



November 19, 2010

**VIA HAND-DELIVERY**

Mr. Mark E. Fesmire,  
Chairman  
Oil Conservation Commission  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

Re: Case Nos. 14418 and 14480: Applications of Cimarex Energy Co. for a Non-Standard Oil Spacing and Proration Unit and Compulsory Pooling, Eddy County, New Mexico.

Dear Mr. Fesmire:

Enclosed please find Lynx Petroleum Consultants, Inc.'s Proposed Order in Case Nos. 14418 and 14480 and its Closing Statement.

Thank you for your time and attention to this matter.

Sincerely,

Ocean Munds-Dry  
Attorney for Lynx Petroleum Consultants, Inc.

cc: Gary Larson (Attorney for Cimarex)  
Mark Smith (Attorney for the Commission)

**TATE 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:**

**CASE NOS. 14418 & 14480  
De Novo**

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

**PROPOSED ORDER OF LYNX PETROLEUM CONSULTANTS, INC.**

This case came on for hearing on November 4, 2010 at Santa Fe, New Mexico, before the Oil Conservation Commission.

NOW, on this \_\_\_\_ day of \_\_\_\_\_, 2010, the Commission, having considered the testimony, the record, and the arguments of the parties, and being otherwise advised,

**FINDS THAT:**

(1) Due public notice has been given of the application and 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 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

and a bottomhole location 330 feet from the South line and 1980 feet from the West line of Section 21.

#### History of Proceedings

(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 Federal Well No. 1.

(5) Lynx timely filed a de novo appeal of Order No. R-13228 on March 25, 2010. Shortly thereafter, on April 7, 2010, Lynx also filed a Motion to Dismiss and a Motion to Stay Order No. R-13228 with the Commission. Cimarex filed a response to Lynx's motion to dismiss on April 21, 2010. Neither the motion to dismiss or motion to stay was acted on by the Commission.

(6) The Division heard Case No. 14480 on June 10, 2010. Subsequently, the Division Director determined that this case should instead be heard by the Commission since the issues 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.

#### Legal Standards

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

(10) 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, however, 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."

(11) Because the statute only allows for pooling to occur for a spacing unit, Cimarex seeks to form a non-standard spacing unit for its proposed project area.

(12) 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).

(13) 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).

(14) According to the plain language of the Division rules, Cimarex’s project area is a “combination of complete, contiguous spacing units” and not a non-standard spacing unit.

(15) When a party seeks to combine complete spacing units, it is more in the nature of unitization.

(16) When a party seeks to unitize lands for primary production, that party must seek the voluntary agreement of the other interest owners whose lands are being sought to be included in the unit. The Commission has no authority to force an interest owner into the proposed Unit.

(17) 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.” *Id.* at § 70-7-5(D). The Division must then find that the participation formula is fair and reasonable. *Id.* at § 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. *Id.* at § 70-7-6(B). Thus, the parties have the opportunity to negotiate on how production from the unit is allocated and the Division has the opportunity to review the participation formula.

(18) There is no such opportunity to determine a fair and reasonable allocation formula in the pooling statute. In fact, Section 70-2-17 only allows for allocation of production to occur on a straight acreage basis.

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

(20) 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.

(21) 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...” *Id.* at 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.” *Id.* at § 70-2-17(C).

(22) Thus, although the Commission is prevented from deciding an allocation formula for production, the Commission must determine whether the granting of the applications in Cases 14418 and 14480 will prevent waste and protect correlative rights.

### Background

(23) 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.

(24) 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).

(25) 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).

(26) After the Division issued Order No. R-13228, Cimarex immediately began to drill the Penny Pincher Federal Well No. 1. Tr. 19 (Compton). Cimarex had a March 31 deadline under its farm-out agreement with Devon to drill. *Id.* However, Cimarex did not ask for an extension of that deadline from Devon. Tr. 24 (Compton). Also, Cimarex could have drilled a well in the N/2 of the section to satisfy the terms of the farm-out agreement. *Id.*

### Evidence Presented

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

(28) Cimarex's geologist and engineer testified that in the Penny Pincher 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). However, the mud log does not show whether there is equal or substantially similar pay along the entire lateral. *Id.*

(29) 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 Fed Well No. 1 were expected to be equally productive in the Second Bone Spring formation. 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.")

(30) However, now that the well has been drilled, Cimarex could not say that each quarter-quarter section would be equally productive. Tr. 58 (Swain). In fact, 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).

(31) 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.

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

(33) 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).

(34) 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). However, in Cimarex's updated mapping, there is no longer a north/south orientation of the sand. Cimarex Exhibits 9 and 10.

(35) 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).

(36) 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).

(37) 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, only 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).

(38) 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.*

(39) Looking at 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.

(40) 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.

(41) 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.*

(42) Lynx also 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).

(43) 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.)

(44) Cimarex failed to establish that it will not impair correlative rights.

(45) 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.

(46) The Commission finds that it is further not appropriate to form a non-standard spacing unit for a project area in order to qualify for compulsory pooling under these circumstances.

(47) Cimarex's applications should therefore be denied.

(48) Cimarex took the risk of drilling the Penny Pincher Fed Well No. 1 before it had a final order from the Commission. If it wishes to continue producing the well, it will need to reach a voluntary agreement with the rest of the interest owners in the S/2 of Section 21 who have not yet agreed to participate. Otherwise, Cimarex will need to plug the well at least back to the N/2 of the section.

**IT IS THEREFORE ORDERED THAT:**

(1) Cimarex applications to form 160-acre non-standard spacing and a 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 Federal Well No. 1 and the Penny Pincher 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 day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

Jami Bailey

William Olson

Mark E. Fesmire