

**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. 10541 (Reopened)  
Order No. R-9773-A**

**IN THE MATTER OF CASE NO. 10541 BEING  
REOPENED PURSUANT TO THE PROVISIONS OF  
DIVISION ORDER NO. R-9773, WHICH ORDER  
PROMULGATED SPECIAL POOL RULES AND  
REGULATIONS FOR THE EAST HERRADURA BEND-  
DELAWARE POOL IN EDDY COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on July 15, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 11th day of August, 1993, 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) By Order No. R-9773 issued in Case No. 10541 on November 19, 1992, the Division promulgated Special Rules and Regulations for the East Herradura Bend-Delaware Pool, located in portions of Townships 22 and 23 South, Range 28 East, NMPM, Eddy County, New Mexico, including the establishment of a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

(3) Pursuant to the provisions of Order No. R-9773, this case has been reopened in order to allow the operators in the subject pool the opportunity to appear and present evidence and testimony to show cause why the special limiting gas-oil ratio should remain in effect.

(4) Appearances in this case were made on behalf of Ray Westall Operating, Inc., Bird Creek Resources, Collins & Ware, Inc., Chevron USA Inc., Fortson Oil Company, Bass Enterprises Production Company, Hanley Petroleum Inc. and Pogo Production Company.

(5) Evidence and testimony in this case were presented by a single witness representing Ray Westall Operating, Inc., Bird Creek Resources and Collins & Ware.

(6) Evidence and testimony presented in this case indicate that the gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil was originally established for the East Herradura Bend-Delaware Pool on the assumption that within the vertical limits of the pool there existed a producing interval which appeared to be productive of natural gas only.

(7) Evidence and testimony presented in the original case further indicated that the fracture treatments typically used in completing Delaware wells in this area have communicated this gas stringer with the other producing zones in this formation resulting in wells producing at high gas-oil ratios.

(8) Applicants testified that the producing gas-oil ratio in the subject pool should decrease as the gas zone is depleted.

(9) The most extreme producing gas-oil ratios are exhibited in wells generally located in the SE/4 of Section 35, however; the average producing gas-oil ratio of all wells in the pool, according to applicants' evidence, is approximately 12,800 cubic feet of gas per barrel of oil.

(9) At the time of the hearing the parties presenting evidence and testimony requested that the current gas-oil ratio limitation for the subject pool remain in effect for an additional one year period in order to allow the gathering of additional data to support its permanent adoption.

(10) A moderate amount of drilling will take place in the subject pool within the next twelve months.

(11) The current gas-oil ratio limitation for the subject pool has been in effect for a period of approximately eight months.

(12) No party represented at the hearing objected to the proposed continuation of the current gas-oil ratio limitation.

(13) The applicants' request for a temporary continuation of the pool's gas-oil ratio limitation is reasonable, however, in order to expeditiously as possible determine the effect of such gas-oil ratio limitation on the reservoir, the proposed continuation should remain in effect for a period of six months.

(14) Approval of the proposed continuation for a temporary period of six months will allow the operators in the subject pool additional opportunity to gather reservoir data and should not have an adverse effect on the East Herradura Bend-Delaware Pool.

(15) This case should be reopened in February, 1994, at which time the operators in the subject pool should be prepared to appear and present evidence and testimony to show cause why the special limiting gas-oil ratio should remain in effect.

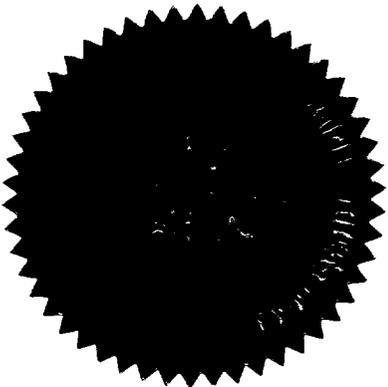
**IT IS THEREFORE ORDERED THAT:**

(1) The Special Rules and Regulations for the East Herradura Bend-Delaware Pool, Eddy County, New Mexico, as promulgated by Division Order No. R-9773, including a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil are hereby continued in effect for a temporary period of six months.

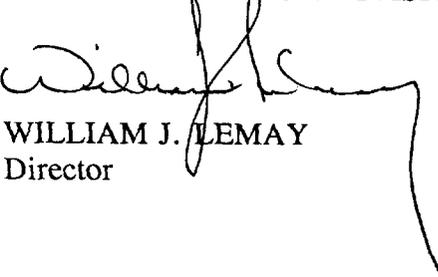
(2) This case shall be reopened at an examiner hearing in February, 1994, at which time the operators in the subject pool shall be prepared to appear and present evidence and testimony to show cause why the special limiting gas-oil ratio for the East Herradura Bend-Delaware Pool should remain in effect.

(3) 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

  
WILLIAM J. LEMAY  
Director

S E A L

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. 10541*  
*ORDER NO. R-9773*

**CONSOLIDATED APPLICATION OF BIRD CREEK RESOURCES, FORTSON OIL  
COMPANY AND RAY WESTALL OPERATING, INC. FOR SPECIAL POOL RULES,  
EDDY COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 1, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 19th day of November, 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) At the time of the hearing, Fortson Oil Company moved to be realigned from an applicant to an interested party in this case and the motion should be granted.
- (3) Bird Creek Resources and Ray Westall Operating, Inc. (hereinafter referred to as the "applicants"), seek an order promulgating special pool rules for the East Herradura Bend-Delaware Pool, including a provision for a gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.
- (4) At the hearing, Fortson Oil Company, Hanley Petroleum, Inc. and Bass Enterprises Production Company, each entered its respective appearance as a party affected by this case.

(5) The East Herradura Bend-Delaware Pool was created and defined by Division Order No. R-8179, as amended, and is currently governed by the Oil Conservation Division's Statewide Rules and Regulations, including a gas-oil ratio of 2,000 cubic feet of gas per barrel of oil and a top oil allowable of 142 barrels per day.

(6) The East Herradura Bend-Delaware Pool is located in portions of Sections 34 and 35, Township 22 South, Range 28 East, and a portion of Section 2, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico.

(7) Recently there has been substantial development in the Delaware formation outside the defined boundaries of this pool but within one mile thereof, and new wells are being curtailed due to the statewide gas-oil ratio of 2,000 cubic feet of gas per barrel of oil.

(8) In this area, the Brushy Canyon portion of the Delaware includes several hundred feet of shale and sand stringers, and, based upon currently available information, one of which appears to only be productive of natural gas.

(9) The fracture treatments typically used in completing Delaware wells in this area have communicated this gas stringer with the other producing zones in this formation resulting in wells producing at high gas-oil ratios.

(10) If the wells in this pool are produced under the statewide gas-oil ratio limitation of 2,000 to 1, liquids cannot be efficiently produced from the reservoir and substantial volumes of liquids may remain trapped as the reservoir energy is depleted by gas production.

(11) Currently there is no production data, PVT analysis or fluid samples taken exclusively from that sand stringer believed by the applicants to be productive only of gas.

(12) Currently there is no evidence available to demonstrate that a single gas cap was originally present in this reservoir or what ultimate effect this single gas productive stringer may have on ultimate recovery from the reservoir.

(13) Gas produced by the wells in this pool is comprised of solution gas plus free gas from oversaturated crude oil and/or gas from a separate gas zone. While the current gas producing rates for these wells may not be an accurate indication of the actual gas-oil ratios of the hydrocarbons at reservoir conditions or the ultimate appropriate gas-oil ratios at which these wells should be produced, approval of a temporary gas-oil ratio of 10,000 cubic feet of gas per barrel of oil is not expected to excessively dissipate reservoir energy or otherwise cause waste.

(14) Currently available evidence presented at the hearing demonstrated that a temporary gas-oil ratio limit of 10,000 cubic feet of gas per barrel of oil in the East Herradura Bend-Delaware Pool for a period of six months commencing on October 1, 1992 will afford an opportunity for all operators to gather more reservoir data, allow the reservoir in this portion of the Delaware formation to be produced at a faster and more efficient rate without harm to correlative rights and without causing waste and should be approved.

(15) Additional data on the producing characteristics of this reservoir, including the appropriate gas-oil producing rates, are rapidly being acquired due to the development currently underway in this pool and special pool rules and regulations for this pool should be promulgated on a temporary basis and should be reviewed by the Division in six months.

(16) The applicants request that temporary pool rules and regulations for this pool be effective as of October 1, 1992 and this request should be granted.

**IT IS THEREFORE ORDERED THAT:**

(1) The request of Fortson Oil Company to be dismissed as an applicant in this case is hereby granted.

(2) The application of Bird Creek Resources and Ray Westall Operating, Inc., for special pool rules providing for an increased gas-oil ratio limit for the East Herradura Bend-Delaware Pool, Eddy County, New Mexico, is hereby approved on a temporary basis.

(3) Temporary special pool rules for the East Herradura Bend-Delaware Pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS FOR THE  
EAST HERRADURA BEND-DELAWARE POOL**

*Rule 1:* The limiting gas-oil ratio for said East Herradura Bend-Delaware Pool shall be 10,000 cubic feet of gas per barrel of oil produced.

**IT IS FURTHER ORDERED THAT:**

(4) The Special Rules and Regulations for the East Herradura Bend-Delaware Pool shall become effective October 1, 1992.

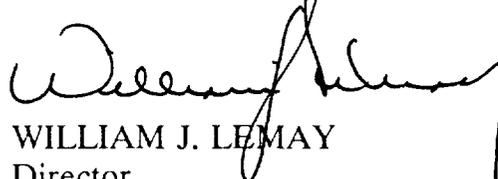
(5) This case shall be reopened at an Examiner Hearing in May, 1993, at which time the operators in the pool may appear and present evidence and show cause why the foregoing Special Rules and Regulations should remain in effect.

(6) 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