MERRION OIL & GAS CORPORATION

610 REILLY AVE. • P. O. Box 840
FARMINGTON, NEW MEXICO 87499

February 13, 1990

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

Attn: Mr. David Catanach

RE: Produced Water Disposal

Little Blue Federal #1
Federal 15-24 H #2
Papers Wash Field

McKinley County, New Mexico

Dear Mr. Catanach:

We have recently drilled two new wells in the Papers Wash Field and are planning to inject their produced water into the Navajo 15-6 disposal well (Section 15, T19N, R5W). Disposal into the Gallup in that well has been approved per State Order #SWD-183.

The Little Blue Federal #1 (Section 15, T19N, R5W) is producing \pm 150 BWPD from the Mesaverde formation (analysis attached). We plan to commingle the Mesaverde water with the water currently being produced from the Entrada Formation (analysis also attached). According to these analyses, the Mesaverde water is actually fresher than the Entrada water, and there should be no compatibility problems commingling the two.

The Federal 15-2H is a horizontal well that was recently drilled into the Entrada Formation. We are currently completing that well, and anticipate an initial water production rate of \pm 500 BPD.

Please contact George Sharpe at (505) 327-9801 if you have problems with our proposal or if you need additional information.

Singerely,

Steven S. Dunn

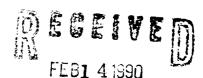
Operations Manager

GFS/eq

CC: VFrank Chavez-NMOCD-Aztec, NM Ron VanWick-EPA-Dallas, Texas

Navajo 15-6 Well File Federal 15-2H-Well File

Little Blue Federal #1-Well File



OIL CON. DIV

Unichem International

707 North Leech P.O.Box 1499

Hobbs, New Mexico 88240

Company : MERRION OIL & GAS

Date : 01-09-1990

Location: Media - Entrada #6 (on 9-13-89)

| | <u>Sample 1</u> |
|-------------------------|-----------------|
| Specific Gravity: | 1.013 |
| Total Dissolved Solids: | 17838 |
| pH: | 7.50 |
| IONIC STRENGTH: | 0.351 |

| CATIONS: Calcium Magnesium Sodium Iron (total) Barium | (Ca ^{+ 2}) (Mg ^{+ 2}) (Na ^{+ 1}) (Fe ^{+ 2}) (Ba ^{+ 2}) | me/liter 14.4 8.80 256 0.014 0.003 | mg/liter 288 107 5890 0.400 0.200 |
|--|--|---|--|
| ANIONS: Bicarbonate Carbonate Hydroxide Sulfate Chloride | (HCO ₃ - 1) | 7.20 | 439 |
| | (CO ₃ - 2) | 0 | 0 |
| | (OH- 1) | 0 | 0 |
| | (SO ₄ - 2) | 116 | 5550 |
| | (Cl- 1) | 157 | 5560 |

| | SCALING | INDEX | (positive | value | indicates | <u>scale)</u> |
|-------|---------|-------|-----------|---------|-----------|---------------|
| | | | | Calcium | | Calcium |
| Tempe | erature | | | Car | bonate | Sulfate |
| 86°F | 30°C | | | | 0.21 | -9.4 |
| 120'F | 49.0 | | | | 1 1 | -9 A |