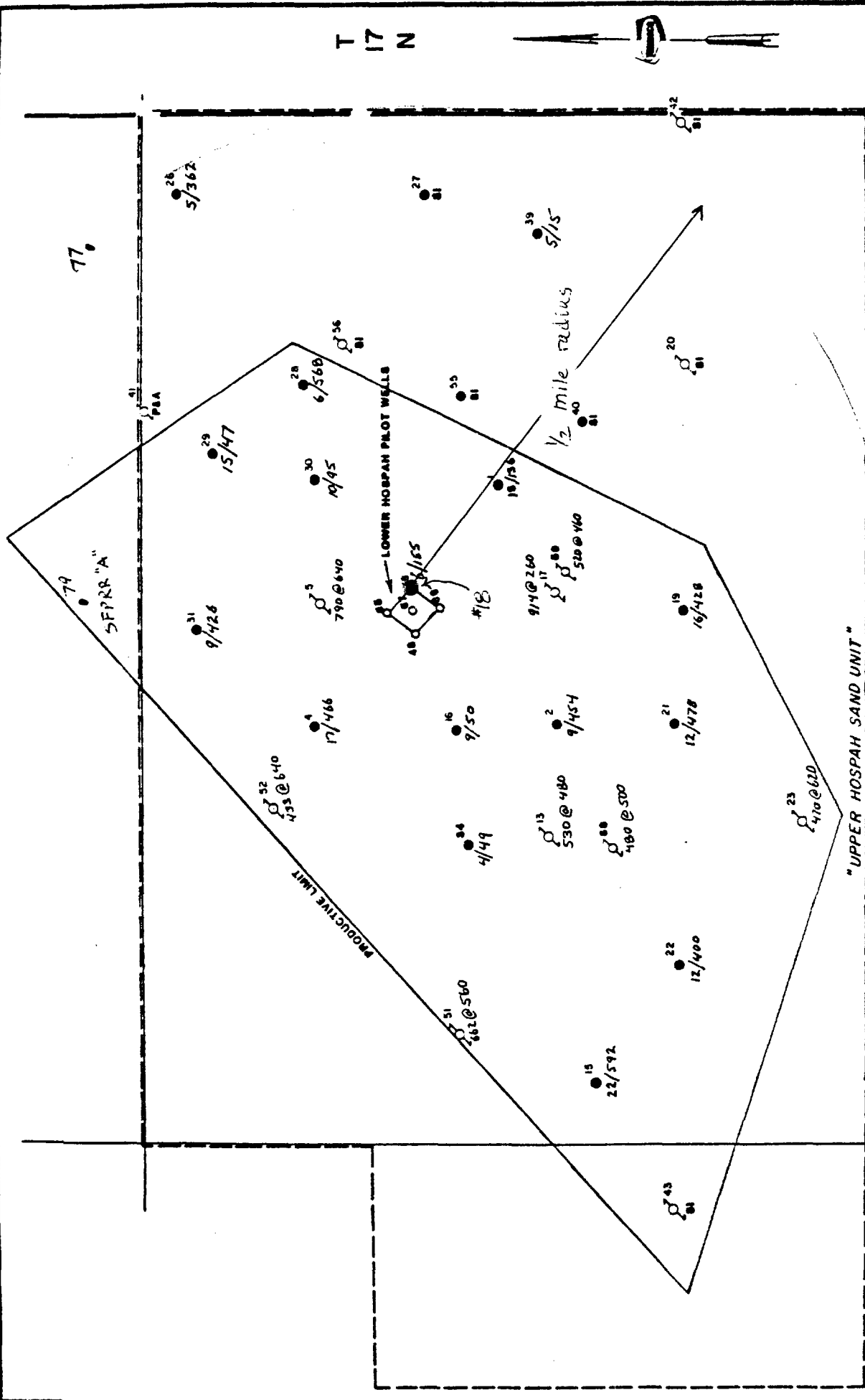
Maximum Inj. pressure = 800 psi.

4. Injection fluid will be produced water.

5. This well is not for disposal purposes.

IX. Stimulation program will initially consist of nothing, but at a later date Hospah #18 may be stimulated w/some MCA.

XII. Not applicable.



TENNECO OIL COMPANY
SUBSIDIARY OF TENNECO INC.

SOUTH HOSHPAH FIELD
MC KINLEY CO., NEW MEXICO

UPPER HOSHPAH SAND UNIT

ATTACHMENT NO. 2

SCALE IN FEET
500 250 0 250 500
DENVER, COLORADO

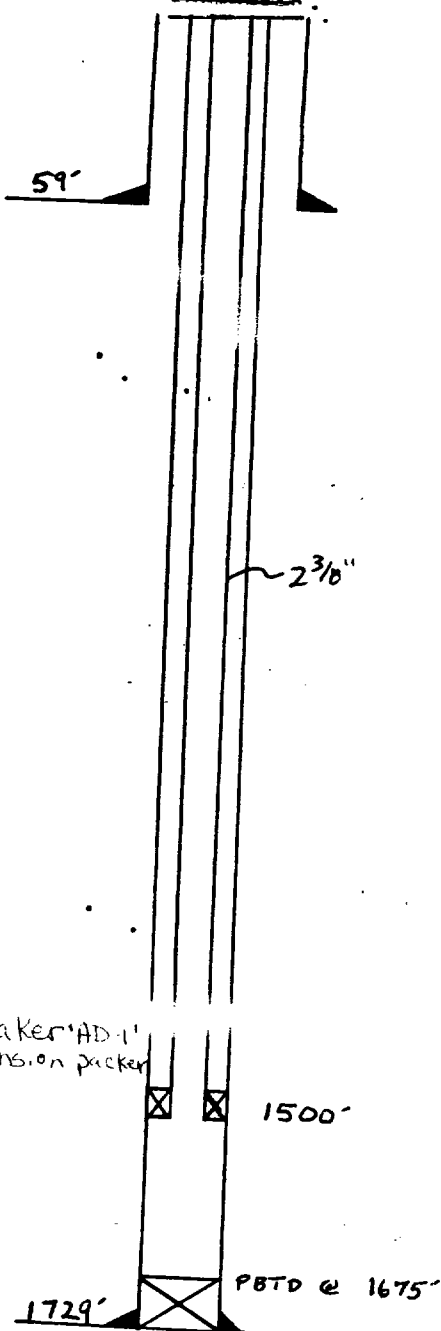
R 9 W

8000/8000
8000 @ 4000-5000

INJECTION WELL DATA SHEET

Tenneco Oil E&P		Upper Hospah	
OPERATOR		LEASE	
18	1475 FNL, 3055 FWL	12	17N
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP
			9W
			RANGE

Schematic



Tabular Data

Surface Casing

Size 7-7/8" (26#/ft) Cemented with 50 sx.
 TOC _____ feet determined by _____
 Hole size 9-7/8"

Intermediate Casing

Size _____" Cemented with _____ sx.
 TOC _____ feet determined by _____
 Hole size _____

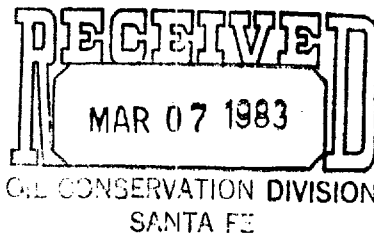
Long string

Size 4-1/2" (10.5#/ft) Cemented with 200 sx.
 TOC _____ feet determined by _____
 Hole size 6-3/4"
 Total depth 1729'

Injection interval

1554 feet to 1596 feet
 (perforated or open-hole, indicate which)

1554-56' 4 JSPF
 1558-60' "
 1562-68' "
 1572-76' "
 1580-83' "
 1586-96' "



Tubing size 2-3/8" lined with _____ set in a _____
 (material)
Baker Model AD-1, 4-1/2" tension packer at 1500' feet.
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Upper Hospah
- Name of Field or Pool (if applicable) South Hospah-Upper Sand
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? Production of oil
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes, perforated as follows: 1622-1634 w/4 JSPF. Cement retainer @ 1610'. Squeezed lower perms w/50 sx Class "B" cmt.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Lower Hospah (1600'). Lone Pine Dakota (=2500')

Prepared by AMM

WF7-511

Tenneco Oil Exploration and Production

A Tenneco Company

Western Rocky Mountain Division

P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address:
6061 South Willow Drive
Englewood, Colorado



June 30, 1983

State of New Mexico Oil & Gas Conservation Commission
Santa Fe District Office
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Gilbert Quintana

Re: Hospah #18

Gentlemen:

We have enclosed a copy of the proof of publication concerning water injection for the above-referenced well. The offset operator has been notified. A copy of our Certified Mail receipt is also enclosed.

If you need additional information, please contact this office.

Very truly yours,

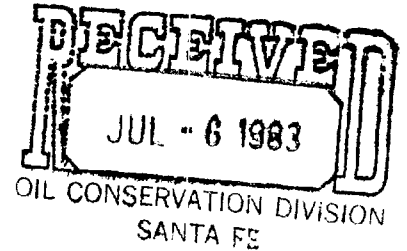
TENNECO OIL COMPANY

A handwritten signature in cursive script, appearing to read "John Orr".

John Orr
Production Analyst

JWO:csh

Enclosure



Affidavit of Publication

STATE OF NEW MEXICO,

) ss

COUNTY OF MCKINLEY

Linda Williams

being duly sworn upon oath, deposes and says:

As legal clerk of the Gallup

Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico, and in the City of Gallup, therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

one time

for _____, the first publication being on the

4 day of June, 1983 the

second publication being on the _____ day of

_____, 19_____ the third publication

on the _____ day of _____, 19_____

and the last publication being on the _____ day of

_____, 19_____

That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation.

Linda Williams
Affiant.

Sworn and subscribed to before me this 9 day of

June, A.D., 1983

Margaret M. Paluchek
Notary Public.

My commission expires

8-27-85

LEGAL NOTICE

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY AND MINERALS
DEPARTMENT OIL
CONSERVATION DIVISION
SANTA FE, NEW MEXICO

NOTICE: To all persons having any right, title, interest or claim in the following:

Pursuant to the Rules and Regulations of the New Mexico Oil Conservation Division, Tenneco Oil Company, hereby gives public notice that it has applied to the Division for an Administrative Order approving Salt Water Injection well for its Hoshpah Waterflood Project as follows:

Township 17 North, Range 9 West, Section 12: Unit G; Hoshpah #18 Well; McKinley County, New Mexico; as water injection well in the South Hoshpah Upper Sand formation at a depth of about 1554-1596 feet at maximum rate of 1200 BWPD barrels per day per well at a maximum injection pressure of 800 psi.

Any interested party must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2000, Santa Fe, New Mexico 87501, within fifteen (15) days of the date of publication of this notice.

KELLAHIN & KELLAHIN
Attorneys at Law
P.O. Box 2265
Santa Fe, New Mexico 87504-2265
(505) 982-4285

ATTORNEYS FOR
TENNECO OIL COMPANY

Legal #9063 Published in the Gallup Independent Saturday, June 4, 1983.

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Aliso Viejo #18

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).

☐ Show to whom and date delivered —¢

☐ Show to whom, date, and address of delivery.. —¢

2. ☐ **RESTRICTED DELIVERY** —¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$ _____

3. **ARTICLE ADDRESSED TO:**

Tesoro Petroleum Corp.
Box 2369
Farmington, NM 87401

4. **TYPE OF SERVICE:**

☐ REGISTERED ☐ INSURED

☐ CERTIFIED ☐ COD

☐ EXPRESS MAIL

ARTICLE NUMBER

P 269 935 897

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

David L. Collis

5. **DATE OF DELIVERY**

4-26-83

POSTMARK

ALISO VIEJO
NM
APR 26 1983

6. **ADDRESSEE'S ADDRESS** (Only if requested)

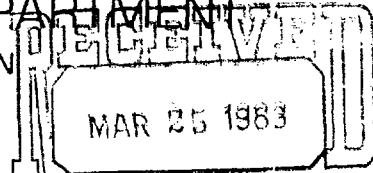
7. **UNABLE TO DELIVER BECAUSE:**

EMPLOYEE'S INITIALS



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE



OIL CONSERVATION DIVISION, AZTEC, NEW MEXICO 87410
SANTA FE (505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 3-23-83

FILE WFX-511

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX ☒ _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 3-8-83
for the Tenneco South Hensch Unit #18 G-12-17N-9W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve with maximum injection pressure of 311 psi.

Yours truly,

Jeff A. Edmister