

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

APPLICATION OF CIMAREX  
ENERGY CO. FOR COMPULSORY  
POOLING, EDDY COUNTY,  
NEW MEXICO

CASE NO. 21021

Examiner Docket: February 6, 2020

**CIMAREX'S EXHIBITS**

Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H,  
Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H,  
Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and  
Riverbend 12-13 Fed Com 35H



Earl E. DeBrine, Jr.  
Lance D. Hough



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DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
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Exhibit A      Compulsory Pooling Application Checklist

Exhibit B      Affidavit of Caitlin Pierce  
                 B-1      Application  
                 B-2      C102s  
                 B-3      Tract Map with WIs and ORRIs  
                 B-4      Well Proposal Letter  
                 B-5      Excerpt from Proposed JOA  
                 B-6      Authorization for Expenditure  
                 B-7      Communication Timeline

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Exhibit C      Affidavit of Harrison Hastings  
                 C-1      Gun Barrel Diagram  
                 C-2      Regional Locator Map  
                 C-3      Cross-Section Locator Map  
                 C-4      Deep Structure Map  
                 C-5      Lower Wolfcamp Isopach Map  
                 C-6      Stratigraphic Cross Section  
                 C-7      Target Zone within Stratigraphic Cross Section

Exhibit D      Affidavit of Lance D. Hough  
                 D-1      Hearing Notice  
                 D-2      Certified Mail Log / Notice January 16, 2020  
                 D-3      Certified Mail Log / Report February 4, 2020  
                 D-4      Affidavit of Publication

Earl E. DeBrine, Jr.  
Lance D. Hough



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# COMPULSORY POOLING APPLICATION CHECKLIST (pdf)

ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS

Case: 21021

APPLICANT'S RESPONSE

Date 2/6/20

Applicant

Cimarex Energy Co.

Designated Operator & OGRID (affiliation if applicable)

Cimarex Energy Co. (OGRID 215099)

Applicant's Counsel:

Modrall Sperling

Case Title:

APPLICATION OF CIMAREX ENERGY CO. FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO, CASE NO. 21021

Entries of Appearance/Intervenors:

None

Well Family

Riverbend

## Formation/Pool

Formation Name(s) or Vertical Extent:

Wolfcamp Formation

Primary Product (Oil or Gas):

Gas

Pooling this vertical extent:

Wolfcamp Formation

Pool Name and Pool Code:

Purple Sage; Wolfcamp Pool (Pool Code 98220)

Well Location Setback Rules:

Division's special set back requirements in Order No. R-14262

Spacing Unit Size:

640 Acres

## Spacing Unit

Type (Horizontal/Vertical)

Horizontal

Size (Acres)

640 Acres

Building Blocks:

Half Section Equivalents

Orientation:

North to South

Description: TRS/County

W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico

Standard Horizontal Well Spacing Unit (Y/N), If No, describe

Yes

## Other Situations

Depth Severance: Y/N. If yes, description

No

Proximity Tracts: If yes, description

No

Proximity Defining Well: if yes, description

N/A

Applicant's Ownership in Each Tract

Exhibit B.3

## Well(s)

Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)

See Exhibit B.1 and Exhibit B.2

Well #1

Riverbend 12-13 Fed Com 29H, API No. 30-015-Pending  
SHL: SE/4 SE/4 (Unit P) of Section 3, Township 25 South, Range 26 East, NMPM, Eddy County.  
BHL: SW/4 SW/4 (Unit M) of Section 4, Township 25 South, Range 26 East, NMPM, Eddy County

Completion Target: Wolfcamp at approx 10,760 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

Well #2


Riverbend 12-13 Fed Com 30H, API No. 30-015-Pending  
SHL: 1,379' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  
BHL: 330' FSL and 2310' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,714 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard



Well #3	<p>Riverbend 12-13 Fed Com 31H, API No. 30-015-Pending  SHL: 1,439' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  BHL: 330' FSL and 1,874' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County</p> <p>Completion Target: Wolfcamp at approx 9,918 feet TVD.  Well Orientation: North to South  Completion Location expected to be: Standard</p>
Well #4	<p>Riverbend 12-13 Fed Com 32H, API No. 30-015-Pending  SHL: 1,439' FSL and 1,257' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  BHL: 330' FSL and 330' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County</p> <p>Completion Target: Wolfcamp at approx 9,918 feet TVD.  Well Orientation: North to South  Completion Location expected to be: Standard</p>
Well #5	<p>Riverbend 12-13 Fed Com 33H, API No. 30-015-Pending  SHL: 1,439' FSL and 1,277' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  BHL: 330' FSL and 716' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County</p> <p>Completion Target: Wolfcamp at approx 9,714 feet TVD.  Well Orientation: North to South  Completion Location expected to be: Standard</p>
Well #6	<p>Riverbend 12-13 Fed Com 34H, API No. 30-015-Pending  SHL: 1,439' FSL and 1,297' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  BHL: 330' FSL and 1,102' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County</p> <p>Completion Target: Wolfcamp at approx 9,918 feet TVD.  Well Orientation: North to South  Completion Location expected to be: Standard</p>
Well #7	<p>Riverbend 12-13 Fed Com 35H, API No. 30-015-Pending  SHL: 1,439' FSL and 1,317' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  BHL: 330' FSL and 1,488' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County</p> <p>Completion Target: Wolfcamp at approx 9,714 feet TVD.  Well Orientation: North to South  Completion Location expected to be: Standard</p>
Horizontal Well First and Last Take Points	Exhibit B.2
Completion Target (Formation, TVD and MD)	Exhibit B.1; Exhibit B.2; Exhibit B.4; Exhibit C.6, Exhibit C.1; Exhibit C.7
<b>AFE Capex and Operating Costs</b>	
Drilling Supervision/Month \$	6,500
Production Supervision/Month \$	650
Justification for Supervision Costs	Exhibit B.6 for AFEs
Requested Risk Charge	200%; see Exhibit B
<b>Notice of Hearing</b>	
Proposed Notice of Hearing	Exhibit D.1
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit D.2 and D.3
Proof of Published Notice of Hearing (10 days before hearing)	Exhibit D.4
<b>Ownership Determination</b>	
Land Ownership Schematic of the Spacing Unit	Exhibit B; Exhibit B.3
Tract List (including lease numbers and owners)	Exhibit B.3



Pooled Parties (including ownership type)	Exhibit B.3
Unlocatable Parties to be Pooled	Exhibit B.3; Exhibit D.2
Ownership Depth Severance (including percentage above & below)	None
<b>Joinder</b>	
Sample Copy of Proposal Letter	Exhibit B.4
List of Interest Owners (ie Exhibit A of JOA)	Exhibit B.3
Chronology of Contact with Non-Joined Working Interests	Exhibit B.7
Overhead Rates In Proposal Letter	Exhibit B.5
Cost Estimate to Drill and Complete	Exhibit B.6 for AFEs
Cost Estimate to Equip Well	Exhibit B.6 for AFEs
Cost Estimate for Production Facilities	Exhibit B.6 for AFEs
<b>Geology</b>	
Summary (including special considerations)	Exhibit C
Spacing Unit Schematic	Exhibits C.1, C.2, and C.3
Gunbarrel/Lateral Trajectory Schematic	Exhibit C.1
Well Orientation (with rationale)	Exhibit C
Target Formation	Exhibits C.6 and C.7
HSU Cross Section	Exhibits C.6 and C.7
Depth Severance Discussion	Exhibit B
<b>Forms, Figures and Tables</b>	
C-102	Exhibit C.2
Tracts	Exhibit B.3
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit B.3
General Location Map (including basin)	Exhibit C.2
Well Bore Location Map	Exhibits C.1
Structure Contour Map - Subsea Depth	Exhibit C.4
Cross Section Location Map (including wells)	Exhibits C.3
Cross Section (including Landing Zone)	Exhibits C.6 and C.7
<b>Additional Information</b>	
<b>CERTIFICATION: I hereby certify that the information provided in this checklist is complete and accurate.</b>	
Printed Name (Attorney or Party Representative):	Lance Hough
Signed Name (Attorney or Party Representative):	
Date:	2/5/20

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

**APPLICATION OF CIMAREX  
ENERGY CO. FOR COMPULSORY  
POOLING, EDDY COUNTY,  
NEW MEXICO**

**CASE NO. 21021**

**AFFIDAVIT OF CAITLIN PIERCE**

STATE OF TEXAS                                 )  
                                                              ) ss.  
COUNTY OF MIDLAND                         )

Caitlin Pierce, being duly sworn, deposes and states:

1. I am a landman for Cimarex Energy Co. ("Cimarex"), over the age of 18 and have personal knowledge of the matters stated herein. I have previously been qualified to testify by the New Mexico Oil Conservation Division as an expert in petroleum land matters.

2. Pursuant to NMAC 19.15.4.12.A(1), the following information is submitted in support of the above referenced compulsory pooling applications filed by Cimarex.

3. This case involves a request for an order from the Division for compulsory pooling of interest owners who have refused to voluntarily pool their interests for the proposed Wolfcamp horizontal spacing unit described below, and in the well to be drilled in the horizontal spacing unit.

4. Prior to filing it application, Cimarex made a good faith effort to obtain voluntary joinder of the working interest owners in the proposed well. Cimarex identified all of the working interest, unleased mineral interests, and overriding royalty interest owners from a title opinion. To locate interest owners, Cimarex conducted a diligent search of the public records in the county where the well will be located, and conducted phone directory and computer searches to locate



contact information for parties entitled to notification. I mailed all working interest owners well proposals and an Authorization for Expenditure, and a form of Operating Agreement upon request.

5. No opposition is expected. Prior to filing its applications Cimarex contacted the interest owners being pooled regarding the proposed well; the pooled working interest owners have failed or refused to voluntarily commit their interests in the well. Cimarex provided all of the working interest owners, any unleased mineral owners, and overriding royalty owners with notice of this application, and none have entered an appearance in opposition to Cimarex's application.

6. In its Application, Cimarex seeks an order from the Division: (1) to the extent necessary, approving the creation of a 640-acre, more or less, Wolfcamp horizontal spacing unit; and, (2) pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H, Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H, Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and Riverbend 12-13 Fed Com 35H** wells, to be horizontally drilled. The Application is attached hereto as **Exhibit B.1**.

7. Attached as **Exhibit B.2** are the C-102s for the proposed wells. The wells will develop the Purple Sage; Wolfcamp Pool (Pool Code 98220), which is a gas pool. The producing interval for the wells will be orthodox and will comply with the Division's special set back requirements in Order No. R-14262, as the first and last take points will be no closer than 330' from the proposed unit boundary and the completed lateral will be no closer than 330' from the proposed unit boundary.

8. A lease tract map outlining the unit to be pooled is attached hereto as **Exhibit B.3**. The working interest owners being pooled and the percent of their interest, as well as a list of

overriding royal interest owners being pooled, are also included as part of **Exhibit B.3**. Cimarex owns an interest in the proposed unit and has a right to drill a well thereon.

9. There are no depth severances within the proposed spacing unit.

10. **Exhibit B.4** is a sample well proposal letter sent to each of the working interest owners seeking their voluntary participation in the wells.

11. **Exhibit B.5** is an excerpt of the proposed joint operating agreement, included with the well proposal letter sent to each of the working interest owners, that provides overhead and administrative rates of \$6,500/month during drilling and \$650/month while producing.

12. **Exhibit B.6** are the Authorizations for Expenditure for the proposed wells. The estimated cost of each well, set forth therein and listed below, is fair and reasonable, and is comparable to the costs of other wells of similar depth, length and completion method being drilled in this area of New Mexico.

a. **Riverbend 12-13 Fed Com 29H:** \$13,028,000.

b. **Riverbend 12-13 Fed Com 30H:** \$12,353,000.

c. **Riverbend 12-13 Fed Com 31H:** \$11,249,000.

d. **Riverbend 12-13 Fed Com 32H:** \$11,256,000.

e. **Riverbend 12-13 Fed Com 33H:** \$11,230,000.

f. **Riverbend 12-13 Fed Com 34H:** \$11,238,000.

g. **Riverbend 12-13 Fed Com 35H:** \$11,230,000.

13. **Exhibit B.7** is a summary of communications with the non-joined working interest.

14. Cimarex requests overhead and administrative rates of \$6,500/month during drilling and \$650/month while producing. 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 and consistent

with the rates awarded by the Division in recent compulsory pooling orders. Cimarex requests that these rates be adjusted periodically as provided in the COPAS Accounting Procedure.

15. Cimarex requests the maximum cost plus 200% risk charge be assessed against non-consenting pooled working interest owners.

16. Cimarex requests that it be designated operator of the well.

17. Cimarex 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.

18. The parties Cimarex is seeking to pool were notified of this hearing.

19. Cimarex requests that overriding royalty interest owners be pooled.

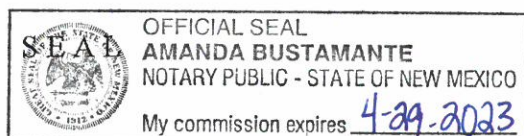
20. Based upon my knowledge of the land matters involved in this case, education and training, it is my expert opinion that the granting of Cimarex's applications in this case is in the interests of conservation and the prevention of waste.

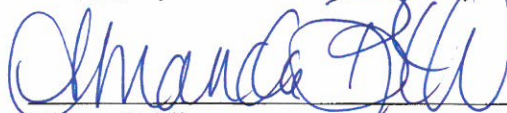
21. The attachments to my Affidavit were prepared by me or compiled from company business records.

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

  
Caitlin Pierce

SUBSCRIBED AND SWORN to before me this 5<sup>th</sup> day of February 2020 by Caitlin Pierce.



  
Notary Public  
My commission expires: 4-29-2023



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

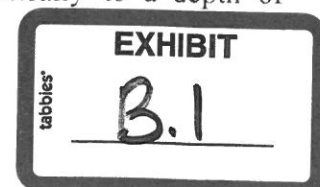
APPLICATION OF CIMAREX  
ENERGY CO. FOR COMPULSORY  
POOLING, EDDY COUNTY,  
NEW MEXICO

CASE NO. \_\_\_\_\_

APPLICATION

Cimarex Energy Co. ("Cimarex"), OGRID Number 215099, 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 Bone Spring horizontal spacing unit underlying the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. In support of this application, Cimarex states as follows:

1. Cimarex is an interest owner in the subject lands and has a right to drill a well thereon.
2. Cimarex seeks to dedicate the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico to form a 640-acre, more or less, Wolfcamp horizontal spacing unit.
3. Cimarex plans to drill the **Riverbend 12-13 Fed Com 29H to 35H** wells to a depth sufficient to test the Wolfcamp formation, and laterally in a southerly direction within the formation to the referenced bottom hole location:
  - a. The **Riverbend 12-13 Fed Com 29H** well is a horizontal well with a surface hole location at 1,379' FSL and 1396' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 2200' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 10,760' to the Wolfcamp formation.



- b. The **Riverbend 12-13 Fed Com 30H** well is a horizontal well with a surface hole location at 1,379' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 2310' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation.
- c. The **Riverbend 12-13 Fed Com 31H** well is a horizontal well with a surface hole location at 1,439' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 1,874' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation.
- d. The **Riverbend 12-13 Fed Com 32H** well is a horizontal well with a surface hole location at 1,439' FSL and 1,257' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 330' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation.
- e. The **Riverbend 12-13 Fed Com 33H** well is a horizontal well with a surface hole location at 1,439' FSL and 1,277' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 716' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation.
- f. The **Riverbend 12-13 Fed Com 34H** well is a horizontal well with a surface hole location at 1,439' FSL and 1,297' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 1,102' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation.
- g. The **Riverbend 12-13 Fed Com 35H** well is a horizontal well with a surface hole location at 1,439' FSL and 1,317' FWL of Section 1, Township 25 South, Range 28 East, Eddy County, and an intended bottom hole location at 330' FSL and 1,488' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation.

4. These wells will be located within the Purple Sage; Wolfcamp (Gas) Pool (Pool Code: 98220) and will comply with the Division's special setback requirements set forth in R-14262.

5. Cimarex 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.

6. The creation of a horizontal spacing unit and 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.

7. A proposed Exhibit A for the Division's compulsory pooling order describing the horizontal spacing unit is attached hereto as "Exhibit A".

WHEREFORE, Cimarex requests that this case is 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. Creating an approximately 640-acre horizontal spacing unit in the Wolfcamp formation comprised of W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico;

B. Pooling all mineral interests in the Wolfcamp formation underlying a horizontal spacing unit within the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico;

C. Designating Cimarex as operator of this unit and the wells to be drilled thereon;

D. Authorizing Cimarex to recover its costs of drilling, equipping and completing the wells;

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

F. 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.

Respectfully submitted,

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

By: 

Earl E. DeBrine, Jr.  
Lance D. Hough  
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[ldh@modrall.com](mailto:ldh@modrall.com)  
*Attorneys for Applicant*

W3590721.DOCX

CASE NO. \_\_\_\_: Application of Cimarex Energy Co. for compulsory pooling, Eddy County, New Mexico. Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 640-acre, more or less, Wolfcamp horizontal spacing unit; and, (2) pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H, Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H, Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and Riverbend 12-13 Fed Com 35H** 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 Cimarex as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 9.5 miles south of Loving, New Mexico.



### **Exhibit "A"**

Applicant: Cimarex Energy Co.  
Operator: Cimarex Energy Co. (OGRID 215099)

Spacing Unit: Horizontal Gas  
Building Blocks: Half Section Equivalent  
Spacing Unit Size: 640 acres (more or less)  
Orientation of Unit: North/South

Spacing Unit Description:  
W/2 of Sections 12 and 13, Township 25 South, Range 28 East,  
NMPM, Eddy County, New Mexico

Pooling this Vertical Extent: Wolfcamp Formation  
Depth Severance? (Yes/No): No

Pool: Purple Sage; Wolfcamp Gas (Pool code 98220)  
Pool Spacing Unit Size: Half Sections  
Governing Well Setbacks: Special Rules for the Purple Sage Gas Pool Apply  
Pool Rules: Purple Sage and Horizontal Well Rules

Proximity Tracts: No

Monthly charge for supervision: While drilling: \$6,500; while producing: \$650  
As the charge for risk, 200 percent of reasonable well costs.

#### **Proposed Wells:**

##### **Riverbend 12-13 Fed Com 29H, API No. 30-015-Pending**

SHL: 1,379' FSL and 1396' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.

BHL: 330' FSL and 2200' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 10,760 feet TVD.

Well Orientation: North to South

Completion Location expected to be: Standard

##### **Riverbend 12-13 Fed Com 30H, API No. 30-015-Pending**

SHL: 1,379' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.

BHL: 330' FSL and 2310' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,714 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

**Riverbend 12-13 Fed Com 31H, API No. 30-015-Pending**

SHL: 1,439' FSL and 1,376' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  
BHL: 330' FSL and 1,874' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,918 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

**Riverbend 12-13 Fed Com 32H, API No. 30-015-Pending**

SHL: 1,439' FSL and 1,257' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  
BHL: 330' FSL and 330' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,918 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

**Riverbend 12-13 Fed Com 33H, API No. 30-015-Pending**

SHL: 1,439' FSL and 1,277' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  
BHL: 330' FSL and 716' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,714 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

**Riverbend 12-13 Fed Com 34H, API No. 30-015-Pending**

SHL: 1,439' FSL and 1,297' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.  
BHL: 330' FSL and 1,102' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,918 feet TVD.  
Well Orientation: North to South  
Completion Location expected to be: Standard

**Riverbend 12-13 Fed Com 35H, API No. 30-015-Pending**

Case No. \_\_\_\_\_  
Order No. R- \_\_\_\_\_  
Page 3 of 3

SHL: 1,439' FSL and 1,317' FWL of Section 1, Township 25 South, Range 28 East, Eddy County.

BHL: 330' FSL and 1,488' FWL of Section 13, Township 25 South, Range 28 East, NMPM, Eddy County.

Completion Target: Wolfcamp at approx 9,714 feet TVD.

Well Orientation: North to South

Completion Location expected to be: Standard

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 Arroyos 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  
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JUN 06 2018

WELL LOCATION AND ACREAGE DEDICATION

<sup>1</sup> API Number 30-015 45021	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp gas
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	
<sup>7</sup> OGRID No. 215099	<sup>6</sup> Operator Name CIMAREX ENERGY CO.	<sup>8</sup> Well Number 29H <sup>9</sup> Elevation 2937.2

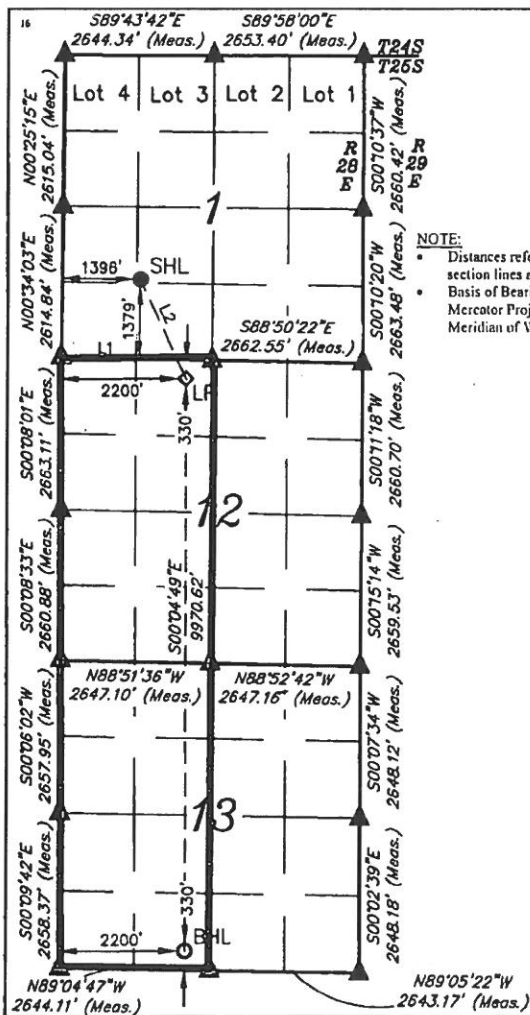
"Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	I	25S	28E		1379	SOUTH	1396	WEST	EDDY

"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
N	I3	25S	28E		330	SOUTH	2200	WEST	EDDY
<sup>11</sup> Dedicated Acres 640		<sup>12</sup> Joint or Infill		<sup>13</sup> Consolidation Code		<sup>14</sup> Order No.			

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.



- = SURFACE HOLE LOCATION
- ◆ = LANDING POINT
- = BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED

NOTE:  
• Distances referenced on plat to section lines are perpendicular.  
• Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

<b>NAD 83 (SURFACE HOLE LOCATION)</b>	
LATITUDE = 32°09'21.01" (32.155835)	
LONGITUDE = 104°02'41.78" (104.044939)	
<b>NAD 27 (SURFACE HOLE LOCATION)</b>	
LATITUDE = 32°09'20.56" (32.155712)	
LONGITUDE = 104°02'40.02" (104.044450)	
<b>STATE PLANE NAD 83 (N.M. EAST)</b>	
N: 420547.64 E: 630584.99	
<b>STATE PLANE NAD 27 (N.M. EAST)</b>	
N: 420489.37 E: 589400.83	

<b>NAD 83 (BOTTOM HOLE LOCATION)</b>	
LATITUDE = 32°07'25.30" (32.123694)	
LONGITUDE = 104°02'32.22" (104.042283)	
<b>NAD 27 (BOTTOM HOLE LOCATION)</b>	
LATITUDE = 32°07'24.86" (32.123572)	
LONGITUDE = 104°02'30.46" (104.041794)	
<b>STATE PLANE NAD 83 (N.M. EAST)</b>	
N: 408857.90 E: 631438.62	
<b>STATE PLANE NAD 27 (N.M. EAST)</b>	
N: 408799.85 E: 590254.17	

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2665.14'
L2	S24°37'55"E	1897.82'



DRAWN BY: C.D. 03-28-17

REV: 2 12-18-17 C.D. (SHL CHANGE)

"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: *Aricka Easterling* Date: 2/1/18

Aricka Easterling

Printed Name

aeasterling@cimarex.com

E-mail Address

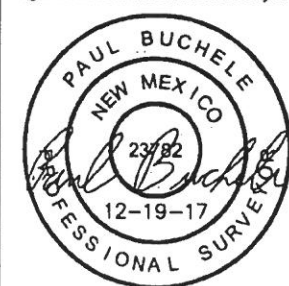
"SURVEYOR  
CERTIFICATION

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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

EXHIBIT

B2

Rev 6-6-18

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
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District IV  
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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  
**ARTESIA DISTRICT**

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
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**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number <b>30-015 45022</b>	<sup>2</sup> Pool Code <b>98220</b>	<sup>3</sup> Pool Name <b>Purple Sage Wolfcamp</b>
<sup>4</sup> Code <b>32/482</b>	<sup>5</sup> Property Name <b>RIVERBEND 12-13 FEDERAL COM</b>	<sup>6</sup> Well Number <b>30H</b>
<sup>7</sup> World No. <b>215099</b>	<sup>8</sup> Operator Name <b>CIMAREX ENERGY CO.</b>	<sup>9</sup> Elevation <b>2937.6</b>

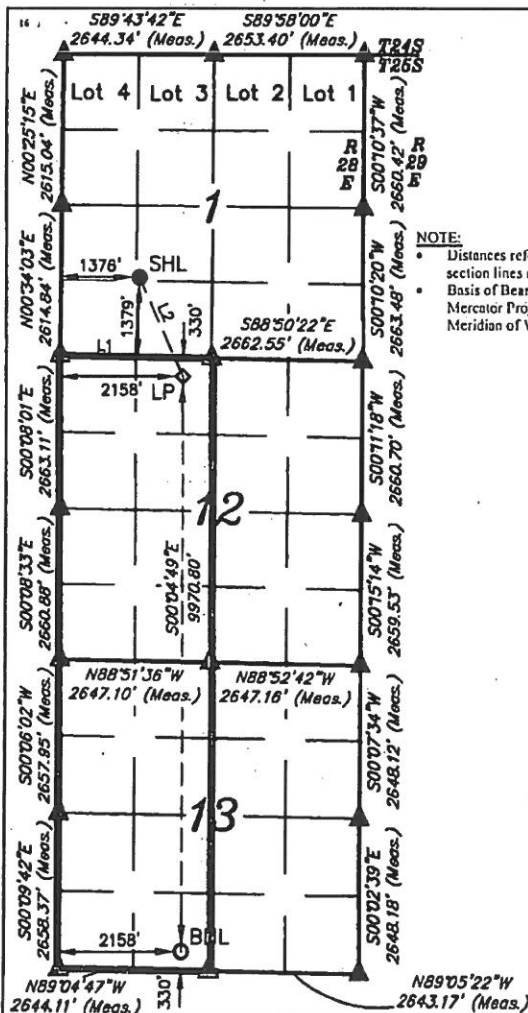
**"Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	1	25S	28E		1379	SOUTH	1376	WEST	EDDY

**"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
N	13	25S	28E		330	SOUTH	2158	WEST	EDDY
<sup>11</sup> Dedicated Acres <b>640</b>	<sup>12</sup> Joint or Infill	<sup>13</sup> Consolidation Code	<sup>14</sup> Order No.						

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.



- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT
- = BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED

**NOTE:**  
• Distances referenced on plat to section lines are perpendicular.  
• Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

<b>NAD 83 (SURFACE HOLE LOCATION)</b>
LATITUDE = 32°09'21.01" (32.155836)
LONGITUDE = 104°02'42.01" (104.045003)
<b>NAD 27 (SURFACE HOLE LOCATION)</b>
LATITUDE = 32°09'20.57" (32.155713)
LONGITUDE = 104°02'40.25" (104.044514)
<b>STATE PLANE NAD 83 (N.M. EAST)</b>
N: 420548.00 E: 630564.98
<b>STATE PLANE NAD 27 (N.M. EAST)</b>
N: 420489.72 E: 589380.82

<b>NAD 83 (BOTTOM HOLE LOCATION)</b>
LATITUDE = 32°07'25.31" (32.123697)
LONGITUDE = 104°02'32.71" (104.042419)
<b>NAD 27 (BOTTOM HOLE LOCATION)</b>
LATITUDE = 32°07'24.86" (32.123572)
LONGITUDE = 104°02'30.95" (104.041931)
<b>STATE PLANE NAD 83 (N.M. EAST)</b>
N: 408858.40 E: 631396.62
<b>STATE PLANE NAD 27 (N.M. EAST)</b>
N: 408800.34 E: 590212.18

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2665.14'
L2	S24°01'51"E	1888.38'



SCALE

DRAWN BY: S.F. 08-09-17

REV: I 12-18-17 C.D. (SHL CHANGE)

**"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 hereinafter entered by the division.

*Aricka Easterling* 2/1/18  
Signature Date

Aricka Easterling

Printed Name

aeasterling@cimarex.com

E-mail Address

**"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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

RWP 6-6-18



RECEIVED

MAY 07 2019

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  
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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
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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

<sup>1</sup> API Number 30-015 <b>45972</b>	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp (Gas)
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	<sup>6</sup> Well Number 31H
<sup>7</sup> OGRID No. 215099	<sup>8</sup> Operator Name CIMAREX ENERGY CO.	<sup>9</sup> Elevation 2937.5

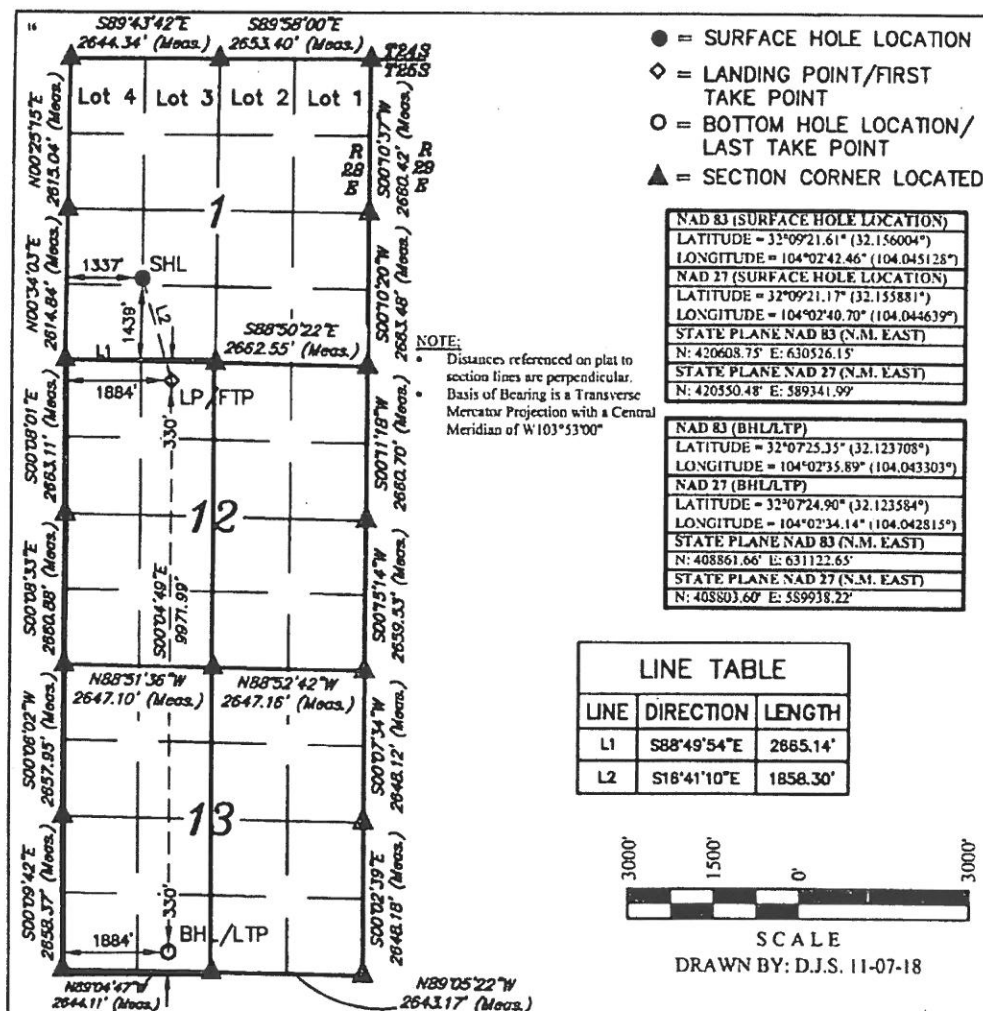
## "Surface Location

UL or lot no. K	Section I	Township 25S	Range 28E	Lot Idn	Feet from the 1439	North/South line SOUTH	Feet from the 1337	East/West line WEST	County EDDY
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## "Bottom Hole Location If Different From Surface

UL or lot no. N	Section 13	Township 25S	Range 28E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 1884	East/West line WEST	County EDDY
<sup>11</sup> Dedicated Acres 640	<sup>12</sup> Joint or Infill	<sup>13</sup> Consolidation Code	<sup>14</sup> Order No.						

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.



- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED

<b>NAD 83 (SURFACE HOLE LOCATION)</b>	
LATITUDE = 32°09'21.61" (32.156004°)	
LONGITUDE = 104°02'42.46" (104.045128°)	
<b>NAD 27 (SURFACE HOLE LOCATION)</b>	
LATITUDE = 32°09'21.17" (32.155881°)	
LONGITUDE = 104°02'40.70" (104.044639°)	
<b>STATE PLANE NAD 83 (N.M. EAST)</b>	
N: 420608.75' E: 630526.15'	
<b>STATE PLANE NAD 27 (N.M. EAST)</b>	
N: 420550.48' E: 589341.99'	

<b>NAD 83 (BHL/LTP)</b>	
LATITUDE = 32°07'25.35" (32.123708°)	
LONGITUDE = 104°02'35.89" (104.043303°)	
<b>NAD 27 (BHL/LTP)</b>	
LATITUDE = 32°07'24.90" (32.123584°)	
LONGITUDE = 104°02'34.14" (104.042815°)	
<b>STATE PLANE NAD 83 (N.M. EAST)</b>	
N: 408861.66' E: 631122.63'	
<b>STATE PLANE NAD 27 (N.M. EAST)</b>	
N: 408803.60' E: 589938.22'	

## "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: *Hope Knauls* Date: 11-13-18

Hope Knauls

Printed Name

hknauls@cimarex.com

E-mail Address

## "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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

RWP 5-9-19

RECEIVED

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  
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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

MAY 07 2019

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
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## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015 <b>45973</b>	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp (Gas)
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	
<sup>7</sup> OGRID No. 215099	<sup>6</sup> Operator Name CIMAREX ENERGY CO.	<sup>8</sup> Well Number 32H <sup>9</sup> Elevation 2938.4

## "Surface Location

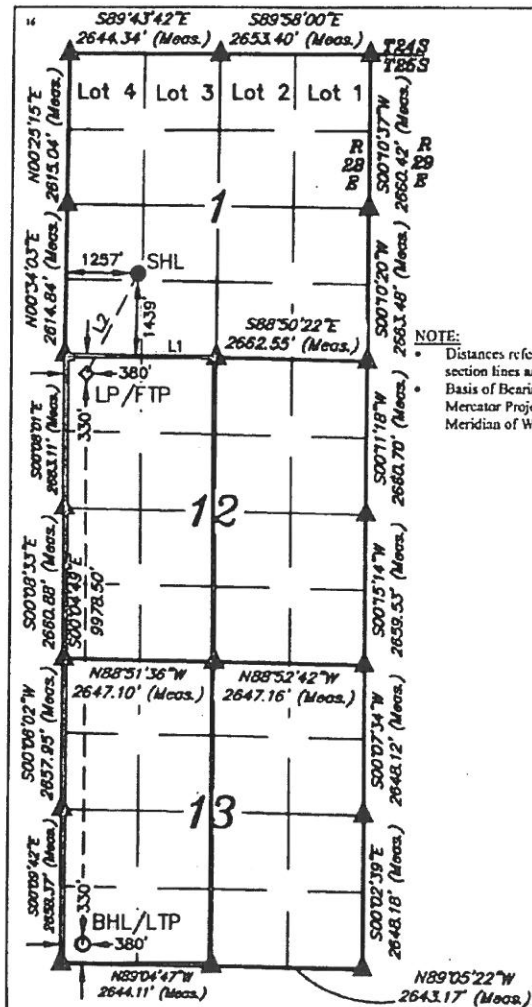
UL or lot no. L	Section 1	Township 25S	Range 28E	Lot Idn	Feet from the 1439	North/South line SOUTH	Feet from the 1257	East/West line WEST	County EDDY
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## "Bottom Hole Location If Different From Surface

UL or lot no. M	Section 13	Township 25S	Range 28E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 380	East/West line WEST	County EDDY
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<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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.



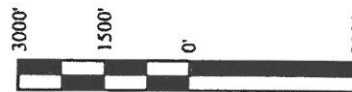
- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED

NAD 83 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.63" (32.156008)	
LONGITUDE = 104°02'43.39" (104.045387)	
NAD 27 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.19" (32.155886)	
LONGITUDE = 104°02'41.63" (104.044897)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 420610.29 E: 630446.22	
STATE PLANE NAD 27 (N.M. EAST)	
N: 420552.01 E: 589262.06	

NAD 83 (BHL/LTP)	
LATITUDE = 32°07'25.56" (32.123768°)	
LONGITUDE = 104°07'53.38" (104.048161°)	
NAD 27 (BHL/LTP)	
LATITUDE = 32°07'25.12" (32.123645°)	
LONGITUDE = 104°07'51.62" (104.047673°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 408879.53 E: 629618.82	
STATE PLANE NAD 27 (N.M. EAST)	
N: 408821.50 E: 588434.41	

## LINE TABLE

LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2665.14'
L2	S26°57'17"W	1064.68'



SCALE

DRAWN BY: C.D. 03-28-17

REV: 3 11-07-18 D.J.S. (BHL CHANGE)

## "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 previously ordered by the division.

Signature: *Aricka Easterling* Date: 11/14/18

Printed Name: Aricka Easterling

E-mail Address: aeasterling@cimarex.com

E-mail Address

## "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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

RW 5-9-19

RECEIVED

District I  
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr. DISTRICT II-ARTESIA O.C.D.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
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District Office  
AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015 45974	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp (Gas)
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	<sup>6</sup> Well Number 33H
<sup>7</sup> OGRID No. 215099	<sup>8</sup> Operator Name CIMAREX ENERGY CO.	<sup>9</sup> Elevation 2938.2

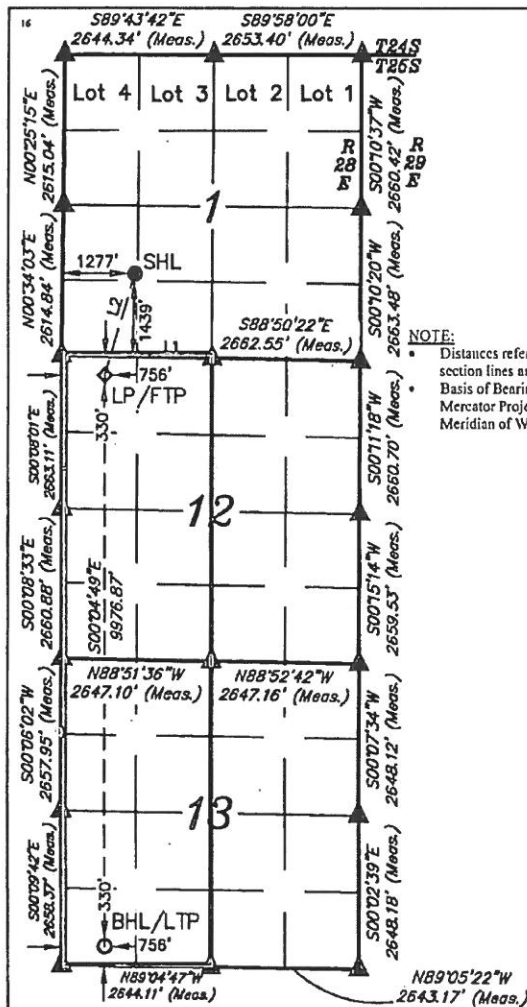
<sup>10</sup> Surface Location

UL or lot no. L	Section 1	Township 25S	Range 28E	Lot Idn	Feet from the 1439	North/South line SOUTH	Feet from the 1277	East/West line WEST	County EDDY
--------------------	--------------	-----------------	--------------	---------	-----------------------	---------------------------	-----------------------	------------------------	----------------

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. M	Section 13	Township 25S	Range 28E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 756	East/West line WEST	County EDDY
<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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.



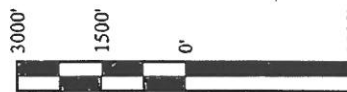
NOTE:  
Distances referenced on plat to section lines are perpendicular. Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED

NAD 83 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.63" (32.156007°)	
LONGITUDE = 104°02'43.16" (104.045322°)	
NAD 27 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.18" (32.155884°)	
LONGITUDE = 104°02'41.40" (104.044833°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 420609.89' E: 630466.17'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 420551.61' E: 589282.02'	

NAD 83 (BHL/LTP)	
LATITUDE = 32°07'25.51" (32.123753°)	
LONGITUDE = 104°02'49.01" (104.046946°)	
NAD 27 (BHL/LTP)	
LATITUDE = 32°07'25.07" (32.123629°)	
LONGITUDE = 104°02'47.25" (104.046455°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 408875.07' E: 629994.78'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 408817.03' E: 588810.36'	

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2865.14'
L2	S18°54'27"W	1837.87'



SCALE  
DRAWN BY: D.J.S. 11-07-18

<sup>17</sup> 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 as before entered by the division.

Signature: *Aricka Easterling* Date: 11/14/18

Printed Name: Aricka Easterling

E-mail Address: aeasterling@cimarex.com

E-mail Address

<sup>18</sup> 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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

Riv 5-9-19

RECEIVED

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

MAY 07 2019

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015 45975	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp (Gas)
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	
<sup>7</sup> OGRID No. 215099	<sup>6</sup> Operator Name CIMAREX ENERGY CO.	<sup>8</sup> Well Number 34H <sup>9</sup> Elevation 2937.9

<sup>10</sup> Surface Location

UL or lot no. L	Section 1	Township 25S	Range 28E	Lot Idn	Feet from the 1439	North/South line SOUTH	Feet from the 1297	East/West line WEST	County EDDY
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. M	Section 13	Township 25S	Range 28E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 1132	East/West line WEST	County EDDY
<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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.



NOTE:  
Distances referenced on plat to section lines are perpendicular. Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED

NAD 83 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.62" (32.156006°)	
LONGITUDE = 104°02'42.93" (104.045258°)	
NAD 27 (SURFACE HOLE LOCATION)	
LATITUDE = 32°09'21.18" (32.155883°)	
LONGITUDE = 104°02'41.17" (104.044769°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 420609.51' E: 630486.17'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 420551.23' E: 589302.01'	

NAD 83 (BHL/LTP)	
LATITUDE = 32°07'25.46" (32.123738°)	
LONGITUDE = 104°02'44.63" (104.045732°)	
NAD 27 (BHL/LTP)	
LATITUDE = 32°07'25.01" (32.123614°)	
LONGITUDE = 104°02'42.88" (104.045244°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 408870.60' E: 630370.73'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 408812.53' E: 589186.31'	

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2665.14'
L2	S05°46'20"W	1774.64'



SCALE  
DRAWN BY: D.J.S. 11-07-18

<sup>17</sup> 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 of a compulsory pooling order heretofore entered by the division.

Signature: *Aricka Easterling* Date: 11/13/18

Printed Name: Aricka Easterling

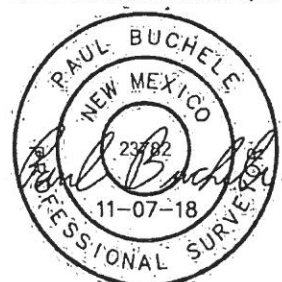
E-mail Address: aeasterling@cimarex.com

<sup>18</sup> 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.

December 12, 2017

Date of Survey  
Signature and Seal of Professional Surveyor:



Certificate Number:

RWP 5-9-19



RECEIVED

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

MAY 07 2019

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015 <b>45976</b>	<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name Purple Sage Wolfcamp (Gas)
<sup>4</sup> Property Code 321482	<sup>5</sup> Property Name RIVERBEND 12-13 FEDERAL COM	<sup>6</sup> Well Number 35H
<sup>7</sup> OGRID No. 215099	<sup>8</sup> Operator Name CIMAREX ENERGY CO.	<sup>9</sup> Elevation 2937.7

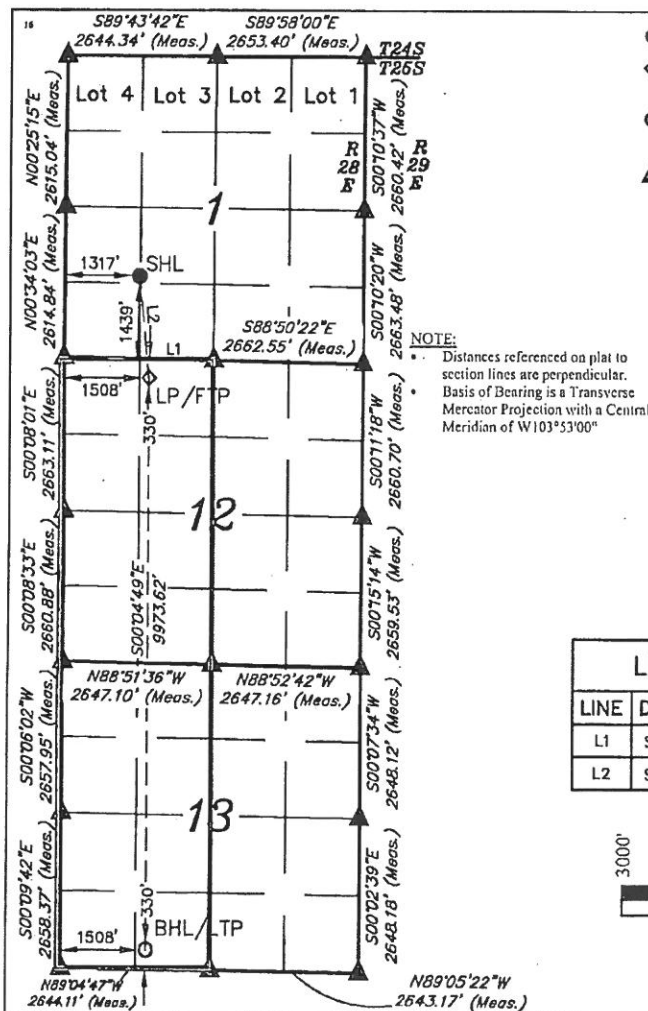
## "Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	1	25S	28E		1439	SOUTH	1317	WEST	EDDY

## "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
N	13	25S	28E		330	SOUTH	1508	WEST	EDDY
<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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.



- = SURFACE HOLE LOCATION
- ◇ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED

<b>NAD 83 (SURFACE HOLE LOCATION)</b>
LATITUDE = 32°09'21.62" (32.156005°)
LONGITUDE = 104°02'42.69" (104.045193°)
<b>NAD 27 (SURFACE HOLE LOCATION)</b>
LATITUDE = 32°09'21.18" (32.155882°)
LONGITUDE = 104°02'40.93" (104.044704°)
STATE PLANE NAD 83 (N.M. EAST)
N: 420609.13' E: 630506.16'
STATE PLANE NAD 27 (N.M. EAST)
N: 420550.86' E: 589322.00'

<b>NAD 83 (BHL/LTP)</b>
LATITUDE = 32°07'25.40" (32.123723°)
LONGITUDE = 104°02'40.26" (104.044518°)
<b>NAD 27 (BHL/LTP)</b>
LATITUDE = 32°07'24.96" (32.123599°)
LONGITUDE = 104°02'38.51" (104.044030°)
STATE PLANE NAD 83 (N.M. EAST)
N: 408866.13' E: 630746.69'
STATE PLANE NAD 27 (N.M. EAST)
N: 408808.08' E: 589562.26'

## LINE TABLE

LINE	DIRECTION	LENGTH
L1	S88°49'54"E	2665.14'
L2	S05°43'08"E	1781.72'



SCALE

DRAWN BY: D.J.S. 11-07-18

## "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.

Signature: *Aricka Easterling* Date: 11/13/18

Aricka Easterling

Printed Name

aeasterling@cimarex.com  
E-mail Address

## "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.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

RUP 5-9-19

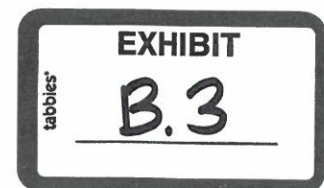


**Riverbend 12 – 13 Federal Com 29H, 30H, 31H, 32H, 33H, 34H & 35H – Pooled Interests**

**W/2 of Section 12 & W/2 of Section 13, Township 25 South, Range 28 East, Eddy County, New Mexico**

OWNER	Tract	TYPE	Net Acres	Working Interest Percentage
Tap Rock Resources	3 & 4	Leasehold	36.5634375	5.713037%
<b>Total</b>			36.5634375	5.713037%

Tract 4: NW/4NW/4 Fee	Tract 5: NE/4NW/4 Fee
Tract 3: SW/4NW/4, NW/4SW/4 Fee	Tract 1: E/2SW/4, SE/4NW/4 of Section 12  NMNM 06104
Tract 2: SW/4SW/4 Fee	Section 12
Tract 7: SW/4SW/4, N/2NW/4, SE/4NW/4 Fee	Section 13
Tract 6: NMNM 088128 SW/4NW/4	
	Tract 1: NW/4SW/4, E/2SW/4 of Section 13  NMNM 06104
Tract 7: SW/4SW/4, N/2NW/4, SE/4NW/4 Fee	



ORRI Owners		Tract	Section
United States of America			
Department of the Interior, Bureau of Land Management	RI	1,2,3,4 & 5	13
Monty D McClane	ORRI	1, 3, 5	13
Alan Jochimsen	ORRI	1, 6, 7	13
States Royalty, LP	ORRI	1, 6, 7	13
Morris E Schertz	ORRI	1, 6, 7	13
Orion Oil & Gas Properties	ORRI	1, 6, 7	13
Premier Oil & Gas Inc	ORRI	1, 6, 7	13
GHHunker, LLC	ORRI	1, 6, 7	13
Chisos Minerals, LLC	ORRI	1, 6, 7	13
Norton LLC	ORRI	1, 6, 7	13
MKHM Oil, LLC	ORRI	1, 6, 7	13
OGI, Inc	ORRI	1, 6, 7	13
Energy Properties, LP	ORRI	1, 6, 7	13
ROEC Inc	ORRI	1, 6, 7	13
Sam L. Shackelford	ORRI	1, 6, 7	13
Robin K. Shackelford	ORRI	1, 6, 7	13
The Willian N. Heiss Profit Sharing Plan, Willian N. Heiss and Susan E.			
Heiss, Co-Trustees	ORRI	1, 6, 7	13
Dutch-Irish Oil Company	ORRI	1, 6, 7	13
Matt Hinkle	ORRI	1, 6, 7	13
Rolla Hinkle, III	ORRI	1, 6, 7	13
Magnum Hunter Production Inc	ORRI	1, 6, 7	13
Curtis W Mewbourne, Trustee	ORRI	1, 6, 7	13
Conoco Phillips Company	ORRI	3	13
Centennial, a New Mexico Partnership	ORRI	3	13
Hutchings Oil Company	ORRI	3	13
Peter T. Balog, Trustee of the Balog Family Trust	ORRI	3	13
Vermego Property Investment Company	ORRI	3	13
Dan M. Leonard	LOR	3	13
Dan M. Leonard, Trustee of the DML Revocable Trust	LOR	3	13
LML Properties, LLC	LOR	3	13
Jack's Peak, LLC	LOR	3	13
Kevin K. Leonard, Trustee of the Kevin K. Leonard Child's Trust	LOR	3	13
Mark B. Murphy	LOR	3	13
Strata Production Company	LOR	3	13
Valorie F. Walker, Trustee of the Jack V. Walker Revocable Trust	LOR	3	13
Sharon Winn Scott	LOR	3	13
Worrall Investment Corporation	LOR	3	13
Mitchell Exploration Inc	LOR	3	13
Permian Basin Investment Corporation	LOR	3	13
Southwest Petroleum Land Services, LLC	LOR	3	13
Realtimzone, Inc.	LOR	3	13

Oak Valley Mineral & Land, LP	LOR	1,2,4	13
Stanley W. Light	LOR	1,2,4	13
Carlsbad National Bank Trust Department, Testamentary Trustee under the Last Will and Testament of Bradley T. Light	LOR	1,2,4	13
Curtis W. Mewbourne	LOR	1,2,4	13
OGX Royalty Fund, LP	ORI	1,2,4	13
Benny May Jenkins	LOR	1,2,4	12
James Matthew Jenkins	LOR	1,2,4	12
Leanne Jenkins Hacker	LOR	1,2,4	12
Joy Elizabeth Cooksey	LOR	1,2,4	12
James Monroe Cooksey, III	LOR	1,2,4	12
Douglas C Koch	LOR	1,2,4	12
Wayne Bissett	LOR	1,2,4	12
Andrew A Latham	LOR	1,2,4	12
Morris E. Schertz, et ux, Holly K Schertz	LOR	1,2,4	12
Larry G. Phillips et ux, Anne C. Phillips	LOR	1,2,4	12
Empire Energy LLC	LOR	1,2,4	12
New State Gas LLC	LOR	1,2,4	12
Charles Getchel Wiley, Trustee of the Charles Getchel Wiley Trust	LOR	1,2,4	12
Pegasus Resources, LLC	LOR	1,2,4	12
McMullun Minerals LLC	LOR	1,2,4	12
Ronadero Company Inc	LOR	1,2,4	12
Seaboard Oil Company	LOR	1,2,4	12
Rowan Family Minerals LLC	LOR	1,2,4	12
Cirrus Minerals, LLC	LOR	1,2,4	12
PEP II Management, LLC	LOR	1,2,4	12
BNSF Railway Company		1,2,4	12

<p><b>Tract 4:</b> NW/4NW/4 Fee</p>	<p><b>Tract 5:</b> NE/4NW/4 Fee</p>
<p><b>Tract 3:</b> SW/4NW/4, NW/4SW/4 Fee</p>	<p><b>Tract 1:</b> E/2SW/4, SE/4NW/4 of Section 12  NMNM 06104</p>
<p><b>Tract 2:</b> SW/4SW/4 Fee</p>	<p><b>Section 12</b></p>
<p><b>Tract 7:</b> SW/4SW/4, N/2NW/4, SE/4NW/4 Fee</p>	<p><b>Section 13</b></p>
<p><b>Tract 6:</b> NMNM 088128 SW/4NW/4</p>	
	<p><b>Tract 1:</b> NW/4SW/4, E/2SW/4 of Section 13  NMNM 06104</p>
<p><b>Tract 7:</b> SW/4SW/4, N/2NW/4, SE/4NW/4 Fee</p>	

Cimarex Energy Co.  
600 N. Marienfeld St.  
Suite 600  
Midland, TX 79701  
Main: 432.571.7800



September 5, 2019

Tap Rock Resources  
802 Park Point Drive, Suite 200  
Golden, Colorado 80401

**Re:   Proposal to Drill  
      Riverbend 12-13 Federal Com 29H-35H  
      W/2 of Section 12 & 13, Township 25 South, Range 28 East, Eddy County, NM**

Dear Working Interest Owner,

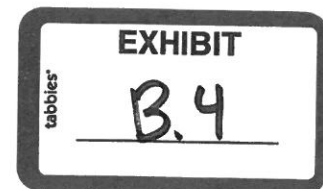
Cimarex Energy Co. previously proposed to drill the following wells in the West-half of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM under that certain Operating Agreement dated February 7, 2017. After review of pugh clauses in the leases contributed by one of our working interest owners, it became apparent that Tap Rock Resources owns Wolfcamp rights within this spacing unit. Details of each well now being proposed to Tap Rock are as follows:

**Riverbend 12-13 Fed Com 29H** - The intended surface hole location for the well is 1,379 FSL and 1,396' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 2,200' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 10,760' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 23,173' feet from surface to terminus.

**Riverbend 12-13 Fed Com 30H** - The intended surface hole location for the well is 1,379' FSL and 1,396' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 100' FSL and 2,310' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 22,437' feet from surface to terminus.

**Riverbend 12-13 Fed Com 31H** - The intended surface hole location for the well is 1,439' FSL and 1,337' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 1,874' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 21,085' feet from surface to terminus.

**Riverbend 12-13 Federal Com 32H** - The intended surface hole location for the well is 1,439' FSL and 1,257' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 330' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation and laterally in a



southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 21,254' feet from surface to terminus.

**Riverbend 12-13 Federal Com 33H** - The intended surface hole location for the well is 1,439' FSL and 1,277' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 716' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 20,651' feet from surface to terminus.

**Riverbend 12-13 Federal Com 34H** - The intended surface hole location for the well is 1,439' FSL and 1,297' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 1,102' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,918' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 20,855' feet from surface to terminus.

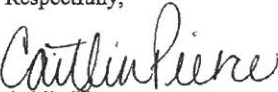
**Riverbend 12-13 Federal Com 35H** - The intended surface hole location for the well is 1,439' FSL and 1,317' FWL of Section 1, Township 25 South, Range 28 East, and the intended bottom hole location is 330' FSL and 1,488' FWL of Section 13, Township 25 South, Range 28 East. The well is proposed to be drilled vertically to a depth of approximately 9,714' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location. Total measured depth of the well is proposed to be approximately 20,651' feet from surface to terminus.

It should be understood that compliance with topography or cultural or environmental concerns, among others, might require modification of Cimarex's intended procedure. Cimarex will advise you of any such modifications.

Enclosed, in duplicate, is (i) our detailed AFEs reflecting estimated costs associated with each proposal, and; (ii) our proposed form of Operating Agreement governing operations of wells drilled in the W/2 of Sections 12 & 13, Township 25 South, Range 28 East, NMPM, Eddy County, NM. If you intend to participate, please approve and return one (1) original of the enclosed AFE, as well as the Election Form attached to this proposal, to the undersigned within 30 days of receipt of this proposal. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance to Cimarex prior to commencement of drilling operations; otherwise, you will be covered by insurance procured by Cimarex and will be responsible for your share of the cost.

If you should have any questions concerning the above, please call the undersigned at (432) 571-7862.

Respectfully,



Caitlin Pierce  
Exploration Landman

**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 29H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 29H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 29H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 29H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

---



**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 30H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 30H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 30H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 30H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations **or** be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

---

**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 31H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 31H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 31H well.

Dated this \_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 31H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

---

**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 32H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 32H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 32H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 32H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

---

**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 33H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 33H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 33H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 33H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

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**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 34H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 34H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 34H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 34H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

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**ELECTION TO PARTICIPATE  
Riverbend 12-13 Federal Com 35H**

\_\_\_\_\_ Tap Rock Resources elects **TO** participate in the proposed Riverbend 12-13 Federal Com 35H well.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to participate in the proposed Riverbend 12-13 Federal Com 35H well.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

If your election above is TO participate in the proposed Riverbend 12-13 Federal Com 35H well, then:

\_\_\_\_\_ Tap Rock Resources elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

\_\_\_\_\_ Tap Rock Resources elects **NOT** to be covered by well control insurance procured by Cimarex Energy Co. and agrees to provide Cimarex Energy Co. with a certificate of insurance prior to commencement of drilling operations or be deemed to have elected to be covered by well control insurance procured by Cimarex Energy Co.

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- 1 • human resources
- 2 • management
- 3 • supervision not directly charged under Section II.2 (*Labor*)
- 4 • legal services not directly chargeable under Section II.9 (*Legal Expense*)
- 5 • taxation, other than those costs identified as directly chargeable under Section II.10 (*Taxes and Permits*)
- 6 • preparation and monitoring of permits and certifications; preparing regulatory reports; appearances before or meetings with
- 7 governmental agencies or other authorities having jurisdiction over the Joint Property, other than On-site inspections; reviewing,
- 8 interpreting, or submitting comments on or lobbying with respect to Laws or proposed Laws.

9

10 Overhead charges shall include the salaries or wages plus applicable payroll burdens, benefits, and Personal Expenses of personnel performing

11 overhead functions, as well as office and other related expenses of overhead functions.

12

13 **1. OVERHEAD—DRILLING AND PRODUCING OPERATIONS**

14

15 As compensation for costs incurred but not chargeable under Section II (*Direct Charges*) and not covered by other provisions of this

16 Section III, the Operator shall charge on either:

- 17
- 18 ☒ (Alternative 1) Fixed Rate Basis, Section III.1.B.
- 19 ☐ (Alternative 2) Percentage Basis, Section III.1.C.

20

21 **A. TECHNICAL SERVICES**

22

23 (i) Except as otherwise provided in Section II.13 (*Ecological, Environmental, and Safety*) and Section III.2 (*Overhead – Major*

24 *Construction and Catastrophe*), or by approval of the Parties pursuant to Section I.6.A (*General Matters*), the salaries, wages,

25 related payroll burdens and benefits, and Personal Expenses for On-site Technical Services, including third party Technical

26 Services:

27

28 ☒ (Alternative 1 – Direct) shall be charged direct to the Joint Account.

29

30 ☐ (Alternative 2 – Overhead) shall be covered by the overhead rates.

31

32 (ii) Except as otherwise provided in Section II.13 (*Ecological, Environmental, and Safety*) and Section III.2 (*Overhead – Major*

33 *Construction and Catastrophe*), or by approval of the Parties pursuant to Section I.6.A (*General Matters*), the salaries, wages,

34 related payroll burdens and benefits, and Personal Expenses for Off-site Technical Services, including third party Technical

35 Services:

36

37 ☒ (Alternative 1 – All Overhead) shall be covered by the overhead rates.

38

39 ☐ (Alternative 2 – All Direct) shall be charged direct to the Joint Account.

40

41 ☐ (Alternative 3 – Drilling Direct) shall be charged direct to the Joint Account, only to the extent such Technical Services

42 are directly attributable to drilling, re-drilling, deepening, or sidetracking operations, through completion, temporary

43 abandonment, or abandonment if a dry hole. Off-site Technical Services for all other operations, including workover,

44 recompletion, abandonment of producing wells, and the construction or expansion of fixed assets not covered by Section

45 III.2 (*Overhead – Major Construction and Catastrophe*) shall be covered by the overhead rates.

46

47 Notwithstanding anything to the contrary in this Section III, Technical Services provided by Operator's Affiliates are subject to limitations

48 set forth in Section II.7 (*Affiliates*). Charges for Technical personnel performing non-technical work shall not be governed by this Section

49 III.1.A, but instead governed by other provisions of this Accounting Procedure relating to the type of work being performed.

50

51 **B. OVERHEAD—FIXED RATE BASIS**

52

53 (1) The Operator shall charge the Joint Account at the following rates per well per month:

54

55 Drilling Well Rate per month \$ 6,500.00 (prorated for less than a full month)

56

57 Producing Well Rate per month \$ 650.00

58

59 (2) Application of Overhead—Drilling Well Rate shall be as follows:

60

61 (a) Charges for onshore drilling wells shall begin on the spud date and terminate on the date the drilling and/or completion

62 equipment used on the well is released, whichever occurs later. Charges for offshore and inland waters drilling wells shall

63 begin on the date the drilling or completion equipment arrives on location and terminate on the date the drilling or completion

64 equipment moves off location, or is released, whichever occurs first. No charge shall be made during suspension of drilling

65 and/or completion operations for fifteen (15) or more consecutive calendar days.



## Authorization For Expenditure Drilling

AFE # 2617071

Company Entity  
Magnum Hunter Production Inc (430)Date Prepared  
9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 29H Carlsbad Bone Spring Prospect		300001-049.01	2617071
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	E/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, New Mexico	7/15/2017	11/17/2018	
<input type="checkbox"/> New	Formation	Well Type	Td Measured Depth	Td Vertical Depth
<input type="checkbox"/> Supplement	Wolfcamp	DEV	21,061	10,750
<input checked="" type="checkbox"/> Revision				

Purpose Devon into Canaan, CWPLCO into Clayton Williams, Jr

## Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 2665', set surface casing. Drill to 10200' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 10825' MD. Finish curve at +/- 4°/100' to +/- 10710' TVD and drill a +/- 9510' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac in stages. Drill out plugs. Run production packer, tubing and GLVs.

<b>Intangible</b>	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$3,003,000		\$3,003,000
Completion Costs		\$7,878,750	\$7,878,750
<b>Total Intangible Cost</b>	<b>\$3,003,000</b>	<b>\$7,878,750</b>	<b>\$10,881,750</b>
<b>Tangible</b>	Dry Hole	After Casing Point	Completed Well Cost
Tangible - Well Equipment	\$479,000	\$525,000	\$1,004,000
Tangible - Lease Equipment		\$1,142,250	\$1,142,250
<b>Total Tangible Cost</b>	<b>\$479,000</b>	<b>\$1,667,250</b>	<b>\$2,146,250</b>
<b>Total Well Cost</b>	<b>\$3,482,000</b>	<b>\$9,546,000</b>	<b>\$13,028,000</b>

## Comments On Well Costs

- All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefore. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019

tabbles

EXHIBIT

B.6



Description	BCP - Drilling		ACF - Drilling		Comp/Stim		Production Equip		Post Completion		Total	Cost
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount		
Roads & Location	DICD.100				STIM.100		CON.100		PCOM.100		0	0
Damages	DICD.105						CON.105				0	0
Mud/Fluids Disposal	DICD.255				STIM.255				PCOM.255		0	0
Day Rate	DICD.115		DICC.120								0	0
Mud Preparation	DICD.120										0	0
Mix	DICD.125		DICC.125		STIM.125				PCOM.125		0	0
Fuel	DICD.135		DICC.130						PCOM.130		0	0
Water for Drilling Rig (Hot Frac Water)	DICD.140		DICC.135		STIM.135				PCOM.135		0	0
Mud & Additives	DICD.145										0	0
SWD PIPED TO XEC SWD WELL									PCOM.254		0	0
SWD PIPED TO 3RD PARTY SWD WELL									PCOM.257		0	0
SWD HAULED TO XEC SWD WELL									PCOM.258		0	0
SWD HAULED TO 3RD PARTY SWD WELL									PCOM.259		0	0
Surface Rentals	DICD.150		DICC.140		STIM.140		CON.140		PCOM.140		0	0
Flowback Labor					STIM.141				PCOM.141		0	0
Downhole Rentals	DICD.155				STIM.145				PCOM.145		0	0
Automation Labor							CON.150		PCOM.150		0	0
Formation Evaluation (DST, Coring, etc.)	DICD.160				STIM.150						0	0
Mud Logging	DICD.170										0	0
Open Hole Logging	DICD.180										0	0
Cementing & Float Equipment	DICD.185		DICC.155						PCOM.160		0	0
Tubular Inspections	DICD.190		DICC.160		STIM.160						0	0
Casing Crews	DICD.195		DICC.165		STIM.165						0	0
Mechanical Labor	DICD.200		DICC.170		STIM.170		CON.170		PCOM.170		0	0
Trucking/Transportation	DICD.205		DICC.175		STIM.175		CON.175		PCOM.175		0	0
Supervision	DICD.210		DICC.180		STIM.180		CON.180		PCOM.180		0	0
Trailer House/Camp/Catering	DICD.280		DICC.255		STIM.280						0	0
Other Misc Expenses	DICD.230		DICC.190		STIM.190		CON.190		PCOM.190		0	0
Overhead	DICD.235		DICC.195								0	0
Remedial Cementing	DICD.231				STIM.215				PCOM.215		0	0
MOB/DEMOS	DICD.240										0	0
Directional Drilling Services	DICD.245										0	0
Solids Control	DICD.260				STIM.240				PCOM.240		0	0
Well Control Equip (Snubbing Services)	DICD.265		DICC.240		STIM.245				PCOM.245		0	0
Plating & Sidetrack Services	DICD.270		DICC.245		STIM.115				PCOM.115		0	0
Completion Rig					STIM.260				PCOM.260		0	0
Cut Tubing Services					STIM.200				PCOM.200		0	0
Completion Logging/Perforating/Mudline					STIM.390				PCOM.390		0	0
Composate Plugs					STIM.210				PCOM.210		0	0
Stimulation Pumping/Chemicals/Additives/Sand					STIM.395				PCOM.395		0	0
Stimulation Water/Water Transfer/Water Storage					STIM.305				PCOM.305		0	0
Cimarex Owned Frac/Rental Equipment											0	0
Legal/Regulatory/Curative	DICD.300						CON.300				0	0
Well Control Insurance	DICD.285										0	0
Major Construction Overhead							CON.305	0			0	0
Real Time Operations Center	DICD.560				STIM.560						0	0
FLUGL - Labor							CON.500				0	0
FLUGL - Supervision							CON.505				0	0
Survey							CON.515				0	0
SWD/Other - Labor							CON.600				0	0
SWD/OTHER - SUPERVISION							CON.605				0	0
Contingency	DICD.435		DICC.220		STIM.220		CON.220		PCOM.220		0	0
Contingency							CON.221				0	0
P&A Costs	DICD.295		DICC.275								0	0
Total Intangible Cost								0			0	0
Drive Pipe	DWEA.130										0	0
Conductor Pipe	DWEA.130										0	0
Water String	DWEA.135										0	0
Surface Casing	DWEA.140										0	0
Intermediate Casing 1	DWEA.145										0	0
Intermediate Casing 2	DWEA.155										0	0
Drilling Liner	DWEA.160										0	0
Production Casing or Liner			DWEA.100								0	0
Production Tie-Back			DWEA.165		STIMT.101				PCOMT.105		0	0
Tubing					STIMT.105				PCOMT.120		0	0
Wellhead, Tree, Chokes	DWEA.115		DWEA.120		STIMT.120						0	0
Liner Hanger, Isolation Packer	DWEA.100		DWEA.125						PCOMT.400		0	0
Packer, Nipples					STIMT.400				PCOMT.405		0	0
Pumping Unit, Engine					STIMT.405				PCOMT.410		0	0
Downhole Lift Equipment					STIMT.410				PCOMT.420		0	0
Surface Equipment									PCOMT.455		0	0
Well Automation Materials											0	0
Total Tangible - Well Equipment Cost											0	0
N/C Lease Equipment							CON.400				0	0
Tanks, Tanks Steps, Stairs							CON.405				0	0
Battery Equipment							CON.410				0	0
Secondary Comairments							CON.415				0	0
Facility Electrical							CON.420				0	0
Telecommunication Equipment							CON.425				0	0
Meters and Metering Equipment							CON.445				0	0
Facility Line Pipe							CON.450				0	0
Lease Automation Materials							CON.455				0	0
FLUGL - Materials							CON.530				0	0
FLUGL - Line Pipe							CON.535				0	0
SWD/Other - Materials							CON.650				0	0
SWD/OTHER - LINE PIPE							CON.655				0	0
Total Tangible - Lease Equipment Cost											0	0
Total Estimated Cost								0			0	0



Description	BCP - Drilling		ACP - Drilling		Comp/Stim		Amount
	Codes	Amount	Codes	Amount	Codes	Amount	
Roads & Location	DICC.100				STIM.100		
Damages	DICC.105						
Mud/Fluids Disposal	DICC.255				STIM.255		
Day Rate	DICC.115		DICC.120				
Misc Preparation	DICC.120						
Bits	DICC.125		DICC.125		STIM.125		
Fuel	DICC.135		DICC.130				
Water for Drilling Rig (Not Frac Water)	DICC.140		DICC.135		STIM.135		
Mud & Additives	DICC.145						
SWD PIPED TO XEC SWD WELL							
SWD PIPED TO 3RD PARTY SWD WELL							
SWD HAULED TO XEC SWD WELL							
SWD HAULED TO 3RD PARTY SWD WELL							
Surface Rentals	DICC.150		DICC.140		STIM.140		
Flowback Labor					STIM.141		
Downhole Rentals	DICC.155				STIM.145		
Automation Labor							
Formation Evaluation (DST, Coring, etc.)	DICC.160				STIM.150		
Mud Logging	DICC.170						
Open Hole Logging	DICC.180						
Cementing & Float Equipment	DICC.185		DICC.155				
Tubular Inspections	DICC.190		DICC.160		STIM.160		
Casing Crews	DICC.195		DICC.165		STIM.165		
Mechanical Labor	DICC.200		DICC.170		STIM.170		
Trucking/Transportation	DICC.205		DICC.175		STIM.175		
Supervision	DICC.210		DICC.180		STIM.180		
Trailer House/Camp/Catering	DICC.280		DICC.255		STIM.280		
Other Misc Expenses	DICC.220		DICC.190		STIM.190		
Overhead	DICC.225		DICC.195				
Remedial Cementing	DICC.231				STIM.215		
MOB/DEMOS	DICC.240						
Directional Drilling Services	DICC.245						
Solids Control	DICC.260						
Well Control Equip (Snubbing Services)			DICC.240		STIM.240		
Fishing & Sidetrack Services	DICC.270		DICC.245		STIM.245		
Completion Rig					STIM.115		
Coil Tubing Services					STIM.260		
Completion Logging/Perforating/Milestone					STIM.200		
Composite Plugs					STIM.390		
Stimulation					STIM.210		
Stimulation Water/Water Transfer/Water					STIM.395		
Comarx Owned Frac/Rental Equipment					STIM.305		
Legal/Regulatory/Curtative	DICC.300						
Well Control Insurance	DICC.285						
Major Construction Overhead							
Real Time Operations Center	DICC.560				STIM.560		
FL/GI - Labor							
FL/GI - Supervision							
Survey							
SWD/Other - Labor							
SWD/OTHER - SUPERVISION							
Contingency	DICC.485		DICC.220		STIM.220		
Contingency							
NSA Costs	DICC.285		DICC.275				
<b>Total Intangible Cost</b>							
Drive Pipe	DWEB.150						
Conductor Pipe	DWEB.190						
Water String	DWEB.135						
Surface Casing	DWEB.140						
Intermediate Casing 1	DWEB.145						
Intermediate Casing 2	DWEB.155						
Drilling Line	DWEB.160						
Production Casing or Liner			DWEB.100		STWT.101		
Production Tie-back			DWEB.165		STWT.105		
Tubing							
Wellhead, Tree, Chokes	DWEB.115		DWEB.120		STWT.120		
Liner Hanger, Isolation Packar	DWEB.100		DWEB.125				
Packer, Nipples					STWT.400		
Pumping Unit, Engine					STWT.405		
Downhole Lift Equipment					STWT.410		
Surface Equipment							
Well Automation Materials							
<b>Total Tangible - Well Equipment Cost</b>							
AVC Lease Equipment							
Tanks, Tanks Steps, Stairs							
Battery Equipment							
Secondary Containments							
Overhead Power Distribution							
Facility Electrical							
Telecommunication Equipment							
Meters and Metering Equipment							
Facility Line Pipe							
Lease Automation Materials							
FL/GI - Materials							
FL/GI - Line Pipe							



Authorization For Expenditure - RIVERBEND 12-13 FEDERAL  
COM 29H

AFE # 2617071

Description		Codes	Production Equip	Amount	Codes	Post Completion	Amount	Total
Roads & Location		CON.100			PCOM.100			
Damages		CON.105						
Mud/Fluids Disposal					PCOM.235			
Day Rate								
Misc Preparation								
Bits					PCOM.123			
Fuel					PCOM.130			
Water for Drilling Rig (Not Frac Water)					PCOM.133			
Mod & Additives								
SWD PIPED TO XEC SWD WELL					PCOM.254			
SWD PIPED TO 3RD PARTY SWD WELL					PCOM.257			
SWD HAULED TO XEC SWD WELL					PCOM.258			
SWD HAULED TO 3RD PARTY SWD WELL					PCOM.259			
Surface Rentals	CON.140				PCOM.140			
Flowback Labor					PCOM.141			
Downhole Rentals					PCOM.145			
Automation Labor	CON.150				PCOM.150			
Formation Evaluation (DST, Coring, etc.)								
Mud Logging								
Open Hole Logging								
Cementing & Float Equipment								
Tubular Inspections					PCOM.160			
Casing Crows								
Mechanical Labor	CON.170				PCOM.170			
Trucking/Transportation	CON.175				PCOM.175			
Supervision	CON.180				PCOM.180			
Trailer House/Camp/Catering								
Other Misc Expenses	CON.190				PCOM.190			
Overhead								
Remedial Cementing					PCOM.215			
MOB/DBAOB								
Directional Drilling Services								
Solids Control								
Well Control Equip (Snubbing Services)					PCOM.240			
Fishing & Side-track Services					PCOM.245			
Completion Rig					PCOM.115			
Coil Tubing Services					PCOM.260			
Completion Logging/Perforating/Wireline					PCOM.200			
Composite Plugs					PCOM.390			
Stimulation Pumping/Chemicals/Additives/Sand					PCOM.210			
Stimulation Water/Water Transfer/Water Storage								
Cimarex Owned Frac/Rental Equipment					PCOM.305			
Legal/Regulatory/Curtative	CON.300							
Well Control Insurance								
Major Construction Overhead	CON.305			0				
Real Time Operations Center								
FLUGL - Labor	CON.300							
FLUGL - Supervision	CON.505							
Survey	CON.515							
SWD/Other - Labor	CON.600							
SWD/OTHER - SUPERVISION	CON.605							
Contingency	CON.220				PCOM.220			
Contingency	CON.221							
ABA Costs								
Total Intangible Cost				0				
Drill Pipe								
Conductor Pipe								
Water Styling								
Surface Casing								
Intermediate Casing 1								
Intermediate Casing 2								
Drilling Liner								
Production Casing or Liner								
Production Tie-Back								
Tubing					PCOMT.105			
Wellhead, Trees, Chokes					PCOMT.120			
Liner Hanger, Isolation Packer								
Packer, Nipples					PCOMT.400			
Pumping Unit, Engine					PCOMT.405			
Downhole Lift Equipment					PCOMT.410			
Surface Equipment					PCOMT.420			
Well Automation Materials					PCOMT.435			
Total Tangible - Well Equipment Cost								
N/C Lease Equipment	CONT.400							
Tanks, Tanks Steps, Stairs	CONT.405							
Battery Equipment	CONT.410							
Secondary Containments	CONT.415							
Overhead Power Distribution	CONT.420							
Facility Electrical	CONT.425							
Telecommunication Equipment	CONT.426							
Meters and Metering Equipment	CONT.445							
Facility Line Pipe	CONT.450							
Lease Automation Materials	CONT.455							
FLUGL - Materials	CONT.550							
FLUGL - Line Pipe	CONT.555							
SWD/Other - Materials	CONT.650							
SWD/OTHER - LINE PIPE	CONT.655							
Total Tangible - Lease Equipment Cost								
Total Estimated Cost				0				



## Authorization For Expenditure Drilling

AFE # 26618050

Company Entity

Magnum Hunter Production Inc (430)

Date Prepared

9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 30H Carlsbad Bone Spring Prospect		300001-067.01	26618050
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, New Mexico	7/2/2018	11/15/2018	
New Supplement	Formation	Well Type	Ttl Measured Depth	Ttl Vertical Depth
X Revision	Wolfcamp	DEV	20,177	9,750

Purpose Canean Into Devon, CWPLCO into Clayton Williams, Jr

## Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 2665', set surface casing. Drill to 9240' (KOP). Drill curve at 12"/100' Initial build rate to +/- 75 degrees and set casing at +/- 9865' MD. Finish curve at +/- 4"/100' to +/- 9750' TVD and drill a +/- 9180' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac in stages. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,539,000		\$2,539,000
Completion Costs		\$7,699,750	\$7,699,750
<b>Total Intangible Cost</b>	<b>\$2,539,000</b>	<b>\$7,699,750</b>	<b>\$10,238,750</b>
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Tangible - Well Equipment	\$449,000	\$523,000	\$972,000
Tangible - Lease Equipment		\$1,142,250	\$1,142,250
<b>Total Tangible Cost</b>	<b>\$449,000</b>	<b>\$1,665,250</b>	<b>\$2,114,250</b>
<b>Total Well Cost</b>	<b>\$2,988,000</b>	<b>\$9,365,000</b>	<b>\$12,353,000</b>

## Comments On Well Costs

1. All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefore. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned. If available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019





Description	SCP - Drilling		ACP - Drilling		Comp/Stim		Production Equip		Post Completion		Total	Costs
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount		
Roads & Location	DIDC100				STIM100		CON100		PCOM100		0	0
Damages	DIDC105						CON105				0	0
Mud/Fluids Disposal	DIDC255				STIM255				PCOM255		0	0
Day Rate	DIDC115		DICC120								0	0
Misc Preparation	DIDC120										0	0
Bits	DIDC125		DICC125		STIM125				PCOM125		0	0
Fuel	DIDC135		DICC130						PCOM130		0	0
Water for Drilling Rig (Not Frac Water)	DIDC140		DICC135		STIM135				PCOM135		0	0
Mud & Additives	DIDC145										0	0
SWD PIPED TO XEC SWD WELL									PCOM254		0	0
SWD PIPED TO 3RD PARTY SWD WELL									PCOM257		0	0
SWD HAULED TO XEC SWD WELL									PCOM258		0	0
SWD HAULED TO 3RD PARTY SWD WELL									PCOM259		0	0
Surface Rentals	DIDC150		DICC140		STIM140		CON140		PCOM140		0	0
Flowback Labor					STIM141				PCOM141		0	0
Downhole Rentals	DIDC155				STIM145				PCOM145		0	0
Automation Labor							CON150		PCOM150		0	0
Formation Evaluation (DST, Coring, etc.)	DIDC160				STIM150						0	0
Mud Logging	DIDC170										0	0
Open Hole Logging	DIDC180										0	0
Cementing & Float Equipment	DIDC185		DICC155								0	0
Tubular Inspections	DIDC190		DICC160		STIM160				PCOM160		0	0
Casing Crews	DIDC195		DICC165		STIM165						0	0
Mechanical Labor	DIDC200		DICC170		STIM170		CON170		PCOM170		0	0
Trucking/Transportation	DIDC205		DICC175		STIM175		CON175		PCOM175		0	0
Supervision	DIDC210		DICC180		STIM180		CON180		PCOM180		0	0
Trailer House/Camp/Catering	DIDC280		DICC255		STIM280						0	0
Other Misc Expenses	DIDC220		DICC190		STIM190		CON190		PCOM190		0	0
Overhead	DIDC225		DICC225								0	0
Remedial Cementing	DIDC231		DICC195		STIM215				PCOM215		0	0
NOB/DENOB	DIDC240										0	0
Directional Drilling Services	DIDC245										0	0
Solids Control	DIDC260										0	0
Well Control Equip (Snubbing Services)	DIDC265		DICC240		STIM240				PCOM240		0	0
Fishing & Side-track Services	DIDC270		DICC245		STIM245				PCOM245		0	0
Completion Rig					STIM115				PCOM115		0	0
Coil Tubing Services					STIM260				PCOM260		0	0
Completion Logging/Perforating/Wireline					STIM200				PCOM200		0	0
Composite Plugs					STIM390				PCOM390		0	0
Stimulation Pumping/Chemicals/Additives/Sand					STIM210				PCOM210		0	0
Stimulation Water/Water Transfer/Water Storage					STIM385						0	0
Cimarex Owned Frac/Rental Equipment					STIM305				PCOM305		0	0
Legal/Regulatory/Curative	DIDC200						CON300				0	0
Well Control Insurance	DIDC285										0	0
Major Construction Overhead							CON305	0			0	0
Real Time Operations Center	DIDC350				STIM550						0	0
FLUGL - Labor							CON500				0	0
FLUGL - Supervision							CON505				0	0
Survey							CON515				0	0
SWD/Other - Labor							CON600				0	0
SWD/OTHER - SUPERVISION							CON605				0	0
Contingency	DIDC435		DICC220		STIM220		CON220		PCOM220		0	0
Contingency							CON221				0	0
P&A Costs	DIDC355		DICC275								0	0
Total Intangible Cost								0			0	0
Drive Pipe	DWEL150										0	0
Conductor Pipe	DWEL130										0	0
Water String	DWEL135										0	0
Surface Casing	DWEL140										0	0
Intermediate Casing 1	DWEL145										0	0
Intermediate Casing 2	DWEL155										0	0
Drilling Liner	DWEL160										0	0
Production Casing or Liner			DWEA100								0	0
Production Tie-Back			DWEA165		STIM101						0	0
Tubing					STIM105				PCOM105		0	0
Wellhead, Tree, Chokes	DWEL115		DWEA120		STIM120				PCOM120		0	0
Liner Hanger, Isolation Packer	DWEL100		DWEA125								0	0
Packer, Nipples					STIM1400				PCOM1400		0	0
Pumping Unit, Engine					STIM1405				PCOM1405		0	0
Downhole Lift Equipment					STIM1410				PCOM1410		0	0
Surface Equipment									PCOM1420		0	0
Well Automation Materials									PCOM1455		0	0
Total Tangible - Well Equipment Cost											0	0
N/C Lease Equipment							CONT400				0	0
Tanks, Tanks Skips, Stairs							CONT405				0	0
Battery Equipment							CONT410				0	0
Secondary Containments							CONT415				0	0
Overhead Power Distribution							CONT420				0	0
Facility Electrical							CONT425				0	0
Telecommunication Equipment							CONT430				0	0
Measurs and Metering Equipment							CONT435				0	0
Facility Line Pipe							CONT440				0	0
Lease Automation Materials							CONT445				0	0
FLUGL - Materials							CONT450				0	0
FLUGL - Line Pipe							CONT455				0	0
SWD/Other - Materials							CONT460				0	0
SWD/OTHER - LINE PIPE							CONT465				0	0
Total Tangible - Lease Equipment Cost											0	0
Total Estimated Cost								0			0	0



Description	Code	Amount	Code	Amount	Comp/Stm	Amount
Roads & Location	DIOC.100				STIM.100	
Damages	DIOC.105					
Mud/Fluids Disposal	DIOC.255				STIM.255	
Day Rate	DIOC.115		DICC.120			
Misc Preparation	DIOC.120					
Bits	DIOC.125		DICC.125		STIM.125	
Fuel	DIOC.135		DICC.130			
Water for Drilling Rig (Not Frac Water)	DIOC.140		DICC.135		STIM.135	
Mud & Additives	DIOC.145					
SWD PIPED TO XSC SWD WELL						
SWD PIPED TO 3RD PARTY SWD WELL						
SWD HAULED TO XSC SWD WELL						
SWD HAULED TO 3RD PARTY SWD WELL						
Surface Rentals	DIOC.150		DICC.140		STIM.140	
Flowback Labor					STIM.141	
Downhole Rentals	DIOC.155				STIM.145	
Automation Labor						
Formation Evaluation (DST, Coring, etc.)	DIOC.160				STIM.150	
Mud Logging	DIOC.170					
Open Hole Logging	DIOC.180					
Cementing & Float Equipment	DIOC.185		DICC.155			
Tubular Inspections	DIOC.190		DICC.160		STIM.160	
Casing Crews	DIOC.195		DICC.165		STIM.165	
Mechanical Labor	DIOC.200		DICC.170		STIM.170	
Trucking/Transportation	DIOC.205		DICC.175		STIM.175	
Supervision	DIOC.210		DICC.180		STIM.180	
Trailer House/Camp/Catering	DIOC.280		DICC.255		STIM.280	
Other Misc Expenses	DIOC.220		DICC.190		STIM.190	
Overhead	DIOC.225		DICC.195			
Remedial Cementing	DIOC.231				STIM.215	
AOD/DIEMOB	DIOC.240					
Directional Drilling Services	DIOC.245					
Solids Control	DIOC.260					
Well Control Equip (Snubbing Services)	DIOC.265		DICC.240		STIM.240	
Fishing & Sidetrack Services	DIOC.270		DICC.245		STIM.245	
Completion Rig					STIM.115	
Coil Tubing Services					STIM.260	
Completion Logging/Perforating/Wireline					STIM.200	
Composite Plugs					STIM.390	
Stimulation					STIM.210	
Simulation Water/Water Transfer/Water					STIM.355	
Owner Owned Frac/Rental Equipment					STIM.305	
Legal/Regulatory/Curtive	DIOC.300					
Well Control Insurance	DIOC.285					
Major Construction Overhead						
Real Time Operations Center	DIOC.560				STIM.560	
FUGL - Labor						
FUGL - Supervision						
Survey						
SWD/Other - Labor						
SWD/OTHER - SUPERVISION						
Contingency	DIOC.455		DICC.220		STIM.220	
Contingency						
PBA Costs	DIOC.295		DICC.275			
Total Intangible Cost						
Drive Pipe	DWEB.150					
Conductor Pipe	DWEB.130					
Water String	DWEB.135					
Surface Casing	DWEB.140					
Intermediate Casing 1	DWEB.145					
Intermediate Casing 2	DWEB.155					
Drilling Liner	DWEB.160					
Production Casing or Liner			DWEA.100			
Production Tie-back			DWEA.165		STIM.T.101	
Tubing					STIM.T.105	
Woolhead, Tree, Chokes	DWEB.115		DWEA.120		STIM.T.120	
Liner Hanger, Isolation Packer	DWEB.100		DWEA.125			
Packer, Nipples					STIM.T.400	
Pumping Unit, Engine					STIM.T.405	
Downhole Lift Equipment					STIM.T.410	
Surface Equipment						
Well Automation Materials						
Total Tangible - Well Equipment Cost						
NVC Lease Equipment						
Tanks, Tanks Steps, Stairs						
Battery Equipment						
Secondary Containment						
Overhead Power Distribution						
Facility Electrical						
Telecommunication Equipment						
Meters and Measuring Equipment						
Facility Line Pipe						
Lease Automation Materials						
FUGL - Materials						
FUGL - Line Pipe						
SWD/Other - Materials						



Description	Production Equip		Post Completion		Total	
	Codes	Amount	Codes	Amount	Cost	
Roads & Location	CON.100		PCOM.100		0	
Damages	CON.105				0	
Mud/Fluids Disposal			PCOM.255		0	
Day Rate					0	
Misc Preparation					0	
Bits			PCOM.135		0	
Fuel			PCOM.130		0	
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	
Mud & Additives					0	
SWD PIPED TO XEC SWD WELL			PCOM.254		0	
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257		0	
SWD HAULED TO XEC SWD WELL			PCOM.258		0	
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.259		0	
Surface Rentals	CON.140		PCOM.140		0	
Flowback Labor			PCOM.141		0	
Downhole Rentals			PCOM.145		0	
Automation Labor	CON.150		PCOM.150		0	
Formation Evaluation (DST, Coring, etc)					0	
Mud Logging					0	
Open Hole Logging					0	
Cementing & Floac Equipment					0	
Tubular Inspections			PCOM.160		0	
Casing Crews					0	
Mechanical Labor	CON.170		PCOM.170		0	
Trucking/Transportation	CON.175		PCOM.175		0	
Supervision	CON.180		PCOM.180		0	
Trailer House/Camp/Catering					0	
Other Misc Expenses	CON.190		PCOM.190		0	
Overhead					0	
Remedial Cementing			PCOM.215		0	
MGS/DIMGS					0	
Directional Drilling Services					0	
Solids Control					0	
Well Control Equip (Snubbing Services)			PCOM.240		0	
Fishing & Sidetrack Services			PCOM.245		0	
Completion Rig			PCOM.115		0	
Coil Tubing Services			PCOM.260		0	
Completion Logging/Perforating/Wireline			PCOM.200		0	
Composite Plugs			PCOM.390		0	
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210		0	
Stimulation Water/Water Transfer/Water Storage					0	
Cimarex Owned Frac/Rental Equipment			PCOM.305		0	
Legal/Regulatory/Cumulative	CON.300				0	
Well Control Insurance					0	
Major Construction Overhead	CON.305	0			0	
Real Time Operations Center					0	
FLUGL - Labor	CON.500				0	
FLUGL - Supervision	CON.505				0	
Survey	CON.515				0	
SWD/Other - Labor	CON.600				0	
SWD/OTHER - SUPERVISION	CON.605				0	
Contingency	CON.220		PCOM.220		0	
Contingency	CON.221				0	
PSUA Costs					0	
Total Intangible Cost		0			0	
Drive Pipe					0	
Conductor Pipe					0	
Water String					0	
Surface Casing					0	
Intermediate Casing 1					0	
Intermediate Casing 2					0	
Drilling Liner					0	
Production Casing or Liner					0	
Production Tie-Back					0	
Tubing			PCOMT.105		0	
Wellhead, Tree, Chokes			PCOMT.120		0	
Liner Hanger, Isolation Packer					0	
Packer, Nipples			PCOMT.400		0	
Pumping Unit, Engine			PCOMT.405		0	
Downhole Lift Equipment			PCOMT.410		0	
Surface Equipment			PCOMT.430		0	
Well Automation Materials			PCOMT.455		0	
Total Tangible - Well Equipment Cost					0	
N/C Lease Equipment	CONT.400				0	
Tanks, Tanks Steps, Scales	CONT.405				0	
Battery Equipment	CONT.410				0	
Secondary Containments	CONT.415				0	
Overhead Power Distribution	CONT.420				0	
Facility Electrical	CONT.425				0	
Telecommunication Equipment	CONT.435				0	
Meters and Metering Equipment	CONT.445				0	
Facility Line Pipe	CONT.450				0	
Lease Automation Materials	CONT.455				0	
FLUGL - Materials	CONT.550				0	
FLUGL - Line Pipe	CONT.555				0	
SWD/Other - Materials	CONT.650				0	
SWD/OTHER - LINE PIPE	CONT.655				0	
Total Tangible - Lease Equipment Cost					0	
Total Estimated Cost		0			0	



## Authorization For Expenditure Drilling

AFE # 26620017

Company Entity

Date Prepared  
9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 31H Carlsbad Bone Spring Prospect		300001-140.01	26620017
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM	7/15/2019	8/15/2019	
<input checked="" type="checkbox"/> New	Formation	Well Type	Ttl Measured Depth	Ttl Vertical Depth
<input type="checkbox"/> Supplement	Wolfcamp	DEV	21,085	9,918
<input type="checkbox"/> Revision				

Purpose Drill and complete well

## Description

Drilling Drill and complete a horizontal test. Drill to 400', set water string casing. Drill to 2566', set surface casing. Drill to 9408' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 10033' MD. Finish curve at +/- 4°/100' to +/- 9920' TVD and drill a +/- 9740' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,785,000		\$2,785,000
Completion Costs		\$6,825,500	\$6,825,500
Total Intangible Cost	\$2,785,000	\$6,825,500	\$9,610,500
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	\$409,000	\$544,000	\$953,000
Lease Equipment		\$685,500	\$685,500
Total Tangible Cost	\$409,000	\$1,229,500	\$1,638,500
Total Well Cost	\$3,194,000	\$8,055,000	\$11,249,000

## Comments On Well Costs

1. All tubular, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefor. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019



Description	BCP - Drilling		ACP - Drilling		Comp/Stim		Production Equip		Post Completion		Total
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	
Roads & Location	DIC100	25,000			STIM100	10,000	CON100	3,000	PCOM100	10,000	48,000
Damages	DIC105	6,000					CON105	4,000			10,000
Mud/Fluids Disposal	DIC255	160,000			STIM255	62,000			PCOM255	252,000	474,000
Day Rate	DIC115	618,000	DIC120	104,000							722,000
Misc Preparation	DIC120	35,000									35,000
Bits	DIC125	75,000	DIC125	0	STIM125	0			PCOM125	0	75,000
Fuel	DIC135	108,000	DIC130	0					PCOM130	0	108,000
Water for Drilling Rig (Not Frac Water)	DIC140	5,000	DIC135	0	STIM135	24,000			PCOM135	0	29,000
Mud & Additives	DIC145	198,000							PCOM254	0	198,000
SWD PIPED TO XEC SWD WELL									PCOM257	0	0
SWD PIPED TO 3RD PARTY SWD WELL									PCOM258	0	0
SWD HAULED TO XEC SWD WELL									PCOM259	0	0
SWD HAULED TO 3RD PARTY SWD WELL											0
Surface Rentals	DIC150	131,000	DIC140	0	STIM140	237,000	CON140	1,500	PCOM140	45,000	414,500
Downhole Rentals	DIC155	177,000			STIM145	0			PCOM145	0	177,000
Flowback Labor					STIM141	0			PCOM141	33,000	33,000
Automation Labor							CON150	45,000	PCOM150	0	45,000
Formation Evaluation (DST, Coring, etc.)	DIC160	0			STIM150	0					0
Mud Logging	DIC170	27,000									27,000
Open Hole Logging	DIC180	0									0
Cementing & Plug Equipment	DIC185	145,000	DIC155	63,000							208,000
Tubular Inspections	DIC180	50,000	DIC180	5,000	STIM160	4,000			PCOM160	0	59,000
Casing Crews	DIC195	20,000	DIC165	13,000	STIM165	0					33,000
Mechanical Labor	DIC200	20,000	DIC170	10,000	STIM170	0	CON170	181,000	PCOM170	0	211,000
Trucking/Transportation	DIC205	25,000	DIC175	8,000	STIM175	4,000	CON175	18,000	PCOM175	0	55,000
Supervision	DIC210	115,000	DIC180	16,000	STIM180	94,000	CON180	10,000	PCOM180	0	235,000
Trailer House/Camp/Catering	DIC220	49,000	DIC235	6,000	STIM280	34,000					89,000
Other Misc Expenses	DIC220	5,000	DIC190	0	STIM190	155,000	CON190	12,000	PCOM190	0	172,000
Overhead	DIC225	10,000	DIC185	5,000							15,000
Remedial Cementing	DIC231	0			STIM215	0			PCOM215	0	0
MOB/DEMOS	DIC240	50,000									50,000
Directional Drilling Services	DIC245	383,000									383,000
Solids Control	DIC260	99,000									99,000
Well Control Equip (Snubbing Services)	DIC265	99,000	DIC240	5,000	STIM240	109,000			PCOM240	0	213,000
Fishing & Sidetrack Services	DIC270	0	DIC245	0	STIM245	0			PCOM245	0	0
Completion Rig					STIM115	21,000			PCOM115	0	21,000
Coil Tubing Services					STIM260	368,000			PCOM260	0	368,000
Completion Logging/Perforating/Wellbore					STIM200	432,000			PCOM200	0	432,000
Completions Plugs					STIM390	96,000			PCOM390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM210	2,926,000			PCOM210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM395	702,000					702,000
Cinmarex Owned Frac/Rental Equipment					STIM305	40,000			PCOM305	59,000	99,000
Legal/Regulatory/Curative	DIC300	10,000					CON300	0			10,000
Well Control Insurance	DIC285	7,000									7,000
Major Construction Overhead							CON305	25,000			25,000
Real Time Operations Center	DIC360	0			STIM360	0					0
PLUG - Labor							CON300	153,500			153,500
PLUG - Supervision							CON305	22,000			22,000
Survey							CON315	4,000			4,000
SWD/Other - Labor							CON360	0			0
SWD/OTHER - SUPERVISION							CON365	0			0
Contingency	DIC435	133,000	DIC220	12,000	STIM220	266,000	CON220	85,500	PCOM220	0	497,500
Contingency							CON221	30,000			30,000
PIBA Costs	DIC295	0	DIC275	0							0
Total Intangible Cost		2,785,000		247,000		5,584,000		595,500		999,000	9,610,500
Drive Pipe	DWEA130	0									0
Conductor Pipe	DWEA130	0									0
Water String	DWEA135	14,000									14,000
Surface Casing	DWEA140	67,000									67,000
Intermediate Casing 1	DWEA145	308,000									308,000
Intermediate Casing 2	DWEA155	0									0
Drilling Liner	DWEA160	0									0
Production Casing or Liner			DWEA100	166,000							166,000
Production Tie-Back			DWEA165	0	STIM101	0					0
Tubing					STIM105	77,000			PCOM105	0	77,000
Wellhead, Tree, Chokes	DWEA115	20,000	DWEA120	25,000	STIM120	60,000			PCOM120	10,000	115,000
Liner Hanger, Isolation Packer	DWEA100	0	DWEA135	98,000							98,000
Packer, Nipples					STIM1400	28,000			PCOM1400	0	28,000
Pumping Unit, Engine					STIM1405	0			PCOM1405	0	0
Downhole Lift Equipment					STIM1410	80,000			PCOM1410	0	80,000
Surface Equipment									PCOM1420	0	0
Well Automation Materials									PCOM1435	0	0
Total Tangible - Well Equipment Cost		409,000		289,000		245,000				10,000	953,000
N/C Lease Equipment							CON1405	176,500			176,500
Tariffs, Taxes, Steps, Stairs							CON1405	51,500			51,500
Battery Equipment							CON1410	191,500			191,500
Secondary Containment							CON1415	12,000			12,000
Overhead Power Distribution							CON1420	25,000			25,000
Facility Electrical							CON1425	30,000			30,000
Telecommunication Equipment							CON1426	0			0
Meters and Metering Equipment							CON1445	22,500			22,500
Facility Line Pipe							CON1450	23,000			23,000
Lease Automation Materials							CON1455	37,500			37,500
PLUG - Materials							CON1530	63,500			63,500
PLUG - Line Pipe							CON1535	52,500			52,500
SWD/Other - Materials							CON1630	0			0
SWD/OTHER - LINE PIPE							CON1635	0			0
Total Tangible - Lease Equipment Cost								685,500			685,500
Total Estimated Cost		3,194,000		536,000		5,829,000		1,281,000		409,000	11,249,000



Authorization For Expenditure - RIVERBEND 12-13 FEDERAL  
COM 31H

AFE # 26620017

Description	BCP - Drilling			ACP - Drilling			Comp/Stim		
	Codes	Amount		Codes	Amount		Codes	Amount	
Roads & Location	DICC100	25,000					STIM100	10,000	
Damages	DICC105	8,000							
Mud/Fluids Disposal	DICC255	160,000					STIM255	62,000	
Day Rate	DICC115 23 days at \$26,000/day	618,000		DICC120 4 days at \$26,000/day	104,000				
Misc Preparation	DICC120	35,000							
Mix	DICC125	75,000		DICC125	0		STIM125	0	
Fuel	DICC135 1,300 gal/day at \$3.00/gal	108,000		DICC130	0				
Water for Drilling Rig (Not Frac Water)	DICC140	5,000		DICC135	0		STIM135	24,000	
Mud & Additives	DICC145	198,000							
SWD PIPED TO XEC SWD WELL									
SWD PIPED TO 3RD PARTY SWD WELL									
SWD HAULED TO XEC SWD WELL									
SWD HAULED TO 3RD PARTY SWD WELL									
Surface Rentals	DICC150 Per Day (BCP)/day	131,000		DICC140	0		STIM140	237,000	
Downhole Rentals	DICC155	177,000					STIM145	0	
Flowback Labor							STIM141	0	
Automation Labor									
Formation Evaluation (DST, Coring, etc.)	DICC160	0					STIM150	0	
Mud Logging	DICC170 18 days at \$1,200/day	27,000							
Open Hole Logging	DICC180	0							
Cementing & Float Equipment	DICC185	145,000		DICC155	63,000				
Tubular Inspections	DICC190	50,000		DICC160	5,000		STIM160	4,000	
Casing Crews	DICC195	20,000		DICC165	13,000		STIM165	0	
Mechanical Labor	DICC200	20,000		DICC170	10,000		STIM170	0	
Trucking/Transportation	DICC205	25,000		DICC175	8,000		STIM175	4,000	
Supervision	DICC210	115,000		DICC180	16,000		STIM180	94,000	
Trailer House/Camp/Catering	DICC280	49,000		DICC255	6,000		STIM280	34,000	
Other Misc Expenses	DICC220	5,000		DICC190	0		STIM190	155,000	
Overhead	DICC225	10,000		DICC195	5,000				
Remedial Cementing	DICC231	0					STIM215	0	
MOS/D&AOB	DICC240	50,000							
Directional Drilling Services	DICC245	383,000							
Solids Control	DICC260	99,000							
Well Control Equip (Snubbing Services)	DICC265	99,000		DICC240	5,000		STIM240	109,000	
Fishing & Sidetrack Services	DICC270	0		DICC245	0		STIM245	0	
Completion Rig							STIM115	21,000	
Coil Tubing Services							STIM280	368,000	
Completion Logging/Perforating/Wireline							STIM200	432,000	
Composite Plugs							STIM390	96,000	
Stimulation							STIM210	2,926,000	
Simulation Water/Water Transfer/Water							STIM395	702,000	
Owner Owned Frac/Remed Equipment							STIM365	40,000	
Legal/Regulatory/Compliance	DICC300	16,000							
Well Control Insurance	DICC285 \$0.35/ft	7,000							
Major Corrosion Overhead									
Real Time Operations Center	DICC560	0					STIM560	0	
FLUGL - Labor									
FLUGL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DICC435 500 % of Drilling Intangibles	133,000		DICC220	12,000		STIM220	266,000	
Contingency									
P&A Costs	DICC295	0		DICC275	0				
Total Intangible Cost		2,785,000			247,000			5,584,000	
Drive Pipe	DWEB150	0							
Conductor Pipe	DWEB130	0							
Water String	DWEB135	14,000							
Surface Casing	DWEB140 9 5/8" - 2,666ft at \$25.00/ft	67,000							
Intermediate Casing 1	DWEB145 7" - 10,130ft at \$28.00/ft	308,000							
Intermediate Casing 2	DWEB155	0							
Drilling Liner	DWEB160	0							
Production Casing or Liner				DWEA100 4 1/2" - 12,780ft at \$18.00/ft	166,000				
Production Tie-back				DWEA165	0		STMT101	0	
Tubing							STMT105 3-1/2" - 6,310ft at \$9.00/ft	77,000	
Wellhead, Tree, Chokes	DWEB115	20,000		DWEA120	25,000		STMT120	60,000	
Liner Hanger, Isolation Packer	DWEB100	0		DWEA125	98,000				
Packer, Nipples							STMT400	28,000	
Pumping Unit, Engine							STMT405	0	
Downhole Lift Equipment							STMT410	80,000	
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost		409,000			289,000			245,000	
N/C Lease Equipment									
Tanks, Tanker Steps, Stairs									
Battery Equipment									
Secondary Containment									
Overhead Power Distribution									
Facility Electrical									
Telecommunication Equipment									
Meters and Metering Equipment									
Facility Line Pipe									
Lease Automation Materials									
FLUGL - Materials									
SWD/Other - Material									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost		3,194,000			536,000			5,829,000	





Authorization For Expenditure - RIVERBEND 12-13 FEDERAL  
COM 31H

AFE # 26620017

Description	Codes	Production Equip		Post Completion		Total	
		Amount	Codes	Amount	Cost		
Roads & Location	CON.100	3,000	PCOM.100 Road Repair	10,000	48,000		
Damages	CON.105	4,000			10,000		
Mud/Fluids Disposal			PCOM.255 6,000 BWPD for 50 Days @ \$0.70/bbl	252,000	474,000		
Day Rate					722,000		
Misc Preparation					35,000		
Bits			PCOM.125	0	75,000		
Fuel			PCOM.130	0	108,000		
Water for Drilling Rig (Not Frac Water)			PCOM.135	0	29,000		
Mud & Additives					198,000		
SWD PIPED TO XEC SWD WELL			PCOM.254	0	0		
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257	0	0		
SWD HAULED TO XEC SWD WELL			PCOM.258	0	0		
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.259	0	0		
Surface Rentals	CON.140	1,500	PCOM.140 \$1500/day for anticipated 30 days	45,000	414,500		
Downhole Rentals			PCOM.145	0	177,000		
Flowback Labor			PCOM.141 \$2200/day for anticipated 15 days	33,000	33,000		
Automation Labor	CON.150	45,000	PCOM.150	0	45,000		
Formation Evaluation (DST, Coring, etc.)					0		
Mud Logging					27,000		
Open Hole Logging					0		
Cementing & Float Equipment					208,000		
Tubular Inspections			PCOM.160	0	59,000		
Casing Crews					33,000		
Mechanical Labor	CON.170	181,000	PCOM.170	0	211,000		
Trucking/Transportation	CON.175	18,000	PCOM.175	0	55,000		
Supervision	CON.180	10,000	PCOM.180	0	235,000		
Trailer House/Camp/Catering					89,000		
Other Misc Expenses	CON.190	12,000	PCOM.190	0	172,000		
Overhead					15,000		
Remedial Cementing			PCOM.215	0	0		
MOB/DEMOS					50,000		
Directional Drilling Services					383,000		
Solids Control					99,000		
Well Control Equip (Grubbing Services)			PCOM.240	0	213,000		
Fishing & Sidetrack Services			PCOM.245	0	0		
Completion Rig			PCOM.115	0	21,000		
Coil Tubing Services			PCOM.260	0	368,000		
Completion Logging/Perforating/Wireline			PCOM.200	0	432,000		
Completion Plugs			PCOM.390	0	96,000		
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210	0	2,928,000		
Stimulation Water/Water Transfer/Water Storage					702,000		
CIMAREX Owned Frac/Rental Equipment			PCOM.305 XEC Owned Sand Separator	59,000	99,000		
Legal/Regulatory/Curtative	CON.300	0			10,000		
Well Control Insurance					7,000		
Major Construction Overhead	CON.305	25,000			25,000		
Real Time Operations Center					0		
FLUGL - Labor	CON.500	153,500			153,500		
FLUGL - Supervision	CON.505	22,000			22,000		
Survey	CON.515	4,000			4,000		
SWD/OTHER - Labor	CON.600	0			0		
SWD/OTHER - SUPERVISION	CON.605	0			0		
Contingency	CON.220	86,500	PCOM.220	0	497,500		
Contingency	CON.221	30,000			30,000		
P&A Costs					0		
Total Intangible Cost		595,500		399,000	9,670,500		
Drive Pipe					0		
Conductor Pipe					0		
Water String					14,000		
Surface Casing					67,000		
Intermediate Casing 1					308,000		
Intermediate Casing 2					0		
Drilling Liner					0		
Production Casing or Liner					166,000		
Production Tie-back					0		
Tubing			PCOM.T.105	0	77,000		
Wellhead, Tree, Chokes			PCOM.T.120 Haispin from choke to flowline	10,000	115,000		
Liner Hanger, Isolation Packer					98,000		
Packer, Nipples			PCOM.T.400	0	28,000		
Pumping Unit, Engine			PCOM.T.405	0	0		
Downhole Lift Equipment			PCOM.T.410	0	80,000		
Surface Equipment			PCOM.T.420	0	0		
Well Automation Materials			PCOM.T.455	0	0		
Total Tangible - Well Equipment Cost				10,000	953,000		
N/C Lease Equipment	CONT.400	176,500			176,500		
Tanks, Tanks Steps, Stairs	CONT.405	51,500			51,500		
Battery Equipment	CONT.410	191,500			191,500		
Secondary Containments	CONT.415	12,000			12,000		
Overhead Power Distribution	CONT.420	25,000			25,000		
Facility Electrical	CONT.425	30,000			30,000		
Telecommunication Equipment	CONT.426	0			0		
Meters and Metering Equipment	CONT.445	22,500			22,500		
Facility Line Pipe	CONT.450	23,000			23,000		
Lease Automation Materials	CONT.455	37,500			37,500		
FLUGL - Materials	CONT.550	63,500			63,500		
FLUGL - Line Pipe	CONT.555	52,500			52,500		
SWD/OTHER - Materials	CONT.650	0			0		
SWD/OTHER - LINE PIPE	CONT.655	0			0		
Total Tangible - Lease Equipment Cost		685,500			685,500		
Total Estimated Cost		1,281,000		409,000	11,249,000		



## Authorization For Expenditure Drilling

AFE # 26620018

Company Entity

Date Prepared  
9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 32H Carlsbad Bone Spring Prospect		300001-141.01	26620018
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM	7/15/2019	8/15/2019	
<input checked="" type="checkbox"/> New Supplement Revision	Formation	Well Type	Ttl Measured Depth	Ttl Vertical Depth
	Wolfcamp	DEV	21,254	9,918

Purpose Drill and complete well

## Description

Drilling Drill and complete a horizontal test. Drill to 400', set water string casing. Drill to 2666', set surface casing. Drill to 9408' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 10033' MD. Finish curve at +/- 4°/100' to +/- 9920' TVD and drill a +/- 9740' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,790,000		\$2,790,000
Completion Costs		\$6,825,500	\$6,825,500
Total Intangible Cost	\$2,790,000	\$6,825,500	\$9,615,500
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	\$409,000	\$546,000	\$955,000
Lease Equipment		\$685,500	\$685,500
Total Tangible Cost	\$409,000	\$1,231,500	\$1,640,500
Total Well Cost	\$3,199,000	\$8,057,000	\$11,256,000

## Comments On Well Costs

1. All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefor. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the joint Operating Agreement.

9/5/2019



Description	BCP - Drilling		ACP - Drilling		Conve/Stim		Production Equip		Post Completion		Total	Cost
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount		
Roads & Location	DICC100	25,000			STIM100	10,000	CON100	3,000	PCOM100	10,000		48,000
Damages	DICC105	6,000					CON105	4,000				10,000
Mud/Fluids Disposal	DICC255	160,000			STIM255	62,000			PCOM255	252,000		474,000
Day Rate	DICC115	618,000	DICC120	104,000								722,000
Misc Preparation	DICC120	35,000										35,000
Bits	DICC125	75,000	DICC135	0	STIM125	0			PCOM125	0		75,000
Fuel	DICC135	108,000	DICC130	0					PCOM130	0		108,000
Water for Drilling Rig (Not Frac Water)	DICC140	5,000	DICC135	0	STIM135	24,000			PCOM135	0		29,000
Mud & Additives	DICC145	198,000										198,000
SWD PIPED TO XEC SWD WELL									PCOM254	0		0
SWD PIPED TO 3RD PARTY SWD WELL									PCOM257	0		0
SWD HAULED TO XEC SWD WELL									PCOM258	0		0
SWD HAULED TO 3RD PARTY SWD WELL									PCOM259	0		0
Surface Rentals	DICC150	131,000	DICC140	0	STIM140	237,000	CON140	1,500	PCOM140	45,000		414,500
Downhole Rentals	DICC155	177,000			STIM145	0			PCOM145	0		177,000
Flowback Labor					STIM141	0			PCOM141	33,000		33,000
Automation Labor							CON150	45,000	PCOM150	0		45,000
Formation Evaluation (DST, Coring, etc.)	DICC160	0			STIM150	0						0
Mud Logging	DICC170	27,000										27,000
Open Hole Logging	DICC180	0										0
Cementing & Float Equipment	DICC185	145,000	DICC155	63,000								208,000
Tubular Inspections	DICC190	50,000	DICC160	5,000	STIM160	4,000			PCOM160	0		59,000
Casing Crews	DICC195	20,000	DICC165	13,000	STIM165	0						33,000
Mechanical Labor	DICC200	20,000	DICC170	10,000	STIM170	0	CON170	181,000	PCOM170	0		211,000
Trucking/Transportation	DICC205	25,000	DICC175	8,000	STIM175	4,000	CON175	18,000	PCOM175	0		55,000
Supervision	DICC210	115,000	DICC180	16,000	STIM180	94,000	CON180	10,000	PCOM180	0		235,000
Trailer House/Camp/Catering	DICC230	49,000	DICC255	6,000	STIM230	34,000						89,000
Other Misc Expenses	DICC230	5,000	DICC190	0	STIM190	155,000	CON190	12,000	PCOM190	0		172,000
Overhead	DICC235	10,000	DICC195	5,000								15,000
Remedial Cementing	DICC231	0			STIM215	0			PCOM215	0		0
MOB/DEM/GB	DICC240	30,000										30,000
Directional Drilling Services	DICC245	388,000										388,000
Solids Control	DICC260	99,000										99,000
Well Control Equip (Snubbing Services)	DICC265	99,000	DICC240	5,000	STIM240	109,000			PCOM240	0		213,000
Fishing & Sidetrack Services	DICC270	0	DICC245	0	STIM245	0			PCOM243	0		0
Completion Rig					STIM115	21,000			PCOM115	0		21,000
Coil Tubing Services					STIM260	368,000			PCOM260	0		368,000
Completion Logging/Perforating/Infusine					STIM200	432,000			PCOM200	0		432,000
Composite Plugs					STIM390	96,000			PCOM390	0		96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM210	2,926,000			PCOM210	0		2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM385	702,000						702,000
Cimarex Owned Frac/Rental Equipment					STIM305	40,000			PCOM305	59,000		99,000
Legal/Regulatory/Cursive	DICC200	10,000					CON300	0				10,000
Well Control Insurance	DICC285	7,000										7,000
Major Construction Overhead							CON305	25,000				25,000
Real Time Operations Center	DICC360	0			STIM560	0						0
FL/G-L - Labor							CON500	153,500				153,500
FL/G-L - Supervision							CON505	22,000				22,000
Survey							CON515	4,000				4,000
SWD/Other - Labor							CON600	0				0
SWD/OTHER - SUPERVISION							CON605	0				0
Contingency	DICC435	133,000	DICC230	12,000	STIM220	266,000	CON220	86,500	PCOM220	0		497,500
Contingency							CON221	30,000				30,000
P&A Costs	DICC285	0	DICC275	0								0
Total Intangible Cost		2,790,000		247,000		5,384,000		595,500		999,000		9,615,500
Drive Pipe	DWEA150	0										0
Conductor Pipe	DWEA130	0										0
Water String	DWEA135	14,000										14,000
Surface Casing	DWEA140	67,000										67,000
Intermediate Casing 1	DWEA145	308,000										308,000
Intermediate Casing 2	DWEA155	0										0
Drilling Liner	DWEA160	0										0
Production Casing or Liner			DWEA100	168,000								168,000
Production Tie-Back			DWEA165	0	STIM101	0						0
Tubing					STIM105	77,000			PCOM105	0		77,000
Wellhead, Tree, Chokes	DWEA115	20,000	DWEA120	25,000	STIM120	60,000			PCOM120	10,000		115,000
Liner Hanger, Isolation Packer	DWEA100	0	DWEA125	98,000								98,000
Packer, Nipples					STIM100	28,000			PCOM100	0		28,000
Pumping Unit, Engine					STIM105	0			PCOM105	0		0
Downhole Lift Equipment					STIM110	80,000			PCOM110	0		80,000
Surface Equipment									PCOM120	0		0
Well Automation Materials									PCOM155	0		0
Total Tangible - Well Equipment Cost		409,000		291,000		245,000				10,000		955,000
N/C Lease Equipment							CON100	176,500				176,500
Tanks, Tanks Steps, Scales							CON105	51,500				51,500
Battery Equipment							CON110	191,500				191,500
Secondary Containments							CON115	12,000				12,000
Overhead Power Distribution							CON120	25,000				25,000
Facility Electrical							CON125	30,000				30,000
Telecommunication Equipment							CON130	0				0
Meters and Metering Equipment							CON135	22,500				22,500
Facility Line Pipe							CON140	23,000				23,000
Lease Automation Materials							CON145	37,500				37,500
FL/G-L - Materials							CON150	63,500				63,500
FL/G-L - Line Pipe							CON155	52,500				52,500
SWD/Other - Materials							CON160	0				0
SWD/OTHER - LINE PIPE							CON165	0				0
Total Tangible - Lease Equipment Cost								685,500				685,500
Total Estimated Cost		3,199,000		538,000		5,829,000		1,281,000		409,000		11,236,000



Description	BCP - Drilling			ACP - Drilling			Comp/Stim		
	Codes	Amount		Codes	Amount		Codes	Amount	
Roads & Location	DIDC.100	25,000					STIM.100	10,000	
Damages	DIDC.105	6,000							
Mud/Fluids Disposal	DIDC.255	160,000					STIM.255	62,000	
Day Rate	DIDC.115 : 23 days at \$26,000/day	618,000		DICC.120 : 4 days at \$26,000/day	104,000				
Misc Preparation	DIDC.120	35,000							
Bits	DIDC.125	75,000		DICC.125	0		STIM.125	0	
Fuel	DIDC.135 : 1,300 gal/day at \$3.00/gal	108,000		DICC.130	0				
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000		DICC.135	0		STIM.135	24,000	
Mud & Additives	DIDC.145	158,000							
SWD PIPED TO XSC SWD WELL									
SWD PIPED TO 3RD PARTY SWD WELL									
SWD HAULED TO XSC SWD WELL									
SWD HAULED TO 3RD PARTY SWD WELL									
Surface Rentals	DIDC.150 : Per Day (BCP)/day	131,000		DICC.140	0		STIM.140	237,000	
Downhole Rentals	DIDC.155	177,000					STIM.145	0	
Flowback Labor							STIM.141	0	
Automation Labor									
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0					STIM.150	0	
Mud Logging	DIDC.170 : 18 days at \$1,200/day	27,000							
Open Hole Logging	DIDC.180	0							
Cementing & Float Equipment	DIDC.185	145,000		DICC.155	63,000				
Tubular Inspections	DIDC.190	50,000		DICC.160	5,000		STIM.160	4,000	
Casing Crews	DIDC.195	20,000		DICC.165	13,000		STIM.165	0	
Mechanical Labor	DIDC.200	20,000		DICC.170	10,000		STIM.170	0	
Trucking/Transportation	DIDC.205	25,000		DICC.175	8,000		STIM.175	4,000	
Supervision	DIDC.210	115,000		DICC.180	16,000		STIM.180	94,000	
Trailer House/Camp/Catering	DIDC.220	49,000		DICC.235	6,000		STIM.280	34,000	
Other Misc Expenses	DIDC.230	5,000		DICC.190	0		STIM.190	155,000	
Overhead	DIDC.235	10,000		DICC.195	5,000				
Refractal Cementing	DIDC.231	0					STIM.215	0	
MUD/GEL/CMC	DIDC.240	50,000							
Directional Drilling Services	DIDC.245	388,000							
Solids Control	DIDC.260	99,000							
Well Control Equip (Snubbing Services)	DIDC.265	99,000		DICC.240	5,000		STIM.240	109,000	
Fishing & Sidetrack Services	DIDC.270	0		DICC.245	0		STIM.245	0	
Completion Rig							STIM.115	21,000	
Coil Tubing Services							STIM.260	368,000	
Completion Logging/Perforating/Wireline							STIM.265	432,000	
Composite Plugs							STIM.330	96,000	
Stimulation							STIM.210	2,926,000	
Stimulation Water/Water Transfer/Water							STIM.335	702,000	
Cimarex Owned Frac/Retent Equipment							STIM.305	40,000	
Legal/Regulatory/Consultive	DIDC.300	10,000							
Well Control Insurance	DIDC.285 : \$0.35/ft	7,000							
Major Construction Overhead									
Real Time Operations Center	DIDC.560	0					STIM.560	0	
FL/G/L - Labor									
FL/G/L - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.435 : 500 % of Drilling (Intangibles)	133,000		DICC.220	12,000		STIM.220	266,000	
Contingency									
P&A Costs	DIDC.295	0		DICC.275	0				
Total Intangible Cost		2,790,000			247,000			5,584,000	
Drive Pipe	DWEB.150	0							
Conductor Pipe	DWEB.130	0							
Water String	DWEB.135	14,000							
Surface Casing	DWEB.140 : 9 5/8" - 2,660ft at \$25.00/ft	67,000							
Intermediate Casing 1	DWEB.145 : 7" - 10,130ft at \$28.00/ft	308,000							
Intermediate Casing 2	DWEB.155	0							
Drilling Liner	DWEB.160	0							
Production Casing or Liner				DWEA.100 : 4 1/2" - 12,950ft at \$13.00/ft	168,000		STIM.T.101	0	
Production Tie-Back				DWEA.165	0		STIM.T.105	77,000	
Tubing							STIM.T.120	60,000	
Wellhead, Tree, Chokes	DWEB.115	20,000		DWEA.120	25,000				
Liner Hanger, Isolation Packer	DWEB.100	0		DWEA.125	98,000		STIM.T.400	28,000	
Packer, Nipples							STIM.T.405	0	
Pumping Unit, Engine							STIM.T.410	80,000	
Downhole Lift Equipment									
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost		409,000			291,000			245,000	
A/C Lease Equipment									
Tanks, Tanks Steps, Stairs									
Battery Equipment									
Secondary Complements									
Overhead Power Distribution									
Facility Electrical									
Telecommunication Equipment									
Meters and Metering Equipment									
Facility Line Pipe									
Lease Automation Materials									
FL/G/L - Materials									
FL/G/L - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost		3,199,000			538,000			5,829,000	



Authorization For Expenditure - RIVERBEND 12-13 FEDERAL  
COM 32H

AFE # 26620018

Description	Codes	Production Equip		Post Completion		Total	
		Amount	Codes	Amount	Cost	Amount	Cost
Roads & Location	CON.100	3,000	PCOM.100	Road Repair		10,000	48,000
Damages	CON.105	4,000					10,000
Mud/Fluids Disposal			PCOM.255	6,000 BWPD for 60 Days @ \$0.70/bbl		252,000	474,000
Day Rate							722,000
Misc Preparation							35,000
Bits			PCOM.125			0	75,000
Fuel			PCOM.130			0	108,000
Water for Drilling Rig (Not Frac Water)			PCOM.135			0	29,000
Mud & Additives							198,000
SWD PIPED TO XEC SWD WELL			PCOM.254			0	0
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257			0	0
SWD HAULED TO XEC SWD WELL			PCOM.258			0	0
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.259			0	0
Surface Rentals	CON.140	1,500	PCOM.140	\$1500/day for anticipated 30 days		45,000	414,500
Downhole Rentals			PCOM.145			0	177,000
Flowback Labor			PCOM.141	\$2200/day for anticipated 15 days		33,000	33,000
Automation Labor	CON.150	45,000	PCOM.150			0	45,000
Formation Evaluation (DST, Coring, etc.)							0
Mud Logging							27,000
Open Hole Logging							0
Cementing & Float Equipment							208,000
Tubular Inspections			PCOM.160			0	59,000
Casing Crews							33,000
Mechanical Labor	CON.170	181,000	PCOM.170			0	211,000
Trucking/Transportation	CON.175	18,000	PCOM.175			0	55,000
Supervision	CON.180	10,000	PCOM.180			0	235,000
Trailer House/Camp/Catering							89,000
Other Misc Expenses	CON.190	12,000	PCOM.190			0	172,000
Overhead							15,000
Remedial Cementing			PCOM.215			0	0
MOB/DEMOB							50,000
Directional Drilling Services							388,000
Solids Control							99,000
Well Control Equip (Grubbing Services)			PCOM.240			0	213,000
Fishing & Sidelock Services			PCOM.245			0	0
Completion Rig			PCOM.115			0	21,000
Coil Tubing Services			PCOM.260			0	368,000
Completion Logging/Perforating/Wireline			PCOM.200			0	432,000
Composite Plugs			PCOM.290			0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210			0	2,926,000
Stimulation Water/Water Transfer/Water Storage							702,000
Cimarex Owned Frac/Rental Equipment			PCOM.305	XEC Owned Sand Separator		59,000	99,000
Legal/Regulatory/Compliance	CON.300	0					10,000
Well Control Insurance							7,000
Major Construction Overhead	CON.305	25,000					25,000
Real Time Operations Center							0
FLUGL - Labor	CON.500	153,500					153,500
FLUGL - Supervision	CON.505	22,000					22,000
Survey	CON.515	4,000					4,000
SWD/Other - Labor	CON.600	0					0
SWD/OTHER - SUPERVISION	CON.605	0					0
Contingency	CON.220	86,500	PCOM.220			0	497,500
Contingency	CON.221	30,000					30,000
P&A Costs							0
Total Intangible Cost		595,500				399,500	9,615,500
Drive Pipe							0
Conductor Pipe							0
Water String							14,000
Surface Casing							67,000
Intermediate Casing 1							308,000
Intermediate Casing 2							0
Drilling Liner							0
Production Casing or Liner							168,000
Production Tie-Back							0
Tubing			PCOMT.105			0	77,000
Wellhead, Tree, Chokes			PCOMT.120	Halfpin from choke to flowline		10,000	115,000
Liner Hanger, Isolation Packer							98,000
Packer, Nipples			PCOMT.400			0	28,000
Pumping Unit, Engine			PCOMT.405			0	0
Downhole Lift Equipment			PCOMT.410			0	80,000
Surface Equipment			PCOMT.430			0	0
Well Automation Materials			PCOMT.455			0	0
Total Tangible - Well Equipment Cost						10,000	955,000
N/C Lease Equipment	CONT.400	176,500					176,500
Tanks, Tanks Steps, Stairs	CONT.405	51,500					51,500
Battery Equipment	CONT.410	191,500					191,500
Secondary Containments	CONT.415	12,000					12,000
Overhead Power Distribution	CONT.420	25,000					25,000
Facility Electrical	CONT.425	30,000					30,000
Telecommunication Equipment	CONT.428	0					0
Meters and Metering Equipment	CONT.445	22,500					22,500
Facility Line Pipe	CONT.450	23,000					23,000
Lease Automation Materials	CONT.455	37,500					37,500
FLUGL - Materials	CONT.550	63,500					63,500
FLUGL - Line Pipe	CONT.555	52,500					52,500
SWD/Other - Materials	CONT.650	0					0
SWD/OTHER - LINE PIPE	CONT.655	0					0
Total Tangible - Lease Equipment Cost		685,500					685,500
Total Estimated Cost		1,281,000				409,500	11,256,000



## Authorization For Expenditure Drilling

AFE # 26620019

Company Entity

Date Prepared

9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 33H Carlsbad Bone Spring Prospect		300001-142.01	26620019
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM	7/15/2019	8/15/2019	
<input checked="" type="checkbox"/> New	Formation	Well Type	Td Measured Depth	Ttl Vertical Depth
<input type="checkbox"/> Supplement	Wolfcamp	DEV	20,651	9,714
<input type="checkbox"/> Revision				

Purpose Drill and complete well

## Description

Drilling Drill and complete a horizontal test. Drill to 400', set water string casing. Drill to 2666', set surface casing. Drill to 9204' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 9829' MD. Finish curve at +/- 4°/100' to +/- 9710' TVD and drill a +/- 9510' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,777,000		\$2,777,000
Completion Costs		\$6,825,500	\$6,825,500
<b>Total Intangible Cost</b>	<b>\$2,777,000</b>	<b>\$6,825,500</b>	<b>\$9,602,500</b>
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	\$403,000	\$539,000	\$942,000
Lease Equipment		\$685,500	\$685,500
<b>Total Tangible Cost</b>	<b>\$403,000</b>	<b>\$1,224,500</b>	<b>\$1,627,500</b>
<b>Total Well Cost</b>	<b>\$3,180,000</b>	<b>\$8,050,000</b>	<b>\$11,230,000</b>

## Comments On Well Costs

1. All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefore. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019



Description	BCP - Drilling		ACP - Drilling		Comp/Stim		Production Equip		Post Completion		Total	
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Cost	
Roads & Location	DIOC100	25,000			STIM100	10,000	CON100	3,000	PCOM100	10,000	48,000	
Damages	DIOC105	6,000					CON105	4,000			10,000	
Mud/Fluids Disposal	DIOC235	160,000			STIM235	62,000			PCOM235	252,000	474,000	
Day Rate	DIOC115	618,000	DICC120	104,000							722,000	
Misc Preparation	DIOC120	35,000									35,000	
Btu	DIOC125	75,000	DICC125	0	STIM125	0			PCOM125	0	75,000	
Fuel	DIOC135	108,000	DICC130	0					PCOM130	0	108,000	
Water for Drilling Rig (Not Frac Water)	DIOC140	5,000	DICC135	0	STIM135	24,000			PCOM135	0	29,000	
Mud & Additives	DIOC145	198,000									198,000	
SWD PIPED TO XEC SWD WELL									PCOM254	0	0	
SWD PIPED TO 3RD PARTY SWD WELL									PCOM257	0	0	
SWD HAULED TO XEC SWD WELL									PCOM258	0	0	
SWD HAULED TO 3RD PARTY SWD WELL									PCOM259	0	0	
Surface Rentals	DIOC150	131,000	DICC140	0	STIM140	237,000	CON140	1,500	PCOM140	45,000	414,500	
Downhole Rentals	DIOC155	177,000			STIM145	0			PCOM145	0	177,000	
Flowback Labor					STIM141	0			PCOM141	33,000	33,000	
Automation Labor							CON150	45,000	PCOM150	0	45,000	
Formation Evaluation (DST, Coring, etc.)	DIOC160	0			STIM150	0					0	
Mud Logging	DIOC170	27,000									27,000	
Open Hole Logging	DIOC180	0									0	
Cementing & Float Equipment	DIOC185	145,000	DICC155	63,000	STIM160	4,000			PCOM160	0	208,000	
Tubular Inspections	DIOC190	50,000	DICC160	5,000	STIM165	0					59,000	
Casing Crews	DIOC195	20,000	DICC165	13,000	STIM170	0					33,000	
Mechanical Labor	DIOC200	20,000	DICC170	10,000	STIM175	0	CON170	181,000	PCOM170	0	211,000	
Trucking/Transportation	DIOC205	25,000	DICC175	8,000	STIM180	4,000	CON175	18,000	PCOM175	0	55,000	
Supervision	DIOC210	115,000	DICC180	16,000	STIM185	94,000	CON180	10,000	PCOM180	0	235,000	
Trailer House/Camp/Catering	DIOC280	49,000	DICC235	6,000	STIM280	34,000					89,000	
Other Misc Expenses	DIOC230	5,000	DICC190	0	STIM190	155,000	CON190	12,000	PCOM190	0	172,000	
Overhead	DIOC235	10,000	DICC195	5,000							15,000	
Remedial Cementing	DIOC231	0			STIM215	0			PCOM215	0	0	
MUD/DEMOS	DIOC240	50,000									50,000	
Directional Drilling Services	DIOC245	376,000									376,000	
Safety Control	DIOC260	99,000									99,000	
Well Control Equip (Snubbing Services)	DIOC265	99,000	DICC240	5,000	STIM240	109,000			PCOM240	0	213,000	
Flaring & Sidetrack Services	DIOC270	0	DICC245	0	STIM245	0			PCOM245	0	0	
Completion Rig					STIM115	21,000			PCOM115	0	21,000	
Coil Tubing Services					STIM260	368,000			PCOM260	0	368,000	
Completion Logging/Perforating/Wireline					STIM200	432,000			PCOM200	0	432,000	
Composite Plugs					STIM390	96,000			PCOM390	0	96,000	
Stimulation Pumping/Chemicals/Additives/Sand					STIM210	2,926,000			PCOM210	0	2,926,000	
Stimulation Water/Water Transfer/Water Storage					STIM395	702,000					702,000	
Cimarex Owned Frac/Rental Equipment					STIM305	40,000			PCOM305	59,000	99,000	
Legal/Regulatory/Corrosive	DIOC200	10,000					CON200	0			10,000	
Well Control Insurance	DIOC285	7,000									7,000	
Major Construction Overhead							CON305	25,000			25,000	
Real Time Operations Center	DIOC580	0			STIM560	0					0	
FL/GIL - Labor							CON300	153,500			153,500	
FL/GIL - Supervision							CON305	22,000			22,000	
Survey							CON315	4,000			4,000	
SWD/Other - Labor							CON600	0			0	
SWD/OTHER - SUPERVISION							CON605	0			0	
Contingency	DIOC435	132,000	DICC220	12,000	STIM220	266,000	CON220	86,500	PCOM220	0	496,500	
Contingency							CON221	30,000			30,000	
P&A Costs	DIOC285	0	DICC275	0							0	
Total Intangible Cost		2,777,000		247,000		5,584,000		595,500		399,000	9,602,500	
Drive Pipe	DWEB150	0									0	
Conductor Pipe	DWEB130	0									0	
Water String	DWEB135	14,000									14,000	
Surface Casing	DWEB140	67,000									67,000	
Intermediate Casing 1	DWEB145	302,000									302,000	
Intermediate Casing 2	DWEB155	0									0	
Drilling Liner	DWEB160	0									0	
Production Casing or Liner			DWEB100	163,000							163,000	
Production Tie-Back			DWEB165	0	STIM101	0					0	
Tubing					STIM105	75,000			PCOM105	0	75,000	
Wellhead, Tree, Chokes	DWEB115	20,000	DWEB120	25,000	STIM120	60,000			PCOM120	10,000	115,000	
Liner Hanger, Isolation Packer	DWEB100	0	DWEB125	98,000							98,000	
Packer, nipples					STIM400	28,000			PCOM400	0	28,000	
Pumping Unit, Engine					STIM405	0			PCOM405	0	0	
Downhole Lift Equipment					STIM410	80,000			PCOM410	0	80,000	
Surface Equipment									PCOM420	0	0	
Well Automation Materials									PCOM435	0	0	
Total Tangible - Well Equipment Cost		403,000		286,000		243,000				10,000	942,000	
N/C Lease Equipment							CON1400	176,500			176,500	
Tanks, Tanks Steps, Stairs							CON1405	51,500			51,500	
Baritary Equipment							CON1410	191,500			191,500	
Secondary Containments							CON1415	12,000			12,000	
Overhead Power Distribution							CON1420	25,000			25,000	
Facility Electrical							CON1425	30,000			30,000	
Telecommunication Equipment							CON1430	0			0	
Meters and Metering Equipment							CON1435	22,500			22,500	
Facility Line Pipe							CON1440	23,000			23,000	
Lease Automation Materials							CON1445	37,500			37,500	
FL/GIL - Materials							CON1450	63,500			63,500	
FL/GIL - Line Pipe							CON1455	52,500			52,500	
SWD/Other - Materials							CON1460	0			0	
SWD/OTHER - LINE PIPE							CON1465	0			0	
Total Tangible - Lease Equipment Cost								685,500			685,500	
Total Estimated Cost		3,180,000		533,000		5,827,000		1,281,000		499,000	11,230,000	



Description	BCP - Drilling			ACP - Drilling			Completion	
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount
Roads & Location	DIDC.100	25,000			STB4.100			10,000
Damages	DIDC.105	6,000						
Mud/Fluids Disposal	DIDC.235	160,000			STB4.235			62,000
Day Rate	DIDC.115 23 days at \$25,000/day	618,000	DIDC.120 4 days at \$26,000/day	104,000				
Misc Preparation	DIDC.120	35,000						
Bits	DIDC.125	75,000	DIDC.125	0	STB4.125			0
Fuel	DIDC.135 1,300 gal/day at \$3.00/gal	108,000	DIDC.130	0				
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DIDC.135	0	STB4.135			24,000
Mud & Additives	DIDC.145	198,000						
SWD RIGED TO XEC SWD WELL								
SWD RIGED TO 3RD PARTY SWD WELL								
SWD HAULED TO XEC SWD WELL								
SWD HAULED TO 3RD PARTY SWD WELL								
Surface Rentals	DIDC.150 Per Day (BCP)/day	131,000	DIDC.140	0	STB4.140			237,000
Downhole Rentals	DIDC.155	177,000			STB4.145			0
Flowback Labor					STB4.141			0
Automation Labor								
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STB4.150			0
Mud Logging	DIDC.170 18 days at \$1,200/day	27,000						
Open Hole Logging	DIDC.180	0						
Cementing & Floor Equipment	DIDC.185	145,000	DIDC.155	63,000	STB4.160			4,000
Tubular Inspections	DIDC.190	50,000	DIDC.160	5,000	STB4.165			0
Casing Crews	DIDC.195	20,000	DIDC.165	13,000	STB4.170			0
Mechanical Labor	DIDC.200	20,000	DIDC.170	10,000	STB4.175			0
Trucking/Transportation	DIDC.205	25,000	DIDC.175	8,000	STB4.180			4,000
Supervision	DIDC.210	115,000	DIDC.180	16,000	STB4.185			94,000
Trailer House/Camp/Catering	DIDC.215	49,000	DIDC.185	6,000	STB4.190			34,000
Other Misc Expenses	DIDC.220	5,000	DIDC.190	0	STB4.195			155,000
Overhead	DIDC.225	10,000	DIDC.195	5,000				
Remedial Cementing	DIDC.231	0			STB4.215			0
MOB/DENVO	DIDC.240	50,000						
Directional Drilling Services	DIDC.245	375,000						
Solids Control	DIDC.250	99,000						
Well Control Equip (Snubbing Services)	DIDC.265	99,000	DIDC.240	5,000	STB4.240			109,000
Fishing & Sidetrack Services	DIDC.270	0	DIDC.245	0	STB4.245			0
Completion Rig					STB4.115			21,000
Coil Tubing Services					STB4.260			368,000
Completion Logging/Perforating/Wireline					STB4.200			482,000
Composite Plugs					STB4.390			96,000
Stimulation					STB4.210			2,828,000
Stimulation Water/Water Transfer/Water					STB4.395			702,000
Cimarex Owned Frac/Rental Equipment					STB4.305			40,000
Legal/Regulatory/Curtative	DIDC.300	10,000						
Well Control Insurance	DIDC.285 \$4.35/ft	7,000						
Major Construction Overhead								
Real Time Operations Center	DIDC.560	0			STB4.560			0
FL/G/L - Labor								
FL/G/L - Supervision								
Survey								
SWD/Other - Labor								
SWD/OTHER - SUPERVISION								
Contingency	DIDC.435 500 % of Drilling Intangibles	132,000	DIDC.220	12,000	STB4.230			266,000
Contingency								
PBA Costs	DIDC.295	0	DIDC.275	0				
Total Intangible Cost		2,777,000		247,000				5,584,000
Drive Pipe	DWEB.150	0						
Conductor Pipe	DWEB.130	0						
Water String	DWEB.135	14,000						
Surface Casing	DWEB.140 9 5/8" - 2,668ft at \$25.00/ft	67,000						
Intermediate Casing 1	DWEB.145 7" - 5,990ft at \$28.00/ft	302,000						
Intermediate Casing 2	DWEB.155	0						
Drilling Liner	DWEB.160	0						
Production Casing or Liner			DWEB.100 4 1/2" - 12,550ft at \$13.00/ft	163,000				
Production Tie-Back			DWEB.163	0	STB4.191			0
Tubing					STB4.195			75,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEB.120	25,000	STB4.120	3-1/2" - 8,300ft at \$8.00/ft		60,000
Liner Hanger, Isolation Packer	DWEB.100	0	DWEB.125	98,000				
Packer, Nipples					STB4.400			28,000
Pumping Unit, Engine					STB4.405			0
Downhole Lift Equipment					STB4.410			80,000
Surface Equipment								
Well Automation Materials								
Total Tangible - Well Equipment Cost		408,000		285,000				248,000
N/C Lease Equipment								
Tanks, Tanks Steps, Stairs								
Sanitary Equipment								
Secondary Containment								
Overhead Power Distribution								
Facility Electrical								
Telecommunication Equipment								
Meters and Metering Equipment								
Facility Line Pipe								
Lease Automation Materials								
FL/G/L - Materials								
FL/G/L - Line Pipe								
SWD/Other - Materials								
SWD/OTHER - LINE PIPE								
Total Tangible - Lease Equipment Cost								
Total Estimated Cost		3,180,000		533,000				5,827,000





Description	Codes	Production Equip		Post Completion		Total	
		Amount	Codes	Amount	Cost		
Roads & Location	CON.100	3,000	PCOM.100 Road Repair	10,000	48,000		
Damages	CON.105	4,000			10,000		
Mud/Pit/Disposal			PCOM.235 6,000 BWPD for 60 Days @ \$0.70/bbl	252,000	474,000		
Day Rate					722,000		
Misc Preparation					35,000		
Bits			PCOM.125	0	75,000		
Fuel			PCOM.130	0	108,000		
Water for Drilling Rig (Not Frac Water)			PCOM.135	0	23,000		
Mud & Additives					198,000		
SWD PIPED TO XEC SWD WELL			PCOM.254	0	0		
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257	0	0		
SWD HAULED TO XEC SWD WELL			PCOM.258	0	0		
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.259	0	0		
Surface Rentals	CON.140	1,500	PCOM.140 \$1500/day for anticipated 30 days	45,000	414,500		
Downdrift Rentals			PCOM.145	0	177,000		
Flowback Labor			PCOM.141 \$2300/day for anticipated 15 days	33,000	33,000		
Automation Labor	CON.150	45,000	PCOM.150	0	45,000		
Formation Evaluation (DST, Coring, etc.)					0		
Mud Logging					27,000		
Open Hole Logging					0		
Cementing & Float Equipment					208,000		
Tubular Inspections			PCOM.160	0	59,000		
Casing Crews					33,000		
Mechanical Labor	CON.170	181,000	PCOM.170	0	211,000		
Trucking/Transportation	CON.175	18,000	PCOM.175	0	55,000		
Supervision	CON.180	10,000	PCOM.180	0	235,000		
Trailer House/Camp/Catering					89,000		
Other Misc Expenses	CON.190	12,000	PCOM.190	0	172,000		
Overhead					15,000		
Remedial Cementing			PCOM.215	0	0		
MOB/DENOB					50,000		
Directional Drilling Services					376,000		
Well Control					99,000		
Well Control Equip (Snubbing Services)			PCOM.240	0	213,000		
Wellbore & Seaback Services			PCOM.245	0	0		
Completion Rig			PCOM.115	0	21,000		
Coil Tubing Services			PCOM.250	0	368,000		
Completion Logging/Perforating/Wireline			PCOM.390	0	432,000		
Composite Plugs			PCOM.210	0	96,000		
Stimulation Pumping/Chemicals/Additives/Sand					2,926,000		
Stimulation Water/Water Transfer/Water Storage					702,000		
Cinemas Owned Frac/Rental Equipment			PCOM.305 XEC Owned Sand Separator	59,000	99,000		
Legal/Regulatory/Curtive	CON.300	0			10,000		
Well Control Insurance					7,000		
Major Construction Overhead	CON.305	25,000			25,000		
Real Time Operations Center					0		
FLUGL - Labor	CON.500	153,500			153,500		
FLUGL - Supervision	CON.505	22,000			22,000		
Survey	CON.515	4,000			4,000		
SWD/Other - Labor	CON.600	0			0		
SWD/OTHER - SUPERVISION	CON.605	0			0		
Contingency	CON.220	86,500	PCOM.220	0	496,500		
Contingency	CON.221	30,000			30,000		
P&A Costs					0		
Total Intangible Cost		595,500		399,000	9,602,500		
Drive Pipe					0		
Conductor Pipe					0		
Water String					14,000		
Surface Casing					67,000		
Intermediate Casing 1					302,000		
Intermediate Casing 2					0		
Drilling Liner					0		
Production Casing or Liner					163,000		
Production Tie-Back					0		
Tubing			PCOM.105	0	75,000		
Wellhead, Tree, Chokes			PCOM.120	10,000	115,000		
Liner Hanger, Isolation Packer					98,000		
Packer, Nipples			PCOM.400	0	28,000		
Pumping Unit, Engine			PCOM.405	0	0		
Downhole Lift Equipment			PCOM.410	0	80,000		
Surface Equipment			PCOM.420	0	0		
Well Automation Materials			PCOM.455	0	0		
Total Tangible - Well Equipment Cost				10,000	942,000		
M/C Lease Equipment	CONT.400	176,500			176,500		
Tanks, Tanks Steps, Stairs	CONT.405	51,500			51,500		
Battery Equipment	CONT.410	191,500			191,500		
Secondary Containment	CONT.415	12,000			12,000		
Overhead Power Distribution	CONT.420	25,000			25,000		
Facility Electrical	CONT.425	30,000			30,000		
Telecommunications Equipment	CONT.430	0			0		
Meters and Metering Equipment	CONT.435	22,500			22,500		
Facility Line Pipe	CONT.440	23,000			23,000		
Lease Automation Materials	CONT.455	37,500			37,500		
FLUGL - Materials	CONT.550	63,500			63,500		
FLUGL - Line Pipe	CONT.555	52,500			52,500		
SWD/Other - Materials	CONT.650	0			0		
SWD/OTHER - LINE PIPE	CONT.655	0			0		
Total Tangible - Lease Equipment Cost		685,500			685,500		
Total Estimated Cost		1,281,000		409,000	11,239,000		



## Authorization For Expenditure Drilling

AFE # 26620020

Company Entity

Date Prepared  
9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 34H Carlsbad Bone Spring Prospect		300001-143.01	26620020
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM	7/15/2019	8/15/2019	
X : New Supplement Revision	Formation	Well Type	Td Measured Depth	Td Vertical Depth
	Wolfcamp	DEV	20,855	9,918

Purpose Drill and complete well

## Description

Drilling Drill and complete a horizontal test. Drill to 400', set water string casing. Drill to 2666', set surface casing. Drill to 9408' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 10033' MD. Finish curve at +/- 4°/100' to +/- 9920' TVD and drill a +/- 9510' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,777,000		\$2,777,000
Completion Costs		\$6,825,500	\$6,825,500
<b>Total Intangible Cost</b>	<b>\$2,777,000</b>	<b>\$6,825,500</b>	<b>\$9,602,500</b>
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	\$409,000	\$541,000	\$950,000
Lease Equipment		\$685,500	\$685,500
<b>Total Tangible Cost</b>	<b>\$409,000</b>	<b>\$1,226,500</b>	<b>\$1,635,500</b>
<b>Total Well Cost</b>	<b>\$3,186,000</b>	<b>\$8,052,000</b>	<b>\$11,238,000</b>

## Comments On Well Costs

- All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefor. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019



Description	BCP - Drilling		ACP - Drilling		Comp/Stm		Production Equip		Post Completion		Total
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	
Roads & Location	DIDC100	25,000			STIM100	10,000	CON100	3,000	PCOM100	10,000	48,000
Damages	DIDC105	6,000					CON105	4,000			10,000
Mud/Fluids Disposal	DIDC255	160,000			STIM255	62,000			PCOM255	252,000	474,000
Day Rate	DIDC115	618,000	DICC120	104,000							722,000
Misc Preparation	DIDC120	35,000									35,000
Bits	DIDC125	75,000	DICC125	0	STIM125	0			PCOM125	0	75,000
Fuel	DIDC135	108,000	DICC130	0					PCOM130	0	108,000
Water for Drilling Rig (Not Frac Water)	DIDC140	5,000	DICC135	0	STIM135	24,000			PCOM135	0	29,000
Mud & Additives	DIDC145	198,000									198,000
SWD PIPED TO XEC SWD WELL									PCOM254	0	0
SWD PIPED TO 3RD PARTY SWD WELL									PCOM257	0	0
SWD HAULED TO XEC SWD WELL									PCOM258	0	0
SWD HAULED TO 3RD PARTY SWD WELL									PCOM259	0	0
Surface Rentals	DIDC150	131,000	DICC140	0	STIM140	237,000	CON140	1,500	PCOM140	45,000	414,500
Downhole Rentals	DIDC155	177,000			STIM145	0			PCOM145	0	177,000
Flowback Labor					STIM141	0			PCOM141	33,000	33,000
Automation Labor							CON150	45,000	PCOM150	0	45,000
Formation Evaluation (DST, Coring, etc.)	DIDC160	0			STIM150	0					0
Mud Logging	DIDC170	27,000									27,000
Open Hole Logging	DIDC180	0									0
Cementing & Float Equipment	DIDC185	145,000	DICC155	63,000	STIM160	4,000			PCOM160	0	208,000
Tubular Inspections	DIDC190	50,000	DICC160	5,000	STIM165	0					59,000
Casing Crews	DIDC195	20,000	DICC165	13,000	STIM170	0					33,000
Mechanical Labor	DIDC200	20,000	DICC170	10,000	STIM175	0	CON170	181,000	PCOM170	0	211,000
Trucking/Transportation	DIDC205	25,000	DICC175	8,000	STIM180	4,000	CON175	18,000	PCOM175	0	55,000
Supervision	DIDC210	115,000	DICC180	16,000	STIM185	94,000	CON180	10,000	PCOM180	0	235,000
Trailer House/Camp/Catering	DIDC280	49,000	DICC255	6,000	STIM280	34,000					89,000
Other Misc Expenses	DIDC220	5,000	DICC190	0	STIM190	155,000	CON190	12,000	PCOM190	0	172,000
Overhead	DIDC225	10,000	DICC195	5,000							15,000
Remedial Cementing	DIDC231	0			STIM215	0			PCOM215	0	0
MOB/DEMOS	DIDC240	50,000									50,000
Directional Drilling Services	DIDC245	376,000									376,000
Solids Control	DIDC260	99,000									99,000
Well Control Equip (Snubbing Services)	DIDC265	99,000	DICC240	5,000	STIM240	109,000			PCOM240	0	213,000
Fishing & Sidetrack Services	DIDC270	0	DICC245	0	STIM245	0			PCOM245	0	0
Completion Rig					STIM115	21,000			PCOM115	0	21,000
Coil Tubing Services					STIM260	368,000			PCOM260	0	368,000
Completion Logging/Perforating/Wireline					STIM200	432,000			PCOM200	0	432,000
Completion Plugs					STIM390	96,000			PCOM390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM210	2,926,000			PCOM210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM385	702,000					702,000
Cement Owned Frac/Rental Equipment					STIM305	40,000			PCOM305	59,000	99,000
Legal/Regulatory/Cursive	DIDC300	10,000					CON300	0			10,000
Well Control Insurance	DIDC285	7,000									7,000
Major Construction Overhead							CON305	25,000			25,000
Real Time Operations Center	DIDC500	0			STIM560	0					0
PLUG - Labor							CON300	153,500			153,500
PLUG - Supervision							CON505	22,000			22,000
Survey							CON515	4,000			4,000
SWD/Other - Labor							CON600	0			0
SWD/OTHER - SUPERVISION							CON605	0			0
Contingency	DIDC435	132,000	DICC220	12,000	STIM220	266,000	CON320	86,500	PCOM220	0	496,500
Contingency							CON221	30,000			30,000
PBA Costs	DIDC285	0	DICC275	0							0
Total Intangible Cost		2,777,000		2,477,000		5,584,000		595,500		399,000	9,602,500
Drive Pipe	DWEA150	0									0
Conductor Pipe	DWEA130	0									0
Water String	DWEA135	14,000									14,000
Surface Casing	DWEA140	67,000									67,000
Intermediate Casing 1	DWEA145	308,000									308,000
Intermediate Casing 2	DWEA155	0									0
Drilling Liner	DWEA160	0									0
Production Casing or Liner			DWEA100	163,000							163,000
Production Tie-Back			DWEA165	0	STIM101	0					0
Tubing					STIM105	77,000			PCOM105	0	77,000
Wellhead, Tree, Chokes	DWEA115	20,000	DWEA120	25,000	STIM120	60,000			PCOM120	10,000	115,000
Liner Hanger, Isolation Packer	DWEA100	0	DWEA125	98,000							98,000
Packer, Nipples					STIM400	28,000			PCOM400	0	28,000
Pumping Unit, Engine					STIM405	0			PCOM405	0	0
Downhole Lift Equipment					STIM410	80,000			PCOM410	0	80,000
Surface Equipment									PCOM420	0	0
Well Automation Materials									PCOM455	0	0
Total Tangible - Well Equipment Cost		409,000		266,000		245,000				10,000	950,000
N/C Lease Equipment							CON400	176,500			176,500
Tanks, Tanks Steps, Stairs							CON405	51,500			51,500
Battery Equipment							CON410	191,500			191,500
Secondary Containers							CON415	12,000			12,000
Overhead Power Distribution							CON420	25,000			25,000
Facility Electrical							CON425	30,000			30,000
Telecommunication Equipment							CON426	0			0
Meters and Metering Equipment							CON445	22,500			22,500
Facility Line Pipe							CON450	23,000			23,000
Lease Automation Materials							CON455	37,500			37,500
PLUG - Materials							CON390	63,500			63,500
SWD/Other - Line Pipe							CON355	52,500			52,500
SWD/OTHER - MATERIALS							CON450	0			0
Total Tangible - Lease Equipment Cost								685,500			685,500
Total Estimated Cost		3,186,000		533,000		5,829,000		1,281,000		409,000	11,238,000



Description	BCP - Drilling			ACP - Drilling			Comp/Stim	
	Codes	Amount	Codes	Amount	Codes	Amount		
Roads & Location	DICD100	25,000			STIM100			10,000
Damages	DICD105	6,000						
Mud/Pulvis Disposal	DICD255	160,000			STIM255			62,000
Day Rate	DICD115 28 days at \$26,000/day	618,000	DICD120 4 days at \$26,000/day	104,000				
Misc Preparation	DICD120	35,000						
Isles	DICD125	75,000	DICD125	0	STIM125			0
Fuel	DICD135 1,300 gal/day at \$3.00/gal	108,000	DICD130	0				
Water for Drilling Rig (Not Frac Water)	DICD140	5,000	DICD135	0	STIM135			24,000
Mud & Additives	DICD145	198,000						
SMD PIPED TO XEC SMD WELL								
SMD PIPED TO 3RD PARTY SMD WELL								
SMD HAULED TO XEC SMD WELL								
SMD HAULED TO 3RD PARTY SMD WELL								
Surface Rentals	DICD150 Per Day (BCP)/day	131,000	DICD140	0	STIM140			237,000
Downhole Rentals	DICD155	177,000			STIM145			0
Flowback Labor					STIM141			0
Automation Labor								0
Formation Evaluation (DST, Coring, etc.)	DICD160	0			STIM150			0
Mud Logging	DICD170 18 days at \$1,200/day	27,000						
Open Hole Logging	DICD180	0						
Cementing & Float Equipment	DICD185	145,000	DICD155	63,000				
Tubular Inspections	DICD190	50,000	DICD160	5,000	STIM160			4,000
Casing Crews	DICD195	20,000	DICD165	13,000	STIM165			0
Mechanical Labor	DICD200	20,000	DICD170	10,000	STIM170			0
Trucking/Transportation	DICD205	25,000	DICD175	8,000	STIM175			4,000
Supervision	DICD210	113,000	DICD180	16,000	STIM180			94,000
Trailer House/Camp/Catering	DICD280	49,000	DICD255	6,000	STIM280			34,000
Other Misc Expenses	DICD220	5,000	DICD190	0	STIM190			155,000
Overhead	DICD225	10,000	DICD195	5,000				
Remedial Cementing	DICD231	0			STIM215			0
MOB/DEMOS	DICD240	50,000						
Directional Drilling Services	DICD245	376,000						
Solids Control	DICD260	99,000						
Well Control Equip (Shooting Services)	DICD265	99,000	DICD240	5,000	STIM240			109,000
Fishing & Sidetrack Services	DICD270	0	DICD245	0	STIM245			0
Completion Rig					STIM115			21,000
Coil Tubing Services					STIM260			368,000
Completion Logging/Perforating/Wireline					STIM200			432,000
Composite Plugs					STIM380			96,000
Stimulation					STIM210			2,926,000
Stimulation Water/Water Transfer/Water					STIM395			702,000
Chemicals Owned Frac/Rental Equipment					STIM305			40,000
Legal/Regulatory/Custodial	DICD300	10,000						
Well Control Insurance	DICD285 \$0.35/ft	7,000						
Major Construction Overhead								
Real Time Operations Center	DICD580	0			STIM560			0
FL/GI - Labor								
FL/GI - Supervision								
Survey								
SMD/Other - Labor								
SMD/OTHER - SUPERVISION								
Contingency	DICD485 500 % of Drilling Intangibles	132,000	DICD220	12,000	STIM220			266,000
Contingency								
ABA Costs	DICD295	0	DICD275	0				
Total Intangible Cost		2,777,000		247,000				5,584,000
Drive Pipe	DWEB150	0						
Conductor Pipe	DWEB130	0						
Water Sling	DWEB135	14,000						
Surface Casing	DWEB140 9 5/8" - 2,666ft at \$25.00/ft	67,000						
Intermediate Casing 1	DWEB145 7" - 10,130ft at \$28.00/ft	308,000						
Intermediate Casing 2	DWEB155	0						
Drilling Liner	DWEB160	0						
Production Casing or Liner			DWEA100 4 1/2" - 12,550ft at \$19.00/ft	163,000				
Production Tie-Back			DWEA165	0	STIMT101			0
Tubing					STIMT105			77,000
Wellhead, Tree, Chokes	DWEB115	20,000	DWEA120	25,000	STIMT120			60,000
Liner Hanger, Isolation Packer	DWEB100	0	DWEA125	98,000				
Packer, Nipples					STIMT400			28,000
Pumping Unit, Engine					STIMT405			0
Downhole Lift Equipment					STIMT410			80,000
Surface Equipment								
Well Automation Materials								
Total Tangible - Well Equipment Cost		409,000		286,000				245,000
N/C Lease Equipment								
Tanks, Tanks Steps, Stairs								
Battery Equipment								
Secondary Containments								
Overhead Power Distribution								
Facility Electrical								
Telecommunication Equipment								
Meters and Metering Equipment								
Facility Line Pipe								
Lease Automation Materials								
FL/GI - Materials								
SMD/Other - Materials								
SMD/OTHER - LINE PIPE								
Total Tangible - Lease Equipment Cost								
Total Estimated Cost		3,186,000		533,000				5,829,000



Description	Codes	Production Equip		Post Completion		Total	
		Amount	Codes	Amount	Cost		
Roads & Location	CON.100	3,000	PCOM.100 Road Repair	10,000	48,000		
Damages	CON.105	4,000			10,000		
Mud/Fluids Disposal			PCOM.255 6,000 BWPD for 60 Days @ 50.70/bbl	252,000	474,000		
Day Rate					722,000		
Misc Preparation					35,000		
Bits			PCOM.125	0	75,000		
Fuel			PCOM.130	0	108,000		
Water for Drilling Rig (Not Frac Water)			PCOM.135	0	29,000		
Mud & Additives					198,000		
SWD PIPED TO XEC SWD WELL			PCOM.254	0	0		
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257	0	0		
SWD HAULED TO XEC SWD WELL			PCOM.258	0	0		
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.259	0	0		
Surface Rentals	CON.140	1,500	PCOM.140 \$1500/day for anticipated 30 days	45,000	414,500		
Downhole Rentals			PCOM.145	0	177,000		
Flowback Labor			PCOM.141 \$2200/day for anticipated 15 days	33,000	33,000		
Automation Labor	CON.150	45,000	PCOM.150	0	45,000		
Formation Evaluation (DST, Coring, etc.)					0		
Mud Logging					27,000		
Open Hole Logging					0		
Cementing & Float Equipment					208,000		
Tubular Inspections			PCOM.160	0	59,000		
Casing Crews					33,000		
Mechanical Labor	CON.170	181,000	PCOM.170	0	211,000		
Tridding/Transportation	CON.175	18,000	PCOM.175	0	55,000		
Supervision	CON.180	10,000	PCOM.180	0	235,000		
Trailer House/Camp/Catering					89,000		
Other Misc Expenses	CON.190	12,000	PCOM.190	0	172,000		
Overhead					15,000		
Remedial Cementing			PCOM.215	0	0		
MOB/DEMOS					50,000		
Directional Drilling Services					376,000		
Solids Control					99,000		
Well Control Equip (Snubbing Services)			PCOM.240	0	213,000		
Fishing & Sidetrack Services			PCOM.245	0	0		
Completion Rig			PCOM.115	0	21,000		
Coil Tubing Services			PCOM.260	0	368,000		
Completion Logging/Perforating/Wireline			PCOM.200	0	432,000		
Composite Plugs			PCOM.390	0	96,000		
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210	0	2,926,000		
Stimulation Water/Water Transfer/Water Storage					702,000		
Cimarex Owned Frac/Rental Equipment					99,000		
Legal/Regulatory/Curative	CON.300	0	PCOM.305 XEC Owned Sand Separator	59,000	10,000		
Well Control Insurance					7,000		
Major Construction Overhead	CON.305	25,000			25,000		
Real Time Operations Center					0		
FLUGL - Labor	CON.500	153,500			153,500		
FLUGL - Supervision	CON.505	22,000			22,000		
Survey	CON.515	4,000			4,000		
SWD/Other - Labor	CON.600	0			0		
SWD/OTHER - SUPERVISION	CON.605	0			0		
Contingency	CON.220	86,500	PCOM.220	0	496,500		
Contingency	CON.221	30,000			30,000		
RBA Costs					0		
Total Intangible Cost		595,500		399,000	9,602,500		
Drive Pipe					0		
Conductor Pipe					0		
Water String					14,000		
Surface Casing					67,000		
Intermediate Casing 1					308,000		
Intermediate Casing 2					0		
Drilling Liner					0		
Production Casing or Liner					163,000		
Production Tie-Back					0		
Tubing			PCOM.108	0	77,000		
Wellhead, Tree, Chokes			PCOM.120 Hairsin from choke to flowline	10,000	115,000		
Liner Hanger, Isolation Packer					98,000		
Packer, Nipples			PCOM.400	0	28,000		
Pumping Unit, Engine			PCOM.405	0	0		
Downhole Lift Equipment			PCOM.410	0	80,000		
Surface Equipment			PCOM.420	0	0		
Well Automation Materials			PCOM.455	0	0		
Total Tangible - Well Equipment Cost					10,000	950,000	
N/C Lease Equipment	CONT.400	176,500			176,500		
Tanks, Tanks Steps, Stairs	CONT.405	51,500			51,500		
Battery Equipment	CONT.410	191,500			191,500		
Secondary Containments	CONT.415	12,000			12,000		
Overhead Power Distribution	CONT.420	25,000			25,000		
Facility Electrical	CONT.425	30,000			30,000		
Telecommunication Equipment	CONT.426	0			0		
Meters and Metering Equipment	CONT.445	22,500			22,500		
Facility Line Pipe	CONT.450	23,000			23,000		
Lease Automation Materials	CONT.455	37,500			37,500		
FLUGL - Materials	CONT.550	63,500			63,500		
SWD/Other - Materials	CONT.650	52,500			52,500		
SWD/OTHER - LINE PIPE	CONT.655	0			0		
Total Tangible - Lease Equipment Cost		685,500			685,500		
Total Estimated Cost		1,281,000		409,000	11,238,000		



## Authorization For Expenditure Drilling

AFE # 26620021

Company Entity

Date Prepared  
9/5/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	RIVERBEND 12-13 FEDERAL COM 35H Carlsbad Bone Spring Prospect		300001-144.01	26620021
County, State	Location	Estimated Spud	Estimated Completion	
Eddy, NM	W/2 of Sections 12 & 13, Township 25 South, Range 28 East, Eddy County, NM	7/15/2019	8/15/2019	
<input checked="" type="checkbox"/> New	Formation	Well Type	Ttl Measured Depth	Ttl Vertical Depth
<input type="checkbox"/> Supplement	Wolfcamp	DEV	20,651	9,714
<input type="checkbox"/> Revision				

Purpose Drill and complete well

## Description

Drilling Drill and complete a horizontal test. Drill to 400', set water string casing. Drill to 2666', set surface casing. Drill to 9204' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 9829' MD. Finish curve at +/- 4°/100' to +/- 9710' TVD and drill a +/- 9510' long lateral in the Wolfcamp formation. Run and cement production liner. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	\$2,777,000		\$2,777,000
Completion Costs		\$6,825,500	\$6,825,500
Total Intangible Cost	\$2,777,000	\$6,825,500	\$9,602,500
Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	\$403,000	\$539,000	\$942,000
Lease Equipment		\$685,500	\$685,500
Total Tangible Cost	\$403,000	\$1,224,500	\$1,627,500
Total Well Cost	\$3,180,000	\$8,050,000	\$11,230,000

## Comments On Well Costs

1. All tubulars, well or lease equipment is priced by COPAS and CEPS guidelines using the Historic Price Multiplier.

## Well Control Insurance

Unless otherwise indicated below, you, as a non-operating working interest owner, agree to be covered by Operator's well control insurance procured by Operator so long as Operator conducts operations hereunder and to pay your prorated share of the premiums therefore. If you elect to purchase your own well control insurance, you must provide a certificate of such insurance acceptable to Operator, as to form and limits, at the time this AFE is returned, if available, but in no event later than commencement of drilling operations. You agree that failure to provide the certificate of insurance, as provided herein, will result in your being covered by insurance procured by Operator.

☐ I elect to purchase my own well control insurance policy.

## Marketing Election

Cimarex sells its gas under arm's-length contracts with third party purchasers. Such contracts may include fees. In addition, penalties may be incurred for insufficient volumes delivered over time. Should you choose to market your share of gas with Cimarex, you will be subject to all of the terms of such contracts. Upon written request to Cimarex's Marketing Department, we will share with you the terms and conditions pursuant to which gas will be sold. Failure to make an election below shall be deemed an election to market your gas with Cimarex under the terms and conditions set forth above.

☐ I elect to take my gas in kind.

☐ I elect to market my gas with Cimarex pursuant to the terms and conditions of its contract.

## Comments on AFE

The above costs are estimates only and anticipate trouble free operations without any foreseeable change in plans. The actual costs may exceed the estimated costs without affecting the authorization for expenditure herein granted. By approval of this AFE, the working interest owner agrees to pay its proportionate share of actual legal, curative, regulatory and well costs under term of the joint operating agreement, regulatory order or other applicable agreement covering this well.

## Nonoperator Approval

Company	Approved By (Print Name)	Approved By (Signature)	Date

NOTICE TO NONOPERATOR: Costs shown on this form are estimates only. By executing this AFE, the consenting party agrees to pay its proportionate share of actual costs incurred. Overhead will be charged in accordance with the Joint Operating Agreement.

9/5/2019

Description	BCP - Drilling		ACP - Drilling		Comp/Stim		Production Equip		Post Completion		Total
	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	
Roads & Location	DIDC100	25,000			STIM100	10,000	CON100	3,000	PCOM100	10,000	48,000
Damages	DIDC105	6,000					CON105	4,000			10,000
Mud/Fluids Disposal	DIDC255	160,000			STIM255	62,000			PCOM255	252,000	474,000
Day Rate	DIDC115	618,000	DICC120	104,000							722,000
Misc Preparation	DIDC120	35,000									35,000
Mts	DIDC125	75,000	DICC125	0	STIM125	0			PCOM125	0	75,000
Fuel	DIDC135	108,000	DICC130	0					PCOM130	0	108,000
Water for Drilling Rig (Not Frac Water)	DIDC140	5,000	DICC135	0	STIM135	24,000			PCOM135	0	29,000
Mud & Additives	DIDC145	198,000									198,000
SVD PIPED TO 3RD PARTY SVD WELL									PCOM254	0	0
SVD HAULED TO 3RD PARTY SVD WELL									PCOM257	0	0
SVD HAULED TO 3RD PARTY SVD WELL									PCOM258	0	0
SVD HAULED TO 3RD PARTY SVD WELL									PCOM259	0	0
Surface Rentals	DIDC150	131,000	DICC140	0	STIM140	237,000	CON140	1,500	PCOM140	45,000	414,500
Downhole Rentals	DIDC155	177,000			STIM145	0			PCOM145	0	177,000
Flowback Labor					STIM141	0			PCOM141	33,000	33,000
Automation Labor							CON150	45,000	PCOM150	0	45,000
Formation Evaluation (DST, Coring, etc)	DIDC160	0			STIM150	0					0
Mud Logging	DIDC170	27,000									27,000
Open Hole Logging	DIDC180	0									0
Cementing & Flow Equipment	DIDC185	145,000	DICC155	63,000							208,000
Tubular Inspections	DIDC190	50,000	DICC160	5,000	STIM160	4,000			PCOM160	0	59,000
Casing Crows	DIDC195	20,000	DICC165	13,000	STIM165	0					33,000
Mechanical Labor	DIDC200	20,000	DICC170	10,000	STIM170	0	CON170	181,000	PCOM170	0	211,000
Trucking/Transportation	DIDC205	25,000	DICC175	8,000	STIM175	4,000	CON175	18,000	PCOM175	0	55,000
Supervision	DIDC210	115,000	DICC180	16,000	STIM180	94,000	CON180	10,000	PCOM180	0	235,000
Trailer House/Camp/Catering	DIDC280	49,000	DICC255	6,000	STIM280	34,000					89,000
Other Misc Expenses	DIDC220	5,000	DICC190	0	STIM190	155,000	CON190	12,000	PCOM190	0	172,000
Overhead	DIDC235	10,000	DICC195	5,000							15,000
Remedial Cementing	DIDC231	0			STIM215	0			PCOM215	0	0
MOB/DEMOS	DIDC240	50,000									50,000
Directional Drilling Services	DIDC245	376,000									376,000
Solids Control	DIDC280	99,000									99,000
Well Control Equip (Snubbing Services)	DIDC285	99,000	DICC240	5,000	STIM240	109,000			PCOM240	0	213,000
Fishing & Sidetrack Services	DIDC270	0	DICC245	0	STIM245	0			PCOM245	0	0
Completion Rig					STIM115	21,000			PCOM115	0	21,000
Coil Tubing Services					STIM260	368,000			PCOM260	0	368,000
Completion Logging/Perforating/Wireline					STIM200	432,000			PCOM200	0	432,000
Composite Plugs					STIM390	96,000			PCOM390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM210	2,926,000			PCOM210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM395	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM305	40,000			PCOM305	59,000	99,000
Legal/Regulatory/Creative	DIDC300	10,000					CON300	0			10,000
Well Control Insurance	DIDC285	7,000									7,000
Major Construction Overhead							CON305	25,000			25,000
Real Time Operations Center	DIDC560	0			STIM560	0					0
FLUGL - Labor							CON500	153,500			153,500
FLUGL - Supervision							CON505	22,000			22,000
Survey							CON515	4,000			4,000
SVD/Other - Labor							CON600	0			0
SVD/OTHER - SUPERVISION							CON605	0			0
Contingency	DIDC435	132,000	DICC220	12,000	STIM220	266,000	CON220	86,500	PCOM220	0	496,500
Contingency							CON221	30,000			30,000
RBA Costs	DIDC295	0	DICC275	0							0
<b>Total Intangible Cost</b>		<b>2,777,000</b>		<b>247,000</b>		<b>5,584,000</b>		<b>595,500</b>		<b>399,000</b>	<b>9,602,500</b>
Drive Pipe	DWBA150	0									0
Conductor Pipe	DWBA130	0									0
Water String	DWBA135	14,000									14,000
Surface Casing	DWBA140	67,000									67,000
Intermediate Casing 1	DWBA145	302,000									302,000
Intermediate Casing 2	DWBA155	0									0
Drilling Liner	DWBA160	0									0
Production Casing or Liner			DWBA100	163,000							163,000
Production Tie-Back			DWBA165	0	STIM101	0					0
Tubing					STIM105	75,000			PCOM105	0	75,000
Wellhead, Tree, Chokes	DWBA115	20,000	DWBA120	25,000	STIM120	60,000			PCOM120	10,000	115,000
Liner Hanger, Isolation Packer	DWBA100	0	DWBA125	98,000							98,000
Packer, Nipples					STIM1400	28,000			PCOM1400	0	28,000
Pumping Unit, Engine					STIM1405	0			PCOM1405	0	0
Downhole Lift Equipment					STIM1410	80,000			PCOM1410	0	80,000
Surface Equipment									PCOM1420	0	0
Well Automation Materials									PCOM1455	0	0
<b>Total Tangible - Well Equipment Cost</b>		<b>403,000</b>		<b>286,000</b>		<b>243,000</b>				<b>10,000</b>	<b>942,000</b>
N/C Lease Equipment							CONT400	176,500			176,500
Tanks, Tanks Steps, Stairs							CONT405	51,500			51,500
Battery Equipment							CONT410	191,500			191,500
Secondary Containments							CONT415	12,000			12,000
Overhead Power Distribution							CONT420	25,000			25,000
Facility Electrical							CONT425	30,000			30,000
Telecommunication Equipment							CONT426	0			0
Meters and Metering Equipment							CONT445	22,500			22,500
Facility Line Pipe							CONT450	23,000			23,000
Lease Automation Materials							CONT455	37,500			37,500
FLUGL - Materials							CONT550	63,500			63,500
FLUGL - Line Pipe							CONT555	52,500			52,500
SVD/Other - Materials							CONT650	0			0
SVD/OTHER - LINE PIPE							CONT655	0			0
<b>Total Tangible - Lease Equipment Cost</b>								<b>685,500</b>			<b>685,500</b>
<b>Total Estimated Cost</b>		<b>3,180,000</b>		<b>533,000</b>		<b>5,827,000</b>		<b>1,281,000</b>		<b>409,000</b>	<b>11,230,000</b>



Description	BCP - Drilling			ACP - Drilling			Comp/Stim	
	Codes	Amount		Codes	Amount		Codes	Amount
Reeds & Location	DIOC100	25,000					STIM100	10,000
Damages	DIOC105	6,000						
Mud/Fluids Disposal	DIOC255	160,000					STIM255	62,000
Day Rate	DIOC115 23 days at \$26,000/day	618,000		DICC120 4 days at \$26,000/day	104,000			
Misc Preparation	DIOC120	35,000						
Bits	DIOC125	75,000		DICC125	0		STIM125	0
Fuel	DIOC135 1,300 gal/day at \$9.00/gal	108,000		DICC130	0			
Water for Drilling Rig (Not Frac Water)	DIOC140	5,000		DICC135	0		STIM135	24,000
Mud & Additives	DIOC145	198,000						
SWD PIPED TO XSC SWD WELL								
SWD PIPED TO 3RD PARTY SWD WELL								
SWD HAULED TO XSC SWD WELL								
SWD HAULED TO 3RD PARTY SWD WELL								
Surface Rentals	DIOC150 Per Day (BCP)/day	131,000		DICC140	0		STIM140	237,000
Downhole Rentals	DIOC155	177,000					STIM145	0
Flowback Labor							STIM141	0
Automation Labor								
Formation Evaluation (GST, Coring, etc.)	DIOC160	0					STIM150	0
Mud Logging	DIOC170 18 days at \$1,200/day	27,000						
Open Hole Logging	DIOC180	0						
Cementing & Float Equipment	DIOC185	145,000		DICC155	63,000			
Tubular Inspections	DIOC190	50,000		DICC160	5,000		STIM160	4,000
Casing Crews	DIOC195	20,000		DICC165	13,000		STIM165	0
Mechanical Labor	DIOC200	20,000		DICC170	10,000		STIM170	0
Trucking/Transportation	DIOC205	25,000		DICC175	8,000		STIM175	4,000
Supervision	DIOC210	115,000		DICC180	16,000		STIM180	94,000
Trailer Housdy/Camp/Catering	DIOC280	49,000		DICC255	6,000		STIM280	34,000
Other Misc Expenses	DIOC220	5,000		DICC190	0		STIM190	155,000
Overhead	DIOC225	10,000		DICC195	5,000			
Remedial Cementing	DIOC281	0					STIM215	0
MAJOR/DENIOS	DIOC240	50,000						
Directional Drilling Services	DIOC245	376,000						
Solids Control	DIOC260	99,000						
Well Control Equip (Snubbing Services)	DIOC265	99,000		DICC240	5,000		STIM240	109,000
Fishing & Sidetrack Services	DIOC270	0		DICC245	0		STIM245	0
Completion Rig							STIM115	21,000
Coil Tubing Services							STIM280	368,000
Completion Logging/Performing/Wireline							STIM300	432,000
Composite Plugs							STIM390	96,000
Stimulation							STIM310	2,926,000
Stimulation Water/Water Transfer/Water							STIM395	702,000
Cimarex Owned Frac/Rental Equipment							STIM305	40,000
Legal/Regulatory/Curtative	DIOC300	10,000						
Well Control Insurance	DIOC285 \$0.35/ft	7,000						
Major Construction Overhead								
Real Time Operations Center	DIOC560	0					STIM560	0
FLUGL - Labor								
FLUGL - Supervision								
Survey								
SWD/Other - Labor								
SWD/OTHER - SUPERVISION								
Contingency	DIOC435 500 % of Drilling Intangibles	132,000		DICC220	12,000		STIM220	266,000
Contingency								
PBA Costs	DIOC285	0		DICC275	0			
Total Intangible Cost		2,777,000			247,000			5,584,000
Drive Pipe	DWEB150	0						
Conductor Pipe	DWEB130	0						
Water String	DWEB135	14,000						
Surface Casing	DWEB140 9 5/8" - 2,666ft at \$25.00/ft	67,000						
Intermediate Casing 1	DWEB145 7" - 9,930ft at \$28.00/ft	302,000						
Intermediate Casing 2	DWEB155	0						
Drilling Liner	DWEB160	0						
Production Casing or Liner				DWEA100 4 1/2" - 12,350ft at \$13.00/ft	163,000		STIMT101	0
Production Tie-Back				DWEA165	0		STIMT105	75,000
Tubing							STIMT120	60,000
Wellhead, Tree, Chokes	DWEB115	20,000		DWEA120	25,000			
Liner Hanger, Isolation Packer	DWEB100	0		DWEA125	98,000		STIMT400	28,000
Packer, Nipples							STIMT405	0
Pumping Unit, Engine							STIMT410	80,000
Downhole Lift Equipment								
Surface Equipment								
Well Automation Materials								
Total Tangible - Well Equipment Cost		409,000			286,000			243,000
N/C Lease Equipment								
Tanks, Tanks Steps, Stairs								
Battery Equipment								
Secondary Containments								
Overhead Power Distribution								
Facility Electrical								
Telecommunication Equipment								
Meters and Metering Equipment								
Facility Line Pipe								
Lease Automation Materials								
FLUGL - Materials								
FLUGL - Line Pipe								
SWD/Other - Materials								
SWD/OTHER - LINE PIPE								
Total Tangible - Lease Equipment Cost								
Total Estimated Cost		3,189,000			533,000			5,827,000





Description	Codes	Production Equip		Post Completion		Total	
		Amount	Codes	Amount	Cost		
Roads & Location	CON.100	3,000	PCOM.100	10,000	48,000		
Damages	CON.105	4,000			10,000		
Mud/P fluids Disposal			PCOM.255	6,000 BWPD for 60 Days @ \$0.70/bbl	252,000	474,000	
Day Rate						722,000	
Misc Preparation						35,000	
Bits			PCOM.125		0	75,000	
Fuel			PCOM.130		0	108,000	
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000	
Mud & Additives					0	198,000	
SWD PIPED TO XEC SWD WELL			PCOM.254		0	0	
SWD PIPED TO 3RD PARTY SWD WELL			PCOM.257		0	0	
SWD HAULED TO XEC SWD WELL			PCOM.258		0	0	
SWD HAULED TO 3RD PARTY SWD WELL			PCOM.258		0	0	
Surface Rentals	CON.140	1,500	PCOM.140	\$1500/day for anticipated 30 days	45,000	414,500	
Downhole Rentals			PCOM.145		0	177,000	
Flowback Labor			PCOM.141	\$2200/day for anticipated 15 days	33,000	33,000	
Automation Labor	CON.150	45,000	PCOM.150		0	45,000	
Formation Evaluation (DST, Coring, etc)					0	0	
Mud Logging						27,000	
Open Hole Logging						0	
Cementing & Float Equipment						208,000	
Tubular Inspections			PCOM.160		0	59,000	
Casing Crews						33,000	
Mechanical Labor	CON.170	181,000	PCOM.170		0	211,000	
Trucking/Transportation	CON.175	18,000	PCOM.175		0	55,000	
Supervision	CON.180	10,000	PCOM.180		0	235,000	
Trailer House/Camp/Catering						89,000	
Other Misc Expenses	CON.190	12,000	PCOM.190		0	172,000	
Overhead						15,000	
Remedial Cementing			PCOM.215		0	0	
MCOB/DMAOB						50,000	
Directional Drilling Services						376,000	
Solids Control						99,000	
Well Control Equip (Snubbing Services)			PCOM.240		0	213,000	
Fishing & Sidetrack Services			PCOM.245		0	0	
Completion Rig			PCOM.115		0	21,000	
Coil Tubing Services			PCOM.280		0	368,000	
Completion Logging/Perforating/Wireline			PCOM.200		0	432,000	
Composite Plugs			PCOM.390		0	96,000	
Stimulation Pumping Chemicals/Additives/Sand			PCOM.210		0	2,926,000	
Stimulation Water/Water Transfer/Water Storage						702,000	
Clinamex Owned Frac/Rental Equipment			PCOM.305	XEC Owned Sand Separator	59,000	99,000	
Legal/Regulatory/Curtive	CON.300	0				10,000	
Well Control Insurance						7,000	
Major Construction Overhead	CON.305	25,000				25,000	
Real Time Operations Center						0	
FL/GIL - Labor	CON.500	153,500				153,500	
FL/GIL - Supervision	CON.505	22,000				22,000	
Survey	CON.515	4,000				4,000	
SWD/Other - Labor	CON.600	0				0	
SWD/OTHER - SUPERVISION	CON.605	0				0	
Contingency	CON.220	86,500	PCOM.220		0	496,500	
P&A Costs	CON.221	30,000				30,000	
Total Intangible Cost		595,500			396,000	9,602,500	
Drive Pipe						0	
Conductor Pipe						0	
Water String						14,000	
Surface Casing						67,000	
Intermediate Casing 1						302,000	
Intermediate Casing 2						0	
Drilling Liner						0	
Production Casing or Liner						163,000	
Production Tie-Back						0	
Tubing			PCOM.105		0	75,000	
Wellhead, Tree, Chokes			PCOM.120	Halfpin from choke to flowline	10,000	115,000	
Liner Hanger, Isolation Packer						98,000	
Packer, Nipples			PCOM.400		0	28,000	
Pumping Unit, Engine			PCOM.405		0	0	
Downhole Lift Equipment			PCOM.410		0	80,000	
Surface Equipment			PCOM.420		0	0	
Well Automation Materials			PCOM.435		0	0	
Total Tangible - Well Equipment Cost					10,000	942,000	
N/A Lease Equipment	CON.400	176,500				176,500	
Tanks, Tanks Steps, Stairs	CON.405	51,500				51,500	
Battery Equipment	CON.410	191,500				191,500	
Secondary Containments	CON.415	12,000				12,000	
Overhead Power Distribution	CON.420	25,000				25,000	
Facility Electrical	CON.425	30,000				30,000	
Telecommunication Equipment	CON.438	0				0	
Meters and Metering Equipment	CON.445	22,500				22,500	
Facility Line Pipe	CON.450	23,000				23,000	
Lease Automation Materials	CON.455	37,500				37,500	
FL/GIL - Materials	CON.550	69,500				69,500	
FL/GIL - Line Pipe	CON.555	52,500				52,500	
SWD/Other - Materials	CON.650	0				0	
SWD/OTHER - LINE PIPE	CON.655	0				0	
Total Tangible - Lease Equipment Cost		685,500				685,500	
Total Estimated Cost		1,281,000			406,000	11,238,000	

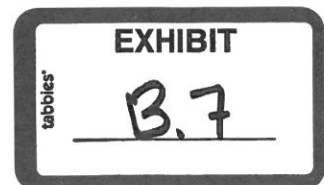
**Timeline of Communications with Tap Rock in regards to W/2 Riverbend Wells –  
Sections 12 & 13-25S-28E, Eddy County, NM**

Post Receipt of Well Proposals:

12/20/2019 – Dana Arnold at Tap Rock reached out with the idea of a possible trade in lieu of Tap Rock participating in the proposed wells

1/7/2019 – Caitlin Pierce from Cimarex called and left a voicemail for Dana Arnold regarding the proposed trade of which XEC could not accept

1/23/2019 – Tap Rock reached out again, this time regarding their interest in the wells. Caitlin Pierce from Cimarex provided a working interest breakdown and snippets of the title opinion that pertained to Tap Rock's interest that same day. This information was provided to Taylor Hinds at Tap Rock who indicated that she would pass on to the landman over the specific area.



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

APPLICATION OF CIMAREX  
ENERGY CO. FOR COMPULSORY  
POOLING, EDDY COUNTY,  
NEW MEXICO

CASE NO. 21021

AFFIDAVIT OF HARRISON HASTINGS

STATE OF TEXAS                    )  
                                          ) ss.  
COUNTY OF MIDLAND            )

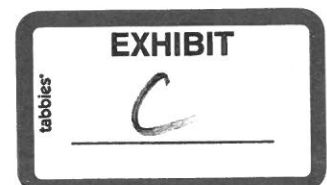
Harrison Hastings, being duly sworn, deposes and states:

1. I am over the age of 18, I am a geologist for Cimarex Energy Co. ("Cimarex"), and have personal knowledge of the matters stated herein. I have been qualified by the Oil Conservation Division ("Division") as an expert in petroleum geology matters.

2. I conducted a geological study of the area that encompasses the horizontal spacing unit that is the subject of Cimarex's application in this case and am familiar with the geological matters involved in this case.

3. As part of my study, I have prepared the following geological exhibits with respect to the horizontal spacing unit that are attached hereto:

- a. **Exhibit C.1** is a Gunbarrel/Lateral Trajectory Diagram. This diagram identifies the Riverbend 12-13 development plan, which includes the **Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H, Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H, Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and Riverbend 12-13 Fed Com 35H** wells (*hereinafter*



“Proposed Wells”) that are located within the Wolfcamp horizontal spacing unit that is the subject of this application.

- b. **Exhibit C.2** is a Locator Map identifying the Riverbend 12-13 project area, in proximity to the Capitan Reef, for the Wolfcamp horizontal spacing unit that is the subject of this application.
- c. **Exhibit C.3** is a Cross-Section Locator Map. This map identifies the cross-section running from A-A' with the cross-section well names and a blue dotted line in proximity to the Proposed Wells. It also identifies the sections in which the cross-section wells are located.
- d. **Exhibit C.4** is a Deep Structure Map on the top of the Wolfcamp formation. This map identifies each of the Proposed Wells with a red line. It also identifies the location of the cross-section running from A-A' with a blue dotted line. This map shows that the structure dips to the east.
- e. **Exhibit C.5** is an Upper Wolfcamp Isopach Map. It shows that the formation is relatively uniform across the proposed unit. It also shows the location of cross-section A-A' in proximity to the Proposed Spacing Unit.
- f. **Exhibit C.6** is a Stratigraphic Cross Section hung on the top of the Wolfcamp formation. The well logs on the cross-section give a representative sample of the Wolfcamp formation in the area. The target zones for the wells in this development are the Wolfcamp 'X' Sand, the Wolfcamp 'Y' Sand, and the Wolfcamp 'A' Shale, and those zones are consistent across the unit. The planned well-paths for the proposed wells are indicated by three blue dashed lines, and the letters 'LZ'.

g. **Exhibit C.7** contains detailed views of the three Target Zones identified within the Stratigraphic Cross Section hung on the top of the Wolfcamp Formation. The target zones for the wells in this development are the Wolfcamp 'X' Sand, the Wolfcamp 'Y' Sand, and the Wolfcamp 'A' Shale; each are identified in bright red, and show that all three zones are consistent across the unit.

4. Based upon my study as illustrated in these exhibits, knowledge of the geology in this area, and education and training, it is my expert opinion 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 unit will contribute more or less equally to production.

5. The preferred well orientation in this area is either N-S. This is due to the fact that regional max horizontal stress orientation in this area is approximately N35E.

6. The producing interval for each of these wells will be orthodox and will comply with the Division's set back requirements.

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



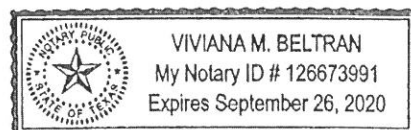
Harrison Hastings

SUBSCRIBED AND SWORN to before me this 4<sup>th</sup> day of February 2020 by Harrison Hastings, on behalf of Cimarex Energy Co.



Notary Public

My commission expires: 09/26/2020



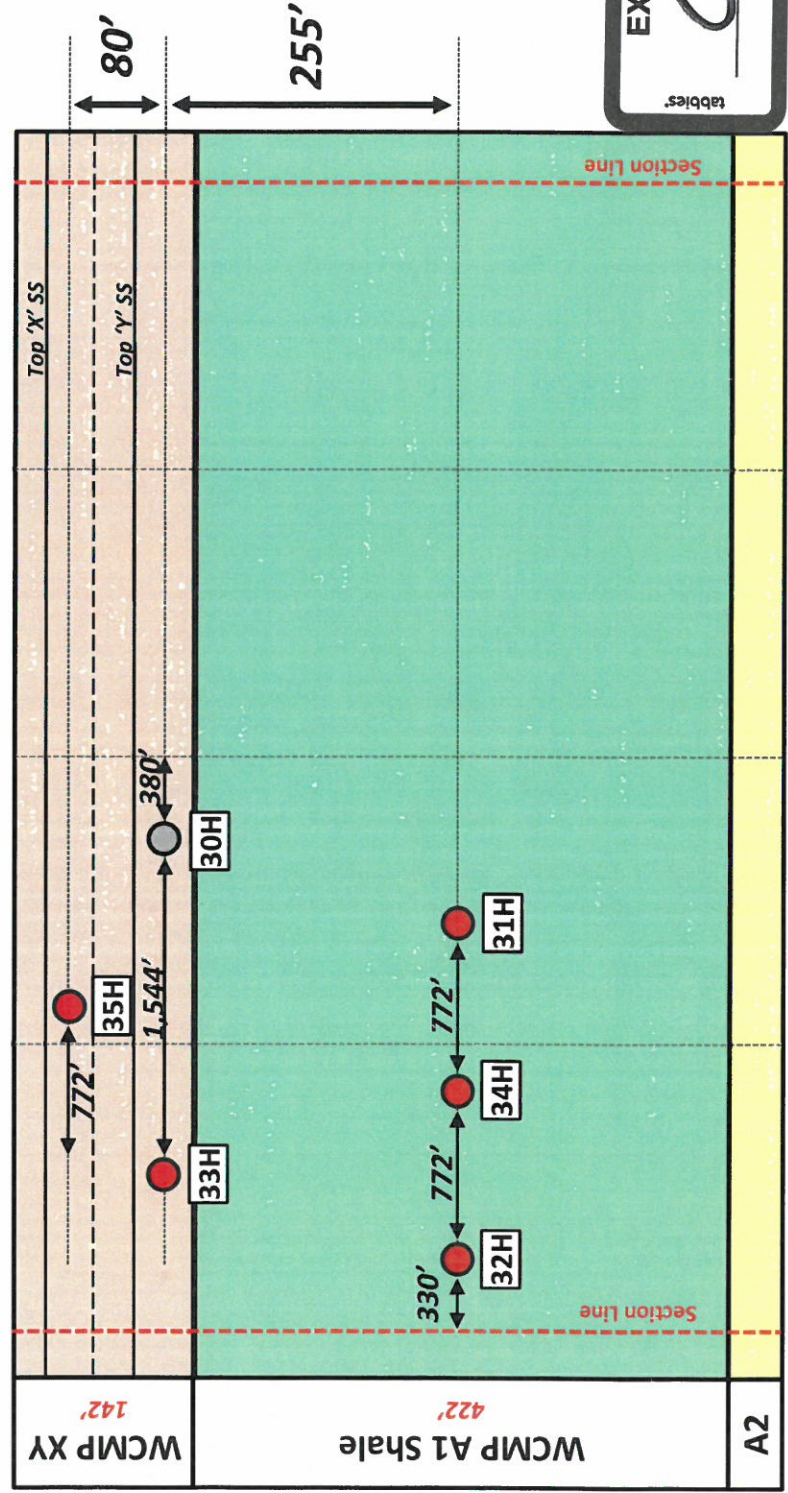
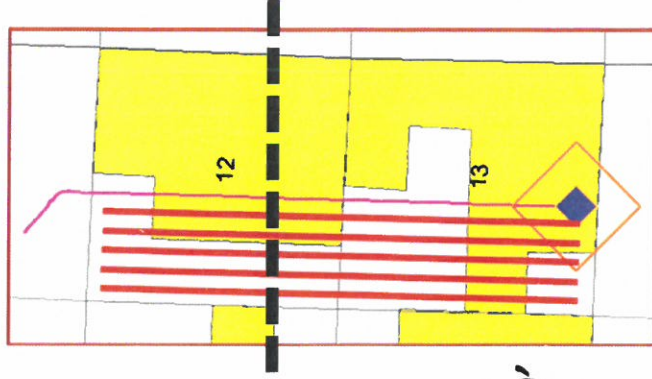
# XEC Riverbend 12-13

## Gun Barrel Diagram

Sections 12 & 13 – T25S R28E

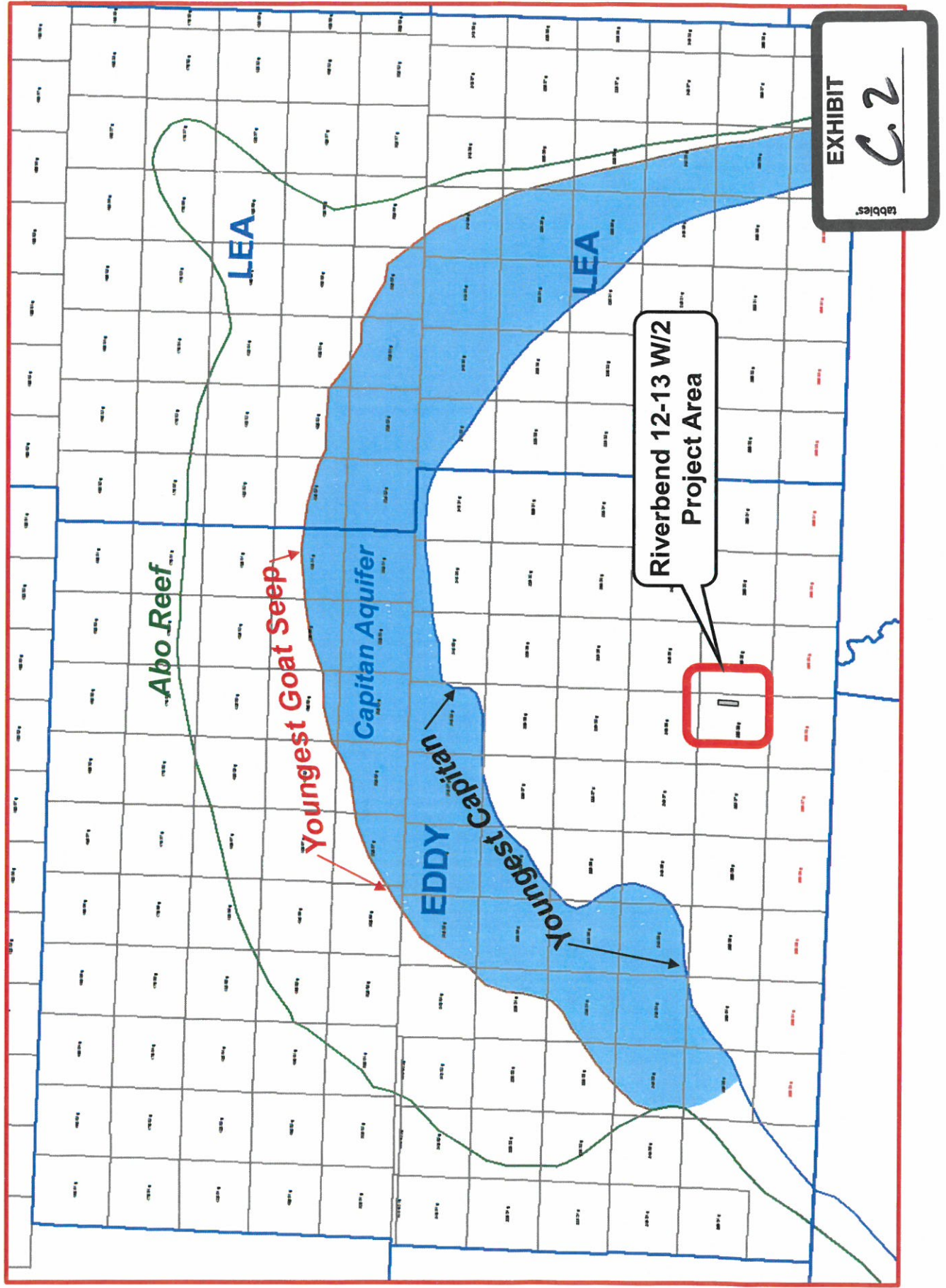
Eddy Co., NM

Cross-Sectional View Location

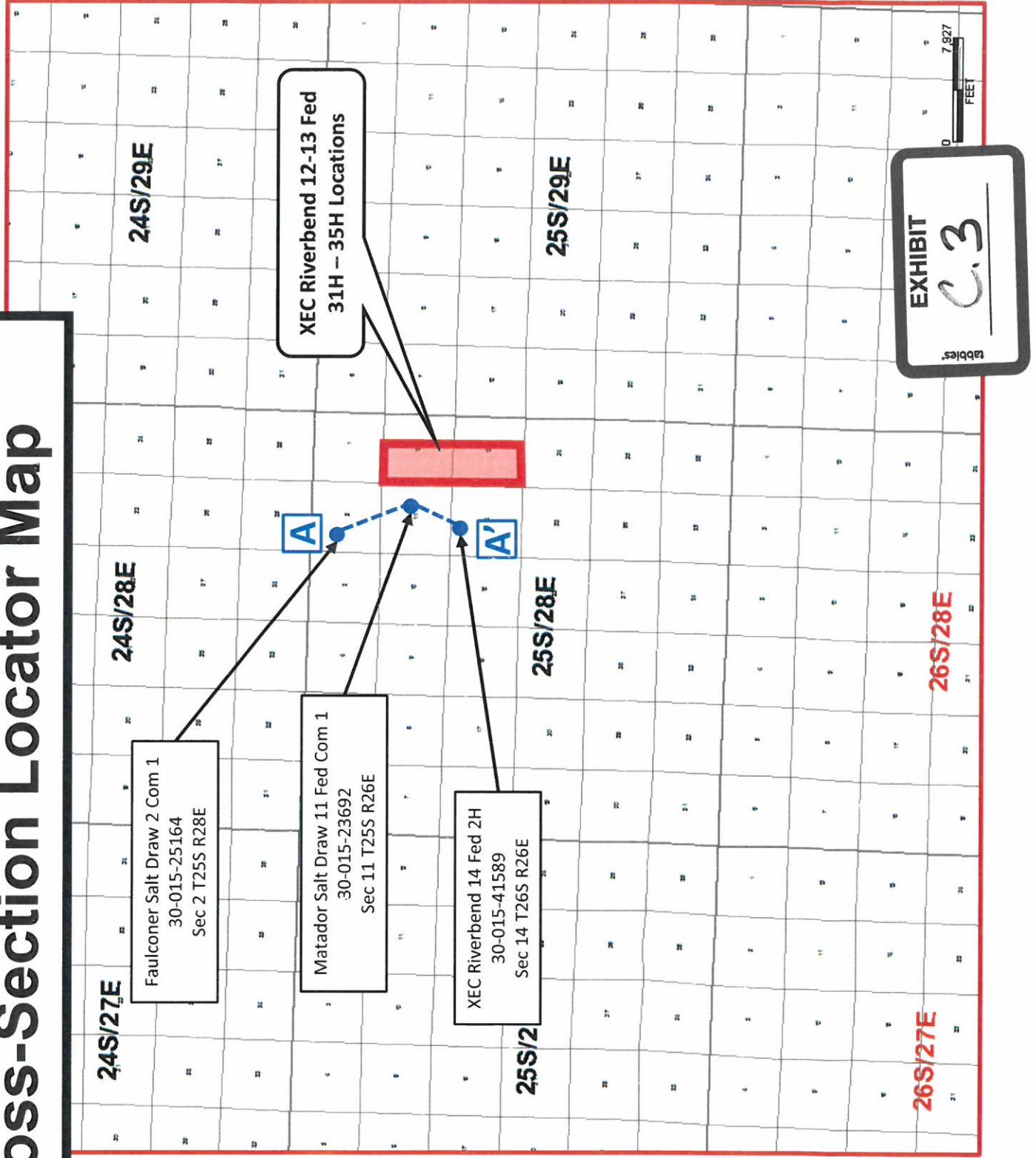




# Riverbend 12-13 Fed W/2 (31H -35H) Locator Map



# Cross-Section Locator Map





# Deep Structure Map

XEC Riverbend 12-13  
Fed 31H - 35H  
Locations

A

A'

25S/28E

25S/29E

26S/28E

26S/29E

-2650  
-2850  
-3050  
-3250  
-3450  
-3650  
-3850  
-4050  
-4250  
-4450  
-4650  
-4850  
-5050  
-5250  
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-6450  
-6650  
-6850  
-7050  
-7250  
-7450  
-7650  
-7850  
-8050  
-8250  
-8450  
-8650  
-8850  
-9050  
-9250

Top Wolfcamp Structure

(C.I. 50')

Riverbend 12-13 W/2

Cross-Section A-A'

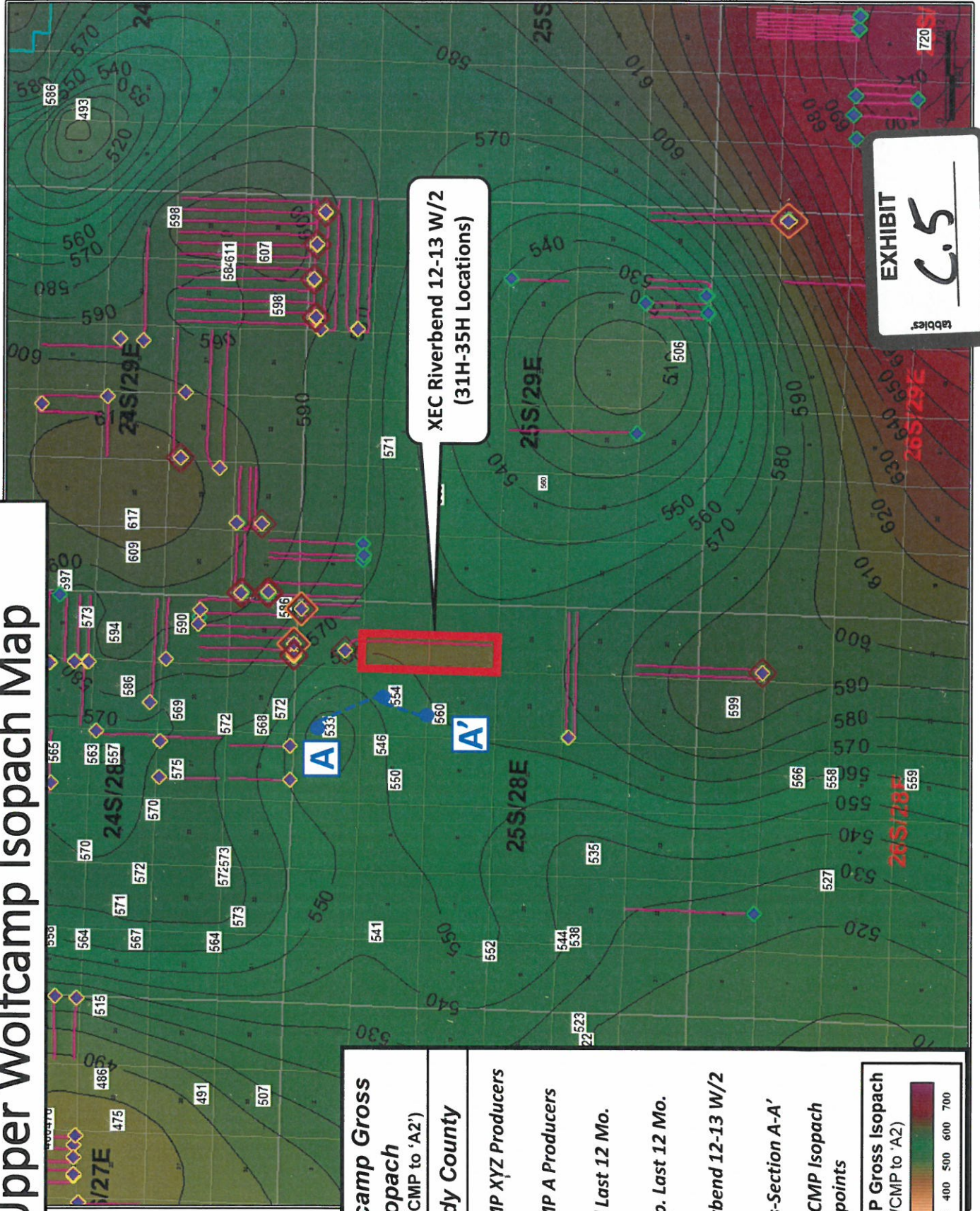
EXHIBIT

C.4

Tables



# Upper Wolfcamp Isopach Map



**U. Wolfcamp Gross Isopach**  
(Top WCMP to 'A2')

**S. Eddy County**

- WCMP XYZ Producers
- WCMP A Producers
- Spud Last 12 Mo.
- Comp. Last 12 Mo.
- Riverbend 12-13 W/2
- Cross-Section A-A'
- U. WCMP Isopach Datapoints

**Upper WCMP Gross Isopach**  
(Top WCMP to 'A2')

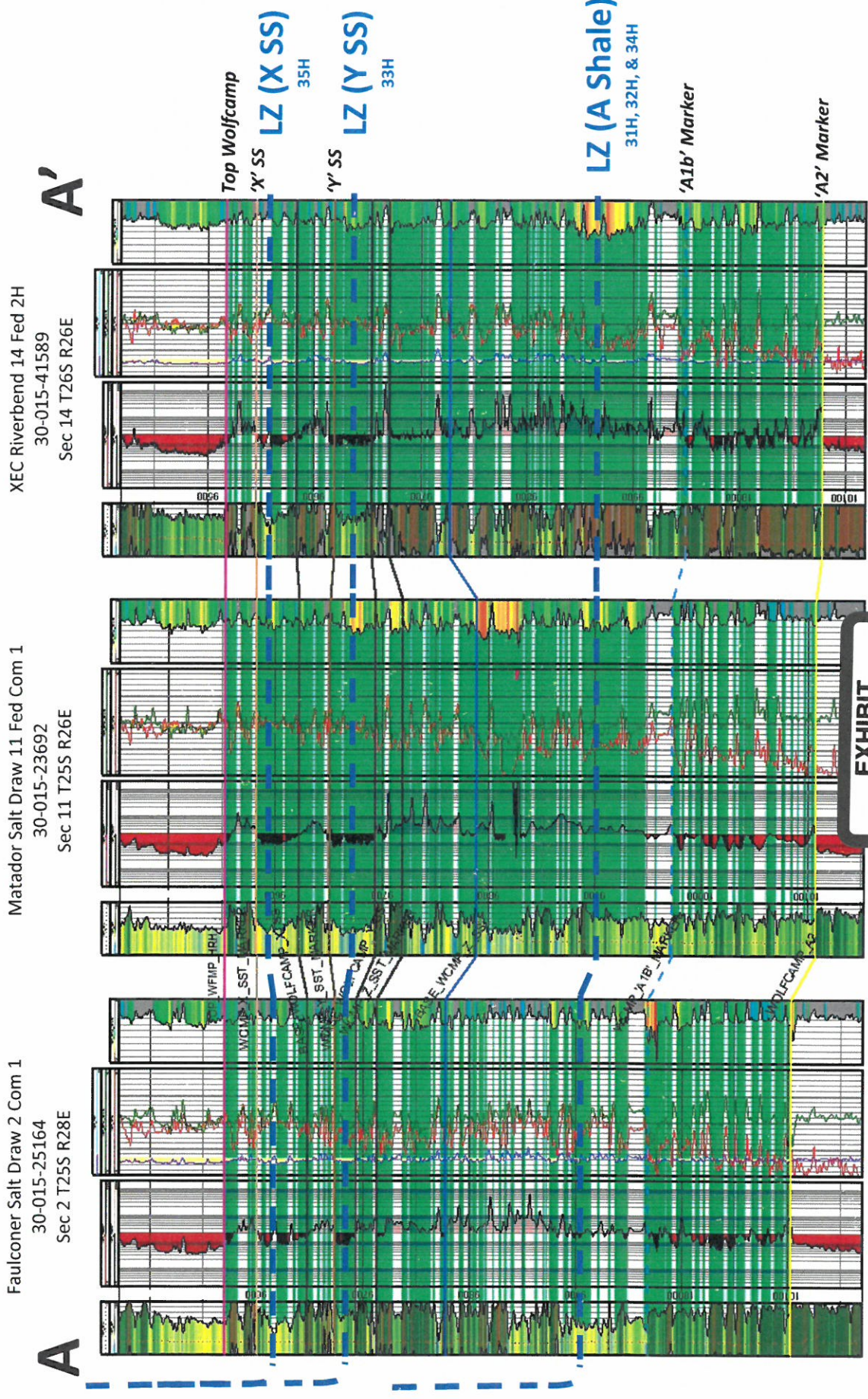
100 200 300 400 500 600 700

**EXHIBIT**  
**C.5**

tabbles



# Upper WCMP N-S Cross-Section A-A'



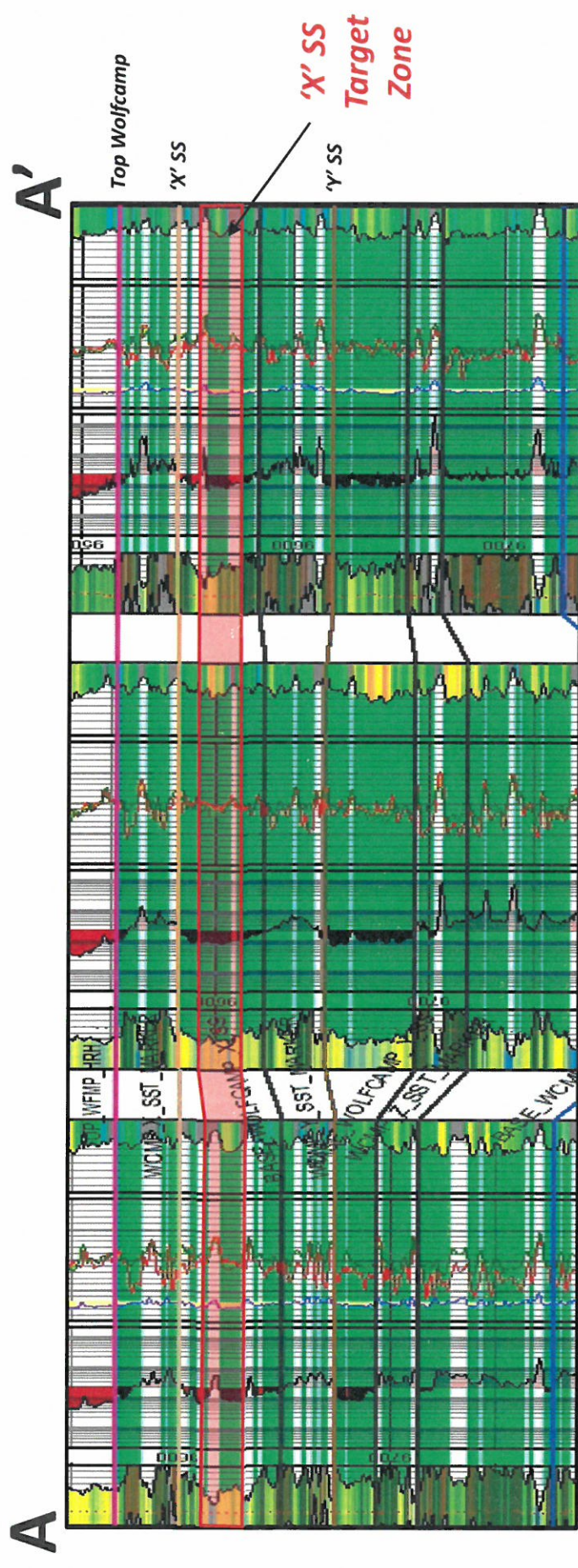
EXHIBIT

C.6

- Upper Wolfcamp Net Pay (DPHI >9% DPHI)

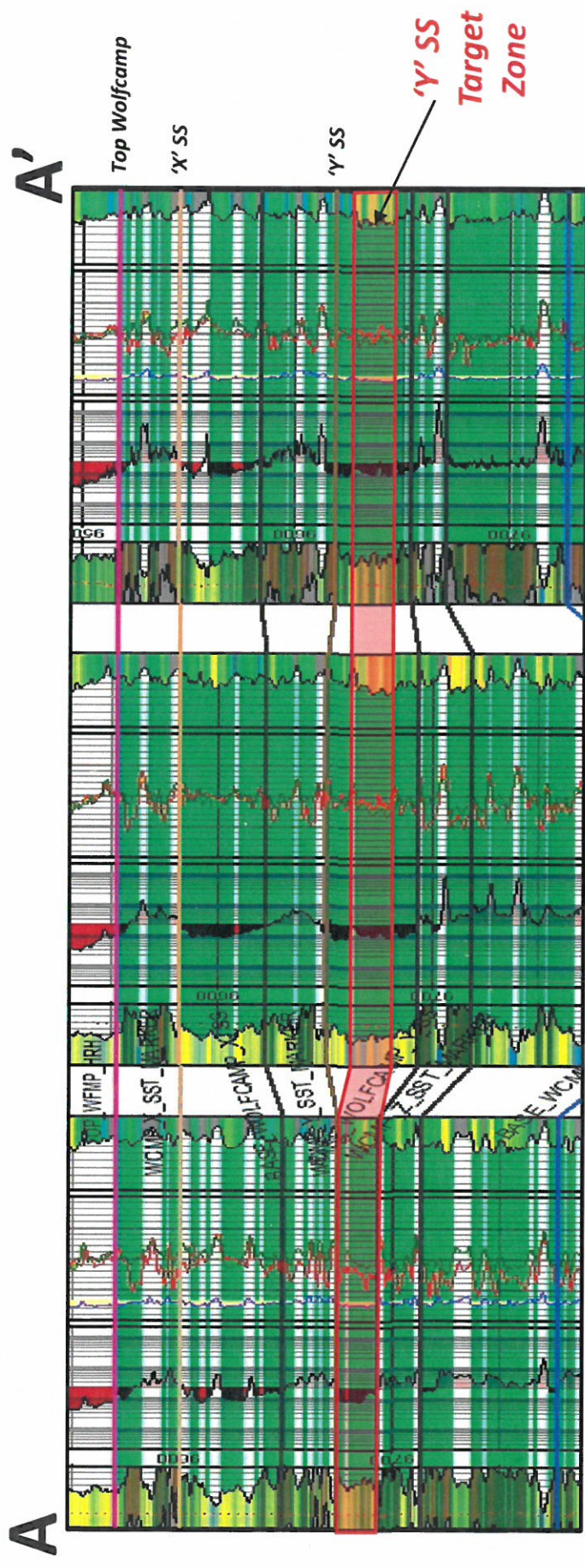


# Upper WCMP N-S Cross-Section (A-A') – 'X' SS LZ



- Upper Wolfcamp Net Pay (DPHI >9% DPHI)

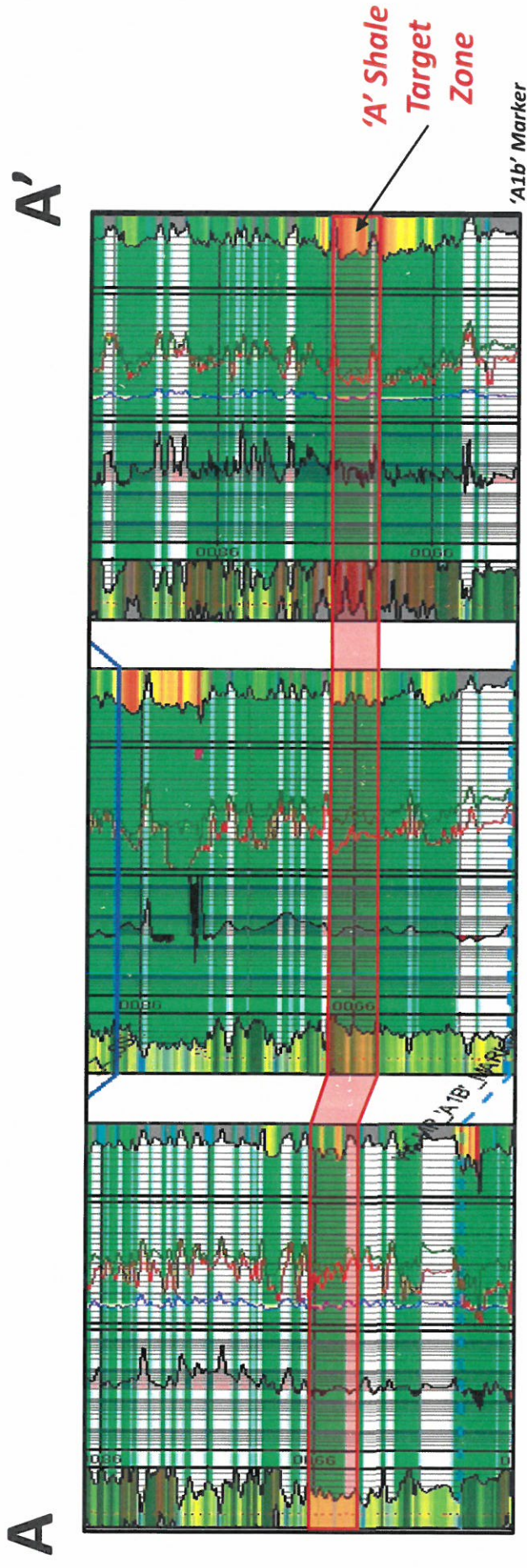
# Upper WCMP N-S Cross-Section (A-A') – 'Y' SS LZ



- Upper Wolfcamp Net Pay (DPHI >9% DPHI)



# Upper WCMP N-S Cross-Section (A-A') – 'A' Shale LZ



- Upper Wolfcamp Net Pay (DPHI >9% DPHI)

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

**APPLICATION OF CIMAREX  
ENERGY CO. FOR COMPULSORY  
POOLING, EDDY COUNTY,  
NEW MEXICO**

**CASE NO. 21021**

**AFFIDAVIT**

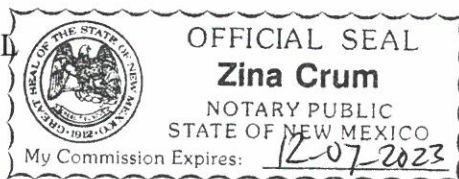
STATE OF NEW MEXICO           )  
                                                  )ss.  
COUNTY OF BERNALILLO       )

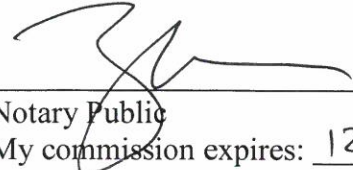
Lance D. Hough, attorney in fact and authorized representative of Cimarex Energy Co., the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Applications were provided under notices of hearing to parties entitled to notice; and that the following are attached hereto: a sample of said notice of hearing, a mailing list for notice of hearing, proof of mailed notice of hearing, and proof of published notice of hearing. As noted in the Affidavit of Caitlin Pierce, Cimarex Energy Co. has conducted a good faith, diligent effort to find the names and correct addresses for the interest owners entitled to receive notice of the application filed herein.

  
\_\_\_\_\_  
Lance D. Hough

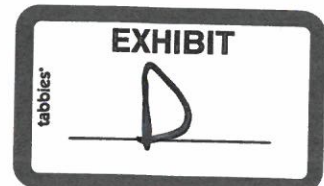
SUBSCRIBED AND SWORN to before me this 5<sup>th</sup> day of February 2020 by Lance D. Hough.

SEAL



  
\_\_\_\_\_  
Notary Public

My commission expires: 12-07-2023





January 16, 2020

Lance D. Hough  
Tel: 505.848.1826  
Fax: 505.848.9710  
Lance.Hough@modrall.com

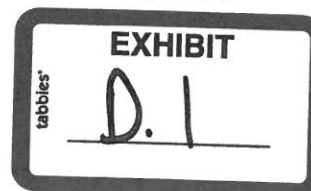
**VIA CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

TO: AFFECTED PARTIES

This letter is to advise you that Cimarex Energy Co. has filed the enclosed applications with the New Mexico Oil Conservation Division:

**Case No. 21021: Application of Cimarex Energy Co. for compulsory pooling, Eddy County, New Mexico.** Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 640-acre, more or less, Wolfcamp horizontal spacing unit; and, (2) pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H, Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H, Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and Riverbend 12-13 Fed Com 35H** 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 Cimarex as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 9.5 miles south of Loving, New Mexico.

These applications have been set for hearing before a Division Examiner at **8:15 a.m. on February 6, 2020**. 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 these applications, we are notifying you of your right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the applications. Failure to appear at the hearing may preclude you from any involvement in this 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



AFFECTED PARTIES

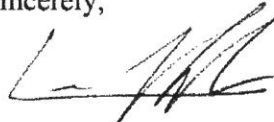
Cimarex / Riverbend 12-13 Fed Com 29H to 35H

January 16, 2020

Page 2

You are further notified that if you desire to appear in these cases, 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 black ink, appearing to read 'L. Hough', with a stylized flourish at the end.

Lance D. Hough  
*Attorney for Applicant*

EED/ldh/W3634823.DOCX

Enclosures: as stated

Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL  
01/16/2020



Firm Mailing Book ID: 182807

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest. Del. Fee	Reference Contents
1	9314 8699 0430 0067 7526 94	Bureau of Land Management General Land Office 301 Dinosaur Trail Santa Fe NM 87508	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
2	9314 8699 0430 0067 7527 00	Monty D McClane P.O. Box 9451 Midland TX 79708	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
3	9314 8699 0430 0067 7527 17	Alan Jochimsen 4209 Cardinal Lane Midland TX 79707	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
4	9314 8699 0430 0067 7527 24	States Royalty, LP P.O. Box 911 Breckenridge TX 76424	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
5	9314 8699 0430 0067 7527 31	Morris E Schertz P.O. Box 2588 Roswell TX 88201	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
6	9314 8699 0430 0067 7527 48	Orion Oil & Gas Properties 2505 Lakeview, Ste. 210 Amarillo TX 79109	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
7	9314 8699 0430 0067 7527 55	Premier Oil & Gas Inc P.O. Box 1246 Artesia NM 88211	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
8	9314 8699 0430 0067 7527 62	GHHunker, LLC P.O. Box 524 Lander WY 82520	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
9	9314 8699 0430 0067 7527 79	Chisos Minerals, LLC 1111 Bagby St., Ste. 2150 Houston TX 77002	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
10	9314 8699 0430 0067 7527 86	Norton LLC 60 Beach Ave. - Bay View S. Dartmouth MA 02748	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
11	9314 8699 0430 0067 7527 93	MKHM Oil, LLC 3200 N. Tacoma St. Arlington VA 22213	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
12	9314 8699 0430 0067 7528 09	OGI, Inc 841 Hersch Ave. Pagosa Springs CO 81147	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
13	9314 8699 0430 0067 7528 16	Energy Properties, LP P.O. Box 51408 Casper WY 82605	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
14	9314 8699 0430 0067 7528 23	ROEC Inc P.O. Box 490 Grand Junction CO 81502	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
15	9314 8699 0430 0067 7528 30	Sam L. Shackelford 1096 Mechem Dr., Ste. G-16 Ruidoso NM 88345	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice



EXHIBIT  
D.2  
tabbles

Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102

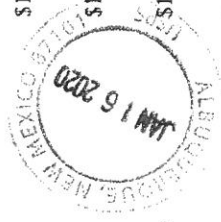
PS Form 3877

Type of Mailing: CERTIFIED MAIL,  
01/16/2020



Firm Mailing Book ID: 182807

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
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17	9314 8699 0430 0067 7528 54	The William N. Heiss Profit Sharing Plan William N. Heiss and Susan E. Heiss, Co-Trustees c/o Midhill P.O. Box 2680 Quich-Inish Oil Company 223 W. Wall, Ste. 407 Midland TX 79701	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
18	9314 8699 0430 0067 7528 61	Matt Hinkle P.O. Box 2292 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
19	9314 8699 0430 0067 7528 78	Rolla Hinkle, III P.O. Box 2292 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
20	9314 8699 0430 0067 7528 85	Magnum Hunter Production Inc 1700 Lincoln Street, Suite 3700 Denver CO 80203	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
21	9314 8699 0430 0067 7528 92	Conoco Phillips Company 600 N. Dairy Ashford Rd. Houston TX 77079	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
22	9314 8699 0430 0067 7529 08	Centennial, a New Mexico Partnership P.O. Box 1837 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
23	9314 8699 0430 0067 7529 15	Hutchings Oil Company 3235 Calle De Deborah NW Albuquerque NM 87104	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
24	9314 8699 0430 0067 7529 22	Peter T. Balog, Trustee of the Balog Family Trust Karen J. Krohn, POA P.O. Box 111890 Anchorage AK 99511	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
25	9314 8699 0430 0067 7529 39	Dan M. Leonard P.O. Box 3422 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
26	9314 8699 0430 0067 7529 46	Dan M. Leonard, Trustee of 1 the DML Revocable Trust P.O. Box 3422 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
27	9314 8699 0430 0067 7529 53	LML Properties, LLC P.O. Box 3194 Boulder CO 80307	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
28	9314 8699 0430 0067 7529 60	Jack's Peak, LLC P.O. Box 294928 Kerrville TX 78029	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
29	9314 8699 0430 0067 7529 77		\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice



Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL  
01/16/2020



Firm Mailing Book ID: 182807

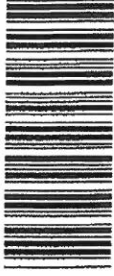
Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
30	9314 8699 0430 0067 7529 84	Kevin K. Leonard, Trustee of the Kevin K. Leonard Child's Trust P.O. Box 50688 Midland TX 79710	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
31	9314 8699 0430 0067 7529 91	Mark B. Murphy c/o Murphy Petroleum Corp P.O. Box 2545 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
32	9314 8699 0430 0067 7530 04	Strata Production Company P.O. Box 1030 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
33	9314 8699 0430 0067 7530 11	Valerie F. Walker, Trustee of the Jack V. Walker Revocable Trust 2341 Scarborough DR. Anchorage AK 99504	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
34	9314 8699 0430 0067 7530 28	Sharon Winn Scott 9626 Meadowland Dr. Houston TX 77063	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
35	9314 8699 0430 0067 7530 35	Worral Investment Corporation P.O. Box 1834 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
36	9314 8699 0430 0067 7530 42	Mitchell Exploration Inc 6212 Homestead Blvd. P.O. Box 2415 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
37	9314 8699 0430 0067 7530 59	Permian Basin Investment Corporation c/o Bank of the Southwest P.O. Box 1638 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
38	9314 8699 0430 0067 7530 66	Southwest Petroleum Land Services, LLC P.O. Box 702377 Dallas TX 75370	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
39	9314 8699 0430 0067 7530 73	Realtimezone, Inc. 100 N. Pennsylvania Ave. Roswell NM 88203	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
40	9314 8699 0430 0067 7530 80	Oak Valley Mineral & Land, LP P.O. Box 50820 Midland TX 79710	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
41	9314 8699 0430 0067 7530 97	Stanley W. Light 3818 Turtle Creek Dr. Dallas TX 75219	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
42	9314 8699 0430 0067 7531 03	Carlsbad National Bank Trust Department, Trustee Last Will and Testament of Bradley T. Light 2401 S. Canal Street Carlsbad NM 88270	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice



Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL  
01/16/2020



Firm Mailing Book ID: 182807

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
43	9314 8699 0430 0067 7531 10	OGX Royalty Fund, LP P.O. Box 2064 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
44	9314 8699 0430 0067 7531 27	Benny May Jenkins 4023 West Lea Street Carlsbad NM 88220	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
45	9314 8699 0430 0067 7531 34	James Matthew Jenkins 112 SW Ave. C Seminole TX 79360	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
46	9314 8699 0430 0067 7531 41	Leanne Jenkins Hacker P.O. Box 2754 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
47	9314 8699 0430 0067 7531 58	Joy Elizabeth Cooksey P.O. Box 45 Carlsbad NM 88221	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
48	9314 8699 0430 0067 7531 65	James Monroe Cooksey, III P.O. Box 103 Malaga NM 88263	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
49	9314 8699 0430 0067 7531 72	Douglas C Koch P.O. Box 540244 Houston TX 77254	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
50	9314 8699 0430 0067 7531 89	Wayne Bissett P.O. Box 2101 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
51	9314 8699 0430 0067 7531 96	Morris E. Schertz, et ux, Holly K Schertz P.O. Box 2588 Roswell NM 88202	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
52	9314 8699 0430 0067 7532 02	Larry G. Phillips et ux, Anne C. Phillips P.O. Box 2197 Midland TX 79702	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
53	9314 8699 0430 0067 7532 19	Empire Energy LLC 70 Riverside Dr. Roswell NM 88201	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
54	9314 8699 0430 0067 7532 26	New State Gas LLC 33530 Tiderunner Ave. Millshoro DE 19966	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
55	9314 8699 0430 0067 7532 33	Charles Getchel Wiley, Trustee of the Charles Getchel Wiley Trust 6965 Independence Street Arvada CO 80004	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
56	9314 8699 0430 0067 7532 40	Pegasus Resources, LLC P.O. Box 733980 Dallas TX 75373	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
57	9314 8699 0430 0067 7532 57	McMullin Minerals LLC P.O. Box 470857 Fl. Worth TX 76147	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice



Zina Crum  
Modrall Sperling  
500 4th Street NW  
Suite 1000  
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL  
01/16/2020



Firm Mailing Book ID: 182807

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
58	9314 8699 0430 0067 7532 64	Ronadero Company Inc P.O. Box 746 Big Horn NY 82833	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
59	9314 8699 0430 0067 7532 71	Seaboard Oil Company P.O. Box 50180 Midland TX 79710	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
60	9314 8699 0430 0067 7532 88	Rowan Family Minerals LLC P.O. Box 107 Andrews TX 79714	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
61	9314 8699 0430 0067 7532 95	Cirrus Minerals, LLC P.O. Box 51746 LaFayette LA 70505	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
62	9314 8699 0430 0067 7533 01	PEP II Management, LLC 330 Marshall St., Ste. 300 Shreveport LA 71101	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
63	9314 8699 0430 0067 7533 18	BNSF Railway Company P.O. Box 676167 Dallas TX 75267	\$1.15	\$3.55	\$1.60	\$0.00	82762.0192 Riverbend Notice
<b>Totals:</b>			<b>\$72.45</b>	<b>\$223.65</b>	<b>\$100.80</b>	<b>\$0.00</b>	
<b>Grand Total:</b>						<b>\$396.90</b>	

List Number of Pieces  
Listed by Sender

Total Number of Pieces  
Received at Post Office

Postmaster:  
Name of receiving employee

Dated:



USPS Article Number	Date Created	Name 1	Name 2	Address1	City	State	Zip	Mailing Status	Service Options	Mail Delivery Date
931486990430006753318	2020-01-16 1:50 PM	BNSF Railway Company		P.O. Box 676167	Dallas	TX	75267	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753301	2020-01-16 1:50 PM	PER II Management, LLC		330 Marshall St., Ste. 300	Shreveport	LA	71101	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753295	2020-01-16 1:50 PM	Cirrus Minerals, LLC		P.O. Box 51746	LaFayette	TX	75805	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006753288	2020-01-16 1:50 PM	Rowan Family Minerals LLC		P.O. Box 107	Andrews	TX	79714	Mailed	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753271	2020-01-16 1:50 PM	Seaboard Oil Company		P.O. Box 50180	Midland	TX	79710	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753264	2020-01-16 1:50 PM	Ronadero Company Inc		P.O. Box 746	Big Horn	WY	82833	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753257	2020-01-16 1:50 PM	McMullen Minerals LLC		P.O. Box 470857	Fl. Worth	TX	76147	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753240	2020-01-16 1:50 PM	Pegasus Resources, LLC		P.O. Box 733980	Dallas	TX	75373	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753233	2020-01-16 1:50 PM	Charles Gatchel Wiley, Trustee of	the Charles Gatchel Wiley Trust	6965 Independence Street	Arvada	CO	80004	Undelivered	Return Receipt - Electronic, Certified Mail	01-24-2020
931486990430006753226	2020-01-16 1:50 PM	New State Gas LLC		33530 Tiderunner Ave.	Millsboro	DE	19966	Undelivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006753219	2020-01-16 1:50 PM	Empire Energy LLC		70 Riverside Dr.	Roswell	NM	88201	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753202	2020-01-16 1:50 PM	Larry G. Phillips et ux, Anne C. Phillips		P.O. Box 2197	Midland	TX	79702	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753196	2020-01-16 1:50 PM	Morris E. Schertz, et ux, Holly K Schertz		P.O. Box 2588	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753189	2020-01-16 1:50 PM	Wayne Bissett		P.O. Box 2101	Midland	TX	79702	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753172	2020-01-16 1:50 PM	Douglas C Koch		P.O. Box 540244	Houston	TX	77254	Delivered	Return Receipt - Electronic, Certified Mail	01-27-2020
931486990430006753165	2020-01-16 1:50 PM	James Monroe Cooksey, III		P.O. Box 103	Malaga	NM	88263	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753158	2020-01-16 1:50 PM	Joy Elizabeth Cooksey		P.O. Box 45	Carlsbad	NM	88221	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753141	2020-01-16 1:50 PM	Leanne Jenkins Hacker		P.O. Box 2754	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006753134	2020-01-16 1:50 PM	James Matthew Jenkins		112 SW Ave. C	Seminole	TX	79360	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753127	2020-01-16 1:50 PM	Benny May Jenkins		4023 West Lea Street	Carlsbad	NM	88220	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753110	2020-01-16 1:50 PM	OGX Royalty Fund, LP		P.O. Box 2064	Midland	TX	79702	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753103	2020-01-16 1:50 PM	Carlsbad National Bank Trust Department, Trustee	Last Will and Testament of Bradley T. Light	2401 S. Canal Street	Carlsbad	NM	88270	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753097	2020-01-16 1:50 PM	Stanley W. Light		3818 Turtle Creek Dr.	Dallas	TX	75219	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753080	2020-01-16 1:50 PM	Oak Valley Mineral & Land, LP		P.O. Box 50820	Midland	TX	79710	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753073	2020-01-16 1:50 PM	Realtimzone, Inc.		P.O. Box 702377	Roswell	NM	88203	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753066	2020-01-16 1:50 PM	Southwest Petroleum Land Services, LLC		100 N. Pennsylvania Ave.	Dallas	TX	75370	Mailed	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006753059	2020-01-16 1:50 PM	Permian Basin Investment Corporation		P.O. Box 1638	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753042	2020-01-16 1:50 PM	Mitchell Exploration Inc	c/o Bank of the Southwest	P.O. Box 2415	Midland	TX	79702	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753035	2020-01-16 1:50 PM	Worral Investment Corporation	6212 Homestead Blvd.	P.O. Box 1834	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753028	2020-01-16 1:50 PM	Sharon Winn Scott		9626 Meadowland Dr.	Houston	TX	77065	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006753011	2020-01-16 1:50 PM	Valorie F. Walker, Trustee of	the Jack V. Walker Revocable Trust	2341 Seaborough DR.	Anchorage	AK	99504	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006752991	2020-01-16 1:50 PM	Mark B. Murphy	c/o Murphy Petroleum Corp	P.O. Box 1030	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752984	2020-01-16 1:50 PM	Kevin K. Leonard, Trustee of	the Kevin K. Leonard Child's Trust	P.O. Box 50688	Midland	TX	79710	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752977	2020-01-16 1:50 PM	Jack's Peak, LLC		P.O. Box 3194	Kerrville	TX	78029	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006752960	2020-01-16 1:50 PM	LML Properties, LLC		P.O. Box 3422	Boulder	CO	80307	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006752946	2020-01-16 1:50 PM	Dan M. Leonard	the DML Revocable Trust	P.O. Box 3422	Midland	TX	79702	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006752939	2020-01-16 1:50 PM	Peter T. Balog, Trustee of the Balog Family Trust		P.O. Box 111890	Anchorage	AK	99511	Mailed	Return Receipt - Electronic, Certified Mail	01-18-2020
931486990430006752922	2020-01-16 1:50 PM	Hutchings Oil Company		3235 Calle De Deborah NW	Albuquerque	NM	87104	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752915	2020-01-16 1:50 PM	Centennial, a New Mexico Partnership		P.O. Box 4837	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752908	2020-01-16 1:50 PM	Conoco Phillips Company		500 N. Dairy Ashford Rd.	Houston	TX	77079	Mailed	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006752892	2020-01-16 1:50 PM	Magnum Hunter Production Inc		1700 Lincoln Street, Suite 3700	Denver	CO	80203	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752885	2020-01-16 1:50 PM	Rolla Hinkle, III		P.O. Box 2292	Roswell	NM	88202	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752878	2020-01-16 1:50 PM	Matt Hinkle		223 W. Wall, Ste. 407	Midland	TX	79701	Returned to Se	Return Receipt - Electronic, Certified Mail	02-04-2020
931486990430006752861	2020-01-16 1:50 PM	Dutch-Irish Oil Company		c/o Midhill P.O. Box 2680	Casper	WY	82602	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006752854	2020-01-16 1:50 PM	The Willian N. Heiss Profit Sharing Plan	Willian N. Heiss and Susan E. Heiss, Co-Trustees	108 Paradise Canyon Dr.	Ruidoso	NM	88345	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752847	2020-01-16 1:50 PM	Robin K. Shackelford		1096 Mechem Dr., Ste. G-16	Ruidoso	NM	88345	Delivered	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752830	2020-01-16 1:50 PM	Sam L. Shackelford		P.O. Box 490	Grand Junction	CO	81502	Delivered	Return Receipt - Electronic, Certified Mail	01-24-2020
931486990430006752823	2020-01-16 1:50 PM	ROEC Inc		P.O. Box 51408	Casper	WY	82605	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020
931486990430006752816	2020-01-16 1:50 PM	Energy Properties, LP		841 Hersch Ave.	Pagosa Spring	CO	81147	Mailed	Return Receipt - Electronic, Certified Mail	01-22-2020
931486990430006752793	2020-01-16 1:50 PM	OGI, Inc		3200 N. Tacoma St.	Arlington	VA	22213	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006752786	2020-01-16 1:50 PM	Norton LLC		60 Beach Ave. - Bay View	S. Dartmouth	MA	02748	Delivered	Return Receipt - Electronic, Certified Mail	01-23-2020
931486990430006752779	2020-01-16 1:50 PM	Chios Minerals, LLC		1111 Bagby St., Ste. 2150	Houston	TX	77002	Delivered	Return Receipt - Electronic, Certified Mail	01-21-2020

EXHIBIT

D.3

Tables



9314869904300067752762 2020-01-16 1:50 PM GHHunter, LLC  
9314869904300067752755 2020-01-16 1:50 PM Premier Oil & Gas Inc  
9314869904300067752748 2020-01-16 1:50 PM Orion Oil & Gas Properties  
9314869904300067752731 2020-01-16 1:50 PM Morris E Schertz  
9314869904300067752724 2020-01-16 1:50 PM States Royalty, LP  
9314869904300067752717 2020-01-16 1:50 PM Alan Jochimsen  
9314869904300067752700 2020-01-16 1:50 PM Monty D McClane  
9314869904300067752694 2020-01-16 1:50 PM Bureau of Land Management

P.O. Box 524  
P.O. Box 1246  
2505 Lakeview, Ste. 210  
P.O. Box 2588  
P.O. Box 911  
4209 Cardinal Lane  
P.O. Box 9451  
301 Dinosaur Trail

Lander  
Artesia  
Amarillo  
Roswell  
Breckenridge  
Midland  
Midland  
Santa Fe

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General Land Office

# Carlsbad Current Argus.

PART OF THE USA TODAY NETWORK

## Affidavit of Publication

Ad # 0004011206

This is not an invoice

MODRALL SPERLING  
POBOX 2168

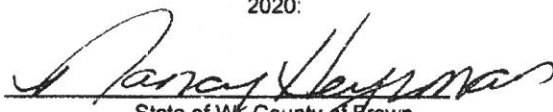
ALBUQUERQUE, NM 87103

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 22, 2020

  
Legal Clerk

Subscribed and sworn before me this January 22,  
2020:

  
State of WI, County of Brown  
NOTARY PUBLIC  
5.15.23  
My commission expires

Ad # 0004011206  
PO #: 21021:  
# of Affidavits 1

This is not an invoice

NANCY HEYRMAN  
Notary Public  
State of Wisconsin

CASE NO. 21021: Notice to all affected parties, as well as their heirs and devisees, of Veritas Permian Resources, LLC EOG Resources, LLC; Mewbourne Oil Company; Clayton Williams, Jr.; CWM 2000-B Ltd; CWM 2000-BII, LTD; 3MG Corporation; Mewbourne Development Corporation; COG Acreage Fund LP; COG Operating LLC; Chevron USA Inc; CWPLCO, Inc; Empire Energy LLC; New State Gas LLC; WPX Energy Permian, LLC; Tap Rock Resources, LLC; Ronadero Company, Inc; Devon Energy Production Company, LP; BNSF Railway Company United States of America; Department of the Interior, Bureau of Land Management; Monty D McClane; Alan Jochimsen; States Royalty, LP; Morris E Schertz; Orion Oil & Gas Properties; Premier Oil & Gas Inc; GHHunker, LLC; Chisos Minerals, LLC; Norton LLC; MKHM Oil, LLC; OGI, Inc; Energy Properties, LP; ROEC Inc; Sam L Shackelford; Robin K. Shackelford; The William N. Heiss Profit Sharing Plan, William N. Heiss and Susan E. Heiss, Co-Trustees; Dutch-Irish Oil Company; Matt Hinkle; Rolla Hinkle, III; Curtis W Mewbourne, Trustee; Conoco Phillips Company; Centennial, a New Mexico Partnership; Hutchings Oil Company; Peter T. Balog, Trustee of the Balog Family Trust; Vermego Property Investment Company; Dan M. Leonard; Dan M. Leonard, Trustee of the DML Revocable Trust; LML Properties, LLC; Jack's Peak, LLC; Kevin K. Leonard, Trustee of the Kevin K. Leonard Child's Trust; Mark B. Murphy; Strata Production Company; Valerie F. Walker, Trustee of the Jack V. Walker Revocable Trust; Sharon Winn Scott; Worrall Investment Corporation; Mitchell Exploration Inc; Permian; Basin Investment Corporation; Southwest Petroleum Land Services, LLC; Realtimezone, Inc.; Oak Valley Mineral & Land, LP; Stanley W. Light; Carlsbad National Bank Trust Department, Testamentary Trustee under the Last Will and Testament of Bradley T. Light; Curtis W. Mewbourne; OGX Royalty Fund, LP; Benny May Jenkins; James Matthew Jenkins; Leanne Jenkins Hacker; Joy Elizabeth Cooksey; James Monroe Cooksey, III; Douglas C Koch; Wayne Bissett; Andrew A Latham; Morris E. Schertz, et ux, Holly K Schertz; Larry G. Phillips et ux, Anne C. Phillips; Empire Energy LLC New State Gas LLC; Charles Getchel Wiley, Trustee of the Charles Getchel Wiley Trust; Pegasus Resources, LLC McMullin Minerals LLC; Ronadero Company Inc; Seaboard Oil Company; Rowan; Family Minerals LLC; Cirrus Minerals, LLC; PEP II Management, LLC; BNSF Railway Company of Cimarex Energy Co.'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: (1) to the extent necessary, approving the creation of a 640-acre, more or less, Wolfcamp horizontal spacing unit; and, (2) pooling all un-committed mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Sections 12 and 13, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the Riverbend 12-13 Fed Com 29H, Riverbend 12-13 Fed Com 30H, Riverbend 12-13 Fed Com 31H, Riverbend 12-13 Fed Com 32H, Riverbend 12-13 Fed Com 33H, Riverbend 12-13 Fed Com 34H, and Riverbend 12-13 Fed Com 35H 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 Cimarex as operator of the wells, and a 200% charge for risk involved in drilling said wells. Said area is located approximately 9.5 miles south of Loving, New Mexico.

January 22, 2020

