

WFX

3/29/99

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ Yes ☐ No
- II. OPERATOR: Penrod Oil Corp  
ADDRESS: P.O. Box 5970, Hobbs, New Mexico 88240  
CONTACT PARTY: JERRY SEXTON PHONE: 377-7051
- 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: 2-9556
- 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:
- MAR 12 1999
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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: JERRY SEXTON TITLE: AGENT  
SIGNATURE: [Signature] DATE: 3-6-99
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances 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 the 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, 2040 South Pacheco, Santa Fe, New Mexico 87505, within 15 days.

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

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**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.

March 3, 1999

NM Oil Conservation Div.  
2040 Pacheco St.  
Santa Fe, New Mexico

Attention: David Catanach

Subject: Expansion of the Eumont Federal "D"  
Lease Pilot Waterflood

Gentlemen:

It is proposed to expand the Eumont Federal D Pilot Waterflood project by converting the Federal D No. 3 well to an injection well. The location of the Federal D No. 3 well is 1980'FNL, 660'FEL, Sec 27-T20S-R36E, Lea Co. New Mexico.

To date the pilot waterflood has responded, but not as effectively as been hoped. The conversion of Fed. D well No. 3 will allow additional water to be injected into essentially the same pattern as the No. 2 well, which will allow better evaluation of the area.

The water injection into the Fed. D well No. 2 is approximately 60 to 70 BWPD at 750 psi pressure which is the max. pressure for the well. This volume is not sufficient to build up a strong enough flood front to move oil to the offset oil well as had been expected.

It is estimated that the Federal D Lease could produce 100 bbls. of additional water by speeding up some of pumping units on the leases oil wells. This water could be injected into the proposed Fed D No. 3 well injection well.

The current price of oil will not allow a major workover to increase water injection to be done on the no. 2 injection well at the present time since the lease has not responded to the water injection.

Since the OCD Order No. R-9556 set up the Eumont Federal D as a waterflood and allowed for expansion of injection into other wells. It is asked that the injection of water into the No. 3 well be done administratively. While the No. 3 well is on the outside edge of the waterflood it is 660' from the lease line and Penroc is operator of the offset lease.

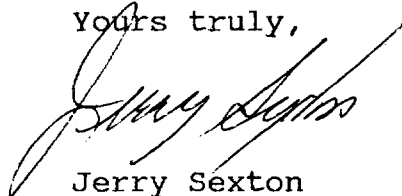
The review of well bores within 1\2 mile of the proposed injection well with the exception of Penroc's State WED Lease well No. 2 ,Located 1980'FSL, 1980'FEL, Sec. 27-T20S-R36E, Lea Co. New Mexico were included in the application to inject into Eumont Federal "D" pilot waterflood (order no.9556).

For your convenience all of the well bores schmatics have been included in this application.

Attached is the C-108 for the injection of water into the Eumont Federal "D" well No.3.

If you have any questions on the application please contact Jerry Sexton

Yours truly,

A handwritten signature in cursive script, appearing to read "Jerry Sexton", written in dark ink.

Jerry Sexton  
agent

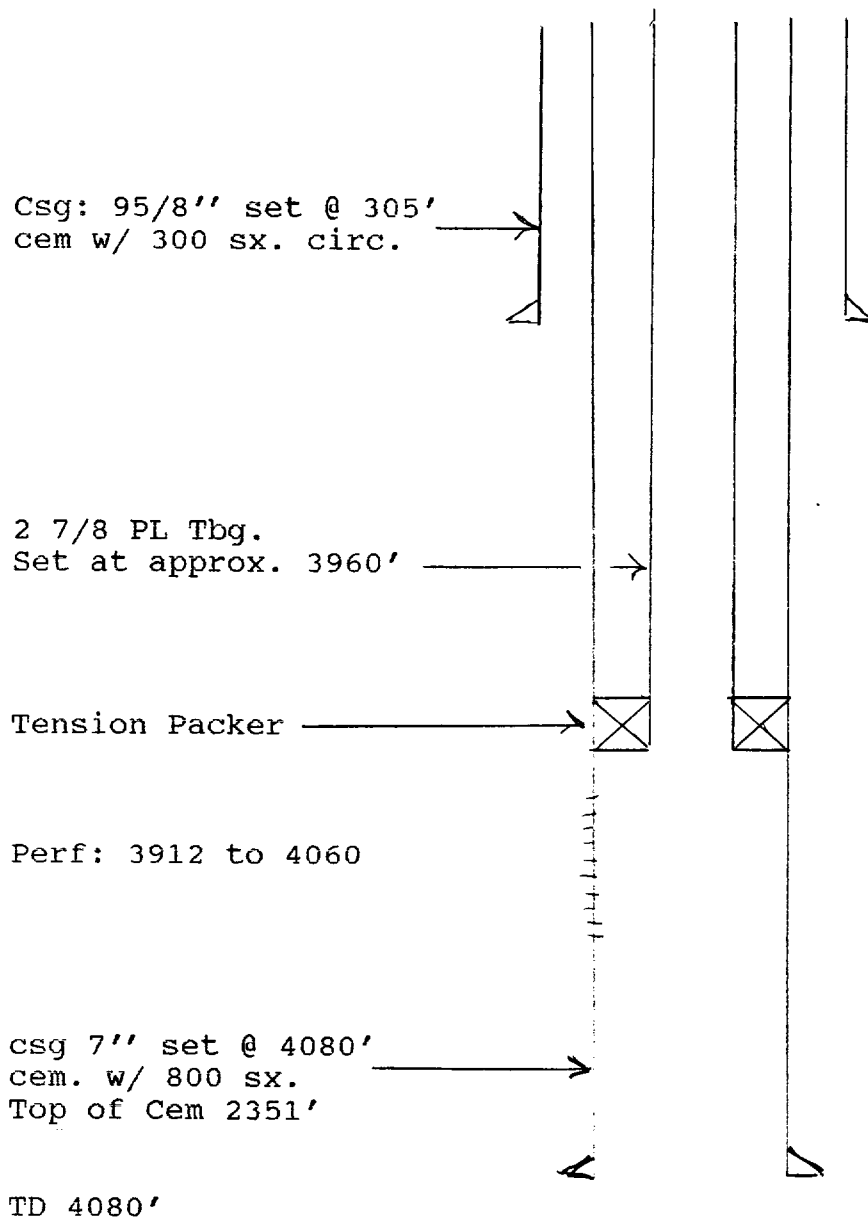


[illegible]



Well Schematic  
Penroc Oil Corp.  
Proposed Eumont  
Federal "D" inj.  
well No. 3

Loc. 1980' FNL, 660' FEL  
Sec. 27-T20S-R36E  
Lea Co. New Mexico



### Well Data

Company:	Penroc Oil Corp.
Lease Name:	Eumont Fed. "D" waterflood
Well No.:	3
Loc:	1980' FNL 660" FEL, Sec. 27 -T20S-R36E, Lea Co. NM
Surface Csg.:	9 5/8" set @ 305' cem. w/ 300 sx. cem. (circ.) 133/8" hole
Production Csg.	7" set @ 4075' cem. w/ 800 sx. cem. Top Cem 2351TS
Perf.:	3912-4060
Stimulation:	2000 gal. acid @ Fraced w/ 27000 gal @ 27000 # sd
Date Drilled:	1954
Well Usage:	oil well
Inj. Form.:	Queen
Inj Interval:	3912 to 4060

### Operational Data

Est Avg Injection rate:	100 BPD
Maximum Injection rate:	200 BPD
Max Inj pressure:	782 psi

Penroc Oil Corp.

Well Bore Data on Penroc's  
Oil Corp. State WED well No.2  
(only well within 1\2 mile of  
proposed inj well Eumont Federal  
"D" No. 3. not previously  
Submitted

Operator: Penroc  
well name: State WED 2  
Location: Unit J  
Sec. 27-T20S-R36E  
Date Drilled: 1980  
TD: 4303  
Status: Oil well SI  
Casing: 133\8 @ 61'  
Cemt. circ.  
85\8 @ 350'  
Cemt. circ.  
51\2 @ 4298'  
cemt. w\ 900sx.  
77\8'' hole 75%  
fillup  
Est. Top Cem surface  
Perforations: 3550-70  
Formation: Queen  
Treatment: 3000 gal acid



WARRIOR INC.

FEDERAL "D" NO. 2

Well Name: State WE "D" #1

Original Operator: Amerada Petroleum Corp.

Current Operator: Warrior Inc.

Date Drilled: Jan., 1954

Location: 1980' from South Line and 660' from East Line, Section 27,  
T205, R36E, Lea County, New Mexico

Depth: 7201'

Completion Record:	<u>Size</u>	<u>Wt.</u>	<u>Depth.</u>	<u>Cement</u>	<u>Comments</u>
Casing:	13 3/8"		291'	300 sx	(Cement Circulated)
	8 5/8"		2990'	1500 sx	(Cement Circulated)
	5 1/2"		7189'	1150 sx	(Top Cement @ 2000 ft.)

Perforations: 3930 - 4005  
4025 - 4085  
4125 - 4170Stimulation: 1,000 gal. Acid  
Frac w/10,000 # sand, set CIBP @ 4110'  
4/60 set CIBP @ 3605'  
Perf. 3460 - 92  
3530 - 3542  
Stim. 1,000 gal. Acid  
Frac 25,000 gal. + 64,000 # sand  
"Not Successful"

[Temp. Abdon. 10/27/60]

Feb, 1973 - Ran Rods, Tubing and Pump and put on production.

Well is currently TA'd

WARRIOR INC.

FEDERAL "D" NO. 2

Well Name: Federal "D" #1

Type: Producing

Original Operator: Amerada Petroleum Corp.

Current Operator: Warrior Inc.

Date Drilled: July, 1954

Location: 660' from West Line and 1980' from South Line, Section 26,  
T205, R36E, Lea County, New MexicoDepth: 4145'  
PBSD

Completion Record:	<u>Size</u>	<u>Wt.</u>	<u>Depth.</u>	<u>Cement</u>	<u>Comments</u>
Casing:	9 5/8"	36#	337'	300 sacks	
	7"	23#	4145'	800 sacks	(Top Cement @ 2433')
Perforations:	4027 -4063				
Stimulation:	500 gal. Acid Frac w/6,000 # sand, swab test 1 BW/hr. + 6 BW/hr. sqz. w/100 sacks				
Perforations:	3826 - 3910 3922 - 3975				
Stimulation:	1,000 gal. Acid Frac w/6,000 gal. oil and 6,000 # sand				
Perforations:	3605 - 3625 3673 - 3714				
Stimulation:	1,000 gal. Acid Frac w/6,000 gal. + 6,000 # sand, swab 1 BW/hr. + 6 BW/hr. sqz. w/75 sx.				
Perforations:	3324 - 70 3380 - 3428				
Stimulation:	1,000 gal. Acid Frac w/6,000 gal. oil + 6,000 # sand, swab test 1 BW/hr. sqz. w/755 sx.				
	Drill out plugs to open 3826 - 3910, 3922 - 3975 PBSD 3974				

WARRIOR INC.

FEDERAL "D" NO. 2

Well Name: Federal "D" #2

Type: Producing Oil Well  
Original Operator: Amerada Petroleum Corp.  
Date Drilled: August, 1954

Location: 1980' from N. Line and 660' from West Line, Section 26,  
T205, R36E, Lea County, New Mexico  
Depth: 3990'

Completion Record:	<u>Size</u>	<u>Wt.</u>	<u>Depth.</u>	<u>Cement</u>	<u>Comments</u>
Casing:	9 5/8"	36#	317'	300 Sacks	(Cemented Circulated)
	7"	23#	3990'	800 Sacks	(Cement Top @ 1457')
Perforations:	3804 - 3898 3910 - 3964				
Stimulation:	1,000 gal. Acid Frac w/20,000 gal. oil and 22,500 # sand				

## WARRIOR INC.

FEDERAL "D" NO. 2

Well Name: Federal "D" #4

Type: Currently producing

Original Operator: Amerada Petroleum Corp.

Current Operator: Warrior Inc.

Date Drilled: Oct., 1954

Location: 660' from West Line and 660' from North Line, Section 26,  
T205, R36E, Lea County, New MexicoDepth: 3980'  
PBSD 3973'

Completion Record:	<u>Size</u>	<u>Wt.</u>	<u>Depth</u>	<u>Cement</u>	<u>Comments</u>
Casing:	9 5/8"	36#	328'	300 sx	
	7"	23#	3980'	800 sx	(Top Cement @ 2334')
Perforations:	3989 - 3947				
Stimulation:	500 gal. Acid				
	Frac w/20,000 gal. + 22,500 # sand				
	Flowing well - Currently pumping				

## WARRIOR INC.

Well Name: Federal D #12

Type: Producing

Original &  
Current Oper. Warrior Inc.

Dated Drilled: December, 1977

Location: 990' from the North Line & 330' from the East line  
Section 27, T-20-S, R-36-E, Lea County, New Mexico

Depth: 4122'

Completion  
Record: 8 5/8" csg. 28#, H-40 set at 334' with 250 sxs. Circ. 50 sxs.  
4 1/2" csg. 10.5#, J-55 set at 4122' with 1150 sxs. circ.  
125 sxs.

Perforations: 3180-3641' , 3950-4067'

Stimulation: Acidized w/6000 gal. of FE acid and 160,000 SCF of Nitrogen



WARRIOR INC.

FEDERAL "D" NO. 2

PART VI FORM C-108

- 1) YARBROUGH OIL  
Elliott State No. 1 Unit Letter P  
330' FEL, 990' FSL  
Section 27, T205, R36E  
Lea County, New Mexico
  
- 2) 8 5/8" 24# @ 319' TOC Surface  
5 1/2" 155# @ 4080' w/800 sxs.  
Perf.: 3964' - 84'; 3998' - 4005'  
C-103 filed in '81 to set plug @ 3900'  
Perf. 3624' - 3684'. No follow-up in OCD Hobbs office

3/29/99



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

3/15/99

GOVERNOR

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD \_\_\_\_\_  
WFX X \_\_\_\_\_  
PMX \_\_\_\_\_

TOTAL 9  
P+H 0  
REPAIR 0

Gentlemen:

I have examined the application for the:

Penroc Oil Corp Federal D #3-H 27-20s-36e  
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

Next highest & lowest oil or gas producing zone?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,

*Chris Williams*

Chris Williams  
Supervisor, District 1

/ed