

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION**

**IN THE MATTER OF THE HEARING CALLED BY THE  
OIL CONSERVATION COMMISSION FOR THE PURPOSES  
OF CONSIDERING:**

**De Novo  
CASE NO. 14418 and  
Reopened  
CASE NO. 14480**

**APPLICATIONS OF CIMAREX ENERGY CO.  
FOR A NON-STANDARD OIL SPACING AND  
PRORATION UNIT AND COMPULSORY POOLING,  
EDDY COUNTY, NEW MEXICO.**

**Order No. R-13228-F**

**ORDER OF THE COMMISSION**

IN THIS MATTER, having come before the New Mexico Oil Conservation Commission ("Commission") on November 4, 2010, at Santa Fe, New Mexico, on applications of Cimarex Energy Co. for a non-standard oil spacing and proration unit and compulsory pooling, the Commission, having carefully considered the evidence, argument and other materials submitted by the parties, now:

**FINDS THAT:**

(1) Proper public notice has been given of the hearing on this matter and the Commission has jurisdiction of this case and its subject matter.

(2) In Case No. 14418, Cimarex Energy Co. ("Cimarex") seeks an order approving a non-standard 160-acre oil spacing and proration unit in the Bone Spring formation comprised of the W/2 W/2 of Section 21, Township 19 South, Range 31 East, NMPM, Eddy County, New Mexico and pooling all uncommitted interests in the unit in the NW/4 NW/4 of Section 21 from the surface to the base of the Bone Spring formation and the W/2 W/2 of Section 21 from 2,500 feet subsurface to the base of the Bone Spring formation. The unit is to be dedicated to Cimarex's Penny Pincher 21 Federal Well No. 1 which has been drilled from a surface location 660 feet from the North line and 990 feet from the West line of Section 21 and a bottomhole location 330 feet from the South line and 330 feet from the West line of Section 21.

(3) In Case No. 14480, Cimarex Energy Co. seeks an order approving a non-standard 160-acre oil spacing and proration unit in the Bone Spring formation comprised of the E/2 W/2 of Section 21, Township 19 South, Range 31 East, NMPM, Eddy County, New Mexico and pooling all uncommitted interests in the unit from the surface to the base of the Bone Spring formation. The unit is to be dedicated to Cimarex's Penny Pincher 21 Federal Com Well No. 2 to be drilled from a surface location 330 feet from the North line and 1980 feet from the West line of Section 21 and a bottomhole location 330 feet from the South line and 1980 feet from the West line of Section 21.

(4) On March 18, 2010, after notice and hearing, the Division entered Order No. R-13228 in Case No. 14418 granting Cimarex's application to form a non-standard spacing unit and pooling certain interests for the Penny Pincher 21 Federal Well No. 1.

(5) Lynx filed a de novo appeal of Order No. R-13228 on March 25, 2010.

(6) The Division heard Case No. 14480 on June 10, 2010. The Division Director determined that Case Nos. 14418 and 14480 should be heard by the Commission because the issues in the two cases were related.

(7) In Order No. R-13228-D, the Commission consolidated Case Nos. 14418 and 14480.

(8) The Commission takes administrative notice of the Division records in Case Nos. 14418 and 14480.

(9) In both cases, Cimarex proposes to drill horizontal Bone Spring wells on project areas comprised of four, complete forty-acre spacing units.

(10) Cimarex acquired an interest in the N/2 of Section 21 by a farm-out agreement from Devon Energy Production Company. Tr. 12 (Compton); Order No. R-13228.

(11) At the time of the first application in Case 14418, Cimarex had no interest in the SW/4 of Section 21. Tr. 12 (Compton). Since that time, Cimarex has acquired various interests in the S/2 of the section. Tr. 18 (Compton).

(12) Lynx Petroleum Consultants, Inc. ("Lynx") is an interest owner in the S/2 of Section 21. Tr. 101 (Scott). Lynx is the designated operator under an existing operating agreement that covers the S/2 of the section. Tr. 129 (Scott).

(13) After the Division issued Order No. R-13228, Cimarex immediately began to drill the Penny Pincher 21 Federal Well No. 1. Tr. 19 (Compton). Cimarex had a March 31 deadline under its farm-out agreement with Devon to drill. Id. Cimarex did not ask for an extension of that deadline from Devon. Tr. 24 (Compton). Nor did Cimarex attempt to drill a well in the N/2 of the section, which would have satisfied the terms of the farm-out agreement. Id.

(14) Cimarex is targeting the Second Bone Spring Sand in its proposed Penny Pincher wells.

(15) Cimarex's geologist and engineer testified that in the Penny Pincher 21 Fed Well No. 1, there is pay along the entire lateral based on a 10% density porosity cut-off. Tr. 34 (Catalano); Tr. 50 (Swain). Cimarex bases this opinion on the mud log of the horizontal well. Tr. 37 (Catalano). The mud log does not show whether there is equal or substantially similar pay along the entire lateral. Id.

(16) Cimarex originally testified in the Division hearing for Case No. 14418 that all quarter-quarter sections to be included in the proposed project area for the Penny Pincher 21 Fed Well No. 1 were expected to be equally productive in the Second Bone Spring formation.

(17) Contrary to its original belief [Tr. 50 (Swain); See also e.g. Transcript at 37 (Catalano) for Case 14418 ("I think they [each quarter-quarter] are all equally prospective."; Transcript at 60 (Swain) for Case 14418 ("[A]ll 40 acres have ample quantities of reservoir rock that are capable of producing oil and gas.")], now that the well has been drilled, it does not appear that each quarter-quarter section will be equally productive. Tr. 58 (Swain). Cimarex's engineer estimates that the S/2 of the section could contribute twice that of the N/2 of the section. Tr. 59 (Swain).

(18) At the Division hearing for Case 14118, Cimarex indicated there would be approximately 75 feet of net pay throughout the proposed project area. Tr. 39 (Catalano); Compare Cimarex Exhibits 10 and 16.

(19) Based on the drilling of the vertical portion of the Penny Pincher 21 Fed Well No. 1, it appears that the NW/4 NW/4 of Section 21 contains approximately 32 feet of net pay. Tr. 39 (Catalano); Cimarex Exhibit 10.

(20) Cimarex offered a volume calculation per quarter-quarter section at the Division hearing (Case No. 14418 Cimarex Exhibit 14). For the Commission hearing, Cimarex performed updated volumetrics for the entire project area based on its revised isopach map but did not offer a volume per quarter-quarter section. Tr. 60 (Swain).

(21) Cimarex testified that it chose to orient the wells north-south because the sands were dumped off the shelf and oriented in a north-south direction. Tr. 40 (Catalano). Cimarex attempts to orient its horizontal wells to encounter the most sand. Tr. 45 (Catalano). In Cimarex's updated mapping, there is no longer a north/south orientation of the sand. Cimarex Exhibits 9 and 10.

(22) Cimarex has drilled 22 wells in the Second Bone Spring Sand and approximately half have been drilled north-south. *Id.* Cimarex's engineer confirmed that a horizontal well in the Second Bone Spring Sand could be drilled either direction because of the fracture orientation and that they have equally good wells drilled in either direction. Tr. 63-64 (Swain).

(23) Lynx presented a structure and isopach map that showed significant differences in the reservoir quality between the N/2 and the S/2 of Section 21. Lynx Exhibit No. 1. Lynx testified that approximately 75 percent of the bulk volume of the reservoir is located in the S/2. Tr. 124 (Scott).

(24) Lynx testified that looking at the more conservative Neutron/Density log from the drilling of the pilot hole of the Penny Pincher No. 1, there is, at most, 8 feet of productive sand present. Lynx Exhibit No. 2. Using Neutron/Density cross-plot porosities, Lynx testified that there could be in excess of 60 feet of pay in the S/2 of the section. Tr. 106 (Scott).

(25) Lynx participated in the Top Dollar Well No. 1 located in the SW/4 SE/4 of Section 16, Township 19 South, Range 31 East which is a northeast diagonal offset to the Penny Pincher No. 1. Tr. 103 (Scott). The Second Bone Spring Sand was not commercial in this well which led Lynx to believe that the N/2 of Section 21 was not particularly prospective. *Id.*

(26) Based on the mud log for the drilling of the horizontal portion of the Penny Pincher Well No. 1 wellbore, Lynx estimates there is approximately 70 percent of the productive rock in the S/2 of the section. Tr. 113 (Scott); Lynx Exhibit 9.

(27) According to the completion summary for the well, 9 of the 15 intervals (60%) were completed in the S/2 and 2603 feet of the 4452 feet completed in the wellbore are located in the S/2. Tr. 123-124 (Scott); Lynx Exhibit 10.

(28) Lynx ran bulk volume calculations per quarter-quarter section based on its structure and isopach map. Lynx estimates that there would be 431 acre feet of productive rock in the N/W NW/4 of Section 21 and 2145 acre feet in the SW/4 SW/4 with progressive improvement from north to south. Tr. 125 (Scott). Thus, Lynx concludes that a minimum of 75 percent of the bulk volume would come from the S/2 of Section 21. *Id.*

(29) Lynx testified that granting the application may cause waste of oil and gas because it would vertically segregate certain minerals which would prevent the development of other minerals that may be present in the S/2. Tr. 128 (Scott).

(30) Lynx testified that the granting of the application would violate Lynx's correlative rights because it would not have the ability to fairly and equitably recover its share of the minerals produced from the well. Tr. 130 (Scott.)

(31) Cimarex failed to establish that its proposed project will not impair correlative rights.

(32) The evidence indicates that there are disparate interests in the proposed project areas such that allocating on a straight acreage basis would violate correlative rights by not allowing Lynx to receive its just and fair share of production.

**AND CONCLUDES THAT:**

(1) Section 70-2-17 of the New Mexico Oil and Gas Act provides: “When two or more separately owned tracts of land are embraced within a spacing or proration unit, the owner or owners thereof may validly pool their interests and develop their lands as a unit. Where such owner or owners have not agreed to pool their interests, and where one such separate owner, or owners, who has the right to drill has drilled or proposes to drill a well on said unit to a common source of supply, the division, to avoid the drilling of unnecessary wells or to protect correlative rights, or to prevent waste, shall pool all or any part of such lands or interests or both in the spacing or proration unit as a unit.”

(2) A “project area” is defined under Division rules as “an area the operator designates on form C-102 that a spacing unit’s outer boundaries enclose, a combination of complete, contiguous spacing units or an approved secondary, tertiary or pressure maintenance project. NMAC 19.15.16.17(I).

(3) A “spacing unit” is defined as “the acreage assigned to a well under a well spacing order or rule.” NMAC 19.15.2.7(S)(9).

(4) Cimarex’s project area is a “combination of complete, contiguous spacing units” and not a non-standard spacing unit.

(5) Combining complete spacing units is the nature of unitization.

(6) When unitizing lands for primary production, voluntary agreement is required for an interest owner to be included in the unit.

(7) When a party seeks to unitize for secondary or tertiary recovery, the Statutory Unitization Act allows the Division to unitize lands. An applicant must show that the plan of unitization is “fair, reasonable and equitable.” § 70-7-5(D). The Division must then find that the participation formula is fair and reasonable. § 70-7-6(A)(6). If the Division determines that the formula “does not allocate unitized hydrocarbons in a fair, reasonable and equitable basis” the Division may make its own determination about the relative value of each tract and how production should be allocated. § 70-7-6(B).

(8) In pooling, Section 70-2-17 allows for allocation of production to occur on a straight acreage basis.

(9) Section 70-2-17 requires the Commission to determine whether the pooling application will prevent waste and protect correlative rights.

(10) When an operator applies for compulsory pooling of a project area, the operator must demonstrate, by appropriate technical evidence, that the formation of such a unit will prevent waste and will not impair correlative rights. Order No. R-12686-C.

(11) The Division and the Commission are required to find in its orders that each owner of property in a pool has "the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as such can be practically obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such property bears to the total recoverable oil or gas, or both, in the pool..." § 70-2-17(A). Furthermore, all pooling orders "shall be upon such terms and conditions as are just and reasonable and will afford to the owner or owners of each tract or interest in the unit the opportunity to recover or receive without unnecessary expense his just and fair share of the oil or gas, or both." § 70-2-17(C).

(12) The Commission must determine whether the granting of the applications in Cases 14418 and 14480 will prevent waste and protect correlative rights.

(13) Under the facts of this case, the Commission cannot find that the pooling, as requested by Cimarex, will allow all owners in such pool the opportunity to produce their just and equitable share of the oil or gas or that the terms and conditions of such pool would be just and reasonable and afford to all owners the opportunity to recover their just and fair shares of the oil or gas.

**IT IS THEREFORE ORDERED THAT:**

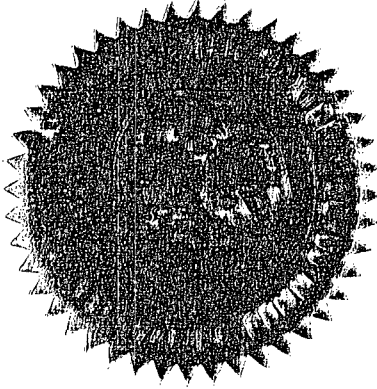
(1) Cimarex's applications to form 160-acre non-standard spacing and proration units in the W/2 W/2 and E/2 W/2 of Section 21 are denied.

(2) Cimarex's applications to pool certain interest owners in the W/2 W/2 and the E/2 W/2 of Section 21 for the Penny Pincher 21 Federal Well No. 1 and the Penny Pincher 21 Federal Com Well No. 2 are denied.

(3) Jurisdiction is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico on the 20<sup>th</sup> day of December 2010.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



SEAL

A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY, CPG, MEMBER

A handwritten signature in cursive script, appearing to read "William Olson".

WILLIAM OLSON, MEMBER

A handwritten signature in cursive script, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E., CHAIR