

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. 10497  
ORDER NO. R-9737*

**APPLICATION OF MEWBOURNE OIL COMPANY FOR TWO  
SECONDARY RECOVERY PROJECTS, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 9, 1992 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 1st day of October, 1992, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Mewbourne Oil Company, seeks authorization to institute two secondary recovery pilot projects in the Querecho Plains-Upper Bone Spring Pool within Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, on its Government "K" and Federal "E" Leases by the injection of water into the following three existing wells:

Well Name and Number	Footage Location	Unit	Section	Injection Perforations
Government "K" No. 2	1950' FSL - 1980' FWL	K	23	8343' - 8515'
Federal "E" No. 10	2310' FN & EL	G	27	8501' - 8530'
Federal "E" No. 11	660' FNL - 530' FEL	A	27	8360' - 8486'

(3) At the time of the hearing, Mewbourne requested that this application be limited to only the "K" No. 2 and the "E" No. 11 wells and that the portion of this application requesting injection into the Federal "E" Well No. 10 be dismissed.

(4) Mewbourne's objective with this application at this time is to test the injectivity of the Upper Bone Spring interval for a sufficient period of time to establish stabilized injection rates. This data will then be reviewed to determine the feasibility of commencing a waterflood project in this area to be unitized at a later time. Said injectivity testing was from a consensus born out of several operator meetings of owners of interests in the area that would be unitized.

(5) It is not Mewbourne's intention to proceed with its proposed test for any length of time that could indicate a response in any surrounding wells.

(6) The applicant has suggested a period of three months, more or less, to be adequate for such testing phase.

(7) The proposed injection test would secure information that, in the long run, could be utilized in establishing a waterflood project and unit agreement in the Upper Bone Spring formation underlying the immediate area.

(8) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(9) The applicant's testimony indicates that its Federal "E" Well No. 1, located 660 feet from the North line and 1980 feet from the East line (Unit B) of said Section 27, a North Lusk Morrow gas well completed at a depth in excess of 12,500 feet, is within one-half mile of the proposed "E" No. 11 injection well and does not appear to have adequate cement across its production casing string at the Bone Spring interval. However, a maximum injection rate per well of 800 barrels of water per day, as proposed by the applicant, should not cause any migration of the injected fluids to reach the suspected unprotected wellbore.

(10) Injection should be accomplished through 2 7/8-inch tubing installed in a packer set approximately 100 feet above the uppermost perforated interval; the casing-tubing annulus for both wells should be filled with an inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leaks in the casing, tubing or packer.

(11) Prior to commencing injection operations, the casing in each of the subject wells should be pressure-tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(12) The injection wells or injection pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 1650 psi.

(13) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such high pressure will not result in migration of the injected waters from the Querecho Plains-Upper Bone Spring Pool.

(14) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(15) The subject application should be approved pursuant to the applicable provisions of Rules 702 through 708 of the Division Rules and Regulations.

(16) The provisions of this order should be on a temporary basis only and water injection into both the subject wells should cease as of December 31, 1992. Provisions for a one-time extension to continue the injectivity test should be included in this order, however any such extension should be limited to a period not to exceed forty-five days.

(17) At the conclusion of the injectivity test and should the applicant wish to continue water injection on a permanent basis, this case should be incorporated into the record on any other matter requiring an examiner hearing for approval such as statutory unitization, enhanced oil recovery tax credit and a waterflood project within a voluntary unit area. At that time, the applicant must be prepared to address certain issues pertaining to, but not limited to, the following items:

- inadequate cement behind the Federal "E" Well No. 1;
- requirements for plastic-lined tubing in the injection wells;
- project oil allowable; and,
- project designation and area.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Mewbourne Oil Company, is hereby authorized to commence, on a temporary basis, a two well water injectivity test in the Querecho Plains-Upper Bone Spring Pool within Township 18 South, Range 32 East, NMPM, Lea County, New Mexico on its Government "K" and Federal "E" Leases.

(2) Said operator shall be permitted to convert its Government "K" Well No. 2 located 1950 feet from the South line and 1980 feet from the West line (Unit K) of Section 23 and its Federal "E" Well No. 11 located 660 feet from the North line and 530 feet from the East line (Unit A) of Section 27 from producing oil wells to water injection wells in the Upper Bone Spring interval only.

(3) The portion of this application seeking approval to inject water into the Federal "E" Well No. 10, located 2310 feet from the North and East lines (Unit G) of said Section 27, is hereby dismissed.

(4) Injection into the "K" No. 2 well shall be accomplished through 2 7/8-inch unlined tubing installed in a packer set at approximately 100 feet above the uppermost perforated interval, with injection into the perforated interval from approximately 8343 feet to 8515 feet.

(5) Injection into the "E" No. 11 well shall be accomplished through 2 7/8-inch unlined tubing installed in a packer set at approximately 100 feet above the uppermost perforated interval, with injection into the perforated interval from approximately 8360 feet to 8486 feet.

(6) The casing-tubing annulus shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

(7) Prior to commencing injection operations, the casing in the subject well shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(8) The injection well or system shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1650 psi.

(9) 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 Querecho Plains-Upper Bone Spring Pool.

(10) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(11) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

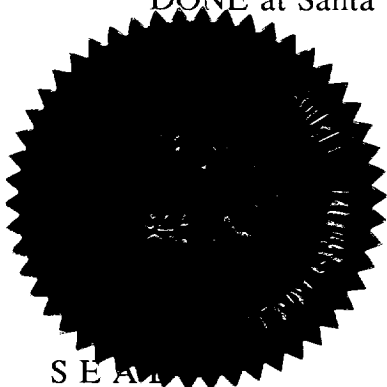
(12) Both wells shall be governed by the applicable provisions of Rules 702 through 708 of the Division Rules and Regulations.

(13) Authorization to inject into both the aforementioned wells shall cease on December 31, 1992; however, a one-time request to continue the injectivity test shall be granted only after a written request to continue such test is submitted to, and approved by, the Division Director and the Supervisor of the Division's Hobbs District Office. Such written request shall explain in detail why such continuation is needed and what effects such continuation will have on the wells and surrounding area.

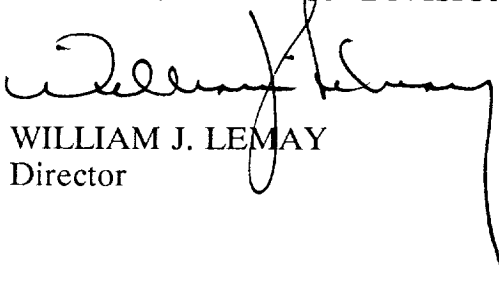
(14) Monthly progress reports shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(15) Jurisdiction of this cause is 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

  
WILLIAM J. LEMAY  
Director