

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

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

CASE NOS. 23448-23455

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

CASE NOS. 23594-23601

**APPLICATIONS OF READ & STEVENS, INC.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.**

CASE NOS. 23508-23523

NOTICE OF EXHIBIT I, J & K

Read & Stevens, Inc. and Permian Resources Operating, LLC, applicant in the above-referenced cases, gives notice that it is filing the attached rebuttal exhibits for acceptance into the record.

Exhibit I, J and K are rebuttal exhibits.

Respectfully submitted,

HOLLAND & HART LLP



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

CERTIFICATE OF SERVICE

I hereby certify that on August 8, 2023, I served a copy of the foregoing document to the following counsel of record via Electronic Mail:

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Attorneys for Sandstone Properties, LLC



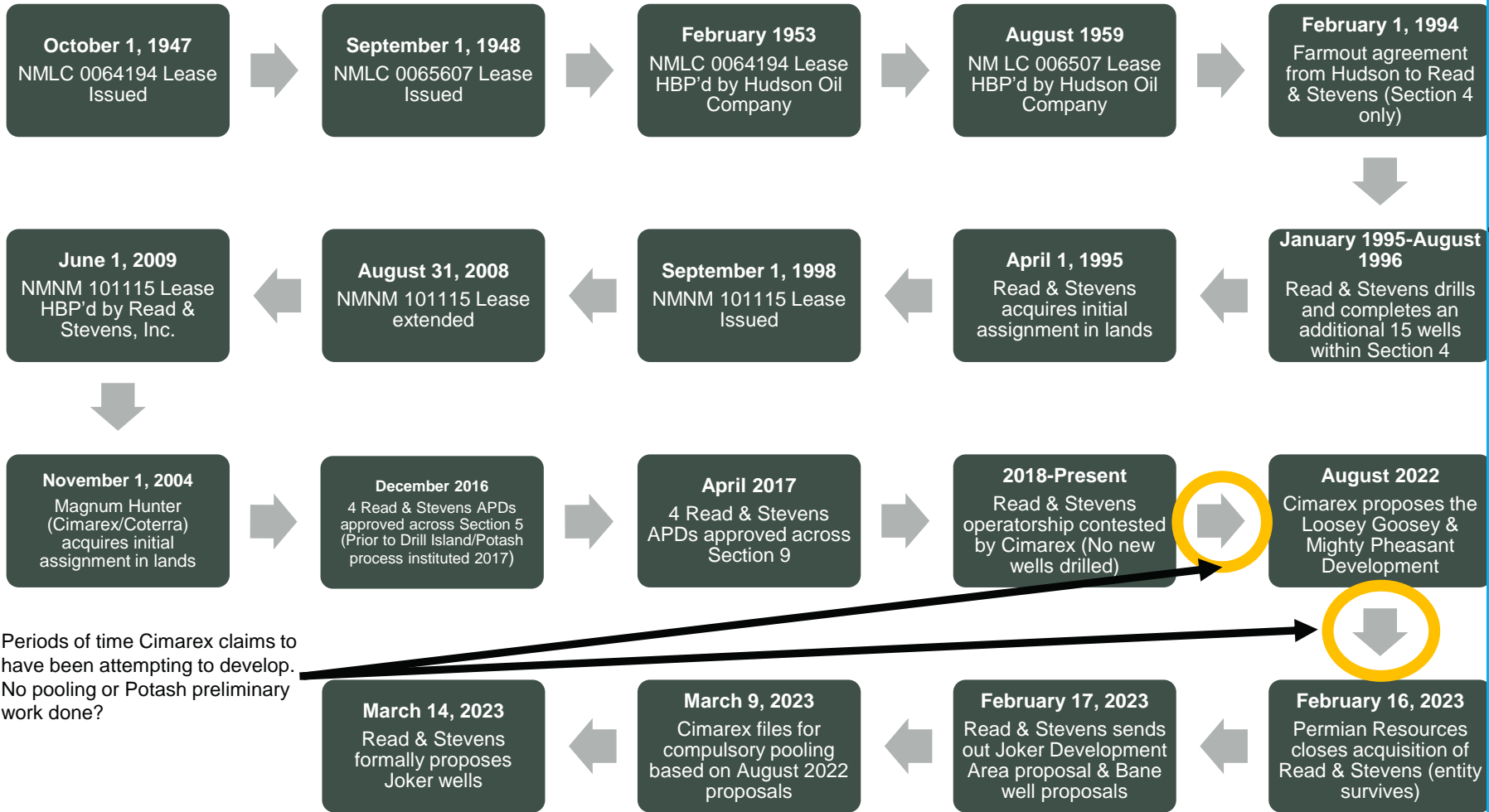
Adam G. Rankin

EXHIBIT I

REBUTTAL EX



Brief Historical Timeline



Slide pertains to ALL cases



Cimarex Brief Rebuttal

EXHIBIT I

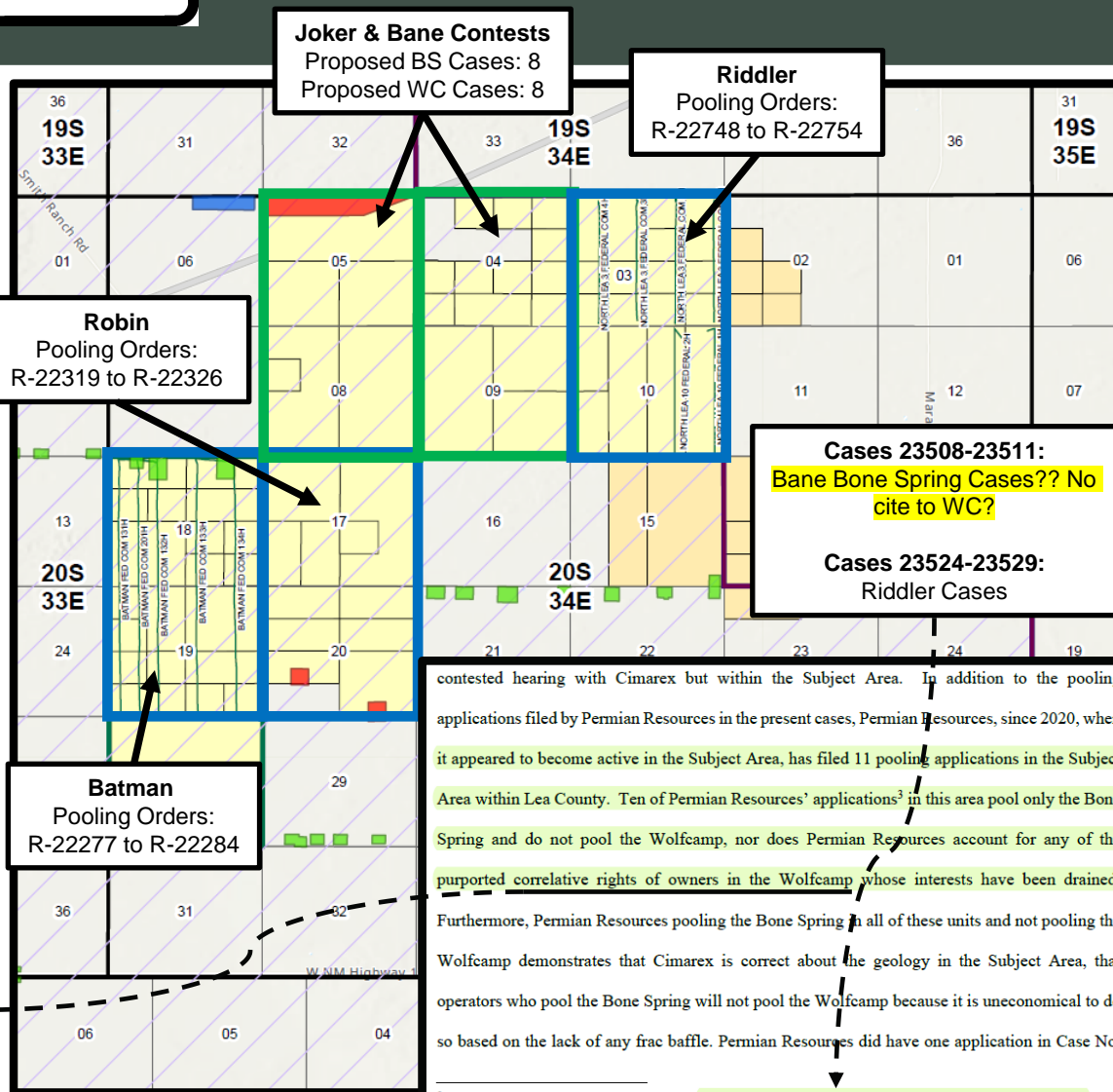
Read & Stevens Rebuttal Ex I

• Response to Incorrect Cimarex Statements:

- WHEREAS, Cimarex cites ten (10) Permian Bone Spring Cases and one (1) Wolfcamp case since 2020 (Factually Incorrect?)
- Batman: (Orders R-22277 to R-22284)
 - 4 Bone Spring Cases
 - 4 Wolfcamp Cases
- Robin: (Orders R-22319 to R-22326)
 - 4 Bone Spring Cases
 - 4 Wolfcamp Cases
- Riddler (Orders R-22748 to R-22754)
 - 4 Bone Spring Cases being overlapping spacing units pooling 1st & 2nd Bone Spring
 - 2 Bone Spring Cases pooling 3rd Bone Spring
 - 1 Wolfcamp Case to be co-developed with the above 3rd Bone pooled wells

• Depth Severance Notes on existing Permian Bone Spring/Wolfcamp Orders: (Moot Point Regardless)

- Batman: One depth severance in NE of Section 19 whereas only owner impacted is Permian, owning 16 more acres in the WC
- Robin: No depth severances
- Riddler: No depth severances



contested hearing with Cimarex but within the Subject Area. In addition to the pooling applications filed by Permian Resources in the present cases, Permian Resources, since 2020, when it appeared to become active in the Subject Area, has filed 11 pooling applications in the Subject Area within Lea County. Ten of Permian Resources' applications³ in this area pool only the Bone Spring and do not pool the Wolfcamp, nor does Permian Resources account for any of the purported correlative rights of owners in the Wolfcamp whose interests have been drained. Furthermore, Permian Resources pooling the Bone Spring in all of these units and not pooling the Wolfcamp demonstrates that Cimarex is correct about the geology in the Subject Area, that operators who pool the Bone Spring will not pool the Wolfcamp because it is uneconomical to do so based on the lack of any frac baffle. Permian Resources did have one application in Case No.

³ Permian Resources' applications in Case Nos. 23508, 23509, 23510, 23511, 23524, 23525, 23526, 23527, 23528, 23529.

*Page 6 of Cimarex Brief dated July 26, 2023

Slide pertains to ALL cases



Joker & Bane – Contractual vs. Leasehold Interest Summary

Joker = 1280.20 Gross Acres, Bane = 1282.20 Gross Acres

>>>

1280.20 + 1282.20 = 2562.40 Gross Total as shown below

| Leasehold vs. Contractual Basis - Does it Change Correlative Rights Issues? (No) | | | | | | | | | |
|--|-----------------------------------|----------|--------|------------------|-------------------------------------|----------|--------|------------------|----------------------------|
| Owner | Joker & Bane - Leasehold Interest | | | | Joker & Bane - Contractual Interest | | | | Status |
| | Bone Spring | Wolfcamp | Delta | Formation Favor? | Bone Spring | Wolfcamp | Delta | Formation Favor? | |
| MRC Permian* | 14.40 | 43.23 | -28.82 | Wolfcamp | 14.40 | 43.23 | -28.82 | Wolfcamp | Neutral |
| HOG Partnership LP* | 142.30 | 166.30 | -24.00 | Wolfcamp | 136.76 | 158.91 | -22.15 | Wolfcamp | Neutral |
| Northern Oil & Gas* | 9.94 | 29.84 | -19.89 | Wolfcamp | 9.94 | 29.84 | -19.89 | Wolfcamp | PR Plan Support |
| Javelina Partners* | 200.95 | 182.95 | 18.00 | Bone Spring | 191.12 | 174.51 | 16.62 | Bone Spring | Cimarex Support |
| Zorro Partners, Ltd.* | 133.40 | 133.40 | 0.00 | N/A | 129.64 | 129.64 | 0.00 | N/A | Cimarex Support |
| Delmar Hudson Trust* | 85.91 | 85.91 | 0.00 | N/A | 84.97 | 84.97 | 0.00 | N/A | Term Assigned to Cimarex |
| First Century | 133.55 | 180.34 | -46.79 | Wolfcamp | 123.98 | 170.78 | -46.79 | Wolfcamp | PR Owned |
| Read & Stevens | 607.51 | 672.79 | -65.28 | Wolfcamp | 590.22 | 655.50 | -65.28 | Wolfcamp | PR Owned |
| CBR Oil Prop* | 5.34 | 16.01 | -10.67 | Wolfcamp | 5.34 | 16.01 | -10.67 | Wolfcamp | PR Support |
| Ard Oil* | 69.58 | 69.58 | 0.00 | N/A | 66.76 | 66.76 | 0.00 | N/A | PR Support |
| Josephine Hudson Trust* | 25.74 | 25.74 | 0.00 | N/A | 24.80 | 24.80 | 0.00 | N/A | Neutral |
| Magnum Hunter* | 513.07 | 287.00 | 226.07 | Bone Spring | 541.45 | 315.38 | 226.07 | Bone Spring | Cimarex Owned |
| CLM Production Co* | 0.00 | 1.60 | -1.60 | Wolfcamp | 0.00 | 1.60 | -1.60 | Wolfcamp | PR Support |
| Highland (Texas) Energy* | 4.80 | 1.60 | 3.20 | Bone Spring | 4.80 | 1.60 | 3.20 | Bone Spring | Neutral |
| Diamond Star Prod.* | 1.60 | 1.60 | 0.00 | N/A | 1.60 | 1.60 | 0.00 | N/A | PR Support |
| Carolyn Beall* | 1.60 | 1.60 | 0.00 | N/A | 1.60 | 1.60 | 0.00 | N/A | PR Support |
| Tierra Encantada* | 1.60 | 1.60 | 0.00 | N/A | 1.60 | 1.60 | 0.00 | N/A | PR Support |
| David Luna* | 1.60 | 1.60 | 0.00 | N/A | 1.60 | 1.60 | 0.00 | N/A | Neutral |
| Warren Associates* | 0.00 | 1.60 | -1.60 | Wolfcamp | 0.00 | 1.60 | -1.60 | Wolfcamp | PR Support |
| Cimarex Energy* | 147.23 | 181.23 | -34.00 | Wolfcamp | 148.73 | 182.73 | -34.00 | Wolfcamp | Cimarex Owned |
| Moore & Shelton* | 61.32 | 61.32 | 0.00 | N/A | 58.00 | 58.00 | 0.00 | N/A | Cimarex Support |
| Lindys Living Trust* | 139.15 | 139.15 | 0.00 | N/A | 133.52 | 133.52 | 0.00 | N/A | Term Assigned to Jav/Zorro |
| Challenger Crude* | 51.36 | 51.36 | 0.00 | N/A | 51.36 | 51.36 | 0.00 | N/A | Neutral |
| Avalon Energy Corp | 10.00 | 0.00 | 10.00 | Bone Spring | 10.00 | 0.00 | 10.00 | Bone Spring | PR Owned |
| Marks Oil* | 10.46 | 20.06 | -9.60 | Wolfcamp | 10.46 | 20.06 | -9.60 | Wolfcamp | Neutral |
| Prime Rock* | 30.00 | 0.00 | 30.00 | Bone Spring | 30.00 | 0.00 | 30.00 | Bone Spring | Neutral |
| Wilbanks Reserve* | 55.56 | 106.56 | -51.00 | Wolfcamp | 55.56 | 106.56 | -51.00 | Wolfcamp | Neutral |
| Bucholz (Union Hill)* | 16.00 | 16.00 | 0.00 | N/A | 41.35 | 41.35 | 0.00 | N/A | Neutral |
| Chase Oil Co* | 33.43 | 33.43 | 0.00 | N/A | 33.43 | 33.43 | 0.00 | N/A | PR Support |
| Foran Oil Co | 49.00 | 49.00 | 0.00 | N/A | 53.85 | 53.85 | 0.00 | N/A | Neutral |
| William A. Hudson II | 6.00 | 0.00 | 6.00 | Bone Spring | 5.54 | 0.00 | 5.54 | Bone Spring | Assigned to Zorro |
| Totals: | 2562.40 | 2562.40 | | 0.00 | 2562.40 | 2562.40 | | | |

| | Total Bone Spring Net Acres | Bone Spring WI% (Full 4 Sections) | Total Wolfcamp Net Acres | Wolfcamp WI% (Full 4 Sections) |
|-------------------------------|-----------------------------|-----------------------------------|--------------------------|--------------------------------|
| Total PR Owned: | 751.06 | 29.31% | 853.13 | 33.29% |
| PR Supporters: | 124.69 | 4.87% | 158.45 | 6.18% |
| Total PR Support: | 875.74 | 34.18% | 1011.59 | 39.48% |
| Total Cimarex Owned: | 746.21 | 29.12% | 554.14 | 21.63% |
| Cimarex Supporters: | 540.83 | 21.11% | 516.83 | 20.17% |
| Total Cimarex Support: | 1287.03 | 50.23% | 1070.97 | 41.80% |

*All ownership information obtained from 2023 title opinions and reports
 *Please note ownership differences between Bone Spring and Wolfcamp formations

*Cimarex Ownership & Supporting Parties ownership heavily weighted towards Bone Spring formation (exposing the clear incentive/motivation to intentionally drain Wolfcamp with no account for owners as Cimarex's stated & filed plans have shown

Slide pertains to ALL cases



Joker & Bane – Debunking Cimarex “Support”?

| | | | | | |
|---------------------------------|---------|---------|---------|---------|--------------|
| Challenger Crude, Ltd. - - - - | 2.1886% | 2.1884% | 2.1883% | 2.1881% | CTRA Support |
| Union Hill Oil & Gas Co. Inc. | 2.2680% | 2.2678% | 2.2676% | 2.2674% | CTRA Support |
| Highland (Texas) Energy Company | 1.2049% | 0.0000% | 0.0000% | 0.0000% | CTRA Support |

*Snips from Cimarex “Hearing Packet I” filed 8.3.2023 pertaining Supporting Parties

Re: -EXTERNAL- T20S-R34E Union Hill Oil and Gas

RB Robert Buchholz <robert@bigdallas.net>
To Travis Macha

You replied to this message on 8/3/2023 8:59 AM.
If there are problems with how this message is displayed, click here to view it in a web browser.

WARNING: The sender of this email could not be validated and may not match the person in the “From” field.

We have not indicated support for Cimarex. Not sure where that's coming from.

On Thu, Aug 3, 2023 at 8:45 AM Travis Macha <Travis.Macha@permianres.com> wrote:

Hey Robert,

Where is any indication of “Support”?

STATE OF NEW MEXICO §
COUNTY OF LEA §

19976

CONVEYANCE, ASSIGNMENT AND BILL OF SALE

THIS CONVEYANCE, ASSIGNMENT AND BILL OF SALE (this “Conveyance”), effective from and after 7 o'clock a.m., May 1, 2004 (the “Effective Date”), is by and between **Magnum Hunter Production, Inc.**, a Texas corporation (herein called “Grantor”), and **Joseph Wm. Foran**, an individual residing in Dallas, Texas (herein called “Grantee”);

WITNESSETH:

Dear Mr. Macha:

Enclosed please find executed AFEs for the Joker 5-8 Federal Com lease consisting of 24 wells along with Challenger’s well requirements. Challenger Crude Ltd. (“Challenger”) hereby elects to participate in the proposed drilling and completion of said wells. Challenger recognizes that Permian Resources Operating LLC and Coterra Energy Inc (Cimarex Energy Co.) are each pursuing operatorship in the same formation within the same tract of land. Challenger is not interested in picking winners or losers in this matter. Challenger intends to participate in the respective wells proposed regardless of which company succeeds in being named operator. Once operatorship has been finally determined, Challenger will consider execution of an appropriate operating agreement to supersede and replace any existing or legacy operating agreements that may be in effect.

Please keep us informed as to the progress of this project. Feel free to contact me should you have further questions or comments.

*Identical Letter for the Bane wells in hand, not shown here to conserve slide space

Marks Oil, Inc. 0.9508 0.00594271 Committed

Marks understands that a dispute exists between Permian and Cimarex as to operational rights and privileges associated with both the Lands and applicable Joint Operating Agreements. Regardless of this dispute, Marks will exercise its rights of participation in any operational proposal on the Lands, drilling or otherwise, with a party authorized to conduct such operations by the New Mexico Conservation Division or other appropriate governing body.

Above 2 Snips from Cimarex Exhibits (“Hearing Packet I, Pg. 70), and Marks written election response

Cimarex/Magnum Hunter claiming to own Foran Oil Company’s **49 Acres** in **Bane (4/9)** despite having assigned it to Foran itself. This accounts for the below metric: (ABOS 1434/924)

W2W2: **4.3721%**
E2W2: **4.3690%**
W2E2: **4.3660%**
E2E2: **2.1814%**

| | | | | | |
|--------------------------|----------|----------|----------|----------|------------|
| Magnum Hunter Production | 21.0570% | 21.0419% | 18.8161% | 18.8026% | CTRA Owned |
|--------------------------|----------|----------|----------|----------|------------|

*Appears Cimarex making bold assumptions when it comes to “Support”

*While Cimarex Land Exhibits credit Foran Oil Company’s interest to Magnum Hunter, Cimarex Engineering Exhibit D-23 accounts for Foran Oil Company Ownership.... Conflicting??

EXHIBIT
I



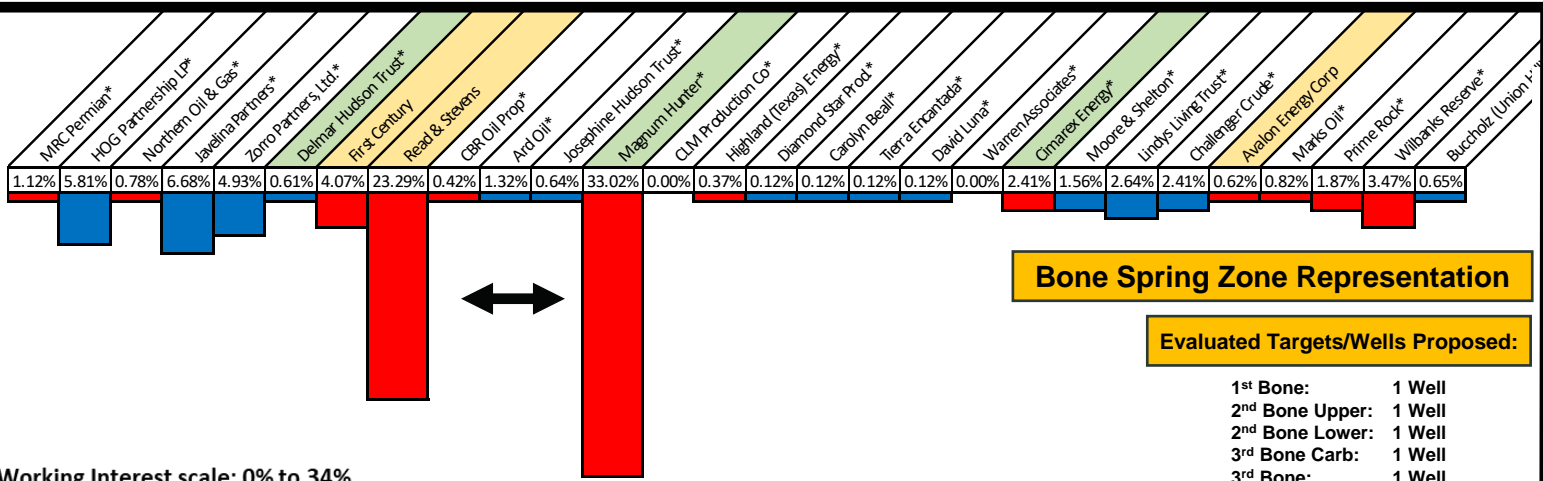
Joker – W2W2 Equivalent – Cases 23516 & 23520

Bone Spring & Wolfcamp Formations (Sections 5 & 8)

Joker – W2W2 of Sections 5 & 8 (320.01 Gross Acres) – CONTRACTUAL DOI

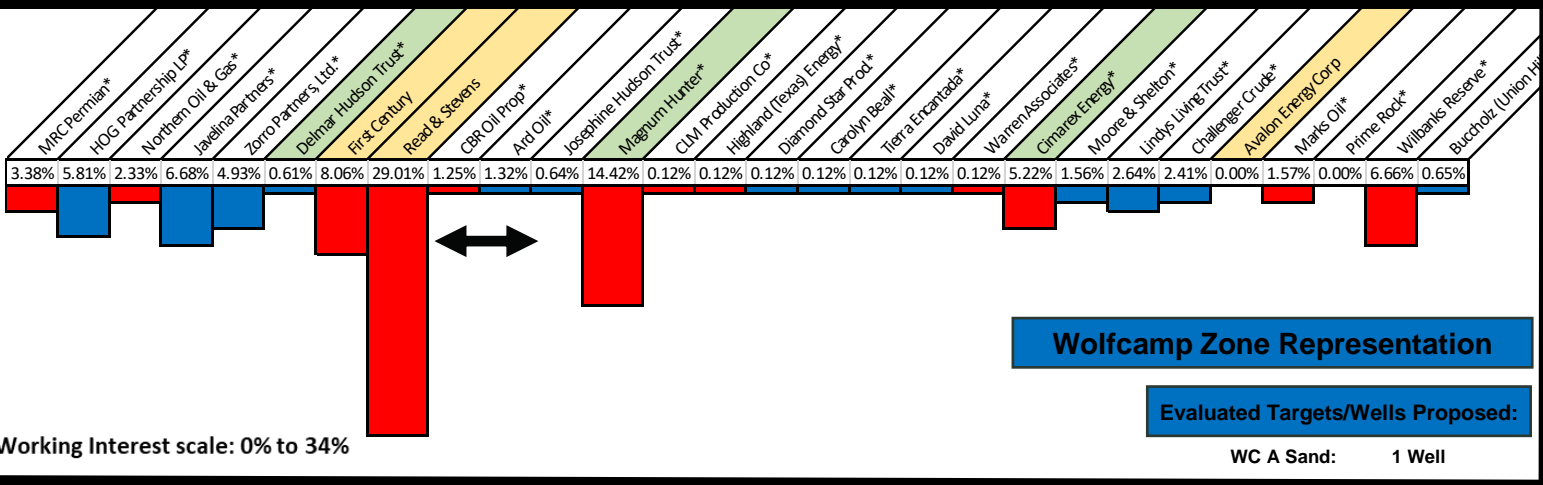
POOLED INTERVAL

Pool: Teas; Bone Spring, East
[96637]



POOLED INTERVAL

Pool: Tonto; Wolfcamp [59500]



Slide pertains to cases 23516 & 23520

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights

RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC

EXHIBIT I

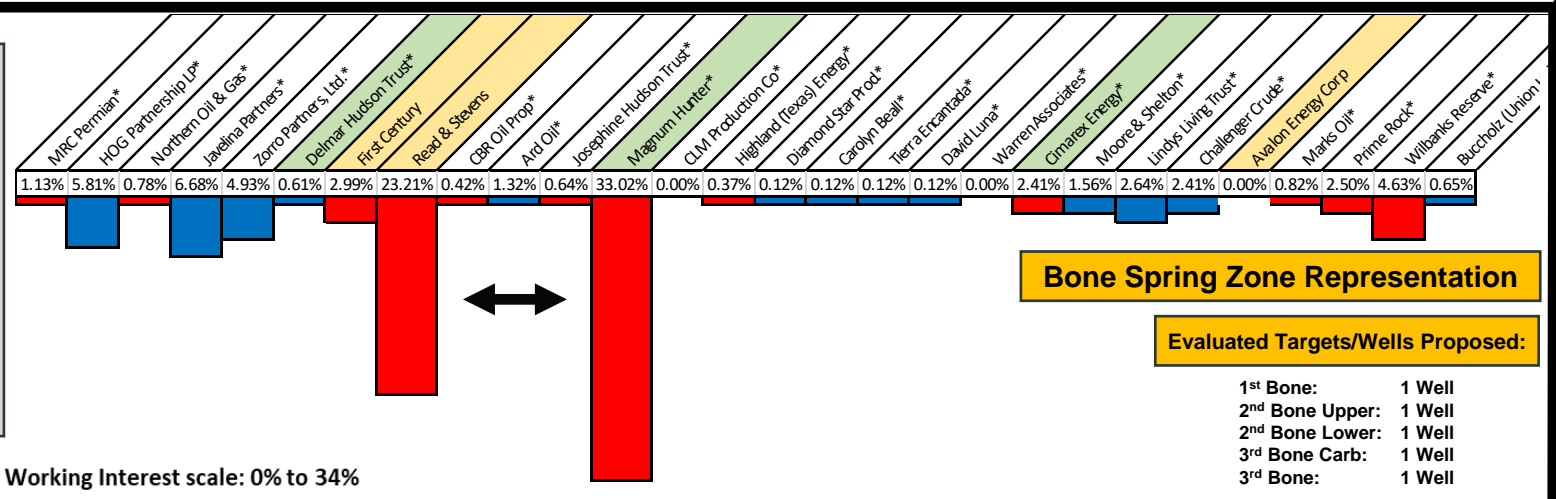


Joker – E2W2 Equivalent – Cases 23517 & 23521 Bone Spring & Wolfcamp Formations (Sections 5 & 8)

Joker – E2W2 of Sections 5 & 8 (320.04 Gross Acres) – CONTRACTUAL DOI

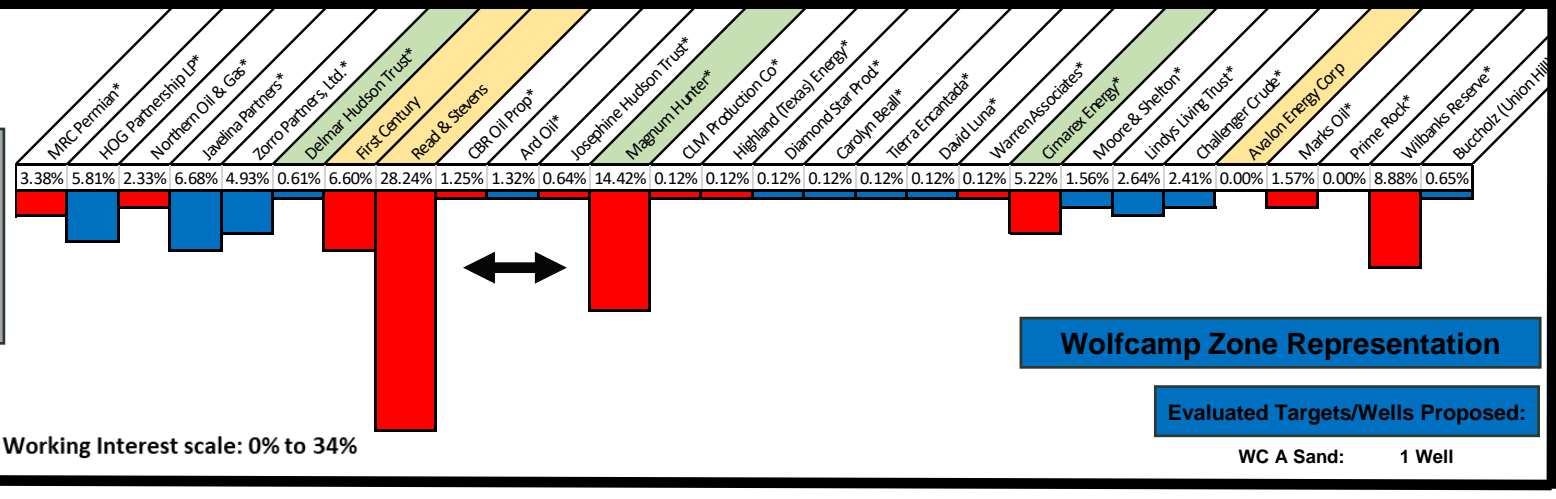
POOLED INTERVAL

Pool: Teas; Bone Spring, East [96637]



POOLED INTERVAL

Pool: Tonto; Wolfcamp [59500]



*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC

Slide pertains to cases 23517 & 23521



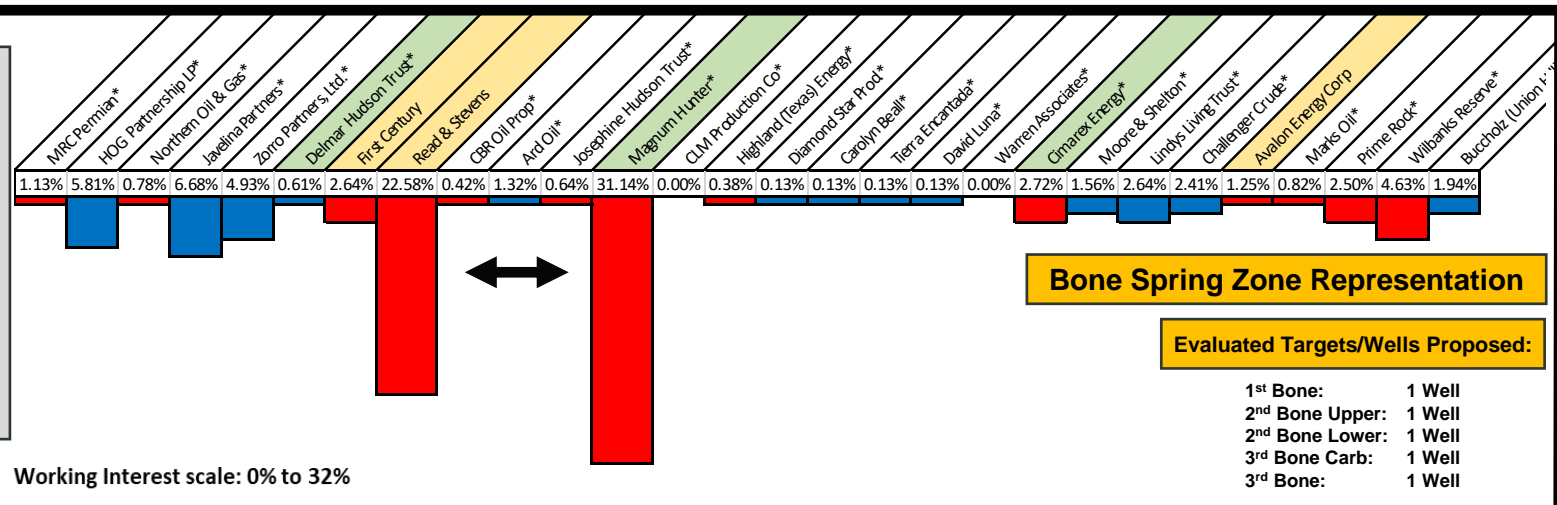
Joker – W2E2 Equivalent – Cases 23518 & 23522

Bone Spring & Wolfcamp Formations (Sections 5 & 8)

Joker – W2E2 of Sections 5 & 8 (320.06 Gross Acres) – CONTRACTUAL DOI

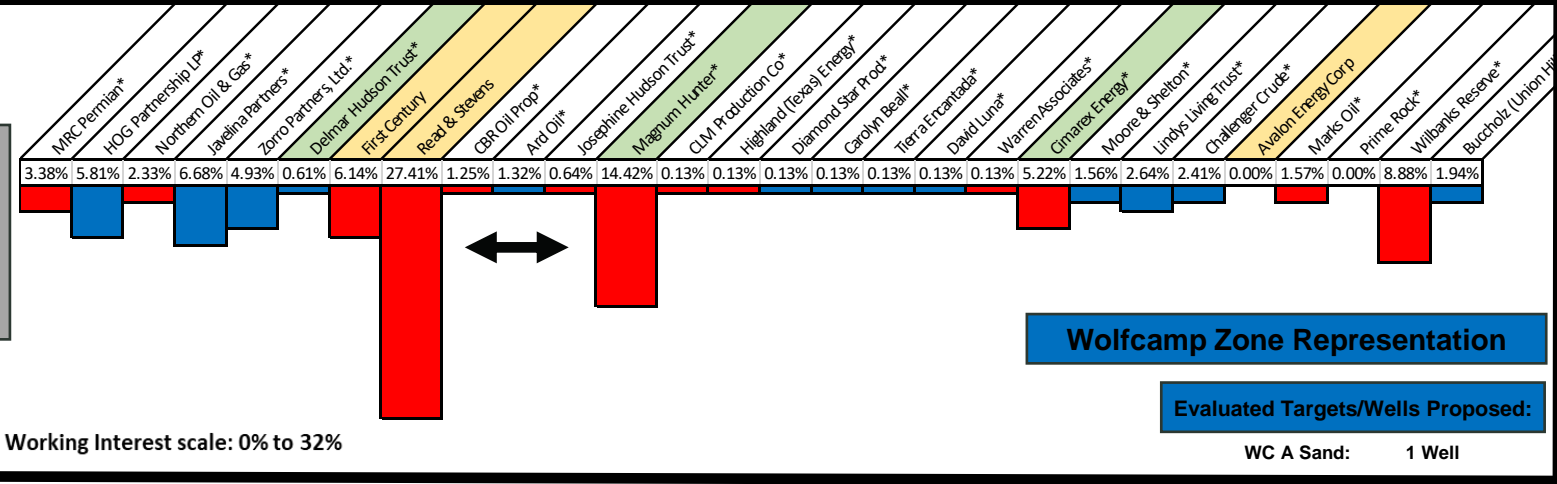
POOLED INTERVAL

Pool: Teas; Bone Spring, East [96637]



POOLED INTERVAL

Pool: Tonto; Wolfcamp [59500]



Slide pertains to cases 23518 & 23522

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC



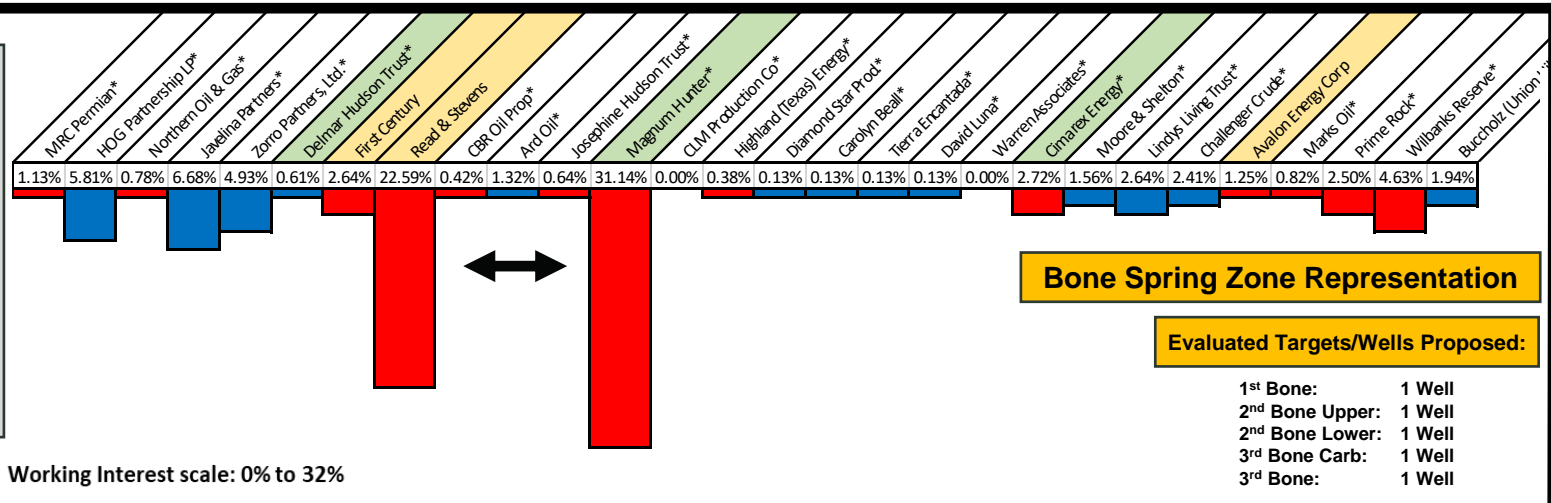
Joker – E2E2 Equivalent – Cases 23519 & 23523

Bone Spring & Wolfcamp Formations (Sections 5 & 8)

Joker – E2E2 of Sections 5 & 8 (320.09 Gross Acres) – CONTRACTUAL DOI

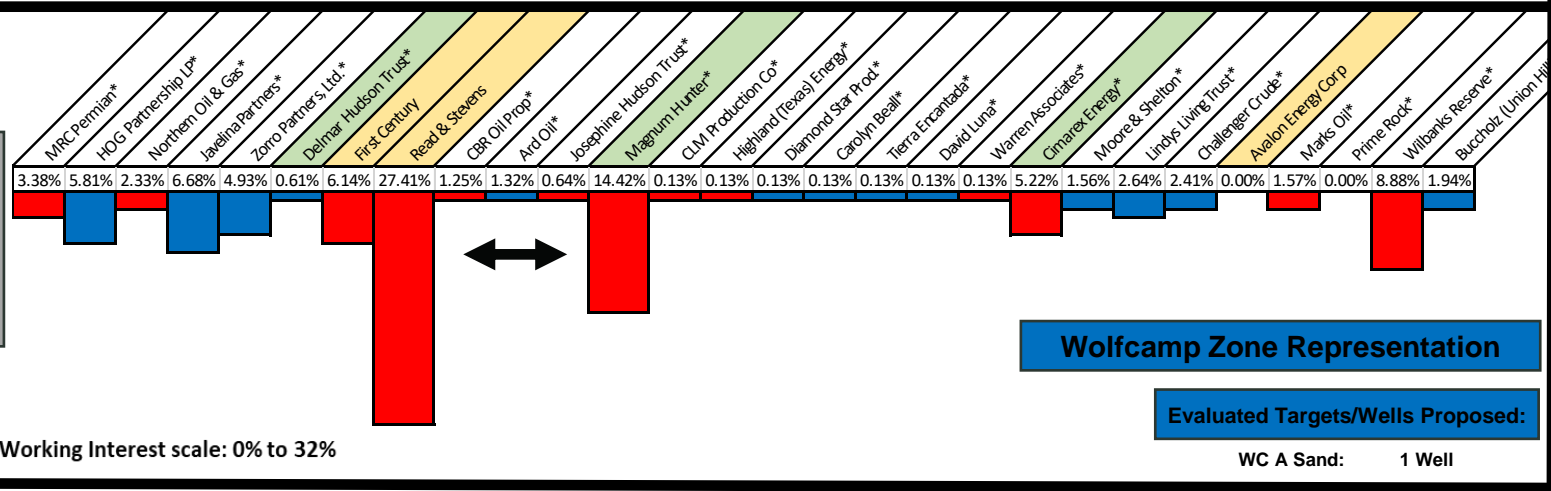
POOLED INTERVAL

Pool: Teas; Bone Spring, East [96637]



POOLED INTERVAL

Pool: Tonto; Wolfcamp [59500]



Slide pertains to cases 23519 & 23523

*All ownership information obtained from 2023 title opinions and reports
 *Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC



Bane – W2W2 Equivalent – Cases 23508 & 23512

Bone Spring & Wolfcamp Formations (Sections 4 & 9)

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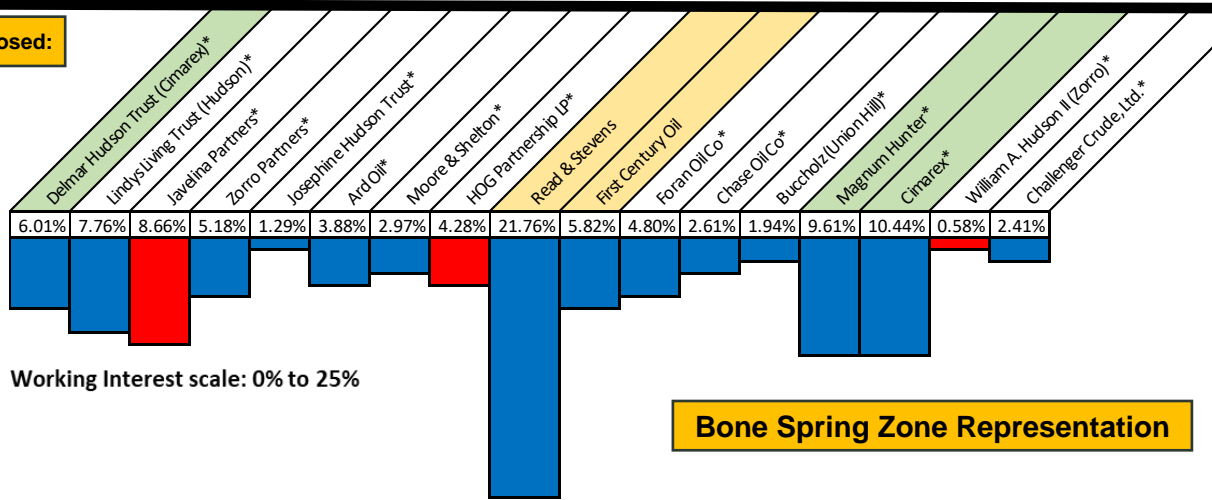
Bane – W2W2 of Sections 4 & 9 (320.21 Gross Acres) – CONTRACTUAL DOI

POOLED INTERVAL

Pool: Teas; Bone Spring, East
[96637]

Evaluated Targets/Wells Proposed:

- 1st Bone: 1 Well
- 2nd Bone Upper: 1 Well
- 2nd Bone Lower: 1 Well
- 3rd Bone Carb: 1 Well
- 3rd Bone Sand: 1 Well



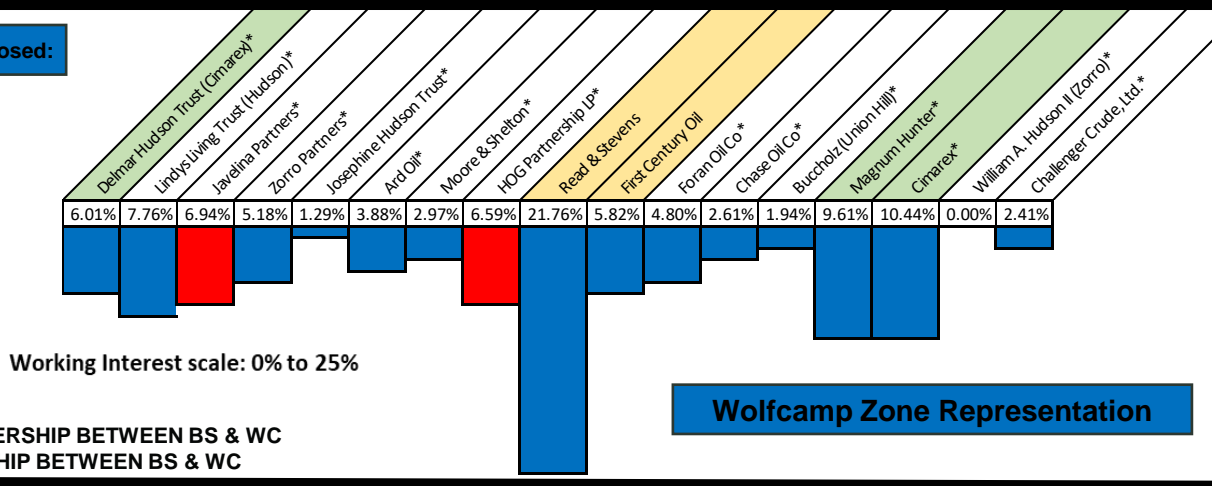
Bone Spring Zone Representation

POOLED INTERVAL

Pool: Tonto;
Wolfcamp [59500]

Evaluated Targets/Wells Proposed:

- WC A Sand: 1 Well



Wolfcamp Zone Representation

RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
*Asterisk denotes pooled party

EXHIBIT
I



Bane – E2W2 Equivalent – Cases 23509 & 23513
Bone Spring & Wolfcamp Formations (Sections 4 & 9)

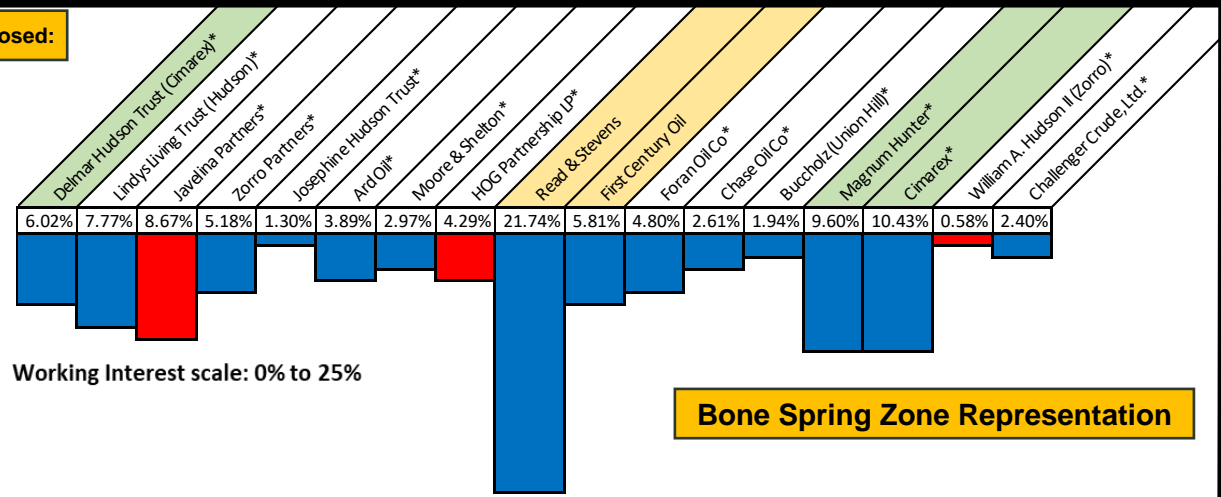
Bane – E2W2 of Sections 4 & 9 (320.44 Gross Acres) – CONTRACTUAL DOI

POOLED INTERVAL

Pool: Teas; Bone Spring, East
[96637]

Evaluated Targets/Wells Proposed:

- 1st Bone: 1 Well
- 2nd Bone Upper: 1 Well
- 2nd Bone Lower: 1 Well
- 3rd Bone Carb: 1 Well
- 3rd Bone Sand: 1 Well



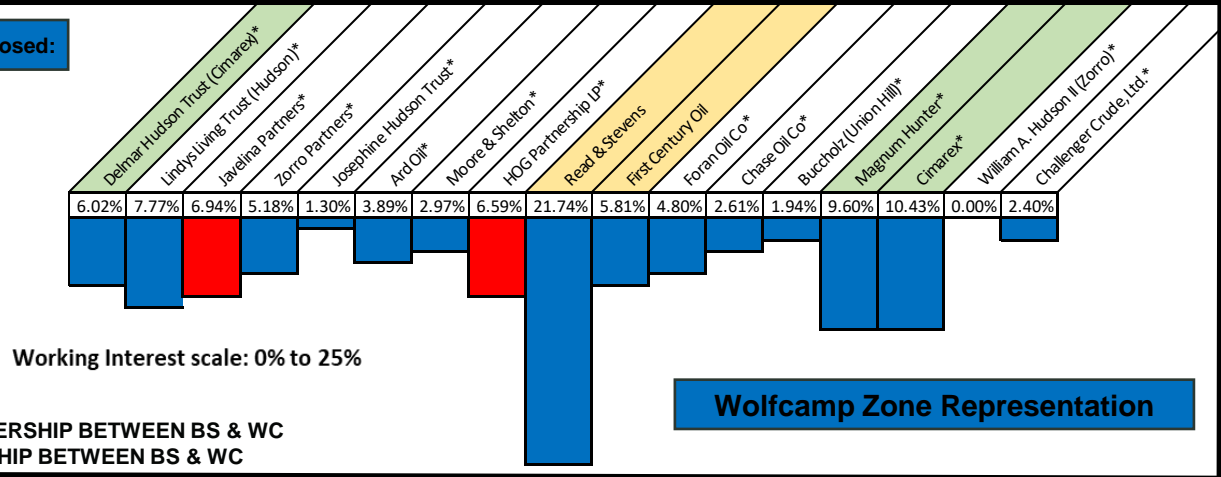
Bone Spring Zone Representation

POOLED INTERVAL

Pool: Tonto;
Wolfcamp [59500]

Evaluated Targets/Wells Proposed:

- WC A Sand: 1 Well



Wolfcamp Zone Representation

RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
*Asterisk denotes pooled party

Slide pertains to cases 23509 & 23513



Bane – W2E2 Equivalent – Cases 23510 & 23514

Bone Spring & Wolfcamp Formations (Sections 4 & 9)

Bane – W2E2 of Sections 4 & 9 (320.66 Gross Acres) – CONTRACTUAL DOI

POOLED INTERVAL

Pool: Teas; Bone Spring, East
[96637]

Evaluated Targets/Wells Proposed:

- 1st Bone: 1 Well
- 2nd Bone Upper: 1 Well
- 2nd Bone Lower: 1 Well
- 3rd Bone Carb: 1 Well
- 3rd Bone Sand: 1 Well

Working Interest scale: 0% to 25%

Bone Spring Zone Representation

POOLED INTERVAL

Pool: Tonto;
Wolfcamp [59500]

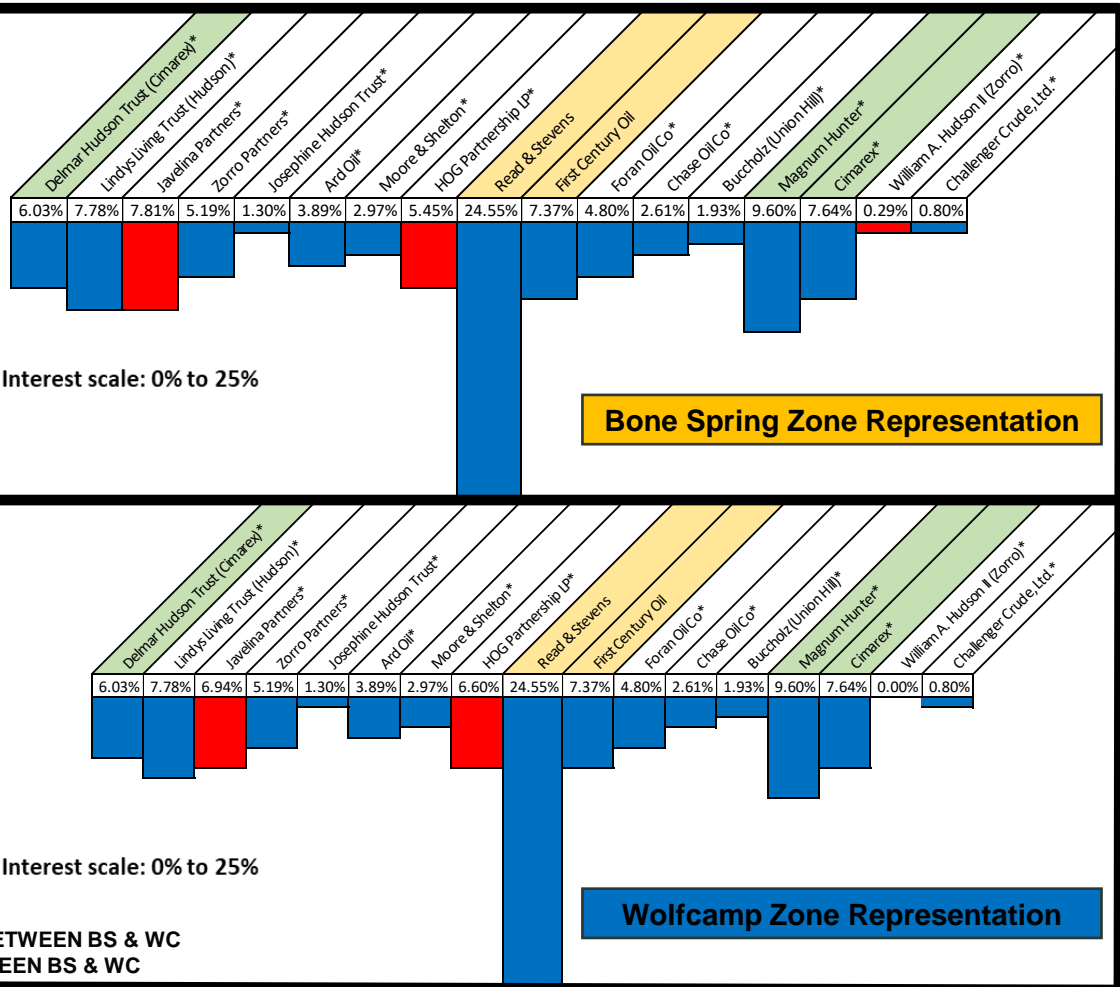
Evaluated Targets/Wells Proposed:

- WC A Sand: 1 Well

Working Interest scale: 0% to 25%

Wolfcamp Zone Representation

RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC



Slide pertains to cases 23510 & 23514

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
*Asterisk denotes pooled party



Bane – E2E2 Equivalent – Cases 23511 & 23515

Bone Spring & Wolfcamp Formations (Sections 4 & 9)

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Bane – E2E2 of Sections 4 & 9 (320.89 Gross Acres) – CONTRACTUAL DOI

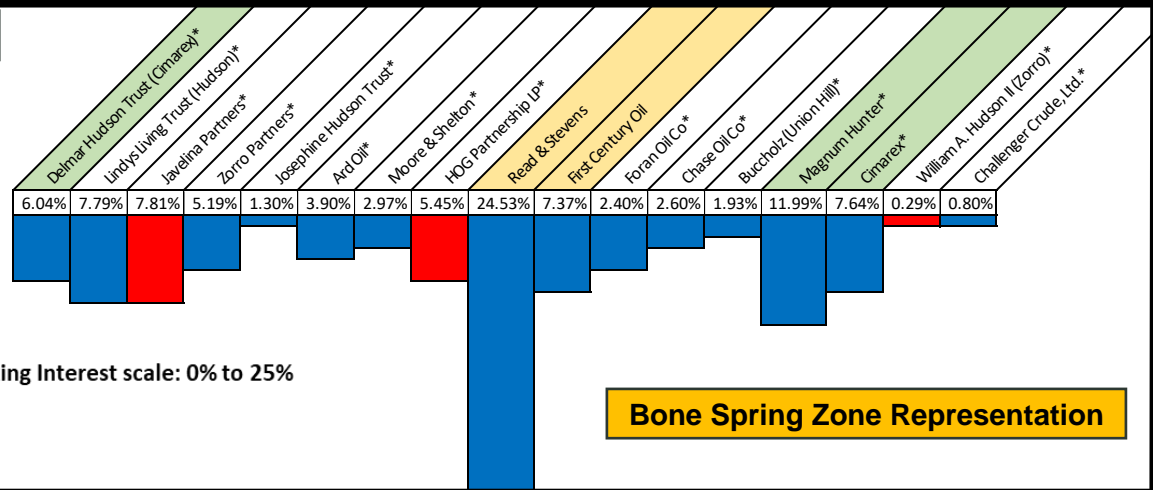
POOLED INTERVAL

Pool: Teas; Bone Spring, East
[96637]

Evaluated Targets/Wells Proposed:

- 1st Bone: 1 Well
- 2nd Bone Upper: 1 Well
- 2nd Bone Lower: 1 Well
- 3rd Bone Carb: 1 Well
- 3rd Bone Sand: 1 Well

Working Interest scale: 0% to 25%



Bone Spring Zone Representation

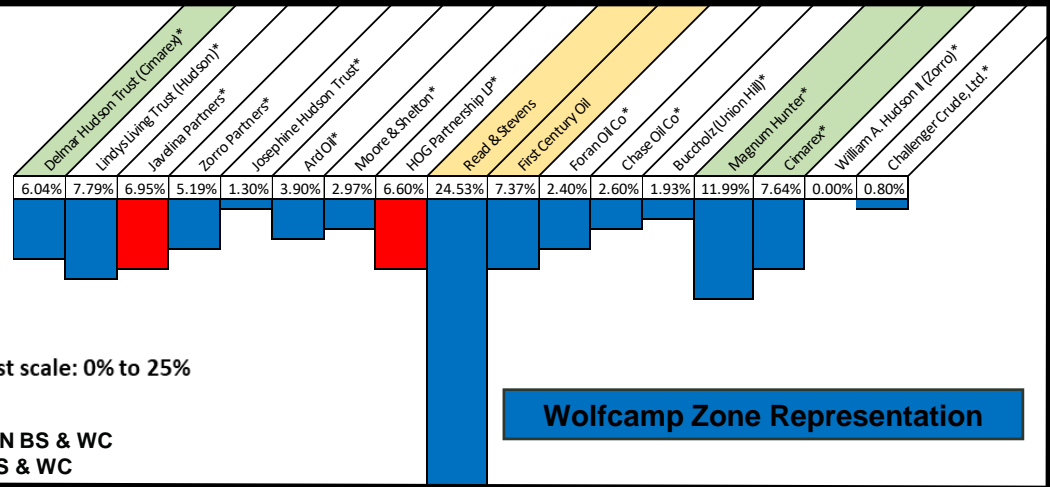
POOLED INTERVAL

Pool: Tonto;
Wolfcamp [59500]

Evaluated Targets/Wells Proposed:

- WC A Sand: 1 Well

Working Interest scale: 0% to 25%



Wolfcamp Zone Representation

RED BARS = DIFFERING OWNERSHIP BETWEEN BS & WC
BLUE BARS = SAME OWNERSHIP BETWEEN BS & WC

*All ownership information obtained from 2023 title opinions and reports
*Please note ownership differences between Bone Spring and Wolfcamp formations

*Contractual Rights
*Asterisk denotes pooled party

CHASE OIL CORPORATION

Post Office Box 1767
Artesia, New Mexico 88211-1767
Office (575) 746-9853
FAX (575) 748-7374

August 1, 2023

Read & Stevens, Inc.
c/o Permian Resources LLC
300 N. Marienfeld Street, Suite 1000
Midland, Texas 79701

RE: Bane Development
Township 20 South, Range 34 East
Sections 4 & 9

To Whom It May Concern:

The purpose of this letter is for Chase Oil Corporation, an impacted working interest owner in the above-referenced development, to adopt and ratify the statements and conclusions in the letter dated July 13, 2023 between Permian Resources LLC & Northern Oil & Gas, Inc. concerning the same.

Sincerely,

Chase Oil Corporation



Staci D. Sanders
Vice President - Land

From: Robert Buchholz <robert@bigdallas.net>
Sent: Thursday, August 3, 2023 7:49 AM
To: Travis Macha
Subject: Re: -EXTERNAL- T20S-R34E Union Hill Oil and Gas

WARNING: The sender of this email could not be validated and may not match the person in the "From" field.

We have not indicated support for Cimarex. Not sure where that's coming from.

On Thu, Aug 3, 2023 at 8:45 AM Travis Macha <Travis.Macha@permianres.com> wrote:

Hey Robert,

Looping back around to this, as you know the PR/Cimarex hearing is set for 8/9. They turned in some more stuff yesterday citing Union Hill as an active supporter of Cimarex's development. As of now our understanding Union Hill is a neutral party here. No hard feelings if you indeed are supporting Cimarex here but wanted to reach out your way and make that clarification.

Obviously we greatly value support here so if there's anything you need from me in the meantime feel free to let me know.

Thanks,



Travis Macha | NM Land Lead

O 432.400.1037 | travis.macha@permianres.com

300 N. Marienfeld Street, Suite 1000 | Midland, TX 79701

permianres.com

Permian Resources is a result of the merger of Centennial Resource Development and Colgate Energy effective September 1, 2022.



March 24, 2023

**VIA U.S. REGULAR MAIL AND
EMAIL TO: travis.macha@permianres.com**

Mr. Travis Macha
Senior Landman
Permian Resources Operating, LLC
300 N. Marienfeld Street, Suite 1000
Midland, TX 79701

RE: Bane 4-9 Federal Com – Well Proposals
Sections 4 & 9, Township 20 South, Range 34 East
Lea County, New Mexico

Dear Mr. Macha:

On February 22, 2023, Marks Oil, Inc. (“Marks”) received a letter dated February 17, 2023, from Permian Resources Operating, LLC, as operator for Reed & Stevens, Inc. (“Permian”) setting forth the proposal (the “Permian Proposal”) to drill the following twenty-four (24) wells: Bane 4-9 Federal Com 111H, 112H, 113H, 114H, 121H, 122H, 123H, 124H, 125H, 126H, 127H, 128H, 171H, 172H, 173H, 174H, 131H, 132H, 133H, 134H, 201H, 202H, 203H, and 204H (collectively the “Wells”) located in Sections 4 & 9, Township 20 South, Range 34 East, Lea County, New Mexico (collectively the “Lands”).

Marks has also received proposals from Reed & Stevens, Inc. dated September 15, 2022, Cimarex Energy Co. (“Cimarex”) dated August 25, 2022, and MRC Permian Company dated August 30, 2022, all of which propose drilling multiple horizontal wells located on the Lands and targeting the same formations in the Permian Proposal.

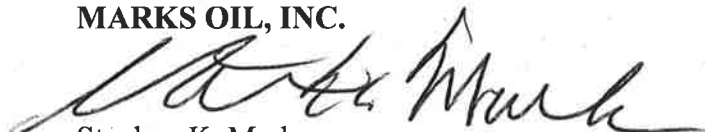
Marks understands that a dispute exists between Permian and Cimarex as to operational rights and privileges associated with both the Lands and applicable Joint Operating Agreements. Regardless of this dispute, Marks will exercise its rights of participation in any operational proposal on the Lands, drilling or otherwise, with a party authorized to conduct such operations by the New Mexico Conservation Division or other appropriate governing body.

Mr. Travis Macha
Permian Resources Operating, LLC
March 24, 2023
Page 2

If you have any questions, please contact me at (303) 861-1974 or by email to Steve.Marks@MarksOil.net.

Sincerely,

MARKS OIL, INC.

A handwritten signature in black ink, appearing to read "Steve Marks", written over the typed name.

Stephen K. Marks
President

Permian Resources-Bane Proposals_MOI ltr 032423_SKM

CHALLENGER CRUDE, LTD

3525 Andrews Highway
Midland, TX 79703
(432) 694-3000

March 20, 2023

Permian Resources Operating LLC
Attn: Travis Macha
300 N. Marienfeld Street, Ste 1000
Midland, TX 79701

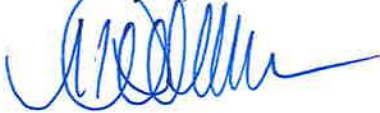
RE: Well Proposal – Bane 4-9 Fed Com Lease (24 Wells)
Section 4 & 9, T20S, R34E
Lea County, NM

Dear Mr. Macha:

Enclosed please find executed AFEs for the Bane 4-9 Federal Com lease consisting of 24 wells along with Challenger’s well requirements. Challenger Crude Ltd. (“Challenger”) hereby elects to participate in the proposed drilling and completion of said wells. Challenger recognizes that Permian Resources Operating LLC and Coterra Energy Inc (Cimarex Energy Co.) are each pursuing operatorship in the same formation within the same tract of land. Challenger is not interested in picking winners or losers in this matter. Challenger intends to participate in the respective wells proposed regardless of which company succeeds in being named operator. Once operatorship has been finally determined, Challenger will consider execution of an appropriate operating agreement to supersede and replace any existing or legacy operating agreements that may be in effect.

Please keep us informed as to the progress of this project. Feel free to contact me should you have further questions or comments.

Thank you,



Kymberly Holman, CPLTA, CPL
Landman

**CHALLENGER CRUDE LTD.
WELL REQUIREMENT SHEET**

- I. Prior to commencement of drilling:
- A. One copy of all required governmental notices and regulatory forms
- B. One copy of the Operator's well prognosis and drilling and completion program
Directed to: Challenger Crude Ltd.
3525 Andrews Highway
Midland, Texas 79703
Attn: OBO File
- Reports to: reports@henryresources.com
- II. During the drilling, testing, completion and workover operations:
- A. **Daily Reports:**
Daily reports by email to (reports@henryresources.com) of all operations from spud through completion.
Reports will include present total depth, status, sample descriptions (if applicable), DST or testing details, rate of penetration, pertinent mud properties and other engineering data.
- B. **Logs and formation Tests:**
Operator shall notify as early as possible when coring, testing, logging, and other such operations are anticipated so that Non-Operator may have a representative present. Log information should be e mailed to Patrick Cohorn (PCohorn@HenryResources.com) as soon as possible following the job, but no later than 48 hours after completion of the logging job.
- C. **Mudlogs:**
If Mudlogs are run, Daily Mudlog and morning reports should be emailed to Patrick Cohorn (PCohorn@HenryResources.com) no later than 9:00 AM.
- D. **Well Logs:**
Cased Hole Compensated Neutron-GR (Base of surface casing to TD)
Minimum Requirement:
Electric Logs- if run
CNL-FDC w/GR and caliper – if run
BHC Sonic w/GR and caliper – if run
Any other logs
Final Log copies required should be delivered to:
Challenger Crude Ltd.
3525 Andrews Highway
Midland, Texas
Attn: Patrick Cohorn
Number of Copies to Office:
- | | |
|---|--|
| 4 | Electric Logs (Final Prints) |
| 1 | Digital Log LAS file with Final Log Tif images |
| 2 | Mud Logs (Final) |
| 1 | Drill Stem Test charts and results – if run |
| 2 | Analyses (Core, Water, Fluid, Etc.) if run |
| 1 | Abandonment Report |
| 1 | Completion Report |
- III. Production Information as reported to the state should be emailed to Laurie Richards (RWilson@HenryResources.com)

PARTIES TO BE NOTIFIED IN ADVANCE OF DRILLSTEM TESTING, CORING, LOGGING OR ABANDONMENT OF WELL:

Forrest Collier
Office: 432-694-3000
Fax: 432-694-2999
FCollier@HenryResources.com

Patrick Cohorn
Office: 432-694-3000
Fax: 432-694-2999
PCohorn@HenryResources.com

CHALLENGER CRUDE, LTD

3525 Andrews Highway
Midland, TX 79703
(432) 694-3000

April 4, 2023

Permian Resources Operating LLC
Attn: Travis Macha
300 N. Marienfeld Street, Ste 1000
Midland, TX 79701

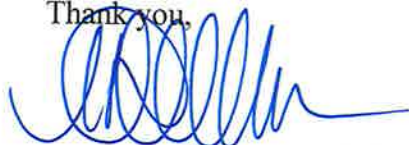
RE: Well Proposal – Joker 5-8 Fed Com Lease (24 Wells)
Section 5 & 8, T20S, R34E
Lea County, NM

Dear Mr. Macha:

Enclosed please find executed AFEs for the Joker 5-8 Federal Com lease consisting of 24 wells along with Challenger's well requirements. Challenger Crude Ltd. ("Challenger") hereby elects to participate in the proposed drilling and completion of said wells. Challenger recognizes that Permian Resources Operating LLC and Coterra Energy Inc (Cimarex Energy Co.) are each pursuing operatorship in the same formation within the same tract of land. Challenger is not interested in picking winners or losers in this matter. Challenger intends to participate in the respective wells proposed regardless of which company succeeds in being named operator. Once operatorship has been finally determined, Challenger will consider execution of an appropriate operating agreement to supersede and replace any existing or legacy operating agreements that may be in effect.

Please keep us informed as to the progress of this project. Feel free to contact me should you have further questions or comments.

Thank you,



Kymerly Holman, CPLTA, CPL
Landman

**CHALLENGER CRUDE LTD.
WELL REQUIREMENT SHEET**

- I. Prior to commencement of drilling:
 - A. One copy of all required governmental notices and regulatory forms
 - B. One copy of the Operator's well prognosis and drilling and completion program
 - Directed to: Challenger Crude Ltd.
3525 Andrews Highway
Midland, Texas 79703
Attn: OBO File
 - Reports to: reports@henryresources.com
- II. During the drilling, testing, completion and workover operations:
 - A. Daily Reports:
Daily reports by email to (reports@henryresources.com) of all operations from spud through completion.
Reports will include present total depth, status, sample descriptions (if applicable), DST or testing details, rate of penetration, pertinent mud properties and other engineering data.
 - B. Logs and formation Tests:
Operator shall notify as early as possible when coring, testing, logging, and other such operations are anticipated so that Non-Operator may have a representative present. Log information should be e mailed to Patrick Cohorn (PCohorn@HenryResources.com) as soon as possible following the job, but no later than 48 hours after completion of the logging job.
 - C. Mudlogs:
If Mudlogs are run, Daily Mudlog and morning reports should be emailed to Patrick Cohorn (PCohorn@HenryResources.com) no later than 9:00 AM.
 - D. Well Logs:
Cased Hole Compensated Neutron-GR (Base of surface casing to TD)
Minimum Requirement:
Electric Logs- if run
CNL-FDC w/GR and caliper – if run
BHC Sonic w/GR and caliper – if run
Any other logs
Final Log copies required should be delivered to:
Challenger Crude Ltd.
3525 Andrews Highway
Midland, Texas
Attn: Patrick Cohorn
Number of Copies to Office:
 - 4 Electric Logs (Final Prints)
 - 1 Digital Log LAS file with Final Log Tif images
 - 2 Mud Logs (Final)
 - 1 Drill Stem Test charts and results – if run
 - 2 Analyses (Core, Water, Fluid, Etc.) if run
 - 1 Abandonment Report
 - 1 Completion Report
- III. Production Information as reported to the state should be emailed to Laurie Richards (RWilson@HenryResources.com)

PARTIES TO BE NOTIFIED IN ADVANCE OF DRILLSTEM TESTING, CORING, LOGGING OR ABANDONMENT OF WELL:

| | |
|--|--|
| Forrest Collier | Patrick Cohorn |
| Office: 432-694-3000 | Office: 432-694-3000 |
| Fax: 432-694-2999 | Fax: 432-694-2999 |
| FCollier@HenryResources.com | PCohorn@HenryResources.com |

J:Well Requirements/Challenger Revised 08-22-2017



Challenger Crude, Ltd.

3525 Andrews Hwy.
Midland, Texas 79703
432-693-3000



August 7, 2023

Darin C. Savage
Attorney for Cimarex Energy Co.

darin@abadieschill.com

Michael H. Feldewert
Attorney for Read & Stevens, Inc.

mfeldewert@hollandhart.com

Re: Application of Cimarex Energy Co., NMOCD Case Numbers 23594 through 23601
Application of Cimarex Energy Co., NMOCD Case Numbers 23448 through 23455
Application of Read & Stevens, Inc., NMOCD Case Numbers 23508 through 23523

Gentlemen:

In September of 2022, Cimarex Energy Co. ("Cimarex") presented to Challenger Crude, Ltd. ("Challenger") a proposal to drill and complete certain wells within Sections 5 & 8, T-20-S, R-34-E, NMPM, Lea County, New Mexico. On September 28, 2022, Challenger elected to participate in the Cimarex proposed development plan by signing and returning a proposed operating agreement. Subsequent to Challenger's election to participate, Read & Stevens, Inc. through its designated operator, Permian Resources Operating, LLC (collectively referred to herein as "Read & Stevens"), approached Challenger with a competing plan of development. The competing plans of development by Cimarex and Read & Stevens are currently being contested in the above referenced Applications for Compulsory Pooling filed in the identified NMOCD Case Numbers.

Challenger wishes to express to the applicants and the NMOCD that Challenger prefers to remain neutral insofar as resolution of the competing applications is concerned. Challenger is committed to participating in development of the subject lands pursuant to whichever plan is determined by the NMOCD to prevail and will execute such agreements as may be necessary or appropriate, including without limitation voluntary Communitization Agreements and a mutually acceptable operating agreement. For the avoidance of doubt, Challenger is not by this letter repudiating the Cimarex operating agreement previously executed by Challenger on September 28th and will abide by the terms of such operating agreement should the NMOCD determine that the Cimarex plan of development prevails.

Should there be any questions, please feel free to contact the undersigned at mcurry@henryresources.com or direct line 432.681.7237.

Very truly yours,

CHALLENGER CRUDE, LTD.

By, 
Michel E. Curry
VP Land/Sr. Counsel



E. G. L. Resources, Inc.

August 3, 2023

Permian Resources
300 N. Marienfeld Street, Suite 1000
Midland, TX 79701

RE: **NMOCD Case # 23508-23523**
Joker Development

To Whom It May Concern:

The purpose of this letter is to allow EGL Resources, Inc. ("EGL") as an impacted operator within the area the opportunity to make a reference to its opinion on the development strategy.

EGL, as an offset operator in similar geology, has been observing the ongoing cases between Permian Resources Operating and Cimarex Energy Company. EGL is presently exploring the co-development of the Bone Spring and Wolfcamp formations together and has concern for any precedent Cimarex is attempting to set by restricting the development of the Wolfcamp formation.

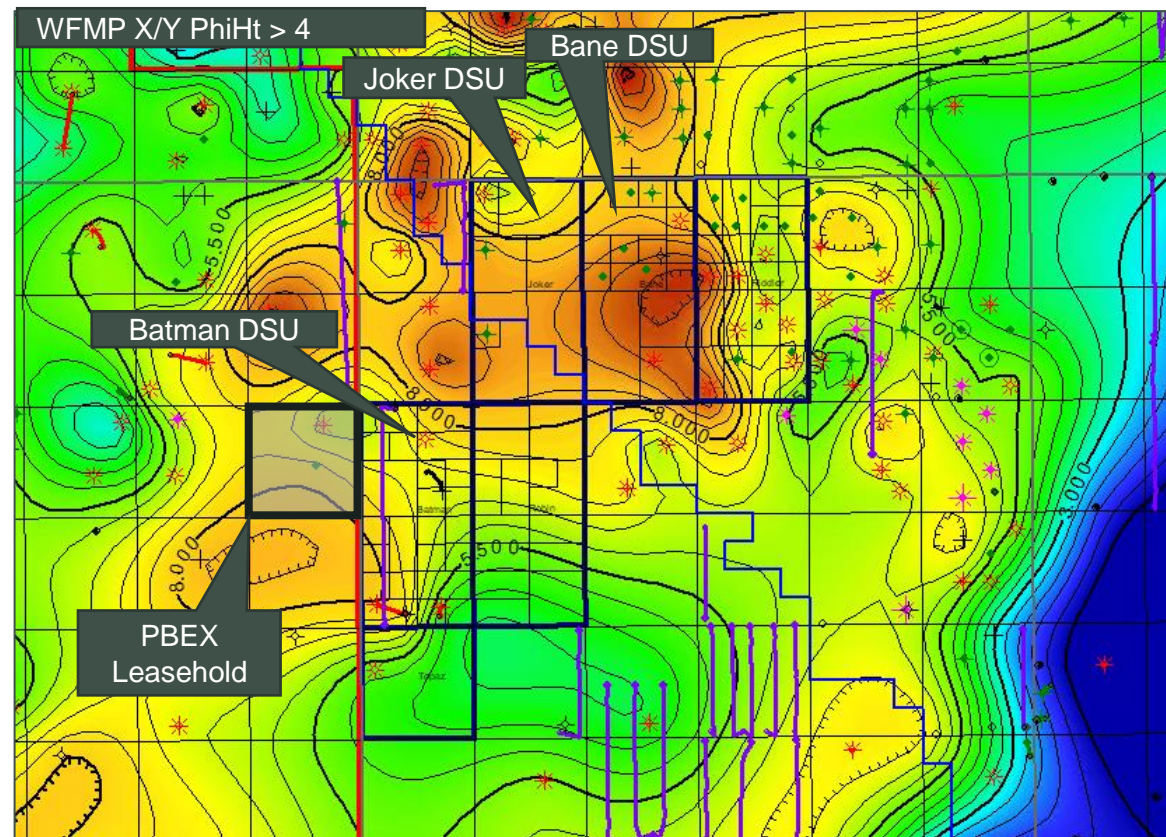
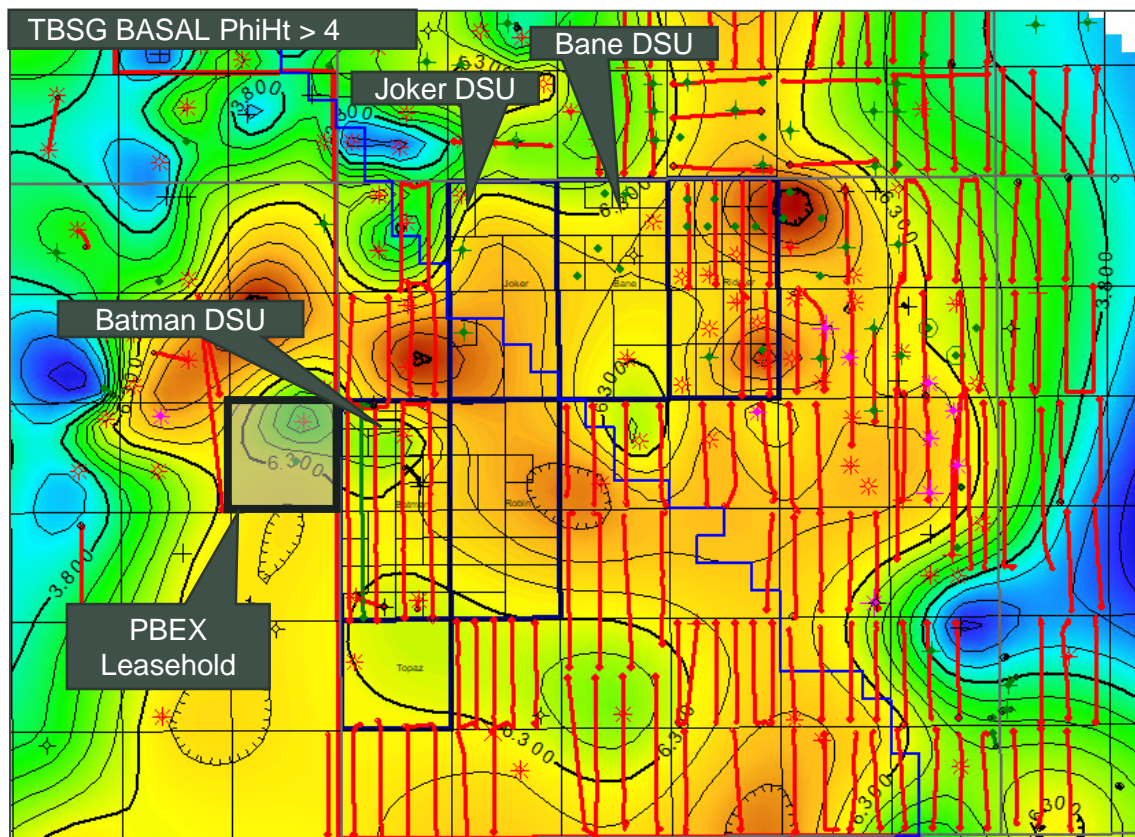
Respectfully,

A handwritten signature in blue ink that reads "Ashley Roush".

Ashly Roush
Land Manager

CC: NMOCD
1220 S. St. Francis Drive
Santa Fe, NM 87505

PBEX Offset Leasehold



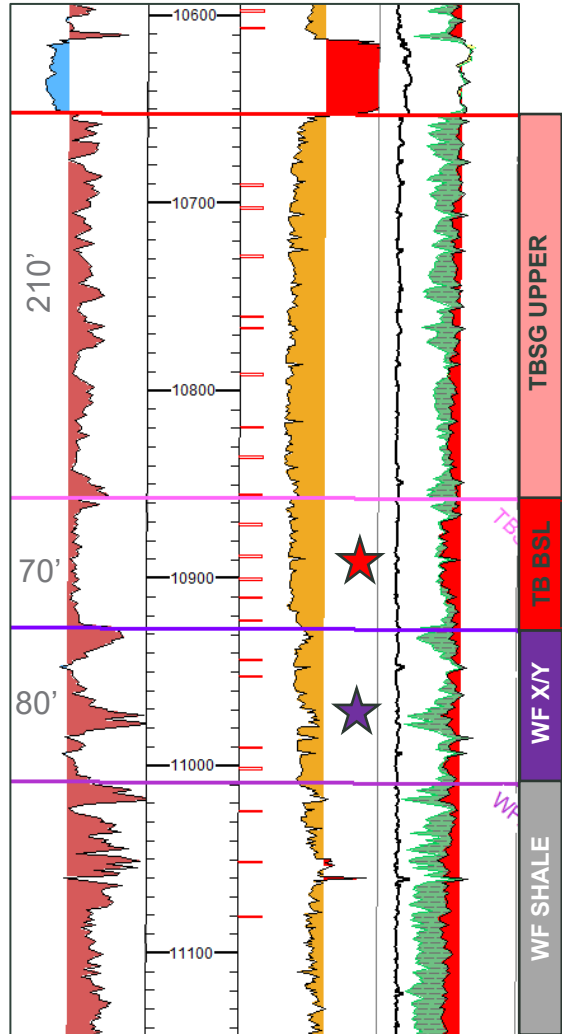
PBEX offset leasehold is in a similar geologic environment as the Bane/Joker units

Permian Resources Offset Study

Pilot Hole and Core Support Wolfcamp XY as a High Quality Target

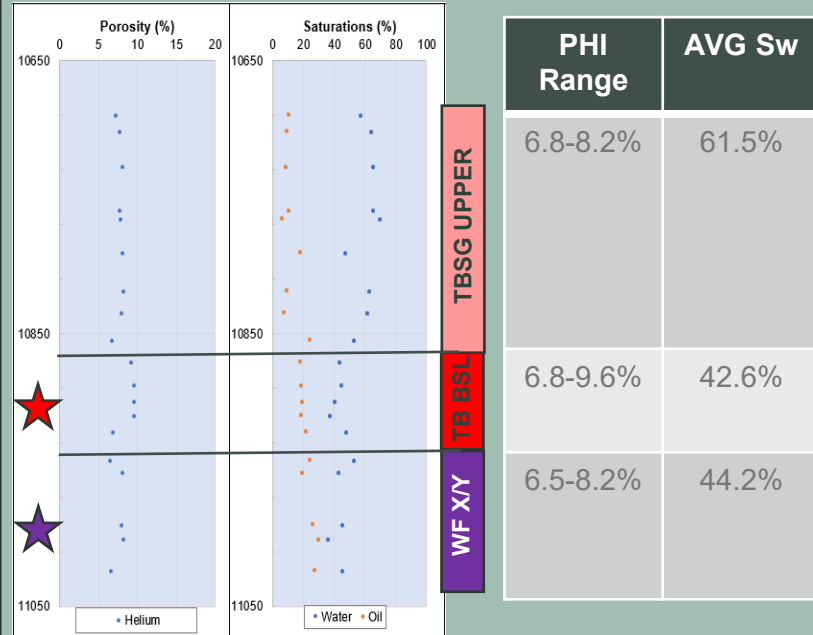


★Batman Fed 132H Pilot

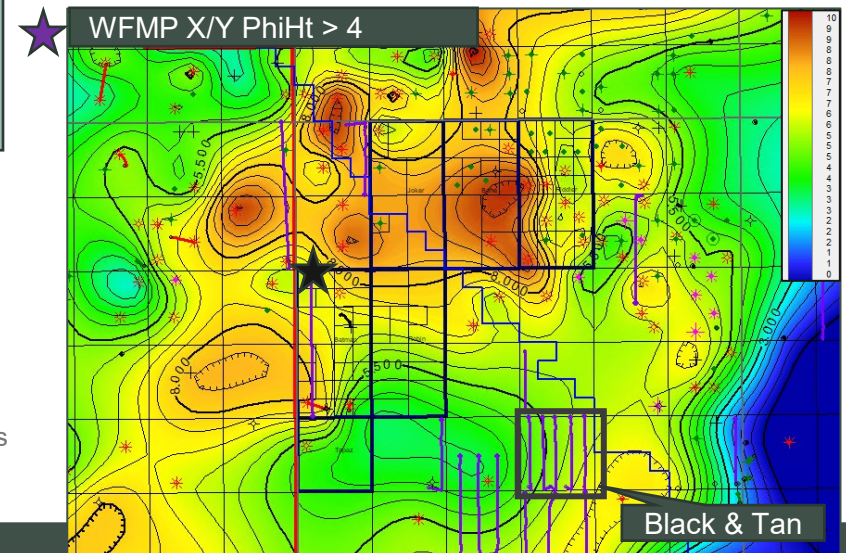
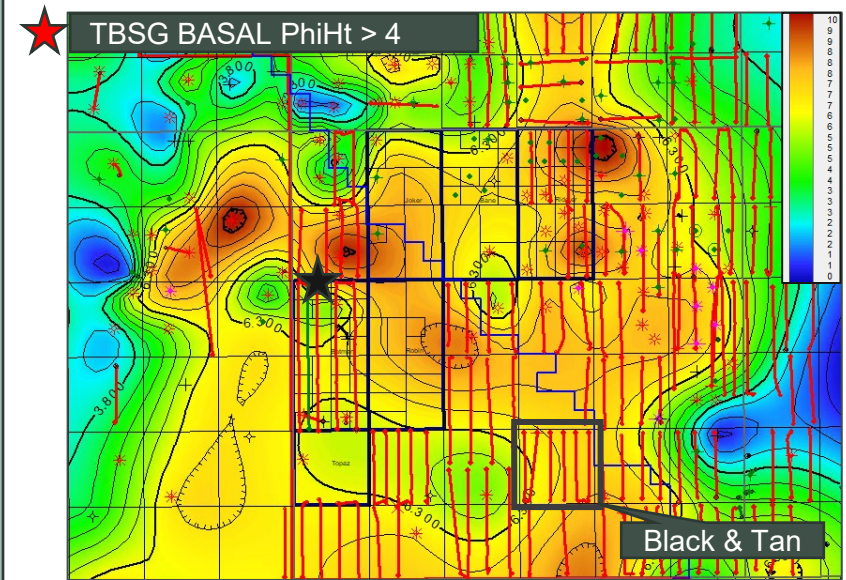


MAPPED INTERVAL

Rotary Sidewall Core Porosity and Water Saturation

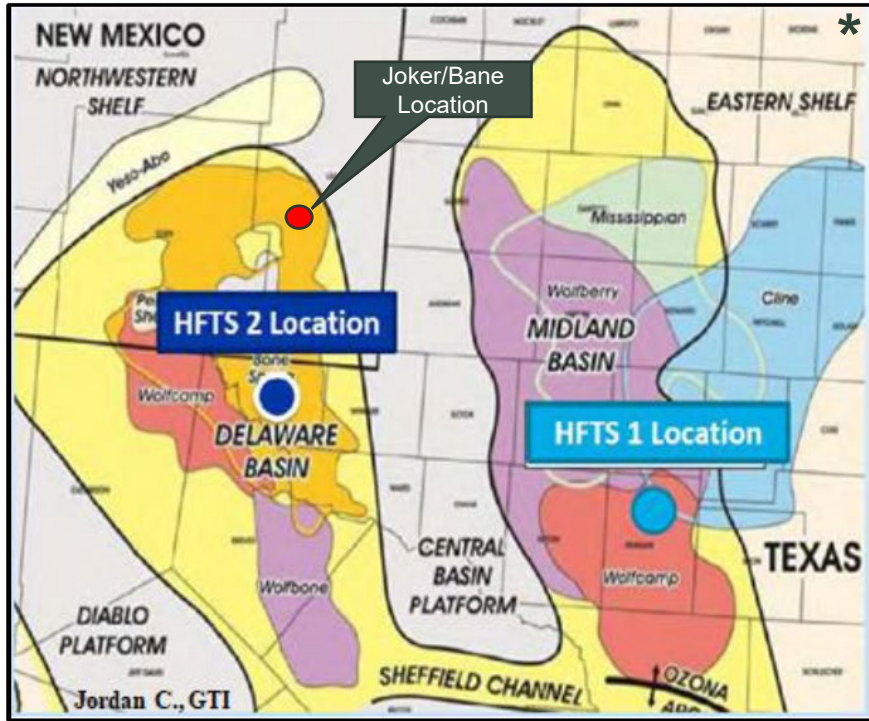


- WFMP X/Y sand target interval is a high-quality reservoir as evident in the offset production data which is further supported by log and core data.
- WFMP A shale is an organic rich, mature source-rock directly underlying the Wolfcamp X/Y and provides excellent hydrocarbon charge potential in the overlying sand target intervals.
- PHIHT mapping of both basal third bone spring and WFMP X/Y targets shows similar reservoir quality and thickness in this area allowing for codevelopment of both target zone intervals on subject acreage.



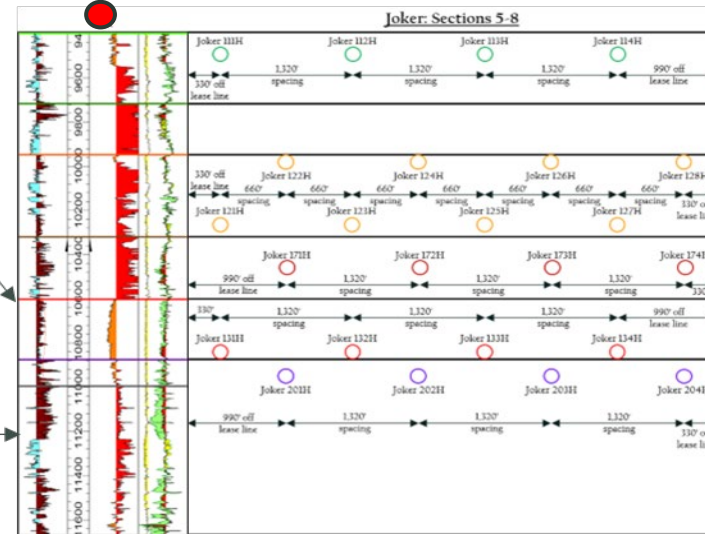
HFTS-2 is not a direct analog for Joker/Bane

HFTS2 Study is 43.7 miles to the South

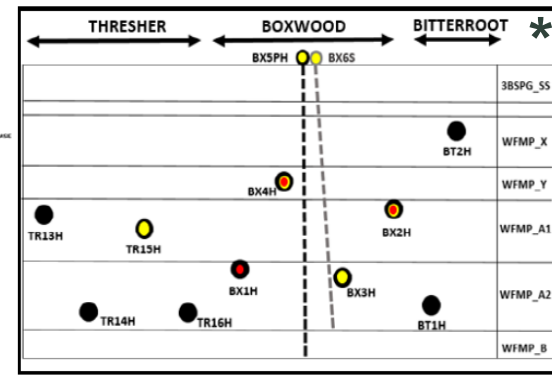
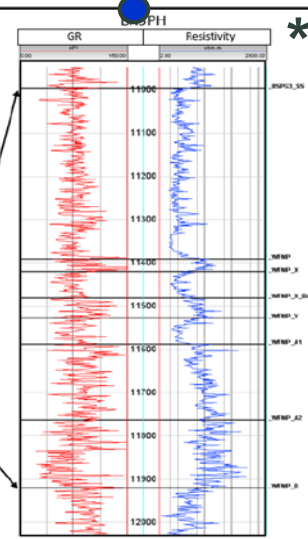


- The HFTS-2 Study is:
 - 43.7 miles away
 - In a different state
 - Does not include Third Bone Spring development

| Texas Delaware Stratigraphic Column | | | |
|-------------------------------------|-------------|--|----------------|
| Age | Formation | Landing Target | |
| Upper | Avalon | AVLN | |
| | | BSPG1_SS | |
| | | BSPG2_LS | |
| | Middle | Bone Spring | BSPG2_SS |
| | | | BSPG3_LS |
| | | | BSPG3_SS |
| Lower | Wolfcamp A | WFMP_A1 | |
| | | WFMP_A2 | |
| | Wolfcampian | Wolfcamp B Wolfcamp C Wolfcamp D Wolfcamp E-F | WFMP_B |
| | | | WFMP_C |
| | | | WFMP_D |
| | | | WFMP_E, WFMP_F |



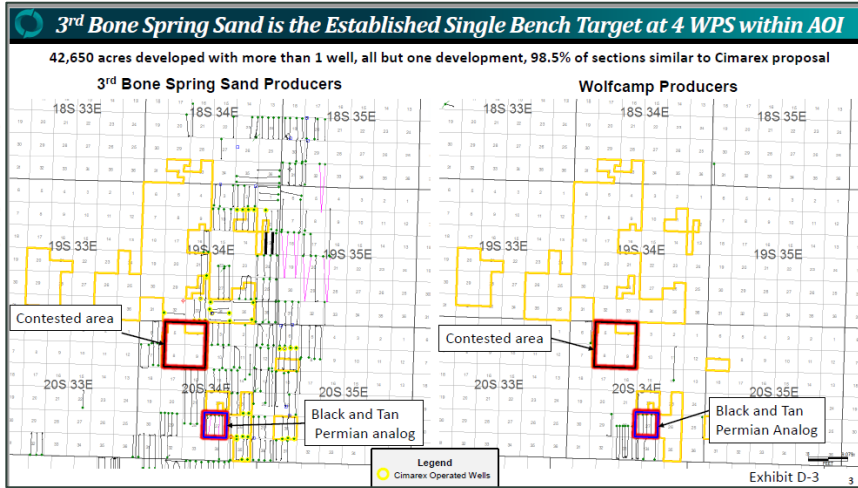
| Texas Delaware Stratigraphic Column | | | |
|-------------------------------------|-------------|--|----------------|
| Age | Formation | Landing Target | |
| Upper | Avalon | AVLN | |
| | | BSPG1_SS | |
| | | BSPG2_LS | |
| | Middle | Bone Spring | BSPG2_SS |
| | | | BSPG3_LS |
| | | | BSPG3_SS |
| Lower | Wolfcamp A | WFMP_A1 | |
| | | WFMP_A2 | |
| | Wolfcampian | Wolfcamp B Wolfcamp C Wolfcamp D Wolfcamp E-F | WFMP_B |
| | | | WFMP_C |
| | | | WFMP_D |
| | | | WFMP_E, WFMP_F |



Reconciling Offset Targeting

WFMP is Commonly Targeted, SBSG ≠ TBSG

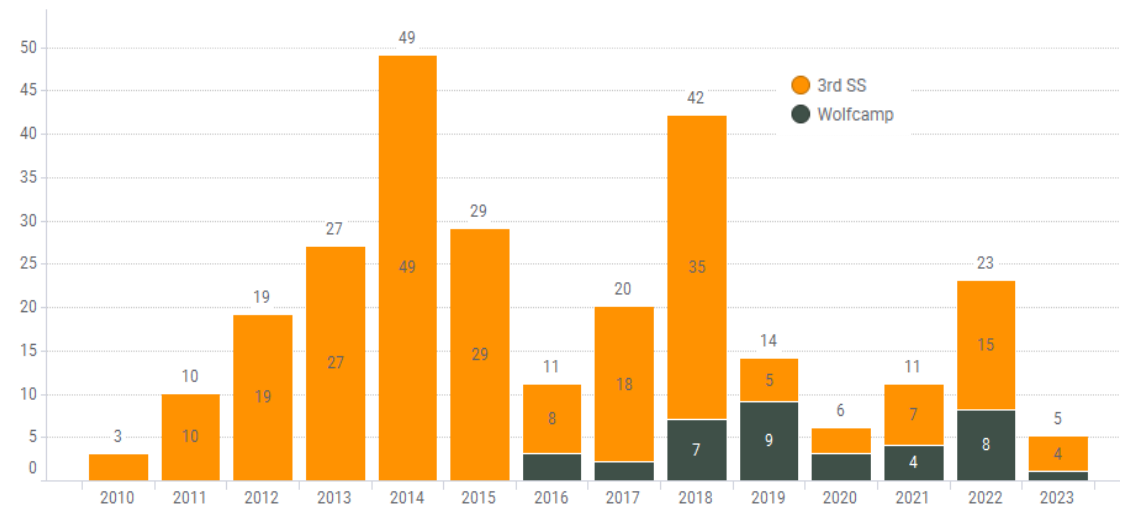
Cimarex Exhibits on Offset Development



Cimarex cites its deep geology and engineering study of the area and references offset wells within this study. The well list used for this deep study includes:

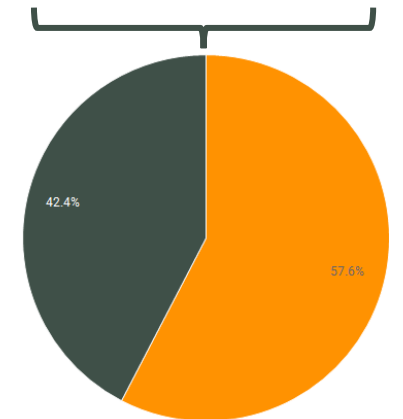
- 19 SBSG wells identified as TBSG that are likely landed in the SBSG
- Numerous missing or incorrectly identified WFMP wells
- Wells developed as far back as 2010

Offset Development Through Time by OCD Producing Pool

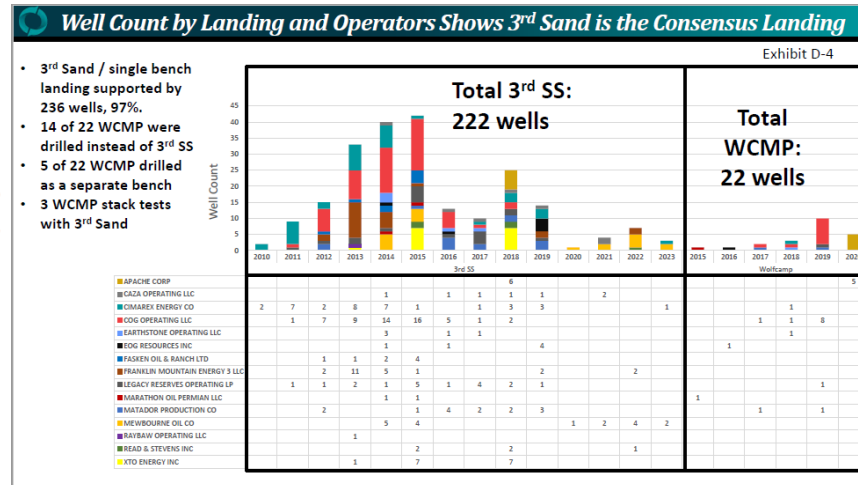


Commentary

Offset development has decidedly shifted towards the appraisal and inclusion of the WFMP with >40% of wells drilled since 2018 targeting the WFMP



Offset Development Since 2018



AOI assumed to be the extent of the maps in Exhibit C-3 (18S 33E-35E, 19S 33E-35E, 20S 33E-35E)
'WFMP' excludes Penn Shale

Reconciling Offset Targeting

WFMP Targeting Far More Pervasive Than Cimarex Asserts



Map



Well List

| UWI | API_10 | Well Official Name | Producing Pool | Formation | Cimarex Formation |
|----------------|------------|-------------------------------------|----------------|-----------|-------------------|
| 30025433950000 | 3002543395 | AIRSTRIP 31 18 35 RN STATE COM 201H | WFMP | WFMP_A | Wolfcamp |
| 30025458960000 | 3002545896 | ANCHOR 19 35 33 STATE 001H | WFMP | WFMP_A | 3rd SS |
| 30025509680100 | 3002550968 | BATMAN FED COM 201H | WFMP | WFMP_A | N/A |
| 30025460720000 | 3002546072 | BLACK & TAN 27 FEDERAL COM 401H | WFMP | WFMP_A | Wolfcamp |
| 30025460730000 | 3002546073 | BLACK & TAN 27 FEDERAL COM 402H | WFMP | WFMP_A | Wolfcamp |
| 30025461230000 | 3002546123 | BLACK & TAN 27 FEDERAL COM 403H | WFMP | WFMP_A | Wolfcamp |
| 30025461240000 | 3002546124 | BLACK & TAN 27 FEDERAL COM 405H | WFMP | WFMP_A | Wolfcamp |
| 30025460750000 | 3002546075 | BLACK & TAN 27 FEDERAL COM 406H | WFMP | WFMP_A | Wolfcamp |
| 30025461400000 | 3002546140 | CABLE 19 35 9 STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025499040000 | 3002549904 | CHAROLAIS 28 21 W1MD STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025430530000 | 3002543053 | DELLA 29 FEDERAL COM 701H | WFMP | WFMP_A | Wolfcamp |
| 30025501680000 | 3002550168 | FOXTAIL E2 05 32 W1 STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025501690000 | 3002550169 | FOXTAIL E2 05 32 W1 STATE COM 002H | WFMP | WFMP_A | 3rd SS |
| 30025478630000 | 3002547863 | GAVILON FED COM 708H | WFMP | WFMP_A | N/A |
| 30025465880000 | 3002546588 | GAVILON FEDERAL COM 704H | WFMP | WFMP_A | N/A |
| 30025496910100 | 3002549691 | GRACE 16 STATE COM 901H | WFMP | WFMP_A | N/A |
| 30025499350000 | 3002549935 | HEREFORD 29 20 W1PA STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025474830000 | 3002547483 | HEREFORD 29-20 W1MD STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025474840000 | 3002547484 | HEREFORD 29-20 W1NC STATE COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025467680000 | 3002546768 | HEREFORD 29-20 W1OB FED COM 001H | WFMP | WFMP_A | 3rd SS |
| 30025431100000 | 3002543110 | LEA SOUTH 25 FEDERAL COM WCA 012H | WFMP | WFMP_A | Wolfcamp |
| 30025452110100 | 3002545211 | LEA UNIT 100H | WFMP | WFMP_A | Wolfcamp |
| 30025451020000 | 3002545102 | LITTLE BEAR FEDERAL COM 006H | WFMP | WFMP_A | Wolfcamp |
| 30025451030000 | 3002545103 | LITTLE BEAR FEDERAL COM 007H | WFMP | WFMP_A | Wolfcamp |
| 30025451040000 | 3002545104 | LITTLE BEAR FEDERAL COM 008H | WFMP | WFMP_A | Wolfcamp |
| 30025451050000 | 3002545105 | LITTLE BEAR FEDERAL COM 009H | WFMP | WFMP_A | Wolfcamp |
| 30025434820000 | 3002543482 | MAS FEDERAL 4H | WFMP | WFMP_A | Wolfcamp |
| 30025442140100 | 3002544214 | MAS FEDERAL COM 002H | WFMP | WFMP_A | Wolfcamp |
| 30025448510000 | 3002544851 | MINIS 1 FEDERAL COM WCA 010H | WFMP | WFMP_A | N/A |
| 30025448530000 | 3002544853 | MINIS 1 FEDERAL COM WCA 016H | WFMP | WFMP_A | N/A |
| 30025416080000 | 3002541608 | PERRY 22 FEDERAL COM 004H | WFMP | WFMP_A | Wolfcamp |
| 30025495350000 | 3002549535 | RAMBO E2 08 17 STATE COM 001H | WFMP | WFMP_A | N/A |
| 30025495360000 | 3002549536 | RAMBO E2 08 17 STATE COM 002H | WFMP | WFMP_A | N/A |
| 30025504630000 | 3002550463 | SAND CHUTE 4 9 W1DM FED COM 001H | WFMP | WFMP_A | N/A |
| 30025444940000 | 3002544494 | VERNA RAE FEDERAL COM 204H | WFMP | WFMP_A | Wolfcamp |
| 30025474310000 | 3002547431 | WAR EAGLE FEDERAL COM 701H | WFMP | WFMP_A | N/A |

Commentary

The WFMP A has been targeted more often than asserted by Cimarex ostensibly owing to a combination of:

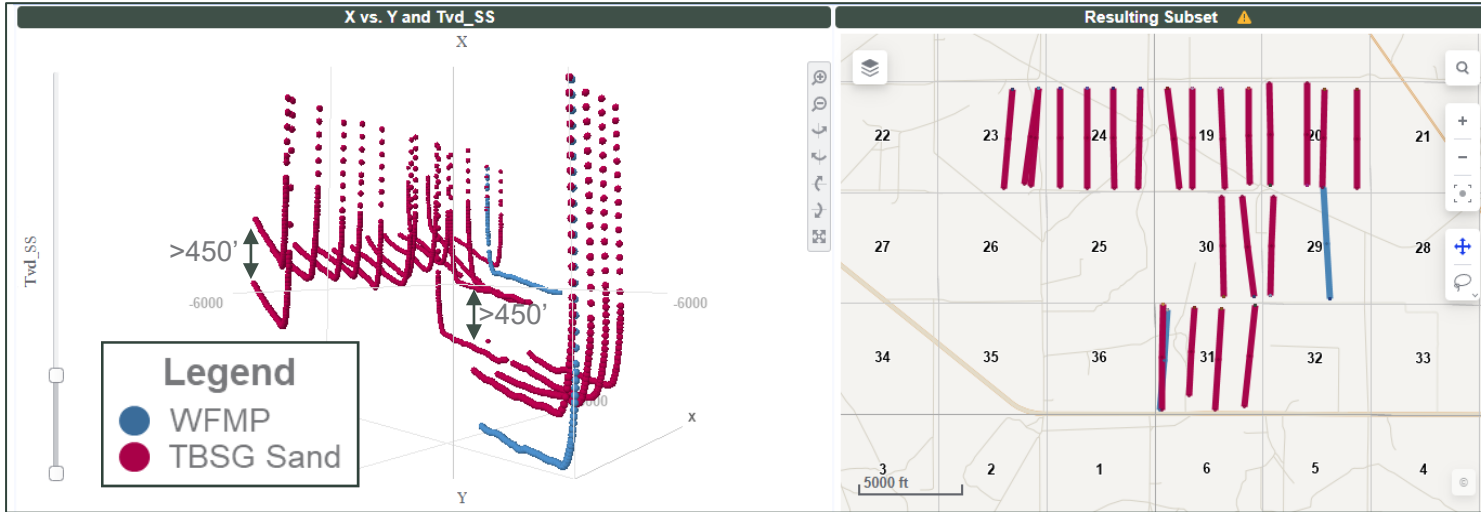
- Incorrectly identifying WFMP wells as TBSG
- Omitting WFMP wells entirely from well-set

Reconciling Offset Targeting

SBSG ≠ TBSG



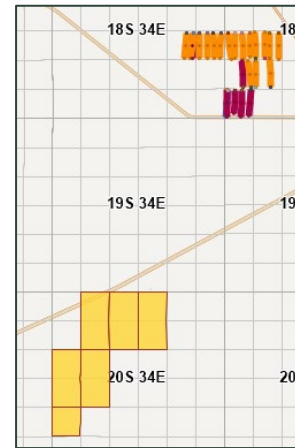
As Landed by Cimarex¹



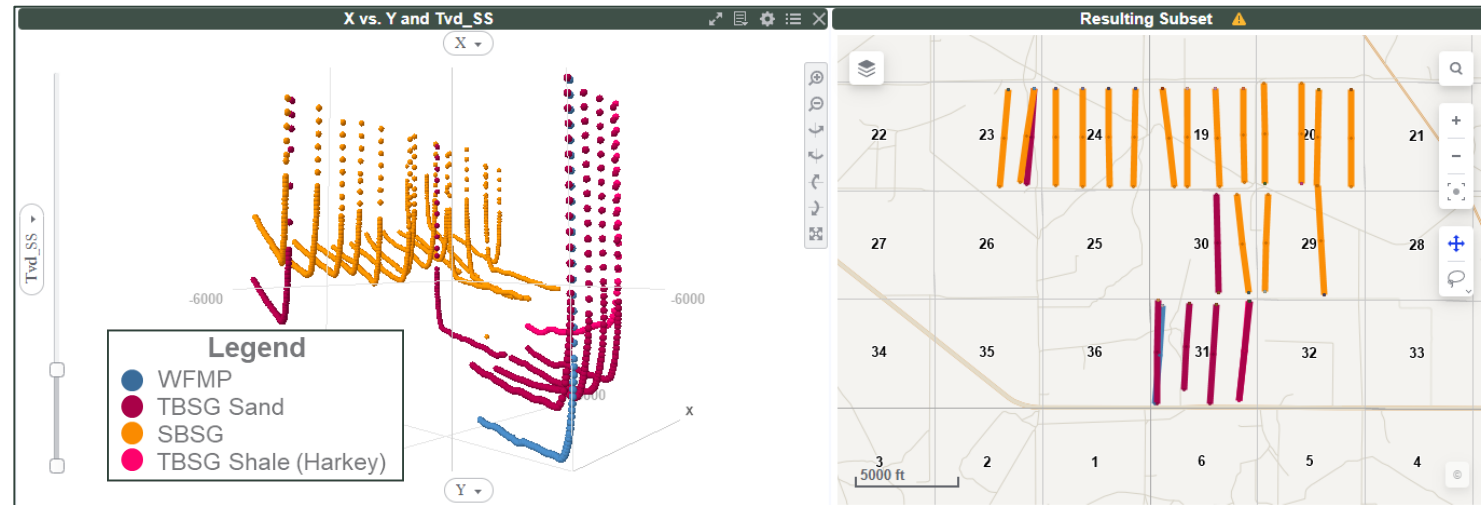
Commentary

Cimarex supplied a well list used in the deep engineering and geology study (Exhibit D-24). A quick look at the directional surveys in the northern extents of the AOI show:

- '3rd SS' wells in the same unit have >450' of TVD separation
- There are WFMP wells shallower than the TBSG



Correct Landings



Commentary

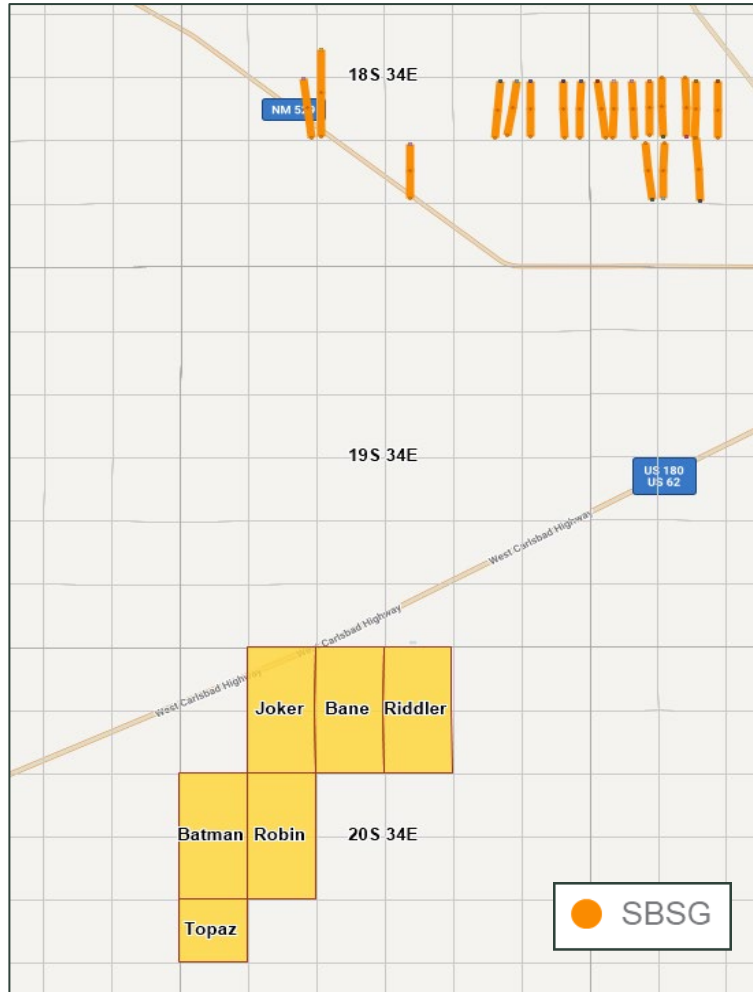
In reality, many of the '3rd SS' wells are most likely incorrectly identified and are actually landed in the **SBSG**

Reconciling Offset Targeting

SBSG ≠ TBSG



Map



Well List

| UWI | API_10 | Well Official Name | Formation | Cimarex Formation |
|----------------|------------|---------------------------------|-----------|-------------------|
| 30025418090000 | 3002541809 | ALBATROSS STATE COM 1H | SBSG | 3rd SS |
| 30025411480100 | 3002541148 | CAPROCK 27 STATE FEDERAL COM 1H | SBSG | 3rd SS |
| 30025408140100 | 3002540814 | CONDOR STATE 001H | SBSG | 3rd SS |
| 30025410250000 | 3002541025 | CONDOR STATE 2H | SBSG | 3rd SS |
| 30025423770000 | 3002542377 | IGGLES STATE COM 001H | SBSG | 3rd SS |
| 30025406760100 | 3002540676 | IRONHOUSE 19 STATE COM 1H | SBSG | 3rd SS |
| 30025410940000 | 3002541094 | IRONHOUSE 19 STATE COM 2H | SBSG | 3rd SS |
| 30025410500000 | 3002541050 | IRONHOUSE 19 STATE COM 3H | SBSG | 3rd SS |
| 30025412450200 | 3002541245 | IRONHOUSE 19 STATE COM 4H | SBSG | 3rd SS |
| 30025406110000 | 3002540611 | IRONHOUSE 20 STATE 1H | SBSG | 3rd SS |
| 30025407480000 | 3002540748 | IRONHOUSE 20 STATE COM 2H | SBSG | 3rd SS |
| 30025411630000 | 3002541163 | IRONHOUSE 24 STATE COM 1H | SBSG | 3rd SS |
| 30025415950000 | 3002541595 | IRONHOUSE 24 STATE COM 2H | SBSG | 3rd SS |
| 30025416960000 | 3002541696 | IRONHOUSE 24 STATE COM 4H | SBSG | 3rd SS |
| 30025418360000 | 3002541836 | KINGFISHER STATE COM 2H | SBSG | 3rd SS |
| 30025424720000 | 3002542472 | KINGFISHER STATE COM 5H | SBSG | 3rd SS |
| 30025419500000 | 3002541950 | NIGHTHAWK STATE COM 003H | SBSG | Wolfcamp |
| 30025415190100 | 3002541519 | NIGHTHAWK STATE COM 1H | SBSG | 3rd SS |
| 30025424990000 | 3002542499 | PICKARD 20 18 34 RN STATE 124H | SBSG | 3rd SS |

Commentary

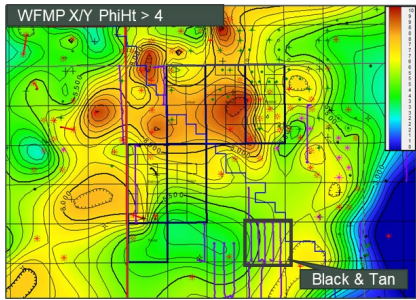
19 of the wells identified by Cimarex as either TBSG or WFMP are likely SBSG wells

Cimarex's Offset Development Analysis

Apache Black & Tan

Black & Tan, the Only Similar Development Plan...

27. There is only one development plan within the entire AOI similar to the plan Permian Resources is proposing for its Joker and Bane Wells, the Black and Tan Wells drilled in Section 27, Township 20 South, Range 35 East, located just 2 miles south of the Subject Lands.



Analogous Geology?



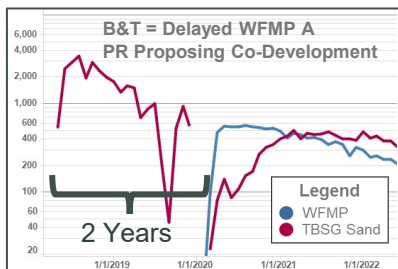
Although Apache's Black & Tan development is NOT an analog to PR's proposal, Cimarex's analysis features so heavily in their materials, it requires additional rebuttal

Analogous Density?



| | TBSG Sand WPS | WFMP A WPS | Total WPS |
|-------------|---------------|------------|-----------|
| Black & Tan | 6 | 5 | 11 |
| PR Proposal | 4 | 4 | 8 |

Analogous Sequencing?

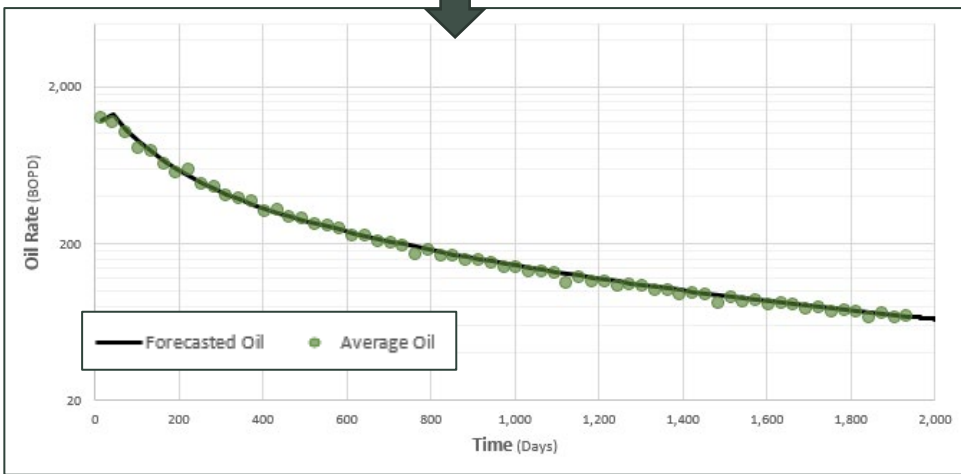
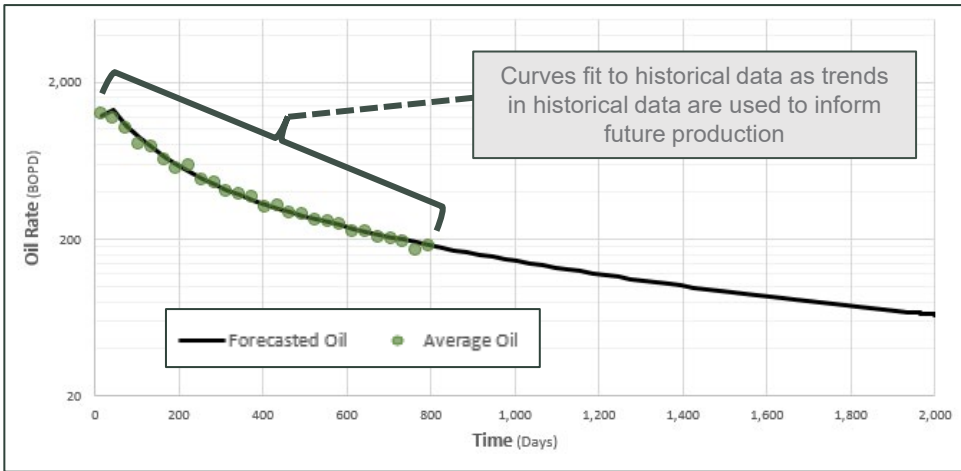


Black & Tan Learnings

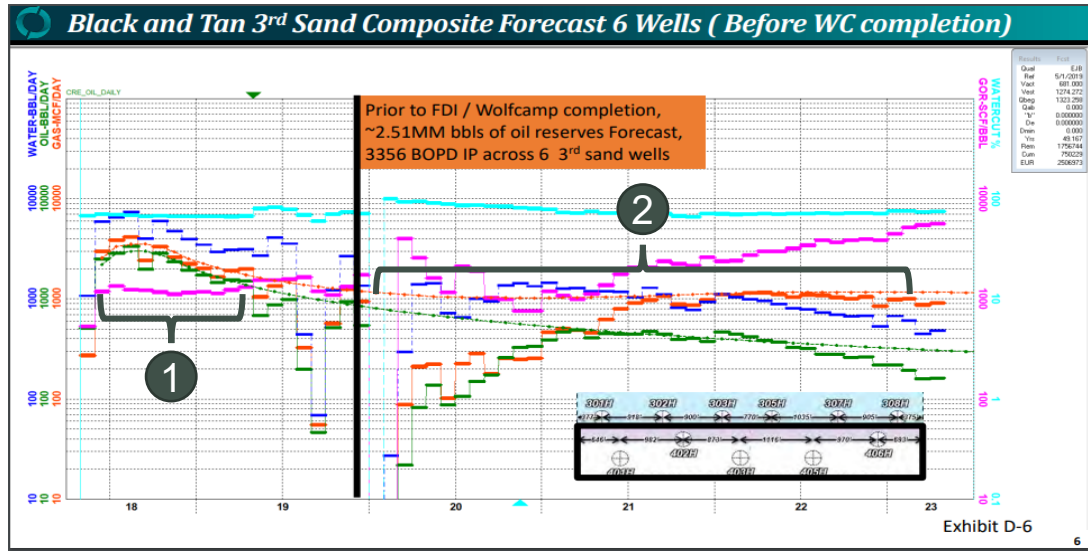
Cimarex's Analysis Fundamentally Flawed



Fundamentals Of Empirical Forecasting



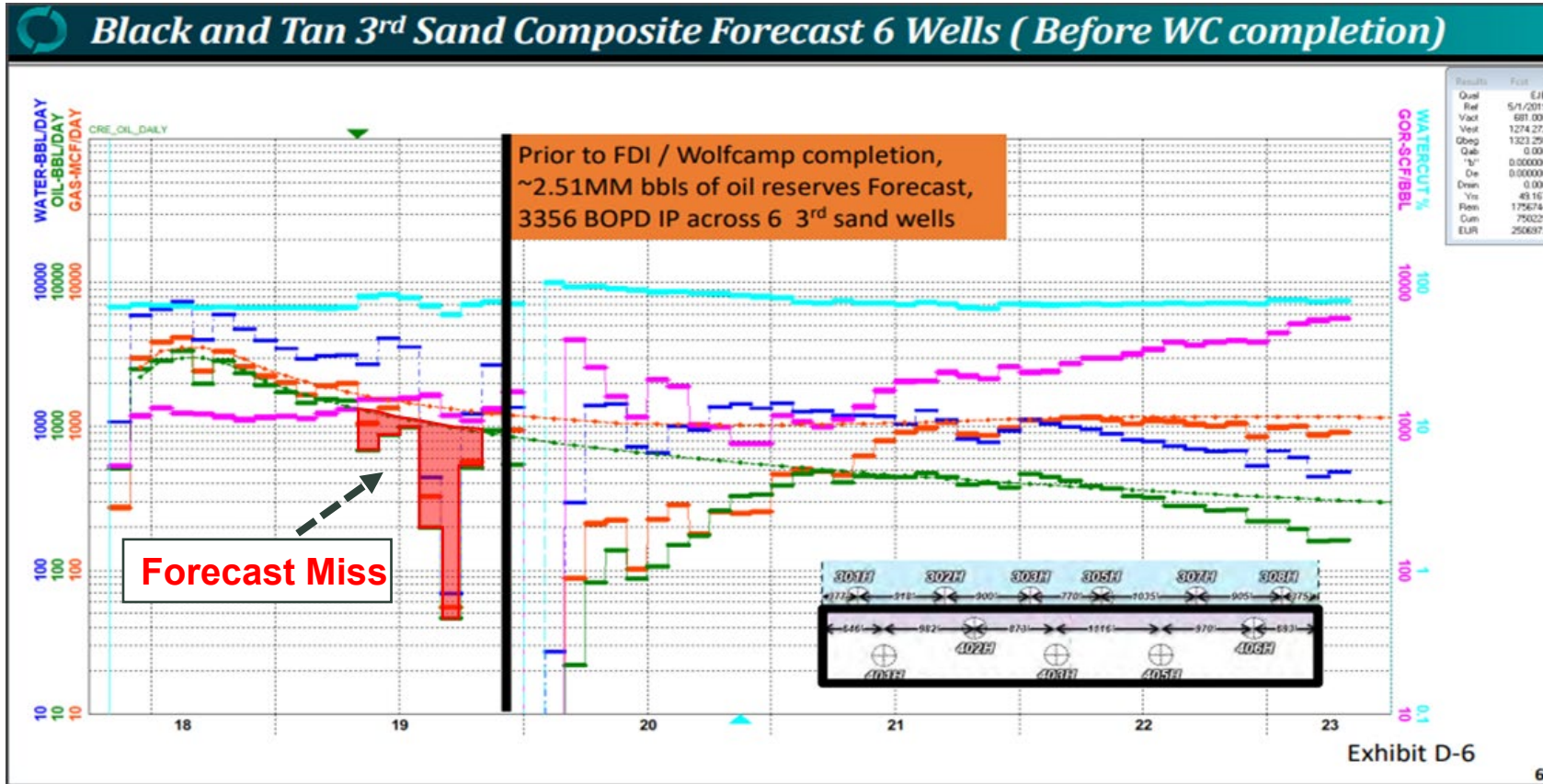
Empirical Forecasting In Cimarex Analysis



Cimarex uses Black & Tan TBSG production data through May 2019 **1** to establish the expected future performance of the project if left as a TBSG only development and then uses the difference between this forecast and the actual TBSG production to establish the damage the development of the TBSG did **2**

Black & Tan Learnings

Cimarex's Analysis Fundamentally Flawed



What Happened To The TBSG?

- Development of the WFMP?
 - 1st B&T WFMP spud August 2019
 - Last B&T WFMP spud October 2019
 - B&T Frac December 2019
- Changing operational conditions?
- Offset interference?



Concho Little Bear 2H (BSPG Pool) frac May 2019

The TBSG data to May 2019 used to generate the expected TBSG performance somehow lost the ability to predict future performance (June 2019- November 2019 highlighted in red)



Black & Tan Learnings

Delayed WFMP Development Leads to Sporadic Production and Reduced Wellbores

Delayed WFMP Develop Causes Issues → Depletion Influences Fracs¹

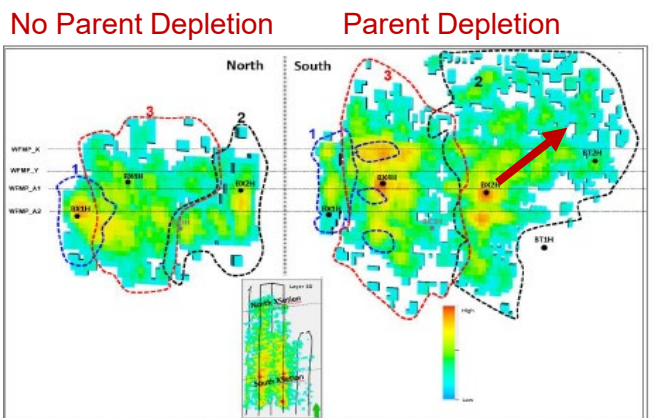
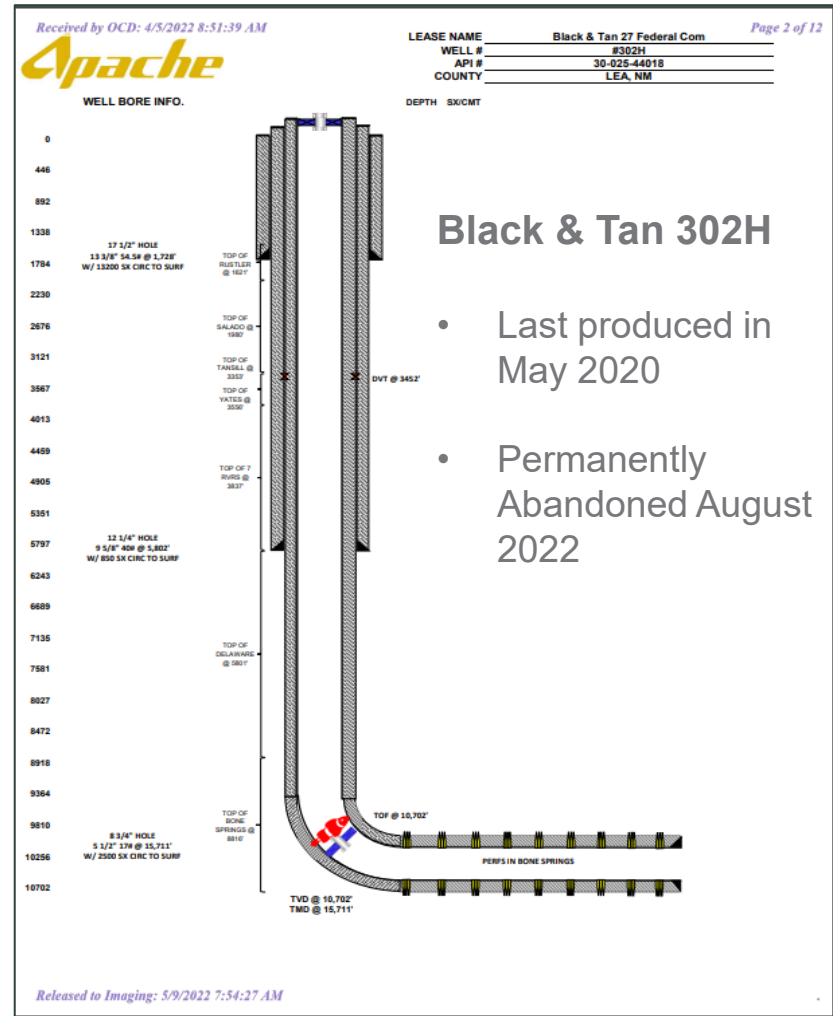


Fig 23—Areal and cross-sectional view in stimulation sequential timing of 3D heat maps grid generated for HFTS-2 area. The numbers and colors (blue, black, red) correspond to relative stimulation time successively.

Pressure depletion influences fracture growth

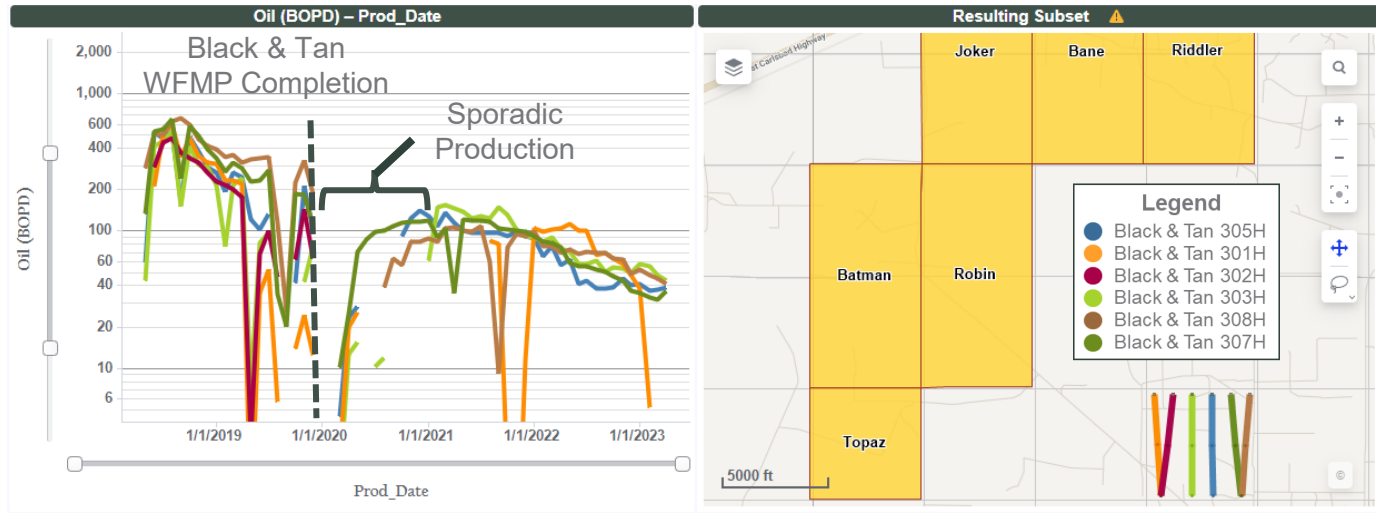
Black & Tan 302H WBD²



Black & Tan 302H

- Last produced in May 2020
- Permanently Abandoned August 2022

Black & Tan TBSG Production By Well

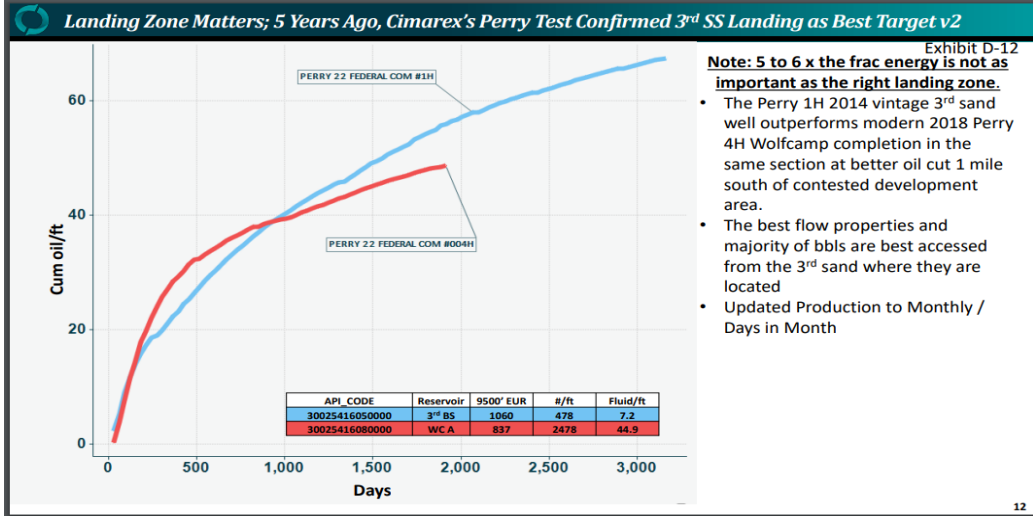


Cimarex's Appraisal of the WFMP

Strong WFMP Results, TBSG not Damaged

Exhibit D-12

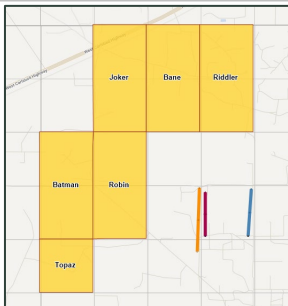
Cimarex Supposed Learnings from Perry Development



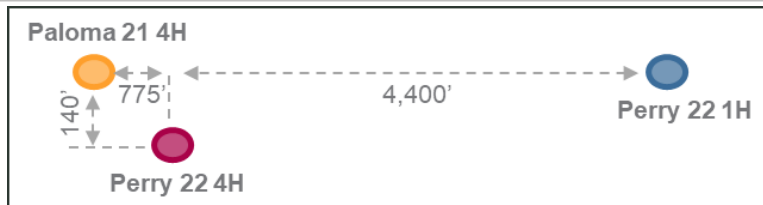
Cimarex cites their Perry development as proof positive that “drilling the upper Wolfcamp is a waste of resources”

Development Overview

Map

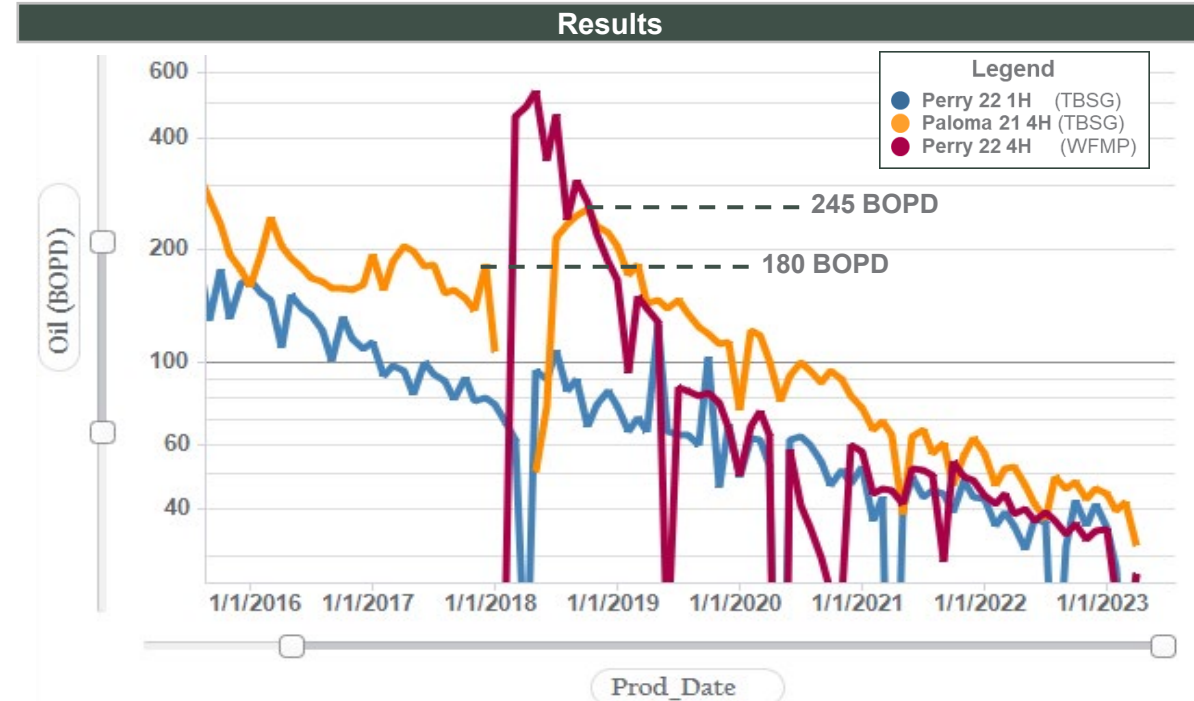


Gun Barrel Diagram



Cimarex's Perry 22 Federal Com 004H WFMP appraisal was drilled offset of an existing TBSG well, Fasken operated Paloma 21 Federal Com 04H

A Closer Look



Far from destroying the TBSG, the Paloma 21 4H improves following offset completion of the Perry 4H

Frac Dimensions

HFTS2 Demonstrated Fracture Growth Upward **AND** Downward

Cimarex's Illustrative View Frac Dimensions

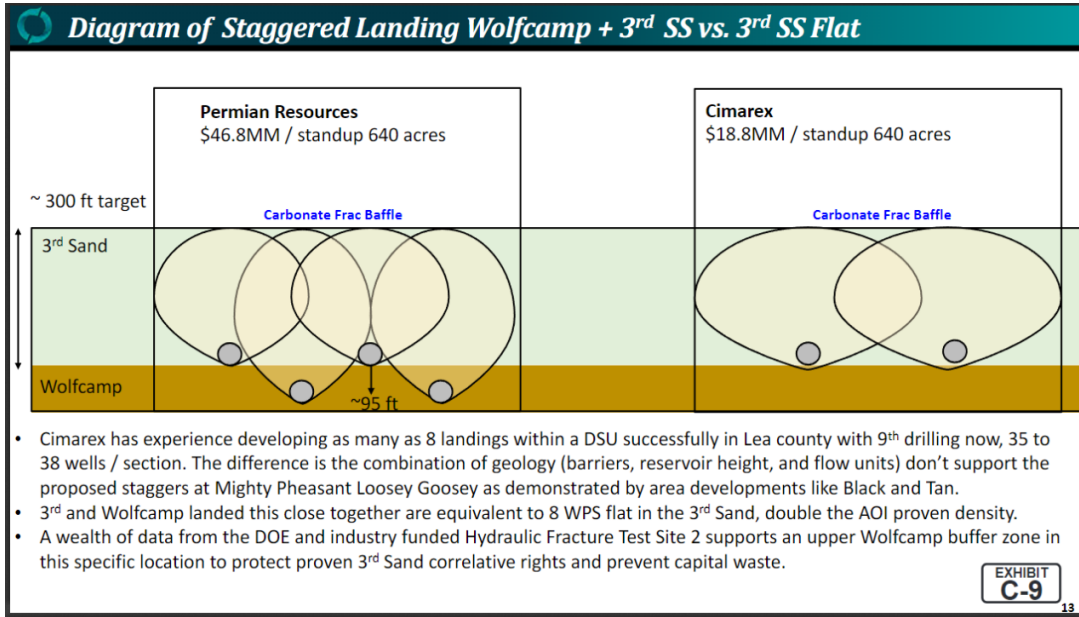


Exhibit D-10

Cimarex has provided a cartoon depiction of fracture dimensions for WFMP/TBSG development and vaguely asserts that this is based on leanings from HFTS2

Actual HFTS2 Takeaways^{1,2}

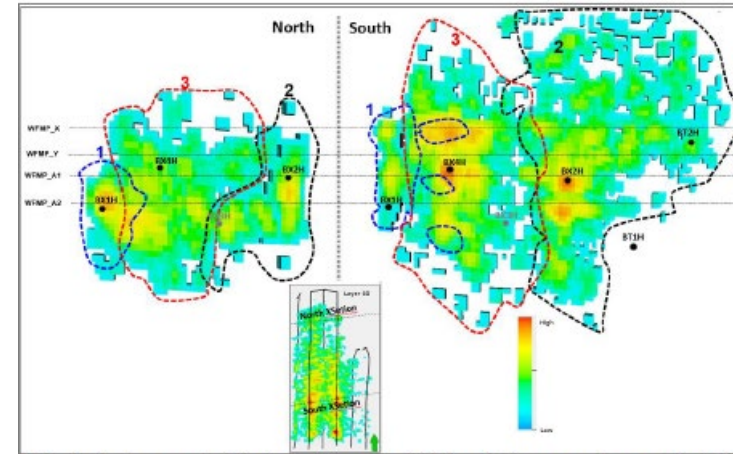
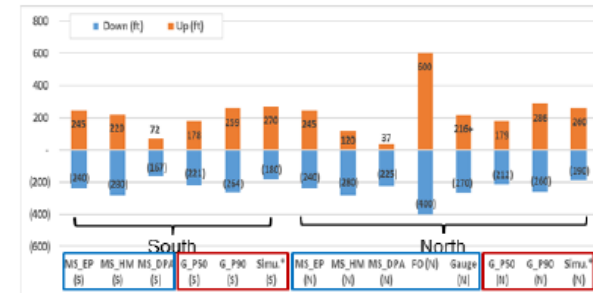


Fig 23—Areal and cross-sectional view in stimulation sequential timing of 3D heat maps grid generated for HFTS-2 area. The numbers and colors (blue, black, red) correspond to relative stimulation time successively.



b) Example of vertical coverage: Boxwood-4H

G_P50, G_P90: GOHFER statistical simulation results
 Simu.*: Calibrated simulation results
 (N) - North; (S) - South

Diagnosics
 Simulation

HFTS2:

- Is more than 40 miles away and in very different geology
- Did not include the development of the TBSG
- Demonstrated upward **AND** downward fracture growth

Cimarex Perry WFMP Appraisal

By Cimarex's Own Exhibits, the WFMP is Highly Economic

Exhibit D-9

| | 3rd Sand | | | Wolfcamp | (Wolfcamp - 3rd Sand Delta) = value added from 5 wells |
|---------------------------------|-----------------|--------------------|----------------|----------|--|
| | 3rd Bone Spring | 3rd Bone Post frac | 3rd Sand Delta | | |
| IP30 BOPD | 3,356 | NA | NA | 555 | NA |
| Pre vs. Post frac oil rate BOPD | 950 | 500 | -450 | +555 | 105 |
| EUR MMBO | 2.51 | 1.63 | -0.88 | +0.89 | 0.01 |

$$\text{Wolfcamp Recovery (EUR)} = \frac{890 \text{ mbo}}{5 \text{ wells}} = \frac{178 \text{ mbo/well}}{4,600 \text{ ft/well}} = \mathbf{38.5 \text{ bo/ft}}$$

Exhibit D-11

Black and Tan Analog Comparison To MP/LG Exhibit D-11

| Analog Comparison | Black and Tan | | | Mighty Pheasant Loosy Goosey | | |
|-------------------|---------------|----------|-------------------|------------------------------|----------|-------------------|
| | 3rd Sand | Wolfcamp | 3rd SS % of total | 3rd Sand | Wolfcamp | 3rd SS % of total |
| PHIH | 22 | 7 | 76 | 27 | 10 | 73 |

- Contested acreage is expected to outperform Black and Tan 2.5MMbo / 640-acre Technical EUR by ~20%
- Over performance driven by improved PHIH of 3rd sand. 27/22 = 122%.
- Sensitivities highlight impact of capital waste given 0% uplift on Black and Tan Wolfcamp 3rd SS analog
 - Table 1.3 - Wolfcamp must add ~40% reserves to break even vs Cimarex Development at P90 reserves case
 - Table 1.4 - Wolfcamp must add ~31% reserves to break even vs. Cimarex Development at SM business case
 - Neither Table 1.3 or 1.4 increase in performance is reasonable to expect given public data

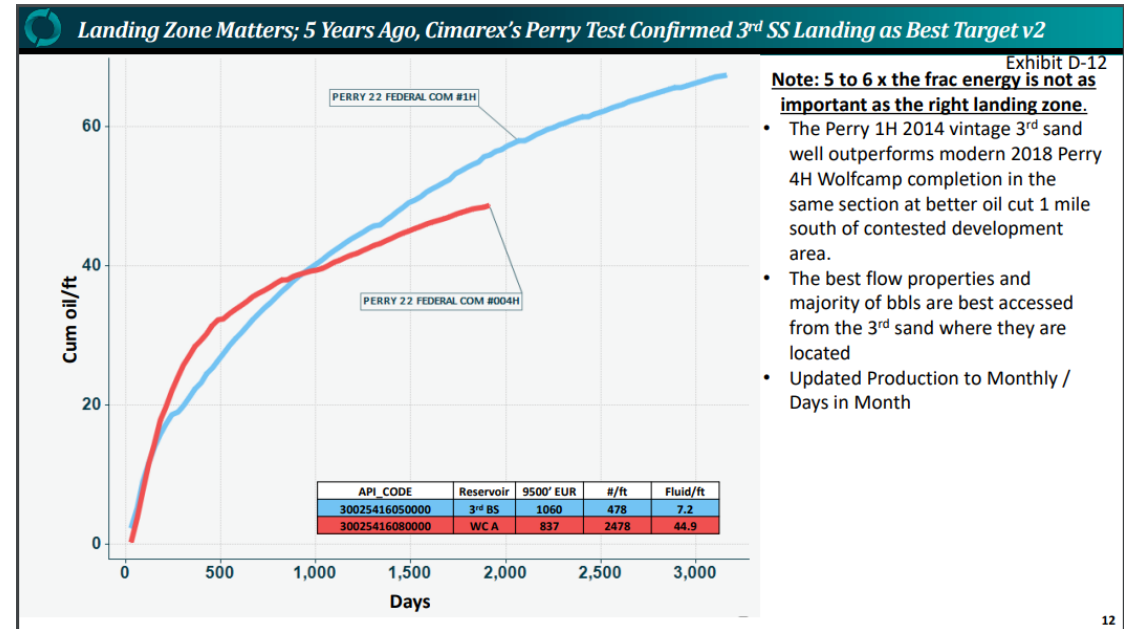
| Reserves | \$65 flat analysis at Cimarex WI & NRI | | | Permian | | Cimarex | |
|---------------|--|------------------|----------|---------------|----------|---------------|----------|
| | IP | Economic EUR MBO | PV10 SMM | Payout months | PV10 SMM | Payout months | PV10 SMM |
| 100% | 14,738 | 8,860 | 14.7 | 43 | 41.8 | 12 | |
| 110% expected | 16,212 | 9,820 | 21.4 | 33 | | | |
| 120% expected | 17,685 | 10,780 | 28.2 | 26 | | | |
| 130% expected | 19,159 | 11,740 | 34.9 | 23 | | | |
| 140% expected | 20,633 | 12,700 | 41.5 | 21 | | | |

| 12 MM EUR | \$65 flat analysis at Cimarex WI & NRI | | | Permian | | Cimarex | |
|---------------|--|------------------|----------|---------------|----------|---------------|----------|
| | IP | Economic EUR MBO | PV10 SMM | Payout months | PV10 SMM | Payout months | PV10 SMM |
| 100% | 18,897 | 11,026 | 34.8 | 23 | 61.9 | 10 | |
| 110% expected | 20,787 | 12,987 | 43.6 | 20 | | | |
| 120% expected | 22,676 | 14,233 | 52.3 | 18 | | | |
| 130% expected | 24,566 | 15,480 | 61 | 16 | | | |
| 140% expected | 26,456 | 16,727 | 69.7 | 15 | | | |

- In order to create equivalent PV10, Wolfcamp landings must add ~40% more reserves vs reserves estimate (table 1.3) and 31% more reserves vs. P50 expectation (table 1.4). This outcome is unrealistic vs. observed results.
- Cimarex lower terminal fixed OpEx + less well degradation results in 9.1MM EUR vs. Permian 8.9MM EUR at 100% reserves expectation.
- The Cimarex plan self-funds annual drilling after first batch of wells supporting rapid development
- Permian plan supports slower development speed

40% more reserves would represent: $38.5 \text{ bo/ft} \times 1.4 = 54 \text{ bo/ft}$

Exhibit D-12



- Note: 5 to 6 x the frac energy is not as important as the right landing zone.**
- The Perry 1H 2014 vintage 3rd sand well outperforms modern 2018 Perry 4H Wolfcamp completion in the same section at better oil cut 1 mile south of contested development area.
 - The best flow properties and majority of bbls are best accessed from the 3rd sand where they are located
 - Updated Production to Monthly / Days in Month

Cimarex provides their internal EUR for the Perry 22 4H

- $837 \text{ mbo} / 9,500 \text{ ft} = \mathbf{88 \text{ bo/ft}}$

| API_CODE | Reservoir | 9500' EUR | #/ft | Fluid/ft |
|----------------|-----------|-----------|------|----------|
| 30025416050000 | 3rd BS | 1060 | 478 | 7.2 |
| 30025416080000 | WC A | 837 | 2478 | 44.9 |

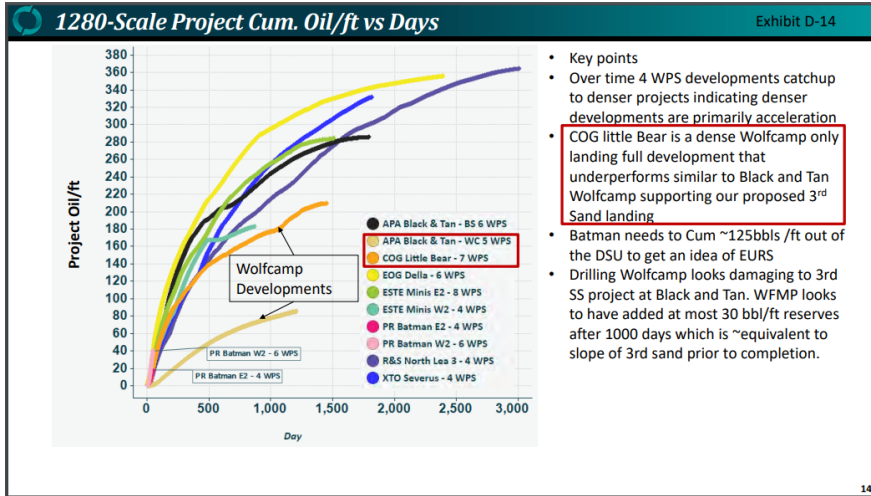
- Exceeding 54 bo/ft required by Cimarex economics

Cimarex Offset Development Comparison

Selectively Breaking Out WFMP and TBSG is Misleading

Cimarex's Offset Comparison

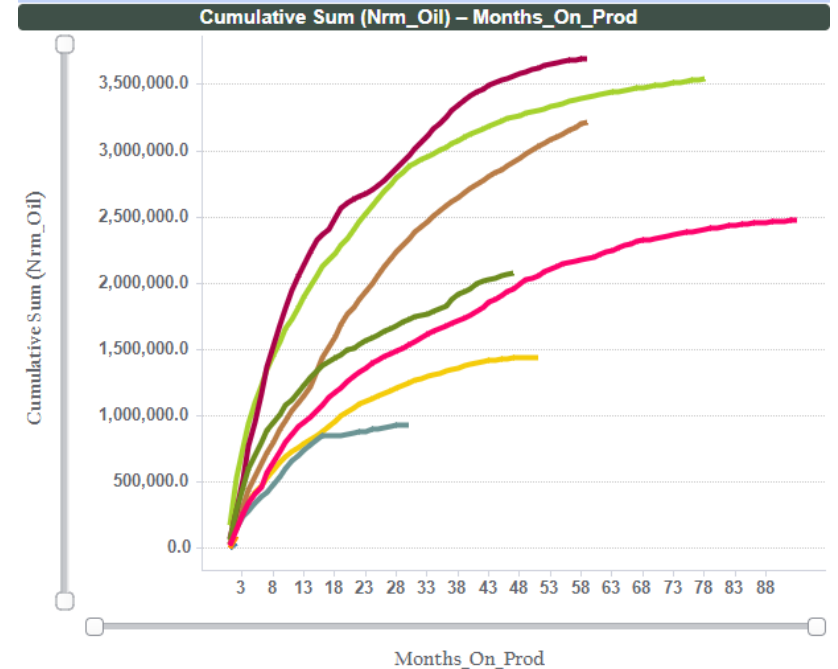
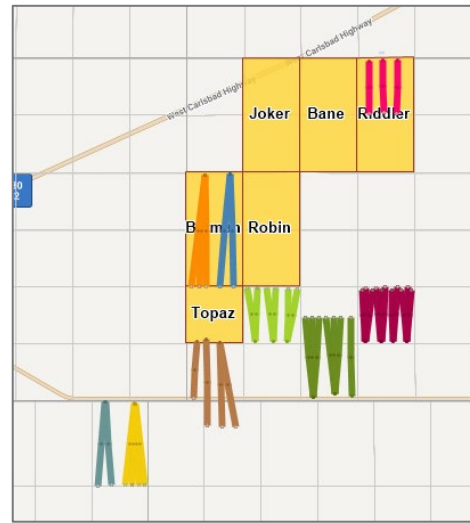
Exhibit D-14



Cimarex selects offset developments in an attempt to demonstrate that 4 WPS TBSG only development generates the most production. Some observations:

- Black & Tan WFMP are graphed separately than the WFMP defeating the purpose of this plot
- Even by this plot, through the first 5 years the Della development (6 WPS and includes a WFMP) is the strongest offset development

A Closer Look



When grouping the developments together instead of selectively separating out the WFMP, the top 2 projects are WFMP & TBSG co-developments at greater than 4 WPS

Cimarex Offset Development Comparison

Selectively Breaking Out WFMP and TBSG is Misleading



Cimarex's Offset Comparison

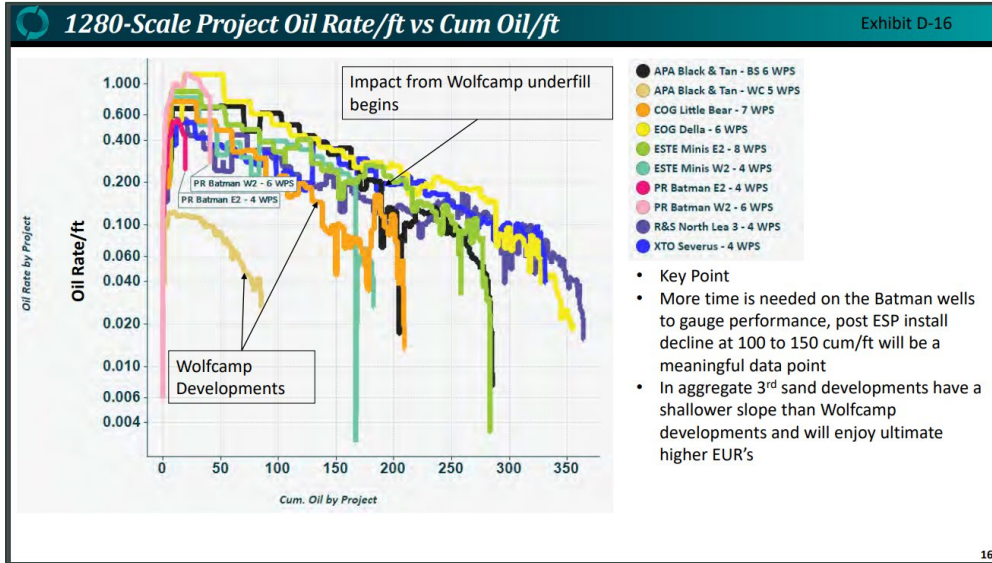
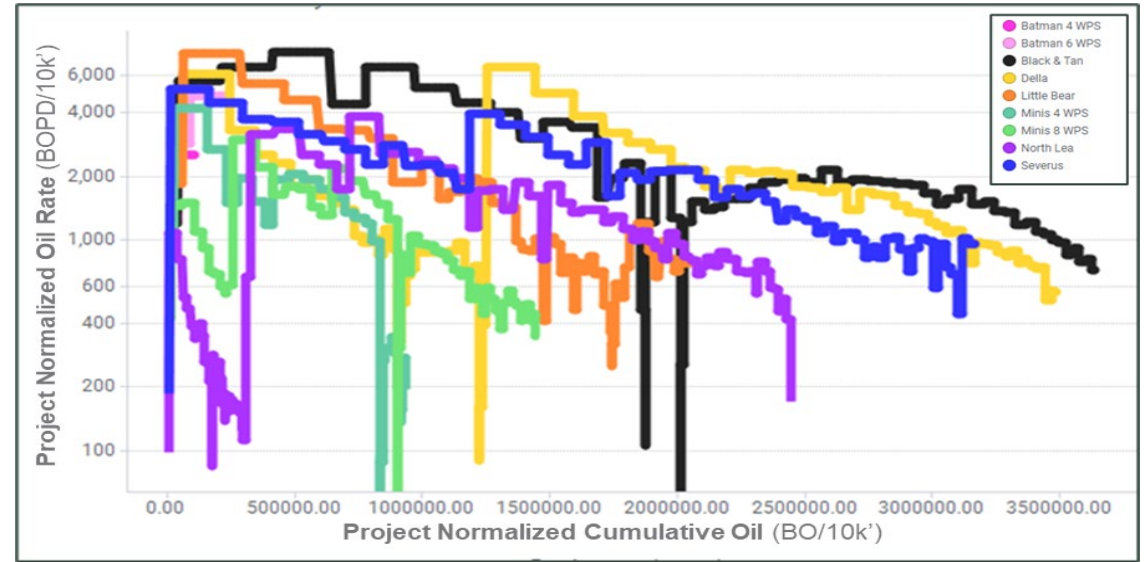


Exhibit D-16

- Merging daily and monthly can be misleading
- Selectively separating out WFMP and TBSG is misleading

A Closer Look

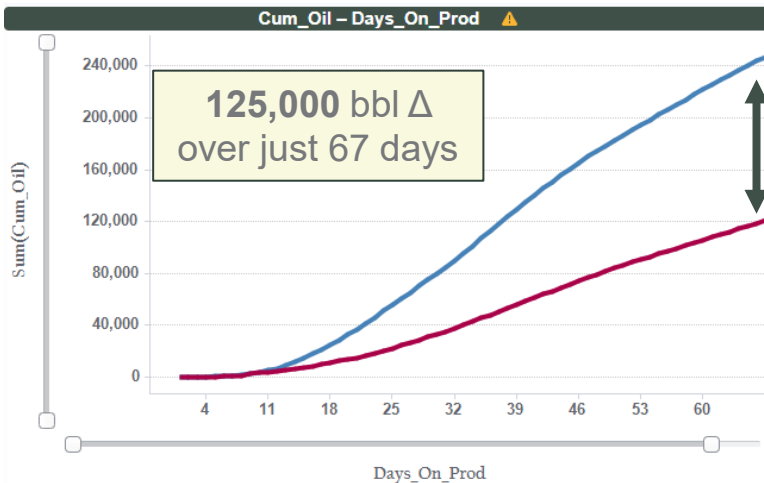
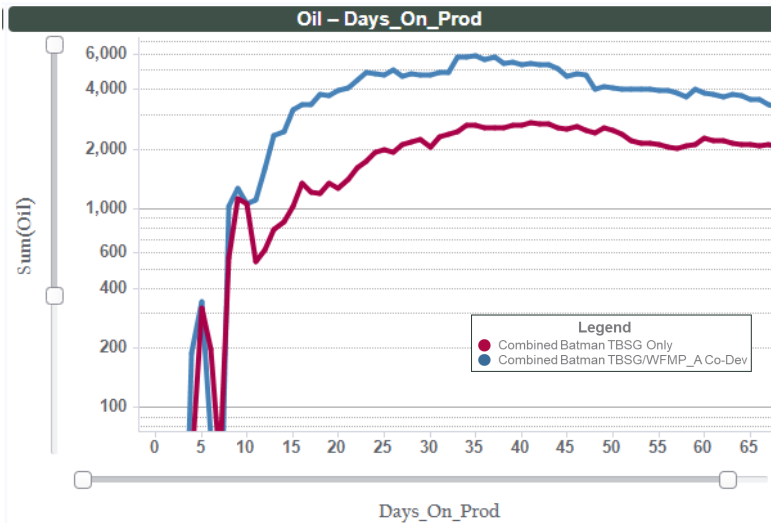


- Recreating the plot with the Black & Tan WFMP & TBSG yields very different results

A Note on Economics

Batman Supports Material Economic Uplift with Co-Development

Batman Early Time Performance



PR Internal Expectations

| | Oil Production (bbls) | Total Forecasted EUR (MBO) | NPV 10 (\$MM) | Actual Revenue to Date (\$MM) | IRR |
|------------------------------|-----------------------|----------------------------|---------------|-------------------------------|-----------|
| Batman Co-Development | 251,000 | 2,524 | \$14.9 | \$8.40 | 78% |
| Batman TBSG Only | 123,000 | 1,776 | \$10.1 | \$3.95 | 73% |
| Delta | 128,000 | 748 | \$4.8 | \$4.45 | 5% |

Current internal expectations strongly support TBSG/WCA co-development and additional reserves with:

- Massively increased early time performance
- Increased EUR
- Increased NPV10

Coterra - 2Q23 Earnings Presentation

Filed 8/7/2023 on Coterra Website



Permian Asset Overview

targeting prolific
Wolfcamp & Bone Spring



notable Permian projects

Larger-scale projects are driving capital efficiency by

- Focusing on concentrated areas & reducing mobilization time for drilling & completion services
- Spreading facilities and infrastructure across more wells

Culberson Mint Julep Row | Wolfcamp | 7.5 wps
11.4 net (23 gross) wells now online

Culberson Row | Wolfcamp | 7-9 wps
25.5 net (51 gross) wells spud 3Q23
Largest development to date

Lea County | Bone Spring, 4 Landing Zones | 14 wps
4.6 net (8 gross) wells coming online Q4 2023
Further testing multiple Bone Spring landing zones

Culberson County | Wolfcamp & Harkey | 9 & 4 wps
9.0 net (18 gross) wells coming online 4Q23
Given project timing, production tilts toward 2024

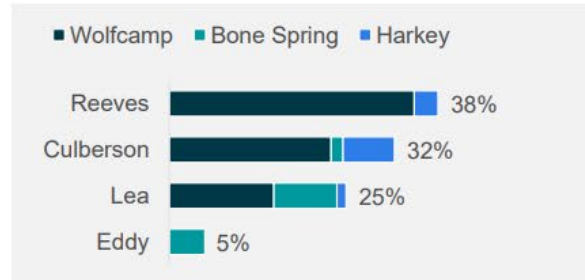


Note: wps = wells per section. ¹Of operated wells.

COTERRA

2023 operational outlook

| | |
|-------------------|--|
| \$880mm - \$980mm | D&C capex |
| 9,700' | avg. lateral length ⁽¹⁾ |
| \$1,200 | avg. well cost per foot ⁽¹⁾ |
| \$1,250 | Reeves |
| \$1,000 | Culberson |
| \$1,400 | Lea |
| \$1,000 | Eddy |
| 80 - 90 | net wells online: |



Coterra - 2Q23 Earnings Presentation

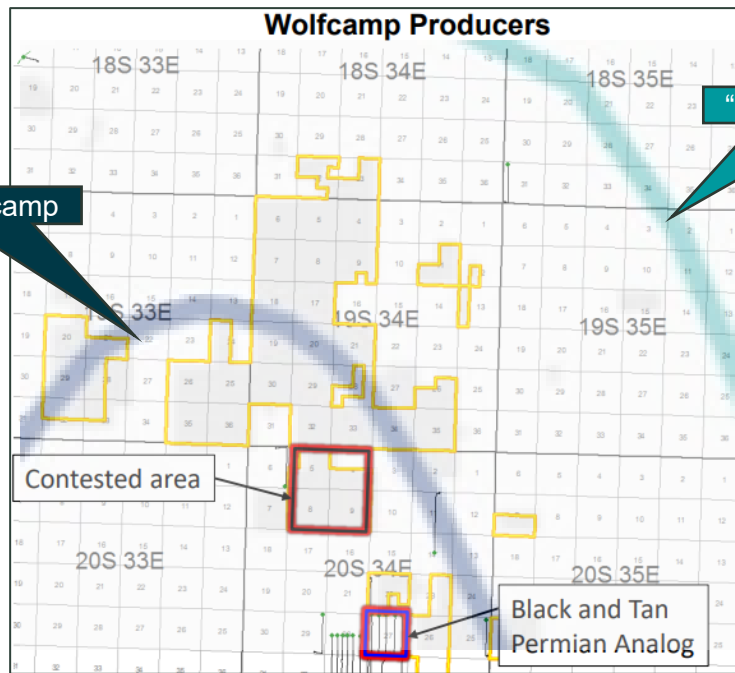
Filed 8/7/2023 on Coterra Website



2Q23 Earnings Presentation Slides

- Coterra highlights “targeting prolific Wolfcamp & Bone Spring” in 2Q23 earnings presentation map – yet is not developing the Wolfcamp inside its own “prolific” play outlines

Map Overlay from Slides



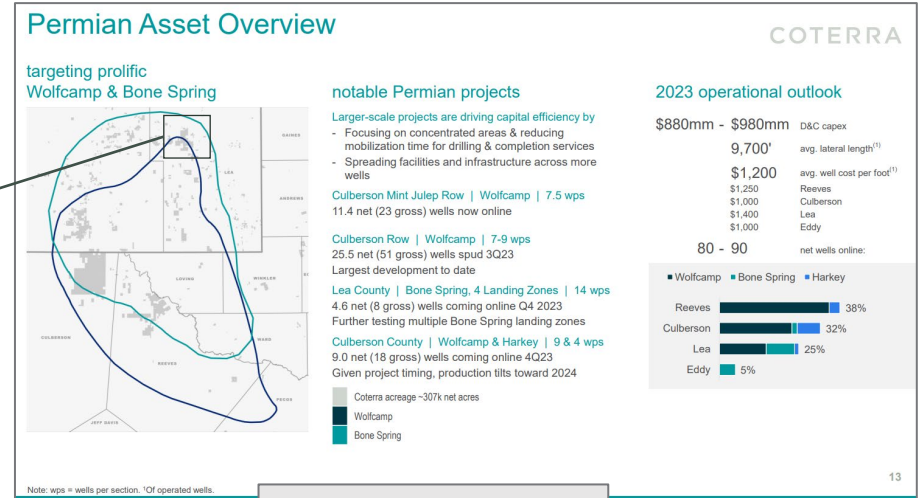
“Prolific” Wolfcamp

“Prolific” Bone Spring

PR geo-referenced maps using Coterra acreage outline

targeting prolific Wolfcamp & Bone Spring

- Coterra acreage ~307k net acres
- Wolfcamp
- Bone Spring



Hearing Exhibit Map

