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

APPLICATIONS OF AVANT OPERATING, LLC FOR COMPULSORY POOLING AND APPROVAL OF AN OVERLAPPING NON-STANDARD HORIZONTAL SPACING UNIT, LEA COUNTY, NEW MEXICO.

CASE NOS. 24632 - 24633

APPLICATIONS OF MAGNUM HUNTER PRODUCTION, INC. FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NOS. 24756 - 24759
CASE NOS. 24913 - 24916

APPLICATIONS OF MRC PERMIAN COMPANY FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO.

CASE NOS. 24760 – 24767

MRC'S POST-HEARING BRIEF AND PROPOSED FINDINGS

MRC Permian Company ("MRC") (OGRID No. 4323) submits this post-hearing brief and proposed findings pursuant to the instructions of the Hearing Examiner following the November 6, 2024, hearing in these consolidated matters.

POST-HEARING BRIEF

The pooling applications filed by MRC and Magnum Hunter Production, Inc. (Magnum Hunter referred to at the hearing as "Cimarex" and "MHPI") seek to create Bone Spring and Wolfcamp horizontal well spacing units that overlap in Section 33, Township 18 South, Range 33 East in Lea County. Both companies seek to initially develop the same Bone Spring and Wolfcamp intervals underlying Section 33. The fundamental difference in the initial development plan is the orientation of the proposed wells. MRC has proposed horizontal well spacing units for two-mile standup wells (north/south) to be drilled from existing well pads in the S2S2 of Section 21 south through Sections 28 and 33. Cimarex has proposed horizontal well spacing units for two-mile well

laydown wells (east/west) to be drilled from new well pads in the W2W2 of Section 33 east through Section 32. Cimarex's proposed laydown horizontal well spacing units are inconsistent with:

(a) the standup horizontal well spacing units proposed by Avant Operating under Cases 24632 and 24633 for the Bone Spring and Wolfcamp formations underlying adjacent Sections 29 and 32,

(b) the orientation of Avant's other horizontal well spacing units to the west of the subject acreage,

(c) the orientation of MRC's horizontal spacing units to the northeast, north and east of the subject acreage,

(d) the orientation of Cimarex's horizontal drilling projects in the adjacent sections to the south of the subject acreage,

(e) the orientation of the horizontal wells drilled by a vast majority of the operators in the Sections surrounding Section 33, and

(f) the orientation of the wells drilled by a vast majority of the operators in the Townships surrounding Section 33.

See Avant Ex. C-4; MRC Exs. A-8, A-10, and C-1; MHPI Rebuttal Ex. 1, slide 1. Since MRC and Avant have presented compelling evidence a standup orientation for horizontal wells in the subject area will recover more oil and gas than the off-pattern, laydown wells proposed by Cimarex, the Division must deny Cimarex's applications in favor of the applications filed by MRC and Avant.

A. The Prevention of Waste is the Paramount Duty of the Oil Conservation Division.

The following excerpt from *Santa Fe Exploration Co. v. Oil Conservation Commission* provides a succinct explanation of Commission/Division authority under the Oil and Gas Act and the interplay between the prevention of waste and the protection of correlative rights:

> "The Oil Conservation Commission is a creature of statute, expressly defined, limited and empowered [****25] by the laws creating it." *Continental Oil Co. v. Oil Conservation Comm'n*, 70 N.M. 310, 318, 373 P.2d 809, 814 (1962). The Oil and Gas Act gives the

> Commission and the Division the two major duties: the prevention of waste and the protection of correlative rights. NMSA 1978, § 70-2-11(A); *Continental Oil Co.*, 70 N.M. at 323, 373 P.2d at 817. Correlative rights are defined as
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> > The opportunity afforded * * * to the owner of each property in a pool *to produce without waste* his just and equitable share of the oil * * * in the pool, being an amount, so far as can be practicably determined and so far as *can be practicably obtained without waste*, substantially in the proportion that the quantity of recoverable oil * * * under the property bears to the total recoverable oil * * * in the pool and, for such purpose, to use his just and equitable share of the reservoir energy.
>
> NMSA 1978, § 70-2-33(H). In addition to its ordinary meaning, waste is defined to include "the locating, spacing, drilling, equipping, operating or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil * * * ultimately recovered from any [****26] pool." NMSA 1978, § 70-2-3(A).

1992-NMSC-044, at ¶27 (emphasis added in the definition of correlative rights). The New Mexico Supreme Court has long observed that the prevention of waste is the paramount duty of the Oil Conservations Commission/Division, since it is a restriction on the ability of a mineral owner to exercise correlative rights. *See Cont'l Oil Co. v. Oil Conservation Comm'n*, 1962-NMSC-062, ¶11 ("the prevention of waste is the paramount power, inasmuch as this term is an integral part of the definition of correlative rights."); *Grace v. Oil Conservation Commission of New Mexico*, 1975-NMSC-001, ¶29 (Upholding a temporary gas proration order stating: "Prevention of waste is paramount, and private rights, such as prevention of drainage not offset by counter drainage and correlative rights must stand aside until it is practical to determine the amount of gas underlying each producer's tract or in the pool.").

Division Orders have focused on the prevention of waste, noting "the most important consideration in awarding operations to competing interest owners is geologic evidence as it relates to well location and recovery of oil and gas and associated risk." *KCS Medallion Resources v. Yates Petroleum*, Order R-10731-B, ¶ 23(f) (Feb. 28, 1997). Division Orders have consistently listed as the first factor to consider: "A comparison of geologic evidence presented by each party as it relates to the proposed well location and the potential of each proposed prospect to efficiently recover the oil and gas reserves underlying the property." *Cimarex v. Chevron,* Order R-22204,

¶12 (July 25, 2022). The Commission has instructed that only in "the absence of compelling factors such as geologic and prospect differences, ability to operate prudently, or any reason why one operator would economically recover more oil or gas by virtue of being awarded operations than the other" does working interest control become the factor in awarding operations. KCS Medallion Resources v. Yates Petroleum, Order R-10731-B, ¶ 24 (Feb. 28, 1997). *See also Longfellow Energy v. Spur Energy,* Order R-21834 at ¶ 31 (9/8/21) (Deciding the competing pooling cases based on Longfellow's superior development plan and the surface factor instead of controlled working interest); COG Operating v. Mewbourne, Order R-21198 (11/3/20) at p. 5, Conclusions ¶8 and ¶13 (Holding that because "COG failed to establish that its applications, if granted, would more efficiently recover the oil and gas reserves underlying Section 6"……."the mineral interest ownership held by each party at the time the application was heard supports independent development by Mewbourne of Section 6, and by COG of Sections 7 and 18."); Cimarex v. Chevron, Order R-22204 (7/25/22) at ¶25 (Deciding the case based on ownership only after finding "the evidence on competing development plans to be insufficient to support one plan over the other.")

B. Since the Evidence Indicates Laydown Wells Risks Causing Waste, these Cases Cannot Be Decided Based on Cimarex's Superior Ownership in Section 33.

The acreage involved is State lands, and Cimarex's superior working interest in the State leases covering Section 33 is undisputed. However, that superior working interest control does not authorize Cimarex to produce oil in a fashion that causes waste. Since MRC and Avant have presented compelling evidence that a standup orientation for horizontal wells in the subject area will recover more oil and gas than the laydown orientation proposed by Cimarex, these cases cannot be decided based on ownership control.

For starters, it is undisputed an overwhelming majority of operators in the sections and townships around Section 33 have drilled wells in a standup orientation. *See* MRC Ex. C-1 and

MHPI Rebuttal Ex. 1, slide 1. This established standup well orientation includes development by Cimarex in adjacent sections to the south of the subject acreage, and MRC and Avant in adjacent sections to the west, northwest, north, northeast and east of the subject acreage. *See* Avant Ex. C-4; MRC Exs. A-8 and A-10. This standup development pattern by operators in this area is supported by the often-cited, peer reviewed publication stating the stress orientation in the subject area is anywhere from 60 to 75 degrees, which undisputably requires standup wells to maximize the recovery of oil. *See* MRC Ex. G (Lund Snee & Zoback Report) at Figure 2, Box 2, at p. 4 (page 130 of the Report).

All parties agree that properly orientating horizontal wells to the stress orientation is necessary to prevent waste. *See, e.g.* 11/6 Tr. 147 (Frey). Cimarex's geologist acknowledged a stress orientation of around 45 degrees is required in the subject area to allow operators to orient wells in a standup or laydown fashion and that the necessary 45-degree orientation is reflected by the top red arrow Cimarex placed on the Lund Snee & Zoback map. 11/6 Tr. 149-150 (Frey); Tr. 228 (Bradfute); *Compare* MHPI Ex. B-2 with MRC Ex. G, Figure 1 at p. 2 (page 128 of Report). Anything greater than 45-degrees requires a standup orientation to avoid waste. 11/5 Tr. at 121 (Harper). Accordingly, the Division cannot grant Cimarex's applications for off-pattern, laydown horizontal wells unless the Division concludes the stress orientation in Section 33 is around 45 degrees or less. As outlined in MRC's proposed findings below, the record does not support that conclusion. To avoid waste, Cimarex's applications must be denied in favor of the applications filed by MRC and Avant for standup horizontal well spacing units.

C. It is Undisputed Cimarex's Off-Pattern Laydown Wells Will Require Unnecessary Surface Disturbance.

The primary reason for denying Cimarex's applications for off-pattern laydown horizontal well spacing units is Cimarex's failure to establish that the stress orientation is around 45-degrees or less in Section 33. However, there are other important reasons MRC's applications should be

granted. For example, MRC has extensive infrastructure in the subject area due to its existing standup well development around the subject acreage. *See* MRC Ex. A-8. As a result, MRC is able to drill its proposed Bobby Pickard wells from existing drilling pads located in the S2S2 of Section 21 and utilize existing tank batteries at this facility. MRC Ex. A at ¶¶ 18-20, referencing MRC Ex. A-8; 11/5 Tr. 202-03 (Wooten); 11/5 Tr. 286 (Shulz). MRC proposed standup development plan will not only prevent waste but avoid additional surface disturbance.

In contrast, Cimarex's proposed off-pattern, laydown wells will require new well pads, a new tank battery, new roads, and new bulk lines generating at least 24-acres of surface disturbance in the E2E2 pf Section 33 where little surface disturbance currently exists. *See* MHPI Ex. C-1; 11/6 Tr. 192 (Boyle). This surface factor, and the other factors outlined in the proposed findings below, further demonstrate why Cimarex's applications must be denied. *See* Longfellow Energy v. Spur Energy, Order R-21834 at ¶ 31 (9/8/21) (Deciding the competing pooling cases based on Longfellow's superior development plan and the surface factor instead of controlled working interest).

D. Cimarex's Pooling Applications Do Not Account for an Ownership Depth Severance in the Bone Spring Formation Underlying Section 32 and Do Not Provide Notice for the Pooling of Proposed "Contract Areas."

Cimarex and Avant agree that Section 32, which is not involved in MRC's applications, has an ownership depth severance in the Bone Spring formation. 11/5 Tr. 99 (Guerra); 11/6 Tr. 58 (Sikes). Because of this ownership depth severance, Cimarex initially filed pooling applications that sought to create Bone Spring spacing units "from the top of the First Bone Spring (at a depth of the stratigraphic equivalent of 7,760 measured feet) to a depth of the stratigraphic equivalent of 9,668 measured feet as identified on the Spectral Density Dual Spaced Neutron Log in the Matador Petroleum Corporation Zafiro State 32 Com 1 (API No. 30-025-34508) ("Bone Spring Interval")." *See* Magnum Hunter Cases 24684-24687. For undisclosed reasons, Cimarex dismissed these cases and replaced them with Cases 24913-24916. These new applications seek to pool the entire Bone

Spring formation underlying Sections 32 and 33, without mentioning or addressing the ownership depth severance in Section 32. *See* Cases 24913-24916; 11/5 Tr. 103-104 (Guerra).

At the hearing, Cimarex proposed to address this depth severance with "Contract Areas." However, neither Cimarex's pooling applications nor in the Division's public notice for those applications provide notice of a desire to pool identified "Contract Areas," and the affected parties have not agreed to an allocation of production based on "Contract Areas." 11/6 Tr. 61-66 (Sikes). Accordingly, the Division is not in position to pool for particular "Contract Areas," leaving the ownership depth severance in Section 32 unresolved for the pooled owners. In contrast, MRC's applications to pool Sections 28 and 33 have no ownership depth severances in the Bone Spring formation, thereby allowing development under standard pooling orders.

PROPOSED FINDINGS AND CONCLUSIONS

The following findings and conclusions demonstrate that Cimarex's applications for laydown horizontal well spacing units must be denied in favor of the applications filed by MRC and Avant for standup horizontal well spacing units.

The Parties Presented Compelling Evidence That Standup Horizontal Well Spacing Units Are Necessary in the Subject Area to Prevent Waste

The Lund Snee & Zoback Report

1. The Lund Snee & Zoback Report is a peer reviewed, "widely accepted" and regularly cited report by oil and gas geologists to identify the horizontal stress orientation in the Permian Basin of New Mexico. 11/5 Tr. 120, 145 (Harper); 11/5 Tr. 235 (Parker); MRC Ex. G.

2. There is a variety of data that went into the stress orientations identified in the Lund Snee & Zoback Report. 11/5 Tr. 238-39 (Parker)

3. All parties agree that properly orienting horizontal wells perpendicular to the stress orientation is necessary to prevent waste. *See, e.g.* 11/6 Tr. 147 (Frey).

4. Avant and MRC utilized the Lund Snee & Zoback Report to conclude the stress orientation in the subject area is greater than 45 degrees and therefore requires horizontal wells to be drilled in a standup fashion to avoid waste. MRC Ex. B (Parker Stmt) at ¶24-¶ 26; 11/5 Tr. 246-247 (Parker); Avant Ex. B (Harper Stmt) at ¶18, 11/5 Tr. 121 (Harper), referencing Avant Ex. B-3.

5. The subject area falls within the southern half of Box 2 shown in Figure 2 of the Lund Snee & Zoback Report, which indicates an average stress orientation of 65 degrees. 11/5 Tr. 236-37 (Parker); 11/6 Tr. 158 (Frey); Matador Ex. G, at p. 4 (Report page 130).

6. The Lund Snee & Zoback Report demonstrates why the predominant orientation of wells around the subject area are standup, and why a "mixed" orientation of horizontal wells does not exist until you get into Eddy County to the west of the subject area. 11/5 Tr. 144-146 (Harper), referencing Avant Ex. B-4 and A-9; 11/5 Tr. 241 (Parker)

The predominant horizontal well orientation for the subject area is standup, including Cimarex's development adjacent to and south of the subject acreage

7. The standup spacing units proposed by Avant and MRC are consistent with the predominantly standup horizontal well development employed by operators around the subject area. 11/5 Tr. 138, 142, 146 (Harper), referencing Avant Ex. B-4 and A-9; MRC Ex. B (Parker Stmt) at ¶ 22-¶ 26, referencing MRC Ex. B-8 & B-9.

    a. Avant's study demonstrates that since 2016, 95% of the horizontal wells drilled in the vicinity of the subject area have been drilled with a standup orientation. Avant Ex. C (Kelly Stmt) at ¶10, discussing Avant Ex. C-5; 11/5 Tr. 153-54 (Kelly).

    b. MRC's study demonstrates over 99% of the horizontal wells drilled in the last ten years in this part of Lea County have been drilled in a standup orientation. MRC Ex. C (Schulz Stmt) at ¶7, discussing MRC Ex. C-1 & C-2.

8. The horizontal well developments directly north and south of the subject acreage are standup wells. MRC Ex. A (Wooten Stmt) at ¶ 24, referencing MRC Ex. A-10.

9. Avant is developing adjacent spacing units to the west of the subject acreage with standup horizontal wells. 11/5 Tr. 177 (Kelly), referencing the Avant Ex. C-4.

10. MRC is developing adjacent spacing units to the northwest, north and east of the subject acreage with standup horizontal wells. MRC Ex. A (Wooten Stmt) at ¶ 18, referencing MRC Ex. A-8.

11. In adjacent Sections 4 and 9 to the south of the subject acreage, Cimarex has chosen a standup well orientation for its "Big Iron" development. 11/6 Tr. 155-157 (Frey), referencing MRC Ex. A-10.

    a. Cimarex's standup horizontal well development directly south of the subject acreage also includes its Cordoniz, Mescalero Ridge, and Chaparral drilling projects. 11/6 Tr. 155-157 (Frey), referencing MRC Ex. A-10.

    b. Cimarex's Mighty Pheasant and Loosey Goosey project in Sections 5 and 8, T20, R34E, are also standup horizontal wells. *See* Cimarex Ex. B, ¶ 6, filed in Cases 23448-23451; MHPI Ex. A-11.

12. With the exception of the Turnpike wells Cimarex has proposed in these cases, ***all*** of Cimarex's proposed or drilled horizontal wells in the subject area are standup wells. 11/6 Tr. 72 (Sikes), referencing MHPI Ex. A-11.

    a. Cimarex's analysis of wells drilled by Cimarex, MRC and Avant in Lea County in the last five years reflects they are all standup wells. MHPI Ex. D-1, discussed at 11/5 Tr. 275-280 (Schulz).

    b. Cimarex's analysis of wells drilled in the vicinity of the subject area reflects they are all standup wells, with MRC drilling the best-performing wells. MHOI Ex. D-10 and D-11, discussed at 11/5 Tr. 280-82 (Schulz).

The degradation analysis presented by MRC and Avant demonstrates standup wells outperform laydown wells

13. MRC and Avant presented studies demonstrating a substantial decrease in well performance by the few laydown wells in the subject area when compared to the predominantly orientated standup wells. MRC Ex. C (Schulz Stmt) at ¶5-¶19, referencing MRC Exs. C-1 through C-6; Avant Ex. C (Kelly Stmt) at ¶9, referencing Avant Ex. C-4.

14. Using the Lund Snee & Zoback Report, MRC analyzed wells drilled in an area with a stress orientation similar to the subject acreage. MRC Ex. B (Parker Stmt) at ¶25, referencing Ex. B-9; 11/5 Tr. 270-273(Parker); MRC Ex C (Schulz Stmt) at ¶¶5-6, referencing MRC Ex. C-1; 11/5 Tr. 288-89 (Schulz).

    a. Cimarex's geologist agreed MRC's study area was "biased towards a certain stress direction" and that the area to the west of MRC's study area has a different stress orientation. 11/6 Tr. 154 (Frey).

    b. Avant's geologist agreed MRC's study area contains a similar stress orientation, and noted that as you move west of MRC's the study area and into Eddy County, the stress orientation changes to accommodate standup or laydown wells. 11/5 Tr. 188-89 (Harper).

    c. MRC's analysis of wells drilled in the Second Bone Spring interval in sections adjacent to or near the subject area demonstrates a 69% degradation in barrels of oil per perforated foot from the few laydown wells when compared to the predominantly orientated standup wells. MRC Ex. C (Schulz Stmt) at ¶10-¶13, referencing MRC Exs. C-3 and C-4; Tr. 11/5 305 (Schulz).

    d. MRC's analysis of a broader study area demonstrates a 19% to 44% degradation in barrels of oil per perforated foot from laydown wells when compared to the predominantly orientated standup wells. MRC Ex. C (Schulz Stmt) at ¶14-¶19, referencing MRC Exs. C-5 and C-6.

15. Avant analyzed wells drilled in the Third Bone Spring interval between 2012 and 2015 in an area within 2-miles of the subject area that has a stress orientation similar to the subject acreage. 11/5 Tr. 176-77 (Kelly)

a. Avant examined wells drilled between 2012 and 2015 to ensure similar frac designs. 11/5 Tr. 152-53 (Kelly).

b. Avant's analysis demonstrates a 52% degradation in barrels of oil per perforated foot from laydown wells when compared to the predominantly orientated standup wells. 11/5 Tr. 152-53 (Kelly); Avant Ex. C (Kelly Stmt) at ¶9, referencing Avant Ex. C-4.

c. The decrease in well performance from the few laydown wells near the subject acreage demonstrates the stress orientation in this area is not conducive to a laydown orientation:

Q. Okay. If the stress orientation in this area was 45 degrees as suggested by Cimarex, would you see this what you called massive reduction in performance?
A. No.
Q. Okay. Is that then, because of this hard data, that's why you've proposed a standup spacing unit; right?
A. That is correct.
Q. And in fact, you've then, according to this exhibit, likewise seek to develop a standup spacing unit right next door with your Speedmaster Unit?
A. Correct? Actually, we have two units, and we already have approved permits and pooling on Royal Oak. And we will be drilling that early next year.
Q. So based on his hard data, you determined that standup units were necessary to prevent waste?
A. Correct.
Q. Okay. And so, in your opinion, if you drill laydown units in this area, is there going to be waste of resources?
A Yes.

11/5 Tr. 177 (Kelly), referencing the Avant Ex. C4.

16. MRC presented an analysis demonstrating MRC's proposed standup wells will yield a greater economic recovery of oil and barrels of oil equivalent than Cimarex's proposed laydown wells. MRC Ex. C (Schulz Stmt) at ¶22-¶38, referencing MRC Ex. C-7.

a. MRC's analysis was conservative, addressing a 15%, 30% and 45% degradation in well performance for laydown wells. 11/5 Tr. 306 (Shulz), referencing MRC Ex. C-7.

17. Cimarex presented a study area that contained similar geology and a similar stress orientation but chose not to analyze the well performance between standup wells and laydown wells. MHPI Ex. D-5; 11/6 Tr. 220-222 (Behm).

18. Cimarex's engineer agreed that frac improvements over time equally impact standup wells and laydown wells. 11/6 Tr. 222-23 (Behm).

Cimarex Did Not Establish the Stress Orientation in the Subject Area is 45-Degrees to Allow Laydown Horizontal Wells

19. Cimarex's proposed well orientation is based on an "estimate" and an "interpolated" stress orientation. 11/6 Tr. 147 (Frey)

20. Cimarex estimates the subject area has a 45-degree stress orientation and reflected that interpolated stress orientation with the top red arrow Cimarex placed on Figure 1 from the Lund Snee & Zoback Report. 11/6 Tr. 149-150 (Frey); Tr. 228 (Bradfute); MHPI Ex. B-2; MRC Ex. G.

    a. MRC's geologist testified he has reviewed the Lund Snee & Zoback Report "many times" and that it does not contain any data to support the orientation of the red arrows Cimarex placed on Figure 1 from that report. 11/5 Tr. 222 & 232 (Parker), referencing MHPI Ex. B-2. *See also* 11/5 Tr. 248-49 (Parker), identifying for counsel the reference in the Report to the Rio Grande rift.

    b. Avant's geologist likewise disagreed with Cimarex's "interpolation" reflected by the red arrows Cimarex placed on Figure 1 of the Lund Snee & Zoback Report. 11/5 Tr. 135 (Harper).

21. Cimarex's geologist conceded that the closest data points to the east and south of the subject area indicate the stress orientation is greater than 45-degrees thereby requiring standup horizontal wells. 11/6 Tr. 147-48 (Frey).

22. In August of 2023, in a case involving a proposed spacing unit one township to the south of the subject area, Cimarex's geologist testified:

    > Exhibit B-1 shows a map made by Jens-Erik Lund Snee and Mark D. Zoback from Stanford University, which depicts the maximum horizontal stress direction throughout the Delaware and Midland Basins. The map on the right is a zoomed in portion of the regional map (red outline), where the blue lines represent the digitized version of the same stress directions. *Based on the regional trend observed by Lund Snee and Zoback, the estimated stress direction at Mighty Pheasant and Loosey Goosey is approximately N70E*, *which means the favorable well orientation is north-south instead of east-west.* [emphasis added]

    See Cimarex Ex. B, ¶ 6, filed in Cases 23448-23451 (addressing Cimarex proposed standup horizontal well spacing units in Sections 5 & 8, T20, R34E); 11/6 Tr. 160 (Frey).

23. The 70-degree stress orientation line Cimarex provided the Division in August of 2023 falls just below the yellow star and between the top red arrow and the middle red arrow Cimarex placed on the Lund Snee & Zoback map. 11/6 Tr. 165 (Frey), referencing MHPI Ex. B-2.

24. The limited focal mechanisms presented in MHPI Ex. 3 are indicative of the type and direction of slip on a fault plane, but do not indicate horizontal stress direction. 11/5 Tr. 136 (Harper); 11/5 Tr. 240, 242-46, 249-250 (Parker).

25. The area studied by Cimarex in MHPI Rebuttal Ex. 1 does not include an area with a similar stress orientation but instead an area with "a blend of stress orientation." 11/16 Tr. 283-84 (Behm)

Evidence Addressing Other Important Factors

26. Cimarex's geologist agreed that MRC's plan to develop the Lower Second Bone Spring interval before developing the Upper Second Bone Spring interval does not risk waste because sufficient frac barriers exist between these intervals. 11/6 Tr. 169 (Frey), referencing MRC Ex. B-6.

    a. Cimarex's geologist agreed that the Lower Second Bone Spring sand targeted by MRC is the "established target" across several townships in the subject area. 11/6 Tr. 170-171 (Frey).

27. The proposed AFE costs presented by the parties are similar and Cimarex's comparison of costs does not account for MRC's updated AFE costs. 11/5 Tr. 282-83 (Schulz); 11/6 Tr. 223 (Behm).

    a. Cimarex's Mescalero Ridge wells are the most recent Bone Spring wells Cimarex has drilled in the subject area. 11/6 Tr. 223-24 (Behm).

    b. Cimarex estimated drilling costs for its Mescalero Ridge wells was 12.2 million dollars, but Cimarex exceeded that estimate by 2.5 million dollars for a total cost of around 15 million dollars. 11/5 Tr. 284-85 (Shulz); 11/6 Tr. 223-24 (Behm).

    c. Cimarex's AFE's for its Lower Wolfcamp and Lower Bone Spring wells do not include facility costs, as Cimarex intends to impose those costs on the owners in the Upper Bone Spring wells. 11/6 Tr. 226-28 (Behm)

    d. There are ownership differences in the Bone Spring formation underlying Cimarex's proposed laydown spacing units, and Cimarex's initial wells will be drilled above the ownership depth severance line. 11/6 Tr. 63 (Sikes)

28. Due to the existing infrastructure associated with MRC's standup development in the area, MRC's proposed standup wells will not require additional surface disturbance. 11/5 Tr. 202-03 (Wooten).

    a. MRC intends to drill the proposed Bobby Pickard standup wells from existing drilling pads in the S2S2 of Section 21 and will utilize existing tank batteries at this facility. MRC Ex. A (Wooten Stmt) at ¶¶ 18-20; 11/5 Tr. 286 (Shulz).

29. Cimarex's proposed off-pattern laydown wells will require new well pads, a new tank battery, new roads, and new bulk lines creating over 24-acres of surface disturbance in the E2E2 pf Section 33 where little surface disturbance currently exists. 11/6 Tr. 192 (Boyle); MHPI Ex. C-1.

30. Due to existing infrastructure in the area, MRC will be able to use recycled water for its proposed development. 11/5 Tr. 286-87 (Shulz).

31. Cimarex did not present any evidence suggesting MRC is not a prudent operator. 11/6 Tr. 219-20 (Behm)

CONCLUSION

The evidence establishes that the Lund Snee & Zoback Report is commonly used by operators as a reliable source for the stress orientation in Eddy and Lea Counties. Figure 2 in the Lund Snee & Zoback report concludes the stress orientation in the subject area averages 65-degrees. Drilling a laydown horizontal well at that stress orientation will cause waste. It is precisely for this reason that a vast majority of operators in and around the subject area have permitted or drilled horizontal wells in a standup orientation. MRC and Avant demonstrated that the few operators that chose to drill horizontal wells in a laydown fashion have experienced a severe degradation in well performance.

Cimarex has failed to provide studies, well log information, empirical evidence, modeling evidence or other data demonstrating the Lund Snee & Zoback Report is incorrect in its assessment of the stress orientation in the subject area. Cimarex has failed to provide studies, well log information, empirical evidence, modeling evidence or other data demonstrating that the stress orientation in the subject area is around 45-degrees to allow either standup or laydown horizontal wells.

Since compelling evidence has been presented that horizontal wells drilled in a standup orientation will more efficiently recover the oil and gas reserves underlying the subject acreage, Cimarex's applications for approval of laydown horizontal well spacing units must be denied, and the applications filed by MRC and Avant for standup horizontal well spacing units must be granted.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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