FAX 505-326-5900

PH. 505-327-9801

MERRION OIL & GAS CORPORATION

610 REILLY AVE. • P. O. BOX 840

FARMINGTON, NEW MEXICO 87499

March 1, 1990

Mr. Mike Stogner
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: C-108 Injection Permit Application
Papers Wash Field
Navajo Allotted 15-3
Section 15, T19N, R5W
McKinley County, New Mexico

Dear Mr. Stogner:

As you know, we are planning on converting the Navajo Allotted 15-3 to injection to initiate a secondary recovery waterflood in the Entrada formation. A Cooperative Agreement has already been formed for a secondary recovery project. Attached is a Form C-108 for the proposed conversion.

We are on the State Docket to propose the waterflood on March 7, 1990. By that date, we should have submitted the EPA application for the conversion to injection.

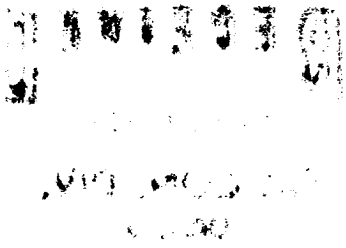
If additional information is required, please contact Mr. George Sharpe at (505) 327-9801.

Sincerely,

Steven S. Dunn
Operations Manager

GFS/eg

CC: Well File
Ken Townsend-BLM,Farmington,NM
Ron Van Wyk-EPA,Dallas, Texas
Frank Chavez-NMOCD,Aztec,NM
Ervin Peshlakai-BIA,Window Rock,Az
Frank Welker-Chase Oil,Albuquerque,NM
Pat Hegarty



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [ ] yes [ ] no

II. Operator: Merrion Oil & Gas Corporation

Address: P. O. Box 840, Farmington, New Mexico 87499

Contact party: George F. Sharpe Phone: (505) 327-9801

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 [X] 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: George F. Sharpe Title Reservoir Engineer

Signature: GF Sharpe Date: Feb. 28, 1990

* 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

FORM C-108
OIL CONSERVATION DIVISION

Application For Authorization to Inject

2/28/90

I. Secondary Recovery Project

II. Merrion Oil & Gas Corporation
P. O. Box 840, Farmington, New Mexico 87499
Contact: George Sharpe (505) 327-9801

III. Well Data Sheet Attached for Navajo 15-3

IV. New Secondary Project

V. Map Attached

VI. Well Data Summary Sheet Attached
BLM Well Completion Reports Attached
Wellbore Schematics Attached

VII. Operating Data:

1) Average injection rate = 3000 BPD
Maximum injection rate = 6000 BPD

2) Closed system = (ie. reinjection of produced water). However, tanks vented to atmosphere.

3) Average injection pressure = 500 psi
Maximum injection pressure = 1000 psi

4) Reinjection of Entrada produced water - TDS = 17800 ppm (95% of total) analysis attached
Injection of Mesaverde water - TDS = 7200 ppm (5% of total) analysis attached

VIII. Geologic Information

Top Entrada: 5143'
Thickness: ±200'
Lithology: ss, grey-white, medium-coarse grained, subround-rounded, friable, porous

Overlying Aquifer: Morrison Formation ± 4700' top. (Although this is not used for drinking water in the area, the TDS is less than 10,000 ppm).

Underlying Aquifer: None

IX. No stimulation planned

X. Existing Well - Logs previously submitted and on file at district office.

XI. No fresh water wells in area.

XII. Extensive seismic data acquired in this field would suggest no fault communication between any stratigraphic horizon.

XIII. Proof of Notice Attached

XIV. Certification - Signed on Original