

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:

**NOMENCLATURE**  
*CASE NO. 10903*  
*ORDER NO. R-10067*

**APPLICATION OF MARBOB ENERGY CORPORATION FOR ABOLISHMENT OF  
THE GRAYBURG-PADDOCK POOL AND EXTENSION OF THE VERTICAL LIMITS  
OF THE GRAYBURG-JACKSON POOL, EDDY COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on February 3, 1994, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 22nd day of February, 1994, 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, Marbob Energy Corporation (Marbob), seeks an order abolishing the Grayburg-Paddock Pool located in the SE/4 of Section 18, Township 17 South, Range 30 East, and extending the vertical limits of the Grayburg-Jackson Pool to include the Glorieta Yeso (Paddock) formation under the Unit Area which is located in portions of Township 17 South, Ranges 29 and 30 East, NMPM, Eddy County, New Mexico.

(3) Division Cases Nos. 10903 and 10904 were consolidated at the time of the hearing for the purpose of testimony. The following findings concerning Case No. 10903 are based on exhibits and documents submitted by the applicant and the testimony of the applicant's witnesses.

(4) Marbob is the operator of the Burch-Keely Unit, Grayburg-Jackson Pool, Eddy County, New Mexico which is comprised of 5149.44 acres, more or less, of federal lands which was statutorily unitized pursuant to Oil Conservation Division Order No. R-7900-A dated October 28, 1993. The Unit Area includes only a part of the Grayburg-Jackson Pool. The Unit Area is described in Exhibit "A" attached hereto. A portion of the unit is currently being waterflooded. A planned expansion would extend flood operations to all the unit.

(5) The "Unitized Formation" in the Burch Keely Unit comprises the interval from the top of the Seven Rivers formation to the base of the San Andres formation (which also corresponds with the vertical limits of the Grayburg-Jackson Pool) or to a true vertical depth of 5000 feet, whichever is lesser.

(6) The Grayburg-Paddock Pool was created by Order No. R-1042, dated August 29, 1957. The pool area is entirely within the boundaries of the Burch-Keely Unit. The Paddock formation is also known as the Glorieta Yeso. Only two wells ever produced from the Grayburg-Paddock Pool. Each recovered approximately 5000 barrels of oil and have now been plugged back to the Grayburg-Jackson pool. Four other wells within the Burch-Keely Unit have tested the Paddock formation with indications of production. Maps and cross-sections suggest that the Paddock may be productive all across the Burch-Keely Unit.

(7) Based on estimated recoveries from the Paddock, wells to develop only the Paddock would not be economically feasible. However, the cost of deepening Grayburg-Jackson wells to the Paddock formation could be justified providing the formations could be produced together as a single pool.

(8) If allowed to add the Paddock to the Grayburg-Jackson Pool vertical interval, the operator would keep the wells pumped off to prevent cross flow. The Paddock formation would not be flooded but produced water from the Paddock would be used for the Grayburg-Jackson waterflood. Compatibility tests indicate only minor scaling problems.

(9) The Bureau of Land Management is in agreement with this application and would modify the Unit Agreement to extend the unitized interval to include the Paddock formation.

(10) The top 500 feet of the Paddock formation is the interval which Marbob plans to develop.

(11) Offset operators and other interested persons were notified of this application but none appeared at the hearing to oppose it.

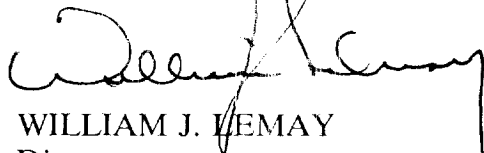
(12) Granting this application will permit Marbob to recover Paddock formation hydrocarbons which might otherwise remain in place.

IT IS THEREFORE ORDERED THAT:

- (1) The Grayburg-Paddock Pool is hereby abolished.
- (2) Within the designated Burch-Keely Unit Area, as described in Exhibit "A" attached hereto, the vertical limits of the Grayburg-Jackson Pool are hereby amended to include that interval from the top of the Seven Rivers formation to 500 feet below the top of the Paddock formation, with the geologic markers for the tops of the Seven Rivers and Paddock formations being found to occur at 1365 feet and 4210 feet, respectively, in the Western Drilling Company, Grayburg Deep Unit Well No. 3 (renamed Marbob, Burch-Keely Unit "A" Well No. 27) located 660 feet from the South line and 660 feet from the East line of Section 18, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico, as recorded on the Schlumberger Electric Log dated April 17 and June 20, 1956.
- (3) The pool name within said Burch-Keely Unit Area is hereby changed from the Grayburg-Jackson Pool to the Grayburg-Jackson-Paddock Pool.
- (4) 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

S E A L

*EXHIBIT "A"*  
*CASE NO. 10903*  
*ORDER NO. R-10067*

Marbob Energy Corporation  
Burch-Keely Unit Area  
Grayburg-Jackson-Paddock Pool

Eddy County, New Mexico

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TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM

Section 12:	SE/4 SE/4
Section 13:	All
Sections 23 through 26:	All

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM

Sections 18 and 19:	All
Section 30:	All