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

APPLICATION OF PRIDE ENERGY COMPANY FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case No. 22853

APPLICATION OF CIMAREX ENERGY CO. FOR A HORIZONTAL SPACING UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case No. 23295

CIMAREX ENERGY CO.'S CLOSING STATEMENT IN SUPPORT OF ITS DEVELOPMENT PLAN FOR THE THIRD BONE SPRING FORMATION

Cimarex Energy Co. ("Cimarex"), through its undersigned attorneys, submits its "Closing Statement in Support of its Development Plan for the Bone Spring Formation." In support of its position that its development plan is the better plan and therefore should be selected, Cimarex provides the following:

I. Introduction.

- 1. The applications filed by Cimarex and Pride Energy Company ("Pride") in the above-referenced cases compete for development of the same lands, the W/2 W/2 of Sections 12 and 13, Township 19 South, Range 34 East, NMPM, Lea County, New Mexico ("Subject Lands"). Cimarex's plan advocates for the pooling and drilling of the Bone Spring formation, while Pride's plan advocates for pooling and drilling of the Wolfcamp formation.
- 2. Under typical geological conditions, pooling and drilling both the Bone Spring and Wolfcamp as adjacent units would not be an issue. However, in these cases the geological and engineering challenges presented by the Subject Lands, and lands in the same vicinity ("Area of Interest" or "AOI") are not typical nor do they allow "business as usual" by operators in order for the Oil Conservation Division ("Division") to carry out its charge to prevent waste and protect correlative rights..

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3. Cimarex shows herein that it has addressed the seven factors the Division may consider when evaluating competing applications, first and foremost being a comparison of the geological evidence. See, i.e., Order R-21834. The evidence presented at the hearing establishes that: (1) the geologic evidence supports Cimarex's contention that the Bone Spring is the preferred formation to develop;1 (2) Pride's development plan poses a threat to correlative rights and a risk of excessive waste;² (3) Cimarex engaged in good faith negotiations with Pride from the start of this controversy and offered a solution that would allow both parties to go forward with their development plan;³ (4) Cimarex has been a pioneer and major player in the development of the AOI with a long track record of prudent operatorship in the AOI;⁴ (5) the AFEs between the two plans for the cost of a well differ by approximately 12.5%, with Cimarex just slightly higher but by an amount that is negligible given that these are initial estimations subject to market changes;⁵ Cimarex is drilling three wells to optimally produce the Bone Spring so its plan is more expensive, while Pride is drilling only one well in the Upper Wolfcamp which, as shown herein, will drain the 3rd Bone Spring Sand; (6) Cimarex owns a majority working interest ("WI") of 50% in the Bone Spring, while Pride owns a minority WI of 25% in the Wolfcamp;⁶ and (7) Cimarex having drilled 35 wells in the 3rd Bone Spring within the AOI demonstrates that it has the experience to timely locate well sites and operate on the surface.⁷

- II. The lack of frac baffles between the two formations precludes the economical development of both formations given the landing zone proposed by Pride.
- 4. What drives the need for the Division to give these two cases, and similar cases covering

¹ See Cimarex's Exhibit B, ¶¶ 13-14

² See Tr. 116: 6-17; 173: 5-9.

³ See Cimarex's Exhibit A, ¶¶ 7-8

⁴ See Cimarex's Exhibit C, ¶ 4.

⁵ See Cimarex's Exhibit A-2 and Pride's Attachment D.

⁶ See Cimarex's Exhibit A-3; Pride's Attachment B. It should be noted that Chevron U.S.A., Inc. owning 25% WI in both the Bone Spring and Wolfcamp supports Cimarex's Bone Spring plan over Pride's Wolfcamp plan reflecting Chevron's trust in Cimarex's plan to better protect its correlative rights through development of the Bone Spring, which results in 75% of the WI supporting Cimarex.

⁷ See Cimarex's Exhibit C, ¶ 4.

lands in the AOI,⁸ a thoughtful and innovative approach – one that is required in order to prevent waste and protect correlative rights — is the nature and character of the geology between the Bone Spring and Wolfcamp formations underlying the Subject Lands. Cimarex's development plan and landing zone is ideally positioned to produce the Bone Spring, specifically the Third Bone Spring Sand, while Pride's development plan and landing zone is also strategically positioned to extract the majority of oil and gas, not from the Upper Wolfcamp as presented, but from the same Third Bone Spring Sand that Cimarex has targeted. Due to the lack of a frac baffle, both development plans, Cimarex's and Pride's, will capture the majority of hydrocarbons from the Third Bone Spring Sands. *See* Cimarex's Exhibit B, ¶13-14 (showing that the Go State Com 401H Well at "only 100[feet]" from the base of the Third Bone Spring "would access the Bone Spring reservoir," and based on the Geologist's "full assessment of the Bone Spring and Wolfcamp formations, plus the lack of frac baffles...," Cimarex has proposed the superior development plan while Pride's well would undermine correlative rights and drain mostly from the 3rd Sand); *see also* Cimarex's Exhibit B-8.

5. Pride's Geologist agrees with Cimarex that the two formations, Bone Spring and Wolfcamp, lack frac baffles which if they existed, would have effectively separated the two formations and kept their production separate. *See* Tr. 141:5-25 (Pride's Geologist stating that he is familiar with the concept of frac baffles and that he analyzed the formations and based on his analysis opined that: "I don't believe there are any – any baffles." Further stating, "some formations might have a hard, tight interval on them that would prevent a frac – a frac job from penetrating either from above or below." And then Pride's Geologist arriving at the same conclusion as Cimarex's Geologist, opined that: "I agree that there are no – you know, and I looked at the Cimarex geology presentation also, *and I am in agreement with that.*" (emphasis added). Thus, both geologists confirmed the unique geology of

⁸ *See* competing Case Nos. 23448-23455, 23594-23601, 23508 – 23523 ("23448 et al.") for Cimarex and Permian Resources.

the Subject Lands – the lack of a frac baffle between the Third Bone Spring Sand and the Upper Wolfcamp.

- III. The preference for Bone Spring development is clearly evident across the Subject Lands and Area of Interest, a bright line signal that Cimarex's plan for the Third Bone Spring is the preferred plan.
- 6. Cimarex's Reservoir Engineer, Mr. Mark McCoy, provides the Division with a very clear picture of how the unique geology of the area determines which formation operators will develop in the Subject Lands and AOI. *See* Cimarex's Exhibit C-1 for a graphic illustration that shows how the unique geology results in an overwhelming incidence of Third Bone Spring development in the Subject Lands and AOI compared to the paucity and lack of development in the Upper Wolfcamp formation. The contrast is both undeniable and dispositive, as Cimarex's Reservoir Engineer explains:

"The 3rd Bone Spring is an established, successful target near the Subject Lands, having been executed 222 times. Coterra/Cimarex had a large hand in this, drilling 35 3rd Bone Spring wells near the Subject Lands since 2020. Figure 1 in Exhibit C-1 is a visual demonstration of the prevalence of the 3rd Bone Spring as a target near the Subject Lands. It is obvious from the number of times this zone has been drilled that it is highly prolific. The Wolfcamp is a largely untested zone with moderate to poor results near the Subject Lands, having been executed only 22 times, or 10% as frequent as the 3rd Bone Spring." Cimarex's Exhibit C, ¶ 4.

- 7. Cimarex has fully substantiated its advocacy for the development of the prolific Third Bone Spring over the less productive Upper Wolfcamp by providing supporting production data for the Division's review. In contrast, Pride has failed to provide production data supporting its claim that the Upper Wolfcamp is the better development option. *See* Cimarex's Exhibit C-2 demonstrating that the best flow properties and majority of reserves are located within the Third Sand; *see also* Cimarex's Exhibit C-3 showing that in wells near the Subject Lands with similar completions, the Third Sand strongly outperforms the Wolfcamp. Cimarex has seized upon the superior productivity of the Third Sand to drill 35 successful Third Bone Spring units and affirms that its plan for the Third Bone Spring as proposed in the Subject Lands will be just as successful. *See* Cimarex's Exhibit C at ¶ 4.
 - 8. A survey of offset units that Pride has drilled and developed in Section 13 of the Subject

Lands reflects Cimarex's assessment that the overwhelming number (90%) of wells in the AOI are drilled in the Bone Spring formation, and a small minority of wells (10%) are drilled in the Wolfcamp. *See id.* Pride has drilled six offset wells, and all the wells target the Bone Spring, with two of the wells specifically targeting the 3rd Bone Spring. *See* Cimarex's Exhibit A, ¶ 11. None of Pride's offset wells target the Wolfcamp formation. *See* Tr. 111: 1-13.

- 9. The Division should take note of the overriding pattern of development in the AOI, to wit: if the Bone Spring is drilled, a prudent operator will not develop the Wolfcamp because the unique geology makes the additional Wolfcamp wells uneconomical, as they contribute nothing to overall production and therefore would be considered unnecessary wells under the Oil and Gas Act ("Act")(see NMSA 1978 §70-2-17(C)). And if the Wolfcamp is drilled, a prudent operator will not develop the Bone Spring for the same reasons. See Cimarex's Exhibit C-1 for a clear illustration of this pattern that in general either the Bone Spring or the Wolfcamp is drilled, not both, and an overwhelming percentage of wells are in the Bone Spring; see also Tr. 262:18-25; 263: 1-25; and 264: 1-6 (Cimarex's Reservoir Engineer explaining that Cimarex would only drill their 3rd Bone Spring well if it is economical, meaning that Cimarex would not drill and develop the unit if Pride drills its well at its current landing zone which would result in fracs entering into and draining the Third Bone Spring, but noting that if Pride lowered its landing zone to the location that Cimarex recommends, then the economics would allow Cimarex to drill its Bone Spring wells).
- 10. This "either/or" pattern of development in the Subject Lands and AOI includes the units drilled and developed by Permian Resources Operating, LLC ("Permian Resources"), a party currently involved in a number of cases related to the present cases.⁹ A survey of the Division's database shows

⁹ Permian Resources is involved in cases (Case Nos. 23448 et al.) that are closely related to the present cases. *See* Tr. 285: 21-25; 286: 1-16 (Counsel for both Cimarex and Pride discussing the usefulness of referencing documents filed in Permian Resources' related cases, and the Hearing Examiner encouraging their use to help the Division understand "the big picture as much as possible" since the goal is "to enhance the Division's overall understanding of these issues.")

that Permian Resources began actively pooling units in the AOI in 2020. As would be expected based on Cimarex's data herein, 10 of the 11 applications that Permian Resources filed sought to pool only the Bone Spring and none sought to pool both formations underlying the same lands. ¹⁰ One application proposed to drill the Upper Wolfcamp but not the Third Bone Spring, thus also confirming the pattern.

- discovered that they can pool and develop the subpar Wolfcamp by placing their landing zones at the top of the Upper Wolfcamp and thereby drain the Third Bone Spring. If an operator, who owns more WI in the Wolfcamp than the Bone Spring, or who only owns in the Wolfcamp, as Pride does, drills the Upper Wolfcamp before the Bone Spring has been drilled, the operator can completely drain the Third Bone Spring, rendering economic development of the 3rd Bone Spring impossible. Consequently, in this particular AOI, an operator can maximize its own financial gain by acquiring and developing substantially cheaper acreage, thus sacrificing the optimal production potential of the common sources of supply in the 3rd Bone Spring, resulting in waste, violation of correlative rights, and the drilling of unnecessary wells.
- 12. The present cases are novel in nature and may be the first of their kind before the Division, presenting questions and issues of first impression. *See* Tr. 102: 23-25; 103: 1-3. Such issues have newly arisen because the lack of baffling between the formations underlying the AOI skews the primary location of the reservoir and common source of supply, such that the pool designation and reservoir may not be fully aligned, and this misalignment becomes problematic for optimal production, drainage, and the proper application of the regulatory framework to prevent waste, protect correlative rights, and avoid the drilling of unnecessary wells. *See* Cimarex Exhibit B, ¶ 13-14 (discussing the difficulty of targeting the actual reservoir based on the pool and formation designations). Under the Act, a pool designation and code must encompass a single "common source of supply" and "common

 $^{^{10}\} See\ Case\ Nos.\ 23508,\ 23509,\ 23510,\ 23511,\ 23524,\ 23525,\ 23526,\ 23527,\ 23528,\ 23529\ and\ 23530.$

reservoir." See NMSA 1978 § 70-2-33. The pool designations in the AOI may have been more aligned and functional for vertical wells in years past because without fracing, the lack of baffles between the formations would not be much of an issue.

- 13. Today, however, with advances in fracing technology coupled with an updated understanding of frac behavior, the pool designation in the AOI may no longer be aligned with the common reservoir. *See* Tr. 245: 18-25 (showing that fracs grow upward from the Upper Wolfcamp into the Third Bone Spring and drain it); *see also* Hydraulic Fracturing Test Site 2, which Cimarex has provided to the Division. Cimarex is likely the first operator willing to address candidly these issues of first impression -- instead of exploiting them -- in an effort to advocate for what it believes to be the proper approach for development in the AOI. The backdoor left open in the Upper Wolfcamp for operators to exploit is a vestige from the vertical world, and the issues of first impression in the present cases are important to help the Division account for these vestiges of the past as New Mexico continues to make its full transition into the horizontal world with a more refined application of its regulatory framework.
 - IV. Cimarex's development plan neither undermines nor infringes on owners' correlative rights; to the contrary, it enhances the owners' correlative rights and better prevents waste.
- 14. Pride mistakenly equates "drainage" with "producing" and "production," as does Permian Resources, ¹¹ and uses this false equivalency to claim that certain amounts of drainage from the Upper Wolfcamp would undermine the correlative rights of the Wolfcamp owners. *See* Tr. 274: 23-25: 275: 1-8. However, "drainage" is distinct and separate from "production" under the Act and

¹¹ Permian Resources recently submitted to the Division in Cases 23448 et al. its 10-page "Response to Cimarex's Legal Memorandum," responding to Cimarex's "Brief Providing the Basis for Evaluating a Single Reservoir Situated in the Third Sand of the Bone Spring Formation in an Area that Lacks a Baffle Separating it from the Underlying Wolfcamp Formation ("Brief")" in which Permian Resources has asserted a number of arguments against Cimarex's plan that highlight unresolved legal issues to which Cimarex has not had the opportunity to reply, but Cimarex does have available direct responses showing how its Options I and II in Cases 23448 et al. are both valid and preferrable under the Act, contrary to Permian Resources' claims. Cimarex would accept an opportunity to provide such a reply if granted.

must be maintained. See Tr. 223: 14-25; 224: 1-25; 225: 1-15 (substantive discussion among Counsel about the distinction between "drainage" and "production"). First, prior to pooling the unit, the Division may establish a proration unit for each pool based on the geological characteristics that determine the extent to which the area can be "efficiently and economically drained." See, i.e., NMSA 1978 § 70-2-17(B). Once the spacing unit is established, the owners of the tracts in the unit may "validly pool their interests and develop their lands as a unit." See id. at § 70-2-17(C). If the owners cannot agree to pool their interest, the Division shall pool all or any of such interests in the spacing unit as a unit. Id. It is at this point in the process that whatever was determined to be efficiently and economically "drained" in the established pool, becomes a pooled unit, and the category applied to the hydrocarbons extracted from the unit shifts from being defined as "drainage" to being defined as "production" and "produced." 12

15. Thus, once the Bone Spring is pooled under Cimarex's plan, the rightful owners in the Bone Spring, since the ownership is fully uniform within the Bone Spring formation, would receive their just and equitable share of oil and gas "produced" from the Bone Spring, which would provide the more prolific production and therefore enhance the owners' correlative rights. *See* Tr. 116: 6-17; 173: 5-9. In contrast, if the Wolfcamp were pooled and drilled, then all the Bone Spring owners who, except for Pride and Cimarex, own the same proportions in the Wolfcamp as they do in the Bone Spring (*see* Tr. 172: 24-25; 173: 1-4) would receive lesser amounts for their respective percentages and thus would not receive their "just and equitable share" as required by statute. In addition, the more prolific Bone Spring formation could never be developed due to it being drained, which is one of the reasons a company like Chevron with its 25% WI in both the Bone Spring and Wolfcamp supports Cimarex's

¹² It is not possible within the page limitations of this Closing Statement to provide a full overview of how "drainage" is separate and distinct from "producing" and "production" under the Act. For a thorough explanation of the distinction between drainage and production, see pages 6-10 of Cimarex's "Brief," filed in its cases with Permian Resources (Cases 23448 et al).

plan and not Pride's plan. See Tr. 287: 2-13.

- 16. Given the unique geology in the AOI, there is no doubt that Pride's and Permian Resources' wells drilled in Third Bone Spring units in the AOI are currently draining a certain percentage (likely up to 26%) from owners in the Upper Wolfcamp, many of whom own different percentages between the two formations. If the Division adopted the arguments asserted by Pride and Permian Resources that "drainage" and "production" are one and the same and therefore there is no distinction between the two because it all comes out of the same wellbore hole, then they should be required to compensate all the Wolfcamp owners for the drainage caused by every Bone Spring unit they operate in the AOI. However, under the Act operators are not required to compensate owners in adjacent formations for incidental drainage.
- 17. It is the distinction between "drainage" and "production" in the Act that provides operators a protective firewall in the Delaware Basin, allowing operators to pool a single formation, and then only after it is pooled, "produce" that formation without concern that the production also happens to incidentally drain a certain amount from an adjacent formation. Under the Act, this "drainage" is allowed because it is separate and distinct from "production." If the Division accepts the arguments of Pride and Permian Resources, this critical distinction between drainage and production would dissolve, thereby exposing all operators in the AOI to substantial liability claims. Fortunately, the distinction between "drainage" and "production" is clearly established in the Act, thus allowing operators to have incidental drainage without liability.¹³
 - V. Conclusion: Cimarex's plan should be selected over Pride's plan; however, both Cimarex and Pride offer a solution that would allow for both plans.

¹³ This is why in the AOI Pride is able to pool and produce only the Bone Spring while draining from the Upper Wolfcamp in all its Bone Spring only units without violating correlative rights; why Permian Resources is able to pool and produce only the Bone Spring while draining the Upper Wolfcamp in all its Bone Spring only units without violating correlative rights; and finally, why Cimarex's Option I, which pools and produces only the Bone Spring, in its cases with Permian Resources (23448 et al.) is a perfectly viable plan, that does not violate correlative rights and is consistent with how operators maximize production from the lands in the AOI.

18. Pride's Geologist offers the same solution as Cimarex to the question of how Pride

could fully develop its correlative rights in the Wolfcamp without negating the economic viability of

the Bone Spring. Pride's Geologist points out that Pride could lower its landing zone if Pride worked

with a frac engineer to design the fracs to produce more precisely the Upper Wolfcamp and not frac

the Third Bone Spring. See Tr. 125: 21-25; 126: 1-13 (explaining how Pride's landing zone could be

lowered and the fracs designed to produce only the Upper Wolfcamp).

19. Cimarex during its good faith negotiations with Pride prior to the hearing offered Pride

this same recommendation, that Pride should lower its landing zone and then design the fracs so that

both formations, the Bone Spring and the Wolfcamp, can be properly developed. See Tr. 248: 23-25;

249: 1-4 (Cimarex's Reservoir Engineer agreeing with Pride's Geologist: "I believe that you could

land the Wolfcamp well lower where Cimarex is proposing Pride to land their well and frac the well

such that you will fracture into the Wolfcamp sands...I think this is a viable solution"); see also

Cimarex's Exhibit B-6 (proposing a landing zone for the Go State Com 401H well 200' below Pride's

landing zone); Cimarex's Exhibit C-5 regarding proper landing zone for Pride's well.

20. Thus, Cimarex respectfully requests that the Division approve its development plan for

the Bone Spring unit, allowing Cimarex to pool and operate the unit as proposed. If Pride should decide

that it wants to develop and produce the Wolfcamp formation, then the Division should allow Pride to

do so, providing that Pride lowers its landing zone in accordance with Cimarex's specifications. This

configuration is the only means by which both pools can be developed prudently and economically.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New MexicoOil Conservation Division and was served on counsel of record via electronic mail on August 7, 2023:

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