2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

Apache CORPORATION

[713] 296-6000

July 14, 1998

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

WFX-740

Re: Expansion of Waterflood Project
Northeast Drinkard Unit
North Eunice Blinebry-Tubb-Drinkard Oil & Gas Pool
Well Nos. 117, 222, 313, 319, 320, & 507

B-2-21S-37E

Gentlemen:

Apache Corporation hereby requests administrative approval for expansion of the subject waterflood project. Division Order No. R-8541, granted 11-9-87, and prior expansion by application dated June 26, 1995 (both in the name of Shell Western E&P Inc.), authorized the existing Northeast Drinkard Unit Waterflood Project within the subject pool.

The following information is submitted in support of this request:

1) Form C-108, with miscellaneous data attached;
2) A map reflecting the location of each of the proposed injection wells. Each map identifies wells and leases located within a two mile radius of each of the proposed injectors and reflects a one-half mile radius around the proposed injectors, this latter area being described as the well's Area of Review;
3) An Injection Well Data Sheet for each of the proposed injectors;
4) Tabulation of Data on wells located within the Area of Review;
5) List of Offset Operators and Surface Owners. These entities have been notified by certified mail; and
6) An Affidavit of Publication and "legal notice" newspaper clipping.

Should you need additional information or have any questions regarding this application, please feel free to contact the undersigned at 713-296-7152.

Sincerely,

Apache Corporation

Deborah K. Hoyt

Deborah K. Hoyt
Engineering Technician

dkh

cc: Mr. Chris Williams
Oil Conservation Division
State of New Mexico
P.O. Box 1980
Hobbs, NM 88241

State of New Mexico
Office of Land Commissioner
P.O. Box 1148
Santa Fe, NM 87504

Offset Operators (see attached list)

Surface Owners (see attached list)

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Div.
2040 Pacheco St.
Santa Fe, NM 87505

Form C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ☑ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ Yes ☐ No

II. OPERATOR: Apache Corporation
ADDRESS: 2000 Post Oak Blvd. Ste. 100, Houston, TX 77056
CONTACT PARTY: Deborah K. Hoyt PHONE: 713-296-7152

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed 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 R-8541

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/1 or less) overlying the proposed injection zone as well as any such sources know 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: Deborah K. Hoyt TITLE: Engineering Technician

SIGNATURE: Deborah K. Hoyt DATE: 7/10/98

* 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 circumstance of the earlier submittal.
Hearing Sept. 24, 1987, Case No. 9232, Order No. 8541 & supplemental application dated 6/26/95.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

ATTACHMENT FOR FORM C-108
NORTHEAST DRINKARD UNIT
MISCELLANEOUS DATA

III. WELL DATA

B.(5) next higher oil zone – Paddock @ +/- 5200'
next lower oil zone – Abo @ +/- 6750'

VII. PROPOSED OPERATION

1. Average Injection Rate 1350 BWPD
Maximum Injection Rate 2000 BWPD

2. Closed Injection System

3. Average Injection Pressure 1000 psi
Maximum Injection Pressure 1200 psi (approx.)
(will not exceed 0.2 psi/ft. to top perforation)

4. Source Water – San Andres – analysis attached

IX. STIMULATION PROGRAM

Acid treatment schedule will be determined following evaluation of GR/CNL/CCL (to be run prior to perforating the unitized interval)