

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 13220
ORDER NO. R-12112**

**APPLICATION OF MACK ENERGY CORPORATION FOR APPROVAL OF A
SALT WATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION;

This case came on for hearing at 8:15 a.m. on February 19, 2004, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 2nd day of March, 2004, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) The applicant, Mack Energy Corporation ("Mack"), seeks authority to utilize its Federal "18" Well No. 2 (**API No.** 30-025-01669), located 1980 feet from the North line and 2039 feet from the West line (Unit F) of Section 18, Township 19 South, Range 33 East, NMPM, Lea County, New Mexico, to dispose of produced water into the Yates formation from a depth of 3,213 feet to 3,256 feet.
- (3) Mack originally filed the subject application for administrative approval on September 2, 2003. Due to concerns regarding certain "area of review" wells, the application was set for hearing.
- (4) Evidence presented by Mack, and Division records, demonstrate that:
 - (a) the Federal "18" Well No. 2 was drilled in 1960 by William A. and Edward R. Hudson to a total depth of approximately 3,280 feet;

- (b) the well produced from 1960 to the present from the West Tonto Yates-Seven Rivers Pool. The well is now depleted in the Yates producing interval;
- (c) the well is currently equipped with 9 5/8-inch casing set at a depth of 267 feet and cemented to surface, and 5 1/2-inch casing set at a depth of 3,280 feet with a cement top at approximately 1,838 feet; and
- (d) Mack proposes to:
 - i) set 2 7/8-inch internally plastic-lined tubing in a packer located at a depth of 3,113 feet; and
 - ii) inject produced water originating from the **Glorieta, San Andres** and Paddock pools in the area into the Yates formation through the perforated interval from 3,213 feet to 3,256 feet.

(5) The geologic evidence presented shows that the Federal "18" Well No. 2 does not penetrate the Seven Rivers formation or the **Capitan** Reef; however, these formations are present at depths of 3,450 feet and 3,510 feet, respectively, in an offset well, the Mustang Federal Well No. 1 (API No. 30-025-33289), located 467 feet from the South line and 1980 feet from the West line (Unit **N**) of Section 18, Township 19 South, Range 33 East, NMPM.

(6) The evidence presented demonstrates that there are two wells within the "area of review" that are plugged and abandoned inadequately to protect the Capitan Reef from the proposed injection operations. These wells are the aforesaid Mustang Federal Well No. 1 and the Federal "AC" Well No. 2 (API No. 30-025-01675) located 1980 feet from the North line and 690 feet from the West line (Unit **E**) of Section 18, Township 19 South, Range 33 East, NMPM.

(7) Prior to commencing injection operations into the Federal "18" Well No. 2, Mack should be required to re-enter and re-plug the Mustang Federal Well No. 1 and the Federal "AC" Well No. 2 in a manner approved by the supervisor of the Division's Hobbs District Office.

(8) The evidence presented demonstrates that the Federal "18" Well No. 2 is cased and cemented adequately to preclude the movement of fluid from the injection zone into other formations, including any fresh water aquifers.

(9) Approval of the application will prevent the drilling of unnecessary wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT;

(1) The applicant, Mack Energy Corporation, is hereby authorized to utilize its Federal "18" Well No. 2 (API No. 30-025-01669), located 1980 feet from the North line and 2039 feet from the West line (Unit F) of Section 18, Township 19 South, Range 33 East, NMPM, Lea County, New Mexico, to dispose of produced water into the Yates formation from a depth of 3,213 feet to 3,256 feet.

(2) Prior to commencing injection operations into the Federal "18" Well No. 2, the applicant shall re-enter and re-plug the Mustang Federal Well No. 1 (API No. 30-025-33289), located 467 feet from the South line and 1980 feet from the West line (Unit N) of Section 18, and the Federal "AC" Well No. 2 (API No. 30-025-01675), located 1980 feet from the North line and 690 feet from the West line (Unit E) of Section 18, both in Township 19 South, Range 33 East, NMPM, in a manner that will ensure that these wellbores will not provide an avenue for the escape of injected fluids into the Capitan Reef or other formations, as approved by the supervisor of the Division's Hobbs District Office.

(3) The operator shall take all steps necessary to ensure that the injected fluids enter only the proposed injection interval and are not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(4) Injection shall be accomplished through 2-7/8 inch internally plastic-lined tubing installed in a packer set at approximately 3,113 feet. The casing-tubing **annulus** shall be filled with an inert fluid and a gauge or approved leak-detection device shall be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) The injection well or **pressurization** system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 643 psi.

(6) The Division Director may administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(7) Prior to commencing injection operations and every five years thereafter, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth to assure the integrity of such casing.

(8) The operator shall give advance notice to the Supervisor of the Division's Hobbs District Office of the date and time (i) disposal equipment will be installed on the Federal "18" Well No. 2; (ii) the mechanical integrity pressure test will be conducted on the Federal "18" Well No. 2; and (iii) re-entry and re-plugging operations will be performed on the Mustang Federal Well No. 1 and the Federal "AC" Well No. 2, so these operations may be witnessed.

(9) Subsequent to conducting re-entry and re-plugging operations on the Mustang Federal Well No. 1 and the Federal "AC" Well No. 2, the operator shall submit to the Santa Fe Office of the Division a report that details the work conducted on these wells. This report shall be sent to the Engineering Bureau, attention UIC Director.

(10) The operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the disposal well or the leakage of water, oil or gas from or around any producing or plugged and abandoned well within the area, and shall take all steps as may be timely and necessary to correct such failure or leakage.

(11) The operator shall submit monthly reports of the disposal operations on Form C-120-A in accordance with Division Rules No. 706 and 1120.

(12) The injection authority granted herein for the Federal "18" Well No. 2 shall terminate one year after the date of this order if the operator has not commenced injection operations into the well; provided, however, the Division, upon written request by the operator, may grant an extension for good cause.

(13) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Lori Wrotenbery
LORI WROTENBERY
Director