

**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. 12663  
ORDER NO. R-11646**

**APPLICATION OF DAVID H. ARRINGTON OIL & GAS, INC. FOR AN  
UNORTHODOX OIL WELL LOCATION AND SIMULTANEOUS  
DEDICATION, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on June 14, 2001, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 11th day of September, 2001, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, David H. Arrington Oil & Gas, Inc. ("Arrington"), seeks approval to recomplete its existing Mayfly "14" State Well No. 7 (API No. 30-025-35078) located at an unorthodox location 330 feet from the North and East lines (Unit A) of Section 14, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, for production from the Strawn formation, North Shoe Bar-Strawn Pool, and to simultaneously dedicate this well to an existing standard 160-acre oil spacing and proration unit comprising the NE/4 of Section 14.

(3) Permian Resources, Inc. ("Permian"), the affected offset operator to the east of the proposed unorthodox location in Section 13, Township 16 South, Range 35 East, NMPM, appeared at the hearing to oppose the application.

(4) The Mayfly "14" State Well No. 7 is located within the North Shoe Bar-Strawn Pool which is currently governed by the "*Special Rules and Regulations for the North Shoe Bar-Strawn Pool*," as established by Division Order No. R-4658 dated

November 16, 1973. These pool rules require standard 160-acre spacing and proration units and designated well location requirements such that wells shall be located within 150 feet of the center of a governmental quarter-quarter section or lot. The pool rules further provide that:

“Rule 6. A standard proration unit (158 through 162 acres) shall be assigned a depth bracket allowable of 605 barrels, subject to the market demand percentage factor, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.”

(5) The applicant’s evidence demonstrates that:

- (a) the Mayfly “14” State Well No. 7 was originally permitted by Arrington as a Pennsylvanian/Mississippian formation test;
- (b) by Order No. R-11403 entered in Case No. 12381 on June 20, 2000, the Division approved the unorthodox gas well location for this well for all formations spaced on 320-acres within the vertical interval from the top of the Cisco formation to the base of the Mississippian formation;
- (c) in Case No. 12381, Arrington presented evidence and testimony that it had voluntarily reached an agreement with Yates Petroleum Corporation (“Yates”), an affected offset operator, stipulating that the Mayfly “14” State Well No. 7 would be assessed a production penalty of 50% as a result of its unorthodox location;
- (d) in addition, Permian, being an affected offset operator, appeared in Case No. 12381 in opposition to the proposed unorthodox gas well location. After considering Permian’s objection, the agreement between Arrington and Yates, and the evidence presented in the case, the Division assessed a production penalty of 75 percent against the Mayfly “14” State Well No. 7 in the event the well was completed in the “Austin” sand interval of the Morrow formation, and 50 percent in the event the

well was completed in any other gas producing interval within the Pennsylvanian or Mississippian formation spaced on 320 acres; and,

- (e) the well was drilled by Arrington in July, 2000 to a total depth of approximately 12,578 feet. The well was subsequently tested in the Mississippian formation and the Cisco interval of the Pennsylvanian formation. The well was non-commercial in these zones.

(6) The NE/4 of Section 14 is currently dedicated in the North Shoe Bar-Strawn Pool to the Arrington Mayfly "14" State Com Well No. 2 (**API No. 30-025-34630**) located at a surface location 660 feet from the North line and 2060 feet from the East line (Unit B) and at a bottomhole location 715 feet from the North line and 788 feet from the East line (Unit A). This well was horizontally drilled within the Strawn formation a distance of approximately 1,300 feet.

(7) Arrington presented evidence to show that during May, 2001, the Mayfly "14" State Com No. 2 produced at an average rate of 389 barrels of oil per day and 964 MCF of gas per day.

(8) The offset operators affected by the proposed unorthodox location are described as follows:

- (a) the SE/4 of Section 11 is currently operated by Yates. Within this quarter section, Yates operates the Runnels "ASP" Well No. 2 (**API No. 30-025-34443**) located 1650 feet from the South line and 2270 feet from the East line (Unit J). This well is currently completed in and producing from the North Shoe Bar-Strawn Pool;
- (b) the SW/4 of Section 12 is currently operated by Chesapeake Operating, Inc. ("Chesapeake"). There is currently no well within this quarter section producing from the North Shoe Bar-Strawn Pool; and,
- (c) the NW/4 of Section 13 is currently operated by Permian. Within this quarter section, Permian currently operates the Hilburn Well No. 1 (**API No.**

30-025-24473) located at a standard location 1980 feet from the North line and 660 feet from the West line (Unit E). This well is currently completed as a downhole commingled well in the North Shoe Bar-Strawn and North Shoe Bar-Wolfcamp Pools.

(9) The applicant testified that Chesapeake is an interest owner in the Mayfly "14" State Well No. 7, and has waived objection to the proposed unorthodox location (Applicant's Exhibit No. (6)).

(10) It is Arrington's position that the Yates production penalty agreement that was presented as evidence in Case No. 12381, and which is described in Finding No. 5 (c) above, is still in effect and should apply to the Mayfly "14" State Well No. 7 in the event this well is completed as a producing well in the North Shoe Bar-Strawn Pool.

(11) Arrington did not recommend a method by which to enforce the production penalty against the Mayfly "14" State No. 7.

(12) In support of its application, Arrington presented testimony that:

- (a) the Mayfly "14" State Com No. 2 is currently producing from a Strawn structure that encompasses approximately 80-100 acres, and that this structure is generally oriented in an east-west direction within the NE/4 of Section 14;
- (b) there is data available that generally defines the northern and western boundaries of this Strawn structure, however, there is not sufficient evidence to determine the eastern boundary of this structure;
- (c) the Mayfly "14" State Well No. 7, if completed as a Strawn producing well, will produce from this Strawn structure;
- (d) producing the Mayfly "14" State Well No. 7 will generally serve to accelerate the recovery of hydrocarbons from this Strawn structure; and
- (e) bottomhole pressure data demonstrates that the Mayfly "14" State Com No. 2 is not producing from

the same Strawn structure that is being produced by the Permian Hilburn No. 1 in Section 13.

(13) Arrington did not present Strawn structure or isopach maps or bottomhole pressure data to substantiate its testimony in this case.

(14) Permian presented 3-D seismic data and a geologic structure map that generally demonstrates that the Strawn structure being produced by the Mayfly "14" State Com No. 2 extends onto its acreage within the NW/4 of Section 13.

(15) Permian presented testimony to the effect that production data generally indicates that the Mayfly "14" State Com No. 2 and its Hilburn No. 1 are producing from separate Strawn structures that are not in communication.

(16) Permian currently has no well within the NW/4 of Section 13 to protect its acreage from offset drainage that may occur from the Mayfly "14" State Com No. 2 and prospectively from the Mayfly "14" State No. 7, however, it plans to drill a well within the NW/4 NW/4 of Section 13.

(17) Permian presented engineering data that demonstrates the Mayfly "14" State Com No. 2 will ultimately recover 816,000 barrels of oil and 1.65 BCF of gas from this Strawn reservoir.

(18) Permian requested that the application of Arrington be denied on the basis that:

- (a) the Mayfly "14" State Com No. 2 is capable of draining the entire NE/4 of Section 14;
- (b) adding another producing well within the NE/4 of Section 14 will only serve to violate its correlative rights by draining Strawn reserves from its acreage in the NW/4 of Section 13; and
- (c) there are viable standard well locations available to Arrington in which to drill additional wells to produce the Strawn reserves underlying the NE/4 of Section 14.

(19) Upon examination of the evidence presented by both parties in this case, the Division finds that:

- (a) there is sufficient geologic evidence to show that the Strawn structure being produced by the Mayfly "14" State Com No. 2 in the NE/4 of Section 14 extends onto Permian's acreage in the NW/4 of Section 13;
- (b) both parties are generally in agreement that the Strawn structure being produced by the Mayfly "14" State Com No. 2 is not the same Strawn structure that is being produced by Permian's Hilburn No. 1 in the NW/4 of Section 13;
- (c) although neither party presented engineering data to indicate the drainage area of the Mayfly "14" State Com No. 2, both parties are generally in agreement that the well will drain the majority, if not all, of the recoverable oil and gas reserves underlying the NE/4 of Section 14 within the Strawn reservoir;
- (d) Arrington's witnesses testified that producing the Mayfly "14" State No. 7 will likely only serve to accelerate the recovery of hydrocarbons from this reservoir underlying the NE/4 of Section 14;
- (e) Arrington presented no justification as to why the Mayfly "14" State No. 7 could not be directionally drilled to a standard well location within the NE/4 of Section 14; and
- (f) the method by which allowables may be arbitrarily assigned between wells on a proration unit within the North Shoe Bar-Strawn Pool will make it difficult to assess a production penalty that will effectively limit production from the Mayfly "14" State No. 7 so as to protect the correlative rights of Permian.

(20) The evidence presented demonstrates that it is not necessary to produce the Mayfly "14" State No. 7 in order to recover the oil and gas reserves in the North Shoe Bar-Strawn Pool underlying the NE/4 of Section 14.

(21) Approval to produce the Mayfly "14" State No. 7 will not result in the recovery of oil and gas reserves from the North Shoe Bar-Strawn Pool underlying the NE/4 of Section 14 that may otherwise not be recovered by the existing well.

(22) Approval of the application will not prevent waste.

(23) The evidence presented further demonstrates that approval of the application will likely result in the violation of Permian's correlative rights.

(24) The application should be denied.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of David H. Arrington Oil & Gas, Inc. to recomplete its existing Mayfly "14" State Well No. 7 (API No. 30-025-35078) located at an unorthodox location 330 feet from the North and East lines (Unit A) of Section 14, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, for production from the Strawn formation, North Shoe Bar-Strawn Pool, and to simultaneously dedicate this well to an existing standard 160-acre oil spacing and proration unit comprising the NE/4 of Section 14, is hereby denied.

(2) 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.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Lori Wrotenbery*  
LORI WROTENBERY  
Director