

**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. 13343
ORDER NO. R-12236**

**APPLICATION OF ARCH PETROLEUM, INC. FOR A NON-STANDARD GAS
SPACING UNIT AND AN UNORTHODOX GAS WELL LOCATION IN THE
JALMAT GAS POOL AND AN UNORTHODOX LANGLEIE-MATTIX OIL
WELL LOCATION, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 7, 2004, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 16th day of November, 2004, 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, Arch Petroleum, Inc. ("Arch") seeks to establish a non-standard 160-acre gas spacing unit within the Jalmat (Tansill-Yates-Seven Rivers) Gas Pool ("Jalmat Gas Pool") comprising the SW/4 of Section 16, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico. This unit is to be dedicated to Arch's proposed Kelly State Well No. 5 to be drilled at an unorthodox gas well location 910 feet from the South line and 1230 feet from the West line (Unit M) of Section 16. The applicant further seeks approval of an unorthodox oil well location for the proposed well in the Langlie-Mattix (Seven Rivers-Queen-Grayburg) Pool ("Langlie-Mattix Pool"). The SW/4 SW/4 of Section 16 is to be dedicated to the Kelly State Well No. 5 in the Langlie-Mattix Pool thereby forming a standard 40-acre oil spacing and proration unit.

(3) Fulfer Oil and Cattle Company, LLC ("Fulfer"), an offset operator, appeared at the hearing in opposition to the application.

- (4) Division records show that:
- (a) by administrative application dated July 6, 2004, Arch applied for an unorthodox oil well location in the Langlie-Mattix Pool for its Kelly State Well No. 5 to be drilled 1310 feet from the South and West lines (Unit M) of Section 16;
 - (b) Arch's application was approved by Division Order No. NSL-5099 dated August 20, 2004;
 - (c) by administrative application dated July 30, 2004, Arch applied for: i) a non-standard 160-acre Jalmat Gas Pool spacing and proration unit comprising the SW/4 of Section 16, this unit to be dedicated to the Kelly State Well No. 5; and ii) an unorthodox gas well location for the Kelly State Well No. 5, this well to be drilled 1310 feet from the South and West lines (Unit M) of Section 16;
 - (d) by letter(s) dated August 25, 2004, Arch filed: i) a request to amend Division Order No. NSL-5099 to change the well location for the Kelly State Well No. 5 from 1310 feet from the South and West lines (Unit M) to 910 feet from the South line and 1230 feet from the West line (Unit M) of Section 16; and ii) an amended application for its proposed non-standard 160-acre spacing unit in the Jalmat Gas Pool to provide for the above-described amended well location;
 - (e) on or about August 19, 2004, Fulfer informed the Division of its objection to Arch's application to establish a non-standard 160-acre gas spacing unit in the Jalmat Gas Pool; and

- (f) by letter dated August 31, 2004, the Division informed Arch that Division Order No. NSL-5099 would be placed in abeyance until further notice, and that Arch's proposed amended well location for the Kelly State Well No. 5 in the Jalmat Gas Pool and Langlie-Mattix Pool, and non-standard 160-acre gas spacing unit in the Jalmat Gas Pool would be consolidated and heard in Case No. 13343.

(5) The Kelly State Well No. 5 is located within one-mile of the Jalmat Gas Pool and is therefore subject to the *"Special Pool Rules for the Jalmat Gas Pool"* as established by Division Order No. R-8170, as amended. The rules that govern gas wells within the Jalmat Gas Pool are summarized as follows:

- (a) a gas well in the Jalmat Gas Pool shall be a well producing from the vertical limits of the pool with a gas-liquid ratio in excess of 100,000 cubic feet of gas per barrel of oil;
- (b) a standard gas spacing unit in the Jalmat Gas Pool shall be 640 acres and shall comprise a single governmental section;
- (c) a gas well in the Jalmat Gas Pool shall be located no closer than: i) 660 feet to any outer boundary of its assigned gas spacing unit; ii) 660 feet to any governmental quarter section line; and iii) 330 feet to any governmental quarter-quarter section line or subdivision inner boundary; and
- (d) for any gas spacing unit, either standard or otherwise, the number of wells allowed shall be limited to no more than one well per 160 acres.

(6) The Kelly State Well No. 5 is also located within the Langlie-Mattix Pool which is currently governed by Division Rule No. 104.B. which requires standard 40-acre spacing and proration units with wells to be located no closer than 330 feet to the outer boundary of the spacing unit

(7) The SW/4 of Section 16 comprises a single state lease. Within the SW/4 of Section 16 Arch owns the operating rights from the surface to a depth of 3,800 feet, which vertical interval includes the Jalmat Gas Pool and Langlie-Mattix Pool. Within the SW/4 of Section 16, Arch currently operates the Kelly State Wells No. 1, 2 and 4, which are currently producing wells in the **Langlie-Mattix** Pool, and the Kelly State Well No. 3, which is currently a produced water disposal well. These wells are described as follows:

| <u>Well Name</u> | <u>API Number</u> | <u>Well Location</u> |
|-------------------|-------------------|--------------------------------|
| Kelly State No. 1 | 30-025-10743 | 1980' FSL & 1980' FWL (Unit K) |
| Kelly State No. 2 | 30-025-10744 | 1980' FSL & 660' FWL (Unit L) |
| Kelly State No. 3 | 30-025-10742 | 660' FSL & 660' FWL (Unit M) |
| Kelly State No. 4 | 30-025-10745 | 660' FSL & 1980' FWL (Unit N) |

(8) Arch's evidence demonstrates that the proposed Kelly State Well No. 5, which was originally staked and permitted at an unorthodox oil well location 1310 feet from the South and West lines (Unit M) of Section 16, had to be re-located due to the presence of pipelines, roads and tank batteries at the original location.

(9) Arch presented geologic and engineering evidence that demonstrates that:

- (a) the primary objective within the Kelly State Well No. 5 is the Langlie-Mattix Pool and the secondary objective is the **Jalmat** Gas Pool;
- (b) the Kelly State Well No. 5 is proposed to be drilled in close proximity to the center of this quarter section in order to attempt to recover oil reserves in the Langlie-Mattix Pool that may have not been recovered by the Kelly State Wells No. 1, 2, 3 and 4;
- (c) to the south in Section 28, Arch has successfully drilled similar infill wells that have targeted **un-**recovered oil reserves in the Langlie-Mattix Pool; and

- (d) through its infill drilling program, Arch has also completed several of its wells in the Jalmat Gas Pool, thereby extending the producing area of this pool further to the east;

(10) Arch further testified that due to the low permeability of the producing interval within the Jalmat Gas Pool in this area, it expects its proposed Kelly State Well No. 5 to drain an area of less than 60 acres.

(11) Arch testified that upon examining the well records for the Kelly State Wells No. 1,2 ,3 and 4, it discovered that the Kelly State Well No. 4, which was initially completed in the Langlie-Mattix Pool in 1956 through perforations from 3,402 feet to 3,553 feet, was perforated in the Jalmat Gas Pool by a previous operator in approximately 1967. The perforated interval in the Jalmat Gas Pool in this well extends from approximately 2,800 feet to 3,150 feet.

(12) Arch further testified that it has examined the production history for the Kelly State Well No. 4 and has found that at the time the Jalmat Gas Pool was completed in the well, there was a modest increase in gas production that lasted approximately 2-3 months. Subsequent to that time, the well returned to prior producing levels.

(13) Arch further testified that prior to completing any well in the Jalmat Gas Pool within the SW/4 of Section 16, it will cement squeeze the interval from approximately 2,800 feet to 3,150 feet in the Kelly State Well No. 4, thereby permanently plugging the Jalmat Gas Pool in this wellbore.

(14) Fulfer testified that it currently operates two Jalmat Gas Pool wells within the N/2 of Section 20, Township 23 South, Range 37 East, NMPM. Fulfer's acreage in Section 20 is the direct southwest offset to Arch's acreage in Section 16.

(15) Fulfer testified that although the permeability is low within this area of the Jalmat Gas Pool, wells may drain a larger area than wells to the west in geologically better areas of the pool.

(16) Fulfer presented no geologic or engineering evidence to demonstrate that its correlative rights would be harmed by approving Arch's application.

(17) The evidence presented in this case demonstrates that:

- (a) the proposed Kelly State Well No. 5 is situated at a reasonable location within the SW/4 of Section 16 in which to recover additional **un-swept** oil reserves from the Langlie-Mattix Pool;
- (b) the proposed non-standard well location in the Langlie-Mattix Pool does not encroach upon any offset operator(s), and the commonly-owned interest within the SW/4 of Section 16 is unaffected by the proposed location;
- (c) it is likely that the Jalmat Gas Pool will be productive within the SW/4 of Section 16;
- (d) development of the Jalmat Gas Pool on a lease basis rather than on a standard 640-acre unit basis is a common practice in this pool. In addition, Arch provided notice of its application to form its proposed non-standard unit to all remaining working interest owners in Section 16. No interest owner appeared at the hearing in opposition to the application; and
- (e) the proposed non-standard well location in the Jalmat Gas Pool does not encroach upon any offset operator, including Fulfer, and is unorthodox only with respect to the interior quarter-quarter section lines of the proposed spacing unit.

(18) Approval of the subject application will provide Arch the opportunity to recover additional oil reserves in the Langlie-Mattix Pool that may not have been recovered by the existing producing wells in the quarter section, thereby preventing waste, will provide Arch the opportunity to develop its Jalmat Gas Pool reserves underlying the SW/4 of Section 16, and will not violate correlative rights.

(19) Prior to producing the Kelly State Well No. 5 in the Jalmat Gas Pool, Arch should be required to permanently abandon the perforations in the Jalmat Gas Pool producing interval within the Kelly State Well No. 4, described in Finding Nos. (7) and (11) above.

(20) In the event that the Kelly State Well No. 5 is not completed in the Jalmat Gas Pool, and that Arch desires to keep producing the Jalmat Gas Pool interval in the Kelly State Well No. 4, Arch should be required to comply with all Division rules pertaining to this type of well completion, including, but not necessarily limited to dual completion, downhole commingling, production reporting requirements, etc.

IT IS THEREFORE ORDERED THAT:

(1) The application of Arch Petroleum, Inc. to establish a non-standard 160-acre gas spacing unit within the Jalmat Gas Pool comprising the SW/4 of Section 16, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico is hereby approved. The applicant is further authorized to drill its Kelly State Well No. 5 at an unorthodox Jalmat Gas Pool gas well location and an unorthodox Langlie-Mattix Pool oil well location 910 feet from the South line and 1230 feet from the West line (Unit M) of Section 16.

(2) The SW/4 of Section 16 shall be dedicated to the Kelly State Well No. 5 in the Jalmat Gas Pool thereby forming a non-standard 160-acre gas spacing and proration unit for this pool.

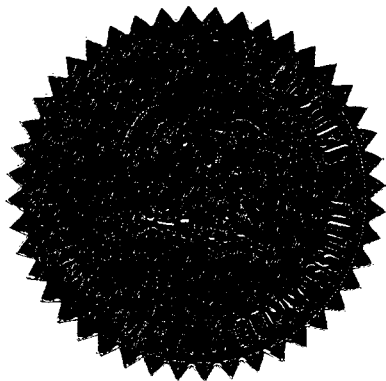
(3) The SW/4 SW/4 of Section 16 shall be dedicated to the Kelly State Well No. 5 in the Langlie-Mattix Pool thereby forming a standard 40-acre oil spacing and proration unit for this pool.

(4) Prior to producing the Kelly State Well No. 5 in the Jalmat Gas Pool, the applicant shall permanently abandon the perforations in the Jalmat Gas Pool producing interval within the Kelly State Well No. 4, located 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 16.

(5) In the event that the Kelly State Well No. 5 is not completed in the Jalmat Gas Pool, and that Arch Petroleum, Inc. desires to keep producing the Jalmat Gas Pool interval in the Kelly State Well No. 4, Arch Petroleum, Inc. should be required to comply with all Division rules pertaining to this type of well completion, including, but not necessarily limited to, dual completion, downhole commingling, reporting requirements, etc.

(6) 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.



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STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Handwritten signature of Mark E. Fesmire, PE.

MARK E. FESMIRE, PE
Director