NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

AMENDED ADMINISTRATIVE ORDER SWD-782-A

APPLICATION OF MARALEX DISPOSAL, LLC FOR SALT WATER DISPOSAL, SAN JUAN COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), Maralex Disposal, LLC Production Company made application to the New Mexico Oil Conservation Division on April 18, 2002, for permission to add additional water disposal perforations to its Trading Post Disposal Well No. 1 (API No. 30-045-21470) located 950 feet from the North line and 1600 feet from the West line (Unit C) of Section 26, Township 25 North, Range 11 West, NMPM, San Juan County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and

(4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

Maralex Disposal, LLC Production Company is hereby authorized to add additional

perforations to its Trading Post Disposal Well No. 1 (API No. 30-045-21470) located 950 feet from the North line and 1600 feet from the West line (Unit C) of Section 26, Township 25 North, Range 11 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the injection of produced water for disposal purposes into the Dakota and Mesaverde formations from a depth of 2100 feet to 6032 feet through 2 7/8 inch plastic-lined tubing set in a packer located at approximately 2050 feet.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

The operator shall perform all steps as proposed in section VII of the NMOCD application form C-108. This section is attached to this order for your referral and convenience. In addition, the operator shall supply the Aztec District office with treating records of all breakdowns or fracturing operations and any electric log including any CBL/CET logs.

Prior to commencing injection operations into the well and at least once per year thereafter, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 420 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection formations. Such proper showing shall at least consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Aztec District Office of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Aztec District Office of the

Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 6th day of May 2002.

Lori Wrotenbery (WVJ)

LORI WROTENBERY, Director

LW/WVJ

cc: Oil Conservation Division – Aztec
Bureau of Land Management - Farmington

1. Perforate the upper Dakota (5879'-5883' & 5900'-5908') and pump an acid breakdown treatment.

2. Isolate the upper and lower Dakota perforations. Perforate the production casing and pump a cement squeeze to allow good cement across the Mesa Verde interval. Run a CBL and resqueeze if necessary. Perforate the Mesa Verde interval from 2100'-3605' (gross interval – the perforations will be picked after the cement bond log has been analyzed). The Mesa Verde perforations will be broken down with acid and fracture stimulated. This zone will be tested to ensure that it is not hydrocarbon productive. In this area the Mesa Verde was used as a water supply source for the East Carson Gallup waterflood.

3. Commingle the Mesa Verde with the Dakota perforations. A packer will be set above the Mesa Verde with 2 7/8" plastic coated tubing used as the injection string. The tubing-casing annulus will be filled with inhibited packer fluid. A casing integrity test as well as a step rate test will be conducted with a NMOCD witness before commencing the commingled Mesa Verde and Dakota injection.

4. The disposal system will operate totally contained. Water from some of the producing wells will be pumped through a pipeline to the proposed disposal site, where it will be filtered before it is disposed of in the injection well. Produced water from some of the further extensions wells will be trucked to the disposal site. There will not be any open-top water pits or tanks.

5. As previously referenced a step rate injectivity test will be conducted on the new disposal well to determine the maximum injection pressure that water can be injected below the fracture gradient of the Mesa Verde and Dakota Sands. Typical wells in this area have seen a fracture gradient of approximately 0.64 psi/ft. We expect to inject approximately 1000 BWPD which will decline as the coal wells are dewatered.

6. Water analysis are included with this application showing the Fruitland coal seam water quality from our surrounding Trading Post wells. There are no known compatibility issues associated with the mixing of coal seam water with the Lower Dakota formation.