

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF ST. MARY LAND &  
EXPLORATION COMPANY FOR APPROVAL  
OF A WATERFLOOD PROJECT AND TO  
QUALIFY THE PROJECT FOR THE  
RECOVERED OIL TAX RATE, EDDY  
AND LEA COUNTIES, NEW MEXICO.

Case No. 12208

APPLICATION

St. Mary Land & Exploration Company ("St. Mary") applies for an order approving a waterflood project, and qualifying the project for the recovered oil tax rate. In support thereof, St. Mary states:

1. St. Mary is the operator of the proposed East Shugart (Delaware) Unit Area, covering the following described federal lands located in Eddy and Lea Counties, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, N.M.P.M.

Section 13: S $\frac{1}{2}$ SE $\frac{1}{4}$

Section 24: NE $\frac{1}{4}$  and N $\frac{1}{2}$ SE $\frac{1}{4}$

TOWNSHIP 18 SOUTH, RANGE 32 EAST, N.M.P.M.

Section 18: Lot 4

Section 19: Lots 1, 2, 3, E $\frac{1}{2}$ NW $\frac{1}{4}$ , and NE $\frac{1}{4}$ SW $\frac{1}{4}$

Containing 604.12 acres of land, more or less, as described in a related application filed herewith.

2. St. Mary proposes to institute a waterflood project in the unit area. St. Mary's address is Suite 1100, 1776 Lincoln Street, Denver, Colorado 80203 (Attention: Robert L. Bachman).

3. St. Mary proposes to inject water into the Brushy Canyon member of the Delaware Mountain Group (East Shugart-Delaware Pool) through the nine wells located in the unit area. A plat outlining

OIL CONSERVATION DIV.  
MAY 28 11:28 AM '68

the project area, and marking the locations of the initial injection and producing wells, is attached hereto as Exhibit A.

4. St. Mary requests that the East Shugart (Delaware) Unit Area Waterflood Project be qualified for the recovered oil tax rate, pursuant to the Enhanced Oil Recovery Act (L. 1992, Ch. 38) and Division Order No. R-9708. Project data includes:

- (a) Number of initial producing wells: 15.
- (b) Number of initial injection wells: 9.
- (c) Capital cost of additional facilities: \$420,000.
- (d) Estimated total project cost: \$5,648,000
- (e) Estimated total value of incremental production recovered from the project: \$58,978,000.
- (f) Anticipated injection commencement date: September 1, 1999.
- (g) Type of fluid injected: Water.
- (h) Anticipated injection volumes: 2,700 BWPD maximum.

5. A Form C-108 for the project is attached hereto as Exhibit B.

6. The granting of this application is in the interests of conservation and the prevention of waste.

**WHEREFORE**, St. Mary requests that the Division approve the injection application and the East Shugart (Delaware) Unit Area Waterflood Project, qualify the project as an enhanced oil recovery project, and certify the project for the recovered oil tax rate.

Respectfully submitted,



James Bruce  
Post Office Box 1056  
Santa Fe, New Mexico 87504  
(505) 982-2043

Attorney for St. Mary Land &  
Exploration Company

VERIFICATION

STATE OF TEXAS       )  
                              )  
COUNTY OF MIDLAND    )

Robert Lee, being duly sworn upon his oath, deposes and states: He is a consulting petroleum engineer employed by St. Mary Land & Exploration Company; he is familiar with the matters set forth in the foregoing application; and the statements therein are true and correct to the best of his knowledge.

Robert Lee

Robert Lee

SUBSCRIBED AND SWORN TO before me this 24<sup>th</sup> day of May, 1999  
by Robert Lee.

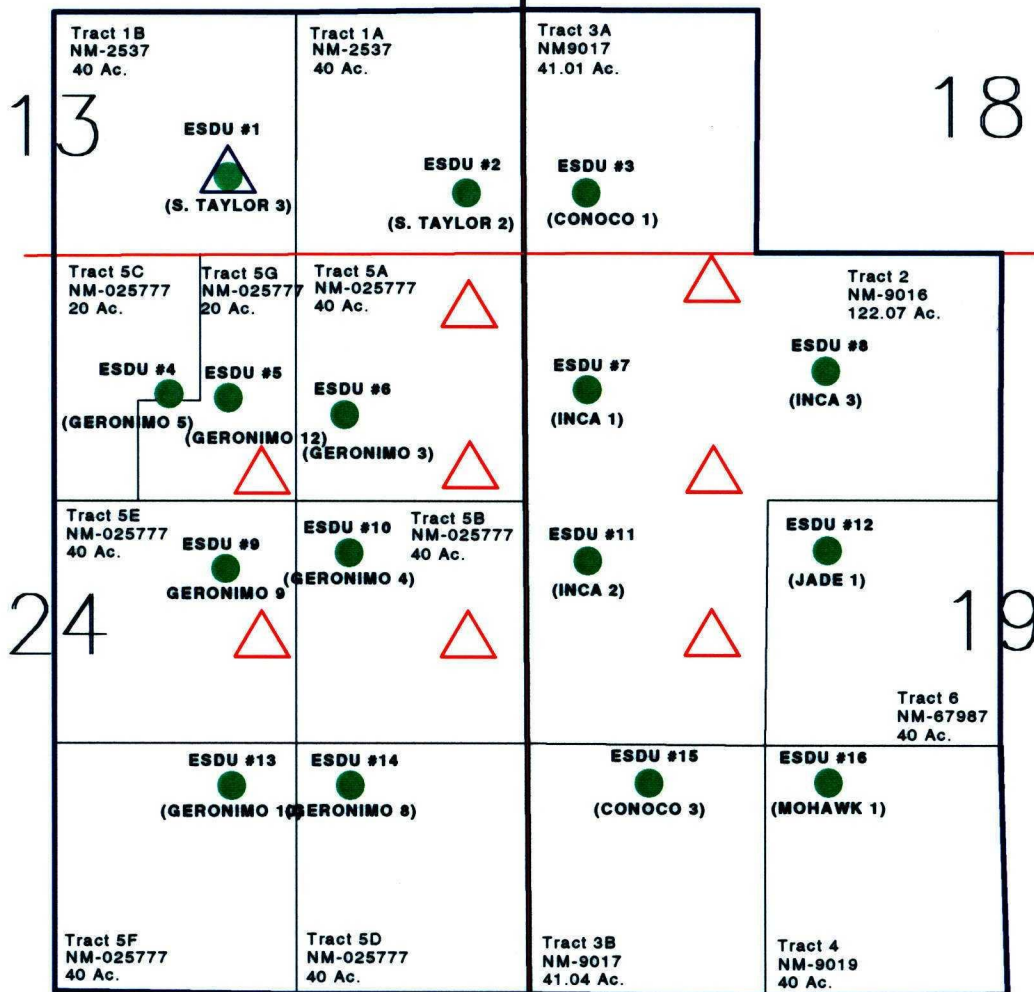


Leah Gibson  
Notary Public

My Commission Expires:  
\_\_\_\_\_

**R 31 E**

**R 32 E**



**LEGEND**

Proposed Well #  
(Former Well Name)



Delaware Producer



Proposed Conversion



Proposed D&C Injection Well

St. Mary Land & Exploration Co.

**EAST SHUGART DELAWARE UNIT  
PROPOSED WATERFLOOD  
Drill 8 Injectors Convert 1 Producer**

Scale 1:12745.56

**EXHIBIT**

**A**

EAST SHUGART DELAWARE

WATERFLOOD UNIT

OCD FORM C-108

OPERATOR

ST. MARY LAND AND EXPLORATION

January 1999

Prepared by  
LEE ENGINEERING  
Midland, Texas



**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ Yes ☒ No
- II. OPERATOR: St. Mary Land & Exploration Company  
ADDRESS: 1776 Lincoln St., Ste. 1100, Denver Co. 80203  
CONTACT PARTY: Mr. Bob Bachman PHONE: (303)-863-4327  
Mr. Robert Lee (915)-682-1251
- 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 \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well within 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 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 source drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certifications: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Robert Lee TITLE: Consulting Engineer  
SIGNATURE: Robert Lee DATE: January 25, 1999

### 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 objection or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 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.