

Before the Oil Conservation Division Examiner Hearing February 6, 2020

Case No. 21030

Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells



Marathon Oil Permian LLC Case No. 21030

Table of Contents

Compulsory Pooling Checklist

Tab A: Landman Affidavit (Chase Rice)

Tab 1: Application

Tab 2: C-102s

Tab 3: Lease Tract Map and Interests

Tab 4: Proposal Letters

Tab 5: AFE

Tab 6: Notice Affidavit

Tab B: Geology Affidavit (Rebecca Horne)

Tab 7: Locator Map

Tab 8: Wellbore Schematic

Tab 9: Geology Study

- **Structure Map**
- **Reference Map for Cross-Section Wells**
- **Cross-Section**
- **Gross Interval Isochore**

Tab 10: Stress Orientation Slide

COMPULSORY POOLING APPLICATION CHECKLIST (pdf)

ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS

Case: 21030	APPLICANT'S RESPONSE
Date: February 5, 2020	
Applicant	Marathon Oil Permian LLC
Designated Operator & OGRID (affiliation if applicable)	Marathon Oil Permian LLC (372098)
Applicant's Counsel:	Deana M. Bennett/Modrall Spering
Case Title:	Application of Marathon Oil Permian LLC for Compulsory Pooling, Eddy County, New Mexico
Entries of Appearance/Intervenors:	EOG Resources, Inc.
Well Family	Rick Vaughn
Formation/Pool	
Formation Name(s) or Vertical Extent:	Wolfcamp
Primary Product (Oil or Gas):	Oil
Pooling this vertical extent:	Wolfcamp
Pool Name and Pool Code:	Purple Sage; Wolfcamp Gas (Pool code 98220)
Well Location Setback Rules:	Special Rules for the Purple Sage Gas Pool Apply
Spacing Unit Size:	640 acres
Spacing Unit	
Type (Horizontal/Vertical)	Horizontal
Size (Acres)	640 acres
Building Blocks:	320 acres
Orientation:	N/S
Description: TRS/County	W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico
Standard Horizontal Well Spacing Unit (Y/N), If No, describe	Y
Other Situations	
Depth Severance: Y/N. If yes, description	N
Proximity Tracts: If yes, description	N
Proximity Defining Well: if yes, description	
Applicant's Ownership in Each Tract	Exhibit 3, p. 18
Well(s)	
Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	Add as needed
Well #1	Rick Vaughn 7 WA Fed Com 1H: API Pending Proposed SHL: 270' FSL and 1410' FWL (Unit N), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 2310' FWL (Unit C), Section 6, Township 26 South, Range 29 East. Proposed FTP: 2310' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 2310' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,745' Approximate TMD: 19,967' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 10, and proposal letter, Exhibit 4, p. 21
Well #2	Rick Vaughn 7 WB Fed Com 5H : API Pending Proposed SHL: 270' FSL and 1380' FWL (Unit N), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 1980' FWL (Unit C), Section 6, Township 26 South, Range 29 East. Proposed FTP: 1980' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 1980' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,745' Approximate TMD: 20,092' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 11, and proposal letter, Exhibit 4, p. 21

Well #3	<p>Rick Vaughn 7 WA Fed Com 6H: API Pending Proposed SHL: 270' FSL and 1350' FWL (Unit N), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 1650' FWL (Unit C), Section 6, Township 26 South, Range 29 East. Proposed FTP: 1650' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 1650' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,745' Approximate TMD: 19,917' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 12, and proposal letter, Exhibit 4, p. 21</p>
Well #4	<p>Rick Vaughn 7 WB Fed Com 8H: API Pending Proposed SHL: 270' FSL and 1320' FWL (Unit N), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 1320' FWL (Lot 1), Section 6, Township 26 South, Range 29 East. Proposed FTP: 1320' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 1320' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,900' Approximate TMD: 20,060' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 13, and proposal letter, Exhibit 4, p. 21</p>
Well #5	<p>Rick Vaughn 7 WA Fed Com 9H: API Pending Proposed SHL: 270' FSL and 1290' FWL (Lot 4), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 900' FWL (Lot 1), Section 6, Township 26 South, Range 29 East. Proposed FTP: 990' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 990' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,725' Approximate TMD: 19,885' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 14, and proposal letter, Exhibit 4, p. 21-22</p>
Well #6	<p>Rick Vaughn 7 WA Fed Com 13H: API Pending Proposed SHL: 270' FSL and 1260' FWL (Lot 4), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 660' FWL (Lot 1), Section 6, Township 26 South, Range 29 East. Proposed FTP: 660' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 660' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,880' Approximate TMD: 20,050' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 15, and proposal letter, Exhibit 4, p. 22</p>
Well #7	<p>Rick Vaughn 7 WA Fed Com 14H: API Pending Proposed SHL: 270' FSL and 1230' FWL (Lot 4), Section 7, Township 26 South, Range 29 East. Proposed BHL: 100' FNL and 330' FWL (Lot 1), Section 6, Township 26 South, Range 29 East. Proposed FTP: 330' FWL x 100' FSL of Section 7-T26S-R29E. Proposed LTP: 330' FWL x 100' FNL of Section 6-T26S-R29E. Formation: Wolfcamp Approximate TVD: 9,725' Approximate TMD: 19,915' Well Orientation: South to North Completion Status: Expected to be non-standard. See also C-102 Exhibit 2, p. 16, and proposal letter, Exhibit 4, p. 22</p>
Horizontal Well First and Last Take Points	See above discussion for each well.
Completion Target (Formation, TVD and MD)	See above discussion for each well.

AFE Capex and Operating Costs	
Drilling Supervision/Month \$	Exhibit A, p. 3
Production Supervision/Month \$	Exhibit A, p. 3
Justification for Supervision Costs	Exhibit A, p. 3
Requested Risk Charge	Exhibit A, p. 3
Notice of Hearing	
Proposed Notice of Hearing	Exhibit 6
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit 6, p. 38 and 47
Proof of Published Notice of Hearing (10 days before hearing)	Exhibit 6, p. 38 and 48
Ownership Determination	
Land Ownership Schematic of the Spacing Unit	Exhibit 3, p. 17.
Tract List (including lease numbers and owners)	Exhibit 3, p. 17-18.
Pooled Parties (including ownership type)	Exhibit 3, p. 18-19
Unlocatable Parties to be Pooled	N/A
Ownership Depth Severance (including percentage above & below)	N/A
Joinder	
Sample Copy of Proposal Letter	Exhibit 4, p. 21-22
List of Interest Owners (ie Exhibit A of JOA)	Exhibit 3, p. 17-18.
Chronology of Contact with Non-Joined Working Interests	Exhibit 3, p. 20
Overhead Rates In Proposal Letter	N/A
Cost Estimate to Drill and Complete	Exhibit 5, pp. 24-37
Cost Estimate to Equip Well	Exhibit 5, pp. 24-37
Cost Estimate for Production Facilities	Exhibit 5, pp. 24-37
Geology	
Summary (including special considerations)	Exhibit B, pp. 49-51
Spacing Unit Schematic	Exhibit 9-A, p. 55
Gunbarrel/Lateral Trajectory Schematic	Exhibit 8, p. 54
Well Orientation (with rationale)	Exhibit 10, p. 59
Target Formation	Exhibit 9-C, p. 57
HSU Cross Section	Exhibit 9-C, p. 57
Depth Severance Discussion	N/A
Forms, Figures and Tables	
C-102	Exhibit 2, pp. 10-16
Tracts	Exhibit 3, p. 17
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit 3, p. 18
General Location Map (including basin)	Exhibit 7, p. 53
Well Bore Location Map	Exhibit 7, p. 53
Structure Contour Map - Subsea Depth	Exhibit 9-A, p. 55
Cross Section Location Map (including wells)	Exhibit 9-B, p. 56
Cross Section (including Landing Zone)	Exhibit 9-C, p. 57
Additional Information	
CERTIFICATION: I hereby certify that the information provided in this checklist is complete and accurate.	
Printed Name (Attorney or Party Representative):	 2/5/2020
Signed Name (Attorney or Party Representative):	
Date:	

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

**APPLICATION OF MARATHON OIL PERMIAN LLC FOR COMPUSLORY
POOLING, EDDY COUNTY, NEW MEXICO.**

CASE NO. 21030

AFFIDAVIT

STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

Chase Rice, being duly sworn, deposes and states:

1. I am over the age of 18, I am a land supervisor for Marathon Oil Permian LLC and have personal knowledge of the matters stated herein. I have previously testified before the Oil Conservation Division ("Division") and my credentials as an expert petroleum landman were accepted by the Division as a matter of record.

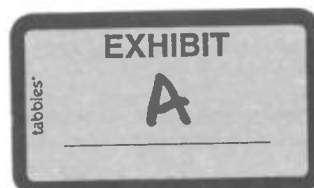
2. My area of responsibility at Marathon includes the area of Eddy County in New Mexico.

3. I am familiar with the application filed by Marathon in this case.

4. I am familiar with the status of the lands that are subject to this application.

5. I submit the following information pursuant to NMAC 19.15.4.12.A(1) in support of the above referenced compulsory pooling application.

6. The purpose of the application is to force pool working interest owners into the horizontal spacing unit described below, and in the wells to be drilled in the unit.



7. No opposition is expected because the interest owners being pooled have been contacted regarding the proposed wells, but have failed or refused to voluntarily commit their interests in the wells.

8. Attached as **Exhibit 1** is the application for Case No. 21030. In this case, Marathon seeks an order from the Division pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells, to be horizontally drilled.

9. There is no depth severance in the Wolfcamp formation.

10. Attached as **Exhibit 2** are the proposed C-102s for the wells. The C-102s identify the proposed surface hole locations, first take point, and bottom hole locations. The C-102s also identify the pool and pool code.

11. The wells will be developing the Purple Sage; Wolfcamp (Gas) pool, pool code, 98220.

12. The Purple Sage; Wolfcamp (Gas) pool is a gas pool with 320-acre building blocks.

13. The Purple Sage Wolfcamp pool is governed by special pool rules, which require setbacks at least 330 feet from a unit boundary.

14. The producing area for these wells will be unorthodox. Marathon will separately file non-standard location applications.

15. Lease tract maps outlining the units being pooled are attached hereto as **Exhibit 3**. The parties being pooled and the percent of their interests is also included as part of Exhibit 3.

16. Marathon has conducted a diligent search of the public records in the county where the wells are located, and conducted phone directory and computer searches to locate contact information for parties entitled to notification, and mailed all parties well proposals, including an Authorization for Expenditure.

17. In my opinion, Marathon has made a good faith effort to obtain voluntary joinder of the working interest owners in the proposed wells. A summary of my contacts with the working interest owners is included with Exhibit 3.

18. Exhibit 4 is an example of the proposal letter sent to working interest owners on November 8, 2019.

19. The proposal letter identifies the proposed first take point, last take point, and approximate TVD. It also contains separate elections for each well.

20. Exhibit 5 contains the Authorization for Expenditure for the proposed wells. The estimated cost of the wells set forth therein is fair and reasonable, and is comparable to the costs of other wells of similar depths and length drilled in this area of New Mexico.

21. Marathon requests overhead and administrative rates of \$8000.00/month for drilling a well and \$800.00/month for a producing well. These rates are fair, and comparable to the rates charged by other operators for wells of this type in this area of Southeastern, New Mexico. Marathon requests that these rates be adjusted periodically as provided in the COPAS Accounting Procedure.

22. Marathon requests the maximum cost plus 200% risk charge be assessed against non-consenting working interest owners.

23. Marathon requests that it be designated operator of the wells.

24. Marathon requests that it be allowed a period of one (1) year between when the wells are drilled and when the first well is completed under the order.

25. **Exhibit 6** is an affidavit of notice prepared by counsel for Marathon that shows the parties who were notified of this hearing, the status of whether they received notice, and an affidavit of publication from Carlsbad Current Argus newspaper, showing that notice of this hearing was published on January 17, 2020.

26. The parties Marathon is seeking to pool were notified of this hearing.

27. Marathon seeks to pool overriding royalty interest owners, and they were provided notice of this hearing.

28. The attachments to this affidavit were prepared by me, or compiled from company business records, or were prepared at my direction.

29. I attest that the information provided herein is correct and complete to the best of my knowledge and belief.

30. The granting of this application is in the interests of conservation and the prevention of waste.

[Signature page follows]

Chase Rice

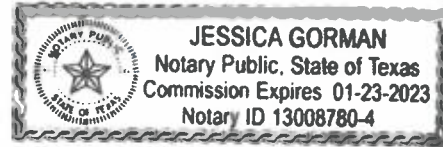
Chase Rice

SUBSCRIBED AND SWORN to before me this 30th day of January, 2020 by Chase Rice on behalf of Marathon Oil Permian LLC.

Jessica Gorman

Notary Public

My commission expires: 1/23/2023



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

**APPLICATION OF MARATHON
OIL PERMIAN LLC FOR COMPULSORY
POOLING, EDDY COUNTY, NEW MEXICO.**

CASE NO. _____

APPLICATION

Marathon Oil Permian LLC ("Marathon"), OGRID Number 372098, through its undersigned attorneys, hereby makes an application to the Oil Conservation Division pursuant to the provisions of NMSA (1978), Section 70-2-17, for an order pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. In support of this application, Marathon states as follows:

1. Marathon is an interest owner in the subject lands and has a right to drill a well thereon.
2. Marathon seeks to dedicate the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico to form a 640-acre, more or less, spacing unit.
3. Marathon plans to drill the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells to a depth sufficient to test the Wolfcamp formation. These wells will be horizontally drilled.



4. These wells will be located within the Purple Sage Wolfcamp Gas Pool, which is subject to special pool rules that establish 330 foot setback requirements.

5. These wells will comply with the Division's setback requirements for this pool.

6. Marathon sought, but has been unable to obtain, a voluntary agreement from all interest owners in the Wolfcamp formation underlying the proposed spacing unit to participate in the drilling of the wells or to otherwise commit their interests to the wells.

7. The pooling of all interests in the Wolfcamp formation underlying the proposed unit will prevent the drilling of unnecessary wells, prevent waste and protect correlative rights.

8. Marathon further requests that it be allowed one (1) year between the time the wells are drilled and completion of the first well under the order issued by the Division.

WHEREFORE, Marathon requests this application be set for hearing before an Examiner of the Oil Conservation Division on February 6, 2020, and after notice and hearing as required by law, the Division enter its order:

A. Pooling all mineral interests in the Wolfcamp formation underlying a horizontal spacing unit within the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico;

B. Designating Marathon as operator of this unit and the wells to be drilled thereon;

C. Authorizing Marathon to recover its costs of drilling, equipping and completing these wells;

D. Approving actual operating charges and costs charged for supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedure;

E. Setting a 200% charge for the risk involved in drilling and completing the wells in the event a working interest owner elects not to participate in the wells.

F. Allowing a time period of one (1) year between when the wells are drilled and when the first well is completed under the order.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS
& SISK, P.A.

By: Deana M. Bennett

Deana M. Bennett
Nicole T. Russell
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. _____: Application of Marathon Oil Permian LLC for compulsory pooling, Eddy County, New Mexico. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells, to be horizontally drilled. The producing area for these wells will be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said wells, and allowing a one year period between when the wells are drilled and when the first well is completed. Said area is located approximately 10 miles Southeast of Malaga, New Mexico.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WA FED COM	⁶ Well Number H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2910'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	26S	29E		270	SOUTH	1410	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	6	26S	29E		100	NORTH	2310	WEST	EDDY

¹² Dedicated Acres 638.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

CORNER COORDINATES
NAD 83, SPCS NM EAST
A - X: 634636.66' / Y: 387296.79'
B - X: 634628.86' / Y: 392587.31'
C - X: 637274.83' / Y: 392585.03'
D - X: 637257.20' / Y: 387302.75'
E - X: 637293.61' / Y: 382020.16'
F - X: 634655.33' / Y: 382021.35'

CORNER COORDINATES
NAD 27, SPCS NM EAST
A - X: 593451.64' / Y: 387239.13'
B - X: 593444.07' / Y: 392529.54'
C - X: 596089.87' / Y: 392537.23'
D - X: 596072.12' / Y: 387245.05'
E - X: 596108.40' / Y: 381962.57'
F - X: 593470.19' / Y: 381963.80'

SURFACE HOLE LOCATION
270' FSL 1410' FWL, SECTION 7
NAD 83, SPCS NM EAST
X: 636064.04' / Y: 382290.71'
LAT: 32.05062836N / LON: 104.02758461W
NAD 27, SPCS NM EAST
X: 594878.86' / Y: 382233.13'
LAT: 32.05050395N / LON: 104.02709990W

KICK OFF POINT / FIRST TAKE POINT
100' FSL 2310' FWL, SECTION 7
NAD 83, SPCS NM EAST
X: 636984.86' / Y: 382120.31'
LAT: 32.05015280N / LON: 104.02467831W
NAD 27, SPCS NM EAST
X: 595779.76' / Y: 382062.72'
LAT: 32.05002845N / LON: 104.02419376W

LAST TAKE POINT/BOTTOM HOLE LOCATION
100' FSL 2310' FWL, SECTION 6
NAD 83, SPCS NM EAST
X: 636939.68' / Y: 392494.05'
LAT: 32.07866985N / LON: 104.02466415W
NAD 27, SPCS NM EAST
X: 595754.72' / Y: 392436.25'
LAT: 32.07854575N / LON: 104.02417866W

17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____

Printed Name _____

E-mail Address _____

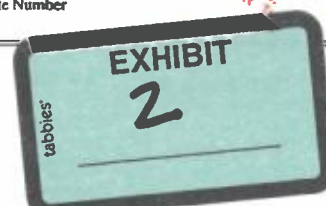
18 SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey _____

Signature and Seal of Professional Surveyor: _____

Certificate Number _____

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99978647 Convergence Angle: 00°10'35.39608"



District I
1625 N French Dr., Hobbs, NM 88240
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1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
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Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLF CAMP (GAS)
⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WB FED COM	⁶ Well Number 5H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2910'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	26S	29E		270	SOUTH	1380	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	6	26S	29E		100	NORTH	1980	WEST	EDDY

¹² Dedicated Acres 638.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<p>SHEET 1 OF 3 JOB No. R3961_015_B REV 0 JCS 1/28/2020</p>	<p>17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p>
	<p>18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor: _____</p>
	<p>CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 634636.66' / Y: 387296.79' B - X: 634628.96' / Y: 392587.31' C - X: 637274.83' / Y: 392595.03' D - X: 637257.20' / Y: 387302.75' E - X: 637293.61' / Y: 382020.16' F - X: 634655.33' / Y: 382021.35'</p> <p>CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 593451.64' / Y: 387239.13' B - X: 593444.07' / Y: 392529.54' C - X: 596089.87' / Y: 392537.23' D - X: 596072.12' / Y: 387245.05' E - X: 596108.40' / Y: 381962.57' F - X: 593470.19' / Y: 381963.80'</p>
	<p>SURFACE HOLE LOCATION 270' FSL 1380' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 636034.04' / Y: 382290.71' LAT: 32.05062859N / LON: 104.02768144W NAD 27, SPCS NM EAST X: 594848.86' / Y: 382233.13' LAT: 32.05050418N / LON: 104.02719673W</p> <p>KICK OFF POINT / FIRST TAKE POINT 100' FSL 1980' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 636634.96' / Y: 382120.46' LAT: 32.05015588N / LON: 104.02574344W NAD 27, SPCS NM EAST X: 595449.76' / Y: 382062.88' LAT: 32.05003146N / LON: 104.02525884W</p> <p>LAST TAKE POINT/BOTTOM HOLE LOCATION 100' FNL 1980' FWL, SECTION 6 NAD 83, SPCS NM EAST X: 636609.68' / Y: 392493.09' LAT: 32.07866979N / LON: 104.02572962W NAD 27, SPCS NM EAST X: 595424.73' / Y: 392435.30' LAT: 32.07854571N / LON: 104.02524408W</p>

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Santa Fe, NM 87505

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WB FED COM	⁶ Well Number 8H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2911'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	26S	29E		270	SOUTH	1320	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 1	6	26S	29E		100	NORTH	1320	WEST	EDDY

¹² Dedicated Acres 638.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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<p>SECTION 36</p> <p>T25S R28E</p> <p>T26S R28E</p> <p>SECTION 1</p> <p>SECTION 12</p> <p>SECTION 13</p> <p>SHEET 1 OF 3</p> <p>JOB NO. R3961_015_D</p> <p>REV 0 JCS 1/28/2020</p>		<p>SECTION 31</p> <p>T25S R29E</p> <p>T26S R29E</p> <p>SECTION 6</p> <p>SECTION 5</p> <p>SECTION 7</p> <p>SECTION 18</p>		<p>SECTION 32</p> <p>T25S R29E</p> <p>T26S R29E</p> <p>SECTION 6</p> <p>SECTION 5</p> <p>SECTION 7</p> <p>SECTION 18</p>		<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p>	
<p>100'</p> <p>1320'</p> <p>1320'</p> <p>100'</p> <p>270'</p> <p>SHL</p> <p>KOP/ FIRST TAKE</p>		<p>LAST TAKE/ BHL</p>		<p>CORNER COORDINATES NAD 83, SPCS NM EAST</p> <p>A - X: 634636.66' / Y: 387296.79'</p> <p>B - X: 634628.96' / Y: 392587.31'</p> <p>C - X: 637274.83' / Y: 392595.03'</p> <p>D - X: 637257.20' / Y: 387302.75'</p> <p>E - X: 637293.61' / Y: 382020.16'</p> <p>F - X: 634655.33' / Y: 382021.35'</p>		<p>CORNER COORDINATES NAD 27, SPCS NM EAST</p> <p>A - X: 593451.64' / Y: 387239.13'</p> <p>B - X: 593444.07' / Y: 392529.54'</p> <p>C - X: 596089.87' / Y: 392537.23'</p> <p>D - X: 596072.12' / Y: 387245.05'</p> <p>E - X: 596108.40' / Y: 381982.57'</p> <p>F - X: 593470.19' / Y: 381963.80'</p>	
<p>LAST TAKE POINT/BOTTOM HOLE LOCATION</p> <p>100' FNL 1320' FWL, SECTION 6</p> <p>NAD 83, SPCS NM EAST</p> <p>X: 635949.87' / Y: 392491.16'</p> <p>LAT: 32.07866965N / LON: 104.02786055W</p> <p>NAD 27, SPCS NM EAST</p> <p>X: 594764.74' / Y: 392453.38'</p> <p>LAT: 32.07854560N / LON: 104.02737491W</p>		<p>KICK OFF / FIRST TAKE POINT</p> <p>100' FSL 1320' FWL, SECTION 7</p> <p>NAD 83, SPCS NM EAST</p> <p>X: 635974.95' / Y: 382120.76'</p> <p>LAT: 32.05016186N / LON: 104.02787370W</p> <p>NAD 27, SPCS NM EAST</p> <p>X: 594789.77' / Y: 382063.18'</p> <p>LAT: 32.05003746N / LON: 104.02738900W</p>		<p>SURFACE HOLE LOCATION</p> <p>270' FSL 1320' FWL, SECTION 7</p> <p>NAD 83, SPCS NM EAST</p> <p>X: 635974.04' / Y: 382290.71'</p> <p>LAT: 32.05062906N / LON: 104.02787510W</p> <p>NAD 27, SPCS NM EAST</p> <p>X: 594788.87' / Y: 382233.13'</p> <p>LAT: 32.05050466N / LON: 104.02739038W</p>		<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date of Survey _____</p> <p>Signature _____</p> <p>Certificate Number _____</p>	

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 98220	³ Pool Name PURPLE SAGE; WOLFCAMP (GAS)
⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WA FED COM	⁶ Well Number 9H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2911'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 4	7	26S	29E		270	SOUTH	1290	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 1	6	26S	29E		100	NORTH	990	WEST	EDDY

¹² Dedicated Acres 638.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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<p>CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 634636.66' / Y: 387286.79' B - X: 634628.98' / Y: 392587.31' C - X: 637274.83' / Y: 392595.03' D - X: 637257.20' / Y: 387302.75' E - X: 637293.61' / Y: 382020.16' F - X: 634655.33' / Y: 382021.35'</p> <p>CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 593451.84' / Y: 387239.13' B - X: 593444.07' / Y: 392529.54' C - X: 596089.87' / Y: 392537.23' D - X: 596072.12' / Y: 387245.05' E - X: 596108.40' / Y: 381962.57' F - X: 593470.10' / Y: 381963.80'</p> <p>LAST TAKE POINT/BOTTOM HOLE LOCATION 100' FNL 990' FWL, SECTION 6 NAD 83, SPCS NM EAST X: 635619.87' / Y: 392490.20' LAT: 32.07866957N / LON: 104.02892601W NAD 27, SPCS NM EAST X: 594434.75' / Y: 392432.42' LAT: 32.07854553N / LON: 104.02844032W</p> <p>KICK OFF / FIRST TAKE POINT 100' FSL 990' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 635644.95' / Y: 382120.91' LAT: 32.05016484N / LON: 104.02893883W NAD 27, SPCS NM EAST X: 594459.78' / Y: 382063.33' LAT: 32.05004045N / LON: 104.02845408W</p> <p>SURFACE HOLE LOCATION 270' FSL 1290' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 635944.04' / Y: 382290.71' LAT: 32.05062929N / LON: 104.02797193W NAD 27, SPCS NM EAST X: 594758.87' / Y: 382233.13' LAT: 32.05050489N / LON: 104.02748720W</p>	<p>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> <p>¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor _____</p> <p>Certificate Number _____</p> <p>PRELIMINARY THIS DOCUMENT IS NOT TO BE USED FOR FINANCE, SALE OR THE BASIS FOR THE ISSUANCE OF A PERMIT</p>
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⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WB FED COM	⁶ Well Number 13H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2911'

¹⁰ Surface Location

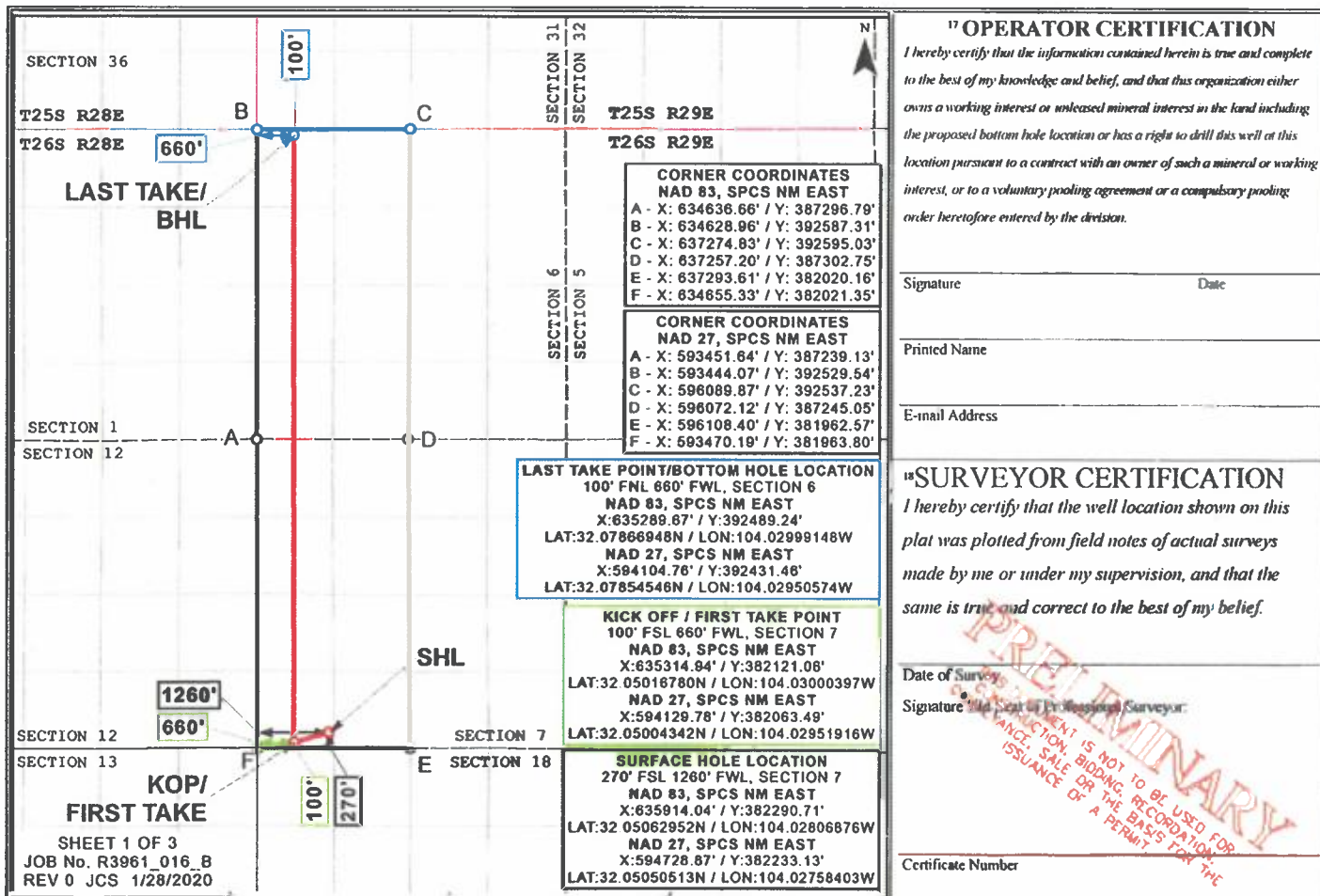
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 4	7	26S	29E		270	SOUTH	1260	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 1	6	26S	29E		100	NORTH	660	WEST	EDDY

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⁴ Property Code	⁵ Property Name RICK VAUGHN 7 WA FED COM	⁶ Well Number 14H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 2912'

¹⁰ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 4	7	26S	29E		270	SOUTH	1230	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L 1	6	26S	29E		100	NORTH	330	WEST	EDDY

¹² Dedicated Acres 638.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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	<p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Date of Survey _____</p> <p>Signature and Seal of Professional Surveyor _____</p> <p>Certificate Number _____</p>
	<p>19 SURFACE HOLE LOCATION</p> <p>270' FSL 1230' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 635884.04' / Y: 382290.71' LAT: 32.05062976N / LON: 104.02816559W NAD 27, SPCS NM EAST X: 594698.87' / Y: 382233.13' LAT: 32.05050536N / LON: 104.02768085W</p>
	<p>20 KICK OFF / FIRST TAKE POINT</p> <p>100' FSL 330' FWL, SECTION 7 NAD 83, SPCS NM EAST X: 634984.94' / Y: 382121.21' LAT: 32.05017075N / LON: 104.03106910W NAD 27, SPCS NM EAST X: 593799.79' / Y: 382063.84' LAT: 32.05004639N / LON: 104.03058424W</p>

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Lease Tract Map

Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; Rick Vaughn 7 WA Fed Com 14H
W/2 of Sections 6 T23S-R28E & W/2 of Section 7 T23S-R29E – 638.40 acres



- Tract 1: Fed NMNM-118113
- Tract 2: Fed NMNM-057261
- Tract 3: Fed NMNM-138835



Summary of Interests

Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; Rick Vaughn 7 WA Fed Com 14H
W/2 of Sections 6 T23S-R28E & W/2 of Section 7 T23S-R29E – 638.40 acres

Committed Working Interest:

Marathon Oil Permian LLC

81.3284167%

Uncommitted Working Interest:

COG Operating LLC

06.0248831%

Concho Resources LC

00.1545323%

OXY Y-1 Company

03.9974937%

EOG Resources Inc.

08.4946742%



W/2 Section 6 & W/2 Section 7 (638.40)

Type	Interest Owner	Type	Interest Owner
WI	COG Operating LLC One Concho Center 600 W. Illinois Avenue Midland, TX 79701	ORRI	Mary Lee Harang Picou and Rebecca Ann Picou, as Co-Trustee of the Mary Lee Harang Picou Revocable Trust Dated April 14, 2000 605 Sarah Court Virginia Beach, VA 23464
WI	Concho Resources LLC One Concho Center 600 W. Illinois Avenue Midland, TX 79701	ORRI	Pony Oil Operating, LLC 4245 North Central Expressway Suite 320, Box 109
WI	OXY Y-1 Company 5 Greenway Plaza Houston, TX 77046	ORRI	Fortis Minerals II, LLC 1111 Bagby Street, Suite 2150
WI	EOG A Resources Inc. 105 S. 4th Street Artesia, NM 88210-2177	ORRI	Regen Royalty Corporation 808 W. Main Street Artesia, NM 88210
WI	EOG M Resources Inc. 105 S. 4th Street Artesia, NM 88210-2177	ORRI	Pegasus Resources, LLC 2821 W 7th Street, Suite 500 Fort Worth, TX 76107
WI	EOG Y Resources Inc. 105 S. 4th Street Artesia, NM 88210-2177	ORRI	McMullen Minerals, LLC P.O. Box 470857 Fort Worth, TX 76147
		ORRI	Concho Resources LLC One Concho Center 600 W. Illinois Avenue Midland, TX 79701
		ORRI	Devon Energy Production Company, L.P. 333 W Sheridan Ave. Oklahoma City, OK
		ORRI	Vanguard Operating, LLC 5847 San Felipe, Suite 3000
		ORRI	Nestegg Energy Corporation 2308 Sierra Vista Road Artesia, NM 88210

Summary of Attempted Contacts: Rick Vaughn

- Marathon sent well proposal letters to the working interest owners on or around November 8, 2019.
- Marathon has had multiple communications with the working interest owners regarding voluntary participation in the unit or potential trades.
- Marathon filed an application to force pool parties who had not entered in to an agreement.
- Marathon sent notices of the force pooling application to the addresses of record at the time of the filing of the application.
- Marathon then also published notice in a newspaper of general circulation in the county where the wells will be located.
- Marathon will alert the Division if it is able to enter into voluntary agreements with the working interest owners.

Chase Rice
Staff Land Professional



Marathon Oil Permian LLC
5555 San Felipe Street
Houston, Texas 77056
Telephone: 713-296-3055
Fax: 713-513-4006
cfrice@marathonoil.com

November 12, 2019

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED
7019 1640 0001 6043 0620

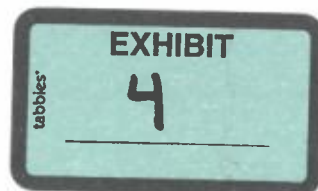
COG Operating LLC
600 West Illinois Ave.
Midland, TX 79701

Re: Well Proposals
Sections 6 & 7, Township 26 South, Range 29 East
Eddy County, New Mexico

Dear Sir or Madam:

Marathon Oil Permian LLC ("Marathon") hereby proposes the drilling of the below-referenced Horizontal Wells located in Sections 6 & 7 T26S-T29E, Eddy County, New Mexico. Accordingly, enclosed are the AFEs for the following wells:

- Rick Vaughn 7 WA Fed Com 1H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,745' subsurface and a total measured depth of 19,967' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 2310' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 2310' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.
- Rick Vaughn 7 WB Fed Com 5H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,900' subsurface and a total measured depth of 20,092' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 1980' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 1980' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.
- Rick Vaughn 7 WA Fed Com 6H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,745' subsurface and a total measured depth of 19,917' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 1650' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 1650' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.
- Rick Vaughn 7 WB Fed Com 8H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,900' subsurface and a total measured depth of 20,060' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 1320' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 1320' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.
- Rick Vaughn 7 WA Fed Com 9H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,725' subsurface and a total



measured depth of 19,885' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 990' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 990' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.

- Rick Vaughn 7 WB Fed Com 13H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,880' subsurface and a total measured depth of 20,050' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 660' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 660' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.
- Rick Vaughn 7 WA Fed Com 14H to be drilled to a depth sufficient to adequately test the Wolfcamp Formation, with an approximate true vertical depth ("TVD") of 9,725' subsurface and a total measured depth of 19,915' from a legal surface location in Unit M of Section 7-T26S-R29E. The proposed First Take Point ("FTP") shall be located approximately 330' FWL x 330' FSL of Section 7-T26S-R29E and a proposed Last Take Point ("LTP") 330' FWL x 330' FNL of Section 6-T26S-R29E with a proration unit being the W/2 of Sections 6 and 7-T26S-R29E.

These proposed locations and target depths are subject to change depending on any surface or subsurface concerns encountered. The enclosed AFEs represent an estimate of the costs that will be incurred to drill and complete the wells, but those electing to participate in the wells are responsible for their proportionate share of the actual costs incurred.

If your election is to participate in the drilling and completion of the wells, please sign and return a copy of this letter along with an executed copy of the enclosed AFEs for each well within thirty (30) days of receipt of this proposal.

Marathon proposes that a 1989 AAPL Model Form Operating Agreement (JOA), with a contract area encompassing the W/2 of Sections 6 and 7 from the top of the Wolfcamp Formation to the base of the Wolfcamp Formation be utilized. A copy of which will be subsequently provided for execution.

If you do not wish to participate in these wells, please contact the undersigned to discuss a potential acquisition of your interest via an assignment. If an agreement cannot be reached within 30 days of the date of this letter, Marathon will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into the proration unit for the proposed wells.

Should you have any questions regarding this or other matters, please do not hesitate to contact me at the above listed phone number or email.

Sincerely,



Chase Rice
Marathon Oil Permian LLC

____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 1H.

____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 1H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 5H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 5H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 6H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of Rick Vaughn 7 WA Fed Com 6H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 8H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 8H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 9H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 9H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 13H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WB Fed Com 13H.

_____ COG Operating LLC elects to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 14H.

_____ COG Operating LLC elects NOT to participate in the drilling, completing, and equipping of the Rick Vaughn 7 WA Fed Com 14H.

COG Operating LLC

By: _____

Print Name: _____

Title: _____

Date: _____

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/3/2019
DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
COMPLETION PREPARED BY JOSH SHANNON
FACILITIES PREPARED BY RICK LINDSAY
ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN			
Field	Purple Sage, Wolfc	FORMATION: WOLF CAMP A	WILDCAT	EXPLORATION
Lease/Facility	Black Vengeance 7 WA Fed Com 3H		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			
Est Total Depth	19,967	Est Drilling Days		Est Completion Days 11

LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000

TOTAL LOCATION COST - INTANGIBLE 67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Drig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000

TOTAL DRILLING - TANGIBLE 644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	43,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging-geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing Inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188

TOTAL DRILLING - INTANGIBLE \$2,064,448

TOTAL DRILLING COST \$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-

TOTAL COMPLETION - TANGIBLE \$15,000



24

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019

Asset Team PERMIAN
Field Purple Sage; Wolfc FORMATION: WOLFCAMP A
Lease/Facility Rick Vaughn 7 WA Fed Com 1H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant, hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019300	Frack Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051
TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of
Company: _____
Signature: _____
Title: _____ Date: _____

25

MARATHON OIL PERMIAN LLC
 AUTHORITY FOR EXPENDITURE
 DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
 COMPLETION PREPARED BY JOSH SHANNON
 FACILITIES PREPARED BY RICK LINDSAY
 ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN			
Field	Purple Sage; Wolfc	FORMATION: WOLFCAMP B	WILDCAT	EXPLORATION
Lease/Facility	Rich Vaughn 7 WB Fed Com 5H		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			

Est Total Depth	20,092	Est Drilling Days		Est Completion Days	11
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LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Orig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	25,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	41,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging-geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing Inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188
TOTAL DRILLING - INTANGIBLE		\$2,064,448

TOTAL DRILLING COST	\$2,708,448
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COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019

Asset Team PERMIAN
Field Purple Sage; Wolfc FORMATION: WOLFCAMP B
Lease/Facility Rick Vaughn 7 W/B Fed Com SH

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. BHT, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019300	Frack Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051
TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of
Company: _____
Signature: _____
Title: _____ Date: _____

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
COMPLETION PREPARED BY JOSH SHANNON
FACILITIES PREPARED BY RICK LINDSAY
ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN			
Field	Purple Sage; Wolfc	FORMATION: WOLF CAMP A	WILDCAT	EXPLORATION
Lease/Facility	Redd Vaughn 2 W/A Fed Conv 6H		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			

Est Total Depth	19,917	Est Drilling Days		Est Completion Days	11
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LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Orig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	41,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging/geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (OH rentals)	15,000
7019110	Casing inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188
TOTAL DRILLING - INTANGIBLE		\$2,064,448
TOTAL DRILLING COST		\$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019

Asset Team PERMIAN
Field Purple Sage; Wolfc FORMATION: WOLFCAMP A
Lease/Facility Rick Vaughn 7 WA Fed Com 6H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019300	Frack Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000

TOTAL COMPLETION COST

\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012030	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	33,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051

TOTAL SURFACE EQUIPMENT COST

\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000

TOTAL ARTIFICIAL LIFT COST

\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

TOTAL COST

TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of
Company: _____
Signature: _____
Title: _____ Date: _____

29

MARATHON OIL PERMIAN LLC
 AUTHORITY FOR EXPENDITURE
 DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
 COMPLETION PREPARED BY JOSH SHANNON
 FACILITIES PREPARED BY RICK LINDSAY
 ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN			
Field	Purple Sage; Wolfc	FORMATION: WOLFCAMP B	WILDCAT	EXPLORATION
Lease/Facility	Rick Vaughn 7 WB Fed Com BH		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			

Est Total Depth 20,060 Est Drilling Days _____ Est Completion Days 11

LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Orig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	43,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging-geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188
TOTAL DRILLING - INTANGIBLE		\$2,064,448

TOTAL DRILLING COST \$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019

Asset Team PERMIAN
Field Purple Sage; Wolffc FORMATION: WOLFCAMP B
Lease/Facility Rick Vaughn 7 WB Fed Com 8H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg, lightplant, hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019900	Frack Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051
TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of
Company: _____
Signature: _____
Title: _____ Date: _____

MARATHON OIL PERMIAN LLC
 AUTHORITY FOR EXPENDITURE
 DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
 COMPLETION PREPARED BY JOSH SHANNON
 FACILITIES PREPARED BY RICK LINDSAY
 ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN			
Field	Purple Sage; Wolfc	FORMATION: WOLFCAMP A	WILDCAT	EXPLORATION
Lease/Facility	Rick Vaughn 7 WA Fed Com 9H		DEVELOPMENT	RECOMPLETION
Location	EDDY COUNTY		X EXPLOITATION	WORKOVER
Prospect	MALAGA			

Est Total Depth	<u>19,885</u>	Est Drilling Days		Est Completion Days	<u>11</u>
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LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Rig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	41,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging-geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188

TOTAL DRILLING - INTANGIBLE \$2,064,448

TOTAL DRILLING COST \$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-

TOTAL COMPLETION - TANGIBLE \$15,000

Asset Team PERMIAN
 Field Purple Sage; Wolfc FORMATION: WOLFCAMP A
 Lease/Facility Rick Vaughn 7 WA Fed Com 9H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. BHT, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019300	Frac Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051
TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of Company: _____
 Signature: _____
 Title: _____ Date: _____

MARATHON OIL PERMIAN LLC
 AUTHORITY FOR EXPENDITURE
 DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
 COMPLETION PREPARED BY JOSH SHANNON
 FACILITIES PREPARED BY RICK LINDSAY
 ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN	FORMATION: WOLFCAMP B	WILDCAT	EXPLORATION
Field	Purple Sage, Wolfc		DEVELOPMENT	RECOMPLETION
Lease/Facility	Rick Vaughn 7 WB Fed Com 13H		X EXPLOITATION	WORKOVER
Location	EDDY COUNTY			
Prospect	MALAGA			

Est Total Depth 20,050 Est Drilling Days _____ Est Completion Days 11

LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Drig Liner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	41,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	-
7019150	Mud Logging-geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysis)	-
7011010	7% Contingency & Taxes	177,188
TOTAL DRILLING - INTANGIBLE		\$2,064,448

TOTAL DRILLING COST

\$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

Asset Team PERMIAN
Field Purple Sage; Wolffc FORMATION: WOLF CAMP B
Lease/Facility Rick Vaughn 7 WB Fed Com 13H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drlg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drlg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drlg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit, BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001170	Consulting Services	100,000
7018150	Zipper Manifold	220,000
7019300	Frack Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
7000010	Electrical Labor	11,937
7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
TOTAL SURFACE EQUIPMENT - TANGIBLE		\$866,051
TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

7006640	Company Labor	15,000
7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
7019350	Well Services-Well/Wellhead Services	14,000
7012270	Materials & Supplies-Tangible	5,000
7012550	Surface Wellhead Equipment	50,000
7012390	Pig Launchers/Receivers & Rel Equip	2,000
7011010	8% Contingency & Taxes	11,000
TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
TOTAL DRILLING COST	\$ 2,708,448
TOTAL COMPLETIONS COST	\$ 5,854,000
TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of Company: _____
Signature: _____
Title: _____ Date: _____

MARATHON OIL PERMIAN LLC
 AUTHORITY FOR EXPENDITURE
 DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019
 DRILLING & LOCATION PREPARED BY MATTHEW RUGAARD
 COMPLETION PREPARED BY JOSH SHANNON
 FACILITIES PREPARED BY RICK LINDSAY
 ARTIFICIAL LIFT PREPARED BY RICK LINDSAY

Asset Team	PERMIAN		
Field	Purple Sage; Wolfc	FORMATION: WOLFCAMP A	WILDCAT
Lease/Facility	Rick Vaughn 7 WA Fed Com 34H		DEVELOPMENT
Location	EDDY COUNTY		X EXPLOITATION
Prospect	MALAGA		WORKOVER

Est Total Depth 19 915 Est Drilling Days _____ Est Completion Days 11

LOCATION COST - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access	40,200
7001250	Land Broker Fees and Services	27,000
TOTAL LOCATION COST - INTANGIBLE		67,200

DRILLING COST - TANGIBLE

7012050	Conductor Pipe	28,000
7012050	Surface Casing	19,000
7012050	Intermediate Casing 1	66,000
7012050	Intermediate Casing 2	253,000
7012050	Production Casing	144,000
7012050	Drig Uner Hanger, Tieback Eq & Csg Accessories	55,000
7012550	Drilling Wellhead Equipment	50,000
7012040	Casing & Tubing Access	24,000
7012270	Miscellaneous MRO Materials	5,000
TOTAL DRILLING - TANGIBLE		644,000

DRILLING COST - INTANGIBLE

7019200	Drilling Rig Mob/Demob	26,000
7019220	Drilling Rig - day work/footage	610,200
7019040	Directional Drilling Services	201,000
7019020	Cement and Cementing Service Surface	15,000
7019020	Cement and Cementing Service Intermediate 1	25,000
7019020	Cement and Cementing Service Intermediate 2	35,000
7019020	Cement and Cementing Service Production	60,000
7019140	Mud Fluids & Services	66,600
7012310	Solids Control equipment	41,000
7012020	Bits	72,000
7019010	Casing Crew and Services	30,000
7016350	Fuel (Rig)	70,000
7019140	Fuel (Mud)	30,000
7001460	Water (non potable)	25,000
7012350	Water (potable)	5,000
7019000	Well Logging Services	
7019150	Mud Logging+geosteering	19,000
7019250	Stabilizers, Hole Openers, Underreamers (DH rentals)	15,000
7019110	Casing inspection/cleaning	15,000
7019110	Drill pipe/collar inspection services	10,000
7016180	Freight - truck	25,000
7001460	Water hauling and disposal (includes soil farming)	60,000
7001160	Contract Services - Disposal/Non-Hazardous Waste	80,000
7001440	Vacuum Trucks	10,000
7000030	Contract Labor - general	30,000
7000030	Contract Labor - Operations	3,000
7001200	Contract Services - Facilities	10,000
7019300	Well Services - Well Control Services	21,300
7019350	Well Services - Well/Wellhead Services	10,000
7018150	Rental Tools and Equipment (surface rentals)	90,400
7018150	Rig Equipment and Misc.	11,300
7001110	Telecommunications Services	5,000
7001120	Consulting Services	106,220
7001400	Safety and Environmental	36,160
7018120	Rental Buildings (trailers)	18,080
7019310	Coring (sidewalls & analysts)	-
7011010	7% Contingency & Taxes	177,188
TOTAL DRILLING - INTANGIBLE		\$2,064,448

TOTAL DRILLING COST

\$2,708,448

COMPLETION - TANGIBLE

7012580	Tubing	-
7012040	Tubing Accessories (nipple, wireline entry)	-
7012550	Wellhead Equip	15,000
7012560	Packers - Completion Equipment	-
TOTAL COMPLETION - TANGIBLE		\$15,000

MARATHON OIL PERMIAN LLC
AUTHORITY FOR EXPENDITURE
DETAIL OF ESTIMATED WELL COSTS

DATE 11/1/2019

Asset Team PERMIAN
Field Purple Sage; Wolfc FORMATION: WOLFCAMP A
Lease/Facility Rick Vaughn 7 WA Fed Com 14H

COMPLETION - INTANGIBLE

GL CODE	DESCRIPTION	ESTIMATED COST
7001270	Location and Access (dress location after rig move, set anchors)	10,000
7019220	Drilling Rig During Completion	-
7019140	Mud Fluids & Services	-
7019030	Coiled Tubing Services (3 runs)	350,000
7019240	Snubbing Services	-
7019270	Pulling/Swab Units	-
7016350	Fuel (from drilg)	-
7019010	Casing Crew and Services	-
7019020	Cement and Cementing Services	-
7019080	Well Testing Services (flow hand & equip)	470,000
7019320	Fracturing Services	3,174,815
7019330	Perforating	300,000
7019360	Wireline Services	15,000
7001460	Water Hauling & Disposal (frac fluids)	354,000
7016180	Freight - Truck (haul pipe; drilg & compl)	20,000
7018150	BOP Rental & Testing	-
7018150	Rental Tools and Equipment (incl drilg; lightplant,hydra-walk)	-
7018150	CT Downhole Rental Equipment (ie. Bit. BHA)	-
7000030	Contract Labor - general	60,000
7001110	Telecommunications Services	100,000
7001400	Safety and Environmental	-
7001120	Consulting Services	100,000
7018150	Zinner Manifold	220,000
7019300	Track Stack Rentals	85,000
7016190	Freight (Transportation Services)	-
7018150	Equipment Rental (w/o operator, frac tanks, lightplants)	100,000
7018120	Rental Buildings (trailers)	35,000
7000030	Contract Labor - Pumping (pump-down pumps)	60,000
7011010	8% Contingency & Taxes	385,185
TOTAL COMPLETION - INTANGIBLE		\$5,839,000
TOTAL COMPLETION COST		\$5,854,000

SURFACE EQUIPMENT - TANGIBLE

7012350	Misc. Piping, Fittings & Valves	18,576
7006640	Company Labor & Burden	-
7000030	Contract Labor - General	70,817
7001110	Telecommunication equip (Telemetry)	-
7012410	Line Pipe & Accessories	-
7012270	Miscellaneous Materials (containment system)	43,281
7008060	SCADA	-
7016180	Freight - truck	-
7001190	Contract Engineering	9,375
7012290	Metering and Instrumentation	7,764
7012290	I&E Materials	114,060
7012200	Gas Treating	-
7012200	Dehydration	-
7012010	Compressor	-
7012350	Power	-
7012610	Vapor Recovery Unit	-
7012440	Separator & other pressure vessels	323,837
7012500	Tanks	235,346
7012100	Heater Treater	-
7012640	Flare & Accessories	31,057
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7000010	Mechanical Labor	-
7012480	Rod Pumping unit & Pad	-
7012180	Pumping Unit Engine	-
7012350	Electrical Power (electrical cooperative construction costs)	-
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TOTAL SURFACE EQUIPMENT COST		\$ 866,051

ARTIFICIAL LIFT

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7012180	Gas Lift Equipment	3,000
7012480	Rod Pumping, Sucker Rods & Rod Pump	2,000
7012140	Elect Sub Pumps (ESP)	20,000
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TOTAL ARTIFICIAL LIFT		122,000
TOTAL ARTIFICIAL LIFT COST		\$ 122,000

SUMMARY OF ESTIMATED DRILLING WELL COSTS

	TOTAL COST
TOTAL LOCATION COST	\$ 67,200
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TOTAL SURFACE EQUIPMENT COST	\$ 866,051
TOTAL ARTIFICIAL LIFT COST	\$ 122,000
GRAND TOTAL COST	\$9,617,700

Participant's Approval

Name of
Company: _____
Signature: _____
Title: _____ Date: _____

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

**APPLICATION OF MARATHON OIL PERMIAN LLC FOR COMPUSLORY
POOLING, EDDY COUNTY, NEW MEXICO.**

CASE NO. 21030

AFFIDAVIT

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

Deana M. Bennett, attorney in fact and authorized representative of Marathon Oil Permian LLC, the Applicant herein, being first duly sworn, upon oath, states as follows:

1. The above-referenced Application was sent under a notice letter, provided herewith, by certified mail and proof of mailing is attached hereto.
2. Marathon also timely published notice of the February 6, 2020 Hearing.
3. Pursuant to Rule 19.15.4.12(B) NMAC, publication shall be made at least 10 business days before the hearing. Marathon's notice was published on January 17, 2020, which is more than 10 business days before February 6, 2020. The affidavit of publication is attached hereto.



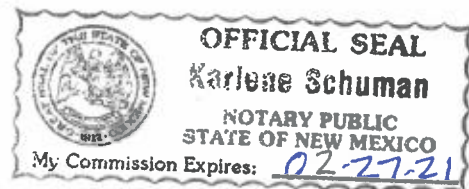
Deana M. Bennett

SUBSCRIBED AND SWORN to before me this 30th day of January, 2020 by Deana M. Bennett.



Notary Public

My commission expires: 02-27-21





MODRALL SPERLING

L A W Y E R S

January 16, 2020

Deana M. Bennett
505.848.1834
dmb@modrall.com

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

**Re: APPLICATION OF MARATHON OIL PERMIAN LLC FOR
COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.**

CASE NO. 21030

TO: AFFECTED PARTIES

This letter is to advise you that Marathon Oil Permian LLC ("Marathon") has filed the above-listed application.

In Case No. 21030, Marathon seeks an order from the Division pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells, to be horizontally drilled. The producing area for these wells will be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said wells, and allowing a one year period between when the wells are drilled and when the first well is completed.

This case has been set for hearing before a Division Examiner on February 6, 2020, starting at 8:15 a.m. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. As a party who may be affected by this application, we are notifying you of your right to appear at the hearing and participate in the case, including the right to present evidence either in support of or in opposition to the application. Failure to appear at the hearing may preclude you from any involvement in the case at a later date.

Modrall Sperling
Roehl Harris & Sisk P.A.

500 Fourth Street NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

Tel: 505.848.1800
www.modrall.com

You are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division at least four business days in advance of a scheduled hearing before the Division or the Commission, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date, with a copy delivered to the undersigned.

Sincerely,

A handwritten signature in cursive script that reads "Deana M. Bennett".

Deana M. Bennett
Attorney for Applicant

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

**APPLICATION OF MARATHON
OIL PERMIAN LLC FOR COMPULSORY
POOLING, EDDY COUNTY, NEW MEXICO.**

CASE NO. _____

APPLICATION

Marathon Oil Permian LLC ("Marathon"), OGRID Number 372098, through its undersigned attorneys, hereby makes an application to the Oil Conservation Division pursuant to the provisions of NMSA (1978), Section 70-2-17, for an order pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. In support of this application, Marathon states as follows:

1. Marathon is an interest owner in the subject lands and has a right to drill a well thereon.
2. Marathon seeks to dedicate the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico to form a 640-acre, more or less, spacing unit.
3. Marathon plans to drill the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells to a depth sufficient to test the Wolfcamp formation. These wells will be horizontally drilled.

4. These wells will be located within the Purple Sage Wolfcamp Gas Pool, which is subject to special pool rules that establish 330 foot setback requirements.

5. These wells will comply with the Division's setback requirements for this pool.

6. Marathon sought, but has been unable to obtain, a voluntary agreement from all interest owners in the Wolfcamp formation underlying the proposed spacing unit to participate in the drilling of the wells or to otherwise commit their interests to the wells.

7. The pooling of all interests in the Wolfcamp formation underlying the proposed unit will prevent the drilling of unnecessary wells, prevent waste and protect correlative rights.

8. Marathon further requests that it be allowed one (1) year between the time the wells are drilled and completion of the first well under the order issued by the Division.

WHEREFORE, Marathon requests this application be set for hearing before an Examiner of the Oil Conservation Division on February 6, 2020, and after notice and hearing as required by law, the Division enter its order:

A. Pooling all mineral interests in the Wolfcamp formation underlying a horizontal spacing unit within the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico;

B. Designating Marathon as operator of this unit and the wells to be drilled thereon;

C. Authorizing Marathon to recover its costs of drilling, equipping and completing these wells;

D. Approving actual operating charges and costs charged for supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedure;

E. Setting a 200% charge for the risk involved in drilling and completing the wells in the event a working interest owner elects not to participate in the wells.

F. Allowing a time period of one (1) year between when the wells are drilled and when the first well is completed under the order.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS
& SISK, P.A.

By: Deana M. Bennett

Deana M. Bennett
Nicole T. Russell
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. _____: Application of Marathon Oil Permian LLC for compulsory pooling, Eddy County, New Mexico. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells, to be horizontally drilled. The producing area for these wells will be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said wells, and allowing a one year period between when the wells are drilled and when the first well is completed. Said area is located approximately 10 miles Southeast of Malaga, New Mexico.

Karlene Schuman
Modrall Sperling Roehl Harris & Sisk P.A.
500 Fourth Street, Suite 1000
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL
01/16/2020



Firm Mailing Book ID: 182747

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0067 7303 95	COG Operating LLC One Concho Center 600 W. Illinois Avenue Midland TX 79701	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
2	9314 8699 0430 0067 7304 01	Concho Resources LLC One Concho Center 600 W. Illinois Avenue Midland TX 79701	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
3	9314 8699 0430 0067 7304 18	OXY Y-1 Company 5 Greenway Plaza Houston TX 77046	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
4	9314 8699 0430 0067 7304 25	EOG A Resources Inc. 105 S. 4th Street Artesia NM 88210	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
5	9314 8699 0430 0067 7304 32	EOG M Resources Inc. 105 S. 4th Street Artesia NM 88210	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
6	9314 8699 0430 0067 7304 49	EOG Y Resources Inc. 105 S. 4th Street Artesia NM 88210	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
7	9314 8699 0430 0067 7304 56	United States of America 301 Dinosaur Trail Santa Fe NM 87508	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
8	9314 8699 0430 0067 7304 63	Mary Lee Harang Picou & Rebecca Ann Picou co Trustees of Mary Picou Rev. Trust 605 Sarah Court Virginia Beach VA 23464	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
9	9314 8699 0430 0067 7304 70	Pony Oil Operating LLC, Attn: John Merritt, CEO 4245 North Central Expressway Suite 320, Box 109 Dallas TX 75805	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
10	9314 8699 0430 0067 7304 87	Fortis Minerals II, LLC 1111 Bagby Street, Suite 2150 Houston TX 77002	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
11	9314 8699 0430 0067 7304 94	Regen Royalty Corporation 808 W. Main Street Artesia NM 88210	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
12	9314 8699 0430 0067 7305 00	Pegasus Resources LLC 2821 W. 7th Street, Suite 500 Fort Worth TX 76107	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
13	9314 8699 0430 0067 7305 17	McMullen Minerals LLC PO Box 470857 Fort Worth TX 76147	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
14	9314 8699 0430 0067 7305 24	Devon Energy Production Company, LP 333 W. Sheridan Ave. Oklahoma City OK 73102	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice

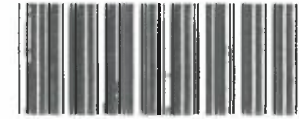


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Karlene Schuman
Modrall Sperling Roehl Harris & Sisk P.A.
500 Fourth Street, Suite 1000
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL
01/16/2020



Firm Mailing Book ID: 182747

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
15	9314 8699 0430 0067 7305 31	Vanguard Operating LLC 5847 San Felipe, Suite 3000 Houston TX 77057	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
16	9314 8699 0430 0067 7305 48	Nestegg Energy Corporation 2308 Sierra Vista Road Artesia NM 88210	\$0.65	\$3.55	\$1.60	\$0.00	81363-0208. Notice
Totals:			\$10.40	\$56.80	\$25.60	\$0.00	
			Grand Total:		\$92.80		

List Number of Pieces
Listed by Sender

Total Number of Pieces
Received at Post Office

Postmaster:
Name of receiving employee

Dated:

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Transaction Report Details - CertifiedPre.net

This Mail Book ID= 187747

Generated: 1/10/2020 10:43:20 AM

USPS Article Number	Date Created	Reference Number	Name 1	Name 2	City	State	Zip	Mailing Status	Service Options	Mail Delivery Date
9314869904300067730548	2020-01-16 8:30 AM	81363-0208	Nestegg Energy Corporation		Artesia	NM	88210	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
9314869904300067730531	2020-01-16 8:30 AM	81363-0208	Vanguard Operating LLC		Houston	TX	77057	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
9314869904300067730524	2020-01-16 8:30 AM	81363-0208	Devon Energy Production Company, LP		Oklahoma City	OK	73102	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
9314869904300067730517	2020-01-16 8:30 AM	81363-0208	McMullen Minerals LLC		Fort Worth	TX	76147	Mailed	Return Receipt - Electronic, Certified Mail	
9314869904300067730500	2020-01-16 8:30 AM	81363-0208	Pegasus Resources LLC		Fort Worth	TX	76107	Mailed	Return Receipt - Electronic, Certified Mail	
9314869904300067730494	2020-01-16 8:30 AM	81363-0208	Regen Royalty Corporation		Artesia	NM	88210	To be Returned	Return Receipt - Electronic, Certified Mail	
9314869904300067730487	2020-01-16 8:30 AM	81363-0208	Fortis Minerals II, LLC		Houston	TX	77002	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
9314869904300067730470	2020-01-16 8:30 AM	81363-0208	Pony Oil Operating LLC, Attn: John Merritt, CEO	4245 North Central Expressway	Dallas	TX	75805	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
9314869904300067730463	2020-01-16 8:30 AM	81363-0208	Mary Lee Harang Picou & Rebecca Ann Picou	co Trustees of Mary Picou Rev. Trust	Virginia Beach	VA	23464	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
9314869904300067730456	2020-01-16 8:30 AM	81363-0208	United States of America		Santa Fe	NM	87508	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
9314869904300067730449	2020-01-16 8:30 AM	81363-0208	EOG Y Resources Inc.		Artesia	NM	88210	To be Returned	Return Receipt - Electronic, Certified Mail	
9314869904300067730432	2020-01-16 8:30 AM	81363-0208	EOG M Resources Inc.		Artesia	NM	88210	To be Returned	Return Receipt - Electronic, Certified Mail	
9314869904300067730425	2020-01-16 8:30 AM	81363-0208	EOG A Resources Inc.		Artesia	NM	88210	To be Returned	Return Receipt - Electronic, Certified Mail	
9314869904300067730418	2020-01-16 8:30 AM	81363-0208	OXY Y-1 Company		Houston	TX	77046	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
9314869904300067730401	2020-01-16 8:30 AM	81363-0208	Concho Resources LLC	One Concho Center	Midland	TX	79701	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
9314869904300067730395	2020-01-16 8:30 AM	81363-0208	COG Operating LLC	One Concho Center	Midland	TX	79701	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020

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Carlsbad Current Argus.

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Affidavit of Publication

Ad # 0004007985

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POBOX 2168

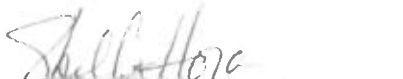
ALBUQUERQUE, NM 87103

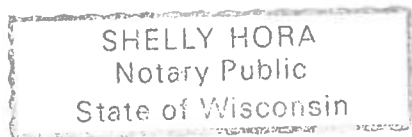
I, a legal clerk of the **Carlsbad Current Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

January 17, 2020


Legal Clerk

Subscribed and sworn before me this January 17, 2020:


State of WI, County of Brown
NOTARY PUBLIC
8-25-23
My commission expires



Ad # 0004007985
PO #: 4007985
of Affidavits 1

This is not an invoice

CASENO. 21030: Notice to all affected parties, as well as the heirs and devisees of: COG Operating LLC, Concho Resources LLC, OXY Y-1 Company, EOG A Resources Inc., EOG M Resources Inc., EOG Y Resources Inc., United States of America, Mary Lee Harang Picou and Rebecca Ann Picou as Co-Trustees of the Mary Lee Harang Picou Revocable Trust Dated April 14, 2000, Pony Oil Operating LLC, Fortis Minerals II, LLC, Regen Royalty Corporation, Pegasus Resources LLC, McMullen Minerals, LLC, Devon Energy Production Company, L.P., Vanguard Operating, LLC, Nestegg Energy Corporation, of Marathon Oil Permian LLC's application for compulsory pooling, Eddy County, New Mexico. The State of New Mexico, through its Oil Conservation Division, hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on February 6, 2020, to consider this application. Applicant seeks an order from the Division pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 6 and 7, Township 26 South, Range 29 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Rick Vaughn 7 WA Fed Com 1H; Rick Vaughn 7 WB Fed Com 5H; Rick Vaughn 7 WA Fed Com 6H; Rick Vaughn 7 WB Fed Com 8H; Rick Vaughn 7 WA Fed Com 9H; Rick Vaughn 7 WB Fed Com 13H; and Rick Vaughn 7 WA Fed Com 14H wells, to be horizontally drilled. The producing area for these wells will be orthodox. Also to be considered will be the cost of drilling and completing said wells, the allocation of these costs as well as the actual operating costs and charges for supervision, designation of Marathon as operator of the wells, and a 200% charge for risk involved in drilling said wells, and allowing a one year period between when the wells are drilled and when the first well is completed. Said area is located approximately 10 miles Southeast of Malaga, New Mexico.
Pub: January 17, 2020 #4007985

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

APPLICATION OF MARATHON OIL PERMIAN LLC FOR COMPUSLORY
POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 21030

AFFIDAVIT

STATE OF TEXAS)
) ss.
COUNTY OF HARRIS)

Rebecca Horne, being duly sworn, deposes and states:

1. I am over the age of 18, I am a geologist for Marathon Oil Permian LLC, and have personal knowledge of the matters stated herein. I have previously testified before the Oil Conservation Division ("Division") and my credentials as an expert petroleum geologist were accepted by the Division as a matter of record.

2. My area of responsibility at Marathon includes the area of Eddy County in New Mexico.

3. I am familiar with the application filed by Marathon in this case.

4. **Exhibit 7** is a locator map showing the approximate location of the proposed wells in relation to the Capitan Reef.

5. **Exhibit 8** is a wellbore schematic showing the Rick Vaughn development plan.

6. The exhibits behind **Tab 9** are the geology study I prepared for the Rick Vaughn wells, which are upper Wolfcamp wells.

7. **Exhibit 9-A** is structure map of the top of the Wolfcamp, and is the structure map for the upper Wolfcamp wells. The proposed project area is identified by a black-dashed box, and



the proposed wells are identified by red and orange lines. The contour interval used in this exhibit is 25 feet. This exhibit shows that the structure dips to the east.

8. Exhibit 9-B is the reference map for the wells I chose for the cross-section. The slide identifies three wells in the vicinity of the proposed upper Wolfcamp wells, shown by a line of cross-section running from A to A'.

9. Exhibit 9-C is a stratigraphic cross section hung on the top of the Wolfcamp. The well logs on the cross-section give a representative sample of the upper Wolfcamp formation in the area. The target zone is identified by the words "Producing Zone" and the shaded area across the cross section, along with a red arrow. The producing zones are the Wolfcamp XY, A, and B.

10. In my opinion, the gross interval thickness increases from west to east.

11. Exhibit 9-D is a Gross Interval Isochore of the Wolfcamp to Wolfcamp C. This slide shows that the gross interval thickness increases from west to east.

12. I conclude from the maps that:

- a. The horizontal spacing unit is justified from a geologic standpoint.
- b. There are no structural impediments or faulting that will interfere with horizontal development.
- c. Each quarter section in the proposed unit will contribute more or less equally to production.

13. Exhibit 10 provides an overview of the stress orientation in the area based on the 2018 Snee-Zoback paper.

14. The preferred well orientation in this area is north/south. This is because the S_{Hmax} is at approximately 60-70 degrees in southern-Eddy County.

15. Exhibits 7-10 were prepared by my or under my supervision or compiled from company business records.

16. In my opinion, the granting of Marathon's application is in the interests of conservation and the prevention of waste.

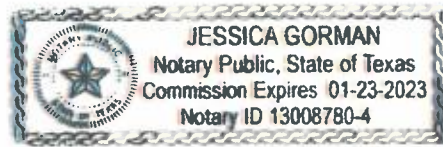
[Signature page follows]

Rebecca Horne
Rebecca Horne

SUBSCRIBED AND SWORN to before me this 30th day of January 2020 by Rebecca Horne, on behalf of Marathon Oil Permian LLC.

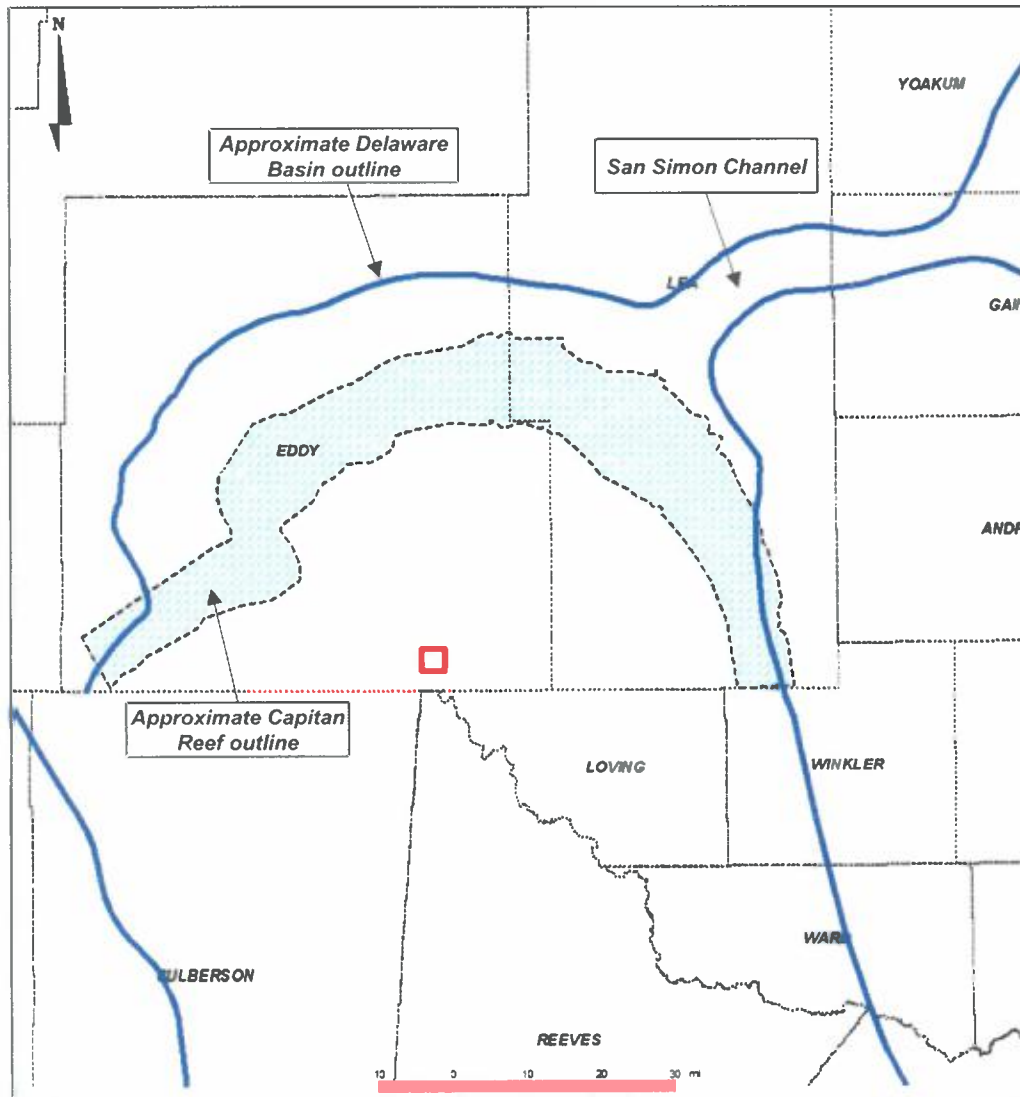
Jessica Gorman
Notary Public

My commission expires: 1/23/2023



Rick Vaughn 7 Fed Com Unit

Locator Map

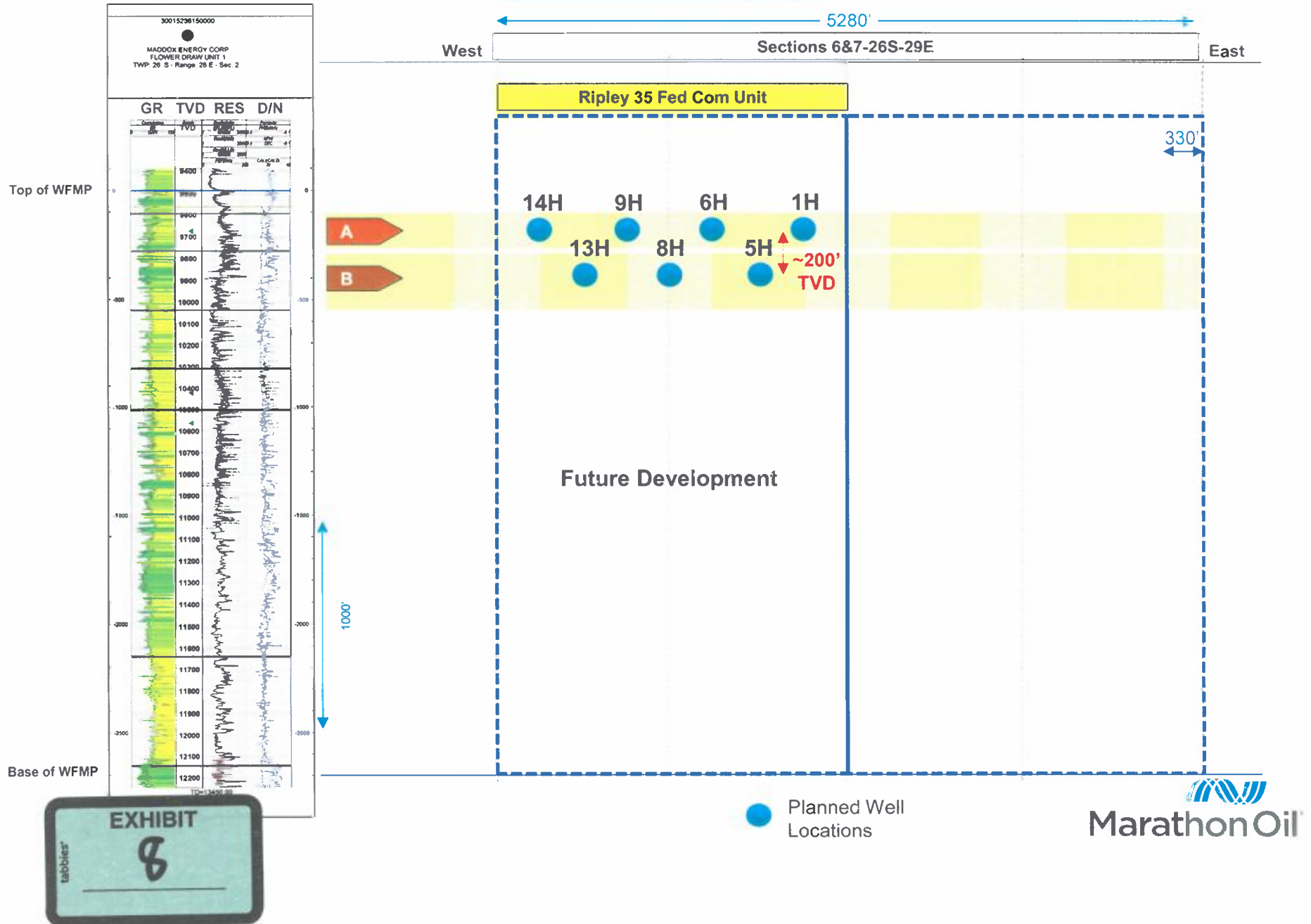


- Approximate location of proposed Rick Vaughn 7 Fed Com well locations shown with red box
- Located basinward of the Capitan Reef
- Southern Eddy county



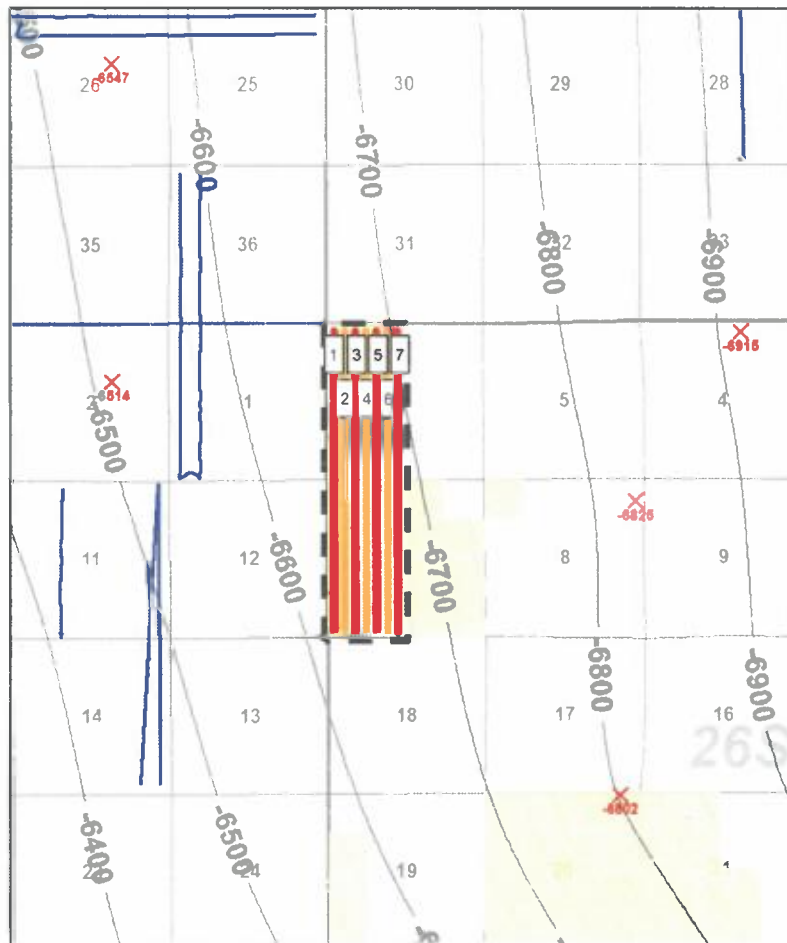
Rick Vaughn 7 Fed Com Unit

Wellbore Schematic



Rick Vaughn 7 Fed Com Unit

Structure Map for Upper Wolfcamp Wells – Top of Wolfcamp (TVDSS)



C.I. = 25'

1 mile

Map Legend

 MRO Acreage
 Project Area

 WFMP A

 WFMP B

MRO – Horizontal
Location



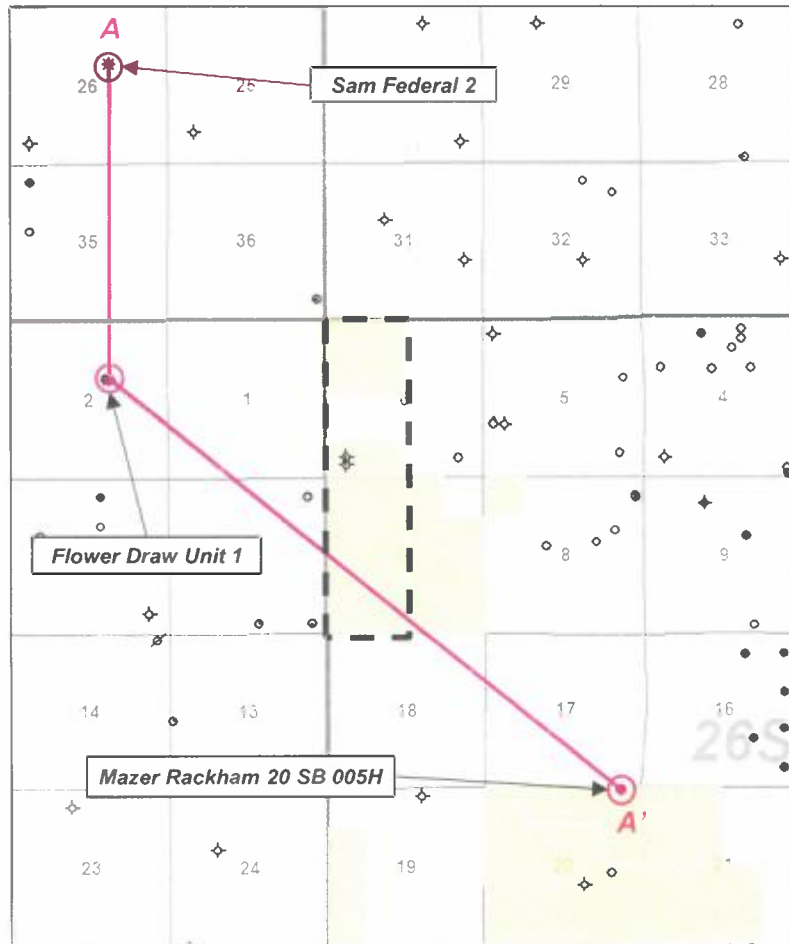
Producing Upper
Wolfcamp Wells

- 1 Rick Vaughn 7 WA Fed Com 14H
- 2 Rick Vaughn 7 WB Fed Com 13H
- 3 Rick Vaughn 7 WA Fed Com 9H
- 4 Rick Vaughn 7 WB Fed Com 8H
- 5 Rick Vaughn 7 WA Fed Com 6H
- 6 Rick Vaughn 7 WB Fed Com 5H
- 7 Rick Vaughn 7 WA Fed Com 1H

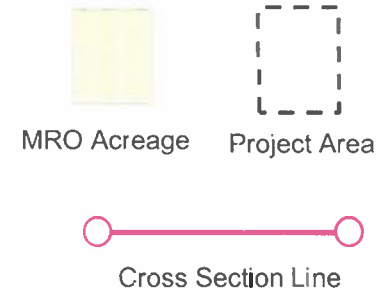


Rick Vaughn 7 Fed Com Unit

Reference Map for Cross Section



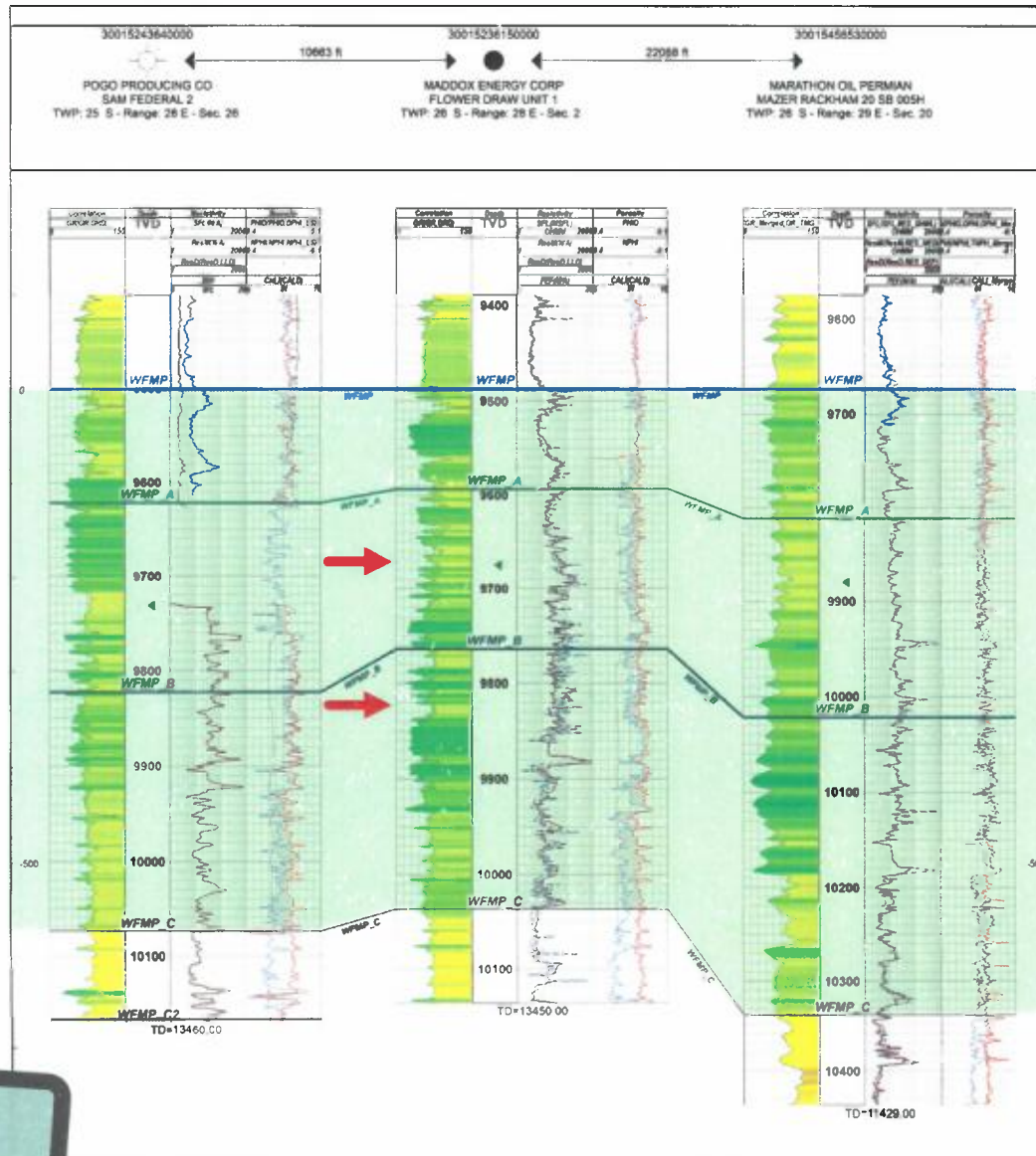
Map Legend



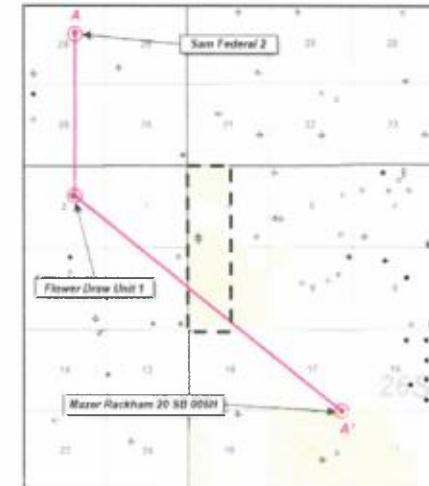
Rick Vaughn 7 Fed Com Unit

Stratigraphic Cross Section (Top Wolfcamp Datum)

A



A'



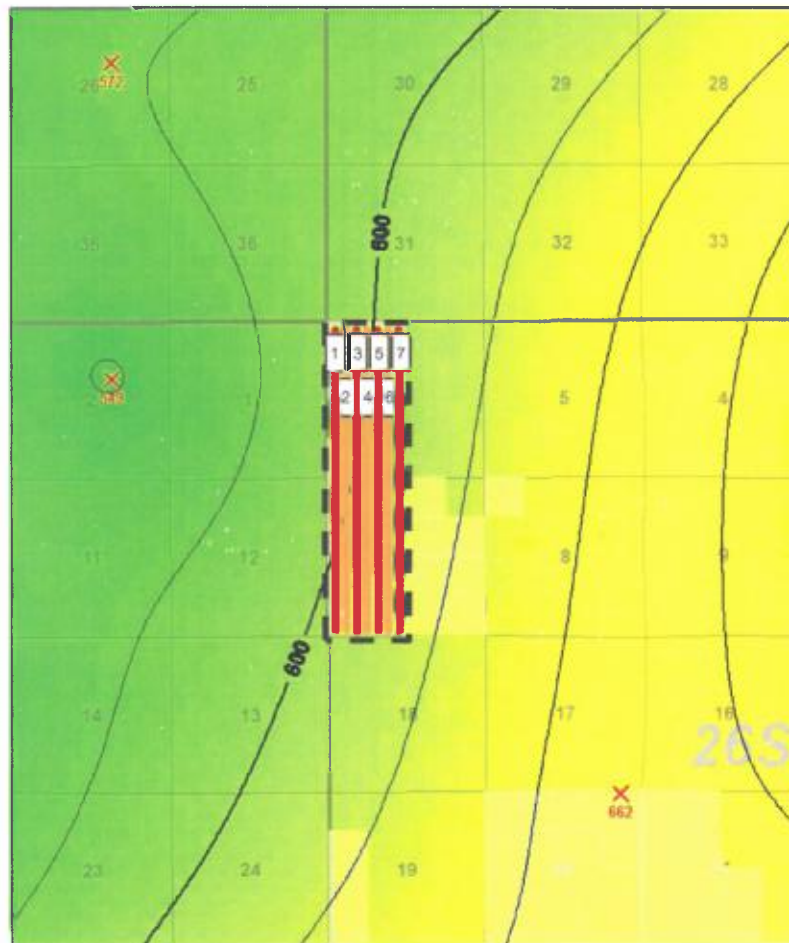
Gross interval thickness increases from west to east.

Producing Zone – Wolfcamp XY, A, & B

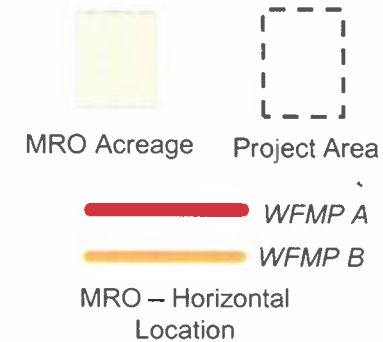


Rick Vaughn 7 Fed Com Unit

Gross Interval Isochore – Wolfcamp to Wolfcamp C



Map Legend



- 1 Rick Vaughn 7 WA Fed Com 14H
- 2 Rick Vaughn 7 WB Fed Com 13H
- 3 Rick Vaughn 7 WA Fed Com 9H
- 4 Rick Vaughn 7 WB Fed Com 8H
- 5 Rick Vaughn 7 WA Fed Com 6H
- 6 Rick Vaughn 7 WB Fed Com 5H
- 7 Rick Vaughn 7 WA Fed Com 1H

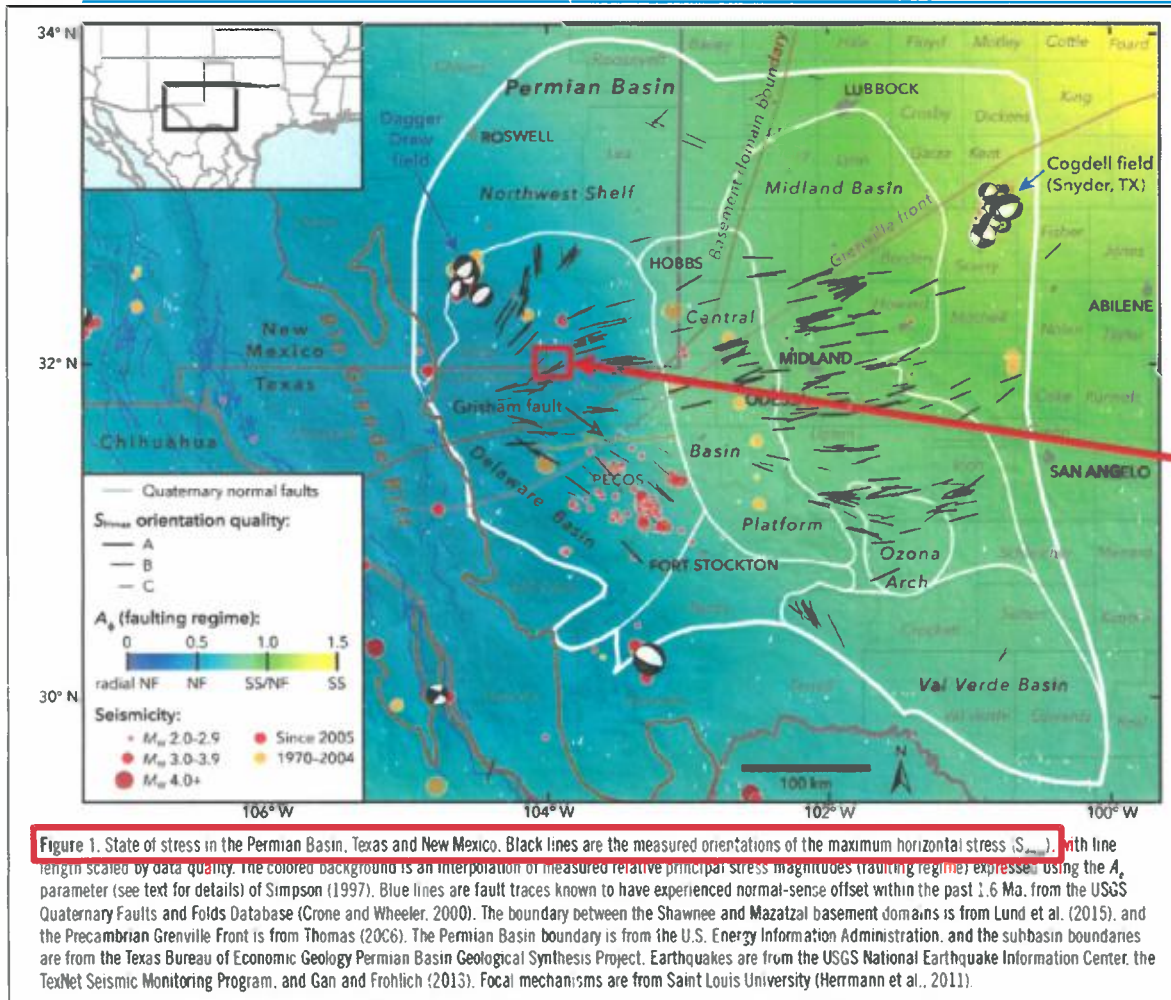
C.I. = 25'

1 mile



Rick Vaughn 7 Fed Com Unit

Preferred Well Orientation - SHmax



Preferred well orientation is N/S.

As outlined in Snee & Zoback (2018), S_{Hmax} is at approximately 60-70 degrees in southern Eddy county. It is preferable to have N/S oriented wellbores at the Rick Vaughn unit (outlined with red box) since hydraulic fractures will propagate outwards at 60-70 degrees.

Source:

Snee, J.L. & M.D. Zoback, 2018, *State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity: The Leading Edge*, 810-819, <https://doi.org/10.1190/tle37020810.1>.

EXHIBIT

10