

**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. 11844  
Order No. R-10891**

**APPLICATION OF CHESAPEAKE OPERATING  
INC. FOR AN UNORTHODOX OIL WELL  
LOCATION, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on September 4, 1997, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26<sup>th</sup> day of September, 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, Chesapeake Operating, Inc., seeks authority to drill its Gandy "19" Well No. 1 at an unorthodox oil well location 2523 feet from the North line and 2370 feet from the East line (Unit G) of Section 19, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico, to test the Strawn formation. The SW/4 NE/4 of Section 19 is to be dedicated to the subject well forming a standard 40-acre oil spacing and proration unit.

(3) Marathon Oil Company (Marathon), the affected offset operator to the south of the proposed unorthodox location, appeared at the hearing in opposition to the application.

(4) The proposed well is located within the West Lovington-Pennsylvanian Pool which is currently governed by Rule No. 104.C.(1)(a) of the Division General Rules and Regulations which require standard 40-acre oil spacing and proration units with wells to be located no closer than 330 feet from the outer boundary of the spacing unit.

(5) The Gandy "19" Well No. 1 is proposed to be located 117 feet from the southern boundary of its spacing unit which would encroach towards acreage owned by Marathon.

(6) The applicant presented its geologic interpretation of certain 3-D seismic data obtained for the drilling of the Gandy "19" Well No. 1. This geologic interpretation indicates that:

- a) there is a small Strawn structure within the SW/4 NE/4 of Section 19 which is generally oriented in an east-west direction;
- b) the Strawn structure is very limited in extent and the majority of this structure is contained within the SW/4 NE/4 of Section 19;
- c) a very small portion of this Strawn structure is located on Marathon's acreage in the NW/4 SE/4, and on Chesapeake's acreage in the SE/4 NW/4 of Section 19; and,
- d) the proposed unorthodox location is necessary in order to penetrate the Strawn formation in the area of maximum porosity development, thickness and structural position within the reservoir.

(7) At the time of the hearing Marathon objected to the admission of applicant's geologic structure map (Exhibit No. 4) on the basis that the applicant did not present the 3-D seismic data upon which the structure map was based. The Division subsequently determined that the applicant should be required to submit the supporting 3-D seismic data.

(8) The applicant presented as evidence a very limited amount of 3-D seismic data and subsequently Marathon withdrew its objection to the admission of applicant's Exhibit No. (4).

(9) Upon examination of Chesapeake's 3-D seismic data, Marathon's geologic witness testified that based upon its interpretation of the data, the Strawn structure to which the Gandy "19" Well No. 1 is to be drilled likely extends at least 150 feet onto its acreage in the NW/4 SE/4 of Section 19.

(10) Marathon testified that in order to protect its correlative rights, the Gandy "19" Well No. 1 should be assessed a production penalty of 65% (35 % allowable). Its proposed production penalty is based upon the footage encroachment towards its acreage described as follows:

330' (Standard setback) - 117' (Distance from Marathon's acreage) = 213' (Encroachment)

$$213' / 330' = 65\%$$

In addition, Marathon requested that the proposed production penalty of 65% be assessed against the depth bracket allowable (365 BOPD) or the initial potential of the well, whichever is less.

(11) Testimony indicates that prior to the hearing, Chesapeake attempted to reach an agreement with Marathon whereby the allowable for its Gandy "19" Well No. 1 would be voluntarily reduced by 25% (75% allowable), and further offered its consent for Marathon to drill a mirror location on its acreage subject to the same allowable reduction.

(12) Marathon has rejected the agreement proposed by Chesapeake.

(13) The evidence and testimony presented in this case indicates that:

- a) the 3-D seismic data presented by the applicant is insufficient to make a more reliable determination as to the extent and location of the targeted Strawn structure, however, the geologic and 3-D seismic data available indicates that:
  - i) the Strawn structure is very limited in size and a considerable portion of this structure is contained within the proposed proration unit;
  - ii) a portion of the Strawn structure is located on Marathon's acreage in the NW/4 SE/4 of Section 19; and,
  - iii) the proposed unorthodox location is geologically justified.

(14) The proposed unorthodox location should be approved, provided however, that in order to protect the correlative rights of Marathon, a production penalty should be imposed on the Gandy "19" Well No. 1.

(15) The production penalty proposed by Marathon is excessive and should not be adopted in this case.

(16) The production penalty imposed on the Gandy "19" Well No. 1 should be based upon the location and general configuration of the Strawn structure as determined from applicant's 3-D seismic data.

(17) Based upon the Division's interpretation, it appears that at least 2/3 of the Strawn reservoir is contained within the applicant's proposed proration unit. The Gandy "19" Well No. 1 should therefore be assessed a production penalty of 34% (66% allowable).

(18) The production penalty should be assessed against the depth bracket allowable for the West Lovington-Pennsylvanian Pool which is currently set at 365 barrels of oil per day.

(19) No other offset operator and/or interest owner appeared at the hearing in opposition to the application.

(20) Approval of the proposed unorthodox location, subject to the above-described production penalty, will afford the applicant the opportunity to produce its just and equitable share of the oil in the affected pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will otherwise prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Chesapeake Operating, Inc., is hereby authorized to drill its Gandy "19" Well No. 1 at an unorthodox oil well location 2523 feet from the North line and 2370 feet from the East line (Unit G) of Section 19, Township 16 South, Range 36 East, NMPM, Lea County, New Mexico, to test the Strawn formation, West Lovington-Pennsylvanian Pool.

(2) The SW/4 NE/4 of Section 19 shall be dedicated to the subject well forming a standard 40-acre oil spacing and proration unit for said pool.

(3) The Gandy "19" Well No. 1 is hereby assessed a production penalty of 34% (66% allowable). The production penalty shall be applied to the depth bracket allowable for the West Lovington-Pennsylvanian Pool.

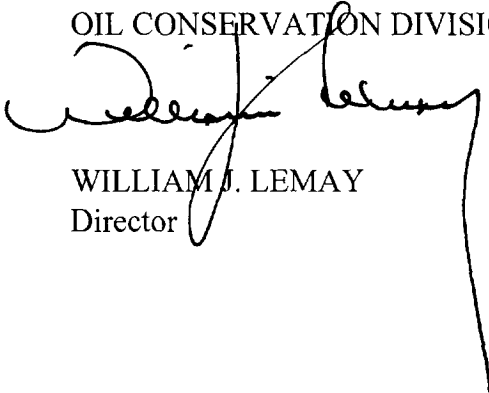
(4) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the typed name and title. The signature is fluid and cursive, with a long vertical stroke extending downwards from the end of the name.

WILLIAM J. LEMAY  
Director

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