

**BEFORE THE OIL CONSERVATION DIVISION  
EXAMINER HEARING AUGUST 13, 2024**

**CASE NO. 24528**

*CREATION OF A SPECIAL WOLFBONE POOL*

**LEA COUNTY, NEW MEXICO**

**PERMIAN**  
RESOURCES

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW  
MEXICO.**

**CASE NO. 24528**

**APPLICATION OF CIMAREX  
ENERGY CO. FOR THE CREATION  
OF A SPECIAL POOL, A WOLFBONE POOL,  
PURSUANT TO ORDER NO. R-23089 AND TO  
REOPEN CASE NOS. 23448 – 23455, 23594 –  
23601, AND 23508 – 23523, LEA COUNTY,  
NEW MEXICO.**

**CASE NO. 24541**

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW  
MEXICO.**

**CASE NO. 24528**

**APPLICATION**

Pursuant to Order No. R-23089, ¶ 21, Read & Stevens, Inc. (“Read & Stevens”), through undersigned counsel, submits this application with the Division for an order creating a special Wolfbone Pool within Sections 4, 5, 8, and 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined below (the “Subject Acreage”). In addition, to accommodate the creation of this special pool, Read & Stevens seeks to vertically contract the base of the Teas; Bone Spring, East Pool (Pool Code 96637) upwards to the top of the Third Bone Spring Sand interval, and to vertically contract the top of the Tonto; Wolfcamp Pool (Pool Code 59500) downwards to the base of the Wolfcamp A interval, all within the Subject Acreage as provided below. In support, Read & Stevens states, as follows.

1. Read & Stevens files this application for creation of a special Wolfbone pool within the Subject Acreage in response to the Division’s guidance issued in Order No. R-23089, ¶ 21, attached as **Exhibit A**.

2. The Division issued Order No. R-23089 on April 8, 2024, denying two sets of applications seeking compulsory pooling for separate spacing units within the Subject Acreage in the Bone Spring and Wolfcamp formations.

3. One set of applications were filed by Cimarex Energy Company (“Cimarex”). It filed a total of sixteen applications (“Cimarex Applications”) to compulsory pool uncommitted oil and gas mineral owners within its proposed spacing units as reflected in Cimarex’s exhibits.

4. Cimarex’s applications were filed under Case Nos. 23448-23455 and 23594-23601.

5. Read & Stevens filed a second set of competing compulsory pooling applications targeting the same acreage. It filed a total of sixteen applications to compulsory pool uncommitted oil and gas mineral owners in its proposed spacing units within the same acreage as reflected in Read & Stevens’ exhibits.

6. Read & Stevens applications were filed under Case Nos. 23508-23523.

7. Under their respective applications, both parties propose to develop Sections 5 and 8, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Cimarex’s plan for these lands is named “Mighty Pheasant” and Read & Stevens’ plan is named “Joker.”

8. Both parties are also propose to develop Sections 4 and 9, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Cimarex’s plan for these lands is named “Loosey Goosey” and Read & Stevens’ plan is named “Bane.” Collectively, Sections 4, 5, 8, and 9 are referred to as the “Subject Acreage.”

9. Cimarex's applications propose drilling twelve wells per section with all twelve wells being distributed solely within the Lower Bone Spring formation intervals within the Subject Acreage.

10. Read & Stevens' applications propose drilling twenty-four wells per section distributed between the Lower Bone Spring formation and the Upper Wolfcamp formation intervals within the Subject Acreage.

11. Read & Stevens also proposes to designate Permian Resources Operating, LLC (OGRID No. 372165) as the operator of its proposed horizontal spacing units and of the proposed initial wells under each of its applications.

12. Read & Stevens is a wholly owned subsidiary of Permian Resources Operating, LLC.

13. After a hearing on the merits in these cases before Division legal and technical examiners on August 9, 2023, through August 11, 2023, the Division took these contested cases under advisement.

14. Following the hearing, the parties submitted closing briefs and findings of fact and conclusions of law that are part of the hearing record.

15. It is undisputed that there is a difference in ownership between the Bone Spring formation and Wolfcamp formation within the Subject Acreage. *See* Cimarex's Closing Statement with Findings of Fact and Conclusions of Law ("Cimarex's Findings"), ¶¶ 27-28;<sup>1</sup> Permian Resources' Proposed Findings and Conclusions ("Permian's Findings"), ¶¶ 6-11.<sup>2</sup>

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<sup>1</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448\\_09\\_22\\_2023\\_10\\_42\\_33.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448_09_22_2023_10_42_33.pdf).

<sup>2</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448\\_09\\_22\\_2023\\_10\\_05\\_46.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448_09_22_2023_10_05_46.pdf).

16. Cimarex's proposed wells target the Third Bone Spring Sand interval but, by design, would also drain the Wolfcamp XY/A interval. *See* Cimarex's Findings, ¶ 23. As a consequence, Wolfcamp owners under Cimarex's plan would not be allocated production in accordance with their ownership percentages in the Wolfcamp (Read & Stevens' Findings, ¶¶ 12, 44, 46) or would be apportioned only approximately 27.2% of the production. *Id.* ¶¶ 47-48; *see also* Cimarex's Findings ¶ 23.

17. In addition to violating the requirement of the Oil & Gas Act to allocate production among owners "to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit," NMSA 1978 § 70-2-17(C), Read & Stevens disputes the technical justification for Cimarex's proposed allocation.

18. In contrast, Read & Stevens' proposed wells will simultaneously co-develop the Third Bone Spring Sand interval and Wolfcamp XY/A intervals together, which is expected to stimulate production of incremental reserves substantially beyond what would be produced by targeting the Third Bone Spring Sand interval by itself, as Cimarex proposes. Read & Stevens' Findings, ¶¶ 19, 68-69; *compare* Read & Stevens Exhibit F-8<sup>3</sup> (showing cumulative production plot showing 70,000 bbl production uplift over first 40 days of production for co-developed Third Bone Spring Sand/Wolfcamp development) *to* Updated Exhibit F-8 (showing 360,000 bbl production uplift for co-development through March 2024), attached as **Exhibit B**.

19. On April 8, 2024, the Division issued Order No. R-23809 denying both sets of applications after concluding that "[n]either application can be approved while

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<sup>3</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508\\_07\\_14\\_2023\\_08\\_32\\_12.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508_07_14_2023_08_32_12.pdf).

remaining in compliance with OCD rules and regulations that require pool segregation, prevent[ion of] waste and protect[ion of] correlative rights.” See Ex. A, ¶ 20.

20. The Division found that because the Subject Acreage “lacks natural barriers that would prevent communication between the Third Bone Spring Sand and Upper Wolfcamp [i.e., the targeted Wolfcamp XY/A interval],” the wells proposed by both Cimarex and Read & Stevens to be completed in the Lower Bone Spring and Upper Wolfcamp “will share production from both the Bone Spring and Wolfcamp formations.” See **Exhibit A**, ¶¶ 6-10.

21. The Division noted that neither Cimarex nor Read & Stevens requested a special pool order to account for a common source of supply from the Third Bone Spring Sand and Wolfcamp XY/A intervals within the Subject Acreage. *Id.* ¶¶ 11-12.

22. The Division determined that the Third Bone Spring Sand and Wolfcamp XY/A meet the definition of a “common source of supply” and must be developed as a single “pool,” as defined under the Oil and Gas Act. *Id.* ¶¶ 6, 13-19. But because each zone is currently designated by the Division to be in separate Bone Spring and Wolfcamp pools, neither set of applications submitted by Cimarex or Read & Stevens can be approved. *Id.* ¶ 20.

23. The Division therefore denied both Cimarex’s applications and Read & Stevens’ applications and closed the hearing record unless and until either or both companies propose a special Wolfbone pool, “that would account for the lack of [natural barriers] between the Bone Spring and Wolfcamp formations in this area.” *Id.* ¶ 21.



24. Pursuant to Order No. R-23089, the Division will reopen the hearing record on both sets of applications upon submission of a proposal to create a special Wolfbone pool by either or both companies by incorporating supporting evidence and testimony already in the hearing record. *Id.* ¶¶ 21-22.

25. In accordance with that provision and guidance, Read & Stevens submits the following proposal for creation of a special Wolfbone pool within the Subject Acreage.

**SPECIAL WOLFBONE POOL PROPOSAL**

26. Read & Stevens proposes and requests the Division issue an order creating a special Wolfbone pool, to be named the Gotham; Wolfbone Pool, that would comprise approximately 2,562.40 acres, more or less, in Lea County, New Mexico, as follows:

**Township 20 South, Range 34 East**

Section 4:	All
Section 5:	All
Section 8:	All
Section 9:	All

27. The Subject Acreage is comprised entirely of federal minerals under federal lease NMNM 101115, NMLC 0-065607, NMLC 0-064194. The record title owners under these federal leases are identified and listed in Read & Stevens Exhibit C-7.<sup>4</sup>

28. The vertical extent of the proposed Gotham; Wolfbone Pool will be from the stratigraphic equivalent of the top of the Third Bone Spring Sand interval, located at approximately 10,598 feet measured depth, to the stratigraphic equivalent of the base of

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<sup>4</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508\\_07\\_14\\_2023\\_08\\_32\\_12.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508_07_14_2023_08_32_12.pdf).

the Wolfcamp A interval, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).<sup>5</sup>

29. Formation of a special Gotham; Wolfbone Pool within the Subject Acreage incorporates a depth severance created by ownership instruments that is located at the division between the base of the Bone Spring formation and the top of the Wolfcamp formation. Accordingly, the ownership depth severance is found at a stratigraphic equivalent of approximately 10,876 feet, measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

30. Under the Oil & Gas Act and governing regulations, a “Pool” is defined as:

[A]n underground reservoir containing a common accumulation of oil or gas. Each zone of a general structure, which zone is completely separated from other zones in the structure, is covered by the word pool as used in 19.15.2 NMAC through 19.15.39 NMAC. “Pool” is synonymous with “common source of supply” and with “common reservoir.”

19.15.2.7.P(5) NMAC.

31. Within the Subject Acreage, the Third Bone Spring Sand, which would comprise the upper portion of the proposed special Gotham; Wolfbone Pool, is separated from the overlying Third Bone Spring Carbonate/Harkey interval by tight carbonate rock that serves as a natural “frac baffle,” or barrier, between the Third Bone Spring Sand and the overlying Third Bone Spring Carbonate/Harkey intervals. *See*

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<sup>5</sup> <https://ocdimage.emnrd.nm.gov/imaging/WellFileView.aspx?RefType=WL&RefID=30025310560000>.

Cimarex Case Nos. 23594-23601, Tab 3, ¶ 12;<sup>6</sup> *see also id.* Ex. B-7; Hrg. Tr. Vol. 1, 174:3-7, dated 8/9/23.<sup>7</sup>

32. Within the Subject Acreage, the Third Bone Spring Sand and Wolfcamp XY/A intervals are not separated by a frac baffle or natural barrier and, therefore, constitute a common source of supply or common reservoir within the Subject Acreage. *See* Cimarex Case Nos. 23594-23601, Tab 3, ¶ 21; *see also id.* Cimarex Ex. B-21.

33. Within the Subject Acreage, the Wolfcamp shale within the Wolfcamp A is the primary source rock that contributes oil to the Third Bone Spring Sand/Wolfcamp XY/A common reservoir within the Subject Area. *See* Hrg. Tr. Vol. 2, 81:1-4,<sup>8</sup> dated 8/10/23; *id.* 197:12-20, 199:15-200:7.

34. Accordingly, the Third Bone Spring Sand and Wolfcamp XY/A intervals should be combined into a single special pool within the Subject Acreage to be named the Gotham; Wolfbone Pool.

35. To accommodate the creation of this special pool, Read & Stevens requests the Division issue an Order vertically contracting the base of the Teas; Bone Spring, East Pool (Pool Code 96637) within the Subject Acreage upwards to above the stratigraphic equivalent of the top of the Third Bone Spring Sand, located at approximately 10,598 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

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<sup>6</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230803/23448\\_08\\_03\\_2023\\_07\\_26\\_52.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230803/23448_08_03_2023_07_26_52.pdf).

<sup>7</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448\\_08\\_28\\_2023\\_08\\_01\\_40.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448_08_28_2023_08_01_40.pdf).

<sup>8</sup> [https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448\\_08\\_28\\_2023\\_08\\_10\\_15.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448_08_28_2023_08_10_15.pdf).

36. In addition, Read & Stevens requests the Division issue an Order vertically contracting the top of the Tonto; Wolfcamp Pool (Pool Code 59500) within the Subject Acreage downwards to below the stratigraphic equivalent of the base of the Wolfcamp A, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

37. Creating the proposed special Gotham; Wolfbone Pool within the Subject Acreage, and vertically contracting the offsetting Teas; Bone Spring, East Pool (Pool Code 96637) and the Tonto; Wolfcamp Pool (Pool Code 59500), as described, will allow Read & Stevens' proposed development to meet the requirements of the Oil & Gas Act, as outlined in Order No. R-23089. *See* Exhibit A ¶¶ 15-17.

38. In contrast, because an ownership depth severance exists within the proposed special Gotham; Wolfbone Pool and because Cimarex proposes to develop only the Third Bone Spring Sand interval within it, Cimarex's proposal will impair the correlative rights of owners within the Wolfcamp XY/A portion of the special pool.<sup>9</sup> *See* Permian's Findings, ¶¶ 6-12, 45-48, 68-71; *see also* § 70-2-17(C) (requiring pooling orders to allocate production among owners "to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit").

39. Cimarex acknowledges that where an ownership depth severance exists within a pool it is necessary to propose and develop wells in spacing units on both sides

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<sup>9</sup> Read & Stevens understands Order No. R-23089 provides that the parties are not to submit revised proposals or development plans and that the hearing record will be reopened only for purposes of considering a proposed special Wolfbone pool within the Subject Acreage.

of the depth severance “to account for” the different owners and ownership interests on either side of the ownership break that is not accounted for in Cimarex’s proposal. *See* Hrg. Tr. Vol. 1, 210:10-212:21, dated 8/9/23 (“So even if you did reevaluate or expand the pool, like doing a Wolfbone or something like that, you still have that ownership severance that you would have to account for. And under permit [sic] interpretations of the statute and regulations, you account for a severance by—you know, if you want to produce below the severance, you have to do a separate well bore as I am sure you know. So, we have this issue of how to produce from the—if you did [Cimarex’s] option two, how to produce from the Third Bone Spring and the upper Wolfcamp.”)

40. To avoid impairment of correlative rights and to comply with the Division’s conclusions under Order No. R-23089, Read & Stevens requests the Division create a special Gotham; Wolfbone Pool within the Subject Acreage and contract the vertically offsetting Teas; Bone Spring, East Pool (Pool Code 96637) and the Tonto; Wolfcamp Pool (Pool Code 59500), as proposed, subject to modification under the Division’s discretion.

41. Notice of this proposal will be provided to all owners of a working interest within the Subject Acreage, and all Division-designated operators, or working interest owners as to tracts that do not have a designated operator, within one-mile of the Subject Acreage.

42. Approval of this application protects correlative rights, prevents waste, and will avoid the drilling of unnecessary wells.

WHEREFORE, Read & Stevens, Inc. requests that this application be set for a hearing before an Examiner of the Oil Conservation Division on June 27, 2024, and, after notice and hearing as required by law, the Division enter an Order:

- A. Re-opening the hearing record under Order No. R-23089 for the purpose of considering the creation of a Wolfbone Pool, as proposed herein;
- B. Creating a special Gotham; Wolfbone Pool within Sections 4, 5, 8, and 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined herein;
- C. Vertically contracting the base of the Teas; Bone Spring, East Pool (Pool Code 96637) upwards to the top of the Third Bone Spring Sand interval within the Subject Acreage, as proposed herein;
- D. Vertically contracting the top of the Tonto; Wolfcamp Pool (Pool Code 59500) downwards to the base of the Wolfcamp A interval within the Subject Acreage, as proposed herein;
- E. Approving Read & Stevens' applications under Case Nos. 23508-23523;
- D. Denying Cimarex's competing applications in Case Nos. 23448-23455 and 23508-23523; and
- E. Providing any such additional relief deemed necessary and supported by the evidence within the discretion of the Division.

Respectfully submitted,

HOLLAND & HART LLP

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**ATTORNEYS FOR READ & STEVENS, INC. AND  
PERMIAN RESOURCES OPERATING, LLC**

# EXHIBIT A

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

IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
CIMAREX ENERGY COMPANY

CASE NOS. 23448 - 23455

IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
CIMAREX ENERGY COMPANY

CASE NOS. 23594 - 23601

IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
READ & STEVENS, INC

CASE NOS. 23508 - 23523

ORDER NO. R-23089

## ORDER

The Director of the New Mexico Oil Conservation Division (“OCD”), having heard this matter through legal and technical Hearing Examiners on August 9, 2023, through August 11, 2023, and after considering the administrative record including the sworn testimony, evidence, and recommendations of the Hearing Examiners, issues the following Order.

## FINDINGS OF FACT

1. Cimarex Energy Company (“Cimarex”) submitted a total of sixteen applications (“Cimarex Applications”) to compulsory pool the uncommitted oil and gas interests within the spacing unit as seen in Cimarex’ exhibits.
2. Read & Stevens, Inc. (“Read & Stevens”) submitted a total of sixteen applications (“Read & Stevens Applications”) to compulsory pool the uncommitted oil and gas interests within the spacing unit as seen in Read & Stevens’ exhibits.
3. Both parties are proposing to develop Sections 5 and 8, Township 20 South, Range 34 East. Cimarex’ plan for these lands is named “Mighty Pheasant” and Read & Stevens’ plan is named “Joker.” Both parties are also proposing to develop Sections 4 and 9, Township 20 South, Range 34 East. Cimarex’ plan for these lands is named “Loosey Goosey” and Read & Stevens’ plan is named “Bane.”
4. Cimarex’ applications proposed drilling twelve wells per section with all twelve wells being distributed between the Bone Spring formation intervals.
5. Read & Stevens’ applications proposed drilling twenty-four wells per section with those twenty-four wells being distributed between the Bone Springs formation and the Wolfcamp formation intervals.



6. The lands proposed for drilling by both parties lacks natural barriers that would prevent communication between the Third Bone Spring Sand and Upper Wolfcamp, thereby creating a single reservoir or common source of supply located predominantly in the Third Bone Spring Sand.

7. Cimarex' geologist Staci Mueller affidavit testimony paragraph twelve states:

*There are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank.*

8. Read & Stevens' Reservoir Engineer John Fechtel testified that:

*The – both wells developed in the third bone sand and the wells developed in the XY will share – have some resources from either formation.”*

*(See Tr. (DD 8-10-23) 181: 2-4)*

9. Read & Stevens' Geologist Ira Bradford was questioned about the substantial communication issues and testified:

*Q: So, Mr. Bradford, you talked a little bit about that you do agree with Ms. Mueller that there is substantial communication between the third Bone Spring and the upper Wolfcamp; is that correct?*

*A: Yes.*

*(See Tr. (DD 8-10-23) 206: 11-1)*

10. Cimarex and Read & Stevens both acknowledged that wells completed in the Bone Spring and Wolfcamp formations will share production from both the Bone Spring and Wolfcamp formations.

11. Neither Cimarex nor Read & Stevens requested in their applications or at hearing the creation of a special pool to accommodate the communication of the Bone Springs and Wolfcamp formations such that there is a common supply.

12. Neither applicant requested a special pool order accounting for the common source of supply, or provided notice of a special pool request.

### **CONCLUSIONS OF LAW**

13. OCD has jurisdiction to issue this Order pursuant to NMSA 1978, Section 70-2-17.

14. A "Pool" is defined as "an underground reservoir containing a common accumulation of oil or gas. Each zone of a general structure, which zone is completely separated from other zones in the structure, is covered by the word pool as used in 19.15.2 NMAC through 19.15.39 NMAC. "Pool" is synonymous with "common source of supply" and with "common reservoir." 19.15.2.7.P(5) NMAC.
15. NMSA 1978, Section 70-2-12 B of the Oil and Gas Act requires OCD:
  - (2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata;
  - (7) to require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties;
  - (12) to determine the limits of any pool producing crude petroleum oil or natural gas or both and from time to time redetermine the limits;
16. 19.15.16.9 NMAC requires that during the drilling of an oil well, injection well or other service well, the operator shall seal and separate the oil, gas and water strata above the producing or injection horizon to prevent their contents from passing into other strata.
17. 19.15.12.9 NMAC requires that an operator shall produce each pool as a single common source of supply and complete, case, maintain and operate wells in the pool so as to prevent communication within the well bore with other pools. An operator shall at all times segregate oil or gas produced from each pool. The combination commingling of production, before marketing, with production from other pools without division approval is prohibited.
18. OCD has the authority to create special pool orders when required pursuant to 19.15.2.9 NMAC, when proper notice has been satisfied.
19. The evidence currently in the record before OCD indicates that Read & Stevens' and Cimarex' proposals would lead to either impairment of correlative rights or illegal allocation. Both parties testify that their production would extend outside of their respective pools and impact other pools, as such both requests extend outside of a standard compulsory pooling request.
20. Neither application can be approved while remaining in compliance with OCD rules and regulations that require pool segregation, prevent waste and protect correlative rights.

### **ORDER**

21. OCD hereby denies both applications except insofar as either applicant or both applicants choose to propose a special pool, a Wolfbone pool, that would account for the lack of frac baffles between the Bone Spring and Wolfcamp formations in

this area. The record is left open for such a proposal and will prompt a reopening of the hearing record on both applications.

22. It is not necessary for the parties to repeat the testimony or resubmit the exhibits regarding their original proposed plans; they may refer to existing evidence to the extent needed to justify the special pool request.
23. OCD retains jurisdiction of this matter for the entry of such orders as may be deemed necessary.

**STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION**



**DYLAN M. FUGE**  
**DIRECTOR (Acting)**  
DMF/jag

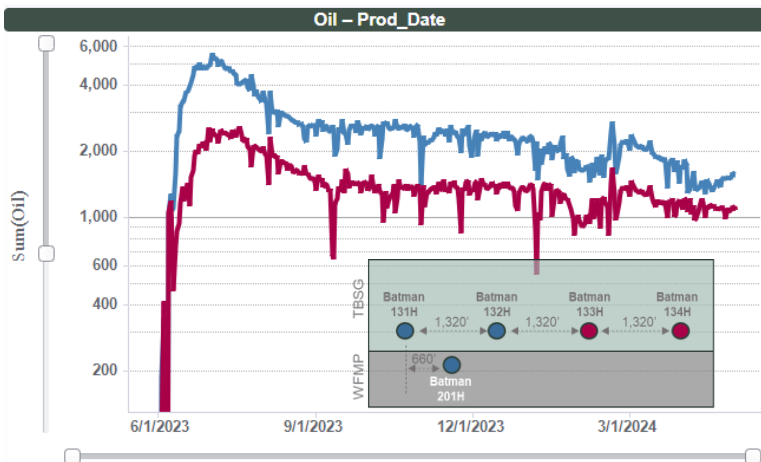
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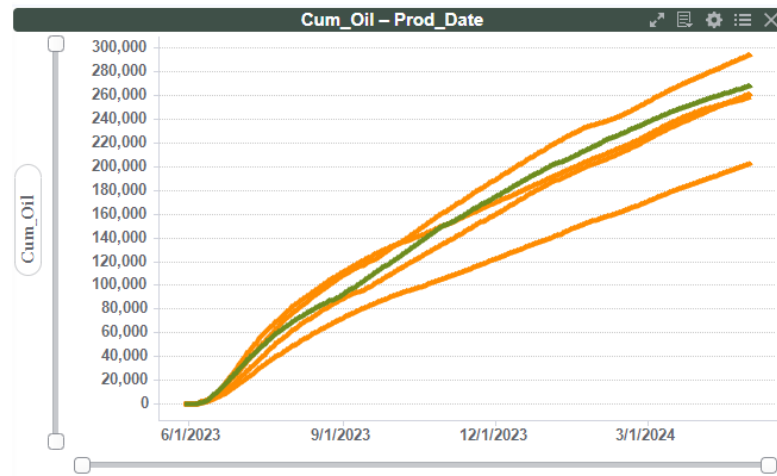
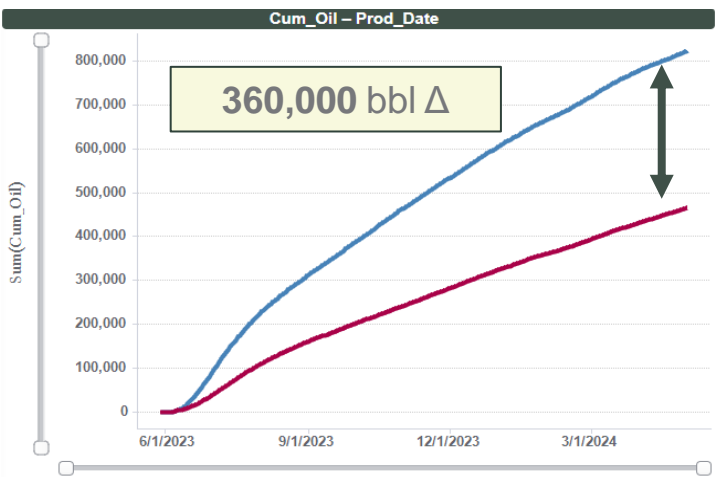
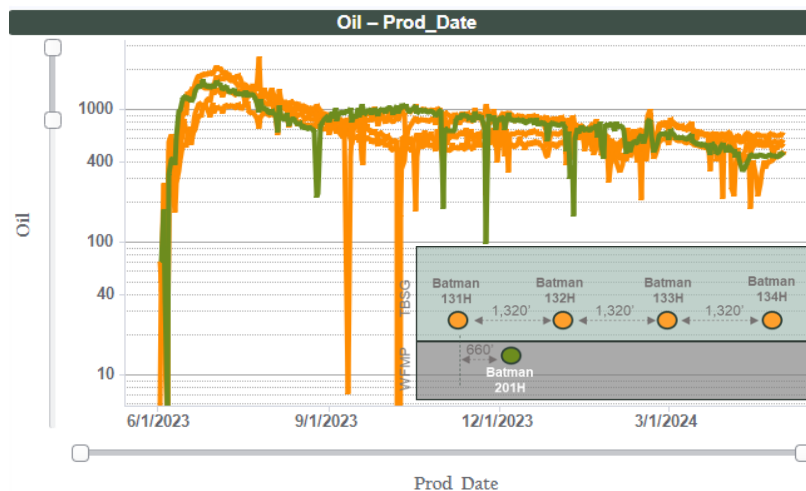
# A Closer Look at Batman Results

## Co-Developed TBSG/WFMP\_A Materially Outperforming

### Well Performance By Appraised Development



### Well Performance By Formation



Legend

- Combined Batman TBSG Only
- Combined Batman TBSG/WFMP\_A Co-Dev

**CASE \_\_\_\_\_ :**      **Application of Read & Stevens, Inc. for Creation of a Special Wolfbone Pool in Sections 4, 5, 8 and 9 in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico.** Applicant in the above-styled cause seeks an order pursuant to Order No. R-23089, ¶ 21, creating a special Wolfbone Pool within Sections 4, 5, 8, and 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined below (the “Subject Acreage”). The vertical extent of the proposed Gotham; Wolfbone Pool will be from the stratigraphic equivalent of the top of the Third Bone Spring Sand interval, located at approximately 10,598 feet measured depth, to the stratigraphic equivalent of the base of the Wolfcamp A interval, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). To accommodate the creation of this special pool, Read & Stevens requests the Division issue an Order vertically contracting the base of the Teas; Bone Spring, East Pool (Pool Code 96637) within the Subject Acreage upwards to above the stratigraphic equivalent of the top of the Third Bone Spring Sand, located at approximately 10,598 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). In addition, Read & Stevens requests the Division issue an Order vertically contracting the top of the Tonto; Wolfcamp Pool (Pool Code 59500) within the Subject Acreage downwards to below the stratigraphic equivalent of the base of the Wolfcamp A, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). Said area is located approximately 27 miles southwest of Hobbs, New Mexico.

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW  
MEXICO.**

**CASE NO. 24528**

**APPLICATION OF CIMAREX  
ENERGY CO. FOR THE CREATION  
OF A SPECIAL POOL, A WOLFBONE POOL,  
PURSUANT TO ORDER NO. R-23089 AND TO  
REOPEN CASE NOS. 23448 – 23455, 23594 –  
23601, AND 23508 – 23523, LEA COUNTY,  
NEW MEXICO.**

**CASE NO. 24541**

**SELF-AFFIRMED STATEMENT OF TRAVIS MACHA**

1. My name is Travis Macha. I work for Permian Resources Operating, LLC (“Permian Resources”) as New Mexico Land Lead. Read & Stevens, Inc. (“Read & Stevens”) is the applicant in these cases. It is a subsidiary of Permian Resources.

2. I have previously testified before the New Mexico Oil Conservation Division (“Division”) as an expert witness in petroleum land matters. My credentials as a petroleum landman have been accepted by the Division and made a matter of record.

3. I am familiar with the applications filed by Read & Stevens and Cimarex Energy Co. (“Cimarex”) in these cases, and I am familiar with the status of the lands in the subject area.

## **INTRODUCTION**

4. Read & Stevens, Inc. (“Read & Stevens”) is the applicant in this case and is a wholly owned subsidiary of Permian Resources (collectively referred to as “Permian Resources”).

5. In this case, Permian Resources seeks an order creating a special Wolfbone Pool comprised of the Third Bone Spring interval the Wolfcamp XY/A interval within Sections 4, 5, 8, and 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined below (the “Subject Acreage”). In addition, to accommodate the creation of this special pool, Permian Resources seeks to vertically contract the base of the Teas; Bone Spring, East Pool (Pool Code 96637) upwards to the top of the Third Bone Spring Sand interval, and to vertically contract the top of the Tonto; Wolfcamp Pool (Pool Code 59500) downwards to the base of the Wolfcamp A interval, all within the Subject Acreage as provided below.

6. **Permian Resources Exhibit A** is a copy of the Application filed in this case to create the proposed special Wolfbone oil pool. Cimarex has filed a competing application for a proposed special Wolfbone oil pool under Case No. 24541.

## **BACKGROUND**

7. Permian Resources filed the Application in response to the Division’s guidance issued in Order No. R-23089, ¶ 21, which is attached as an exhibit to the Application.

8. The Division issued Order No. R-23089 on April 8, 2024, denying two sets of applications seeking compulsory pooling for separate spacing units within the Subject Acreage.

9. One set of applications was filed by Cimarex under Case Nos. 23448-23455 and 23594-23601. Permian Resources filed a second set of competing

compulsory pooling applications targeting the same acreage under Case Nos. 23508-23523.

10. Cimarex's applications propose drilling four wells per section with all eight wells being distributed solely within the Lower Bone Spring formation intervals within the Subject Acreage with no wells drilled or completed in the Upper Wolfcamp. Permian Resources' applications propose drilling eight wells per section distributed between the Lower Bone Spring formation and the Upper Wolfcamp formation intervals within the Subject Acreage in a vertically stacked "wine rack" pattern.

11. The Application provides a summary and overview of the competing underlying compulsory pooling cases in Case Nos. 23448-23455 and 23594-23601 and Case Nos. 23508-23523 (collectively "the Competing Pooling Cases").

12. After a hearing on the competing development plans, the parties submitted closing briefs and findings of fact and conclusions of law that are part of the hearing record in the Competing Pooling Cases.

13. It is undisputed that there is a difference in ownership between the Bone Spring formation and Wolfcamp formation within the Subject Acreage. *See* Cimarex's Closing Statement with Findings of Fact and Conclusions of Law ("Cimarex's Findings") in Case Nos. 23448-23455 and 23594-23601, ¶¶ 27-28;<sup>1</sup> Permian Resources' Proposed Findings and Conclusions ("Permian's Findings") in Case Nos. 23508-23523, ¶¶ 6-11.<sup>2</sup>

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[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448\\_09\\_22\\_2023\\_10\\_42\\_33.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448_09_22_2023_10_42_33.pdf).

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[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448\\_09\\_22\\_2023\\_10\\_05\\_46.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230922/23448_09_22_2023_10_05_46.pdf).



14. Cimarex's proposed wells target the Third Bone Spring Sand interval but, by design, would also partially drain the Wolfcamp XY/A interval. *See* Cimarex's Findings in Case Nos. 23448-23455 and 23594-23601, ¶ 23. As a consequence, Wolfcamp owners under Cimarex's plan would not be allocated production in accordance with their ownership percentages in the Wolfcamp (Permian Resources' Findings in Case Nos. 23508-23523, ¶¶ 12, 44, 46) or would be apportioned only approximately 27.2% of the production. *Id.* ¶¶ 47-48; *see also* Cimarex's Findings in Case Nos. 23448-23455 and 23594-23601, ¶ 23; Cimarex Application in Case No. 24541, ¶ 20.

15. In contrast, Cimarex's proposed development and special Wolfbone oil pool would violate the requirement of the Oil and Gas Act to allocate production under compulsory pooling orders among owners "to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit." NMSA 1978 § 70-2-17(C). In addition, and as explained in more detail in Permian Resources' geology and reservoir engineering testimony, Permian Resources disputes the technical justification for Cimarex's proposed allocation.

16. It should be noted that no other special pool in New Mexico has incorporated a special allocation formula to address an incorporated ownership depth severance in an attempt to protect correlative rights against production drainage from across the depth severance line. To do so would be unprecedented and not necessary here.

17. In contrast, Permian Resources' proposed special Wolfbone oil pool and wells will allow for the simultaneous co-development of the Third Bone Spring Sand interval and Wolfcamp XY/A intervals. That is expected to stimulate production of incremental reserves substantially beyond what would be produced by targeting the Third Bone Spring Sand interval by itself, as Cimarex proposes, thereby preventing waste. *See* Permian Resources' Findings in Case Nos. 23508-23523, ¶¶ 19, 68-69; *compare* Permian Resources' Exhibit F-8<sup>3</sup> in Case Nos. 23508-23523 (showing cumulative production plot showing 70,000 bbls production uplift over first 40 days of production for co-developed Third Bone Spring Sand/Wolfcamp development) *to* Updated Exhibit F-8 (showing 360,000 bbls production uplift for co-development through March 2024), attached as Exhibit B to the Application.

18. Permian Resources' proposal complies with the Oil and Gas Act mandate to allocate production under compulsory pooling orders among owners on a surface acreage basis, NMSA 1978 § 70-2-17(C). Complying with this provision ensures that the correlative rights of owners in the Bone Spring and Wolfcamp formations are protected. And maximizing production by co-developing the Third Bone Spring with the Wolfcamp XY/A will prevent waste compared to Cimarex's plan.

19. On April 8, 2024, the Division issued Order No. R-23809 denying both sets of applications after concluding that "[n]either application can be approved while remaining in compliance with OCD rules and regulations that require pool segregation, prevent[ion of] waste and protect[ion of] correlative rights."

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[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508\\_07\\_14\\_2023\\_08\\_32\\_12.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508_07_14_2023_08_32_12.pdf).

20. The Division found that because the Subject Acreage “lacks natural barriers that would prevent communication between the Third Bone Spring Sand and Upper Wolfcamp [i.e., the targeted Wolfcamp XY/A interval],” the wells proposed by both Cimarex and Read & Stevens to be completed in the Lower Bone Spring and Upper Wolfcamp “will share production from both the Bone Spring and Wolfcamp formations.” *See* Order No. R-23809 at ¶¶ 6-10.

21. The Division noted that neither Cimarex nor Permian Resources requested a special pool order to account for a common source of supply from the Third Bone Spring Sand and Wolfcamp XY/A intervals within the Subject Acreage. *Id.* ¶¶ 11-12.

22. The Division determined that the Third Bone Spring Sand and Wolfcamp XY/A meet the definition of a “common source of supply” and must be developed as a single “pool,” as defined under the Oil and Gas Act. *Id.* ¶¶ 6, 13-19. But because each zone is currently designated by the Division to be in separate Bone Spring and Wolfcamp pools, neither set of applications submitted by Cimarex or Permian Resources can be approved. *Id.* ¶ 20.

23. The Division therefore denied both Cimarex’s applications and Permian Resources’ applications and closed the hearing record unless and until either or both companies propose a special Wolfbone pool, “that would account for the lack of [natural barriers] between the Bone Spring and Wolfcamp formations in this area.” *Id.* ¶ 21.

24. Pursuant to Order No. R-23089, the Division stated it will re-open the hearing record following an application to create a special Wolfbone pool and will

incorporate supporting evidence and testimony already in the hearing record. *Id.* ¶¶ 21-22.

25. Both Permian Resources and Cimarex filed competing applications to create a special Wolfbone Pool.

26. **Permian Resources Exhibit B-1** provides an overview for easy reference of the key definitions and terms that govern the Division’s analysis of the competing proposed special pools.

**OVERVIEW<sup>4</sup> OF PERMIAN RESOURCES’ SPECIAL WOLF BONE POOL PROPOSAL**

27. Permian Resources proposes a special Wolfbone oil pool that would be governed by statewide oil rules to be named either the Teas; Wolfbone Pool or the Quail Ridge; Wolfbone Pool<sup>5</sup> and would comprise approximately 2,562.40 acres, more or less, in Lea County, New Mexico, (the “Subject Acreage”) as follows:

**Township 20 South, Range 34 East**

Section 4:	All
Section 5:	All
Section 8:	All
Section 9:	All

28. The Subject Acreage is comprised entirely of federal minerals under federal lease NMNM 101115, NMLC 0-065607, and NMLC 0-064194. The record title

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<sup>4</sup> This section of testimony is intended to provide an overview of Permian Resources’ proposed special pool and its justifications. Permian Resources’ geology and reservoir engineering witnesses will address the technical merits of the proposal in their separate testimony.

<sup>5</sup> Permian Resources originally proposed that the special pool should be named the Gotham; Wolfbone Pool but has since learned the Division’s guidance is to approve pool names based on the geographic location. Accordingly, the special pool should be named either the Teas; Wolfbone Pool or the Quail Ridge; Wolfbone Pool.

owners under these federal leases are identified and listed in Permian Resources' Exhibit C-7 in Case Nos. 23508-23523.<sup>6</sup>

29. The vertical extent of the proposed special Wolfbone oil pool will be from the stratigraphic equivalent of the top of the Third Bone Spring Sand interval, located at approximately 10,598 feet measured depth, to the stratigraphic equivalent of the base of the Wolfcamp A interval, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).<sup>7</sup>

30. Formation of a special Wolfbone oil pool within the Subject Acreage incorporates a depth severance created by ownership instruments that is located at the division between the base of the Bone Spring formation and the top of the Wolfcamp formation. Accordingly, the ownership depth severance is found at a stratigraphic equivalent of approximately 10,876 feet, measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

31. Under the Oil and Gas Act and governing regulations, a "Pool" is defined as:

[A]n underground reservoir containing a common accumulation of oil or gas. Each zone of a general structure, which zone is completely separated from other zones in the structure, is covered by the word pool as used in 19.15.2 NMAC through 19.15.39 NMAC. "Pool" is synonymous with "common source of supply" and with "common reservoir."

19.15.2.7.P(5) NMAC.

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<sup>6</sup>

[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508\\_07\\_14\\_2023\\_08\\_32\\_12.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20230714/23508_07_14_2023_08_32_12.pdf).

<sup>7</sup> <https://ocdimage.emnrd.nm.gov/imaging/WellFileView.aspx?RefType=WL&RefID=30025310560000>.

32. Within the Subject Acreage, the Third Bone Spring Sand, which would comprise the upper portion of the proposed special Wolfbone oil pool, is separated from the overlying Third Bone Spring Carbonate/Harkey interval by tight carbonate rock that serves as a natural “frac baffle,” or barrier, between the Third Bone Spring Sand and the overlying Third Bone Spring Carbonate/Harkey intervals. *See* Cimarex Case Nos. 23594-23601, Tab 3, ¶ 12;<sup>8</sup> *see also id.* Ex. B-7; Case Nos. 23448-23455 and 23594-23601, Hrg. Tr. Vol. 1, 174:3-7, dated 8/9/23.<sup>9</sup>

33. Within the Subject Acreage, the Third Bone Spring Sand and Wolfcamp XY/A intervals are not separated by a frac baffle or natural barrier and, therefore, constitute a common source of supply or common reservoir within the Subject Acreage. *See* Cimarex Case Nos. 23594-23601, Tab 3, ¶ 21; *see also id.* Cimarex Ex. B-21.

34. Within the Subject Acreage, the Wolfcamp shale within the Wolfcamp A is the primary source rock that contributes oil to the Third Bone Spring Sand/Wolfcamp XY/A common reservoir within the Subject Area. *See* Case Nos. 23448-23455 and 23594-23601, Hrg. Tr. Vol. 2, 81:1-4,<sup>10</sup> dated 8/10/23; *id.* 197:12-20, 199:15-200:7.

35. Accordingly, Permian Resources proposes that the Third Bone Spring Sand and Wolfcamp XY/A intervals can be combined into a single special pool within

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[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448\\_08\\_28\\_2023\\_08\\_01\\_40.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448_08_28_2023_08_01_40.pdf).

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[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448\\_08\\_28\\_2023\\_08\\_10\\_15.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448_08_28_2023_08_10_15.pdf).

the Subject Acreage to be named either the Teas; Wolfbone Pool or the Quail Ridge; Wolfbone Pool.

36. To accommodate the creation of this special pool, Permian Resources requests the Division issue an order vertically contracting the base of the Teas; Bone Spring, East Pool (Pool Code 96637) within the Subject Acreage upwards to above the stratigraphic equivalent of the top of the Third Bone Spring Sand, located at approximately 10,598 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

37. In addition, Permian Resources requests the Division vertically contract the top of the Tonto; Wolfcamp Pool (Pool Code 59500) within the Subject Acreage downwards to below the stratigraphic equivalent of the base of the Wolfcamp A, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056).

**PERMIAN RESOURCES' PROPOSAL COMPLIES WITH THE  
MANDATE OF THE OIL & GAS ACT**

38. **Permian Resources Exhibit B-2** is a subsurface visual representation of Permian Resources' proposed development targeting two benches within the proposed special Wolfbone oil pool. It depicts Permian Resources' proposed initial Joker and Bane wells, as presented in Case Nos. 23508-23523, and identifies the location of the ownership depth severance, the proposed vertical limits of the special Wolfbone oil pool, and the vertically offset Teas; Bone Spring, East Pool (Pool Code 96637) and the Tonto; Wolfcamp Pool (Pool Code 59500).

39. Creating the proposed special Wolfbone oil pool within the Subject Acreage, and vertically contracting the offsetting Teas; Bone Spring, East Pool and the

Tonto; Wolfcamp Pool will allow Permian Resources' proposed development to meet the requirements of the Oil and Gas Act—to protect correlative rights, prevent waste, and allocate production and costs under the terms of a compulsory pooling order on an acreage basis—as outlined in Order No. R-23089, ¶¶ 15-17.

40. In contrast, because an ownership depth severance exists within the proposed special Wolfbone oil pool and because Cimarex proposes to develop only the Third Bone Spring Sand interval within it, Cimarex's proposal will impair the correlative rights of owners within the Wolfcamp XY/A portion of the special pool by violating the mandate of the Oil and Gas Act.<sup>11</sup> See Permian's Findings in Case Nos. 23508-23523, ¶¶ 6-12, 45-48, 68-71; see also § 70-2-17(C) (requiring pooling orders to allocate production among owners “to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit”).

41. Cimarex acknowledges that where an ownership depth severance exists within a pool it is necessary to propose and develop wells in spacing units on both sides of the depth severance “to account for” the different owners and ownership interests on either side of the ownership break that is not accounted for in Cimarex's proposal. See Case Nos. 23448-23455 and 23594-23601, Hrg. Tr. Vol. 1, 210:10-212:21, dated 8/9/23 (“So even if you did reevaluate or expand the pool, like doing a Wolfbone or something like that, you still have that ownership severance that you would have to account for. And under permit [sic] interpretations of the statute and regulations, you account for a

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<sup>11</sup> Permian Resources understands Order No. R-23089 provides that the parties are not to submit revised proposals or development plans and that the hearing record will be reopened for purposes of considering a proposed special Wolfbone pool within the Subject Acreage.



severance by—you know, if you want to produce below the severance, you have to do a separate well bore as I am sure you know. So, we have this issue of how to produce from the—if you did [Cimarex’s] option two, how to produce from the Third Bone Spring and the upper Wolfcamp.”).

42. **Permian Resources Exhibit B-3** is an overview of the proposed Special Wolfbone oil pool that highlights the ownership depth severance issue, confirms Cimarex counsel’s agreement that correlative rights are protected by drilling and completing horizontal well laterals on both sides of an ownership depth severance, and provides a summary timeline of key events following the hearing on the Competing Pooling Cases in August 2023.

43. The ownership difference between the Bone Spring and Wolfcamp formations means that Cimarex’s proposal cannot be approved under the Division’s statutory or regulatory framework because it would impair Wolfcamp owners’ correlative rights and contravenes the Oil and Gas Act and the Division’s regulations.

44. Cimarex’s target the Third Bone Spring interval but, by design, would also partially drain the Wolfcamp XY/A within the special pool. *See* Cimarex’s Findings in Case Nos. 23448-23455 and 23594-23601, ¶ 23. The Oil and Gas Act, however, requires allocation of production and costs under compulsory pooling orders among owners “to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit.” NMSA 1978 § 70-2-17(C). Because of the ownership depth severance, which makes mineral ownership across the entire special Wolfbone oil pool non-uniform, it is impossible under Cimarex’s plan to allocate production and costs across all owners in the proposed special pool on an “acreage basis” as required by the statute.

45. That allocation problem is not an issue under Permian Resources' plan because Permian Resources proposes to drill and complete wells on both sides of the ownership depth severance and separately dedicate spacing units to each side of the depth severance. This approach maintains uniform ownership within each spacing unit thereby allowing allocation to be on an "acreage basis," as required. That has been the only solution to ownership depth severances within a single pool that has been recognized by the Division in horizontal well compulsory pooling proceedings because that is the only way to comply with the statutory mandate.

46. Cimarex attempts to circumvent this dispositive infirmity by proposing an allocation formula based on PhiHt as part of its proposed special Wolfbone oil pool as a way to proportionately allocate production among owners on both sides of the ownership depth severance.

47. As Permian Resources' geology witness explains in his testimony in this case, the problem with that approach is that PhiHt is not an accurate predictor of production. PhiHt is a good tool to identify and compare reservoir quality of prospective development targets at a high level. PhiHt is a valid proxy for predicting reserves for purposes of identifying prospective development targets because it represents the total storage or pore space in the rock and, therefore, serves as a reasonable proxy for potential production but is not accurate enough to allocate production of hydrocarbons in a way that is protective of correlative rights.

48. As explained by Permian Resources' reservoir engineering witness, Cimarex's plan will also permanently strand reserves, resulting in waste.

49. Cimarex's approach therefore has two fatal infirmities. First, it violates the mandate of the Oil and Gas Act and will impair correlative rights because it does

not allocate on an acreage basis. Second, it will result in substantial waste by failing to effectively and efficiently drain the Wolfcamp XY/A interval.

50. To avoid impairment of correlative rights, prevent waste, and comply with the Division's conclusions under Order No. R-23089, Permian Resources requests the Division create a special Wolfbone oil pool within the Subject Acreage and contract the vertically offsetting Teas; Bone Spring, East Pool (Pool Code 96637) and the Tonto; Wolfcamp Pool (Pool Code 59500), as proposed, subject to modification under the Division's discretion.

#### **UPDATED LAND OWNERSHIP AND WORKING INTEREST SUPPORT**

51. Because protection of correlative rights is the dispositive factor that weighs in favor of Permian Resources' plan it is important to understand the ownership differences within the proposed special Wolfbone oil pool and how Cimarex's ill-conceived allocation formula would impact those interests.

52. **Permian Resources Exhibit B-4** is a modification of Permian Resources' Exhibit B-2 in the Competing Pooling Cases laying ownership detail over the subsurface visual to give an accurate depiction of the varying ownership between the Bone Spring and Wolfcamp formations. The wellbores depicted are representative of Permian Resources' development plan. As further detailed below, this slide breaks out the four distinct ownership tables which show owners, net acres, indication of ownership severance (also highlighted in BLUE), as well as indication of Permian vs. Cimarex support (highlighted in YELLOW and GREEN, respectively).

53. Starting in the top left this first table is representative of ownership in the Bone Spring formation in the Joker Unit, being sections 5 & 8. Moving to the bottom left,

this table depicts ownership in the Wolfcamp formation. In total, 13 of the 27 respective interests are depth severed, owning a differing amount of interest in the Bone Spring Formation vs. the Wolfcamp Formation. Notably, Magnum Hunter (Cimarex subsidiary) owns 226.07 net acres MORE in the Bone Spring Formation than the Wolfcamp (or a Wolfcamp interest equal to a total of 222.46% of their Bone Spring interest). Furthermore, not a single Cimarex supporter is subject to a depth severance, therefore none of them will be affected in any way by Cimarex's proposed allocation formula. Lastly of note, two owners, Watson Properties and CLM Production, own no interest in the Bone Spring and both support Permian's plan to properly develop the Wolfcamp formation.

54. Moving to the top right-hand table, this is representative of ownership in the Bone Spring formation in the Bane Unit, being Sections 4 & 9. The bottom right likewise shows a table representative of ownership in the Wolfcamp formation. While the Bane unit contains more homogenous ownership, there are still three interests subject to a depth severance.

55. **Permian Resources Exhibit B-5** is also a modification of Exhibit B-2, however in this version the wellbores depicted are representative of Cimarex's plan. Similar to the previous exhibit, this slide breaks out, not four, but two distinct ownership tables which show owners, net acres, indication of ownership severance (also highlighted in BLUE), as well as indication of Permian vs. Cimarex support (highlighted in YELLOW and GREEN respectively). The reason for showing two tables rather than four is that this exhibit shows a "hypothetical" allocation of interest in the event Cimarex's allocation formula were to be adopted.

56. Starting at the top left, this provides for ownership inside the proposed Wolfbone pool limited to the Joker unit, whereas all Bone Spring and Wolfcamp interests are proportionately reduced; multiplying Bone Spring owners total net acres by 72.8%, then multiplying all Wolfcamp owners total net acres by 27.2%, then adding that together to get a blended interest which has the goal of forecasting distribution of production between the Bone Spring formation and Wolfcamp on all eight Cimarex proposed wells.

57. Moreover, because it is a blended interest, Cimarex's formula does not provide an allocation of "production . . . to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit." NMSA 1978 § 70-2-17(C). It provides an allocation of an amount less than the production from each spacing unit, because the total production for each owner is being reduced by a factor based on Cimarex's PhiHt measurements. That means owners in both the Bone Spring and Wolfcamp will be getting less than the total production allocated to each tract "in proportion to the number of surface acres" that is required by the pooling statute.

58. Moving to the top right, this similarly shows implementation of the same allocation factor between the interests in the Bone Spring and Wolfcamp formations for all owners in the Bane unit.

59. The table shown at the bottom is a detail of all 16 owners inside the Joker and Bane units that are subject to the ownership severance at the base of the Bone Spring formation. The purpose of this table is to show how their interests would be calculated by showing the beginning total net acres in the respective formations, the allocation formula in use, and final net acres utilizing the formula. Lastly of note, 8 of the 16 owners

(50%) that are subject to a depth severance have issued support favoring Permian's development plan. None support Cimarex's plan. The sole two interest owners supporting Cimarex's plan own a larger interest in the Bone Spring formation than the Wolfcamp formation (Similar to Cimarex itself).

**Permian Resources is Committed to Properly Developing this Area**

60. **Permian Resources Exhibit B-6** shows Permian's commitment to the area. The two maps show Permian's growth in the area over the past 12 months and the company's hyperfocus on acquiring interests in and surrounding the Joker and Bane units, pointing towards aggressive yet thoughtful and proper exploration of the area.

61. The three bullets to the right of the maps highlight the contrasting operator activity in the vicinity, noting Cimarex's lack of activity.

**NOTICE**

62. **Permian Resources Exhibit B-7** includes a lease overview plat on the left side of the exhibit that shows the acreage comprising the proposed special Wolfbone oil pool and the location and orientation of each of the federal leases. On the right side of the exhibit is a general overview map that identifies the Sections that comprise the proposed special Wolfbone oil pool and also identify each of the offsetting Sections that were subject to notice.

63. Notice of Permian Resources' application was provided to all parties subject to the related pooling applications in Case Nos. 23508-23523. In addition, I identified as subject to notice all owners of a working interest within the Subject Acreage, and all Division-designated operators, or working interest owners as to tracts that do not have a designated operator, within

one-mile of the Subject Acreage. I provided a list of parties subject to notification to Holland & Hart LLP to perfect notice by certified mail and publication.

64. The second page of Exhibit B-7 is a list of all the parties identified subject to notice. I provided this list of notice parties to Holland & Hart LLP.

65. **Permian Resources Exhibit B-8** is a copy of a notice letter I sent apprising owners in the Subject Acreage on the status of the competing development plans, the Division’s guidance regarding formation of a special Wolfbone oil pool, an operational update on Permian Resources’ developments, and updated estimates of costs for its proposed wells.

**CONCLUSION**

66. **Permian Resources Exhibits B-1 through B-8** were either prepared by me or compiled under my direction and supervision.

67. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in these cases. This statement is made on the date next to my signature below.



Travis Macha

8/6/2024

Date



# Notable Definitions

## Exhibit B-1

**Pool:** *(cited in NMOCD Order R-23089)*

- “an underground reservoir containing a common accumulation of oil or gas. Each zone of a general structure, which zone is completely separated from other zones in the structure, is covered by the word pool as used in 19.15.2 NMAC through 19.15.39 NMAC. “Pool” is synonymous with “common source of supply” and with “common reservoir” 19.15.2.7.P(5) NMAC.”

**Correlative Rights:** *(cited in NM Code R 19.15.2.7)*

- “the opportunity afforded, as far as it is practicable to do so, to the owner of each property in a pool to produce without waste the owner's just and equitable share of the oil or gas in the pool, being an amount, so far as can be practically determined, and so far as can be practicably obtained without waste, substantially in the proportion that the quantity of recoverable oil or gas under the property bears to the total recoverable oil or gas in the pool, and for the purpose to use the owner's just and equitable share of the reservoir energy.”

**Waste:** *(cited in NM Code R 19.15.2.7)*

- “underground waste as those words are generally understood in the oil and gas business, and to embrace the inefficient, excessive or improper use or dissipation of the reservoir energy, including gas energy and water drive, of a pool, and the locating, spacing, drilling, equipping, operating or producing of a well or wells in a manner to reduce or tend to reduce the total quantity of oil or gas ultimately recovered from a pool, and the use.” of inefficient underground storage of gas.”

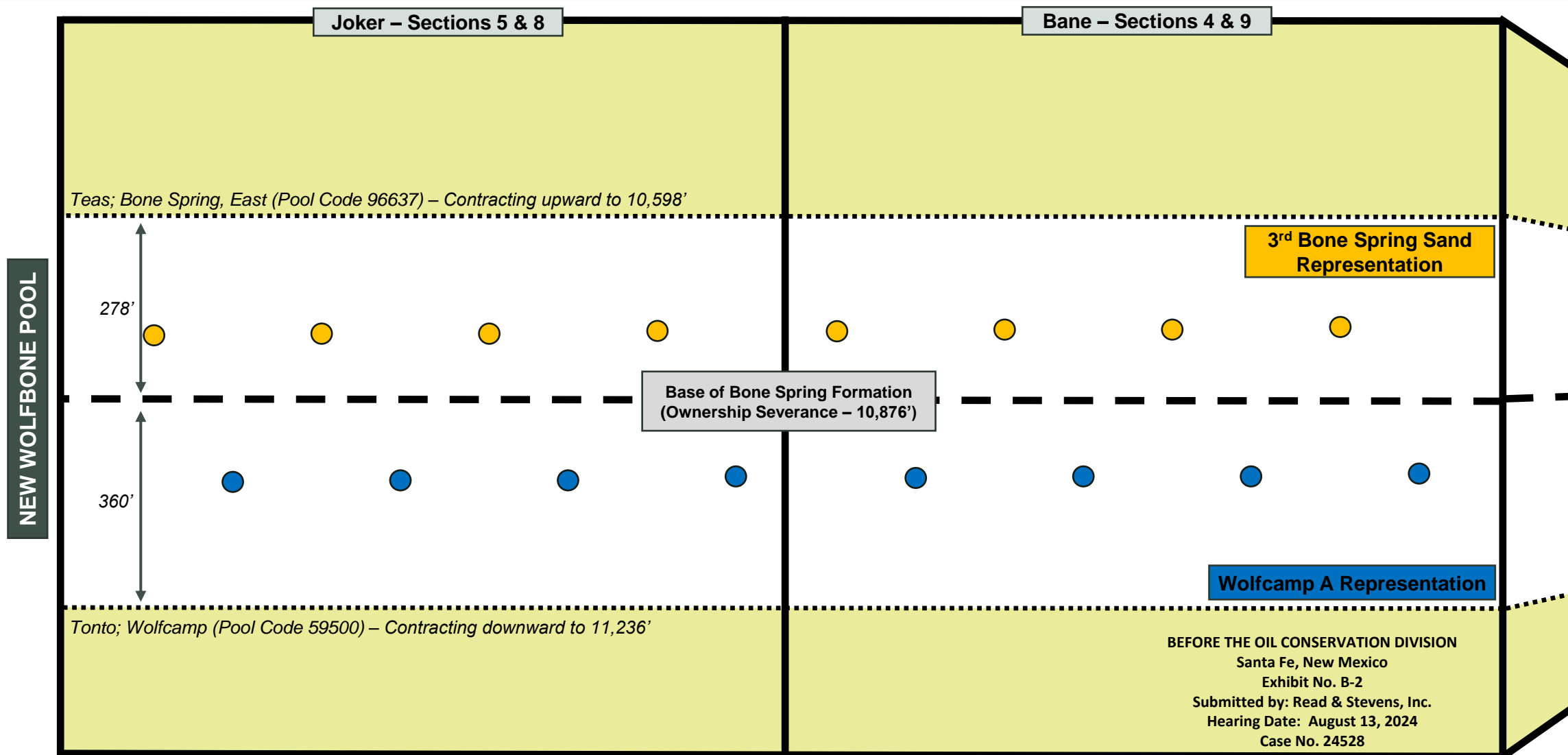
**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
Exhibit No. B-1  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528





# Wolfbone Pool Boundaries – Subsurface Visual

## Exhibit B-2



BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. B-2  
 Submitted by: Read & Stevens, Inc.  
 Hearing Date: August 13, 2024  
 Case No. 24528

\*Illustration for visual purposes only, wellbores shown representative of PR development proposal

\*\*No PR well plans have changed since August 2023 hearing



# Permian Proposed Pool

## Exhibit B-3

**Proposed Pool Name:** Gotham; Wolfbone

- Pursuant to Cimarex application, the OCD provides two naming options “Teas” or “Quail Ridge”. Any name is acceptable as it is non-material and is at the OCD’s discretion

**Proposed Pool Code:** OCD to issue

**Pool Type:** Oil

**Rules:** Statewide rules

**Pool Key Feature:**

- Integration of a severance at the base of the Bone Spring Formation to account for differing ownership between landings in the respective Bone Spring & Wolfcamp Formations. (Interest allocation based on surface acres in accordance with the Oil & Gas Act, NMSA 1978 § 70-2-17(C))

**Cimarex’s Agreement:** See Hrg. Tr. Vol. 1, 210:10-212:21, dated 8/9/23 (“*So even if you did reevaluate or expand the pool, like doing a Wolfbone or something like that, you still have that ownership severance that you would have to account for. And under permit [sic] interpretations of the statute and regulations, you account for a severance by—you know, if you want to produce below the severance, you have to do a separate well bore as I am sure you know. So, we have this issue of how to produce from the—if you did [Cimarex’s] option two, how to produce from the Third Bone Spring and the upper Wolfcamp.*”)

**Compulsory Pooling Cases:** 23508 - 23523

**Compulsory Pooling Dates:** August 9-11, 2023

**Misc. Update:**

- April 8, 2024 Order R-23089 received
- April 16, 2024 Dialogue with Cimarex
- May 9, 2024 Permian Wolfbone application filed
- June 5, 2024 Wolfbone Notice sent to all interest owners (WI, ORRI, & RT) – (Attached as Exhibit B-8)

**BEFORE THE OIL CONSERVATION DIVISION**  
**Santa Fe, New Mexico**  
**Exhibit No. B-3**  
**Submitted by: Read & Stevens, Inc.**  
**Hearing Date: August 13, 2024**  
**Case No. 24528**



# Ownership Look – Permian Plan

# Exhibit B-4

Yellow denotes Permian owned or supported

Green denotes Cimarex owned or supported

## Joker – Sections 5 & 8

## Bane – Sections 4 & 9

Permian Resources Plan<sup>1</sup>

NEW WOLFBONE POOL

Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
MRC Permian	14.40	Y	Carolyn Beall	1.60	N
HOG Partnership LP	74.33	N	Tierra Encantada	1.60	N
Northern Oil & Gas	9.94	Y	Sarvis Permian	1.60	N
Javelina Partners (Hudson Family)	85.50	N	Watson Properties	0.00	Y
Zorro Partners (Hudson Family)	63.15	N	Cimarex Energy	32.86	Y
Delmar Hudson Trust (TA to Cimarex)	7.76	N	Moore & Shelton	19.94	N
Read & Stevens	332.85	Y	Lindys Living Trust	33.78	N
CBR Oil Prop	5.34	Y	Challenger Crude	30.82	N
Ard Oil	16.89	N	Marks Oil	10.46	Y
Josephine Hudson Trust (TA to Cimarex)	8.17	N	Prime Rock	30.00	Y
Magnum Hunter	410.68	Y	Wilbanks Reserve	55.56	Y
CLM Production Co	0.00	Y	Buccholz (Union Hill)	4.14	N
Highland (Texas) Energy	4.80	Y	Permian Resources	22.41	Y
Diamond Star Prod.	1.60	N			

Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
Delmar Hudson Trust (TA to Cimarex)	77.21	N	Read & Stevens	381.35	N
Challenger Crude, Ltd.	20.54	N	Magnum Hunter	130.77	N
Lindys Living Trust (TA to Javelina/Zorro)	99.74	N	Foran Oil Co	53.85	N
Javelina Partners (Hudson Family)	105.63	Y	Chase Oil Co	33.43	N
Josephine Hudson Trust (TA to Cimarex)	16.62	N	William A. Hudson II	5.54	Y
Ard Oil	49.87	N	Permian Resources	18.61	N
Zorro Partners (Hudson Family)	66.49	N	Buccholz (Union Hill)	6.20	N
HOG Partnership LP	62.43	Y	Cimarex	115.86	N
			Moore & Shelton	38.06	N

278'

360'

Base of Bone Spring Formation  
(Ownership Severance – 10,876')

3<sup>rd</sup> Bone Spring Sand Representation

Wolfcamp A Representation

Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
MRC Permian	43.23	Y	Carolyn Beall	1.60	N
HOG Partnership LP	74.33	N	Tierra Encantada	1.60	N
Northern Oil & Gas	29.84	Y	Sarvis Permian	1.60	N
Javelina Partners (Hudson Family)	85.50	N	Watson Properties	1.60	Y
Zorro Partners (Hudson Family)	63.15	N	Cimarex Energy	66.86	Y
Delmar Hudson Trust (TA to Cimarex)	7.76	N	Moore & Shelton	19.94	N
Read & Stevens	444.93	Y	Lindys Living Trust (TA'd)	33.78	N
CBR Oil Prop	16.01	Y	Challenger Crude	30.82	N
Ard Oil	16.89	N	Marks Oil	20.06	Y
Josephine Hudson Trust (TA to Cimarex)	8.17	N	Prime Rock	0.00	Y
Magnum Hunter	184.61	Y	Wilbanks Reserve	106.56	Y
CLM Production Co	1.60	Y	Buccholz (Union Hill)	4.14	N
Highland (Texas) Energy	1.60	Y	Permian Resources	12.41	Y
Diamond Star Prod.	1.60	N			

Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
Delmar Hudson Trust (TA to Cimarex)	77.21	N	Read & Stevens	381.35	N
Challenger Crude, Ltd.	20.54	N	Magnum Hunter	130.77	N
Lindys Living Trust (TA to Javelina/Zorro)	99.74	N	Foran Oil Co	53.85	N
Javelina Partners (Hudson Family)	89.01	Y	Chase Oil Co	33.43	N
Josephine Hudson Trust (TA to Cimarex)	16.62	N	William A. Hudson II	0.00	Y
Ard Oil	49.87	N	Permian Resources	18.61	N
Zorro Partners (Hudson Family)	66.49	N	Buccholz (Union Hill)	6.20	N
HOG Partnership LP	84.58	Y	Cimarex	115.86	N
			Moore & Shelton	38.06	N

<sup>1</sup>Permian Plan - Allocate all revenues/working interests of wells landed in the respective Bone Spring & Wolfcamp formations to the respective owners inside such formations



# Ownership Look – Cimarex Plan

# Exhibit B-5

Yellow denotes Permian owned or supported

Green denotes Cimarex owned or supported

## Joker – Sections 5 & 8

## Bane – Sections 4 & 9

Joker - Ownership assuming Cimarex's blending/allocation method					
Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
MRC Permian	22.24	Y	Carolyn Beall	1.60	N
HOG Partnership LP	74.33	N	Tierra Encantada	1.60	N
Northern Oil & Gas	15.35	Y	Sarvis Permian	1.60	N
Javelina Partners (Hudson Family)	85.50	N	Watson Properties	0.44	Y
Zorro Partners (Hudson Family)	63.15	N	Cimarex Energy	42.11	Y
Delmar Hudson Trust (TA to Cimarex)	7.76	N	Moore & Shelton	19.94	N
Read & Stevens	363.34	Y	Lindys Living Trust (TA'd)	33.78	N
CBR Oil Prop	8.24	Y	Challenger Crude	30.82	N
Ard Oil	16.89	N	Marks Oil	13.07	Y
Josephine Hudson Trust (TA to Cimarex)	8.17	N	Prime Rock	21.84	Y
Magnum Hunter	349.19	Y	Wilbanks Reserve	69.44	Y
CLM Production Co	0.44	Y	Buccholz (Union Hill)	4.14	N
Highland (Texas) Energy	3.93	Y	Permian Resources	19.69	Y
Diamond Star Prod.	1.60	N			

Bane - Ownership assuming Cimarex's blending/allocation method					
Owner	Net Acres	Severed Ownership?	Owner	Net Acres	Severed Ownership?
Delmar Hudson Trust (TA to Cimarex)	77.21220318	N	Read & Stevens	381.3480804	N
Challenger Crude, Ltd.	20.54477501	N	Magnum Hunter	130.7692376	N
Lindys Living Trust (TA to Javelina/Zorro)	99.73528158	N	Foran Oil Co	53.84807388	N
Javelina Partners (Hudson Family)	101.1092792	Y	Chase Oil Co	33.43298584	N
Josephine Hudson Trust (TA to Cimarex)	16.62256026	N	William A. Hudson II	4.031999462	Y
Ard Oil	49.86763599	N	Permian Resources	18.61219363	N
Zorro Partners (Hudson Family)	66.49018027	N	Buccholz (Union Hill)	6.204064544	N
HOG Partnership LP	68.45515562	Y	Cimarex	115.863888	N
			Moore & Shelton	38.06242783	N

Cimarex Plan<sup>1</sup>  
NEW WOLFBONE POOL

278'

360'

Base of Bone Spring Formation  
(Ownership Severance – 10,876')

3<sup>rd</sup> Bone Spring Sand Representation

Wolfcamp A Representation

Severed Owner Impacts Across all of Joker and Bane						
Owner (16 of total 29 Owners)	Bone Spring Net	BS Allocation Factor *72.8%		Wolfcamp Net	WC Allocation Factor *27.2%	Post-Blending Net Acres
Javelina Partners (Hudson Family)	191.12	139.14		174.51	47.47	186.60
HOG Partnership LP	136.76	99.56		158.91	43.22	142.79
William A. Hudson II	5.54	4.03		0.00	0.00	4.03
MRC Permian	14.40	10.49		43.23	11.76	22.24
Northern Oil & Gas	9.94	7.24		29.84	8.12	15.35
Read & Stevens	332.85	242.32		444.93	121.02	363.34
CBR Oil Prop	5.34	3.88		16.01	4.35	8.24
Magnum Hunter	410.68	298.97	+	184.61	50.22	349.19
CLM Production Co	0.00	0.00		1.60	0.44	0.44
Watson Properties	0.00	0.00		1.60	0.44	0.44
Cimarex Energy	32.86	23.92		66.86	18.19	42.11
Marks Oil	10.46	7.61		20.06	5.46	13.07
Prime Rock	30.00	21.84		0.00	0.00	21.84
Wilbanks Reserve	55.56	40.45		106.56	28.99	69.44
Permian Resources	22.41	16.31		12.41	3.37	19.69
Highland (Texas) Energy	4.80	3.49		1.60	0.44	3.93
			=			

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. B-5

Submitted by: Read & Stevens, Inc.

Hearing Date: August 13, 2024

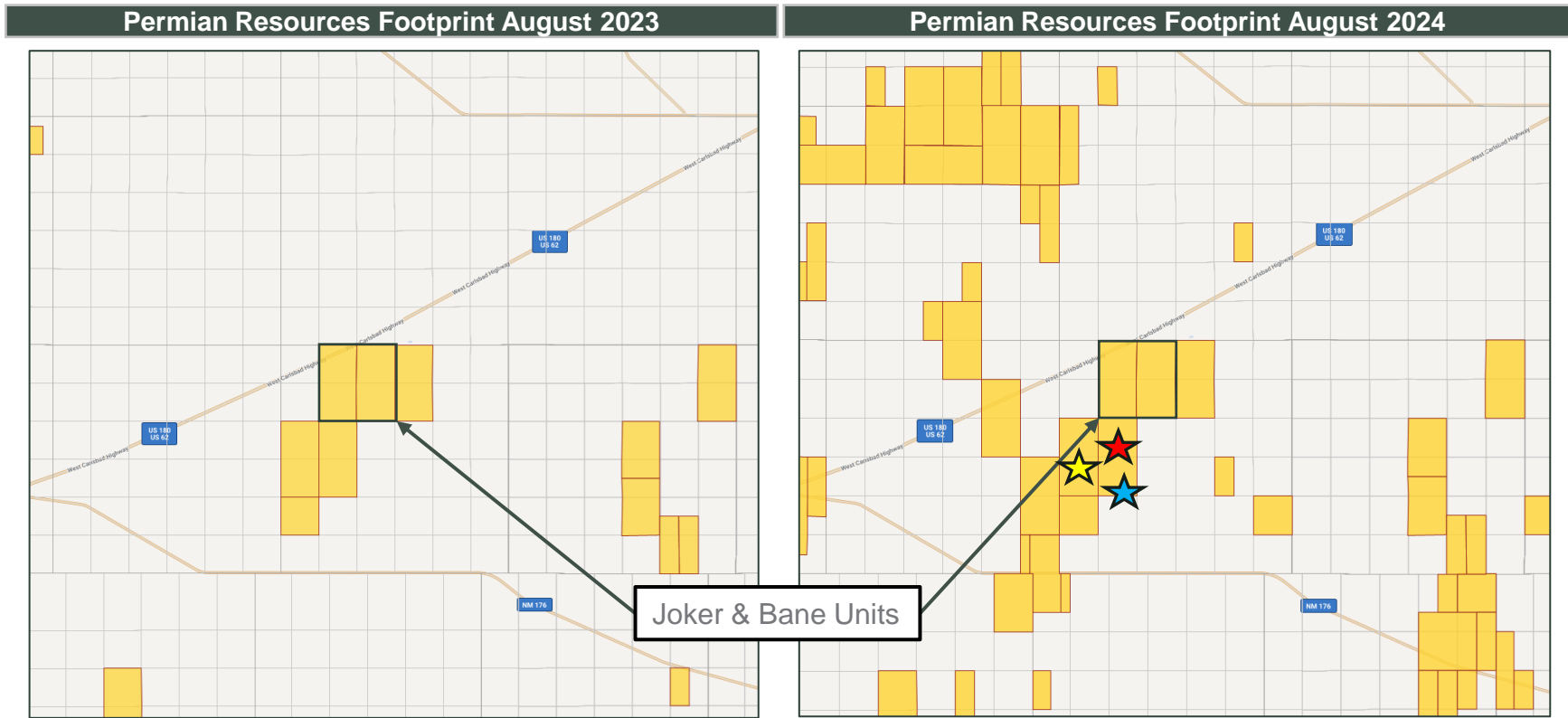
Case No. 24528

<sup>1</sup>Cimarex plan – Blend all revenues/working interests of wells % allocated to the Wolfcamp owners – Inaccurate & flawed PhiHt (porosity height) formula) landed in the 3<sup>rd</sup> Bone Spring Sand interval with differing ownership in the Wolfcamp A interval (72.8% allocated to the Bone Spring owners, 27.2



# Footprint Visual & Growth Update

## Exhibit B-6



### PR Offset Activity

In the year since the original compulsory pooling hearing, Permian Resources and its subsidiaries has in the depicted offset acreage:

- Drilled, completed and brought online >500,000 feet of lateral in 64 wells
- Continued the appraisal and delineation in the acreage immediately adjacent to Joker and Bane including:
  - ★ An additional pilot hole in Robin
  - ★ A second occupation in Batman appraising the dual targeting of the SBSG
  - ★ The co-development of the TBSG and XY in Robin

Permian Resources continues to view this area as a key area of growth and focus and is committed to the proper exploration, appraisal, and development of the subject lands

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. B-6  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528



# Wolfbone Pool Boundaries – Surface Visual

## Exhibit B-7

Lease Overview (100% Federal)

Sec 5 NMM-101115	Sec 4 <b>LC-0065607</b>
Sec 8 <b>LC-064194</b>	Sec 9

General Overview (Offset Notice)

Sec 31	Sec 32	Sec 33	Sec 34
<i>Offset Notice Area</i>			
Sec 6	Sec 5	Sec 4	Sec 3
<b>Wolfbone Pool</b>			
Sec 7	Sec 8	Sec 9	Sec 10
<i>Offset Notice Area</i>			
Sec 18	Sec 17	Sec 16	Sec 15

\*Interest & Offset notice owners on next slide



# Wolfbone Pool Boundaries – Surface Visual

# Exhibit B-7

## Internal & Offset Notice Parties

2023 Permian Basin JV	Dennis, Jamie	Hoshi Kanri LLC	Mewbourne Oil Company	Rubie Crosby Bell Family LP #1 (Now Rubie Crosby Bell Family LLC)
Abby Corporation	Devon Energy Production Co. LP	Hudson, William A., II	Mike Moylett	S & E Royalty, LLC
Alan M. Hannifin, as his sole and separate property	Diamond Star Production Company, LLC	Jan C. Ice	Milestone Oil, LLC	S.N.S. Oil & Gas Properties, Inc.
AmeriPermian Holdings, LLC	DNR Oil and Gas, Inc.	Jan E. Mills Testamentary Trust, c/o JPMorgan Chase Bank, N.A.	Moore & Shelton Company, Ltd.	Sandstone Properties, LLC
Apache Corporation	Doug J. Schutz, a married man dealing with his sole and separate property	Javelina Partners Zorro Partners	Moore & Shelton Company, Ltd.	Sarvis Permian Land Fund I LLC
Ard Oil Ltd.	Earthstone Permian LLC, wholly owned subsidiary of Permian Resources Operating, LLC	Jetstream Royalty Partners LP	Motowi, LLC	Schertz Energy, LLC
Avant Operating, LLC	EAU Rouge, LLC	Joann E. Jensen Family Trust	MW Oil Investment Company, Inc.	Sealy Hutchings Cavin, Inc.
B&N Energy, LLC	EC Ohara Trust	John C. Maxey (CLM)	New Mexico State Land Office	Sharron Stone Trollinger Trust
Bernhardt Oil Corporation	Echols, Marjorie C. - Estate	John C. Mills Testamentary Trust, c/o JP Morgan Chase Bank, N.A.	New Mexico Western Minerals, Inc.	Slayton Investments, LLC
Blasco, LLC	EG3 Inc.	Jonathan S. Roderick, Trustee of the Jonathan S. Roderick Living Trust dated February 8, 2007	Northern Oil and Gas, Inc.	Stevens Oil & Gas, LLC
Bowtie Slash Energy, Inc.	Eileen M. Grooms, Trustee of the EMG Revocable Trust, U/A/D 11/01/2004	Josephine T. Hudson Testamentary Trust FBO J. Terrell Ard, Frost Bank, Trustee	Nuevo Seis, LP	Stevens, David M.
Breckenridge Partnership Ltd	Elizabeth Jane Kay Family Trust, Elizabeth Jane Kay, Trustee	JPT Family JV #1, c/o The Thompson Co.	Oak Valley Mineral and Land, LP	Stevens, N.L., III
Brothers Prod Properties Ltd	Ergodic Resources Company	Jupiter JV LP	Pear Resources	Sunburst Energy, LLC
Bureau of Land Management	Estate of Bruce C. Monroe, Deceased	Kaleb Smith	Pegasus Resources II LLC	Susan Bonner Mead, Trustee
BXP Partners VLP	Estate of Clarence Hyde	Kent Production Co	Penasco Petroleum, LLC	The Allar Company
Carolyn J. Chester Trust dated 8/11/1995	Fasken Land & Minerals Ltd	Laura K. Read, LLC	Penroc Oil Corp	Thomas M. & Carolyn Beall
Caza Petroleum LLC	FFF, Inc.	Lindy's Living Trust, Francis H. Hudson, Trustee	Penroc Oil Corporation	Tierra Encantada LLC
CBR Oil Properties LLC	First Roswell Company, Ltd.	LMC Energy, LLC	Permian Resources Operating, LLC	Turner Royalties, LLC
CEP Minerals, LLC	FISCO Inc.	Loveless Land Holdings, LLC	Phillip D. Dunford	Turner, Marion T.
Chad Barbe and wife, Marci Barbe	Foran Oil Company	Loveless, Lucinda	Phillip D. Dunford, Jr.	Union Hill Oil & Gas Co., Inc.
Challenger Crude, Ltd.	Frannifin, LLC	Lucinda Loveless Revocable Trust 12/21/2006	Pioneer Natural Resources, Inc.	Vrooman Energy LLC
Chase Oil Corporation	Fred Andrew Grooms, a/k/a F. Andrew Grooms, Trustee of the F. Andrew Grooms, SSP Trust U/A/D March 24, 2014	Luna, David	Post Oak Crown IV, LLC	W A Moncrief Jr. Trust
Chevron U.S.A., Inc.	Free Ride, LLC	Lynne M. Romanchuk	Post Oak Crown IV-B, LLC	Warren Associates
Christopher R. F. Eckels	Good Earth Minerals, LLC	MAP 92-96 MGD, an Oklahoma general partnership, c/o Mineral Acquisition Partners, Inc.	Prime Rock Resources AgentCo, Inc., as Nominee F/B/O Prime Rock Resources	Watson Properties LLC
Cimarex Energy Co. Magnum Hunter Coterra Energy	Good News Minerals, LLC	MAP Holdings, an Oklahoma general partnership, c/o Mineral Acquisition Partners, Inc.	Prospector, LLC	Weimer, Inc.
Clay Rufus G Trust	Grimshaw, Jane Scisson	Marathon Oil Permian	Pruitt, Pat	Western Oil Company, Inc.
Collins & Jones Investments, LLC	H. Jason Wacker	Margaret Couch Trust	Pumpkin Buttes LLC	Wilbanks Properties Inc.
Communities Foundation of Texas, Inc., c/o JPMorgan Chase Bank, N.A.	HHB Limited Partnership	Marks Oil, Inc.	PXP Gulf Coast, Inc.	Wilbanks Reserve Corporation
Cowboy Minerals LLC	High Divide, LLC	Matador Resources MRC Permian MRC Delaware Hat Mesa MRC Spiral Resources LLC	RBCM, Inc.	Wilbanks Reserve Partners, LLC
Crown Oil Partners V, LP	Highland (Texas) Energy Company	Matlock Minerals Ltd. Company	Read & Stevens, Inc., wholly owned subsidiary of Permian Resources Operating, LLC	William N. Heiss Profit Sharing Plan
Crown Oil Partners, LP	Hightower Exploration LLC	Mavros Minerals II, LLC	Richardson Oil Company, LLC	Wise Oil & Gas No. 6 Ltd
David W. Cromwell	Hillier, LLC	McBride Oil & Gas Corp	Richter, Glenda L.	Wood Family Non-Exempt Trust FBO James Ralph Wood, III
Deane Duham	HM Investments, Ltd.	McMullen Minerals, LLC	Robert Edward Eckels, Jr., LLC	Wyotex Oil Company
Delmar Hudson Lewis Living Trust, Bank of America, N.A., Trustee	HOG Partnership, LP	Merit Energy Partners	Rolla Hinkle III	Yates Energy Corporation



300 N. MARIENFELD STREET, SUITE 1000  
MIDLAND, TX 79701

OFFICE 432.695.4222  
FAX 432.695.4063

June 5, 2024

**Addressed to all Interested Parties**

**Via Certified Mail**

**RE: Joker & Bane Developments**  
Township 20 South, Range 34 East, Lea Co., New Mexico  
Sections 4, 5, 8, & 9

To Whom It May Concern,

The purpose of this letter (the "Notice") is to provide formal notice redesignating the previously proposed Joker and Bane wells in accordance with New Mexico Oil Conservation Division ("NMOCD") Order R-23089 (the "Order"). Furthermore, to mitigate any confusion, this Notice provides a summary of where the active contest over the above-referenced acreage ("Subject Acreage") between Permian Resources Operating, LLC as parent company to Read & Stevens, Inc. (collectively "Permian") and Cimarex Energy Co. ("Cimarex") stands. Permian and Cimarex are referred herein as the "Parties".

**Notice:**

The NMOCD issued the Order on April 8, 2024, attached as Exhibit "A" providing the mandate for creation of a special Wolfbone pool in the Subject Acreage. While the target formations and the TVDs remain unchanged, the previously proposed wells as defined in Exhibit "B" (the "Wells") will now be redesignated from their respective Bone Spring and Wolfcamp pool codes to a new special Wolfbone pool. Permian applied for the creation of the Wolfbone pool on May 9, 2024, and the NMOCD has designated the case number 24528. All interest owners should have received notice of this application but for ease of access, the application can also be viewed in the address below:

**Permian Wolfbone Application:**

<https://ocdimage.emnrd.nm.gov/imaging/CaseFileView.aspx?CaseNo=24528>

Cimarex likewise has filed a competing Wolfbone application dated May 13, 2024, that can be viewed in the address below:

**Cimarex Wolfbone Application:**

<https://ocdimage.emnrd.nm.gov/imaging/CaseFileView.aspx?CaseNo=24541>

For descriptive purposes, attached here as Exhibit "C" is a graphic depiction of the intent of the separate applications.

**Contest Update:**

The Parties are set to appear before the NMOCD again on August 13, 2024, to have a contested hearing focused solely on the two competing applications to create a special Wolfbone pool in the Subject Acreage. Should you wish to view this hearing live and need direction, please feel free to reach out to me at the below email address and we will provide the link to the hearing once it is published and made available on the NMOCD's website.

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. B-8  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528



Lastly, as the original contest between the Parties was heard before the NMOCD ten (10) months ago, Permian is supplementing the original cost estimates with updated AFEs herein as Exhibit "D" to reflect the expenditures more accurately.

**Operational Update:**

Permian continues its exploration and development in the area, having drilled a total of eighteen (18) wells, and logged two (2) pilot hole studies through the Bone Spring and Wolfcamp Formations in the past twelve (12) months, approximately 1-mile south of the Joker unit in Sections 17, 18, 19, and 20 of Township 20 South, Range 34 East with plans to spud an additional twenty-one (21) wells in the immediate vicinity by the end of the year. Wells drilled in the previous 12 months have targeted the below formations:

- 2<sup>nd</sup> Bone Spring
- 3<sup>rd</sup> Bone Spring
- Wolfcamp XY
- Wolfcamp - Deep

All interest owners within the Joker and Bane units are set to receive the benefit of these scientific tests in the event Permian is granted operatorship by the NMOCD.

Thank you for your time and attention to this matter, should you have any questions at all please do not hesitate to contact me via email at [travis.macha@permianres.com](mailto:travis.macha@permianres.com).

Respectfully,

A handwritten signature in blue ink, appearing to read 'Travis Macha', is written over a horizontal blue line.

Travis Macha  
NM Land Lead

**Exhibit "A"**

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

**IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
CIMAREX ENERGY COMPANY**

**CASE NOS. 23448 - 23455**

**IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
CIMAREX ENERGY COMPANY**

**CASE NOS. 23594 - 23601**

**IN THE MATTER OF APPLICATION FOR  
COMPULSORY POOLING SUBMITTED BY  
READ & STEVENS, INC**

**CASE NOS. 23508 - 23523**

**ORDER NO. R-23089**

**ORDER**

The Director of the New Mexico Oil Conservation Division (“OCD”), having heard this matter through legal and technical Hearing Examiners on August 9, 2023, through August 11, 2023, and after considering the administrative record including the sworn testimony, evidence, and recommendations of the Hearing Examiners, issues the following Order.

**FINDINGS OF FACT**

1. Cimarex Energy Company (“Cimarex”) submitted a total of sixteen applications (“Cimarex Applications”) to compulsory pool the uncommitted oil and gas interests within the spacing unit as seen in Cimarex’ exhibits.
2. Read & Stevens, Inc. (“Read & Stevens”) submitted a total of sixteen applications (“Read & Stevens Applications”) to compulsory pool the uncommitted oil and gas interests within the spacing unit as seen in Read & Stevens’ exhibits.
3. Both parties are proposing to develop Sections 5 and 8, Township 20 South, Range 34 East. Cimarex’ plan for these lands is named “Mighty Pheasant” and Read & Stevens’ plan is named “Joker.” Both parties are also proposing to develop Sections 4 and 9, Township 20 South, Range 34 East. Cimarex’ plan for these lands is named “Loosey Goosey” and Read & Stevens’ plan is named “Bane.”.
4. Cimarex’ applications proposed drilling twelve wells per section with all twelve wells being distributed between the Bone Spring formation intervals.
5. Read & Stevens’ applications proposed drilling twenty-four wells per section with those twenty-four wells being distributed between the Bone Springs formation and the Wolfcamp formation intervals.

6. The lands proposed for drilling by both parties lacks natural barriers that would prevent communication between the Third Bone Spring Sand and Upper Wolfcamp, thereby creating a single reservoir or common source of supply located predominantly in the Third Bone Spring Sand.

7. Cimarex' geologist Staci Mueller affidavit testimony paragraph twelve states:

*There are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank.*

8. Read & Stevens' Reservoir Engineer John Fechtel testified that:

*The – both wells developed in the third bone sand and the wells developed in the XY will share – have some resources from either formation.”*

*(See Tr. (DD 8-10-23) 181: 2-4)*

9. Read & Stevens' Geologist Ira Bradford was questioned about the substantial communication issues and testified:

*Q: So, Mr. Bradford, you talked a little bit about that you do agree with Ms. Mueller that there is substantial communication between the third Bone Spring and the upper Wolfcamp; is that correct?*

*A: Yes.*

*(See Tr. (DD 8-10-23) 206: 11-1)*

10. Cimarex and Read & Stevens both acknowledged that wells completed in the Bone Spring and Wolfcamp formations will share production from both the Bone Spring and Wolfcamp formations.

11. Neither Cimarex nor Read & Stevens requested in their applications or at hearing the creation of a special pool to accommodate the communication of the Bone Springs and Wolfcamp formations such that there is a common supply.

12. Neither applicant requested a special pool order accounting for the common source of supply, or provided notice of a special pool request.

### **CONCLUSIONS OF LAW**

13. OCD has jurisdiction to issue this Order pursuant to NMSA 1978, Section 70-2-17.

14. A "Pool" is defined as "an underground reservoir containing a common accumulation of oil or gas. Each zone of a general structure, which zone is completely separated from other zones in the structure, is covered by the word pool as used in 19.15.2 NMAC through 19.15.39 NMAC. "Pool" is synonymous with "common source of supply" and with "common reservoir." 19.15.2.7.P(5) NMAC.
15. NMSA 1978, Section 70-2-12 B of the Oil and Gas Act requires OCD:
  - (2) to prevent crude petroleum oil, natural gas or water from escaping from strata in which it is found into other strata;
  - (7) to require wells to be drilled, operated and produced in such manner as to prevent injury to neighboring leases or properties;
  - (12) to determine the limits of any pool producing crude petroleum oil or natural gas or both and from time to time redetermine the limits;
16. 19.15.16.9 NMAC requires that during the drilling of an oil well, injection well or other service well, the operator shall seal and separate the oil, gas and water strata above the producing or injection horizon to prevent their contents from passing into other strata.
17. 19.15.12.9 NMAC requires that an operator shall produce each pool as a single common source of supply and complete, case, maintain and operate wells in the pool so as to prevent communication within the well bore with other pools. An operator shall at all times segregate oil or gas produced from each pool. The combination commingling of production, before marketing, with production from other pools without division approval is prohibited.
18. OCD has the authority to create special pool orders when required pursuant to 19.15.2.9 NMAC, when proper notice has been satisfied.
19. The evidence currently in the record before OCD indicates that Read & Stevens' and Cimarex' proposals would lead to either impairment of correlative rights or illegal allocation. Both parties testify that their production would extend outside of their respective pools and impact other pools, as such both requests extend outside of a standard compulsory pooling request.
20. Neither application can be approved while remaining in compliance with OCD rules and regulations that require pool segregation, prevent waste and protect correlative rights.


### **ORDER**

21. OCD hereby denies both applications except insofar as either applicant or both applicants choose to propose a special pool, a Wolfbone pool, that would account for the lack of frac baffles between the Bone Spring and Wolfcamp formations in

this area. The record is left open for such a proposal and will prompt a reopening of the hearing record on both applications.

22. It is not necessary for the parties to repeat the testimony or resubmit the exhibits regarding their original proposed plans; they may refer to existing evidence to the extent needed to justify the special pool request.
23. OCD retains jurisdiction of this matter for the entry of such orders as may be deemed necessary.

**STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION**

  
\_\_\_\_\_  
**DYLAN M. FUGE**  
**DIRECTOR (Acting)**  
DMF/jag

**Date:** 4/8/24

## Exhibit "B"

### Wells:

**1. Bane 4-9 Federal Com 131H – West Pad**

SHL: 445' FNL & 1,558' FWL (or at a legal location within Lot 3) of Section 4  
BHL: 10' FSL & 330' FWL of Section 9  
FTP: 100' FNL & 330' FWL of Section 4  
LTP: 100' FSL & 330' FWL of Section 9  
TVD: Approximately 10,825'  
TMD: Approximately 21,110'  
Proration Unit: Lot 4, SWNW, W2SW of Section 4 and W2W2 of 9 of T20S-R34E  
Targeted Interval: 3<sup>rd</sup> Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**2. Bane 4-9 Federal Com 132H**

SHL: 445' FNL & 1,624' FWL (or at a legal location within Lot 3) of Section 4  
BHL: 10' FSL & 1,650' FWL of Section 9  
FTP: 100' FNL & 1,650' FWL of Section 4  
LTP: 100' FSL & 1,650' FWL of Section 9  
TVD: Approximately 10,825'  
TMD: Approximately 21,110'  
Proration Unit: Lot 3, SENW, E2SW of Section 4 and E2W2 of 9 of T20S-R34E  
Targeted Interval: 3<sup>rd</sup> Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**3. Bane 4-9 Federal Com 133H – East Pad**

SHL: 375' FNL & 1,292' FEL (or at a legal location within Lot 1) of Section 4  
BHL: 10' FSL & 2,310' FEL of Section 9  
FTP: 100' FNL & 2,310' FEL of Section 4  
LTP: 100' FSL & 2,310' FEL of Section 9  
TVD: Approximately 10,825'  
TMD: Approximately 21,110'  
Proration Unit: Lot 2, SWNE, W2SE of Section 4 and W2E2 of 9 of T20S-R34E  
Targeted Interval: 3<sup>rd</sup> Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**4. Bane 4-9 Federal Com 134H**

SHL: 375' FNL & 1,226' FEL (or at a legal location within Lot 1) of Section 4  
BHL: 10' FSL & 990' FEL of Section 9  
FTP: 100' FNL & 990' FEL of Section 4  
LTP: 100' FSL & 990' FEL of Section 9  
TVD: Approximately 10,825'  
TMD: Approximately 21,110'  
Proration Unit: Lot 1, SENE, E2SE of Section 4 and E2E2 of 9 of T20S-R34E  
Targeted Interval: 3<sup>rd</sup> Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**5. Bane 4-9 Federal Com 201H – West Pad**

SHL: 445' FNL & 1,591' FWL (or at a legal location within Lot 3) of Section 4  
BHL: 10' FSL & 990' FWL of Section 9  
FTP: 100' FNL & 990' FWL of Section 4  
LTP: 100' FSL & 990' FWL of Section 9  
TVD: Approximately 10,925'  
TMD: Approximately 21,210'  
Proration Unit: Lot 4, SWNW, W2SW of Section 4 and W2W2 of 9 of T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**6. Bane 4-9 Federal Com 202H – West Pad**

SHL: 445' FNL & 1,657' FWL (or at a legal location within Lot 3) of Section 4  
BHL: 10' FSL & 2,310' FWL of Section 9  
FTP: 100' FNL & 2,310' FWL of Section 4  
LTP: 100' FSL & 2,310' FWL of Section 9  
TVD: Approximately 10,925'  
TMD: Approximately 21,210'  
Proration Unit: Lot 3, SENW, E2SW of Section 4 and E2W2 of 9 of T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**7. Bane 4-9 Federal Com 203H – East Pad**

SHL: 375' FNL & 1,259' FEL (or at a legal location within Lot 1) of Section 4  
BHL: 10' FSL & 1,650' FEL of Section 9  
FTP: 100' FNL & 1,650' FEL of Section 4  
LTP: 100' FSL & 1,650' FEL of Section 9  
TVD: Approximately 10,925'  
TMD: Approximately 21,210'  
Proration Unit: Lot 2, SWNE, W2SE of Section 4 and W2E2 of 9 of T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**8. Bane 4-9 Federal Com 204H – East Pad**

SHL: 375' FNL & 1,193' FEL (or at a legal location within Lot 1) of Section 4  
BHL: 10' FSL & 330' FEL of Section 9  
FTP: 100' FNL & 330' FEL of Section 4  
LTP: 100' FSL & 330' FEL of Section 9  
TVD: Approximately 10,925'  
TMD: Approximately 21,210'  
Proration Unit: Lot 1, SENE, E2SE of Section 4 and E2E2 of 9 of T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**1. Joker 5-8 Federal Com 131H - West Pad**

SHL: 250' FNL & 2,212' FWL (or at a legal location in Lot 3) of Section 5  
FTP: 100' FNL & 330' FWL of Section 5  
LTP: 100' FSL & 330' FWL of Section 8  
BHL: 10' FSL & 330' FWL of Section 8  
TVD: 10,831'  
TMD: 21,116'  
Proration Unit: Lot 4, SWNW, W2SW of Section 5, W2W2 of Section 8, T20S-R34E  
Targeted Interval: 3rd Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**2. Joker 5-8 Federal Com 132H – West Pad**

SHL: 250' FNL & 2,278' FWL (or at a legal location in Lot 3) of Section 5  
FTP: 100' FNL & 1,650' FWL of Section 5  
LTP: 100' FSL & 1,650' FWL of Section 8  
BHL: 10' FSL & 1,650' FWL of Section 8  
TVD: 10,831'  
TMD: 21,116'  
Proration Unit: Lot 3, SENW, E2SW of Section 5, E2W2 of Section 8, T20S-R34E  
Targeted Interval: 3rd Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**3. Joker 5-8 Federal Com 133H – East Pad**

SHL: 250' FNL & 1,972' FEL (or at a legal location in Lot 2) of Section 5  
FTP: 100' FNL & 2,310' FEL of Section 5  
LTP: 100' FSL & 2,310' FEL of Section 8  
BHL: 10' FSL & 2,310' FEL of Section 8  
TVD: 10,821'  
TMD: 21,106'  
Proration Unit: Lot 2, SWNE, W2SE of Section 5, W2E2 of Section 8, T20S-R34E  
Targeted Interval: 3rd Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**4. Joker 5-8 Federal Com 134H – East Pad**

SHL: 250' FNL & 1,906' FEL (or at a legal location in Lot 2) of Section 5  
FTP: 100' FNL & 990' FEL of Section 5  
LTP: 100' FSL & 990' FEL of Section 8  
BHL: 10' FSL & 990' FEL of Section 8  
TVD: 10,821'  
TMD: 21,106'  
Proration Unit: Lot 1, SENE, E2SE of Section 5, E2E2 of Section 8, T20S-R34E  
Targeted Interval: 3rd Bone Spring  
Defined Pool: Wolfbone  
Total Cost: See attached AFE



**5. Joker 5-8 Federal Com 201H - West Pad**

SHL: 250' FNL & 2,245' FWL (or at a legal location in Lot 3) of Section 5  
FTP: 100' FNL & 990' FWL of Section 5  
LTP: 100' FSL & 990' FWL of Section 8  
BHL: 10' FSL & 990' FWL of Section 8  
TVD: 10,926'  
TMD: 21,211'  
Proration Unit: Lot 4, SWNW, W2SW of Section 5, W2W2 of Section 8, T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**6. Joker 5-8 Federal Com 202H - West Pad**

SHL: 250' FNL & 2,311' FWL (or at a legal location in Lot 3) of Section 5  
FTP: 100' FNL & 2,310' FWL of Section 5  
LTP: 100' FSL & 2,310' FWL of Section 8  
BHL: 10' FSL & 2,310' FWL of Section 8  
TVD: 10,926'  
TMD: 21,211'  
Proration Unit: Lot 3, SENW, E2SW of Section 5, E2W2 of Section 8, T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**7. Joker 5-8 Federal Com 203H - East Pad**

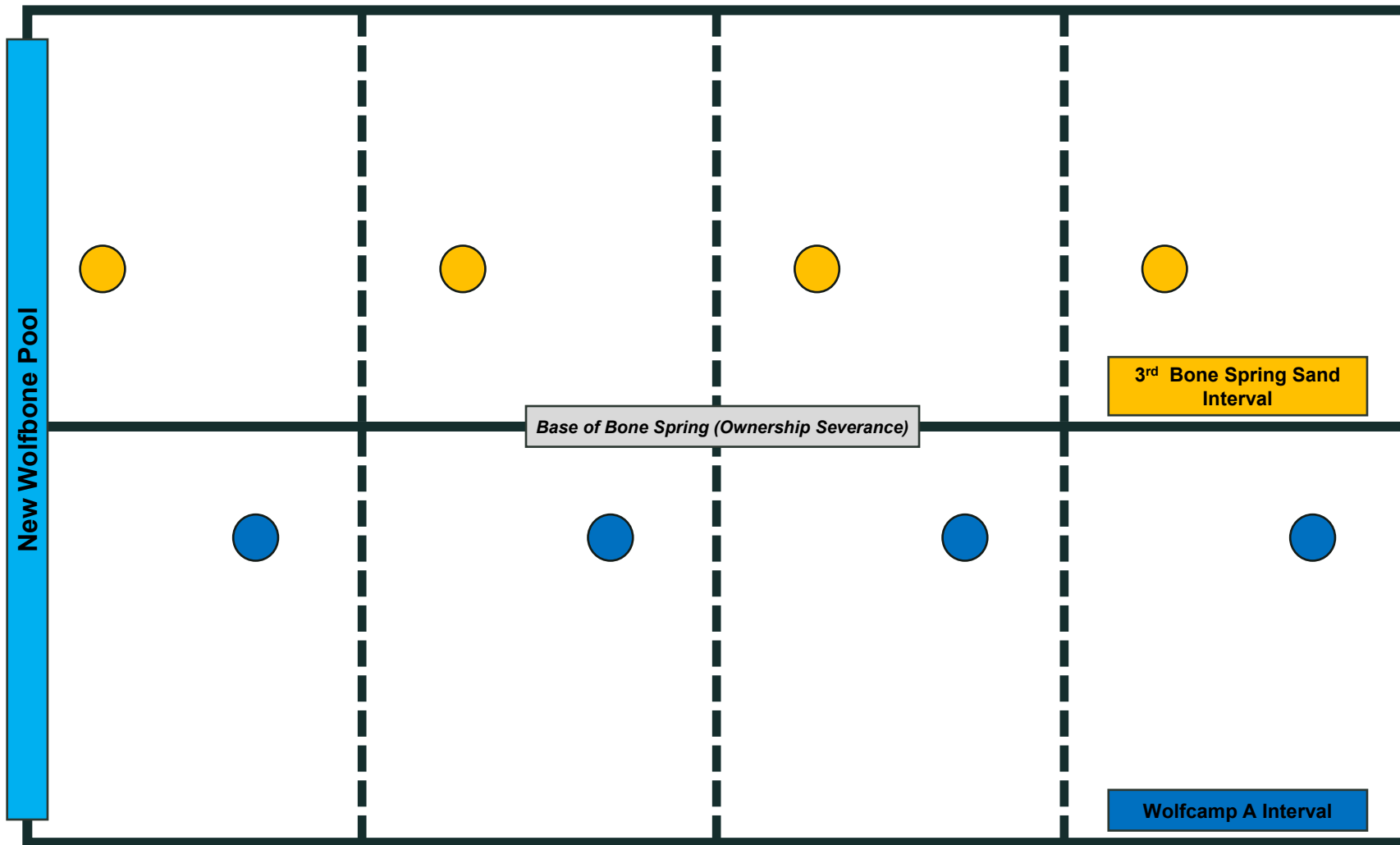
SHL: 250' FNL & 1,939' FEL (or at a legal location in Lot 2) of Section 5  
FTP: 100' FNL & 1,650' FEL of Section 5  
LTP: 100' FSL & 1,650' FEL of Section 8  
BHL: 10' FSL & 1,650' FEL of Section 8  
TVD: 10,906'  
TMD: 21,191'  
Proration Unit: Lot 2, SWNE, W2SE of Section 5, W2E2 of Section 8, T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE

**8. Joker 5-8 Federal Com 204H - East Pad**

SHL: 250' FNL & 1,873' FEL (or at a legal location in Lot 2) of Section 5  
FTP: 100' FNL & 330' FEL of Section 5  
LTP: 100' FSL & 330' FEL of Section 8  
BHL: 10' FSL & 330' FEL of Section 8  
TVD: 10,896'  
TMD: 21,181'  
Proration Unit: Lot 1, SENE, E2SE of Section 5, E2E2 of Section 8, T20S-R34E  
Targeted Interval: Wolfcamp XY  
Defined Pool: Wolfbone  
Total Cost: See attached AFE



# Exhibit "C" - Permian Wolfbone Application – Visual Depiction

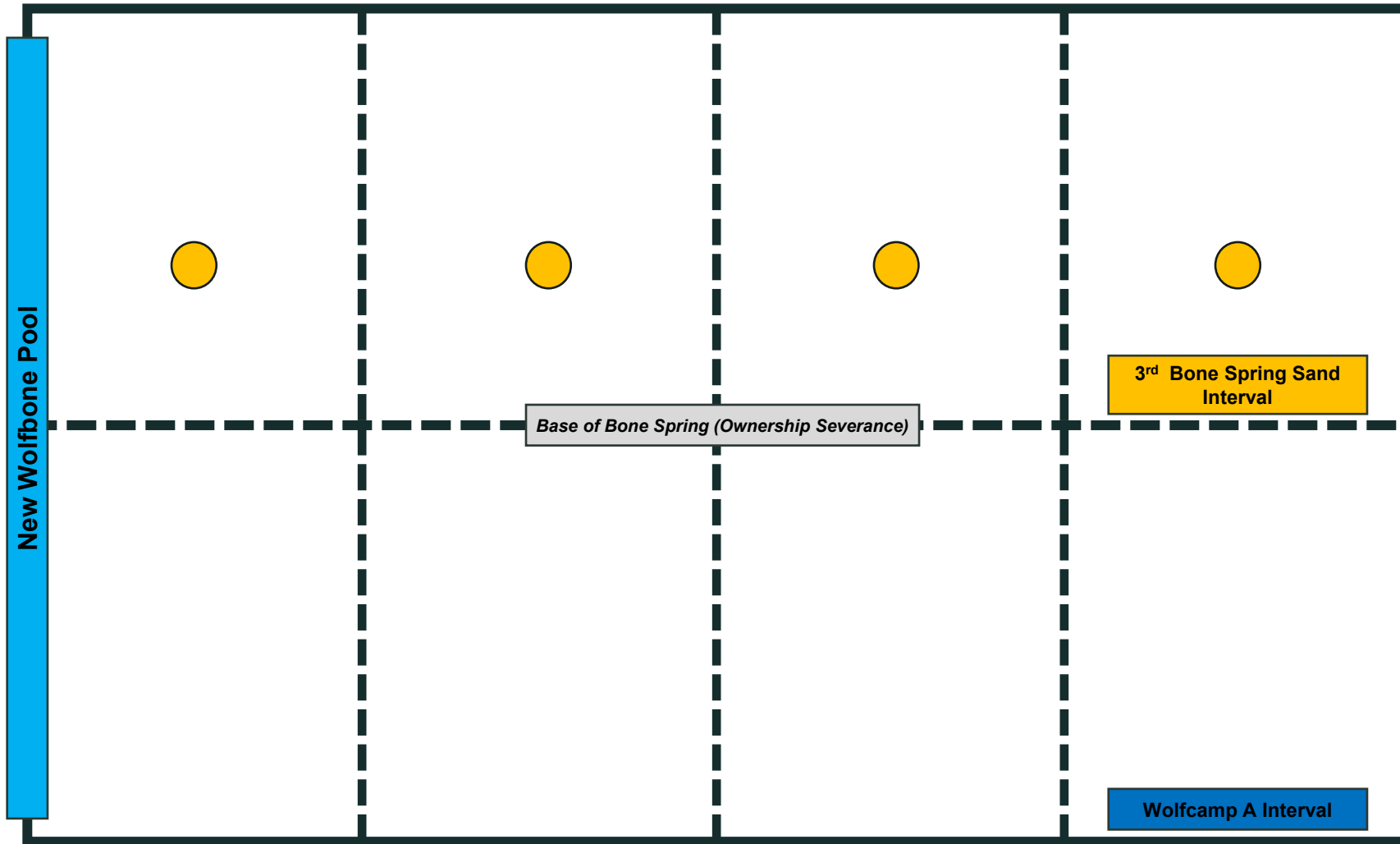


\*Graphic is for informational purposes only

\*Permian plan – Allocate all revenues/working interests of wells landed in the respective Bone Spring & Wolfcamp formations to the respective owners inside such formations



# Exhibit "C" - Cimarex Wolfbone Application – Visual Depiction



\*Graphic is for informational purposes only

\*Cimarex plan – Blend all revenues/working interests of wells landed in the 3<sup>rd</sup> Bone Spring Sand interval with differing ownership in the Wolfcamp A interval (72.8% allocated to the Bone Spring owners, 27.2% allocated to the

Wolfcamp owners – Inaccurate, revised P11H (porosity height) formula)

**Cost Estimate**

<b>AFE Number:</b>	502188	<b>Description:</b>	Joker 131-134, Bane 131-134
<b>AFE Name:</b>	<u>Joker &amp; Bane - 3rd Bone Spring Sand AFE Update</u>	<b>AFE TYPE:</b>	Drill and Complete
<b>Well Operator:</b>	Permian Resources Operating, LLC		
<b>Operator AFE #:</b>			

<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
<b>Completion Intangible</b>		
8025.3500	ICC - WELLSITE SUPERVISION	\$56,700.00
8025.1800	ICC - WATER DISPOSAL/VACUUM TRUCK	\$18,113.00
8025.3050	ICC - SOURCE WATER	\$482,307.00
8025.3100	ICC - WELLHEAD/FRACTURE REPAIR	\$40,000.00
8025.3400	ICC - RENTAL EQUIPMENT	\$181,260.00
8025.3700	ICC - SAFETY / ENVIRONMENTAL	\$15,000.00
8025.3000	ICC - WATER HANDLING	\$157,274.00
8025.1600	ICC - COILED TUBING	\$184,906.00
8025.1100	ICC - ROAD, LOCATIONS, PITS	\$10,500.00
8025.1500	ICC - FUEL / POWER	\$531,261.00
8025.2600	ICC - CONTRACT LABOR/ROUSTABOUT	\$15,000.00
8025.3600	ICC - SUPERVISION/ENGINEERING	\$5,000.00
8025.2300	ICC - COMPLETION FLUIDS	\$10,000.00
8025.2000	ICC - TRUCKING	\$14,375.00
8025.2200	ICC - ELECTRIC LOGGING / PERFORATING	\$363,974.00
8025.2500	ICC - WELL STIMULATION/FRACTUR	\$1,986,932.00
8025.3800	ICC - OVERHEAD	\$10,000.00
8025.1400	ICC - WIRELINE OPEN/CASED HOLE	\$40,000.00
	<b>Sub-total</b>	<b>\$4,122,602.00</b>
<b>Facilities</b>		
8035.3200	FAC - VALVES FITTINGS & PIPE	\$40,000.00
8035.2200	FAC - CONTRACT LABOR / ROUSTAB	\$30,000.00
8035.1700	FAC - RENTAL EQUIPMENT	\$8,000.00
8035.1600	FAC - TRANSPORTATION TRUCKING	\$3,000.00
8035.3600	FAC - ELECTRICAL	\$20,000.00
8035.3700	FAC - AUTOMATION MATERIAL	\$10,000.00
8035.1400	FAC - ROAD LOCATIONS PITS	\$1,000.00
8035.1300	FAC - SURFACE DAMAGE / ROW	\$400.00
8035.2100	FAC - INSPECTION & TESTING	\$1,000.00
8035.2000	FAC - WASTE DISPOSAL	\$600.00
8035.4400	FAC - COMPANY LABOR	\$1,000.00
8035.3000	FAC - HEATER TREATER/SEPARATOR	\$90,000.00
8035.1500	FAC - MATERIALS & SUPPLIES	\$1,000.00
8035.4500	FAC - CONTINGENCY	\$7,218.00
8035.3300	FAC - CIRCULATING TRANSFER PUMP	\$4,000.00
8035.3400	FAC - METER & LACT	\$21,000.00
8035.2400	FAC - SUPERVISION	\$8,000.00
8035.2500	FAC - CONSULTING SERVICES	\$1,000.00
8035.1900	FAC - WATER DISPOSAL / SWD	\$600.00
	<b>Sub-total</b>	<b>\$247,818.00</b>

<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
<b>Drilling Tangible</b>		
8020.1200	TDC - CASING - INTERMEDIATE - 1	\$135,660.00
8020.1100	TDC - CASING - SURFACE	\$86,705.31
8020.1400	TDC - CASING - PRODUCTION	\$497,510.10
8020.1300	TDC - CASING - INTERMEDIATE 2	\$212,228.53
8020.1700	TDC - PACKER/DOWNHOLE TOOLS	\$53,125.00
8020.1500	TDC - WELLHEAD EQUIPMENT	\$53,125.00
	<b>Sub-total</b>	<b>\$1,038,353.94</b>
<b>Pipeline</b>		
8036.3200	PLN - VALVES FITTINGS & PIPE	\$15,000.00
8036.1310	PLN - PERMANENT EASEMENT	\$64,000.00
8036.2200	PLN - CONTRACT LABOR	\$422,400.00
8036.2800	PLN - FLOWLINE MATERIAL	\$295,680.00
	<b>Sub-total</b>	<b>\$797,080.00</b>
<b>Artificial Lift Tangible</b>		
8065.2100	TAL - WELL SITE POWER EQUIPMENT/INSTALL	\$75,000.00
8065.2200	TAL - OHP INFRASTRUCTURE EQUIPMENT/INSTALL	\$50,000.00
8065.1100	TAL - TUBING	\$125,000.00
8065.2000	TAL - WELLHEAD EQUIPMENT	\$50,000.00
8065.2500	TAL - VALVES/CONNECTIONS/FTGS	\$15,000.00
8065.1300	TAL - DOWNHOLE ARTIFICIAL LIFT EQPT	\$15,000.00
8065.3200	TAL - COMM, TELEMETRY & AUTOMA	\$5,000.00
8065.3100	TAL - MEASUREMENT EQUIPMENT	\$5,000.00
8065.1310	TAL - ESP EQUIPMENT/INSTALL	\$100,000.00
	<b>Sub-total</b>	<b>\$440,000.00</b>
<b>Flowback Intangible</b>		
8040.2900	IFC - WELL TESTING / FLOWBACK	\$125,000.00
8040.3430	IFC - SURFACE PUMP RENTAL	\$20,000.00
8040.4000	IFC - CHEMICALS	\$15,000.00
8040.1899	IFC - FRAC WATER RECOVERY	\$200,876.25
8040.3420	IFC - TANK RENTALS	\$20,000.00
8040.3500	IFC - WELLSITE SUPERVISION	\$10,000.00
8040.2000	IFC - TRUCKING/VACUUM/TRANSP	\$20,000.00
	<b>Sub-total</b>	<b>\$410,876.25</b>
<b>Completion Tangible</b>		
8030.2000	TCC - WELLHEAD EQUIPMENT	\$47,250.00
	<b>Sub-total</b>	<b>\$47,250.00</b>
<b>Drilling Intangible</b>		
8015.1000	IDC - PERMITS,LICENSES,ETC	\$15,000.00
8015.3800	IDC - WELLHEAD PREPARE/REPAIR	\$12,500.00
8015.2150	IDC - DRILL BIT	\$115,000.00
8015.2350	IDC - FUEL/MUD	\$86,000.00
8015.1310	IDC - PERMANENT EASEMENT	\$12,000.00
8015.1100	IDC - STAKING & SURVEYING	\$15,000.00
8015.5000	IDC - WELL CONTROL INSURANCE	\$9,625.00
8015.3000	IDC - CEMENT SERV/FLOAT EQUIP	\$350,500.00

<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
8015.4100	IDC - RENTAL EQUIPMENT	\$96,250.00
8015.4300	IDC - WELLSITE SUPERVISION	\$101,500.00
8015.1600	IDC - RIG MOB / STANDBY RATE	\$35,100.00
8015.2500	IDC - MUD/CHEMICALS/ACIDIZING	\$230,027.00
8015.3400	IDC - MATERIALS & SUPPLIES	\$5,000.00
8015.2200	IDC - BITS, TOOLS, STABILIZERS	\$63,356.00
8015.1700	IDC - DAYWORK CONTRACT	\$652,640.63
8015.2700	IDC - INSPECTION, TESTING & REPAIR	\$37,000.00
8015.2400	IDC - RIG WATER	\$21,875.00
8015.1400	IDC - ROAD, LOCATIONS, PITS	\$95,625.00
8015.3200	IDC - CONTRACT LABOR/ROUSTABOUT	\$27,000.00
8015.2300	IDC - FUEL / POWER	\$163,625.00
8015.2000	IDC - CONDUCTOR HOLE & SERVICE	\$42,500.00
8015.1900	IDC - DIRECTNL DRILL & SURVEY	\$288,203.13
8015.4600	IDC - SAFETY / ENVIRONMENTAL	\$19,250.00
8015.3500	IDC - TRUCKING/VACUUM/ TRANSP	\$26,250.00
8015.1300	IDC - SURFACE DAMAGE / ROW	\$35,000.00
8015.4200	IDC - MANCAMP	\$45,500.00
8015.3100	IDC - CASING CREW & TOOLS	\$65,000.00
8015.1200	IDC - LEGAL, TITLE SERVICES	\$13,000.00
8015.3600	IDC - SOLIDS CONTROL/ CLOSED LOOP SYSTEM	\$68,796.88
8015.3700	IDC - DISPOSAL	\$151,746.00
8015.1500	IDC - RIG MOB / TRUCKING	\$127,500.00
8015.5200	IDC - CONTINGENCY	\$136,231.63
	<b>Sub-total</b>	<b>\$3,163,601.26</b>
<b>Artificial Lift Intangible</b>		
8060.3810	IAL - ACID	\$25,000.00
8060.3410	IAL - LAYDOWN MACHINE	\$5,000.00
8060.1200	IAL - WORKOVER RIG	\$15,000.00
8060.1900	IAL - INSPECTION & TESTING	\$3,000.00
8060.2600	IAL - CONTRACT LABOR/ROUSTABOUT	\$10,000.00
8060.1210	IAL - SPOOLING SERVICES	\$6,000.00
8060.2000	IAL - TRUCKING/VACUUM/TRANSP	\$7,000.00
8060.3400	IAL - RENTAL EQUIPMENT	\$10,000.00
8060.2010	IAL - KILL TRUCK	\$5,000.00
8060.2300	IAL - COMPLETION FLUIDS	\$5,000.00
8060.1400	IAL - WIRELINE OPEN/CASED HOLE	\$5,000.00
8060.3500	IAL - WELLSITE SUPERVISION	\$9,000.00
8060.3420	IAL - REVERSE UNIT RENTAL	\$5,000.00
	<b>Sub-total</b>	<b>\$110,000.00</b>
	<b>Grand Total</b>	<b>\$10,377,581.45</b>



### Cost Estimate

<b>AFE Number:</b>	501544	<b>Description:</b>	Joker 201-204, Bane 201-204
<b>AFE Name:</b>	Joker & Bane - Wolfcamp XY AFE Update Permian	<b>AFE TYPE:</b>	Drill and Complete
<b>Well Operator:</b>	Resources Operating, LLC		
<b>Operator AFE #:</b>			

<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
<b>Artificial Lift Intangible</b>		
8060.1210	IAL - SPOOLING SERVICES	\$6,000.00
8060.2010	IAL - KILL TRUCK	\$5,000.00
8060.2300	IAL - COMPLETION FLUIDS	\$5,000.00
8060.3420	IAL - REVERSE UNIT RENTAL	\$5,000.00
8060.3410	IAL - LAYDOWN MACHINE	\$5,000.00
8060.3400	IAL - RENTAL EQUIPMENT	\$10,000.00
8060.2600	IAL - CONTRACT LABOR/ROUSTABOUT	\$10,000.00
8060.2000	IAL - TRUCKING/VACUUM/TRANSP	\$7,000.00
8060.3500	IAL - WELLSITE SUPERVISION	\$9,000.00
8060.1400	IAL - WIRELINE OPEN/CASED HOLE	\$5,000.00
8060.1900	IAL - INSPECTION & TESTING	\$3,000.00
8060.1200	IAL - WORKOVER RIG	\$15,000.00
8060.3810	IAL - ACID	\$25,000.00
	<b>Sub-total</b>	<b>\$110,000.00</b>
<b>Facilities</b>		
8035.2000	FAC - WASTE DISPOSAL	\$333.00
8035.2200	FAC - CONTRACT LABOR / ROUSTAB	\$20,833.00
8035.4500	FAC - CONTINGENCY	\$6,630.00
8035.3000	FAC - HEATER TREATER/SEPARATOR	\$104,167.00
8035.1600	FAC - TRANSPORTATION TRUCKING	\$5,000.00
8035.2500	FAC - CONSULTING SERVICES	\$833.00
8035.3700	FAC - AUTOMATION MATERIAL	\$8,333.00
8035.3400	FAC - METER & LACT	\$20,333.00
8035.4400	FAC - COMPANY LABOR	\$833.00
8035.3600	FAC - ELECTRICAL	\$8,333.00
8035.2400	FAC - SUPERVISION	\$6,667.00
8035.1400	FAC - ROAD LOCATIONS PITS	\$3,333.00
8035.3200	FAC - VALVES FITTINGS & PIPE	\$33,333.00
8035.1300	FAC - SURFACE DAMAGE / ROW	\$833.00
8035.1900	FAC - WATER DISPOSAL / SWD	\$333.00
8035.1700	FAC - RENTAL EQUIPMENT	\$6,667.00
8035.2100	FAC - INSPECTION & TESTING	\$833.00
	<b>Sub-total</b>	<b>\$227,627.00</b>
<b>Drilling Intangible</b>		
8015.3700	IDC - DISPOSAL	\$173,304.00
8015.1100	IDC - STAKING & SURVEYING	\$15,000.00
8015.4100	IDC - RENTAL EQUIPMENT	\$82,500.00
8015.4600	IDC - SAFETY / ENVIRONMENTAL	\$19,500.00
8015.3500	IDC - TRUCKING/VACUUM/ TRANSP	\$22,500.00
8015.5200	IDC - CONTINGENCY	\$125,913.84

<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
8015.2300	IDC - FUEL / POWER	\$159,972.66
8015.1400	IDC - ROAD, LOCATIONS, PITS	\$95,625.00
8015.1600	IDC - RIG MOB / STANDBY RATE	\$36,300.00
8015.2400	IDC - RIG WATER	\$18,750.00
8015.2150	IDC - DRILL BIT	\$105,000.00
8015.2350	IDC - FUEL/MUD	\$98,093.75
8015.2500	IDC - MUD/CHEMICALS/ACIDIZING	\$229,915.44
8015.3100	IDC - CASING CREW & TOOLS	\$70,000.00
8015.1000	IDC - PERMITS,LICENSES,ETC	\$15,000.00
8015.3400	IDC - MATERIALS & SUPPLIES	\$5,000.00
8015.1700	IDC - DAYWORK CONTRACT	\$578,531.25
8015.1200	IDC - LEGAL, TITLE SERVICES	\$13,000.00
8015.3600	IDC - SOLIDS CONTROL/ CLOSED LOOP SYSTEM	\$58,968.75
8015.4200	IDC - MANCAMP	\$39,000.00
8015.3000	IDC - CEMENT SERV/FLOAT EQUIP	\$269,000.00
8015.1900	IDC - DIRECTNL DRILL & SURVEY	\$240,735.94
8015.3200	IDC - CONTRACT LABOR/ROUSTABOUT	\$27,000.00
8015.5000	IDC - WELL CONTROL INSURANCE	\$8,250.00
8015.1500	IDC - RIG MOB / TRUCKING	\$127,500.00
8015.3800	IDC - WELLHEAD PREPARE/REPAIR	\$12,500.00
8015.2700	IDC - INSPECTION, TESTING & REPAIR	\$37,000.00
8015.2000	IDC - CONDUCTOR HOLE & SERVICE	\$47,812.50
8015.1310	IDC - PERMANENT EASEMENT	\$12,000.00
8015.4300	IDC - WELLSITE SUPERVISION	\$87,000.00
8015.1300	IDC - SURFACE DAMAGE / ROW	\$35,000.00
8015.2200	IDC - BITS, TOOLS, STABILIZERS	\$58,326.00
	<b>Sub-total</b>	<b>\$2,923,999.13</b>
<b>Completion Intangible</b>		
8025.1400	ICC - WIRELINE OPEN/CASED HOLE	\$40,000.00
8025.2600	ICC - CONTRACT LABOR/ROUSTABOUT	\$15,000.00
8025.2500	ICC - WELL STIMULATION/FRACTUR	\$2,080,588.00
8025.3050	ICC - SOURCE WATER	\$398,427.00
8025.3400	ICC - RENTAL EQUIPMENT	\$204,944.00
8025.1500	ICC - FUEL / POWER	\$601,652.00
8025.3000	ICC - WATER HANDLING	\$314,548.00
8025.2300	ICC - COMPLETION FLUIDS	\$10,000.00
8025.3500	ICC - WELLSITE SUPERVISION	\$50,625.00
8025.3100	ICC - WELLHEAD/FRACTREE REPAIR	\$40,000.00
8025.3600	ICC - SUPERVISION/ENGINEERING	\$5,000.00
8025.3800	ICC - OVERHEAD	\$10,000.00
8025.2000	ICC - TRUCKING	\$14,375.00
8025.1800	ICC - WATER DISPOSAL/VACUUM TRUCK	\$20,843.00
8025.1600	ICC - COILED TUBING	\$203,187.00
8025.2200	ICC - ELECTRIC LOGGING / PERFORATING	\$357,138.00
8025.1100	ICC - ROAD, LOCATIONS, PITS	\$10,500.00
8025.3700	ICC - SAFETY / ENVIRONMENTAL	\$15,000.00



<u>Account</u>	<u>Description</u>	<u>Gross Est. (\$)</u>
		<b>Sub-total</b>
		<b>\$4,391,827.00</b>
<b>Completion Tangible</b>		
8030.2000	TCC - WELLHEAD EQUIPMENT	\$47,250.00
		<b>Sub-total</b>
		<b>\$47,250.00</b>
<b>Artificial Lift Tangible</b>		
8065.2100	TAL - WELL SITE POWER EQUIPMENT/INSTALL	\$75,000.00
8065.1310	TAL - ESP EQUIPMENT/INSTALL	\$100,000.00
8065.3200	TAL - COMM, TELEMETRY & AUTOMA	\$5,000.00
8065.3100	TAL - MEASUREMENT EQUIPMENT	\$5,000.00
8065.1100	TAL - TUBING	\$125,000.00
8065.2500	TAL - VALVES/CONNECTIONS/FTGS	\$15,000.00
8065.1300	TAL - DOWNHOLE ARTIFICIAL LIFT EQPT	\$15,000.00
8065.2200	TAL - OHP INFRASTRUCTURE EQUIPMENT/INSTALL	\$50,000.00
8065.2000	TAL - WELLHEAD EQUIPMENT	\$50,000.00
		<b>Sub-total</b>
		<b>\$440,000.00</b>
<b>Drilling Tangible</b>		
8020.1200	TDC - CASING - INTERMEDIATE - 1	\$227,855.25
8020.1100	TDC - CASING - SURFACE	\$96,435.69
8020.1500	TDC - WELLHEAD EQUIPMENT	\$63,750.00
8020.1400	TDC - CASING - PRODUCTION	\$591,765.46
8020.1700	TDC - PACKER/DOWNHOLE TOOLS	\$53,125.00
		<b>Sub-total</b>
		<b>\$1,032,931.40</b>
<b>Flowback Intangible</b>		
8040.2000	IFC - TRUCKING/VACUUM/TRANSP	\$20,000.00
8040.1899	IFC - FRAC WATER RECOVERY	\$420,750.00
8040.3430	IFC - SURFACE PUMP RENTAL	\$20,000.00
8040.3500	IFC - WELLSITE SUPERVISION	\$10,000.00
8040.3420	IFC - TANK RENTALS	\$20,000.00
8040.4000	IFC - CHEMICALS	\$15,000.00
8040.2900	IFC - WELL TESTING / FLOWBACK	\$125,000.00
		<b>Sub-total</b>
		<b>\$630,750.00</b>
<b>Pipeline</b>		
8036.2800	PLN - FLOWLINE MATERIAL	\$390,720.00
8036.3200	PLN - VALVES FITTINGS & PIPE	\$15,000.00
8036.2200	PLN - CONTRACT LABOR	\$273,504.00
8036.1310	PLN - PERMANENT EASEMENT	\$118,400.00
		<b>Sub-total</b>
		<b>\$797,624.00</b>
		<b>Grand Total</b>
		<b>\$10,602,008.53</b>

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW  
MEXICO.**

**CASE NO. 24528**

**APPLICATION OF CIMAREX  
ENERGY CO. FOR THE CREATION  
OF A SPECIAL POOL, A WOLFBONE POOL,  
PURSUANT TO ORDER NO. R-23089 AND TO  
REOPEN CASE NOS. 23448 – 23455, 23594 –  
23601, AND 23508 – 23523, LEA COUNTY,  
NEW MEXICO.**

**CASE NO. 24541**

**SELF-AFFIRMED STATEMENT OF IRA BRADFORD**

1. My name is Ira Bradford. I work for Permian Resources Operating, LLC (“Permian Resources”) as a Geologist. Read & Stevens, Inc. (“Read & Stevens”) is the applicant in these cases. It is a subsidiary of Permian Resources.

2. I have previously testified before the New Mexico Oil Conservation Division (“Division”) as an expert witness in petroleum geology matters. My credentials as a petroleum geologist have been accepted by the Division and made a matter of record.

3. I am familiar with the applications filed by Read & Stevens and Cimarex Energy Co. in these cases, and I have conducted a geologic study of the lands in the subject area.

**PERMIAN RESOURCES’ PROPOSED SPECIAL  
WOLFBONE POOL**

4. Permian Resources seeks an order creating a special Wolfbone Pool comprised of the Third Bone Spring interval the Wolfcamp XY/A interval within Sections 4, 5, 8, and 9, in

**BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. C  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528**

Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined below (the “Subject Acreage”). In addition, to accommodate the creation of this special pool, Permian Resources seeks to vertically contract the base of the Teas; Bone Spring, East Pool (Pool Code 96637) upwards to the top of the Third Bone Spring Sand interval, and to vertically contract the top of the Tonto; Wolfcamp Pool (Pool Code 59500) downwards to the base of the Wolfcamp A interval, all within the Subject Acreage as provided below.

5. Permian Resources’ Application in this case, marked as Permian Resources Exhibit A, correctly and accurately describes Permian Resources’ proposal to create a special Wolfbone oil pool and to contract the vertically offsetting Teas; Bone Spring, East Pool and the Tonto; Wolfcamp Pool.

6. **Permian Resources Exhibit C-1** includes a type log for the proposed special Wolfbone oil pool using the Matador 5 Federal #1 well (API No. 30-025-31056). On the upper left corner of the exhibit is the log header. In the bottom left is an inset map showing the location of the proposed special Wolfbone oil pool with a blue dashed boundary. And denoted with a red star is the location of the Matador 5 Federal #1 well.

7. In the center of the exhibit the relevant interval from the type log is depicted showing the top and base of the proposed special Wolfbone oil pool. As depicted in the exhibit, the vertical extent of the proposed special Wolfbone oil pool will be from the stratigraphic equivalent of the top of the Third Bone Spring Sand interval, located at approximately 10,598 feet measured depth, to the stratigraphic equivalent of the base of the Wolfcamp A interval, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the type log well.

8. On the right side of the exhibit is the digitized log for the Matador 5 Federal #1 well. The tracks depicted are from left to right: gamma ray, depth, resistivity, and porosity or Phi. The top of the Third Bone Spring Sand interval is depicted with a red horizontal line. The top of the Wolfcamp formation is marked with a dark purple line. The top of the Wolfcamp A interval is marked with a light purple line. The top of the Wolfcamp B is denoted with a pale purple line. The proposed special Wolfbone oil pool is indicated on the right side of the digital log, reflecting that it starts at the top of the Third Bone Spring Sand interval 10,598 feet measured depth and extends down to the top of the Wolfcamp B interval at 11,236 feet measured depth, which is the base of the Wolfcamp A.

9. **Permian Resources Exhibit C-2** is a cross-section constructed using the type logs used by Cimarex Energy Company (“Cimarex”) on the left, the Quail Ridge 32 State 2 well (API No. 30-025-37703), and Permian Resources’ Matador 5 Federal #1 well on the right.

10. As depicted in Cimarex’s type log well, the upper limit of their proposed special Wolfbone oil pool is proposed to be the stratigraphic equivalent of the top of the Third Bone Spring, located at approximately 10,620 feet measured depth, to the stratigraphic equivalent of the base of the Wolfcamp A shale, located at approximately 11,225 feet measured depth, as found in the triple combo well log for the Quail Ridge 32 State 2 well.

11. Also included in the exhibit is an inset map in the upper left that shows the locations of the type log wells on a cross-section line relative to the proposed special Wolfbone oil pool, identified by a blue hashed boundary.

12. The cross-section shows a side-by-side comparison of the type logs selected by Cimarex and Permian Resources. The comparison shows that there is no material difference in the

stratigraphic unit proposed by Cimarex compared to the unit proposed by Permian Resources. Both companies propose to create a special pool comprised of the same interval.

**CIMAREX'S PROPOSED ALLOCATION DOES NOT  
PROTECT CORRELATIVE RIGHTS**

13. As noted in Travis Macha's testimony and exhibits, an ownership depth severance exists within the proposed special Wolfbone oil pool. The ownership depth severance is found at a stratigraphic equivalent of approximately 10,876 feet, measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056), which is at the base of the Third Bone Spring interval.

14. As Travis Macha explains in his testimony, this means Cimarex's proposed production from the Third Bone Spring interval that will, by design, also partially drain the Wolfcamp XY/A interval within the proposed special pool, cannot be allocated to owners across the depth severance on a "surface acreage basis," as the Oil and Gas Act requires.

15. Cimarex proposes to get around this allocation problem by imposing an allocation formula as part of its special Wolfbone oil pool proposal that would distribute production on the basis of measured PhiHt. The formula would allocate 72.8% of production to Bone Spring owners and 27.2% of production to Wolfcamp owners. *See* Cimarex Application Case No. 24541, ¶¶ 20-22.

16. The problem with this approach is that PhiHt does not accurately predict oil production. It is not even a reasonable estimate. PhiHt is a good tool to identify and compare reservoir quality of prospective development targets at a high level. It represents the total storage or pore space in the rock and, therefore, serves as a reasonable proxy for potential production. But is not nearly accurate enough to fairly or equitably allocate production in a way that is protective of correlative rights.

17. **Permian Resources Exhibit C-3** is an exhibit I prepared that shows how PhiHt cannot be used to determine the equitable share of production for owners in the Bone Spring and Wolfcamp intervals within the proposed special pool.

18. On the left side of the exhibit is a scatter plot with 12-month oil cumulative production values on the Y axis and PhiHt on the X axis for Third Bone Spring interval wells within about a 225 square mile area immediately offsetting the proposed special pool. I ran an R-squared analysis to determine whether there is any relationship or correlation between the productivity of a well and its PhiHt. As can be readily seen by the wide distribution of 12-month cumulative production values—many of which occur in wells with PhiHt in the lower 50% of the distribution—the regression curve shows a poor fit with PhiHt. The R-squared value is 0.003, which indicates there is no relationship between oil production and PhiHt. PhiHt is therefore a completely unreliable predictor of Third Bone Spring production for wells in this area. It cannot be used as a basis to equitably allocate production and would not be protective of correlative rights.

19. One reason there is no relationship here between production and PhiHt is because the water saturation value,  $Sw$ , is so variable. PhiHt is simply a measure of the total pore space in a rock—i.e., its potential for storage—it says nothing about what is actually stored in the pore space. Because water saturation is so variable in this area, some of the pore space contains higher volumes of water than oil, resulting in a wide range of oil production values across PhiHt.

20. The impact of  $Sw$  on the relationship between oil production and PhiHt can be seen by looking at the scatter plot on the right. Instead of showing 12-month cumulative oil production on the Y axis, it shows 12-month total fluid production compared to PhiHt on the X axis. Here, the data points show more of a relationship between total fluid production and PhiHt, which is expected. The more total pore space in the rock, the more total fluid production there is.

21. But even this relationship shows a relatively weak correlation with an R-squared value of only 0.1. The relatively poor correlation is due to other variables that affect production, such as frac size, frac vintage, lateral length, flowback methodology, and other parameters.

22. Because even total fluid shows a poor correlation to total pore space, PhiHt is confirmed to be an unreliable tool to predict actual production values for wells completed in the Third Bone Spring in this area. It remains a useful tool to evaluate and compare prospective zones and development projects, but it is too unreliable to be used as a basis to allocate production.

23. **Permian Resources Exhibit C-4** is an exhibit I prepared showing total PhiHt values within the Third Bone Spring interval across the proposed special Wolfbone oil pool—identified within the blue box—and all the existing producing wells completed within the Third Bone Spring interval that were used in the plots in exhibit C-3. The are of interest is approximately 225 square miles and identifies all the wells in my analysis used in Permian Resources Exhibit C-3.

24. Not only is Cimarex's proposed allocation based on PhiHt flawed because it is an inaccurate and unreliable predictor of oil production, but it is also flawed for a more fundamental reason. Cimarex uses only the Third Bone Spring and Wolfcamp XY intervals to calculate its proposed PhiHt allocation formula. *See* Cimarex Application at ¶ 20, Case No. 24541. Cimarex completely excludes the PhiHt contributions of the Wolfcamp A shale to the total PhiHt in the special Wolfbone pool. This is a problem where Cimarex contends in its application that its eight proposed wells "will produce the entire Wolfbone pool, such that a specified percentage, 72.8%, will be produced from the Third Bone Spring formation and a certain percentage, 27.2%, will be produced from the Upper Wolfcamp formation." *See* Cimarex Application at ¶ 28, Case No. 24541 (emphasis added).

25. **Permian Resources Exhibit C-5** is an exhibit I prepared showing the calculated PhiHt values by zone in the proposed Special Wolfbone Pool from the Quail Ridge 32 St 2 well (30-025-37730). The PhiHt allocation formula proposed by Cimarex considers only the PhiHt contained within the Third Bone Spring and Wolfcamp XY intervals, even though Cimarex's application asserts its wells will produce the entire Wolfbone pool. As the well log on the left side of the exhibit shows, Cimarex's proposal completely excludes the PhiHt value for the Wolfcamp A shale interval even though it is part of the Wolfbone pool Cimarex is proposing.

26. When the PhiHt ratio is calculated in this well using only the Third Bone Spring and Wolfcamp XY intervals, as Cimarex has done, the ratio is nearly identical to what Cimarex proposes for its allocation formula—74% attributable to the Third Bone Spring and 26% attributable to the Wolfcamp XY. But when the Wolfcamp A shale interval is included to calculate the total PhiHit in this well for the entire proposed Wolfbone pool, the calculation shifts—40% attributable to the Third Bone Spring and 60% attributable to the Upper Wolfcamp (Wolfcamp XY/A).

27. If PhiHt porosity “accurately accounts for the depth severance” and would provide “all owners in the Wolfbone pool their just and equitable share of oil,” then the allocation formula must include PhiHt for the entire Wolfbone pool by including the Wolfcamp A shale. Cimarex's allocation formula, however, fails to account for the entire Wolfbone pool's measured PhiHt. Exclusion of the Wolfcamp A shale from Cimarex's allocation formula further marginalizes owners in the Wolfcamp and would impair their correlative rights by failing to account for their full contribution to production with the special Wolfbone pool under Cimarex's approach.

28. Setting these problems aside, it is nearly impossible to properly attribute production allocation based on PhiHt alone due to differences in lithology, porosity, and permeability, which



is why Permian Resources maintains the only equitable solution to account for the Wolfcamp depth severance is to drill wells on either side of the severance. Finally, as noted in Travis Macha's testimony, the Division has never assigned an allocation formula to a special pool before, which suggests doing so should be reserved for truly unprecedented circumstances. That is not this case.

29. Cimarex's application asserts that its approach to target only the Third Bone Spring interval and allocate production based on PhiHt is "novel but nonetheless necessary" due to the "unique geological anomaly" within the proposal special pool area and to avoid drilling unnecessary wells. *See* Cimarex Application at ¶ 9, Case No. 24541. Cimarex is wrong on both counts.

30. Cimarex's own geologist made clear at the hearing on the Competing Pooling Cases that the lack of a "frac baffle" between the Third Bone Spring and Upper Wolfcamp target within the proposed special Wolfbone oil pool is not "unique," but "is pretty common in many places in the Delaware Basin, and we also see that here." *See* Case Nos. 23448-23455 and 23594-23601, Hrg. Tr. Vol. 1, 153:8-17, dated 8/9/23.<sup>1</sup> I agree the lack of a frac baffle between the Third Bone Spring and Upper Wolfcamp is not unique to this area and, in fact, is a common feature across the Delaware Basin.

31. Because the geology is not unique here, a "novel approach" creating a special pool allocation formula is not necessary. The common geologic conditions that exist here simply do not justify implementing an unprecedented and impractical solution to allocating production. And, as demonstrated by Permian Resources' engineering witness and his testimony in this case,

---

1

[https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448\\_08\\_28\\_2023\\_08\\_01\\_40.pdf](https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20230828/23448_08_28_2023_08_01_40.pdf).

drilling additional wells in the Wolfcamp XY/A is necessary to prevent stranding additional reserves within the Wolfcamp that Cimarex’s proposed development will leave behind, resulting in waste.

**CONCLUSION**

32. In my opinion, the Division should reject Cimarex’s proposed special Wolfbone oil pool and its proposed allocation formula based on PhiHt. Cimarex’s proposal is neither necessary nor practical. It is also inaccurate and flawed. The Division should instead approve Permian Resources’ proposed special Wolfbone oil pool and its related compulsory pooling applications in Case Nos. 23508-23523 will be in the best interests of conservation, the prevention of waste, and protection of correlative rights.

33. **Permian Resources Exhibits C-1 through C-4** were either prepared by me or compiled under my direction and supervision.

34. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in these cases. This statement is made on the date next to my signature below.

  
\_\_\_\_\_

Ira Bradford

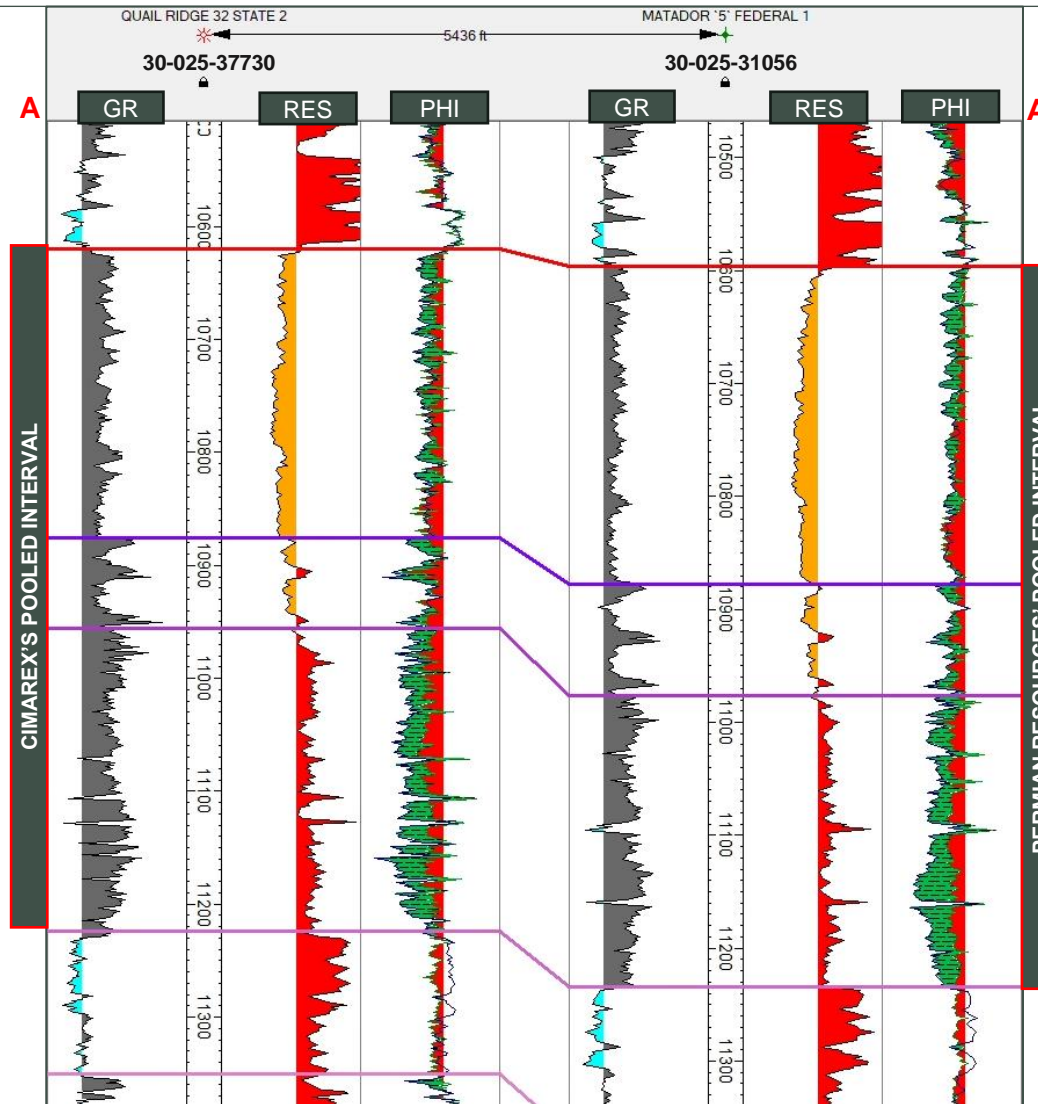
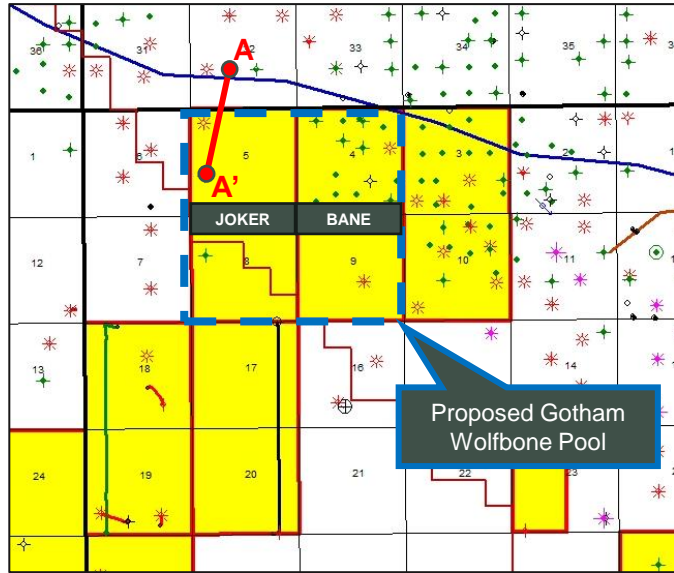
8/6/2024 \_\_\_\_\_

Date





# Cimarex's Wolfbone Pool vs Permian Resources' Wolfbone Pool



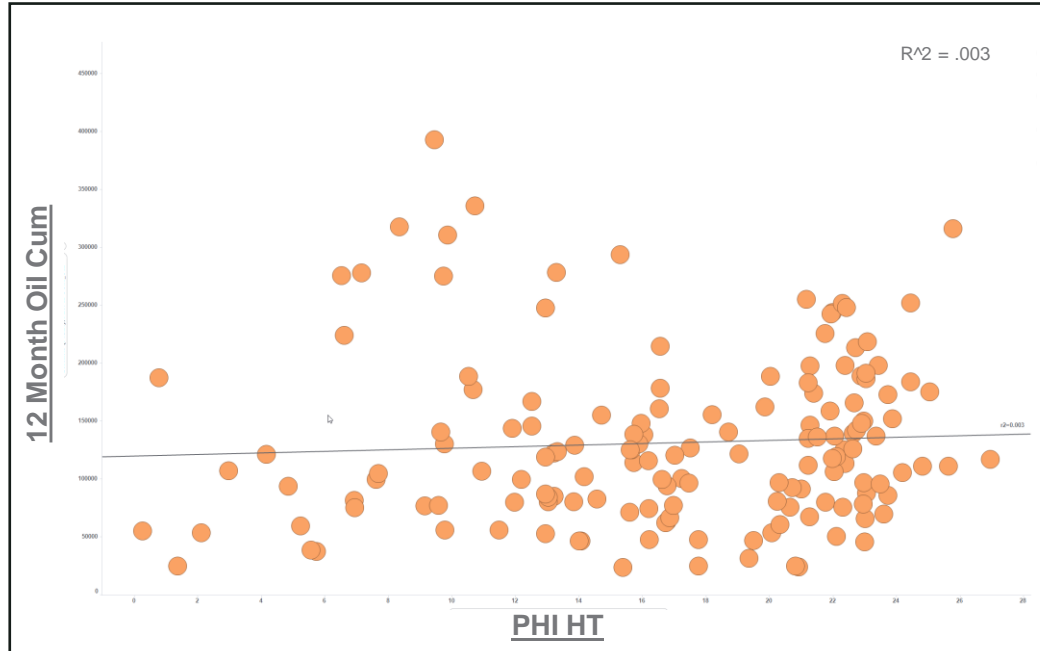
There is no material difference in the stratigraphic unit being proposed by Cimarex and Permian Resources

BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. C-2  
 Submitted by: Read & Stevens, Inc.  
 Hearing Date: August 13, 2024  
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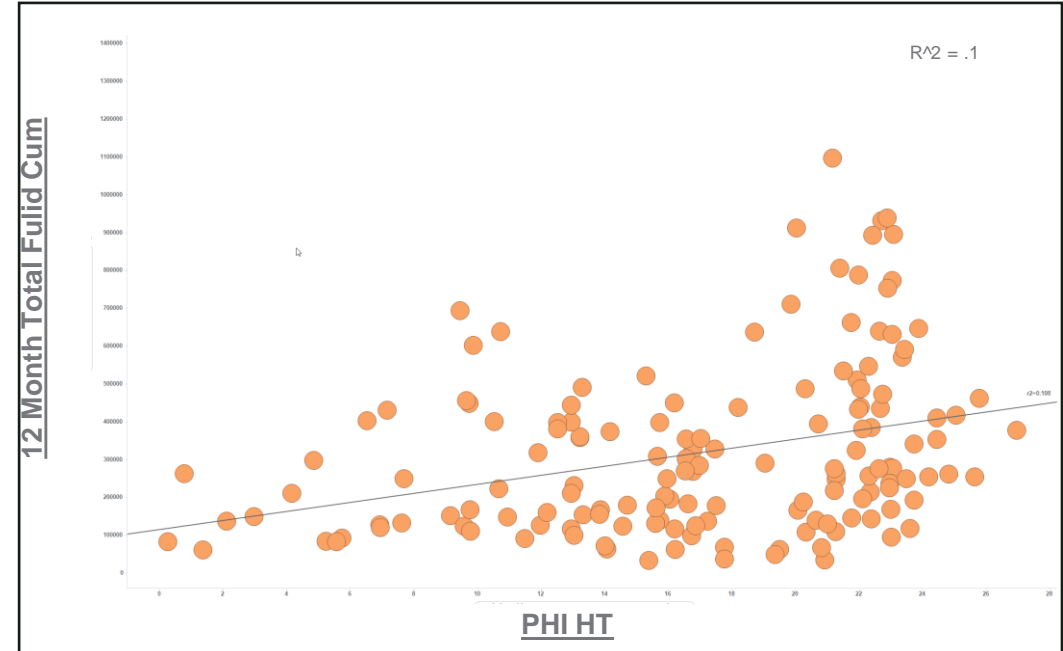
# PhiHt is not an appropriate tool for determining oil allocation

12 Month Oil Cum vs PhiHt



- No correlation between oil production and PhiHt in the Third Bone Spring Sand
- This is due to the fact the Sw is variable and PhiHt is a measure of the total storage space in a rock, not what is in the storage space

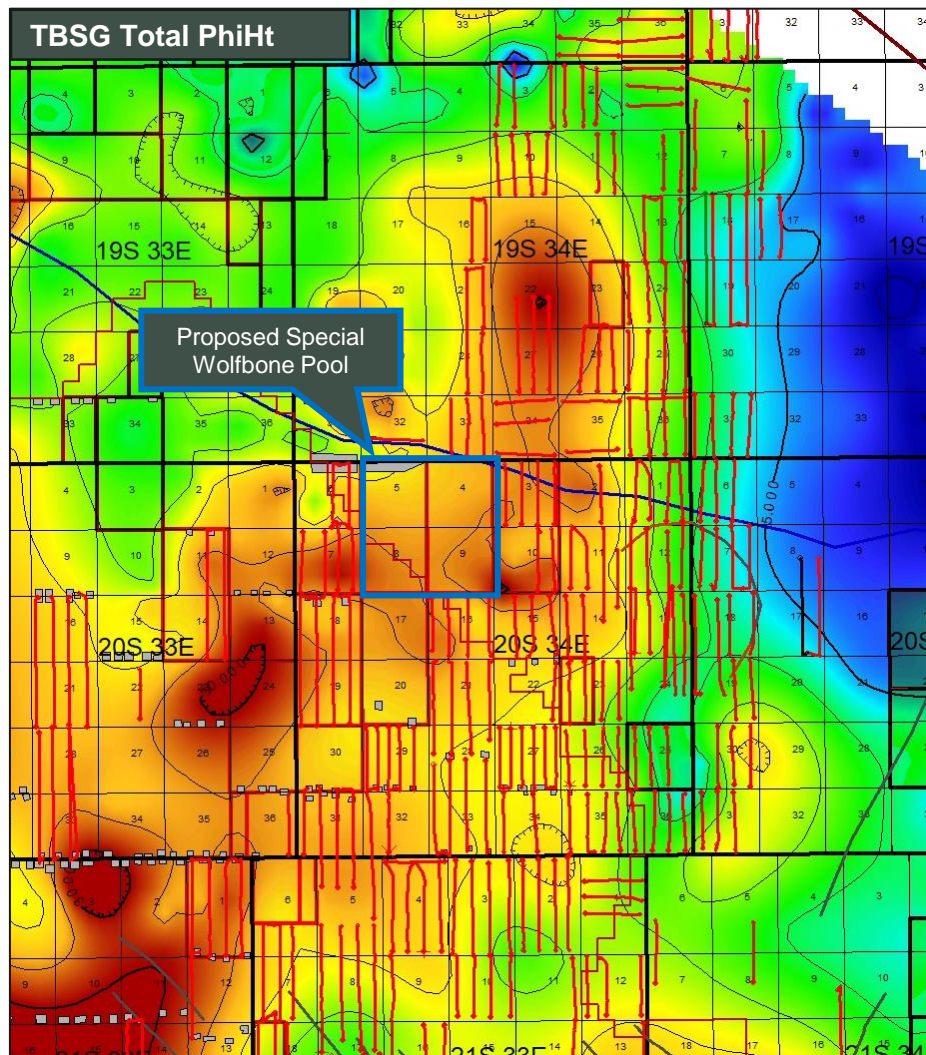
12 Month Total Fluid Cum vs PhiHt



- PhiHt vs Total Fluid has a stronger correlation than oil alone
- Correlation of these attributes is still poor due to other variables like frac size, frac vintage, flowback methodology, etc...
- Because of this, PR does not believe PhiHt is an appropriate tool for determining oil allocation



# Data set for PhiHt vs Production Plots



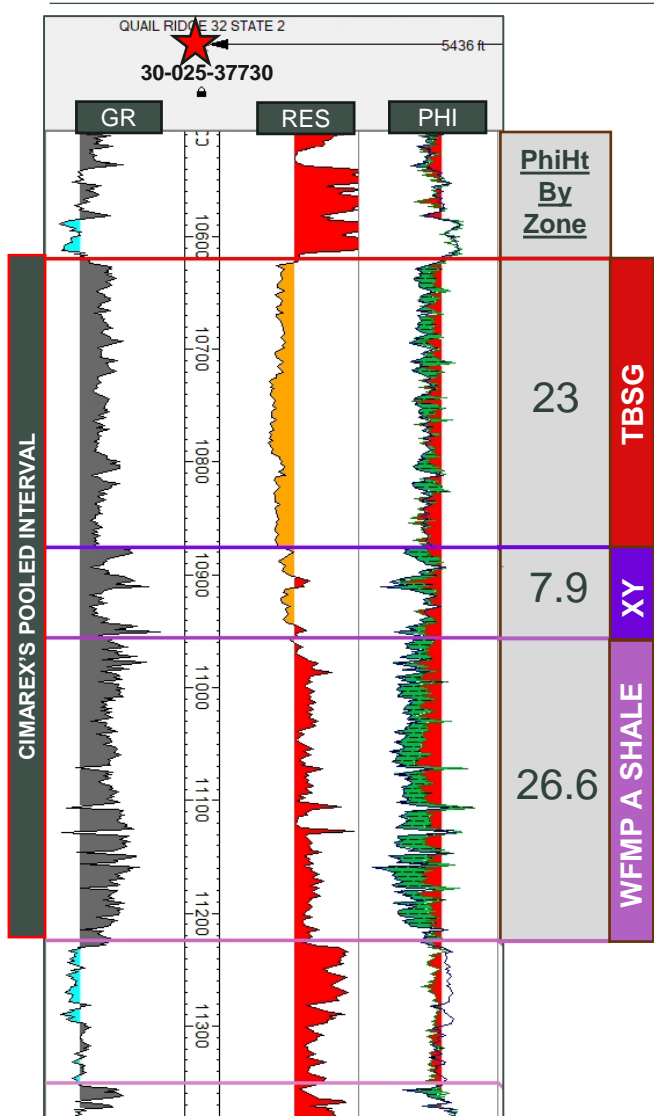
- This map is showing that the TBSG production data points used in the previous displays are all local to the proposed special Wolfbone pool.

— TBSG production datapoints

BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. C-4  
 Submitted by: Read & Stevens, Inc.  
 Hearing Date: August 13, 2024  
 Case No. 24528



# Cimarex's allocation formula compared to Pooled Interval



- The allocation formula using PhiHt proposed by Cimarex only considers possible oil drainage from the TBSG and XY Zones and does not consider pore space that is contained within the remainder of the interval covered by the Special Wolfbone Pool
- The total Wolfcamp interval (XY + WFMP A Shale) accounts for ~60% of the PhiHt in the Special Wolfbone Pool.
- Permian Resources still maintains that an allocation formula is not adequate for allocating production to owners on either side of the WFMP depth severance

Drained Zone	TOTAL PhiHt	TBSG PhiHt %	WFMP PhiHt %
TBSG+XY	30.9	74%	26%
TBSG+XY+WFMP A SH	57.7	40%	60%

**Interval not considered in proposed allocation formula**



BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. C-5  
 Submitted by: Read & Stevens, Inc.  
 Hearing Date: August 13, 2024  
 Case No. 24528

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW  
MEXICO.**

**CASE NO. 24528**

**APPLICATION OF CIMAREX  
ENERGY CO. FOR THE CREATION  
OF A SPECIAL POOL, A WOLFBONE POOL,  
PURSUANT TO ORDER NO. R-23089 AND TO  
REOPEN CASE NOS. 23448 – 23455, 23594 –  
23601, AND 23508 – 23523, LEA COUNTY,  
NEW MEXICO.**

**CASE NO. 24541**

**SELF-AFFIRMED STATEMENT OF JOHN FECHTEL**

1. My name is John Fechtel. I work for Permian Resources Operating, LLC (“Permian”) as a reservoir engineer. Read & Stevens, Inc. (“Read & Stevens”) is the applicant in these cases. It is a subsidiary of Permian Resources.

2. I have previously testified before the New Mexico Oil Conservation Division (“Division”) as an expert witness in reservoir engineering matters.

3. I am familiar with the applications filed by Read & Stevens, Inc. (“Read & Stevens”) and Cimarex Energy Co. in these cases, and I have conducted an engineering study of the lands in the subject area.

4. In its application to create a special Wolfbone oil pool under Case No. 24541, Cimarex Energy Company (“Cimarex”) makes numerous misstatements regarding Permian

**BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. D  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528**



Resources' development plan and Cimarex's proposal to allocate production between the Bone Spring and Wolfcamp owners. Three are noteworthy.

5. The first misstatement is that Permian Resources' plan was "originally designed for two pools" and "is now attempting to use [it] for the development of a single pool, the Wolfbone, and its single reservoir." *See* Cimarex Application Case No. 24541 at ¶ 23.

6. Whether the targeted zone is one pool or two pools, the geologic targets are thick enough to require a vertically staggered and stacked "wine-rack" pattern to effectively and efficiently drain them. *See* Permian Resources Closing Argument at p. 4, Case Nos. 23508-23523. Given the thickness of the targets, co-development is necessary to increase the stimulated rock volume and the complexity of the fracture network, leading to production of increased reserves. *See* Permian Resources, Finding of Fact 64 ("FOF") Case Nos. 23508-23523.

7. Permian Resources, therefore, did not plan its development on the premise that there were two separate Division-designated pools—the Bone Spring and Wolfcamp. It designed a co-development plan across two productive benches to avoid parent-child depletion effects, increase the stimulated rock volume, and maximize ultimate recovery in both targets. *See id.* FOF 59, 68.

8. The second related misstatement is that Permian Resources opted to drill an extra set of wells in the Wolfcamp XY/A "to account for the ownership depth severance[.]" *See* Cimarex Application Case No. 24541 at ¶ 23.

9. The fact that an ownership depth severance happens to bifurcate the productive benches Permian Resource targets in this acreage is pure happenstance. As outlined above, and explained throughout Permian Resources' testimony in the related Competing Pooling Cases, Permian Resources proposes to simultaneously co-develop the Third Bone Spring and Wolfcamp

XY/A intervals together as the best way to most effectively and efficiently drain them without waste. It just so happens that fully developing the benches on both sides of the ownership depth severance is also necessary to comply with the statutory mandate and fully protect correlative rights. *See Permian Resources Closing Argument at p. 4, Case Nos. 23508-23523.*

10. The third misstatement goes to the heart of the issue in this separate proceeding to create a special Wolfbone oil pool. Cimarex's application asserts that the allocation formula Cimarex proposes is a "more accurate allocation of interest" than Permian Resources' approach of increasing the ultimate recovery for owners the Bone Spring and Wolfcamp targets. *See Cimarex Application Case No. 24541 at ¶ 19.* Cimarex further contends its PhiHt formula "accurately accounts for the depth severance" and will "provide all owners in the Wolfbone Pool with their just and equitable shares of oil[.]" *Id.* Because using PhiHt appears on its face to convey a sense of technical, objective certainty, Cimarex argues their approach "protects correlative rights with as much precision as possible" because it uses "a scientific methodology for measuring reserves[.]" *Id.* at ¶ 34 (emphasis added).

11. In fact, using PhiHt for the purpose of allocating production is anything but accurate. The problem, as Permian Resources' geology witness explained, is that PhiHt is not actually a direct measurement of reserves and is not a direct measurement of production; it is a measurement of total storage in the subsurface. PhiHt says nothing about what is actually stored in the pore space and nothing about what is being produced. He shows quite clearly that PhiHt is not correlated with production in the Third Bone Spring. PhiHt is not accurate enough, therefore, to fairly or equitably allocate production in a way that is protective of correlative rights.

12. A simple scatter plot with an R-squared regression curve confirms how poorly suited PhiHt is in this area for that purpose. In some wells with a relatively low PhiHt in the Third Bone Spring, cumulative production is high—among the highest in the study area. In other wells with the largest measured PhiHt, production is among the lowest.

13. That means Cimarex's assumption that a strict allocation based on a simple ratio of PhiHt between the Bone Spring and Wolfcamp intervals within the proposed Wolfbone pool will accurately, and equitably, allocate production between them is terribly flawed. The factors influencing production are numerous and the vast majority of them are not accounted for in a PhiHt calculation. By way of an example, I ran a reservoir simulation model and varied just one subsurface parameter not considered in a PhiHt calculation, initial water saturation ( $S_{wi}$ ) to demonstrate just how much one such parameter can influence performance to confirm Cimarex's flawed thinking.

14. **Permian Resources Exhibit D-1** shows the result of the reservoir simulation on the left side of the exhibit. Both plots represent oil production from the same three simulations the top left chart has oil rate in the y-axis and time in the x-axis. The bottom left chart has cumulative oil in the y-axis and time in the x-axis and in both charts, the lines are color by the assumed water saturation in the model. As indicated in the legends on the respective charts, the dark green dashed line represents a simulation with an initial water saturation of 40%, the light green dashed line represents a simulation with an initial water saturation of 50%, and the dark blue dashed line represents a simulation with an initial water saturation of 60%.

15. A reservoir model like this has hundreds of different inputs that include reservoir dimensions, fluid properties, fracture dimension, and so on. Different inputs can be approximated

by different approaches but ultimately each input parameter is then varied until the simulation outputs match the rates and pressures of the actual well—a process known as history matching. After history matching to an actual well’s performance in this example, I then locked every input parameter except for initial water saturation ( $Sw_i$ ) and ran the simulation three times with different assumed initial water saturations. The model output results are represented in the graphs.

16. For this simulation, relatively minor changes in just one variable, initial water saturation, had a massive impact to the model’s outputted oil results, for example, the simulation with 40% initial water saturation yields four times more oil in the first year than the simulation with an initial water saturation of 60%. It is important to highlight that the assumed  $\Phi h_t$  remained exactly the same in all three of these simulations while the simulation produced massively different oil production values. Reservoir behavior is complex and is governed by numerous related parameters. Porosity and height (the two parameters that make up  $\Phi h_t$ ) are important parts of a petroleum system but porosity and height alone are wholly insufficient for predicting reservoir behavior and allocating production as they do not account for the numerous other factors that influence subsurface behavior. This should make sense intuitively and is an alternative approach to exactly what Ira Bradford has shown through real life examples in his exhibit.  $\Phi h_t$  is not correlated with production as  $\Phi h_t$  only represents a fraction of the variables that influence reservoir behavior.

17. Despite being just one of many subsurface parameters that influence production, initial water saturation (or its complement—initial oil saturation) is important as it is required to make the leap from total pore space to total hydrocarbon-filled pore space, which is needed even for high-level mapping. The importance of understanding initial saturations is recognized by Cimarex’s geology expert witness concedes that “we have no data to support a confident oil

saturation measurement. Therefore, I can't give an accurate So Phi H map." Case Nos. 23594-23601, Hrg. Tr. Vol. 1, 193:21-194:2. She later asserted that Cimarex plans to collect more data while drilling its Third Bone Spring wells "to get a more accurate estimation of oil saturation[.]" which she agreed are necessary to "have concrete numbers and firm percentages[.]" Permian Resources does not agree that Cimarex would have the necessary data for a concrete allocation of production even with a better understanding of saturations and, what's more, the assertion that Cimarex plans to gather data about saturations while drilling the shallower Third Bone Spring is convenient at best.. Accurate saturations typically require taking core at reservoir conditions and even if log- or cutting-derived analysis were sufficiently accurate, it is unclear how Cimarex would collect saturation data about the Wolfcamp while drilling the shallower Third Bone Spring.

18. Returning to Batman results where Permian Resources appraised the co-development of the Third Bone Spring Sand ("TBSG") interval with the Wolfcamp XY/A ("WFMP") in **Permian Resources Exhibit D-2**, we see just how crucial co-development of the two formations is. The top left chart shows cumulative oil production for each of the individual Batman wells and is colored by formation and development approach where the co-developed TBSG wells are represented in orange and the associated codeveloped WFMP is in green, and the non-co-developed TBSG wells are depicted in brown. The chart on the right side of the exhibit shows the total cumulative oil production for each of the two appraised developments with co-development of the TBSG and WFMP in blue and the TBSG only wells in red. The tables underlying the graphs contain the cumulative oil produced to date, the 11-month cumulative operating cash flows from the individual wells and projects, Permian Resources' current forecasted

five-year cumulative oil production for each well, as well as the five-year forecasted cumulative oil production per lateral foot. Five year forecasted cumulative oil is a common metric in development analysis as production can be forecasted to five years far more accurately than it can to full life, while five years also represents the substantial portion of an unconventional well's cash flow and thus value. As costs and revenue streams are not fully booked for recent months, only the first 11 months of accounting data were used. As represented by positive cumulative operating cash flow, all five Batman wells have paid out in less than one year and are extremely economic, which is all the more impressive considering that the pilot hole cost is even included in these cash flows. The co-development of the TBSG and WFMP has yielded materially increased production, reserves, and economics that will benefit owners on both sides of the ownership depth severance relative to Cimarex's proposal.

19. **Permian Resources Exhibit D-3** serves to further emphasize this point. The Batman project provides real world results on which to vet the impact of co-developing the TBSG with the WFMP without a PhiHt allocation formula vs. developing the TBSG only with Cimarex's proposed allocation methodology. The center of the exhibit contains the Batman gun barrel diagram and is the same configuration and coloring scheme as is represented on the previous slide. Overlaid on the gun barrel diagram are two dashed box outlines, one surrounding the co-developed TBSG/WFMP Batman 131H, 132H and 201H on the left, and the other surrounding the TBSG-only Batman 133H and 134H on the right. The tables and commentary below the respective boxed outlines represent these associated development configurations. The tables represent the same data represented in Exhibit D-2 but the data has been grouped by development approach and associated allocation methodology.

20. For the TBSG/WFMP co-development represented by the Batman 131H, Batman 201H, and Batman 132H, owners in the TBSG receive the production and revenue from the Batman 131H and Batman 132H, and owners in the WFMP receive the production and revenue from the Batman 201H, under Permian Resources' approach.

21. The right side of the exhibit represents the approach to development and allocation that Cimarex is proposing. The Batman 133H and the Batman 134H were developed as TBSG only at an equivalent spacing of 4 wells per section. The table represents the production and operating metrics from the actual Batman133H and Batman 134H however the production and revenue for these wells has been allocated based on Cimarex's proposed arbitrary PhiHt methodology such that 72.8% is allocated to the owners in the TBSG and 27.2% is allocated to the WFMP owners. Owners in both the TBSG and the WFMP suffer from Cimarex's TBSG-only development and their proposed methodology for allocating production to both TBSG and WFMP owners.

22. As has been well covered in this testimony and in Ira Braford's testimony, Cimarex's proposed method for allocating production between formations is problematic for numerous reasons, but ultimately no method of allocating production across a depth severance can avoid harming at least one set of owners when the proposed development itself is flawed as Cimarex's is. The WFMP A cannot be sufficiently produced by developing the TBSG at the exclusion of the WFMP A. This is seen clearly in the Batman results and is affirmed by Cimarex's own testimony.

23. Cimarex's geology expert witness testified that when developing the TBSG "there will be incidental drainage from the upper WFMP. I don't think the Bone Spring wells will drain the Wolfcamp A1 shale." See Case Nos. 23508-23523, Hrg. Tr. Vol. 1, 177:4-

9. She further highlighted that Cimarex may eventually return to develop the resource left behind in the WFMP A, stating that “[i]f we were to come back later on and develop the WFMP A shale, then we would land probably 250 feet-ish below our Third Sand landing to make sure that those wells have minimal interaction between each other.” *Id.*, Tr. 206:14-18 (emphasis added). The WFMP A shale and a target 250 feet below Cimarex’s proposed TBSG wells are firmly in the proposed Wolfbone pool. Cimarex’s testimony makes clear that the proposed pool cannot be sufficiently produced from wells landed in the TBSG.

24. **Permian Resources Exhibit D-4** provides a comparison between Permian Resources’ Batman results and the single well Cimarex has developed in the area in more than five years. The map on the left side of the exhibit depicts the subject acreage in a red box, Permian Resources’ offset co-developed Batman TBSG wells in orange, Permian Resources’ Batman WFMP appraisal in blue, Permian Resources’ non-codeveloped Batman TBSG wells in brown, and Cimarex’s Mescalero Ridge 21-28 Federal Com 002H TBSG in green. Cimarex developed the Mescalero Ridge as a single TBSG well in early 2023. Despite targeting the TBSG at the exclusion of the WFMP, as Cimarex erroneously contends is the only appropriate way to develop the proposed pool, Cimarex’s TBSG only Mescalero Ridge 002H materially underperforms Permian Resource’s TBSG and WFMP results in the Batman unit further supporting that maximizing value and preventing waste requires co-developing the TBSG and WFMP.

### CONCLUSION

25. Cimarex’s proposed allocation using PhiHt is not a fair or equitable methodology to allocate production because it is demonstrated to be an unreliable predictor of actual production.



26. In my opinion Permian Resources' plan to co-develop horizontal laterals across the Bone Spring and Wolfcamp formations using a stacked and staggered "wine-rack" spacing pattern with simultaneous completions—and in particular, co-developing the Third Bone Spring and Wolfcamp A together—is in the best interests of conservation, the prevention of waste, and protection of correlative rights.

27. The Division should, therefore, approve Permian Resources' proposal for a special Wolfbone oil pool and reject Cimarex's plan to incorporate an automatic allocation method within the special pool rule that is proven to be unreliable.

28. **Permian Resources Exhibits D-1 through D-4** were either prepared by me or compiled under my direction and supervision.

29. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in these cases. This statement is made on the date next to my signature below.



John Fechtel

8/6/2024

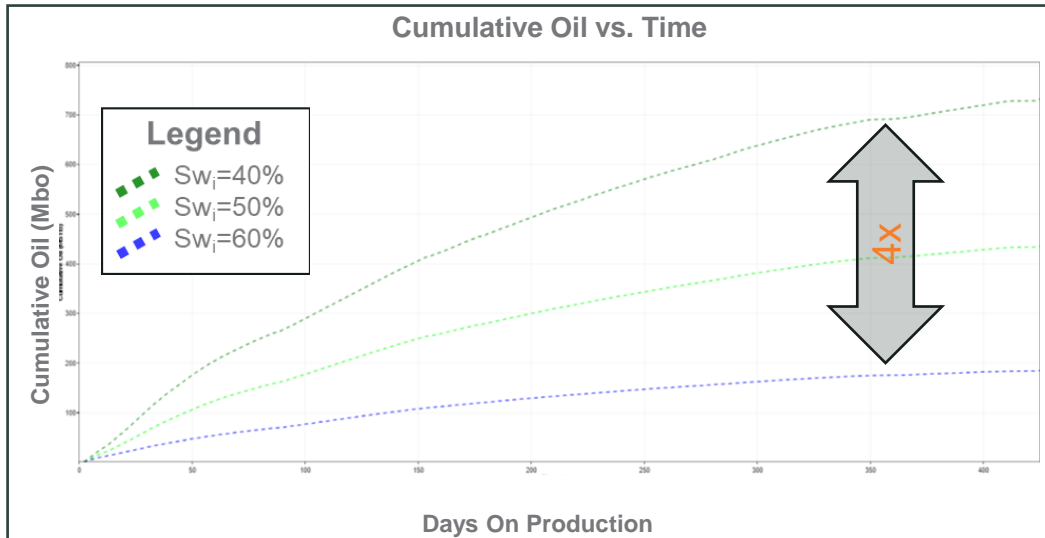
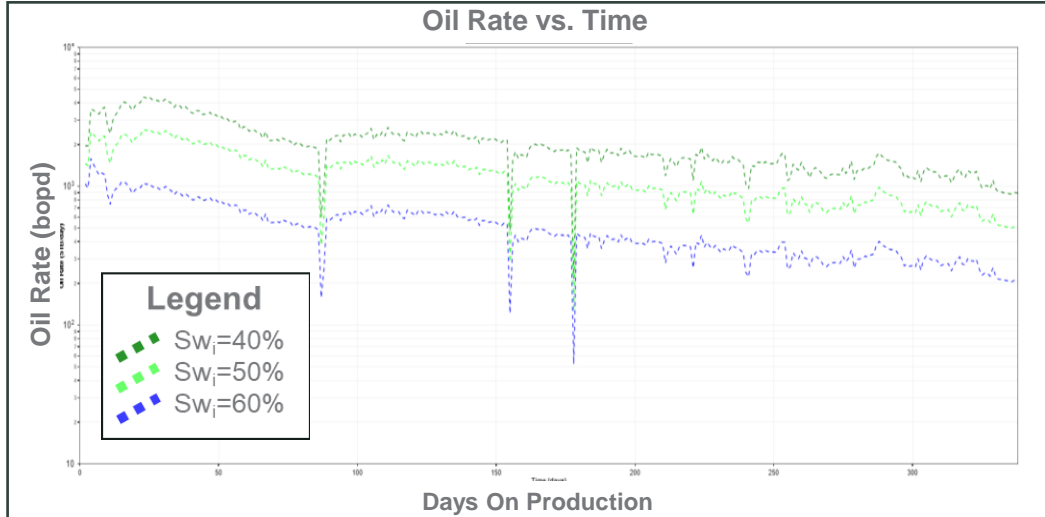
Date



# Phi-H ≠ Oil Production

Numerical Simulation Example with Varying Initial Water Saturations

## Simulation Results



## Commentary

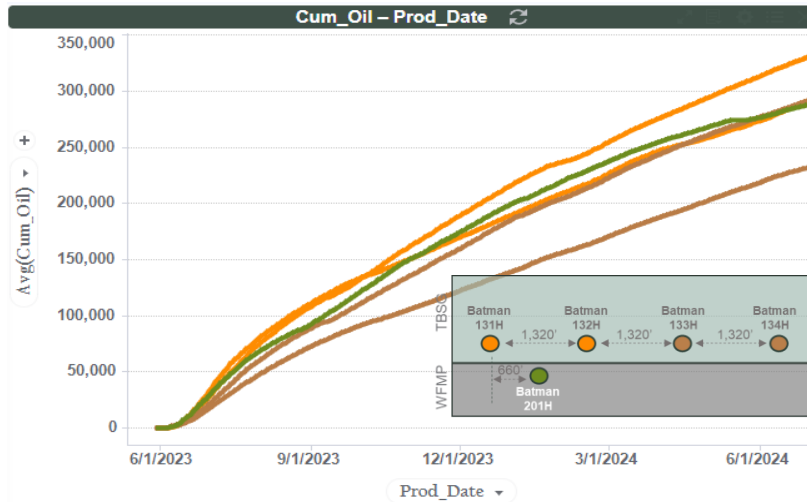
- A numerical simulation (reservoir model) was created and history matched to an actual well
- A sensitivity was performed varying the assumed initial water saturation (Sw<sub>i</sub>) from 40% to 60% while every other model parameter was held constant
- Increasing the initial water saturation from 40% to 60% **decreases 1<sup>st</sup> year cumulative oil production by a factor of 4**
- Initial water saturation is just one of many, many variables that affect well performance that are unaccounted for in phi-h

BEFORE THE OIL CONSERVATION DIVISION  
 Santa Fe, New Mexico  
 Exhibit No. D-1  
 Submitted by: Read & Stevens, Inc.  
 Hearing Date: August 13, 2024  
 Case No. 24528

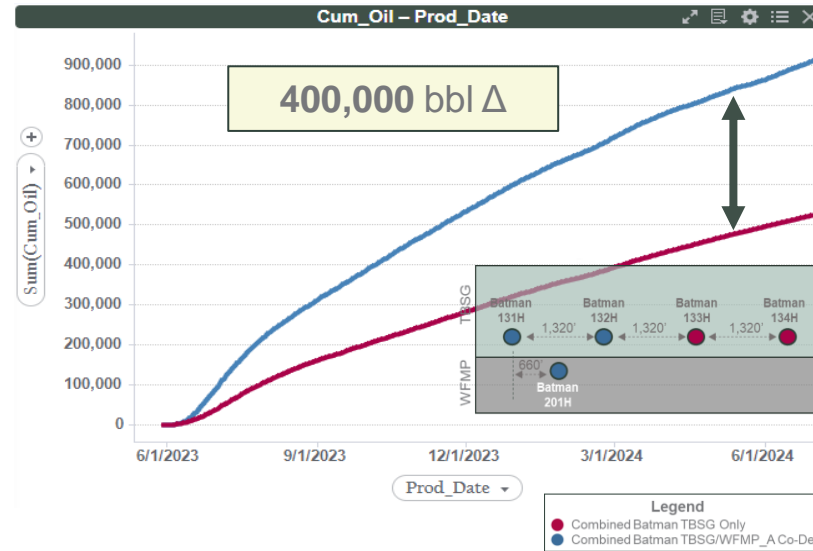
# A Closer Look at Batman Results

## Co-Developed TBSG/WFMP\_A Materially Outperforming

### Well Performance By Formation



### Well Performance By Appraised Development



### Commentary

- All wells have paid out in less than one year
- The WFMP appraisal –the Batman 201H- is very strong and highly economic
- The TBSG was not degraded by co-development with the WFMP
- Co-development of the TBSG and the WFMP has yielded:
  - Materially increased production
  - Materially increased reserves
  - Materially increased cash flow and economics

Well	Formation	Cumulative Oil To Date	11 Month Cumulative Operating Cash Flow <sup>1,2,3</sup>	Forecasted 5 Yr Cum Oil	Forecasted 5 Yr Cum Oil
Batman Fed Com 131H	TBSG	307,018	\$3,447,556	671,612	69
Batman Fed Com 201H	WFMP	292,054	\$3,095,217	474,361	49
Batman Fed Com 132H	TBSG	335,993	\$2,598,181	677,883	68
Batman Fed Com 133H	TBSG	295,730	\$2,906,413	643,407	66
Batman Fed Com 134H	TBSG	233,041	\$74,381	582,412	60

Project	Well Count	Cumulative Oil To Date	Total 11 Month Cum. Operating Cash Flow	Total Forecasted 5 Yr Cum
Batman Co-dev	3	935,065	\$9,140,954	1,823,856
Batman TBSG Only	2	528,771	\$2,980,793	1,225,819

1 - Accounting actuals beyond 11 months are not complete and thus were not used

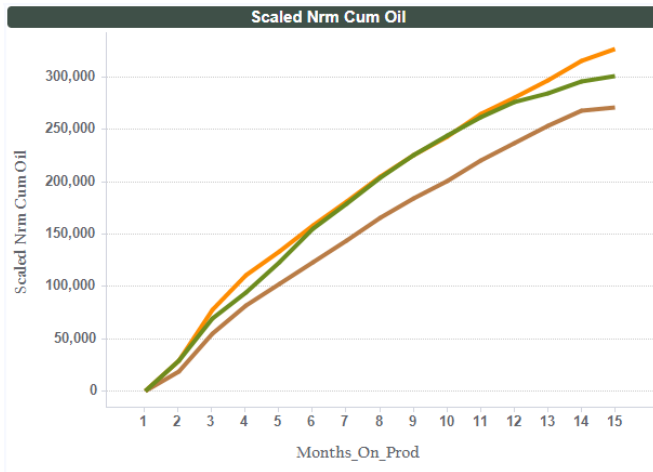
3 - Pilot hole costs are included in the Batman 132H actuals



# Batman Results By Allocation Method

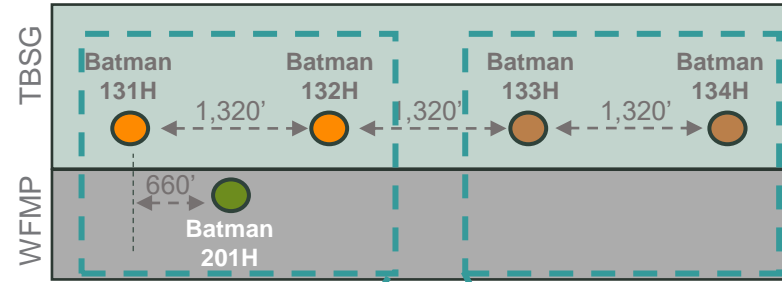
Owners in Both Formations Harmed by Cimarex's Proposed Allocation Method

Exhibit  
D-3



## Permian Resources

- Formations developed discretely
- No novel allocation method



## Cimarex

- TBSG only development
- Allocated by PhiHt (72.8% TBSG)

- Permian Resources' Batman project provides a real world example of just how detrimental Cimarex's development plan and proposed allocation formula would be

Owner Perspective	Total Cum. Oil To Date	Total 11 Month Cumulative Operating Cash Flow	Total Forecasted 5 Yr Cum Oil	Total Forecasted 5 Yr Cum Oil/ft
TBSG Owners	643,011	\$6,045,737	1,349,495	137
WFMP Owners	292,054	\$3,095,217	474,361	49

Production and revenue 'allocated' to the formation in which the well has been drilled and completed

For owners in **both** formations:

- **Increased** Production
- **Increased** Revenue
- **Increased** Economics
- **Increased** Reserves

Owner Perspective	Total Cum. Oil To Date	Total 11 Month Cumulative Operating Cash Flow	Total Forecasted 5 Yr Cum Oil	Total Forecasted 5 Yr Cum Oil/ft
TBSG Owners	384,945	\$2,170,018	892,396	92
WFMP Owners	143,826	\$810,776	333,423	34

Production and revenue allocated by Cimarex's proposed PhiHt allocation method

For owners in **both** formations:

- **Decreased** Production
- **Decreased** Revenue
- **Decreased** Economics
- **Decreased** Reserves

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. D-3

Submitted by: Read & Stevens, Inc.

Hearing Date: August 13, 2024

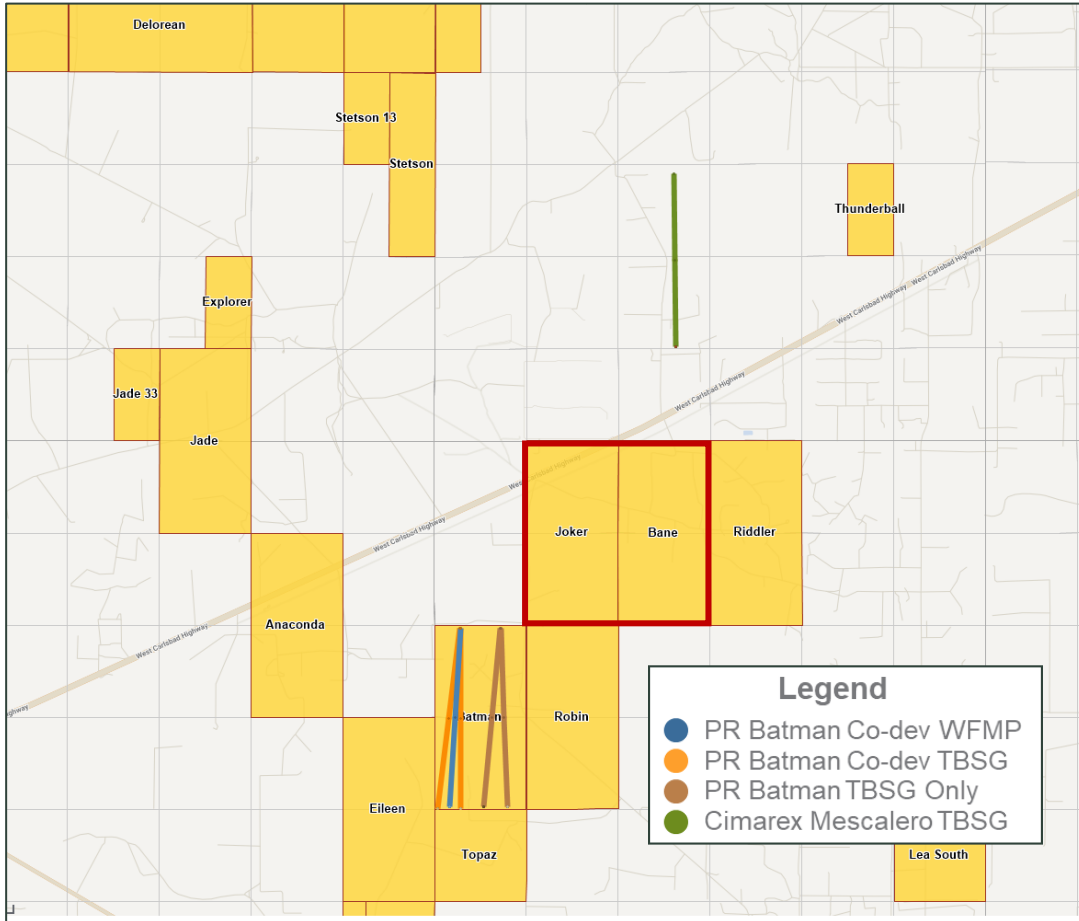
Case No. 24528

# Offset Results Update

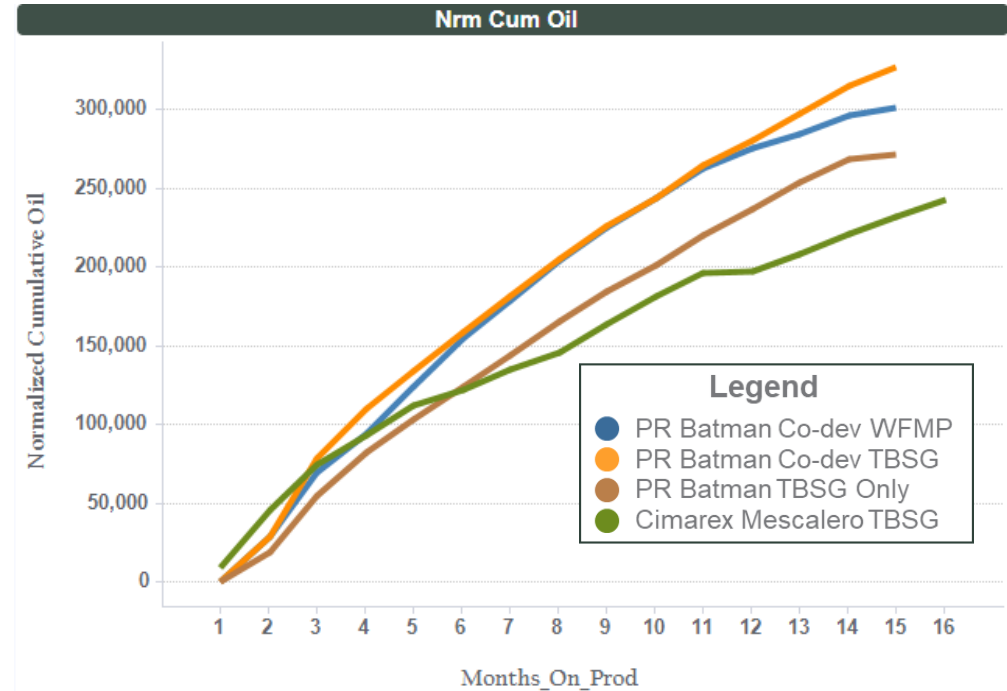
## Cimarex's Lone Modern Development Underperforms



### Map



### Results<sup>1</sup>



- The Mescalero Ridge 21-28 Federal Com 002H is the only well Cimarex has drilled in the subject area in more than 5 years
  - It is a single TBSG only well (not co-developed with the WFMP)
  - It is materially underperforming PR's Batman development in both the TBSG and WFMP

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

**APPLICATION OF READ & STEVENS, INC.  
FOR CREATION OF A SPECIAL  
WOLFBONE POOL IN SECTIONS 4, 5, 8,  
AND 9 IN TOWNSHIP 20 SOUTH, RANGE 34  
EAST, NMPM, LEA COUNTY, NEW MEXICO.**

**CASE NO. 24528**

**SELF-AFFIRMED STATEMENT OF  
ADAM G. RANKIN**

1. I am attorney in fact and authorized representative of Read & Stevens, Inc., (“Read & Stevens”), the Applicant herein. I have personal knowledge of the matter addressed herein and am competent to provide this self-affirmed statement.

2. The above-referenced application and notice of the hearing on this application was sent by certified mail to the locatable affected parties on the date set forth in the letter attached hereto.

3. The spreadsheet attached hereto contains the names of the parties to whom notice was provided.

4. The spreadsheet attached hereto contains the information provided by the United States Postal Service on the status of the delivery of this notice as of August 5, 2024.

5. I caused a notice to be published to all parties subject to this proceeding. An affidavit of publication from the publication’s legal clerk with a copy of the notice publication is attached herein.

6. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct. I understand that this self-affirmed statement will be used as written testimony in this case. This statement is made on the date next to my signature below.

**BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. E  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528**



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Adam G. Rankin

August 6, 2024

---

Date



**Adam G. Rankin**  
**Partner**  
Phone (505) 988-4421  
agrankin@hollandhart.com

May 14, 2024

**VIA CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

**TO: ALL INTEREST OWNERS SUBJECT TO POOLING PROCEEDINGS AND OFFSET OPERATORS IN THE BONE SPRING AND WOLFCAMP POOLS**

**Re: Application of Read & Stevens, Inc. for Creation of a Special Wolfbone Pool in Sections 4, 5, 8 and 9 in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Case No. 24528**

Ladies & Gentlemen:

This letter is to advise you that Read & Stevens, Inc. has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on June 27, 2024, and the status of the hearing can be monitored through the Division’s website at <https://www.emnrd.nm.gov/ocd/>.

**The State of New Mexico Oil Conservation Division hearing will be held in a hybrid format with both in-person and virtual participation options. The hearing will be held in the Pecos Hall Hearing Room at the Wendall Chino Building, 1st Floor, 1220 South St. Francis Dr., Santa Fe, New Mexico, starting at 8:15 a.m. Virtual access to the Division’s public hearing is available as follows: <https://www.emnrd.nm.gov/ocd/hearing-info/>.**

You are not required to attend this hearing, but as an owner of an interest that may be affected by this motion, you may appear remotely and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date. Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division’s Santa Fe office and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact Travis Macha at (432) 400-1037 or [travis.macha@permianres.com](mailto:travis.macha@permianres.com).

Sincerely,

Adam G. Rankin  
**ATTORNEY FOR READ & STEVENS, INC. AND PERMIAN RESOURCES OPERATING, LLC**

**Location**  
110 North Guadalupe, Suite 1  
Santa Fe, NM 87501-1849

**Mailing Address**  
P.O. Box 2208  
Santa Fe, NM 87504-2208

**Contact**  
p: 505.988.4421 | f: 505.983.6043  
[www.hollandhart.com](http://www.hollandhart.com)



Readh Stevens - Special Wolfbone Pool - Case no. 24528  
Postal Delivery Report

9414811898765465698803	2023 Permian Basin JV	PO Box 10	Folsom	LA	70437-0010	Your item was picked up at a postal facility at 3:20 pm on May 28, 2024 in FOLSOM, LA 70437.
9414811898765465698896	Abby Corporation	500 N Main St Ste 827	Roswell	NM	88201-4771	Your item has been delivered to the original sender at 2:25 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698841	Apache Corporation	2000 Post Oak Blvd Ste 100	Houston	TX	77056-4497	Your item was delivered to an individual at the address at 11:23 am on May 20, 2024 in HOUSTON, TX 77056.
9414811898765465698889	Ard Oil Ltd.	PO Box 101027	Fort Worth	TX	76185-1027	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465698834	Avant Operating, LLC	1515 Wynkoop St Ste 700	Denver	CO	80202-2062	Your item was delivered to the front desk, reception area, or mail room at 2:22 pm on May 17, 2024 in DENVER, CO 80202.
9414811898765465698872	B&N Energy, LLC	PO Box 1277	Los Gatos	CA	95031	Your item has been delivered to the original sender at 10:08 am on June 17, 2024 in SANTA FE, NM 87501.

Readh Stevens - Special Wolfbone Pool - Case no. 24528  
Postal Delivery Report

9414811898765465698711	Bernhardt Oil Corporation	12170 Jaycie Cir	Midwest City	OK	73130-8459	Your item was delivered to an individual at the address at 11:05 am on May 18, 2024 in OKLAHOMA CITY, OK 73130.
9414811898765465698759	Bowtie Slash Energy, Inc.	3140 Kessler Pl	Roswell	NM	88201	We now anticipate delivery of your package the next business day. We apologize for the delay.
9414811898765465698728	Breckenridge Partnership Ltd	PO Box 1973	Roswell	NM	88202-1973	Your item was picked up at the post office at 10:14 am on May 20, 2024 in ROSWELL, NM 88201.
9414811898765465698704	Brothers Prod Properties Ltd	PO Box 7515	Midland	TX	79708-7515	Your item was picked up at the post office at 9:03 am on May 22, 2024 in MIDLAND, TX 79707.
9414811898765465698797	Bureau of Land Management	301 Dinosaur Trl	Santa Fe	NM	87508-1560	Your item was delivered to the front desk, reception area, or mail room at 10:32 am on May 17, 2024 in SANTA FE, NM 87508.
9414811898765465698780	BXP Partners V LP	11757 Katy Fwy Ste 475	Houston	TX	77079-1761	Your item was delivered to the front desk, reception area, or mail room at 2:51 pm on May 20, 2024 in HOUSTON, TX 77079.

Readh Stevens - Special Wolfbone Pool - Case no. 24528  
Postal Delivery Report

9414811898765465698735	Carolyn J. Chester Trust dated 8/11/1995	450 Woodland Square Blvd Apt 4204	Conroe	TX	77384-2225	Your item was delivered to the front desk, reception area, or mail room at 1:41 pm on May 18, 2024 in CONROE, TX 77384.
9414811898765465698773	Caza Petroleum LLC	16945 Northchase Dr Ste 1430	Houston	TX	77060-2133	Your item was delivered to an individual at the address at 3:51 pm on May 21, 2024 in HOUSTON, TX 77060.
9414811898765465698919	CBR Oil Properties LLC	PO Box 1518	Roswell	NM	88202-1518	Your item has been delivered to the original sender at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698957	Challenger Crude, Ltd.	3525 Andrews Hwy	Midland	TX	79703-5056	Your item was delivered to an individual at the address at 11:55 am on May 17, 2024 in MIDLAND, TX 79703.
9414811898765465698964	Chase Oil Corporation	PO Box 1767	Artesia	NM	88211-1767	Your item was picked up at the post office at 11:22 am on May 22, 2024 in ARTESIA, NM 88210.
9414811898765465698926	Chevron U.S.A., Inc.	6301 Deauville	Midland	TX	79706-2964	Your item was delivered to the front desk, reception area, or mail room at 12:14 pm on May 17, 2024 in MIDLAND, TX 79706.

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9414811898765465698995	Cimarex Energy Co. Magnum Hunter Coterra Energy	6001 Deauville	Midland	TX	79706-2671	Your item was delivered to the front desk, reception area, or mail room at 12:05 pm on May 17, 2024 in MIDLAND, TX 79706.
9414811898765465698940	Clay Rufus G Trust	3600 Hamilton Ave	Fort Worth	TX	76107-1704	Your item was delivered to an individual at the address at 11:31 am on May 17, 2024 in FORT WORTH, TX 76107.
9414811898765465698988	Delmar Hudson Lewis Living Trust, Bank of America, N.A., Trustee	901 Main St	Dallas	TX	75202-3707	Your item was delivered to the front desk, reception area, or mail room at 11:57 am on May 20, 2024 in DALLAS, TX 75202.
9414811898765465698933	Delmar Hudson Lewis Living Trust, Bank of America, N.A., Trustee	PO Box 2546	Fort Worth	TX	76113-2546	Your item has been delivered and is available at a PO Box at 6:51 am on May 17, 2024 in FORT WORTH, TX 76102.
9414811898765465698971	Dennis, Jamie	PO Box 1518	Roswell	NM	88202-1518	Your item has been delivered to the original sender at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.

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9414811898765465698612	Devon Energy Production Co. LP	333 W Sheridan Ave	Oklahoma City	OK	73102-5010	Your item has been delivered and is available at a PO Box at 7:06 am on May 18, 2024 in OKLAHOMA CITY, OK 73102.
9414811898765465698650	Diamond Star Production Company, LLC	5 A St., Suite 300	Ardmore	OK	73401	Your item has been delivered to the original sender at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698629	Earthstone Permian LLC, wholly owned subsidiary of Permian Resources Operating, LLC	300 N Marienfeld St Ste 1000	Midland	TX	79701-4688	Your item was delivered to an individual at the address at 12:47 pm on May 17, 2024 in MIDLAND, TX 79701.
9414811898765465698605	EAU Rouge, LLC	PO Box 823085	Dallas	TX	75382-3085	Your item has been delivered and is available at a PO Box at 6:02 am on May 17, 2024 in DALLAS, TX 75382.
9414811898765465698698	EC Ohara Trust	3600 Hamilton Ave	Fort Worth	TX	76107-1704	Your item was delivered to an individual at the address at 11:31 am on May 17, 2024 in FORT WORTH, TX 76107.
9414811898765465698643	Echols, Marjorie C. - Estate	10320 Stone Canyon Rd unit 1068	Dallas	TX	75230-4833	Your item was picked up at a postal facility at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.

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9414811898765465698681	EG3 Inc.	PO Box 1567	Graham	TX	76450-7567	Your item was picked up at a postal facility at 10:16 am on May 17, 2024 in GRAHAM, TX 76450.
9414811898765465698636	Estate of Clarence Hyde	Petroleum Building	Fort Worth	TX	75206	Your item has been delivered to the original sender at 1:03 pm on June 6, 2024 in SANTA FE, NM 87501.
9414811898765465698117	Fasken Land & Minerals Ltd	6101 Holiday Hill Rd	Midland	TX	79707-1631	Your item was delivered to the front desk, reception area, or mail room at 9:37 am on May 17, 2024 in MIDLAND, TX 79707.
9414811898765465698155	FISCO Inc.	1000 Louisiana St Ste 3400	Houston	TX	77002-5011	Your item has been delivered to the original sender at 1:03 pm on June 6, 2024 in SANTA FE, NM 87501.
9414811898765465698162	Foran Oil Company	5400 Lbj Fwy Ste 1500	Dallas	TX	75240-1017	Your item was delivered to an individual at the address at 10:16 am on May 17, 2024 in DALLAS, TX 75240.
9414811898765465698124	Grimshaw, Jane Scisson	4934 E 92nd St	Tulsa	OK	74137-4020	Your item was delivered to an individual at the address at 10:15 am on May 17, 2024 in TULSA, OK 74137.

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9414811898765465698100	HHB Limited Partnership	929 E Britton Rd	Oklahoma City	OK	73114-7802	Your item has been delivered to the original sender at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698193	High Divide, LLC	5750 Swiss Ave	Dallas	TX	75214-4637	Your item was picked up at the post office at 3:07 pm on May 20, 2024 in DALLAS, TX 75214.
9414811898765465698148	Highland Texas Energy Company	11886 Greenville Ave Ste 106	Dallas	TX	75243-3569	Your item has been delivered to an agent for final delivery in DALLAS, TX 75243 on May 17, 2024 at 1:19 pm.
9414811898765465698186	Hightower Exploration LLC	4925 Greenville Ave Ste 1100	Dallas	TX	75206-4087	Your item was delivered to an individual at the address at 10:30 am on May 17, 2024 in DALLAS, TX 75206.
9414811898765465698131	Hillier, LLC	6046 Azalea Ln	Dallas	TX	75230-3406	Your item was picked up at a postal facility at 2:44 pm on May 21, 2024 in DALLAS, TX 75230.
9414811898765465698179	HM Investments, Ltd.	1433 Lincoln Pl	Carrollton	TX	75006-1406	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.

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9414811898765465698315	HOG Partnership, LP	5950 Cedar Springs Rd Ofc 200	Dallas	TX	75235-6805	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465698322	Hudson, William A., II	18 Valley Ridge Rd	Fort Worth	TX	76107-3111	Your item was delivered to an individual at the address at 1:45 pm on May 17, 2024 in FORT WORTH, TX 76107.
9414811898765465698308	Javelina Partners Zorro Partners	616 Texas St	Fort Worth	TX	76102-4612	Your item was delivered to the front desk, reception area, or mail room at 2:19 pm on May 17, 2024 in FORT WORTH, TX 76102.
9414811898765465698391	Joann E. Jensen Family Trust	1702 NW Ridge Rd	Ankeny	IA	50023-6704	Your item was delivered to an individual at the address at 10:54 am on May 18, 2024 in ANKENY, IA 50023.
9414811898765465698346	John C. Maxey CLM	PO Box 881	Roswell	NM	88202-0881	Your item was picked up at the post office at 9:18 am on May 20, 2024 in ROSWELL, NM 88201.
9414811898765465698384	Josephine T. Hudson Testamentary Trust FBO J. Terrell Ard, Frost Bank, Trustee	PO Box 1600	San Antonio	TX	78296-1600	Your item has been delivered and is available at a PO Box at 9:41 am on May 17, 2024 in SAN ANTONIO, TX 78205.



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9414811898765465698339	Jupiter JV LP	301 Commerce St Ste 3300	Fort Worth	TX	76102-4133	Your item was delivered to an individual at the address at 10:22 am on May 18, 2024 in FORT WORTH, TX 76102.
9414811898765465698377	Kent Production Co	PO Box 131524	Houston	TX	77219-1524	Your item has been delivered and is available at a PO Box at 10:55 am on May 21, 2024 in HOUSTON, TX 77019.
9414811898765465698018	Laura K. Read, LLC	1217 W 3rd St	Roswell	NM	88201-2046	Your item was picked up at the post office at 3:03 pm on June 3, 2024 in ALBUQUERQUE, NM 87111.
9414811898765465698063	Lindys Living Trust, Francis H. Hudson, Trustee	215 W Bandera Rd Ste 114-620	Boerne	TX	78006-2820	Your item was delivered to an individual at the address at 10:33 am on May 18, 2024 in BOERNE, TX 78006.
9414811898765465698001	Loveless Land Holdings, LLC	PO Box 12454	Dallas	TX	75225-0454	Your item was picked up at the post office at 2:44 pm on May 17, 2024 in DALLAS, TX 75225.
9414811898765465698049	Loveless Land Holdings, LLC	4023 Goodfellow Dr	Dallas	TX	75229-2811	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.

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9414811898765465698087	Loveless, Lucinda	PO Box 8	Hobbs	NM	88241-0008	Your item has been delivered to the original sender at 2:35 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698032	Loveless, Lucinda	1630 Vista Del Cerro	Las Cruces	NM	88007-8901	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465698414	Lucinda Loveless Revocable Trust 12/21/2006	PO Box 8	Hobbs	NM	88241-0008	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465698452	Luna, David	712 Sunrise Rd	Roswell	NM	88201-7818	Your item has been delivered to the original sender at 2:25 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465698469	Marathon Oil Permian	990 Town And Country Blvd	Houston	TX	77024-2217	Your item was delivered to the front desk, reception area, or mail room at 2:32 pm on May 20, 2024 in HOUSTON, TX 77024.
9414811898765465698421	Margaret Couch Trust	3600 Hamilton Ave	Fort Worth	TX	76107-1704	Your item was delivered to an individual at the address at 12:23 pm on May 18, 2024 in FORT WORTH, TX 76107.

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9414811898765465698407	Marks Oil, Inc.	1775 N Sherman St Ste 2015	Denver	CO	80203-4319	Your item has been delivered to an agent for final delivery in DENVER, CO 80205 on May 16, 2024 at 7:45 pm.
9414811898765465698490	Matador Resources MRC Permian MRC Delaware Hat Mesa MRC Spiral Resources LLC	5400 Lbj Fwy Ste 1500	Dallas	TX	75240-1017	Your item was delivered to an individual at the address at 10:16 am on May 17, 2024 in DALLAS, TX 75240.
9414811898765465698445	McBride Oil & Gas Corp	PO Box 1515	Roswell	NM	88202-1515	Your item was picked up at the post office at 9:50 am on May 20, 2024 in ROSWELL, NM 88201.
9414811898765465698438	Merit Energy Partners	13727 Noel Rd Ste 500	Dallas	TX	75240-7312	Your item was delivered to the front desk, reception area, or mail room at 2:10 pm on May 17, 2024 in DALLAS, TX 75240.
9414811898765465698476	Mewbourne Oil Company	PO Box 7698	Tyler	TX	75711-7698	Your item has been delivered and is available at a PO Box at 5:53 pm on May 21, 2024 in TYLER, TX 75701.
9414811898765465698513	Moore & Shelton Company, Ltd.	PO Box 3070	Galveston	TX	77552-0070	Your item has been delivered and is available at a PO Box at 9:08 am on May 22, 2024 in GALVESTON, TX 77551.

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9414811898765465698568	Moore & Shelton Company, Ltd.	1011 23rd St	Galveston	TX	77550-4630	Your item was delivered to an individual at the address at 2:44 pm on May 18, 2024 in GALVESTON, TX 77550.
9414811898765465698520	New Mexico State Land Office	310 Old Santa Fe Trl	Santa Fe	NM	87501-2708	Your item was picked up at a postal facility at 8:15 am on May 20, 2024 in SANTA FE, NM 87501.
9414811898765465698506	New Mexico Western Minerals, Inc.	PO Box 45750	Rio Rancho	NM	87174-5750	Your item was delivered to the front desk, reception area, or mail room at 10:14 am on May 20, 2024 in RIO RANCHO, NM 87144.
9414811898765465698599	Northern Oil and Gas, Inc.	4350 Baker Rd Ste 400	Minnetonka	MN	55343-8628	Your item has been delivered to an agent for final delivery in HOPKINS, MN 55343 on May 17, 2024 at 10:02 am.
9414811898765465698544	Pear Resources	PO Box 11044	Midland	TX	79702-8044	Your item was delivered to the front desk, reception area, or mail room at 1:15 pm on May 17, 2024 in MIDLAND, TX 79701.
9414811898765465698582	Penroc Oil Corp	1515 W Calle Sur St Ste 174	Hobbs	NM	88240-0998	Your item was picked up at the post office at 10:08 am on June 17, 2024 in SANTA FE, NM 87501.

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9414811898765465698537	Permian Resources Operating, LLC	300 N Marienfeld St Ste 1000	Midland	TX	79701-4688	Your item was delivered to an individual at the address at 12:47 pm on May 17, 2024 in MIDLAND, TX 79701.
9414811898765465698575	Pioneer Natural Resources, Inc.	777 Hidden Rdg	Irving	TX	75038-3802	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465697219	Prime Rock Resources Agent Co, Inc., as Nominee F/B/O Prime Rock Resources	2 Riverway Ste 1870	Houston	TX	77056-1939	Your item has been delivered to the original sender at 1:03 pm on June 6, 2024 in SANTA FE, NM 87501.
9414811898765465697257	Prospector, LLC	PO Box 429	Roswell	NM	88202-0429	Your item was picked up at the post office at 10:22 am on May 17, 2024 in ROSWELL, NM 88201.
9414811898765465697226	Pruitt, Pat	PO Box 3422	Roswell	NM	88202-3422	Your item was picked up at the post office at 8:33 am on June 3, 2024 in ROSWELL, NM 88201.
9414811898765465697202	PXP Gulf Coast, Inc.	500 Dallas St Ste 700	Houston	TX	77002-4700	Your item has been delivered to the original sender at 1:04 pm on June 6, 2024 in SANTA FE, NM 87501.

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9414811898765465697295	RBCM, Inc.	5701 Club Hill Cir	Dallas	TX	75248-1101	Your item was delivered to an individual at the address at 3:22 pm on May 17, 2024 in DALLAS, TX 75248.
9414811898765465697288	Read & Stevens, Inc., wholly owned subsidiary of Permian Resources Operating, LLC	300 N Marienfeld St Ste 1000	Midland	TX	79701-4688	Your item was delivered to an individual at the address at 12:47 pm on May 17, 2024 in MIDLAND, TX 79701.
9414811898765465697233	Richardson Oil Company, LLC	11886 Greenville Ave Ste 106	Dallas	TX	75243-3569	Your item has been delivered to an agent for final delivery in DALLAS, TX 75243 on May 17, 2024 at 1:19 pm.
9414811898765465697271	Richter, Glenda L.	9 Willowood St	Dallas	TX	75205-3829	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility.
9414811898765465697851	S.N.S. Oil & Gas Properties, Inc.	PO Box 2234	Ardmore	OK	73402-2234	Your item has been delivered and is available at a PO Box at 9:05 am on May 18, 2024 in ARDMORE, OK 73402.
9414811898765465697868	S.N.S. Oil & Gas Properties, Inc.	301 W Main St Ste 550	Ardmore	OK	73401-6325	Your item was delivered to an individual at the address at 12:49 pm on May 20, 2024 in ARDMORE, OK 73401.

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9414811898765465697820	Sandstone Properties, LLC	40 First Plaza Ctr NW Ste 601-N	Albuquerque	NM	87102-3355	Your item was delivered to an individual at the address at 2:39 pm on May 17, 2024 in ALBUQUERQUE, NM 87102.
9414811898765465697806	Sandstone Properties, LLC	200 3rd St NW	Albuquerque	NM	87102-3334	Your item was delivered to an individual at the address at 2:39 pm on May 17, 2024 in ALBUQUERQUE, NM 87102.
9414811898765465697899	Sealy Hutchings Cavin, Inc.	PO Box 1125	Roswell	NM	88202-1125	Your item was picked up at the post office at 1:01 pm on May 17, 2024 in ROSWELL, NM 88201.
9414811898765465697844	Sharron Stone Trollinger Trust	6026 Meadowcreek Dr	Dallas	TX	75248-5452	Your item was delivered to an individual at the address at 5:10 pm on May 28, 2024 in AUSTIN, TX 78703.
9414811898765465697882	Stevens Oil & Gas, LLC	PO Box 3087	Roswell	NM	88202-3087	Your item was picked up at the post office at 5:01 pm on May 20, 2024 in ROSWELL, NM 88201.
9414811898765465697875	Stevens, David M.	3101 Diamond A Dr	Roswell	NM	88201-3420	Your item was picked up at the post office at 1:32 pm on May 21, 2024 in ROSWELL, NM 88201.

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9414811898765465697714	Stevens, N.L., III	1000 Louisiana St Ste 3400	Houston	TX	77002-5011	Your item has been delivered to the original sender at 1:03 pm on June 6, 2024 in SANTA FE, NM 87501.
9414811898765465697752	Sunburst Energy, LLC	400 N Pennsylvania Ave Ste 1000	Roswell	NM	88201-4780	Your item has been delivered to the original sender at 2:25 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465697721	Susan Bonner Mead, Trustee	5938 Elderwood Dr	Dallas	TX	75230-3454	Your item was delivered to an individual at the address at 11:47 am on May 17, 2024 in DALLAS, TX 75230.
9414811898765465697707	The Allar Company	PO Box 1567	Graham	TX	76450-7567	Your item was picked up at a postal facility at 10:15 am on May 20, 2024 in GRAHAM, TX 76450.
9414811898765465697790	Thomas M. & Carolyn Beall	1414 Country Club Dr	Midland	TX	79701-5713	Your item was delivered to an individual at the address at 12:37 pm on May 17, 2024 in MIDLAND, TX 79701.
9414811898765465697783	Tierra Encantada LLC	PO Box 811	Roswell	NM	88202-0811	Your item was picked up at the post office at 11:42 am on May 20, 2024 in ROSWELL, NM 88201.



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9414811898765465697738	Turner Royalties, LLC	3 Brass Horse Ln	Santa Fe	NM	87508-9400	Your item has been delivered to the original sender at 4:18 pm on July 5, 2024 in SANTA FE, NM 87501.
9414811898765465697776	Turner, Marion T.	21 Arroyo Hondo Trl	Santa Fe	NM	87508	Your item was picked up at a postal facility at 12:20 pm on July 11, 2024 in SANTA FE, NM 87501.
9414811898765465697912	Union Hill Oil & Gas Co., Inc.	7712 Glenshannon Cir	Dallas	TX	75225-2054	Your item was delivered to an individual at the address at 4:36 pm on May 17, 2024 in DALLAS, TX 75225.
9414811898765465697950	Vrooman Energy LLC	10510 S Kingston Ave	Tulsa	OK	74137-7017	Your item was picked up at a postal facility at 1:03 pm on June 6, 2024 in SANTA FE, NM 87501.
9414811898765465697967	W A Moncrief Jr. Trust	109 E 9th St	Fort Worth	TX	76102-6402	Your item has been delivered and is available at a PO Box at 8:33 am on May 21, 2024 in FORT WORTH, TX 76102.
9414811898765465697929	Warren Associates	PO Box 10400	Albuquerque	NM	87184-0400	Your item has been delivered and is available at a PO Box at 8:03 am on May 17, 2024 in ALBUQUERQUE, NM 87184.

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9414811898765465697905	Watson Properties LLC	3905 Futura Dr	Roswell	NM	88201-6797	Your item has been delivered to the original sender at 4:21 pm on July 5, 2024 in SANTA FE, NM 87501.
9414811898765465697998	Weimer, Inc.	6842 N Baltusrol Ln	Charlotte	NC	28210-7364	Your item was delivered to an individual at the address at 9:53 am on May 17, 2024 in CHARLOTTE, NC 28210.
9414811898765465697943	Western Oil Company, Inc.	1762 Queens Hwy	Carlsbad	NM	88220-9476	Your item was delivered to the front desk, reception area, or mail room at 11:09 am on May 17, 2024 in CARLSBAD, NM 88220.
9414811898765465697981	Wilbanks Properties Inc.	450 E 17th Ave Unit 220	Denver	CO	80203-1254	Your item was delivered to the front desk, reception area, or mail room at 11:50 am on May 16, 2024 in DENVER, CO 80203.
9414811898765465697936	Wilbanks Reserve Corporation	450 E 17th Ave Unit 220	Denver	CO	80203-1254	Your item was delivered to the front desk, reception area, or mail room at 11:50 am on May 16, 2024 in DENVER, CO 80203.

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9414811898765465697974	Wilbanks Reserve Partners, LLC	450 E 17th Ave Unit 220	Denver	CO	80203-1254	Your item was delivered to the front desk, reception area, or mail room at 11:50 am on May 16, 2024 in DENVER, CO 80203.
9414811898765465697615	Wise Oil & Gas No. 6 Ltd	6851 NE Loop 820 Ste 110	North Richland Hills	TX	76180-6611	Your item was delivered to the front desk, reception area, or mail room at 11:54 am on May 18, 2024 in NORTH RICHLAND HILLS, TX 76180.
9414811898765465697660	Wood Family Non-Exempt Trust FBO James Ralph Wood, III	7278 Lane Park Dr	Dallas	TX	75225-2470	Your item has been delivered to the original sender at 2:25 pm on May 30, 2024 in SANTA FE, NM 87501.
9414811898765465697622	Yates Energy Corporation	PO Box 2323	Roswell	NM	88202-2323	Your item was picked up at the post office at 10:12 am on May 17, 2024 in ROSWELL, NM 88201.

# Affidavit of Publication

STATE OF NEW MEXICO  
COUNTY OF LEA

LEGAL LEGAL LEGAL LEGAL

LEGAL NOTICE  
July 30, 2024

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated July 30, 2024 and ending with the issue dated July 30, 2024.

  
\_\_\_\_\_  
Publisher

Sworn and subscribed to before me this 30th day of July 2024.

  
\_\_\_\_\_  
Business Manager

My commission expires

January 29, 2027  
STATE OF NEW MEXICO  
(Seal) NOTARY PUBLIC  
GUSSIE RUTH BLACK  
COMMISSION # 1087526  
COMMISSION EXPIRES 01/29/2027

Case No. 24528: Application of Read & Stevens, Inc. for Creation of a Special Wolfbone Pool in Sections 4, 5, 8 and 9 in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Notice to all affected interest owners, including all heirs, devisees and successors of: 2023 Permian Basin JV; Abby Corporation; Apache Corporation; Ard Oil Ltd.; Avant Operating, LLC; B&N Energy, LLC; Bernhardt Oil Corporation; Bowtie Slash Energy, Inc.; Breckenridge Partnership Ltd; Brothers Prod Properties Ltd; Bureau of Land Management; BXP Partners V LP; Carolyn J. Chester Trust dated 8/11/1995; Caza Petroleum LLC; CBR Oil Properties LLC; Challenger Crude, Ltd.; Chase Oil Corporation; Chevron U.S.A., Inc.; Cimarex Energy Co.; Magnum Hunter; Coterra Energy; Clay Rufus G Trust; Delmar Hudson Lewis Living Trust, Bank of America, N.A., Trustee; Delmar Hudson Lewis Living Trust, Bank of America, N.A., Trustee; Dennis, Jamie, Devon Energy Production Co. LP; Diamond Star Production Company, LLC; Earthstone Permian LLC, wholly owned subsidiary of Permian Resources Operating, LLC; EAU Rouge, LLC; EC Ohara Trust; Estate of Marjorie C. Echols; EG3 Inc.; Estate of Clarence Hyde; Fasken Land & Minerals Ltd.; FISCO Inc.; Foran Oil Company; Grimshaw, Jane Scisson; HNB Limited Partnership; High Divide, LLC; Highland (Texas) Energy Company; Hightower Exploration LLC; Hillier, LLC; HM Investments, Ltd.; HOG Partnership, LP; William A. Hudson, II; Javellna Partners; Zorro Partners; Joann E. Jensen Family Trust; John C. Maxey (CLM); Josephine T. Hudson Testamentary Trust FBO J. Terrell Ard, Frost Bank, Trustee; Jupiter JV LP; Kent Production Co.; Laura K. Read, LLC; Lindy's Living Trust, Francis H. Hudson, Trustee; Loveless Land Holdings, LLC; Lucinda Loveless; Lucinda Loveless Revocable Trust 12/21/2006; David Luna; Marathon Oil Permian; Margaret Couch Trust; Marks Oil, Inc.; Matador Resources; MRC Permian; MRC Delaware Hat Mesa; MRC Spiral Resources LLC; McBride Oil & Gas Corp.; Merit Energy Partners; Mewbourne Oil Company; Moore & Shelton Company, Ltd.; New Mexico State Land Office; New Mexico Western Minerals, Inc.; Northern Oil and Gas, Inc.; Pear Resources; Penroc Oil Corp.; Permian Resources Operating, LLC; Pioneer Natural Resources, Inc.; Prime Rock Resources Agent Co. Inc., as Nominee F/B/O Prime Rock Resources; Prospector, LLC; Pat Pruitt; PXP Gulf Coast, Inc.; RBCM, Inc.; Read & Stevens, Inc., wholly owned subsidiary of Permian Resources Operating, LLC; Richardson Oil Company, LLC; Glenda L. Richter; S.N.S. Oil & Gas Properties, Inc.; Sandstone Properties, LLC; Sealy Hutchings Cavin, Inc.; Sharron Stone Trollinger Trust; Stevens Oil & Gas, LLC; David M. Stevens; N.L. Stevens, III; Sunburst Energy, LLC; Susan Bonner Mead, Trustee; The Allar Company; Thomas M. & Carolyn Beall; Tierra Encantada LLC; Turner Royalties, LLC; Marion T. Turner; Union Hill Oil & Gas Co., Inc.; Vrooman Energy LLC; W A Moncrief Jr. Trust; Warren Associates; Watson Properties LLC; Weimer, Inc.; Western Oil Company, Inc.; Wilbanks Properties Inc.; Wilbanks Reserve Corporation; Wilbanks Reserve Partners, LLC; Wise Oil & Gas No. 6 Ltd.; Wood Family Non-Exempt Trust FBO James Ralph Wood, III; Yates Energy Corporation. The State of New Mexico, Energy Minerals and Natural Resources Department, Oil Conservation Division ("Division") hereby gives notice that the Division will hold public hearing 8:30 a.m. on August 13, 2024, to consider this application. The hearing will be conducted in a hybrid fashion, both in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505 and via the WebEx virtual meeting platform. To participate in the hearings electronically, see the instructions posted on the docket for the hearing date: <https://www.emnrd.nm.gov/ocd/hearing-info/> or contact Freya Tschantz, at [Freya.Tschantz@emnrd.nm.gov](mailto:Freya.Tschantz@emnrd.nm.gov). Applicant in the above-styled cause seeks an order pursuant to Order No. R-23089, ¶ 21, creating a special Wolfbone Pool within Sections 4, 5, 8, and 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico, as defined below (the "Subject Acreage"). The vertical extent of the proposed Gotham; Wolfbone Pool will be from the stratigraphic equivalent of the top of the Third Bone Spring Sand interval, located at approximately 10,598 feet measured depth, to the stratigraphic equivalent of the base of the Wolfcamp A interval, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). To accommodate the creation of this special pool, Read & Stevens requests the Division issue an Order vertically contracting the base of the Teas; Bone Spring, East Pool (Pool Code 96637) within the Subject Acreage upwards to above the stratigraphic equivalent of the top of the Third Bone Spring Sand, located at approximately 10,598 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). In addition, Read & Stevens requests the Division issue an Order vertically contracting the top of the Tonto; Wolfcamp Pool (Pool Code 59500) within the Subject Acreage downwards to below the stratigraphic equivalent of the base of the Wolfcamp A, located at approximately 11,236 feet measured depth, as found in the five-inch Dual Lateral Micro Log SFL in the Matador 5 Federal #1 well (API No. 30-025-31056). Said area is located approximately 27 miles southwest of Hobbs, New Mexico.  
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This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

HOLLAND & HART LLC  
110 N GUADALUPE ST., STE. 1  
SANTA FE, NM 87501

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. F  
Submitted by: Read & Stevens, Inc.  
Hearing Date: August 13, 2024  
Case No. 24528