

**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. 11748  
Order No. R-10813**

**APPLICATION OF ENRON OIL & GAS  
COMPANY FOR DOWNHOLE COMMINGLING,  
EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on May 15, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 4th day of June, 1997, 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, Enron Oil & Gas Company, seeks authority to downhole commingle the Atoka and Morrow formations, Sand Tank-Atoka Gas Pool and Sand Tank-Morrow Gas Pool, within its Sand Tank "6" Federal Well No. 1 located 1980 feet from the North line and 1650 feet from the East line (Unit G) of Section 6, Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) According to applicant's evidence and testimony, the subject well was drilled in August, 1996, to a total depth of approximately 11,765 feet. The well was completed in the Sand Tank-Morrow Gas Pool in October, 1996, at an initial producing rate of approximately 5.4 MMCFGD, 72 BOPD and 11 BWPD.

(4) In January, 1997, the applicant filed an intent to complete the Sand Tank "6" Federal Well No. 1 in the Sand Tank-Atoka Gas Pool and dually complete the well as an Atoka/Morrow producer.

(5) The subject well was completed in the Atoka formation in December, 1996. The well is currently capable of producing 700 MCFGD, 5 BOPD and 0 BWPD from the Atoka formation, and 1.8 MMCFGD, 14 BOPD and 171 BWPD from the Morrow formation.

(6) The applicant seeks authority to downhole commingle the subject well primarily due to liquid loading problems associated with the Morrow completion.

(7) Applicant's engineering evidence and testimony indicates that:

- a) the Morrow formation is producing substantial quantities of water which reduces the producing efficiency of the well;
- b) the Atoka zone is nearing depletion with estimated remaining gas reserves of 29 MMCFG;
- c) producing the well in a downhole commingled configuration will improve the producing efficiency of the Morrow formation and should result in the ultimate recovery of an additional 0.5-1.0 BCF gas from this zone which may otherwise not be recovered;
- d) in addition to the proposed downhole commingling, applicant plans to implement gas injection to further aid in lifting liquids from the Morrow formation.

(8) The engineering evidence further indicates that:

- a) the bottomhole pressure of the highest pressured commingled zone does not exceed the original reservoir pressure of any other commingled zone in the wellbore, adjusted to a common datum;
- b) commingling will not result in the permanent loss of reserves due to crossflow in the wellbore;
- c) neither zone appears to be fluid sensitive;

- d) the fluids from each zone are compatible with the fluids from the other, and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs;
- e) the interest ownership between the zones is common.

(9) No offset operator appeared at the hearing in opposition to the application.

(10) Approval of the proposed downhole commingling will allow the applicant the opportunity to recover additional oil and gas reserves from the Morrow and Atoka zones which may otherwise not be recovered, thereby preventing waste, and will not violate correlative rights.

(11) The applicant testified that the allocation formula utilized to allocate production from the Sand Tank "6" Federal Well No. 1 may change periodically due to changes in methods of production. The applicant proposed that the allocation formula be determined after consultation with the supervisor of the Division's Hobbs District Office.

(12) After consultation with the supervisor of the Division's Artesia District Office, the applicant should be required to submit the initially approved allocation formula and any subsequent changes to said allocation formula to the Santa Fe Office of the Division.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Enron Oil & Gas Company, is hereby authorized to downhole commingle the Atoka and Morrow formations, Sand Tank-Atoka Gas Pool and Sand Tank-Morrow Gas Pool, within its Sand Tank "6" Federal Well No. 1 located 1980 feet from the North line and 1650 feet from the East line (Unit G) of Section 6, Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico.

(2) The applicant shall consult with the supervisor of the Divisions's Artesia District Office in order to determine a formula for the allocation of production from the subject well.

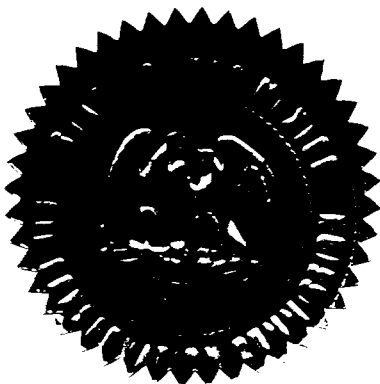
(3) After consultation with the supervisor of the Division's Artesia District Office, the applicant shall submit the initially approved allocation formula and any subsequent changes to said allocation formula to the Santa Fe Office of the Division.

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

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



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A handwritten signature in black ink, appearing to read "William J. Lemay", is written over the typed name and title.

WILLIAM J. LEMAY  
Director