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. 20590**

Examiner Docket: July 11, 2019

Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H

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

CIMAREX'S EXHIBITS

Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H

Exhibit A Affidavit of Caitlin Pierce

- A-1 Application
- A-2 Lease Tract Map
- A-3 Well Proposal Letter
- A-4 Authorizations for Expenditures

Exhibit B Affidavit of Harrison Hastings

- B-1 Deep Structure Map
- B-2 Winerack Diagram
- B-3 Cross-Section Locator Map – Upper Wolfcamp
- B-4 Gross Interval Isopach Map – Upper Wolfcamp
- B-5 Stratigraphic Cross-Section – Upper Wolfcamp
- B-6 Cross-Section Locator Map – Lower Wolfcamp
- B-7 Gross Interval Isopach Map – Lower Wolfcamp
- B-8 Stratigraphic Cross-Section – Lower Wolfcamp

Exhibit C Affidavit of Lance D. Hough

- Certified Mail Log / Notice - June 21, 2019
- Certified Mail Log / Report - July 10, 2019
- Certified Mail Log / Notice - July 8, 2019 (Additional ORRI)
- Certified Mail Log / Report - July 10, 2019 (Additional ORRI)
- Affidavit of Publication – June 27, 2019

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

CASE NO. 20590

AFFIDAVIT OF CAITLIN PIERCE

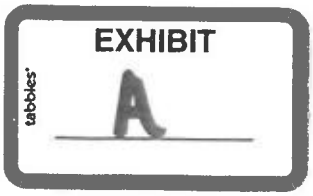
STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

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 and my credentials were accepted as a matter of record by the Division.

2. I am familiar with the applications filed by Cimarex in the above-referenced case and the land matters involved. 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 wells to be drilled in the horizontal spacing unit. In its Application, Cimarex seeks an order from the Division pooling all uncommitted mineral interests within a 640-acre Wolfcamp horizontal spacing unit underlying the W/2 of Section 34 and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H** wells, to be horizontally drilled. The Application is attached as **Exhibit A.1.**



4. Prior to filing the application, Cimarex made a good faith effort to obtain voluntary joinder of the working interest owners in the proposed wells. I identified the working interest and overriding royalty interest owners from a title opinion. To locate owners, I conducted a diligent search of the public records in the county where the wells are to be located and conducted phone directory and computer internet searches to locate contact information for parties entitled to notification, and mailed all working interest owners well proposals, including an Authorization for Expenditure and a form of Operating Agreement to any owner who requested one.

5. No opposition is expected. Prior to filing its applications Cimarex contacted the interest owners being pooled regarding the proposed wells; the pooled interest owners have failed or refused to voluntarily commit their interests in the wells. Cimarex provided all of the working interest owners and any unleased mineral owners, and all but one potential overriding royalty owners with notice of this application. Cimarex also published notice of the hearing on the applications in a newspaper of general circulation in Eddy County. None of the above mentioned interest holders have entered an appearance in opposition to Cimarex' applications.

6. One additional potential overriding royalty owner was discovered this week, after prior notices of the application were mailed and the newspaper advertisement was published. Notice to this potential overriding royalty owner has been mailed to his last known address.

7. Cimarex plans to drill the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H** wells to a depth sufficient to test the Wolfcamp formation, and laterally and in a southerly direction within the formation to the bottom hole locations referenced below:

- The **Hayduke 34-3 Federal Com 1H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,610'.

- The **Hayduke 34-3 Federal Com 2H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 990' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,830'.

- The **Hayduke 34-3 Federal Com 3H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 1650' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,610'.

- The **Hayduke 34-3 Federal Com 4H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,830'.

- The **Hayduke 34-3 Federal Com 5H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,555'.

- The **Hayduke 34-3 Federal Com 6H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 1310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,340'.

- The **Hayduke 34-3 Federal Com 7H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,555'.

8. The wells will develop the Purple Sage Wolfcamp Gas Pool (Pool ID: 98220), which is a gas pool.

9. The producing interval for the well 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 spacing unit boundary, and the completed lateral will be no closer than 330' from the spacing unit boundary.

10. A lease tract map outlining the unit to be pooled is attached hereto as **Exhibit A.2.** The working interest owners being pooled and the percent of their interests is also included as part of this Exhibit. Cimarex owns a working interest in the proposed unit and has a right to drill a well thereon.

11. There are no depth severances within the proposed Wolfcamp spacing unit.

12. **Exhibit A.3** is a sample well proposal letter sent to each of the interest owners seeking their voluntary participation in the well.

13. **Exhibit A.4** are the Authorization for Expenditure for the proposed wells. The estimated cost of the wells set forth therein are as follows:

a. **Hayduke 34-3 Federal Com 1H**: $10,108,340

b. **Hayduke 34-3 Federal Com 2H**: $9,946,340

c. **Hayduke 34-3 Federal Com 3H**: $9,946,340

d. **Hayduke 34-3 Federal Com 4H**: $9,946,340

e. **Hayduke 34-3 Federal Com 5H**: $9,960,340

f. **Hayduke 34-3 Federal Com 6H**: $9,960,340

g. **Hayduke 34-3 Federal Com 7H**: $9,960,340

These estimated costs of the wells are 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.

14. Cimarex requests overhead and administrative rates of $7,000/month during drilling and $700/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 in recent compulsory pooling orders. Cimarex requests that these rates be adjusted periodically as provided in the COPAS Accounting Procedure.

15. Cimarex requests that it be allowed to recover its costs for drilling, completing and equipping each of these wells and a 200% risk charge be assessed against non-consenting pooled working interest owners.

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

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, my education training and experience, it is my expert opinion that the granting of Cimarex's application in this case is in the interests of conservation and the prevention of waste.

21. The exhibits attached 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.

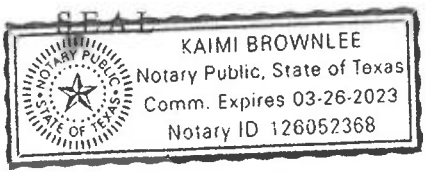
Caitlin Pierce

SUBSCRIBED AND SWORN to before me this 10th day of July 2019 by Caitlin Pierce.

Kaimi Brownlee
Notary Public

My commission expires: 3/26/2023

SEAL



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

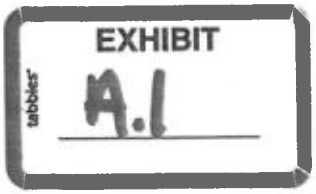
Cimarex Energy Co. ("Cimarex"), OGRID Number 215099, through its undersigned attorneys, hereby makes an application to the Oil Conservation Division pursuant to the provisions of NMSA (1978), Section 70-2-17, for an order pooling all uncommitted mineral interests within a Wolfcamp horizontal spacing unit underlying the W/2 of Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 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 wells thereon.

2. Cimarex seeks to dedicate the W/2 of Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico to form a 640-acre, more or less, spacing unit.

3. Cimarex plans to drill the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H** wells to a depth sufficient to test the Wolfcamp formation, and laterally and in a southerly direction within the formation to the bottom hole locations referenced below:

- The **Hayduke 34-3 Federal Com 1H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,610'.



- The **Hayduke 34-3 Federal Com 2H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 990' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,830'.
- The **Hayduke 34-3 Federal Com 3H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 1650' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,610'.
- The **Hayduke 34-3 Federal Com 4H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 8,830'.
- The **Hayduke 34-3 Federal Com 5H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,555'.
- The **Hayduke 34-3 Federal Com 6H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 1310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,340'.
- The **Hayduke 34-3 Federal Com 7H** well is a horizontal well with a surface location 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, Eddy County, and the intended bottom hole location is 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, Eddy County. This well will be drilled vertically to a depth of approximately 9,555'.

4. These wells will be located within the Purple Sage Wolfcamp Gas Pool (Pool ID: 98220) and will comply with the Division's setback requirements in Order No. 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.

WHEREFORE, this case is set for hearing before an Examiner of the Oil Conservation Division on July 11, 2019, Cimarex requests that, after notice and hearing as required by law, the Division enter its order:

A. Creating a horizontal spacing unit in the Wolfcamp formation comprised of W/2 of Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 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 Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 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 these 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 well in the event a working interest owner elects not to participate in the wells.

Respectfully submitted,

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

By: _____

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Attorneys for Applicant

W3436751.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 Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H,** and **7H** 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 8.5 miles southeast of Whites City, New Mexico.

Hayduke 34-3 – Wolfcamp Wells

W/2 of Section 34, Township 25S, Range 26 East, Eddy County, NM
W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM

Owner – Wolfcamp	Tract	Net	Working Interest Percentage	Force Pool Interest
Cimarex Energy Co.	1,4	335	52.34375%	No – Operator
EOG	2,3,4	259	40.468750%	Yes
Oxy Y-1	2	16	2.500000%	Yes
Partnership Properties Company	3	30	4.6875%	Yes
TOTAL			100%	

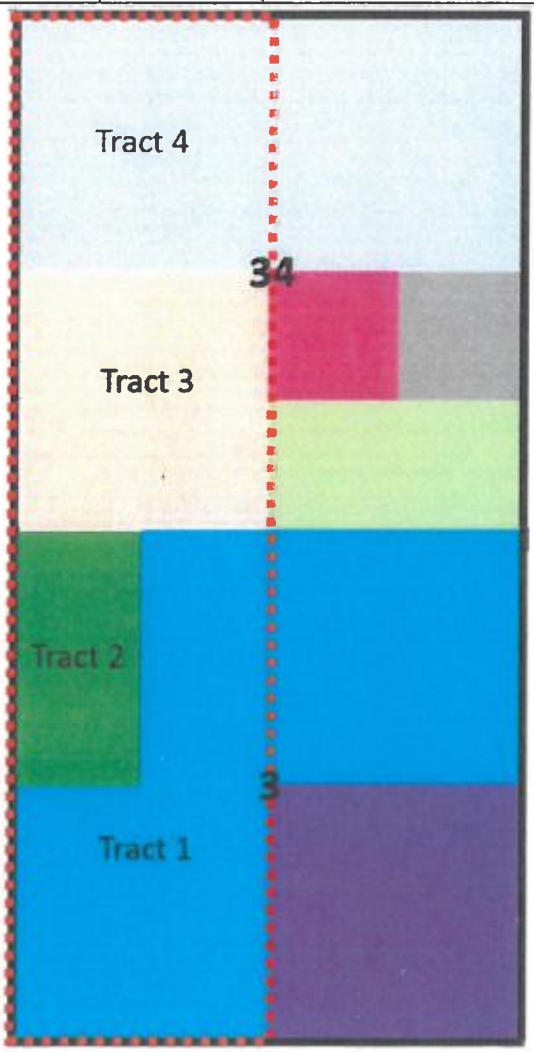


EXHIBIT
A.2

April 24, 2019

Partnership Properties Company
c/o Petro-Lewis Co
P.O. Box 20352
Billings, MT 59104

Re: Proposal to Drill
Hayduke 34-3 Federal Com Wells
Section 34, Township 25 South, Range 26 East
Section 3, Township 26 South, Range 26 East
Eddy County, New Mexico

Dear Working Interest Owner,

Cimarex Energy Co. hereby proposes to drill the Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, 7H, 8H, 9H, 10H & 11H wells at a legal location in Section 34, Township 25 South, Range 26 East, NMPM, Eddy Co., New Mexico.

Hayduke 34-3 Federal Com 1H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 8,610' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 2H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 990' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 8,830' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 3H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 1650' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 8,610' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 4H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 8,830' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

EXHIBIT
4.3

Hayduke 34-3 Federal Com 5H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 330' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 9,555' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 6H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 1310' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 9,340' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 7H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 330' FSL and 2310' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 9,555' to the Wolfcamp formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 8H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 100' FSL and 660' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 7,300' to the Bone Spring formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 9H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 100' FSL and 1980' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 7,300' to the Bone Spring formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 10H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 100' FSL and 660' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 7,680' to the Harkey formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

Hayduke 34-3 Federal Com 11H - The intended surface hole location for the well is approximately 390' FNL and 1310' FWL of Section 34, Township 25 South, Range 26 East, and the intended bottom hole location is approximately 100' FSL and 1980' FWL of Section 3, Township 26 South, Range 26 East. The well is proposed to be drilled vertically to a depth of approximately 7,680' to the Harkey formation and laterally in a southerly direction within the formation to the referenced bottom hole location.

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 AFE reflecting estimated costs associated with this proposal, and; (ii) our proposed form of Operating Agreement to govern operations of the Hayduke 34-3 Fed Com 1H well. If you intend to participate, please approve and return one (1) original of the enclosed AFE, one (1) original of the signature page to the Operating Agreement, along with the contact information to receive your well data, to the undersigned within thirty (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.

In the event you would prefer to lease your interest in lieu of participating in the proposed operation(s), we would be happy to make you a competitive offer to lease.

Please call the undersigned with any questions or comments.

Respectfully,

Caitlin Pierce

Caitlin Pierce
432.571.7862

ELECTION TO PARTICIPATE
Hayduke 34-3 Federal Com 1H

_____ Partnership Properties Company elects **TO** participate in the proposed Hayduke 34-3 Federal Com 1H

_____ Partnership Properties Company elects **NOT** to participate in the proposed Hayduke 34-3 Federal Com 1H

Dated this ____ day of _____ , 2019.

Signature: _____

Title: _____

If your election above is TO participate in the proposed Hayduke 34-3 Federal Com 1H well, then:

_____ Partnership Properties Company elects **TO** be covered by well control insurance procured by Cimarex Energy Co.

_____ Partnership Properties Company 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.

CIMAREX **Authorization For Expenditure** Drilling — AFE # 26621001

Company Entity

Date Prepared: 4/23/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 1H	Carlsbad Bone Spring Prospect	300001-128.01	26621001

County, State	Location	Estimated Spud	Estimated Completion
Eddy, NM	SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM	1/1/2021	2/1/2021

	Formation	Well Type	Tvl Measured Depth	Tvl Vetical Depth
X New Supplement Revision	Wolfcamp	DEV	18,403	8,610

Purpose: Drill and complete well

Description

Drilling: Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1876', set surface casing. Drill to 8133' (KOP). Drill curve at 12°/100' initial build rate to +/- 90 degrees 8610' TVD and drill a +/- 9420' long lateral in the Wolfcamp formation. Run and cement production casing. Stage frac. Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	$2,262,000		$2,262,000
Completion Costs		$6,338,340	$6,338,340
Total Intangible Cost	$2,262,000	$6,338,340	$8,600,340

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$84,000	$794,000	$878,000
Lease Equipment		$630,000	$630,000
Total Tangible Cost	$84,000	$1,424,000	$1,508,000

Total Well Cost	$2,346,000	$7,762,340	$10,108,340

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. 4/23/2019

EXHIBIT A.4

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 1H

AFE # 26621001

Description	BCP - Drilling Codes	BCP - Drilling Amount	ACP - Drilling Codes	ACP - Drilling Amount	Comp/Stim Codes	Comp/Stim Amount	Production Equip Codes	Production Equip Amount	Post Completion Codes	Post Completion Amount	Total Cost
Roads & Location	DIDC.100	140,000			STIM.100	10,000	CON.100	8,500	PCOM.100	28,000	186,500
Damages	DIDC.105	6,000					CON.105	1,000			7,000
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	90,000	312,000
Day Rate	DIDC.115	442,000	DICC.120	104,000							546,000
Misc Preparation	DIDC.120	35,000									35,000
Gas	DIDC.125	55,000	DICC.125	0	STIM.125	0			PCOM.125	0	55,000
Fuel	DIDC.135	82,000	DICC.130	0					PCOM.130	0	82,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.135	24,000			PCOM.135	0	29,000
Mud & Additives	DIDC.145	200,000									200,000
Surface Rentals	DIDC.150	104,000	DICC.140	0	STIM.140	189,000	CON.140	2,000	PCOM.140	30,900	325,900
Downhole Rentals	DIDC.155	97,000			STIM.145	0			PCOM.145	0	97,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	37,500	PCOM.190	0	37,500
Formation Evaluation (DST, Coring, etc)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	19,000									19,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	65,000	DICC.155	160,000							225,000
Tubular Inspections	DIDC.190	18,000	DICC.160	5,000	STIM.160	4,000			PCOM.160	0	27,000
Casing Crews	DIDC.195	10,000	DICC.165	20,000	STIM.165	0					30,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	154,000	PCOM.170	0	184,000
Trucking/Transportation	DIDC.205	18,000	DICC.175	8,000	STIM.175	4,000	CON.175	19,000	PCOM.175	0	49,000
Supervision	DIDC.210	88,000	DICC.180	16,000	STIM.180	74,000	CON.180	12,000	PCOM.180	0	190,000
Trailer House/Camp/Catering	DIDC.230	35,000	DICC.255	6,000	STIM.280	28,000					73,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	115,000	CON.190	10,000	PCOM.190	0	130,000
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.221	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	150,000									150,000
Directional Drilling Services	DIDC.245	225,000									225,000
Solids Control	DIDC.250	72,000									72,000
Well Control Equip-Snubbing Services	DIDC.265	72,000	DICC.240	5,000	STIM.240	81,000			PCOM.240	0	158,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	400,000			PCOM.200	0	400,000
Composite Plugs					STIM.390	96,000			PCOM.380	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.285	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.285	7,000									7,000
Major Construction Overhead							CON.305	21,500			21,500
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
PL/GL - Labor							CON.500	54,500			54,500
PL/GL - Supervision							CON.505	3,500			3,500
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	108,000	DICC.220	17,000	STIM.220	257,000	CON.220	87,500	PCOM.220	0	469,500
Contingency							CON.221	8,000			8,000
PNA Costs	DIDC.305	0	DICC.275	0							0
Total Intangible Cost		2,262,000		356,000		5,403,000		418,000		162,340	8,600,340
Drive Pipe	DWEL.120	0									0
Conductor Pipe	DWEL.130	0									0
Water String	DWEL.135	16,000									16,000
Surface Casing	DWEL.140	48,000									48,000
Intermediate Casing 1	DWEL.145	0									0
Intermediate Casing 2	DWEL.155	0									0
Drilling Liner	DWEL.160	0									0
Production Casing or Liner			DWEA.160	489,000							489,000
Production Tie-Back			DWEA.185	0	STIMT.101	0					0
Tubing					STIMT.105	53,000			PCOMT.105	0	53,000
Wellhead, Tree, Chokes	DWEL.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.120	0	105,000
Liner Hanger, Isolation Packer	DWEL.100	0	DWEA.125	0							0
Packer, Nipples					STIMT.420	28,000			PCOMT.480	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.485	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
WHC Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		84,000		514,000		221,000				59,000	878,000
H/C Lease Equipment							CONT.400	183,000			183,000
Tanks, Tanks Steps, Stairs							CONT.405	64,000			64,000
Battery Equipment							CONT.410	178,000			178,000
Secondary Containments							CONT.415	34,000			34,000
Overhead Power Distribution							CONT.420	31,500			31,500
Facility Electrical							CONT.425	36,500			36,500
Telecommunication Equipment							CONT.428	0			0
Meters and Metering Equipment							CONT.445	20,000			20,000
Facility Line Pipe							CONT.450	30,000			30,000
Lease Automation Materials							CONT.455	43,000			43,000
PL/GL - Materials							CONT.550	7,500			7,500
PL/GL - Line Pipe							CONT.555	11,500			11,500
SWD/Other - Materials							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								630,000			630,000
Total Estimated Cost		2,346,000		870,000		5,624,000		1,048,000		221,340	10,109,340

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 1H

AFE # 26621001

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Stim Codes		Amount
Roads & Location	DIDC.100		140,000				STIM.100		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	16 days at $26,000/day	442,000	DICC.120	4 days at $26,000/day	104,000			
Misc Preparation	DIDC.120		35,000						
Bits	DIDC.125		55,000	DICC.125		0	STIM.125		0
Fuel	DIDC.135	1,300 gal/day at $3.00/gal	82,000	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		200,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	104,000	DICC.140		0	STIM.140		183,000
Downhole Rentals	DIDC.155		97,000				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	12 days at $1,250/day	19,000						
Open Hole Logging	DIDC.180		0						
Cementing & Float Equipment	DIDC.185		65,000	DICC.155		160,000			
Tubular Inspections	DIDC.190		18,000	DICC.160		5,000	STIM.160		4,000
Casing Crews	DIDC.195		10,000	DICC.165		20,000	STIM.165		0
Mechanical Labor	DIDC.200		20,000	DICC.170		10,000	STIM.170		0
Trucking/Transportation	DIDC.205		18,000	DICC.175		8,000	STIM.175		4,000
Supervision	DIDC.210		88,000	DICC.180		16,000	STIM.180		74,000
Trailer House/Camp/Catering	DIDC.280		33,000	DICC.255		6,000	STIM.280		28,000
Other Misc Expenses	DIDC.220		5,000	DICC.190		0	STIM.190		115,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
MOB/DEMOB	DIDC.240		150,000						
Directional Drilling Services	DIDC.245		225,000						
Solids Control	DIDC.250		72,000						
Well Control Equip (Snubbing Services)	DIDC.265		72,000	DICC.240		5,000	STIM.240		81,000
Fishing & Sidetrack Services	DIDC.270		0	DICC.245		0	STIM.245		0
Completion Rig							STIM.115		21,000
CoC Tubing Services							STIM.260		368,000
Completion Logging/Perforating/Wireline							STIM.200		400,000
Composite Plugs							STIM.380		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.395		702,000
Closure Owned Frac/Rental Equipment							STIM.305		40,000
Legal/Regulatory/Curative	DIDC.300		10,000						
Well Control Insurance	DIDC.285	$0.35/ft	7,000						
Major Construction Overhead									
Real Time Operations Center	DIDC.260		0				STIM.260		0
FL/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.433	500 % of Drilling Intangibles	108,000	DICC.220		17,000	STIM.220		257,000
Contingency									
P&A Costs	DIDC.295		0	DICC.275		0			
Total Intangible Cost			2,262,000			356,000			5,401,000
Drive Pipe	DWEB.150		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.135		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,900ft at $25.00/ft	48,000						
Intermediate Casing 1	DWEB.145		0						
Intermediate Casing 2	DWEB.153		0						
Drilling Liner	DWEB.980		0						
Production Casing or Liner				DWEA.100	5 1/2" - 18,596ft at $25.00/ft	483,000			
Production Tie-Back				DWEA.165		0	STIMT.101		0
Tubing							STIMT.105	2 7/8" - 7,520ft at $7.00/ft	53,000
Wellhead, Tree, Chokes	DWEB.315		20,000	DWEA.120		25,000	STIMT.120		60,000
Liner Hanger, Isolation Packer	DWEB.300		0	DWEA.125		0			
Packer, Nipples							STIMT.400		28,000
Pumping Unit, Engine							STIMT.405		0
Downhole Lift Equipment							STIMT.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			84,000			514,000			221,000
A/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/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,346,000			870,000			5,622,000

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 1H

AFE # 26621001

Description	Production Equip Codes	Amount	Post Completion Codes		Amount	Total Cost
Roads & Location	CON.100	8,500	PCOM.100	Pad/Road Clean Up	28,000	186,500
Damages	CON.105	1,000				7,000
Mud/Fluids Disposal			PCOM.255	6,000 BWPD for 60 days @ $0.25/bbl	90,000	312,000
Day Rate						546,000
Misc Preparation						35,000
BOP			PCOM.125		0	55,000
Fuel			PCOM.130		0	82,000
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000
Mud & Additives						200,000
Surface Rentals	CON.140	2,800	PCOM.140	$1,030/d for Production Target of 30 Days	30,900	325,900
Downhole Rentals			PCOM.145		0	97,000
Flowback Labor			PCOM.147	$960/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CON.150	37,500	PCOM.150		0	37,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						19,000
Open Hole Logging						0
Cementing & Float Equipment						225,000
Tubular Inspection			PCOM.160		0	27,000
Casing Crew						30,000
Mechanical Labor	CON.170	154,000	PCOM.170		0	184,000
Trucking/Transportation	CON.175	19,000	PCOM.175		0	49,000
Supervision	CON.180	12,000	PCOM.180		0	190,000
Trailer House/Camp/Catering						73,000
Other Misc Expenses	CON.190	10,000	PCOM.190		0	130,000
Overhead						15,000
Remedial Cementing			PCOM.215		0	0
MOB/DEMOB						150,000
Directional Drilling Services						225,000
Solids Control						72,000
Well Control Equip (Snubbing Services)			PCOM.240		0	158,000
Fishing & Sidetrack Services			PCOM.245		0	0
Completion Rig			PCOM.315		0	21,000
Coil Tubing Services			PCOM.380		0	368,000
Completion Logging/Perforating/Wireline			PCOM.200		0	400,000
Composite Plugs			PCOM.390		0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210		0	2,926,000
Stimulation Water/Water Transfer/Water						702,000
Cimarex Owned Frac/Rental Equipment			PCOM.305		0	40,000
Legal/Regulatory/Curative	CON.300	0				10,000
Well Control Insurance						7,000
Major Construction Overhead	CON.305	21,500				21,500
Real Time Operations Center						0
FL/GL - Labor	CON.500	54,500				54,500
FL/GL - Supervision	CON.505	3,500				3,500
Survey	CON.515	0				0
SWD/Other - Labor	CON.800	0				0
SWD/OTHER - SUPERVISION	CON.805	0				0
Contingency	CON.220	87,500	PCOM.220		0	469,500
Contingency	CON.221	8,000				8,000
RBA Costs						0
Total Intangible Cost		419,000			362,340	8,600,340
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						48,000
Intermediate Casing 1						0
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						489,000
Production Tie-Back						0
Tubing			PCOMT.105		0	53,000
Wellhead, Tree, Chokes			PCOMT.120		0	105,000
Liner Hanger, Isolation Packer						0
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.420	XEC Owned Sand Separator	59,080	59,080
Well Automation Materials			PCOMT.435		0	0
Total Tangible - Well Equipment Cost					59,080	878,080
P/C Lease Equipment	CONT.400	183,000				183,000
Tanks, Tanks Steps, Stairs	CONT.405	64,000				64,000
Battery Equipment	CONT.410	179,000				179,000
Secondary Containments	CONT.415	24,000				24,000
Overhead Power Distribution	CONT.420	31,500				31,500
Facility Electrical	CONT.425	36,500				36,500
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	20,000				20,000
Facility Line Pipe	CONT.450	30,000				30,000
Lease Automation Materials	CONT.455	43,000				43,000
FL/GL - Materials	CONT.550	7,500				7,500
FL/GL - Line Pipe	CONT.555	11,500				11,500
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		630,000				630,000
Total Estimated Cost		1,049,000			221,340	10,108,340

CIMAREX Authorization For Expenditure Drilling AFE # 26621002

Company Entity			Date Prepared 4/23/2019	
Exploration Region Permian Basin	Well Name HAYDUKE 34-3 FEDERAL COM 2H	Prospect Carlsbad Bone Spring Prospect	Property Number 300001-129.01	AFE 26621002
County, State Eddy, NM	Location SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of SEction 3, Township 26 South, Range 26 East, Eddy County, NM		Estimated Spud 1/1/2021	Estimated Completion 2/1/2021
X New Supplement Revision	Formation Wolfcamp Upper	Well Type DEV	Tvd Measured Depth 19,000	Tvd Vedical Depth 8,700

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1876', set surface casing. Drill to 8133' (KOP). Drill curve at 12°/100' initial build rate to +/- 90 degrees 8610' TVD and drill a +/- 9420' long lateral in the Wolfcamp formation. Run and cement production casing. Stage frac.Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	$2,108,000		$2,108,000
Completion Costs		$6,338,340	$6,338,340
Total Intangible Cost	$2,108,000	$6,338,340	$8,446,340

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$83,000	$787,000	$870,000
Lease Equipment		$630,000	$630,000
Total Tangible Cost	$83,000	$1,417,000	$1,500,000
Total Well Cost	$2,191,000	$7,755,340	$9,946,340

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. 4/23/2019

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 2H

AFE # 26621002

Description	BCP - Drilling Codes	BCP - Drilling Amount	ACP - Drilling Codes	ACP - Drilling Amount	Comp/Stim Codes	Comp/Stim Amount	Production Equip Codes	Production Equip Amount	Post Completion Codes	Post Completion Amount	Total Cost
Roads & Location	DIDC.100	70,000			STIM.100	10,000	CON.100	8,500	PCOM.100	28,000	116,500
Damages	DIDC.105	6,000					CON.105	1,000			7,000
Mud/Fluids Disposal	DIDC.253	160,000			STIM.253	62,000			PCOM.253	90,000	312,000
Day Rate	DIDC.115	442,000	DICC.120	104,000							546,000
Misc Preparation	DIDC.120	35,000									35,000
EQs	DIDC.125	55,000	DICC.125	0	STIM.125	0			PCOM.125	0	55,000
Fuel	DIDC.135	82,000	DICC.130	0					PCOM.130	0	82,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.133	24,000			PCOM.133	0	29,000
Mud & Additives	DIDC.145	200,000									200,000
Surface Rentals	DIDC.150	104,000	DICC.140	0	STIM.140	189,000	CON.140	2,000	PCOM.140	30,900	325,900
Downhole Rentals	DIDC.155	97,000			STIM.145	0			PCOM.145	0	97,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	37,500	PCOM.150	0	37,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	19,000									19,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	65,000	DICC.135	160,000							225,000
Tubular Inspections	DIDC.190	18,000	DICC.168	5,000	STIM.160	4,000			PCOM.160	0	27,000
Casing Crews	DIDC.195	10,000	DICC.165	20,000	STIM.153	0					30,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	154,000	PCOM.170	0	184,000
Trucking/Transportation	DIDC.205	18,000	DICC.175	8,000	STIM.175	4,000	CON.175	19,000	PCOM.175	0	49,000
Supervision	DIDC.210	88,000	DICC.180	16,000	STIM.180	74,000	CON.180	12,000	PCOM.180	0	190,000
Trailer House/Camp/Catering	DIDC.280	39,000	DICC.255	6,000	STIM.280	28,000					73,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	115,000	CON.190	10,000	PCOM.190	0	130,000
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	75,000									75,000
Directional Drilling Services	DIDC.245	225,000									225,000
Solids Control	DIDC.260	72,000									72,000
Well Control Equip Grabbing Services	DIDC.265	72,000	DICC.249	5,000	STIM.240	81,000			PCOM.240	0	158,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	400,000			PCOM.200	0	400,000
Composite Plugs					STIM.290	96,000			PCOM.290	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.295	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.255	6,000									6,000
Major Construction Overhead							CON.305	21,500			21,500
Real Time Operations Center	DIDC.500	0			STIM.500	0					0
FL/GL - Labor							CON.500	54,500			54,500
FL/GL - Supervision							CON.505	3,500			3,500
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	100,000	DICC.220	17,000	STIM.220	257,000	CON.220	87,500	PCOM.220	0	461,500
Contingency							CON.221	8,000			8,000
PBA Costs	DIDC.285	0	DICC.275	0							0
Total Intangible Cost		2,108,000		356,000		5,400,000		418,000		162,340	8,446,340
Drive Pipe	DWEB.150	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	47,000									47,000
Intermediate Casing 1	DWEB.145	0									0
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.160	0									0
Production Casing or Liner			DWEA.180	484,000							484,000
Production Tie-Back			DWEA.185	0	STIMT.101	0					0
Tubing					STIMT.105	51,000			PCOMT.105	0	51,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.120	0	105,000
Liner Hanger, Isolation Packer	DWEB.100	0	DWEA.125	0							0
Packer, Nipples					STIMT.400	28,000			PCOMT.400	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.405	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
Well Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		83,000		509,000		219,000				59,000	870,000
NJC Lease Equipment							CONT.400	183,000			183,000
Tanks, Tanks Steps, Stairs							CONT.405	64,000			64,000
Battery Equipment							CONT.410	179,000			179,000
Secondary Containments							CONT.415	24,000			24,000
Overhead Power Distribution							CONT.420	31,500			31,500
Facility Electrical							CONT.425	36,500			36,500
Telecommunication Equipment							CONT.430	0			0
Meters and Metering Equipment							CONT.445	20,000			20,000
Facility Line Pipe							CONT.450	30,000			30,000
Lease Automation Materials							CONT.455	43,000			43,000
FL/GL - Materials							CONT.530	7,500			7,500
FL/GL - Line Pipe							CONT.535	11,500			11,500
SWD/Other - Materials							CONT.630	0			0
SWD/OTHER - LINE PIPE							CONT.635	0			0
Total Tangible - Lease Equipment Cost								630,000			630,000
Total Estimated Cost		2,191,000		865,000		5,619,000		1,048,000		221,340	9,946,340

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 2H

AFE # 26621002

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Stim Codes		Amount
Roads & Location	DIDC.100		70,000				STIM.380		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.235		62,000
Day Rate	DIDC.115	16 days at $26,000/day	442,000	DICC.120	4 days at $26,000/day	104,000			
Misc Preparation	DIDC.120		35,000						
Bits	DIDC.125		55,000	DICC.125		0	STIM.125		0
Fuel	DIDC.133	1,300 gal/day at $3.00/gal	82,000	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		220,000						
Surface Rentals	DIDC.150	Per Day (BOP)/day	104,000	DICC.140		0	STIM.140		185,000
Downhole Rentals	DIDC.155		97,000				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	12 days at $1,250/day	19,000						
Open Hole Logging	DIDC.180		0						
Cementing & Float Equipment	DIDC.185		65,000	DICC.155		160,000			
Tubular Inspection	DIDC.190		18,000	DICC.160		5,800	STIM.360		4,000
Casing Crews	DIDC.195		10,000	DICC.165		20,000	STIM.365		0
Mechanical Labor	DIDC.200		20,000	DICC.170		10,000	STIM.170		0
Trucking/Transportation	DIDC.205		18,000	DICC.175		8,000	STIM.175		4,000
Supervision	DIDC.210		88,000	DICC.180		16,000	STIM.180		74,000
Trailer House/Camp/Catering	DIDC.280		39,000	DICC.255		6,000	STIM.280		28,000
Other Misc Expenses	DIDC.220		5,000	DICC.190		0	STIM.190		115,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
MOB/DEMOB	DIDC.240		75,000						
Directional Drilling Services	DIDC.245		225,000						
Solids Control	DIDC.260		72,000						
Well Control Equip (Snubbing Services)	DIDC.265		72,000	DICC.240		5,000	STIM.240		81,000
FishNig & Sidetrack Services	DIDC.270		0	DICC.245		0	STIM.245		0
Completion Rig							STIM.715		21,000
Coil Tubing Services							STIM.260		368,000
Completion Logging/Perforating/Wireline							STIM.200		400,000
Composite Plugs							STIM.390		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.395		702,000
Cleanout Owned Frac/Bench Equipment							STIM.305		40,000
Legal/Regulatory/Curative	DIDC.300		10,000						
Well Control Insurance	DIDC.285	$0.35/ft	6,000						
Major Construction Overhead									
Real Time Operations Center	DIDC.560		0				STIM.560		0
FL/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.485	100 % of Drilling Intangibles	100,000	DICC.220		17,800	STIM.220		257,800
Contingency									
FBA Costs	DIDC.285		0	DICC.375		0			
Total Intangible Cost			2,108,000			356,000			5,401,000
Drive Pipe	DWEB.130		0						
Conductor Pipe	DWEB.120		0						
Water String	DWEB.125		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,870ft at $25.60/ft	47,000						
Intermediate Casing 1	DWEB.145		0						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.100	5 1/2" - 19,403ft at $25.00/ft	484,000			
Production Tie-back				DWEA.165		0	STIM.301		0
Tubing							STIM.105	2 7/8" - 7,230ft at $7.00/ft	51,000
Wellhead, Tree, Chokes	DWEB.115		20,000	DWEA.120		25,000	STIM.320		60,000
Liner Hanger, Isolation Packer	DWEB.300		0	DWEA.125		0			
Packer, Nipples							STIM.400		28,000
Pumping Unit, Engine							STIM.405		0
Downhole Lift Equipment							STIM.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			83,000			509,000			219,000
WC Lease Equipment									
Tanks, Tanks Steps, Stairs									
Battery Equipment									
Secondary Containment									
Overhead Power Distribution									
Facility Electrical									
Telecommunication Equipment									
Meter and Metering Equipment									
Facility Line Pipe									
Lease Automation Materials									
FL/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,191,000			865,000			5,620,000

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 2H

AFE # 26621002

Description	Codes	Production Equip Amount	Codes	Post Completion	Amount	Total Cost
Roads & Location	CDM.100	8,500	PCDM.100	Pad/Road Clean Up	28,000	116,500
Damages	CDM.105	1,000				7,000
Mud/Fluids Disposal			PCDM.255	6,000 BW/PD for 60 days @ $0.25/bbl	90,000	312,000
Dry Rats						546,000
Misc Preparation						35,000
Bits			PCDM.125		0	55,000
Fuel			PCDM.130		0	82,000
Water for Drilling Rig (Not Frac Water)			PCDM.135		0	29,000
Mud & Additives						200,000
Surface Rentals	CDM.140	2,000	PCDM.140	$1,030/d for Production Target of 20 Days	30,900	325,900
Downhole Rentals			PCDM.145		0	97,000
Flowback Labor			PCDM.141	$360/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CDM.150	37,500	PCDM.150		0	37,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						19,000
Open Hole Logging						0
Cementing & Float Equipment						225,000
Tubular Inspections			PCDM.160		0	27,000
Casing Crews						30,000
Mechanical Labor	CDM.170	154,000	PCDM.170		0	184,000
Trucking/Transportation	CDM.175	19,000	PCDM.175		0	49,000
Supervision	CDM.180	12,000	PCDM.180		0	190,000
Trailer House/Camp/Catering						73,000
Other Misc Expenses	CDM.190	10,000	PCDM.190		0	130,000
Overhead						15,000
Remedial Cementing			PCDM.215		0	0
MOB/DEMOB						75,000
Directional Drilling Services						225,000
Solids Control						72,000
Well Control Equip (Snubbing Services)			PCDM.240		0	158,000
Fishing & Sidetrack Services			PCDM.245		0	0
Completion Rig			PCDM.115		0	21,000
Coil Tubing Services			PCDM.280		0	368,000
Completion Logging/Perforating/Wireline			PCDM.290		0	400,000
Composite Plugs			PCDM.295		0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCDM.298		0	2,926,000
Stimulation Water/Water Transfer/Water						702,000
Closure Owned Frac/Rental Equipment			PCDM.305		0	40,000
Legal/Regulatory/Curative	CDM.300	0				10,000
Well Control Insurance						6,000
Major Construction Overhead	CDM.305	21,500				21,500
Real Time Operations Center						0
FL/GL - Labor	CDM.500	54,500				54,500
FL/GL - Supervision	CDM.505	3,500				3,500
Survey	CDM.515	0				0
SWD/Other - Labor	CDM.600	0				0
SWD/OTHER - SUPERVISION	CDM.605	0				0
Contingency	CDM.220	87,500	PCDM.220		0	461,500
Contingency	CDM.221	8,000				8,000
P&A Costs						0
Total Intangible Cost		419,000			192,340	8,446,340
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						47,000
Intermediate Casing 1						0
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						484,000
Production Tie-Back						0
Tubing			PCDMT.105		0	51,000
Wellhead, Tree, Chokes			PCDMT.120		0	105,000
Liner Hanger, Isolation Packer						0
Packer, Nipples			PCDMT.400		0	28,000
Pumping Unit, Engine			PCDMT.405		0	0
Downhole Lift Equipment			PCDMT.410		0	80,000
Surface Equipment			PCDMT.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCDMT.455		0	0
Total Tangible - Well Equipment Cost					59,000	870,000
N/C Lease Equipment	CONT.400	183,000				183,000
Tanks, Tanks Stand, Stairs	CONT.405	64,000				64,000
Battery Equipment	CONT.410	179,000				179,000
Secondary Containments	CONT.415	24,000				24,000
Overhead Power Distribution	CONT.420	31,500				31,500
Facility Electrical	CONT.425	36,500				36,500
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	20,000				20,000
Facility Line Pipe	CONT.450	30,000				30,000
Lease Automation Materials	CONT.455	43,000				43,000
FL/GL - Materials	CONT.550	7,500				7,500
FL/GL - Line Pipe	CONT.555	11,500				11,500
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		630,000				630,000
Total Estimated Cost		1,049,000			251,340	9,946,340

CIMAREX Authorization For Expenditure Drilling

AFE # 26621003

Company Entity				Date Prepared
				4/23/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 3H	Carlsbad Bone Spring Prospect	300001-130.01	26621003

County, State	Location	Estimated Spud	Estimated Completion
Eddy, NM	SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM	1/1/2021	2/1/2021

	Formation	Well Type	TD Measured Depth	TD Vetical Depth
X New Supplement Revision	Wolfcamp Upper	DEV	19,000	8,700

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1876', set surface casing. Drill to 8133' (KOP). Drill curve at 12°/100' initial build rate to +/- 90 degrees 8610' TVD and drill a +/- 9420' long lateral in the Wolfcamp formation. Run and cement production casing. Stage frac.Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	$2,108,000		$2,108,000
Completion Costs		$6,338,340	$6,338,340
Total Intangible Cost	$2,108,000	$6,338,340	$8,446,340

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$83,000	$787,000	$870,000
Lease Equipment		$630,000	$630,000
Total Tangible Cost	$83,000	$1,417,000	$1,500,000
Total Well Cost	$2,191,000	$7,755,340	$9,946,340

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. 4/23/2019

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 3H

AFE # 26621003

Description	BCP - Drilling Codes	BCP - Drilling Amount	ACP - Drilling Codes	ACP - Drilling Amount	Comp/Stim Codes	Comp/Stim Amount	Production Equip Codes	Production Equip Amount	Post Completion Codes	Post Completion Amount	Total Cost
Roads & Location	DIDC.100	70,000			STIM.100	10,000	CON.100	8,500	PCOM.100	28,000	116,500
Damages	DIDC.105	6,000					CON.105	1,000			7,000
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	90,000	312,000
Day Rate	DIDC.115	442,000	DICC.120	104,000							546,000
Misc Preparation	DIDC.120	35,000									35,000
Bits	DIDC.125	55,000	DICC.125	0	STIM.125	0			PCOM.125	0	55,000
Fuel	DIDC.135	82,000	DICC.130	0					PCOM.130	0	82,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.135	24,000			PCOM.135	0	29,000
Mud & Additives	DIDC.145	200,000									200,000
Surface Rentals	DIDC.150	104,000	DICC.140	0	STIM.140	189,000	CON.140	2,000	PCOM.140	30,900	325,900
Downhole Rentals	DIDC.155	97,000			STIM.145	0			PCOM.145	0	97,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	37,500	PCOM.150	0	37,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	19,000									19,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	65,000	DICC.155	160,000							225,000
Tubular Inspections	DIDC.190	18,000	DICC.160	5,000	STIM.160	4,000			PCOM.160	0	27,000
Casing Crews	DIDC.195	10,000	DICC.165	20,000	STIM.165	0					30,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	154,000	PCOM.170	0	184,000
Trucking/Transportation	DIDC.205	18,000	DICC.175	8,000	STIM.175	4,000	CON.175	19,000	PCOM.175	0	49,000
Supervision	DIDC.210	88,000	DICC.180	16,000	STIM.180	74,000	CON.180	12,000	PCOM.180	0	190,000
Trailer House/Camp/Catering	DIDC.280	39,000	DICC.255	6,000	STIM.280	28,000					73,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	115,000	CON.190	10,000	PCOM.190	0	130,000
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	75,000									75,000
Directional Drilling Services	DIDC.245	225,000									225,000
Solids Control	DIDC.260	72,000									72,000
Well Control Equip (Snubbing Services)	DIDC.265	72,000	DICC.240	5,000	STIM.240	81,000			PCOM.240	0	158,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	400,000			PCOM.200	0	400,000
Composite Plugs					STIM.380	96,000			PCOM.390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.395	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.285	6,000									6,000
Major Construction Overhead							CON.305	21,500			21,500
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
FL/GL - Labor							CON.500	54,500			54,500
FL/GL - Supervision							CON.505	3,500			3,500
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	100,000	DICC.320	17,000	STIM.220	257,000	CON.220	87,500	PCOM.220	0	461,500
Contingency							CON.221	8,000			8,000
PBA Costs	DIDC.295	0	DICC.275	0							0
Total Intangible Cost		2,108,000		356,000		5,401,000		419,000		162,340	8,446,340
Drive Pipe	DWEB.150	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	47,000									47,000
Intermediate Casing 1	DWEB.145	0									0
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.160	0									0
Production Casing or Liner			DWEA.100	484,000							484,000
Production Tie-Back			DWEA.165	0	STIMT.101	0					0
Tubing					STIMT.105	51,000			PCOMT.105	0	51,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.120	0	105,000
Liner Hanger, Baloion Packer	DWEB.100	0	DWEA.125	0							0
Packer, Nipples					STIMT.400	28,000			PCOMT.400	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.405	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
Well Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		83,000		509,000		219,000				59,000	870,000
N/C Lease Equipment							CONT.400	183,000			183,000
Tanks, Tanks Steps, Stairs							CONT.405	64,000			64,000
[redacted]y Equipment							CONT.410	179,000			179,000
Secondary Containments							CONT.415	24,000			24,000
Overhead Power Distribution							CONT.420	31,500			31,500
[redacted] Electrical							CONT.425	36,500			36,500
Telecommunication Equipment							CONT.426	0			0
Meters and Metering Equipment							CONT.445	20,000			20,000
Facility Line Pipe							CONT.450	30,000			30,000
Lease Automation Materials							CONT.455	43,000			43,000
FL/GL - Materials							CONT.550	7,500			7,500
FL/GL - Line Pipe							CONT.555	11,500			11,500
SWD/Other - Materials							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								630,000			630,000
Total Estimated Cost		2,191,000		865,000		5,620,000		1,049,000		221,340	9,946,340

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 3H

AFE # 26621003

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Completion Codes		Amount
Roads & Location	DIDC.100		70,000				STIM.100		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	16 days at $26,000/day	442,000	DICC.120	4 days at $26,000/day	104,000			
Misc Preparation	DIDC.120		35,000						
Bits	DIDC.125		55,000	DICC.125		0	STIM.125		0
Fuel	DIDC.135	1,300 gal/day at $3.00/gal	82,000	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		200,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	104,000	DICC.140		0	STIM.140		189,000
Downhole Rentals	DIDC.155		97,000				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	12 days at $1,250/day	15,000						
Open Hole Logging	DIDC.180		0						
Cementing & Float Equipment	DIDC.185		65,000	DICC.185		160,000			
Tubular Inspections	DIDC.190		18,000	DICC.180		5,000	STIM.160		4,000
Casing Crews	DIDC.195		10,000	DICC.185		20,000	STIM.165		0
Mechanical Labor	DIDC.200		20,000	DICC.170		10,000	STIM.170		0
Trucking/Transportation	DIDC.205		18,000	DICC.175		8,000	STIM.175		4,000
Supervision	DIDC.210		88,000	DICC.180		16,000	STIM.180		74,000
Trailer House/Camp/Catering	DIDC.280		39,000	DICC.255		6,000	STIM.280		28,000
Other Misc Expenses	DIDC.220		5,000	DICC.190		0	STIM.190		115,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
MOB/DEMOB	DIDC.240		75,000						
Directional Drilling Services	DIDC.245		225,000						
Solids Control	DIDC.260		72,000						
Well Control Equip (Snubbing Services)	DIDC.265		72,000	DICC.240		5,000	STIM.240		81,000
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.200		400,000
Composite Plugs							STIM.390		95,000
Stimulation							STIM.210		2,526,000
Stimulation Water/Water Transfer/Water							STIM.395		702,000
Cleanup Onsite Frac/Rental Equipment							STIM.305		40,000
Legal/Regulatory/Curative	DIDC.300		10,000						
Well Control Insurance	DIDC.285	$0.33/ft	6,000						
Major Construction Overhead									
Real Time Operations Center	DIDC.560		0				STIM.560		0
FL/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.615	500 % of Drilling Intangibles	100,000	DICC.220		17,000	STIM.220		257,000
Contingency									
P&A Costs	DIDC.285		0	DICC.275		0			
Total Intangible Cost			2,106,000			356,000			5,401,000
Drive Pipe	DWEB.150		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.135		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,876ft at $25.00/ft	47,000						
Intermediate Casing 1	DWEB.145		0						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.100	5 1/2" - 18,403ft at $25.00/ft	484,000			
Production Tie-Back				DWEA.165		0	STIMT.101		0
Tubing							STIMT.105	2 7/8" - 7,230ft at $7.00/ft	51,000
Wellhead, Tree, Chokes	DWEB.115		20,000	DWEA.120		25,000	STIMT.120		60,000
Liner Hanger, Isolation Packer	DWEB.180		0	DWEA.125		0			
Packer, Nipples							STIMT.400		28,000
Pumping Unit, Engine							STIMT.405		0
Downhole Lift Equipment							STIMT.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			83,000			509,000			219,000
N/C Lease Equipment									
Tanks, Tanks Steps, Stairs									
Battery Equipment									
Secondary Containment									
Overhead Power Distribution									
Facility Electrical									
Telecommunication Equipment									
Meters and Metering Equipment									
Facility Line Pipe									
Lease Automation Materials									
FL/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,191,000			865,000			5,620,000

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 3H

AFE # 26621003

Description	Codes	Production Equip Amount	Codes	Post Completion	Amount	Total Cost
Roads & Location	CON.100	8,500	PCOM.100	Pad/Road Clean Up	28,000	116,500
Damages	CON.105	1,000				7,000
Mud/Fluids Disposal			PCOM.255	6,800 BWPD for 60 days @ $0.25/bbl	90,000	312,000
Day Rate						546,000
Misc Preparation						35,000
Bits			PCOM.125		0	55,000
Fuel			PCOM.130		0	82,000
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000
Mud & Additives						200,000
Surface Rentals	CON.140	2,000	PCOM.140	$1,030/d for Production Target of 30 Days	30,900	325,900
Downhole Rentals			PCOM.145		0	97,000
Flowback Labor			PCOM.141	$960/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CON.130	37,500	PCOM.150		0	37,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						19,000
Open Hole Logging						0
Cementing & Float Equipment						225,000
Tubular Inspections			PCOM.160		0	27,000
Casing Crews						30,000
Mechanical Labor	CON.170	154,000	PCOM.170		0	184,000
Trucking/Transportation	CON.175	19,000	PCOM.175		0	49,000
Supervision	CON.180	12,000	PCOM.180		0	190,000
Trailer House/Camp/Catering						73,000
Other Misc Expenses	CON.190	10,000	PCOM.190		0	130,000
Overhead						15,000
Remedial Cementing			PCOM.215		0	0
MOB/DEMOB						75,000
Directional Drilling Services						225,000
Solids Control						72,000
Well Control Equip (Snubbing Services)			PCOM.240		0	158,000
Fishing & Sidetrack 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.200		0	400,000
Composite Plugs			PCOM.390		0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210		0	2,926,000
Stimulation Water/Water Transfer/Water						702,000
Cimarex Owned Frac/Rental Equipment			PCOM.305		0	40,000
Legal/Regulatory/Curative	CON.300	0				10,000
Well Control Insurance						6,000
Major Construction Overhead	CON.305	21,500				21,500
Real Time Operations Center						0
FL/GL - Labor	CON.500	54,500				54,500
FL/GL - Supervision	CON.505	3,500				3,500
Survey	CON.515	0				0
SWD/Other - Labor	CON.580	0				0
SWD/OTHER - SUPERVISION	CON.605	0				0
Contingency	CON.220	87,500	PCOM.220		0	461,500
Contingency	CON.221	8,000				8,000
PBA Costs						0
Total Intangible Cost		419,000			162,340	8,446,340
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						47,000
Intermediate Casing 1						0
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						484,000
Production Tie-Back						0
Tubing			PCOMT.105		0	51,000
Wellhead, Tree, Chokes			PCOMT.120		0	105,000
Liner Hanger, Isolation Packer						0
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.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCOMT.455		0	0
Total Tangible - Well Equipment Cost					59,000	870,000
A/C Lease Equipment	CONT.420	183,000				183,000
Tanks, Tanks Steps, Stairs	CONT.405	64,000				64,000
Battery Equipment	CONT.410	179,000				179,000
Secondary Containments	CONT.415	24,000				24,000
Overhead Power Distribution	CONT.420	31,500				31,500
Facility Electrical	CONT.425	36,500				36,500
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	20,000				20,000
Facility Line Pipe	CONT.450	30,000				30,000
Lease Automation Materials	CONT.455	43,000				43,000
FL/GL - Materials	CONT.550	7,500				7,500
FL/GL - Line Pipe	CONT.555	11,500				11,500
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		630,000				630,000
Total Estimated Cost		1,049,000			221,340	9,946,340

CIMAREX Authorization For Expenditure Drilling AFE # 26621004

Company Entity

Date Prepared
4/23/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 4H	Carlsbad Bone Spring Prospect	300001-131.01	26621004

County, State	Location	Estimated Spud	Estimated Completion
Eddy, NM	W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM	1/1/2021	2/1/2021

	Formation	Well Type	Tvd Measured Depth	Tvd Vetical Depth
X New Supplement Revision	Wolfcamp Upper	DEV	19,000	8,700

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1876', set surface casing. Drill to 8133' (KOP). Drill curve at 12°/100' initial build rate to +/- 90 degrees 8610' TVD and drill a +/- 9420' long lateral in the Wolfcamp formation. Run and cement production casing. Stage frac.Drill out plugs. Run production packer, tubing and GLVs.

Intangible	Dry Hole	After Casing Point	Completed Well Cost
Drilling Costs	$2,108,000		$2,108,000
Completion Costs		$6,338,340	$6,338,340
Total Intangible Cost	$2,108,000	$6,338,340	$8,446,340

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$83,000	$787,000	$870,000
Lease Equipment		$630,000	$630,000
Total Tangible Cost	$83,000	$1,417,000	$1,500,000

Total Well Cost	$2,191,000	$7,755,340	$9,946,340

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. 4/23/2019

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 4H

AFE # 26621004

Description	BCP - Drilling Codes	BCP - Drilling Amount	ACP - Drilling Codes	ACP - Drilling Amount	Comp/Stim Codes	Comp/Stim Amount	Production Equip Codes	Production Equip Amount	Post Completion Codes	Post Completion Amount	Total Cost
Roads & Location	DIDC.100	70,000			STIM.100	10,000	CON.100	8,500	PCOM.100	28,000	116,500
Damages	DIDC.105	6,000					CON.105	1,000			7,000
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	90,000	312,000
Day Rate	DIDC.115	442,000	DIDC.120	104,000							546,000
Misc Preparation	DIDC.120	35,000									35,000
RPs	DIDC.125	55,000	DIDC.125	0	STIM.125	0			PCOM.125	0	55,000
Fuel	DIDC.135	82,000	DIDC.130	0					PCOM.130	0	82,000
Water for Drilling Eg (Not Frac Water)	DIDC.140	5,000	DIDC.135	0	STIM.135	24,000			PCOM.133	0	29,000
Mud & Additives	DIDC.145	200,000									200,000
Surface Rentals	DIDC.135	104,000	DIDC.140	0	STIM.140	189,000	CON.140	2,000	PCOM.140	30,900	325,900
Downhole Rentals	DIDC.155	97,000			STIM.145	0			PCOM.145	0	97,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	37,500	PCOM.150	0	37,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	19,000									19,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	65,000	DIDC.155	160,000							225,000
Inspection Inspections	DIDC.190	18,000	DIDC.160	5,000	STIM.160	4,000			PCOM.160	0	27,000
Casing Crews	DIDC.195	10,000	DIDC.165	20,000	STIM.165	0					30,000
Mechanical Labor	DIDC.200	20,000	DIDC.170	10,000	STIM.170	0	CON.170	154,000	PCOM.170	0	184,000
Trucking/Transportation	DIDC.205	18,000	DIDC.175	8,000	STIM.175	4,000	CON.175	19,000	PCOM.175	0	49,000
Supervision	DIDC.210	88,000	DIDC.180	16,000	STIM.180	74,000	CON.180	12,000	PCOM.180	0	190,000
Trailer House/Camp/Catering	DIDC.280	39,000	DIDC.255	6,000	STIM.280	28,000					73,000
Other Misc Expenses	DIDC.220	5,000	DIDC.190	0	STIM.190	115,000	CON.190	10,000	PCOM.190	0	130,000
Overhead	DIDC.225	10,000	DIDC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	75,000									75,000
Directional Drilling Services	DIDC.245	225,000									225,000
Solids Control	DIDC.250	72,000									72,000
Well Control Equip (Snubbing Services)	DIDC.265	72,000	DIDC.240	5,000	STIM.240	81,000			PCOM.240	0	158,000
Fishing & Sidetrack Services	DIDC.270	0	DIDC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
CoilTubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	400,000			PCOM.200	0	400,000
Composite Plugs					STIM.350	96,000			PCOM.350	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.285	702,000					702,000
Closure Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.285	6,000									6,000
Major Construction Overhead							CON.305	21,500			21,500
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
FL/GL - Labor							CON.500	54,500			54,500
FL/GL - Supervision							CON.505	3,500			3,500
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	100,000	DIDC.220	17,000	STIM.220	257,000	CON.220	87,500	PCOM.220	0	461,500
Contingency							CON.321	8,000			8,000
P&A Costs	DIDC.295	0	DIDC.275	0							0
Total Intangible Cost		2,108,000		354,000		5,401,000		419,000		162,340	8,446,340
Drive Pipe	DWEB.150	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	47,000									47,000
Intermediate Casing 1	DWEB.145	0									0
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.180	0									0
Production Casing or Liner			DWEA.160	484,000							484,000
Production Tie-Back			DWEA.165	0	STIMT.101	0					0
Tubing					STIMT.105	51,000			PCOMT.905	0	51,000
Wellhead Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.930	0	105,000
Liner Hanger, Isolation Packer	DWEB.160	0	DWEA.125	0							0
Packer, Nipples					STIMT.400	28,000			PCOMT.400	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.405	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
Well Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		83,000		308,000		219,000				59,000	670,000
NPC Lease Equipment							CONT.400	183,000			183,000
Tanks, Tanks Steps, Stairs							CONT.405	64,000			64,000
Battery Equipment							CONT.410	179,000			179,000
Secondary Containments							CONT.413	24,000			24,000
Overhead Power Distribution							CONT.420	31,500			31,500
Facility Electrical							CONT.425	96,500			96,500
Telecommunication Equipment							CONT.426	0			0
Meters and Metering Equipment							CONT.445	20,000			20,000
Facility Line Pipe							CONT.450	30,000			30,000
Lease Automation Materials							CONT.433	43,000			43,000
FL/GL - Materials							CONT.500	7,500			7,500
FL/GL - Line Pipe							CONT.555	11,500			11,500
SWD/Other - Materials							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								630,000			630,000
Total Estimated Cost		2,191,000		865,000		5,620,000		1,049,000		221,340	9,946,340

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 4H

AFE # 26621004

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Strn Codes		Amount
Roads & Location	DIDC.100		70,000				STIM.100		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	16 days at $26,000/day	442,000	DICC.120	4 days at $26,000/day	104,000			
Misc Preparation	DIDC.120		35,000						
Rig	DIDC.125		55,000	DICC.125		0	STIM.125		0
Fuel	DIDC.135	1,300 gal/day at $3.00/gal	82,000	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		200,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	104,000	DICC.140		0	STIM.140		189,000
Downhole Rentals	DIDC.155		97,000				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	12 days at $1,250/day	15,000						
Open Hole Logging	DIDC.180		0						
Cementing & Float Equipment	DIDC.185		65,000	DICC.135		160,000			
Tubular Inspections	DIDC.190		18,000	DICC.160		5,000	STIM.160		4,000
Casing Crews	DIDC.195		10,000	DICC.165		20,000	STIM.165		0
Mechanical Labor	DIDC.200		20,000	DICC.170		10,000	STIM.170		0
Trucking/Transportation	DIDC.205		18,000	DICC.175		8,000	STIM.175		4,000
Supervision	DIDC.210		88,000	DICC.180		16,000	STIM.180		74,000
Trailer House/Camp/Catering	DIDC.220		39,000	DICC.235		6,000	STIM.230		28,000
Other Misc Expenses	DIDC.230		5,000	DICC.190		0	STIM.190		115,000
Overhead	DIDC.235		18,000	DICC.195		5,000			
Remedial Cementing	DIDC.251		0				STIM.215		0
MOB/DEMOB	DIDC.240		75,000						
Directional Drilling Services	DIDC.245		225,000						
Solids Control	DIDC.260		72,000						
Well Control Equip (Snubbing Services)	DIDC.265		72,000	DICC.240		5,000	STIM.240		81,000
Fishing & Sidetrack Services	DIDC.270		0	DICC.245		0	STIM.245		0
Completion Rig							STIM.715		21,000
Coil Tubing Services							STIM.260		368,000
Completion Logging/Perforating/Wireline							STIM.200		420,000
Composite Plugs							STIM.350		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.355		702,000
Cimarex Owned Frac/Rental Equipment							STIM.305		40,000
Legal/Regulatory/Curative	DIDC.300		10,000						
Well Control Insurance	DIDC.285	$0.35/ft	6,000						
Major Construction Overhead									
Real Time Operations Center	DIDC.540		0				STIM.340		0
FL/GL - Labor									
FL/GL - Supervisor									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.435	500 % of Drilling Intangibles	100,000	DICC.320		17,800	STIM.220		257,000
Contingency									
MRA Costs	DIDC.295		0	DICC.275		0			
Total Intangible Cost			2,108,000			256,800			5,431,000
Drive Pipe	DWEB.150		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.125		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,876ft at $25.00/ft	47,000						
Intermediate Casing 1	DWEB.145		0						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.300	5 1/2" - 13,403ft at $25.00/ft	484,000			
Production Tie-Back				DWEA.165		0	STIMT.101		0
Tubing							STIMT.105	2 7/8" - 7,250ft at $7.00/ft	51,000
Wellhead, Tree, Chokes	DWEB.115		20,000	DWEA.120		23,000	STIMT.120		60,000
Liner Hanger, Isolation Packer	DWEB.180		0	DWEA.125		0			
Packer, Nipples							STIMT.480		28,000
Pumping Unit, Engine							STIMT.485		0
Downhole Lift Equipment							STIMT.490		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			83,000			508,000			219,000
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/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,191,000			865,000			5,620,000

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 4H

AFE # 26621004

		Production Equip			Post Completion		Total
Description	Codes	Amount	Codes		Amount	Cost
Roads & Location	CDN.100	8,500	PCDM.100	Pad/Road Clean Up	28,000	116,500
Damages	CDN.105	1,000				7,000
Mud/Fluids Disposal			PCDM.255	6,000 BWPD for 60 days @ $0.25/bbl	90,000	312,000
Day Rate						546,000
Misc Preparation						35,000
Bits			PCDM.125		0	55,000
Fuel			PCDM.130		0	82,000
Water for Drilling Rig (Not Frac Water)			PCDM.135		0	29,000
Mud & Additives						200,000
Surface Rentals	CDN.140	2,000	PCDM.140	$1,033/d for Production Target of 30 Days	30,900	325,900
Downhole Rentals			PCDM.145		0	97,000
Flowback Labor			PCDM.147	$960/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CDN.150	37,500	PCDM.150		0	37,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						19,000
Open Hole Logging						0
Cementing & Float Equipment						225,000
Tubular Inspections			PCDM.160		0	27,000
Casing Crews						30,000
Mech. Labor	CDN.170	154,000	PCDM.170		0	184,000
Trucking/Transportation	CDN.175	19,000	PCDM.175		0	49,000
Supervision	CDN.180	12,000	PCDM.180		0	190,000
Trailer House/Camp/Catering						73,000
Other Misc Expenses	CDN.190	10,000	PCDM.190		0	130,000
Overhead						15,000
Remedial Cementing			PCDM.215		0	0
MOB/DEMOB						75,000
Directional Drilling Services						225,000
Solids Control						72,000
Well Control Equip (Snubbing Services)			PCDM.240		0	158,000
Fishing & Sidetrack Services			PCDM.245		0	0
Completion Rig			PCDM.115		0	21,000
Coil Tubing Services			PCDM.260		0	368,000
Completion Logging/Perforating/Wireline			PCDM.280		0	400,000
Composite Plugs			PCDM.290		0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCDM.210		0	2,926,000
Stimulation Water/Water Transfer/Water						702,000
Cimarex Owned Frac/Rental Equipment			PCDM.305		0	40,000
Legal/Regulatory/Curative	CDN.300	0				10,000
Well Control Insurance						6,000
Major Construction Overhead	CDN.305	21,500				21,500
Real Time Operations Center						0
FL/GL - Labor	CDN.500	54,500				54,500
FL/GL - Supervision	CDN.505	3,500				3,500
Survey	CDN.515	0				0
SWD/Other - Labor	CDN.600	0				0
SWD/OTHER - SUPERVISION	CDN.605	0				0
Contingency	CDN.220	87,500	PCDM.220		0	461,500
Contingency	CDN.221	8,000				8,000
P&A Costs						0
Total Intangible Cost		419,000			182,340	8,446,340
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						47,000
Intermediate Casing 1						0
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						484,000
Production Tie-Back						0
Tubing			PCDMT.105		0	51,000
Wellhead, Tree, Chokes			PCDMT.120		0	105,000
Liner Hanger, Isolation Packer						0
Packer, Nipples			PCDMT.400		0	28,000
Pumping Unit, Engine			PCDMT.405		0	0
Downhole Lift Equipment			PCDMT.410		0	80,000
Surface Equipment			PCDMT.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCDMT.455		0	0
Total Tangible - Well Equipment Cost					59,000	870,000
N/C Lease Equipment	CONT.400	183,000				183,000
Tanks, Tanks Steps, Stairs	CONT.405	64,000				64,000
Battery Equipment	CONT.410	179,000				179,000
Secondary Containments	CONT.415	24,000				24,000
Overhead Power Distribution	CONT.420	31,500				31,500
Facility Electrical	CONT.425	36,500				36,500
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	20,000				20,000
Facility Line Pipe	CONT.450	30,000				30,000
Lease Automation Materials	CONT.455	43,000				43,000
FL/GL - Materials	CONT.550	7,500				7,500
FL/GL - Line Pipe	CONT.555	11,500				11,500
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		630,000				630,000
Total Estimated Cost		1,049,000			221,340	9,946,340

CIMAREX Authorization For Expenditure Drilling AFE # 26621005

Company Entity				Date Prepared 4/23/2019
Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 5H	Lea Prospect	300001-132.01	26621005
County, State	Location		Estimated Spud	Estimated Completion
Eddy, NM	SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM		1/1/2021	2/1/2021
[X] New [ ] Supplement [ ] Revision	Formation	Well Type	Tvd Measured Depth	Tvd Vetical Depth
	Wolfcamp Lower	DEV	19,900	9,600

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1900', set surface casing. Drill to 8830' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 9455' MD. Finish curve at +/- 4°/100' to +/- 9340' TVD and drill a +/- 9180' 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	$2,586,000		$2,586,000
Completion Costs		$6,225,840	$6,225,840
Total Intangible Cost	$2,586,000	$6,225,840	$8,811,840

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$376,000	$569,000	$945,000
Lease Equipment		$203,500	$203,500
Total Tangible Cost	$376,000	$772,500	$1,148,500

Total Well Cost	$2,962,000	$6,998,340	$9,960,340

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. 4/23/2019

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 5H

AFE # 26621005

	BCP - Drilling		ACP - Drilling		Comp/Stim		Production Equip		Post Completion		Total
Description	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Codes	Amount	Cost
Roads & Location	DIDC.100	95,000			STIM.100	10,000	CON.100	5,500	PCOM.100	28,000	138,500
Damages	DIDC.105	6,000					CON.105	1,500			7,500
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	75,000	297,000
Day Rate	DIDC.115	494,000	DICC.120	104,000							598,000
Misc Preparation	DIDC.120	35,000									35,000
Rits	DIDC.125	75,000	DICC.125	0	STIM.125	0			PCOM.125	0	75,000
Fuel	DIDC.133	90,000	DICC.130	0					PCOM.130	0	90,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.135	24,000			PCOM.135	0	29,000
Mud & Additives	DIDC.145	198,000									198,000
Surface Rentals	DIDC.150	112,000	DICC.140	0	STIM.140	237,000	CON.140	2,500	PCOM.140	30,900	382,400
Downhole Rentals	DIDC.155	142,000			STIM.145	0			PCOM.145	0	142,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	16,500	PCOM.150	0	16,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	22,000									22,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	145,000	DICC.153	63,000							208,000
Tubular Inspections	DIDC.190	50,000	DICC.160	5,000	STIM.160	4,000			PCOM.160	0	59,000
Casing Crews	DIDC.195	20,000	DICC.163	13,000	STIM.165	0					33,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	72,500	PCOM.170	0	102,500
Trucking/Transportation	DIDC.205	25,000	DICC.175	8,000	STIM.175	4,000	CON.175	8,500	PCOM.175	0	45,500
Supervision	DIDC.210	96,000	DICC.180	16,000	STIM.180	94,000	CON.180	3,500	PCOM.180	0	209,500
Trailer House/Camp/Catering	DIDC.280	42,000	DICC.255	6,000	STIM.280	34,000					82,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	155,000	CON.190	13,500	PCOM.190	0	173,500
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	100,000									100,000
Directional Drilling Services	DIDC.245	339,000									339,000
Solids Control	DIDC.260	80,000									80,000
Well Control Equip (Snubbing Services)	DIDC.265	80,000	DICC.240	5,000	STIM.240	109,000			PCOM.240	0	194,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	432,000			PCOM.200	0	432,000
Composite Plugs					STIM.390	96,000			PCOM.390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.395	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.285	7,000									7,000
Major Construction Overhead							CON.305	12,000			12,000
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
FL/GL - Labor							CON.500	65,500			65,500
FL/GL - Supervision							CON.505	5,000			5,000
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	123,000	DICC.220	12,000	STIM.220	266,000	CON.220	31,000	PCOM.220	0	432,000
Contingency							CON.221	10,000			10,000
AFA Costs	DIDC.285	0	DICC.275	0							0
Total Intangible Cost		2,386,000		247,000		5,584,000		247,500		147,340	8,811,840
Drive Pipe	DWEB.130	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	48,000									48,000
Intermediate Casing 1	DWEB.145	292,000									292,000
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.160	0									0
Production Casing or Liner			DWEA.100	148,000							148,000
Production Tie-Back			DWEA.165	0	STIM.T.101	0					0
Tubing					STIM.T.105	71,000			PCOM.T.105	0	71,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIM.T.120	60,000			PCOM.T.120	0	105,000
Liner Hanger, Isolation Packer	DWEB.109	0	DWEA.125	98,000							98,000
Packer, Nipples					STIM.T.400	28,000			PCOM.T.400	0	28,000
Pumping Unit, Engine					STIM.T.405	0			PCOM.T.405	0	0
Downhole Lift Equipment					STIM.T.410	80,000			PCOM.T.410	0	80,000
Surface Equipment									PCOM.T.420	59,000	59,000
Well Automation Materials									PCOM.T.455	0	0
Total Tangible - Well Equipment Cost		376,000		271,000		239,000				59,000	945,000
N/C Lease Equipment							CONT.400	48,000			48,000
Tanks, Tanks Steps, Stairs							CONT.405	0			0
Battery Equipment							CONT.410	60,500			60,500
Secondary Containments							CONT.415	9,500			9,500
Overhead Power Distribution							CONT.420	0			0
Facility Electrical							CONT.425	15,000			15,000
Telecommunication Equipment							CONT.426	0			0
Meters and Metering Equipment							CONT.445	15,500			15,500
Facility Line Pipe							CONT.450	10,000			10,000
Lease Automation Materials							CONT.455	19,000			19,000
FL/GL - Materials							CONT.550	10,000			10,000
FL/GL - Line Pipe							CONT.555	16,000			16,000
SWD/Other - Materials							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								203,500			203,500
Total Estimated Cost		2,962,000		518,000		5,823,000		451,000		206,340	9,960,340

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 5H

AFE # 26621005

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Stim Codes		Amount
Roads & Location	DIDC.100		95,000				STIM.100		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	18 days at $26,000/day	494,000	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	90,000	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		198,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	112,000	DICC.140		0	STIM.140		237,000
Downhole Rentals	DIDC.155		142,000				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	14 days at $1,200/day	22,000						
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		96,000	DICC.180		16,000	STIM.180		94,000
Trailer House/Camp/Catering	DIDC.230		42,000	DICC.255		6,000	STIM.230		34,000
Other Misc Expenses	DIDC.220		5,000	DICC.190		0	STIM.190		155,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
MOB/DEMOB	DIDC.240		100,000						
Directional Drilling Services	DIDC.245		339,000						
Solids Control	DIDC.260		80,000						
Well Control Equip (Snubbing Services)	DIDC.265		80,000	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.200		432,000
Composite Plugs							STIM.390		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.395		702,000
Cimarex Owned Frac/Rental Equipment							STIM.305		40,000
Legal/Regulatory/Curative	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/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.435	500 % of Drilling Intangibles	123,000	DICC.220		12,000	STIM.220		266,000
Contingency									
P&A Costs	DIDC.295		0	DICC.275		0			
Total Intangible Cost			2,586,000			247,000			5,584,000
Drive Pipe	DWEB.150		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.135		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,900ft at $25.00/ft	48,000						
Intermediate Casing 1	DWEB.145	7" - 9,560ft at $28.00/ft	292,000						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.100	4 1/2" - 11,350ft at $13.00/ft	148,000			
Production Tie-Back				DWEA.165		0	STIMT.101		0
Tubing							STIMT.105	3-1/2" - 7,530ft at $9.00/ft	71,000
Wellhead, Tree, Chokes	DWEB.115		20,000	DWEA.120		25,000	STIMT.120		60,000
Liner Hanger, Isolation Packer	DWEB.100		0	DWEA.125		98,000			
Packer, Nipples							STIMT.400		28,000
Pumping Unit, Engine							STIMT.405		0
Downhole Lift Equipment							STIMT.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			376,000			271,000			239,000
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/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,962,000			518,000			5,823,000

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 5H

AFE # 26621005

		Production Equip			Post Completion		Total
Description	Codes	Amount	Codes		Amount	Cost
Roads & Location	CON.180	5,500	PCOM.100	Pad/Road Clean Up	28,000	138,500
Damages	CON.185	1,500				7,500
Mud/Fluids Disposal			PCOM.285	5,000 BWPD for 60 days @ $0.25/bbl	75,000	297,000
Day Rate						598,000
Misc Preparation						35,000
Bits			PCOM.125		0	75,000
Fuel			PCOM.130		0	90,000
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000
Mud & Additives						198,000
Surface Rentals	CON.140	2,500	PCOM.140	$1,032/d for Production Target of 30 Days	30,900	382,400
Downhole Rentals			PCOM.145		0	142,000
Flowback Labor			PCOM.141	$960/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CON.150	16,500	PCOM.150		0	16,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						22,000
Open Hole Logging						0
Cementing & Float Equipment						208,000
Tubular Inspections			PCOM.160		0	58,000
Casing Crews						33,000
Mechanical Labor	CON.170	72,500	PCOM.170		0	102,500
Trucking/Transportation	CON.175	8,500	PCOM.175		0	45,500
Supervision	CON.160	3,500	PCOM.180		0	209,500
Trailer House/Camp/Catering						82,000
Other Misc Expenses	CON.190	13,500	PCOM.190		0	173,500
Overhead						15,000
Remedial Cementing			PCOM.215		0	0
MOB/DEMOB						100,000
Directional Drilling Services						339,000
Solids Control						80,000
Well Control Equip (Snubbing Services)			PCOM.240		0	194,000
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						702,000
'Operator Owned Frac/Rents' Equipment			PCOM.305		0	40,000
Legal/Regulatory/CurrOve	CON.300	0				10,000
Well Control Insurance						7,000
Major Construction Overhead	CON.305	12,000				12,000
Real Time Operations Center						0
FL/GL - Labor	CON.500	65,500				65,500
FL/GL - Supervision	CON.505	5,000				5,000
Survey	CON.515	0				0
SWD/Other - Labor	CON.600	0				0
SWD/OTHER - SUPERVISION	CON.605	0				0
Contingency	CON.220	31,000	PCON.220		0	432,000
Contingency	CON.221	10,000				10,000
PBA Costs						0
Total Intangible Cost		247,500			147,340	8,811,840
Drive Pipe						0
Conductor Pipe						0
Water String						14,000
Surface Casing						48,000
Intermediate Casing 1						292,000
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						148,000
Production Tie-Back						0
Tubing			PCOMT.105		0	71,000
Wellhead, Tree, Chokes			PCOMT.120		0	105,000
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.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCOMT.435		0	0
Total Tangible - Well Equipment Cost					59,000	945,000
N/C Lease Equipment	CONT.400	48,000				48,000
Tanks, Tanks Steps, Stairs	CONT.405	0				0
Battery Equipment	CONT.410	60,500				60,500
Secondary Containments	CONT.415	9,500				9,500
Overhead Power Distribution	CONT.420	0				0
Facility Electrical	CONT.425	15,000				15,000
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	15,500				15,500
Facility Line Pipe	CONT.450	10,000				10,000
Lease Automation Materials	CONT.455	19,000				19,000
FL/GL - Materials	CONT.550	10,000				10,000
FL/GL - Line Pipe	CONT.555	16,000				16,000
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		203,500				203,500
Total Estimated Cost		451,000			206,340	9,960,340

CIMAREX Authorization For Expenditure Drilling AFE # 26621006

Company Entity

Date Prepared
4/23/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 6H	Lea Prospect	300001-133.01	26621006

County, State	Location	Estimated Spud	Estimated Completion
Eddy, NM	SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM	1/1/2021	2/1/2021

	Formation	Well Type	TD Measured Depth	TD Vertical Depth
[X] New [ ] Supplement [ ] Revision	Wolfcamp Lower	DEV	19,900	9,600

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1900', set surface casing. Drill to 8830' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 9455' MD. Finish curve at +/- 4°/100' to +/- 9340' TVD and drill a +/- 9180' 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	$2,586,000		$2,586,000
Completion Costs		$6,225,840	$6,225,840
Total Intangible Cost	$2,586,000	$6,225,840	$8,811,840

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$376,000	$569,000	$945,000
Lease Equipment		$203,500	$203,500
Total Tangible Cost	$376,000	$772,500	$1,148,500

Total Well Cost	$2,962,000	$6,998,340	$9,960,340

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. 4/23/2019

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 6H

AFE # 26621006

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	DIDC.100	95,000			STIM.100	10,000	CON.100	5,500	PCOM.100	28,000	138,500
Damages	DIDC.905	6,000					CON.105	1,500			7,500
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	75,000	297,000
Day Rate	DIDC.115	494,000	DICC.120	104,000							598,000
Misc Preparation	DIDC.120	35,000									35,000
Bits	DIDC.125	75,000	DICC.125	0	STIM.125	0			PCOM.125	0	75,000
Fuel	DIDC.135	90,000	DICC.130	0					PCOM.130	0	90,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.135	24,000			PCOM.135	0	29,000
Mud & Additives	DIDC.145	198,000									198,000
Surface Rentals	DIDC.150	112,000	DICC.140	0	STIM.140	237,000	CON.140	2,500	PCOM.140	30,900	382,400
Downhole Rentals	DIDC.155	142,000			STIM.145	0			PCOM.145	0	142,000
Flowback Labor					STIM.145	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	16,500	PCOM.150	0	16,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	22,000									22,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	145,000	DICC.155	63,000							208,000
Tubular Inspections	DIDC.190	50,000	DICC.160	5,000	STIM.160	4,000			PCOM.160	0	59,000
Casing Crews	DIDC.195	20,000	DICC.165	13,000	STIM.165	0					33,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	72,500	PCOM.170	0	102,500
Trucking/Transportation	DIDC.205	25,000	DICC.175	8,000	STIM.175	4,000	CON.175	8,500	PCOM.175	0	45,500
Supervision	DIDC.210	96,000	DICC.180	16,000	STIM.180	94,000	CON.180	3,500	PCOM.180	0	209,500
Trailer House/Camp/Catering	DIDC.280	42,000	DICC.255	6,000	STIM.280	34,000					82,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	155,000	CON.190	13,500	PCOM.190	0	173,500
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	100,000									100,000
Directional Drilling Services	DIDC.245	339,000									339,000
Solids Control	DIDC.260	80,000									80,000
Well Control Equip (Snubbing Services)	DIDC.265	80,000	DICC.240	5,000	STIM.240	109,000			PCOM.240	0	194,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	432,000			PCOM.200	0	432,000
Composite Plugs					STIM.290	96,000			PCOM.290	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.395	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.285	7,000									7,000
Major Construction Overhead							CON.305	12,000			12,000
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
FL/GL - Labor							CON.500	65,500			65,500
FL/GL - Supervision							CON.505	5,000			5,000
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.435	123,000	DICC.220	12,000	STIM.220	266,000	CON.220	31,000	PCOM.220	0	432,000
Contingency							CON.221	10,000			10,000
P&A Costs	DIDC.295	0	DICC.275	0							0
Total Intangible Cost		2,596,000		247,000		5,584,000		247,500		147,340	8,821,840
Drive Pipe	DWEB.150	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	48,000									48,000
Intermediate Casing 1	DWEB.145	292,000									292,000
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.160	0									0
Production Casing or Liner			DWEA.100	148,000							148,000
Production Tie-Back			DWEA.165	0	STIMT.101	0					0
Tubing					STIMT.105	71,000			PCOMT.105	0	71,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.120	0	105,000
Liner Hanger, Isolation Packer	DWEB.100	0	DWEA.125	98,000							98,000
Packer, Nipples					STIMT.400	28,000			PCOMT.400	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.405	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
Well Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		376,000		271,000		239,000				59,000	945,000
N/C Lease Equipment							CONT.400	48,000			48,000
Tanks, Tanks Steps, Stairs							CONT.405	0			0
Battery Equipment							CONT.410	60,500			60,500
Secondary Containments							CONT.415	9,500			9,500
Overhead Power Distribution							CONT.420	0			0
Facility Electrical							CONT.425	15,000			15,000
Telecommunication Equipment							CONT.426	0			0
Meters and Metering Equipment							CONT.445	15,500			15,500
Facility Line Pipe							CONT.450	10,000			10,000
Lease Automation Materials							CONT.455	19,000			19,000
FL/GL - Materials							CONT.550	10,000			10,000
FL/GL - Line Pipe							CONT.555	16,000			16,000
SWD/Other - Material:							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								203,500			203,500
Total Estimated Cost:		**2,972,000**		**518,000**		**5,823,000**		**451,000**		**206,340**	**9,960,340**

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 6H

AFE # 26621006

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Stim Codes		Amount
Roads & Location	DIDC.100		95,000				STIM.100		10,000
Damages	DIDC.105		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	16 days at $26,000/day	494,000	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	90,000	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		198,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	112,000	DICC.140		0	STIM.140		237,000
Downhole Rentals	DIDC.155		142,000				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	34 days at $1,200/day	22,000						
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		96,000	DICC.180		16,000	STIM.180		94,000
Trailer House/Camp/Catering	DIDC.230		42,000	DICC.255		6,000	STIM.230		34,000
Other Misc Expenses	DIDC.220		5,000	DICC.190		0	STIM.190		155,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
P&A/DEMOB	DIDC.240		100,000						
Directional Drilling Services	DIDC.245		338,000						
Solids Control	DIDC.260		80,000						
Well Control Equip (Snubbing Services)	DIDC.265		80,000	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.200		432,000
Composite Plugs							STIM.390		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.385		702,000
Cimarex Owned Frac/Rental Equipment							STIM.305		40,000
Legal/Regulatory/Curative	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/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.435	500 % of Drilling Intangibles	123,000	DICC.220		12,000	STIM.220		266,000
Contingency									
P&A Costs	DIDC.295		0	DICC.275		0			
Total Intangible Cost			2,596,000			247,000			5,584,000
Drive Pipe	DWEB.130		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.135		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,900ft at $25.00/ft	48,000						
Intermediate Casing 1	DWEB.145	7" - 8,560ft at $28.00/ft	292,000						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.100	4 1/2" - 11,350ft at $13.00/ft	148,000			
Production Tie-Back				DWEA.165		0	STIM.T.101		0
Tubing							STIM.T.105	2-1/2" - 7,830ft at $9.00/ft	71,000
Wellhead, Tree, Chokes	DWEB.115		20,000	DWEA.120		25,000	STIM.T.120		60,000
Liner Hanger, Isolation Packer	DWEB.180		0	DWEA.125		98,000			
Packer, Nipples							STIM.T.400		28,000
Pumping Unit, Engine							STIM.T.405		0
Downhole Lift Equipment							STIM.T.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			376,000			271,000			239,000
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/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			2,972,000			518,000			5,823,000

CIMAREX **Authorization For Expenditure** - HAYDUKE 34-3 FEDERAL COM 6H

AFE # 26621006

	Production Equip			Post Completion		Total
Description	Codes	Amount	Codes		Amount	Cost
Roads & Location	CON.160	5,500	PCOM.180	Pad/Road Clean Up	28,000	138,500
Damages	CON.165	1,500				7,500
Mud/Fluids Disposal			PCOM.255	5,000 BWPD for 60 days @ $0.25/bbl	75,000	297,000
Day Rate						598,000
Misc Preparation						35,000
Bits			PCOM.125		0	75,000
Fuel			PCOM.130		0	90,000
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000
Mud & Additives						198,000
Surface Rentals	CON.140	2,500	PCOM.140	$1,080/d for Production Target of 30 Days	30,900	382,400
Downhole Rentals			PCOM.145		0	142,000
Flowback Labor			PCOM.141	$350/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CON.150	16,500	PCOM.150		0	16,500
Formation Evaluation (DST, Coring, etc)						0
Mud Logging						22,000
Open Hole Logging						0
Cementing & Float Equipment						208,000
Tubular Inspections			PCOM.160		0	59,000
Casing Crews						33,000
Mechanical Labor	CON.170	72,500	PCOM.170		0	102,500
Trucking/Transportation	CON.175	8,500	PCOM.175		0	45,500
Supervision	CON.180	3,500	PCOM.180		0	209,500
Trailer House/Camp/Catering						82,000
Other Misc Expenses	CON.190	13,500	PCOM.190		0	173,500
Overhead						15,000
Remedial Cementing			PCOM.215		0	0
MOB/DEMOB						100,000
Directional Drilling Services						339,000
Solids Control						80,000
Well Control Equip (Snubbing Services)			PCOM.240		0	194,000
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						702,000
Cimarex Owned Frac/Rental Equipment			PCOM.385		0	40,000
Legal/Regulatory/Curative	CON.300	0				10,000
Well Control Insurance						7,000
Major Construction Overhead	CON.305	12,000				12,000
Real Time Operations Center						0
FL/GL - Labor	CON.500	65,500				65,500
FL/GL - Supervision	CON.505	5,000				5,000
Survey	CON.515	0				0
SWD/Other - Labor	CON.800	0				0
SWD/OTHER - SUPERVISION	CON.805	0				0
Contingency	CON.220	31,000	PCOM.220		0	432,000
Contingency	CON.221	10,000				10,000
P&A Costs						0
Total Intangible Cost		269,500			147,340	8,810,980
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						48,000
Intermediate Casing 1						292,000
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						148,000
Production Tie-Back						0
Tubing			PCOMT.105		0	71,000
Wellhead, Tree, Chokes			PCOMT.120		0	105,000
Liner Hanger, Isolation Packer						98,000
Packer, Nipples			PCOMT.420		0	28,000
Pumping Unit, Engine			PCOMT.405		0	0
Downhole Lift Equipment			PCOMT.418		0	80,000
Surface Equipment			PCOMT.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCOMT.455		0	0
Total Tangible - Well Equipment Cost					59,000	945,000
A/C Lease Equipment	CONT.400	48,000				48,000
Tanks, Tanks Steps, Stairs	CONT.405	0				0
Battery Equipment	CONT.410	60,500				60,500
Secondary Containments	CONT.415	9,500				9,500
Overhead Power Distribution	CONT.420	0				0
Facility Electrical	CONT.425	15,000				15,000
Telecommunication Equipment	CONT.426	0				0
Meters and Metering Equipment	CONT.445	15,500				15,500
Facility Line Pipe	CONT.450	10,000				10,000
Lease Automation Materials	CONT.455	19,000				19,000
FL/GL - Materials	CONT.550	10,000				10,000
FL/GL - Line Pipe	CONT.555	16,000				16,000
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINT PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		203,500				203,500
Total Estimated Cost		451,000			206,340	9,960,340

CIMAREX Authorization For Expenditure Drilling AFE # 26621007

Company Entity

Date Prepared
4/23/2019

Exploration Region	Well Name	Prospect	Property Number	AFE
Permian Basin	HAYDUKE 34-3 FEDERAL COM 7H	Carlsbad Bone Spring Prospect	300001-134.01	26621007

County, State	Location	Estimated Spud	Estimated Completion
Eddy, NM	SHL: W/2 of Section 34, Township 25 South, Range 26 East, Eddy County, NM BHL: W/2 of Section 3, Township 26 South, Range 26 East, Eddy County, NM	1/1/2021	2/1/2021

	Formation	Well Type	Tvd Measured Depth	Tvd Vetical Depth
[X] New [ ] Supplement [ ] Revision	Wolfcamp Lower	DEV	19,900	9,600

Purpose Drill and complete well

Description

Drilling Drill and complete a horizontal test. Drill to 450', set water string casing. Drill to 1900', set surface casing. Drill to 8830' (KOP). Drill curve at 12°/100' initial build rate to +/- 75 degrees and set casing at +/- 9455' MD. Finish curve at +/- 4°/100' to +/- 9340' TVD and drill a +/- 9180' 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	$2,586,000		$2,586,000
Completion Costs		$6,225,840	$6,225,840
Total Intangible Cost	$2,586,000	$6,225,840	$8,811,840

Tangible	Dry Hole	After Casing Point	Completed Well Cost
Well Equipment	$376,000	$569,000	$945,000
Lease Equipment		$203,500	$203,500
Total Tangible Cost	$376,000	$772,500	$1,148,500

Total Well Cost	$2,962,000	$6,998,340	$9,960,340

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. 4/23/2019

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 7H

AFE # 26621007

Description	BCP - Drilling Codes	BCP - Drilling Amount	ACP - Drilling Codes	ACP - Drilling Amount	Completion Codes	Completion Amount	Production Equip Codes	Production Equip Amount	Post Completion Codes	Post Completion Amount	Total Cost
Roads & Location	DIDC.100	95,000			STIM.100	10,000	CON.100	5,500	PCOM.100	28,000	138,500
Damages	DIDC.105	6,000					CON.105	1,500			7,500
Mud/Fluids Disposal	DIDC.255	160,000			STIM.255	62,000			PCOM.255	75,000	297,000
Day Rate	DIDC.115	494,000	DICC.120	104,000							598,000
Misc Preparation	DIDC.120	35,000									35,000
SCs	DIDC.125	75,000	DICC.125	0	STIM.125	0			PCOM.125	0	75,000
Fuel	DIDC.130	90,000	DICC.130	0					PCOM.130	0	90,000
Water for Drilling Rig (Not Frac Water)	DIDC.140	5,000	DICC.135	0	STIM.135	24,000			PCOM.135	0	29,000
Mud & Additives	DIDC.145	198,000									198,000
Surface Rentals	DIDC.150	112,000	DICC.140	0	STIM.140	237,000	CON.140	2,500	PCOM.140	30,900	382,400
Downhole Rentals	DIDC.155	142,000			STIM.145	0			PCOM.145	0	142,000
Flowback Labor					STIM.141	0			PCOM.141	13,440	13,440
Automation Labor							CON.150	16,500	PCOM.150	0	16,500
Formation Evaluation (DST, Coring, etc.)	DIDC.160	0			STIM.150	0					0
Mud Logging	DIDC.170	22,000									22,000
Open Hole Logging	DIDC.180	0									0
Cementing & Float Equipment	DIDC.185	145,000	DICC.155	63,000							208,000
Tubular Inspections	DIDC.190	50,000	DICC.160	5,000	STIM.160	4,000			PCOM.160	0	59,000
Casing Crews	DIDC.195	20,000	DICC.165	13,000	STIM.165	0					33,000
Mechanical Labor	DIDC.200	20,000	DICC.170	10,000	STIM.170	0	CON.170	72,500	PCOM.170	0	102,500
Trucking/Transportation	DIDC.205	25,000	DICC.175	8,000	STIM.175	4,000	CON.175	8,500	PCOM.175	0	45,500
Supervision	DIDC.210	96,000	DICC.180	16,000	STIM.180	94,000	CON.180	3,500	PCOM.180	0	209,500
Trailer House/Camp/Catering	DIDC.230	42,000	DICC.253	6,000	STIM.280	34,000					82,000
Other Misc Expenses	DIDC.220	5,000	DICC.190	0	STIM.190	155,000	CON.190	13,500	PCOM.190	0	173,500
Overhead	DIDC.225	10,000	DICC.195	5,000							15,000
Remedial Cementing	DIDC.231	0			STIM.215	0			PCOM.215	0	0
MOB/DEMOB	DIDC.240	100,000									100,000
Directional Drilling Services	DIDC.245	339,000									339,000
Solids Control	DIDC.250	80,000									80,000
Well Control Equip (Snubbing Services)	DIDC.266	80,000	DICC.240	5,000	STIM.240	109,000			PCOM.240	0	194,000
Fishing & Sidetrack Services	DIDC.270	0	DICC.245	0	STIM.245	0			PCOM.245	0	0
Completion Rig					STIM.115	21,000			PCOM.115	0	21,000
Coil Tubing Services					STIM.260	368,000			PCOM.260	0	368,000
Completion Logging/Perforating/Wireline					STIM.200	432,000			PCOM.200	0	432,000
Composite Plugs					STIM.390	96,000			PCOM.390	0	96,000
Stimulation Pumping/Chemicals/Additives/Sand					STIM.210	2,926,000			PCOM.210	0	2,926,000
Stimulation Water/Water Transfer/Water Storage					STIM.395	702,000					702,000
Cimarex Owned Frac/Rental Equipment					STIM.305	40,000			PCOM.305	0	40,000
Legal/Regulatory/Curative	DIDC.300	10,000					CON.300	0			10,000
Well Control Insurance	DIDC.265	7,000									7,000
Major Construction Overhead							CON.305	12,000			12,000
Real Time Operations Center	DIDC.560	0			STIM.560	0					0
FL/GL - Labor							CON.580	65,500			65,500
FL/GL - Supervision							CON.505	5,000			5,000
Survey							CON.515	0			0
SWD/Other - Labor							CON.600	0			0
SWD/OTHER - SUPERVISION							CON.605	0			0
Contingency	DIDC.405	129,000	DICC.220	12,000	STIM.220	266,000	CON.220	31,000	PCOM.220	0	432,000
Contingency							CON.221	10,000			10,000
PBA Costs	DIDC.285	0	DICC.275	0							0
Total Intangible Cost		2,586,000		247,000		5,584,000		247,500		147,340	8,811,840
Drive Pipe	DWEB.150	0									0
Conductor Pipe	DWEB.130	0									0
Water String	DWEB.135	16,000									16,000
Surface Casing	DWEB.140	48,000									48,000
Intermediate Casing 1	DWEB.145	292,000									292,000
Intermediate Casing 2	DWEB.155	0									0
Drilling Liner	DWEB.180	0									0
Production Casing or Liner			DWEA.100	148,000							148,000
Production Tie-Back			DWEA.165	0	STIMT.101	0					0
Tubing					STIMT.105	71,000			PCOMT.305	0	71,000
Wellhead, Tree, Chokes	DWEB.115	20,000	DWEA.120	25,000	STIMT.120	60,000			PCOMT.520	0	105,000
Liner Hanger, Isolation Packer	DWEB.100	0	DWEA.125	98,000							98,000
Packer, Nipples					STIMT.400	28,000			PCOMT.400	0	28,000
Pumping Unit, Engine					STIMT.405	0			PCOMT.405	0	0
Downhole Lift Equipment					STIMT.410	80,000			PCOMT.410	0	80,000
Surface Equipment									PCOMT.420	59,000	59,000
Well Automation Materials									PCOMT.455	0	0
Total Tangible - Well Equipment Cost		376,000		271,000		298,000				59,000	945,000
NAC Lease Equipment							CONT.420	48,000			48,000
Tanks, Tanks Steps, Stairs							CONT.405	0			0
Battery Equipment							CONT.410	60,500			60,500
Secondary Containments							CONT.415	9,500			9,500
Overhead Power Distribution							CONT.420	0			0
Facility Electrical							CONT.425	15,000			15,000
Telecommunication Equipment							CONT.426	0			0
Meters and Metering Equipment							CONT.445	15,500			15,500
Facility Line Pipe							CONT.450	10,000			10,000
Lease Automation Materials							CONT.455	19,000			19,000
FL/GL - Materials							CONT.550	10,000			10,000
FL/GL - Line Pipe							CONT.555	16,000			16,000
SWD/Other - Materials							CONT.650	0			0
SWD/OTHER - LINE PIPE							CONT.655	0			0
Total Tangible - Lease Equipment Cost								203,500			203,500
Total Estimated Cost		2,962,000		518,000		5,823,000		451,000		206,340	9,368,340

CIMAREX Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 7H

AFE # 26621007

Description	BCP - Drilling Codes		Amount	ACP - Drilling Codes		Amount	Comp/Stim Codes		Amount
Roads & Location	DIDC.160		95,000				STIM.100		10,000
Damages	DIDC.165		6,000						
Mud/Fluids Disposal	DIDC.255		160,000				STIM.255		62,000
Day Rate	DIDC.115	18 days at $26,000/day	494,000	DICC.120	4 days at $26,000/day	104,000			
Misc Preparation	DIDC.120		35,000						
Rig	DIDC.125		75,000	DICC.125		0	STIM.125		0
Fuel	DIDC.135	1,500 gal/day at $3.00/gal	90,000	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		198,000						
Surface Rentals	DIDC.150	Per Day (BCP)/day	112,000	DICC.140		0	STIM.140		237,000
Downhole Rentals	DIDC.155		142,000				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	14 days at $1,200/day	22,000						
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		96,000	DICC.180		16,000	STIM.180		94,000
Trailer House/Camp/Catering	DIDC.220		42,000	DICC.255		6,000	STIM.220		34,000
Other Misc Expenses	DIDC.230		5,000	DICC.190		0	STIM.190		155,000
Overhead	DIDC.225		10,000	DICC.195		5,000			
Remedial Cementing	DIDC.231		0				STIM.215		0
MOB/DEMOB	DIDC.240		100,000						
Directional Drilling Services	DIDC.245		339,000						
Solids Control	DIDC.260		80,000						
Well Control Equip (Snubbing Services)	DIDC.265		80,000	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.200		432,000
Composite Plugs							STIM.390		96,000
Stimulation							STIM.210		2,926,000
Stimulation Water/Water Transfer/Water							STIM.395		702,000
Cimarex Owned Frac/Rental Equipment							STIM.385		40,000
Legal/Regulatory/Curative	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/GL - Labor									
FL/GL - Supervision									
Survey									
SWD/Other - Labor									
SWD/OTHER - SUPERVISION									
Contingency	DIDC.435	500 % of Drilling Intangibles	123,000	DICC.220		12,000	STIM.220		266,000
Contingency									
PZA Costs	DIDC.285		0	DICC.275		0			
Total Intangible Cost			2,556,000			247,000			5,584,000
Drive Pipe	DWEB.150		0						
Conductor Pipe	DWEB.130		0						
Water String	DWEB.135		16,000						
Surface Casing	DWEB.140	9 5/8" - 1,900ft at $25.00/ft	48,000						
Intermediate Casing 1	DWEB.145	7" - 9,550ft at $28.00/ft	292,000						
Intermediate Casing 2	DWEB.155		0						
Drilling Liner	DWEB.160		0						
Production Casing or Liner				DWEA.100	4 1/2" - 11,350ft at $13.00/ft	148,000			
Production Tie-Back				DWEA.165		0	STIMT.101		0
Tubing							STIMT.105	3-1/2" - 7,930ft at $9.00/ft	71,000
Wellhead, Tree, Chokes	DWEB.115		23,000	DWEA.120		25,000	STIMT.120		60,000
Liner Hanger, Isolation Packer	DWEB.100		0	DWEA.125		98,000			
Packer, Nipples							STIMT.400		28,000
Pumping Unit, Engine							STIMT.405		0
Downhole Lift Equipment							STIMT.410		80,000
Surface Equipment									
Well Automation Materials									
Total Tangible - Well Equipment Cost			379,000			271,000			239,000
H/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/GL - Materials									
FL/GL - Line Pipe									
SWD/Other - Materials									
SWD/OTHER - LINE PIPE									
Total Tangible - Lease Equipment Cost									
Total Estimated Cost			[redacted]			$518,000			$5,823,000

CIMAREX

Authorization For Expenditure - HAYDUKE 34-3 FEDERAL COM 7H

AFE # 26621007

Description	Production Equip Codes	Amount	Post Completion Codes		Amount	Total Cost
Permits & Location	CON.100	5,500	PCOM.100	Pad/Road Clean Up	28,000	138,500
Damages	CON.105	1,500				7,500
Mud/Fluids Disposal			PCOM.255	3,000 BWPD for 30 days @ $0.25/bbl	75,000	297,000
Day Rate						598,000
Misc Preparation						35,000
Rig			PCOM.125		0	75,000
Fuel			PCOM.130		0	90,000
Water for Drilling Rig (Not Frac Water)			PCOM.135		0	29,000
Mud & Additives						198,000
Surface Rentals	CON.140	2,500	PCOM.140	$1,030/d for Production Target of 30 Days	30,900	382,400
Downhole Rentals			PCOM.145		0	142,000
Flowback Labor			PCOM.141	$960/d for Production Target of 14 Day	13,440	13,440
Automation Labor	CON.150	16,500	PCOM.150		0	16,500
Formation Evaluation (DST, Coring, etc.)						0
Mud Logging						22,000
Open Hole Logging						0
Cementing & Float Equipment						208,000
Tubular Inspections			PCOM.160		0	59,000
Casing Crews						33,000
Mechanical Labor	CON.170	72,500	PCOM.170		0	102,500
Trucking/Transportation	CON.175	8,500	PCOM.175		0	45,500
Supervision	CON.180	3,500	PCOM.180		0	209,500
Trailer House/Camp/Catering						82,000
Other Misc Expenses	CON.190	13,500	PCOM.190		0	173,500
Overhead						15,000
Remedial Cementing			PCOM.215		0	0
MOB/DEMOB						100,000
Directional Drilling Services						339,000
Solids Control						80,000
Well Control Equip (Snubbing Services)			PCOM.240		0	194,000
Fishing & Sidetrack 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.300		0	432,000
Composite Plugs			PCOM.310		0	96,000
Stimulation Pumping/Chemicals/Additives/Sand			PCOM.210		0	2,826,000
Stimulation Water/Water Transfer/Water						702,000
Cimarex Owned Frac/Rental Equipment:			PCOM.305		0	40,000
Legal/Regulatory/Corrative	CON.300	0				10,000
Well Control Insurance						7,000
Major Construction Overhead	CON.305	12,000				12,000
Real Time Operations Center						0
FL/GL - Labor	CON.500	65,500				65,500
FL/GL - Supervision	CON.505	5,000				5,000
Survey	CON.515	0				0
SWD/Other - Labor	CON.600	0				0
SWD/OTHER - SUPERVISION	CON.605	0				0
Contingency	CON.220	31,000	PCOM.220		0	432,000
Contingency	CON.221	10,000				10,000
P&A Costs						0
Total Intangible Cost		[illegible]			147,340	8,811,840
Drive Pipe						0
Conductor Pipe						0
Water String						16,000
Surface Casing						48,000
Intermediate Casing 1						292,000
Intermediate Casing 2						0
Drilling Liner						0
Production Casing or Liner						148,000
Production Tie-Back						0
Tubing			PCOMT.105		0	71,000
Wellhead, Tree, Choke			PCOMT.120		0	105,000
Liner Hanger, Isolation Packer						98,000
Packer, Nipples			PCOMT.420		0	28,000
Pumping Unit, Engine			PCOMT.405		0	0
Downhole Lift Equipment			PCOMT.410		0	80,000
Surface Equipment			PCOMT.420	XEC Owned Sand Separator	59,000	59,000
Well Automation Materials			PCOMT.435		0	0
Total Tangible - Well Equipment Cost					59,000	945,000
H/C Lease Equipment	CONT.400	48,000				48,000
Tanks, Tanks Steps, Stairs	CONT.405	0				0
Battery Equipment	CONT.410	60,500				60,500
Secondary Containments	CONT.415	9,500				9,500
Overhead Power Distribution	CONT.420	0				0
Facility Electrical	CONT.425	15,000				15,000
Telecommunication Equipment	CONT.429	0				0
Meters and Metering Equipment	CONT.445	15,500				15,500
Facility Line Pipe	CONT.450	10,000				10,000
Lease Automation Materials	CONT.455	19,000				19,000
FL/GL - Materials	CONT.550	10,000				10,000
FL/GL - Line Pipe	CONT.555	16,000				16,000
SWD/Other - Materials	CONT.650	0				0
SWD/OTHER - LINE PIPE	CONT.655	0				0
Total Tangible - Lease Equipment Cost		203,500				203,500
Total Estimated Cost		451,880			206,340	9,960,340

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. 20590

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 petroleum geologist and my credentials were accepted as a matter of record by the Division.

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. This case includes a Wolfcamp proposed horizontal spacing unit located in the W/2 of Section 34 and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico, which is the focus of my study area. This proposed spacing unit is dedicated to the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H** wells.

4. As part of my study, I have prepared the following geological exhibits with respect to the horizontal spacing units for this case that are attached to my affidavit and described below:

EXHIBIT B

a. **Exhibit B.1** is a Deep Structure Map on the top of the Wolfcamp formation This map identifies the sections to be developed with a red shaded rectangle. It also shows that the structure dips to the east-northeast.

b. **Exhibit B.2** is a Winerack Diagram that includes the Wolfcamp formation. This diagram identifies the Wolfcamp formation in purple, and the proposed wells with green circles labeled by well number. It also shows that the wells will be 330' from the proposed unit boundaries and orthodox.

c. **Exhibit B.3** is a Cross-Section Locator Map outlining the Wolfcamp horizontal spacing unit being pooled that is the subject of this application; and referencing the location of Stratigraphic Cross Section A-A'. It identifies a line of cross-section, running from A to A', as well as the cross-section well names.

d. **Exhibit B.4** is a Gross Interval Isopach Map of the Upper Wolfcamp (Top Wolfcamp to Wolfcamp A2.) It shows that the formation is relatively uniform across the proposed well unit. It also shows the location of cross-section A-A'.

e. **Exhibit B.5** is a Stratigraphic Cross Section hung on the top of the Wolfcamp Fm. The well logs on the cross-section give a representative sample of the Upper Wolfcamp formation in the area. The target zones for the wells are the Wolfcamp Y Sand and Wolfcamp A Shale, and those zones are consistent across the unit. The planned well-paths for these wells are indicated by two blue dashed lines, and the letters 'LZ'.

f. **Exhibit B.6** is a Cross-Section Locator Map outlining the Wolfcamp horizontal spacing unit being pooled that is the subject of this application; and referencing the location of Stratigraphic Cross Section B-B'. It identifies a line of cross-section, running from B to B', as well as the cross-section well names.

g. **Exhibit B.7** is a Gross Interval Isopach Map of the Lower Wolfcamp (Top Wolfcamp C to Wolfcamp D5.) It shows that the formation is relatively uniform across the proposed well unit. It also shows the location of cross-section B-B'.

h. **Exhibit B.8** is a Stratigraphic Cross Section hung on the top of the Wolfcamp 'C'. The well logs on the cross-section give a representative sample of the Lower Wolfcamp formation in the area. The target zones for the wells are the Wolfcamp 'C' Shale and Wolfcamp 'D' Shale, and those zones are consistent across the unit. The planned well-paths for these wells are indicated by two sets of blue dashed lines, and the letters 'LZ' .

5. Based upon my study as illustrated in these exhibits, my education and training, and my knowledge of the geology in this area, it is my expert opinion that:

a. The horizontal spacing unit in this case is justified from a geologic standpoint.

b. There are no structural impediments or faulting that will interfere with the proposed horizontal development.

c. Each quarter quarter section in the unit will contribute more or less equally to production.

6. The preferred well orientation in this area is either north to south or east to west. This is due to the fact that regional max horizontal stress orientation in this area runs approximately N45E.

7. The producing interval for each of the wells in this case will be orthodox and will comply with the Division's set back requirements.

8. Pursuant to Rule 1-011 NMRA (2019), I declare and affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements are true and correct.

[Signature Page to Follow]

Harrison Hastings

SUBSCRIBED AND SWORN to before me this 10th day of July 2019 by Harrison Hastings, on behalf of Cimarex Energy Co.

Notary Public

My commission expires: 4-29-2023

OFFICIAL SEAL
AMANDA BUSTAMANTE
NOTARY PUBLIC - STATE OF NEW MEXICO
My commission expires 4-29-2023

Hayduke 34-3 Fed 1H – 7H

Wolfcamp Fm. Geology Exhibits

Deep Structure Map

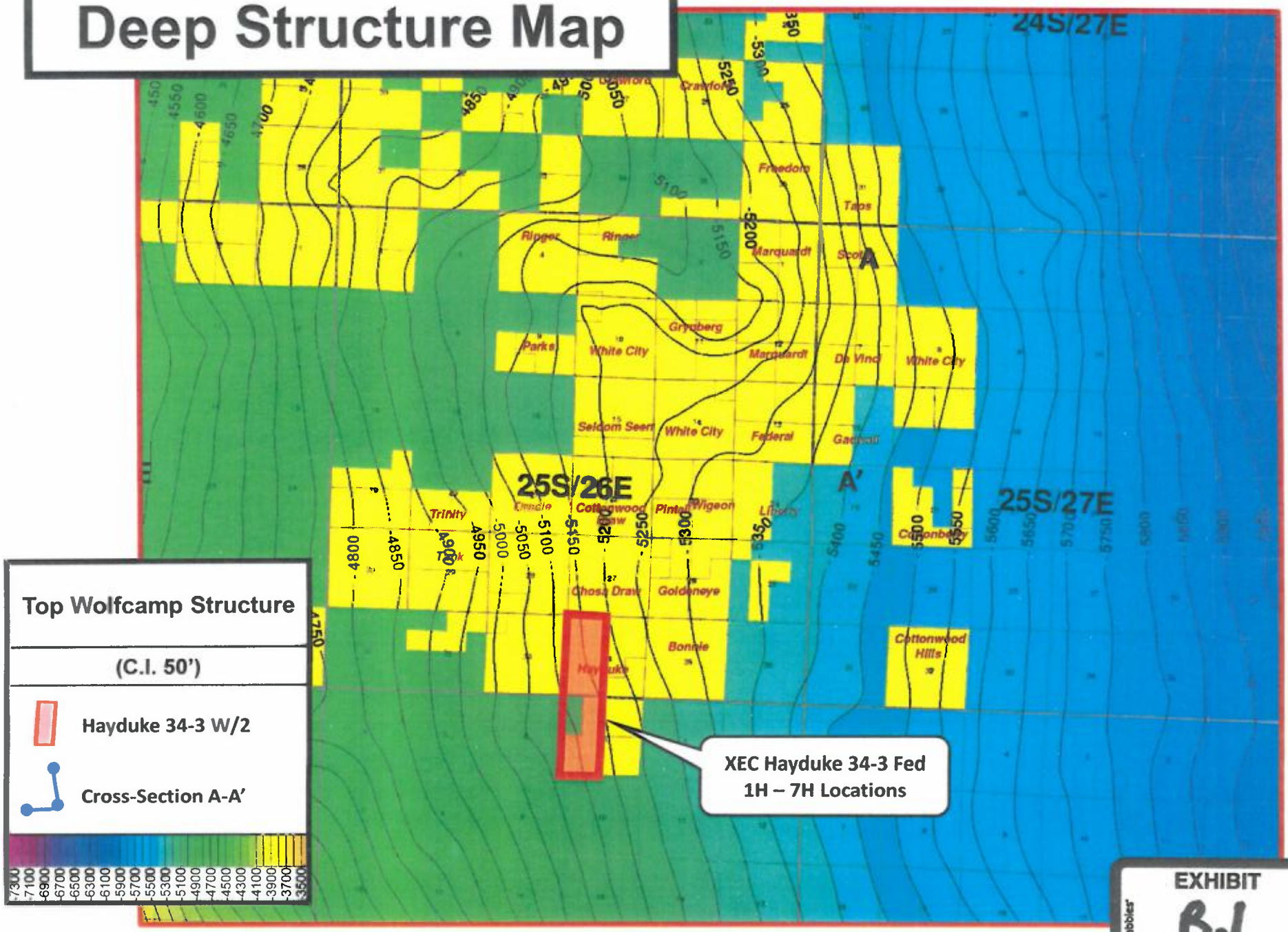
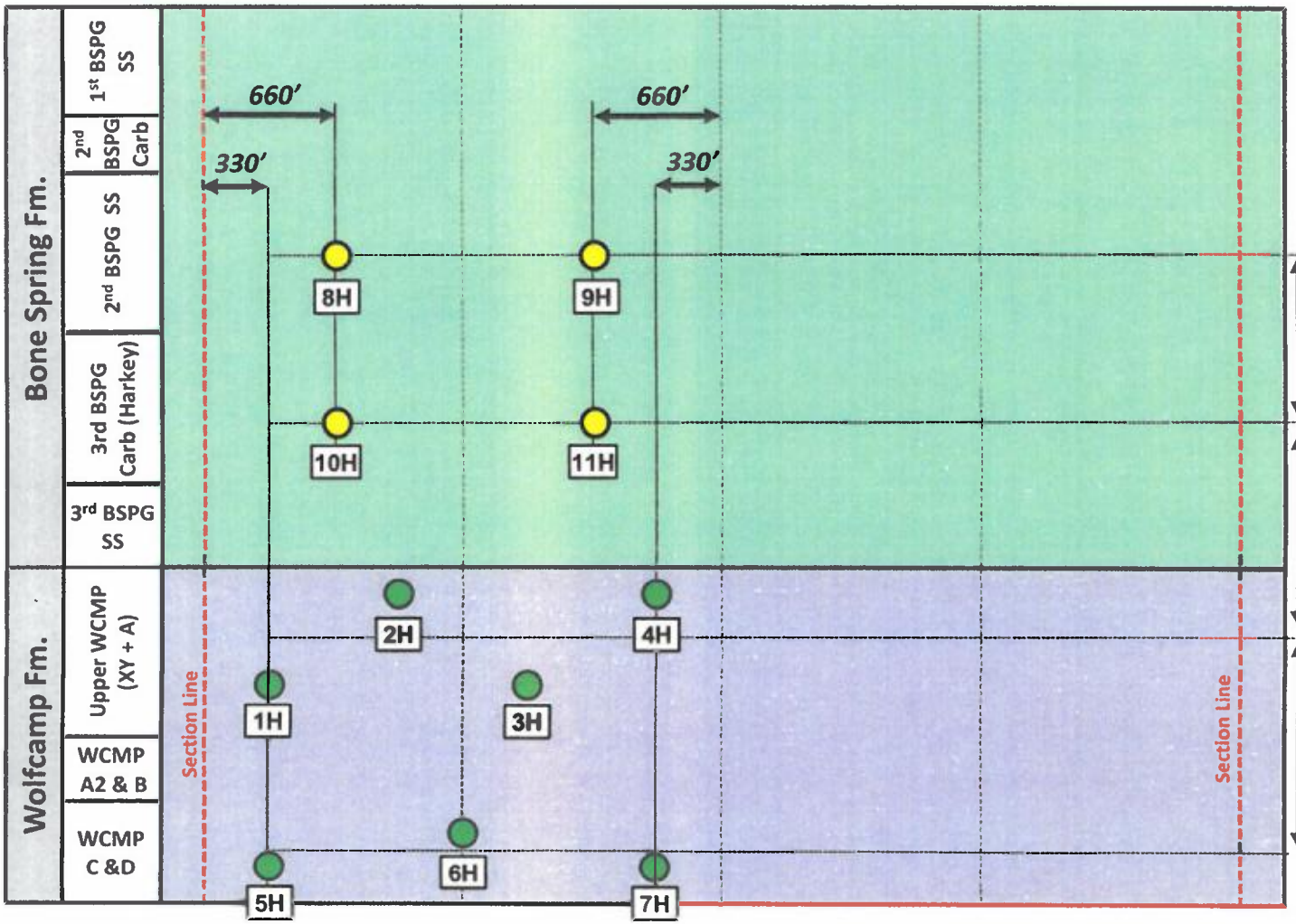


EXHIBIT
B.1

XEC Hayduke 34-3 Fed 1H – 11H Winerack

Sec 34 - T25S/R26E & Sec 3 - T26S/26E
Eddy Co., NM



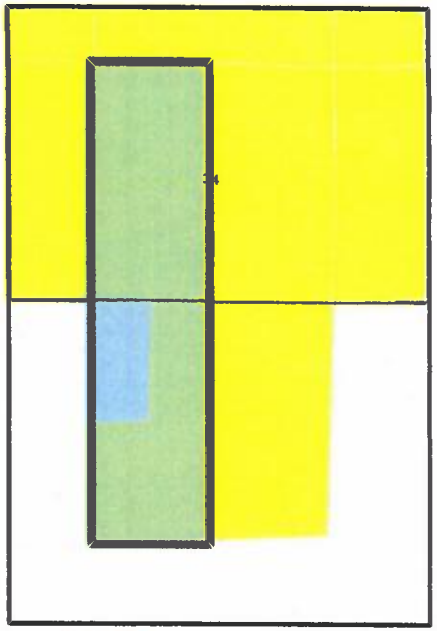


EXHIBIT
tabbies
B.2

Upper Wolfcamp (1H-4H)

Cross-Section Locator Map

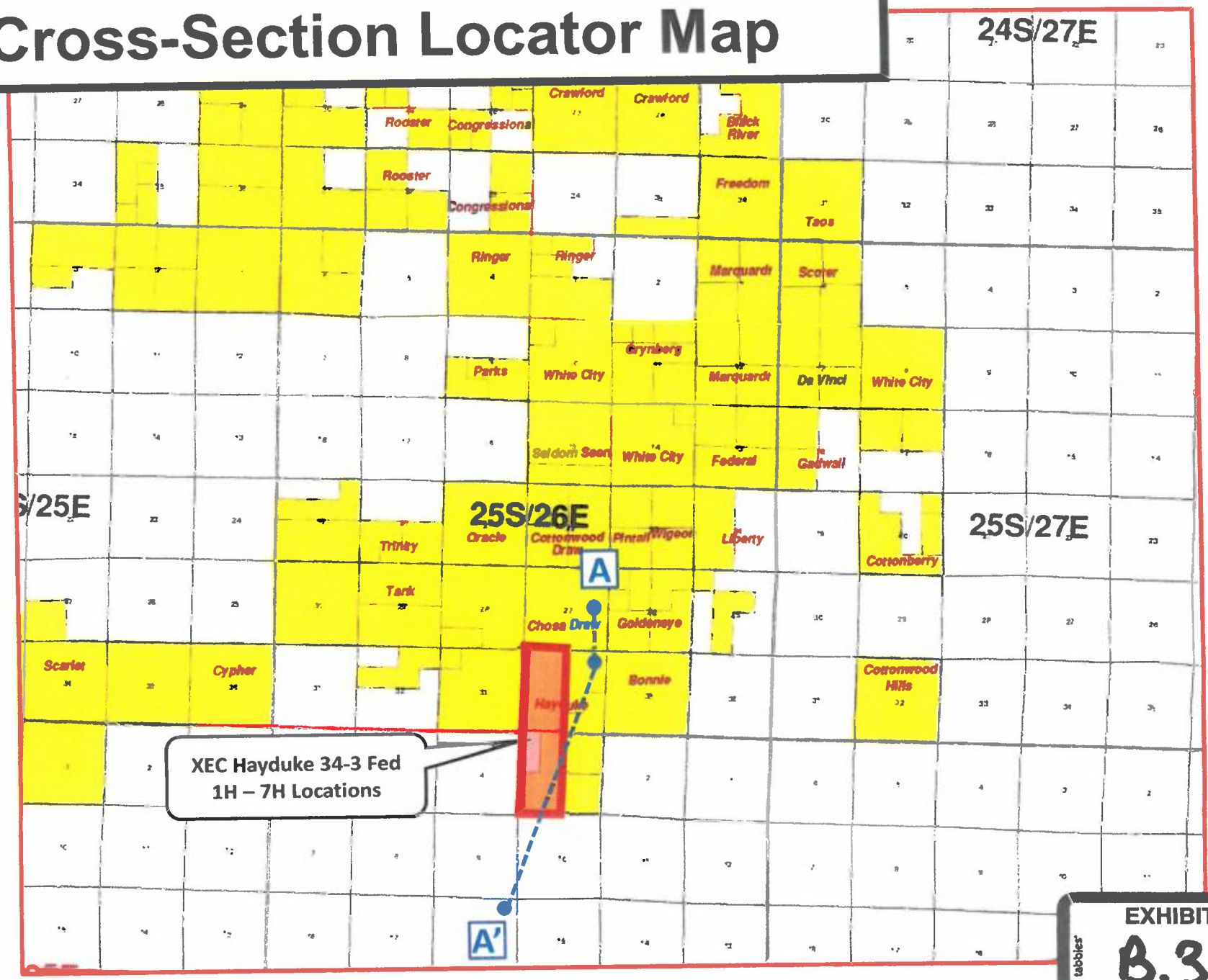


EXHIBIT
B.3

Upper Wolfcamp Isopach Map

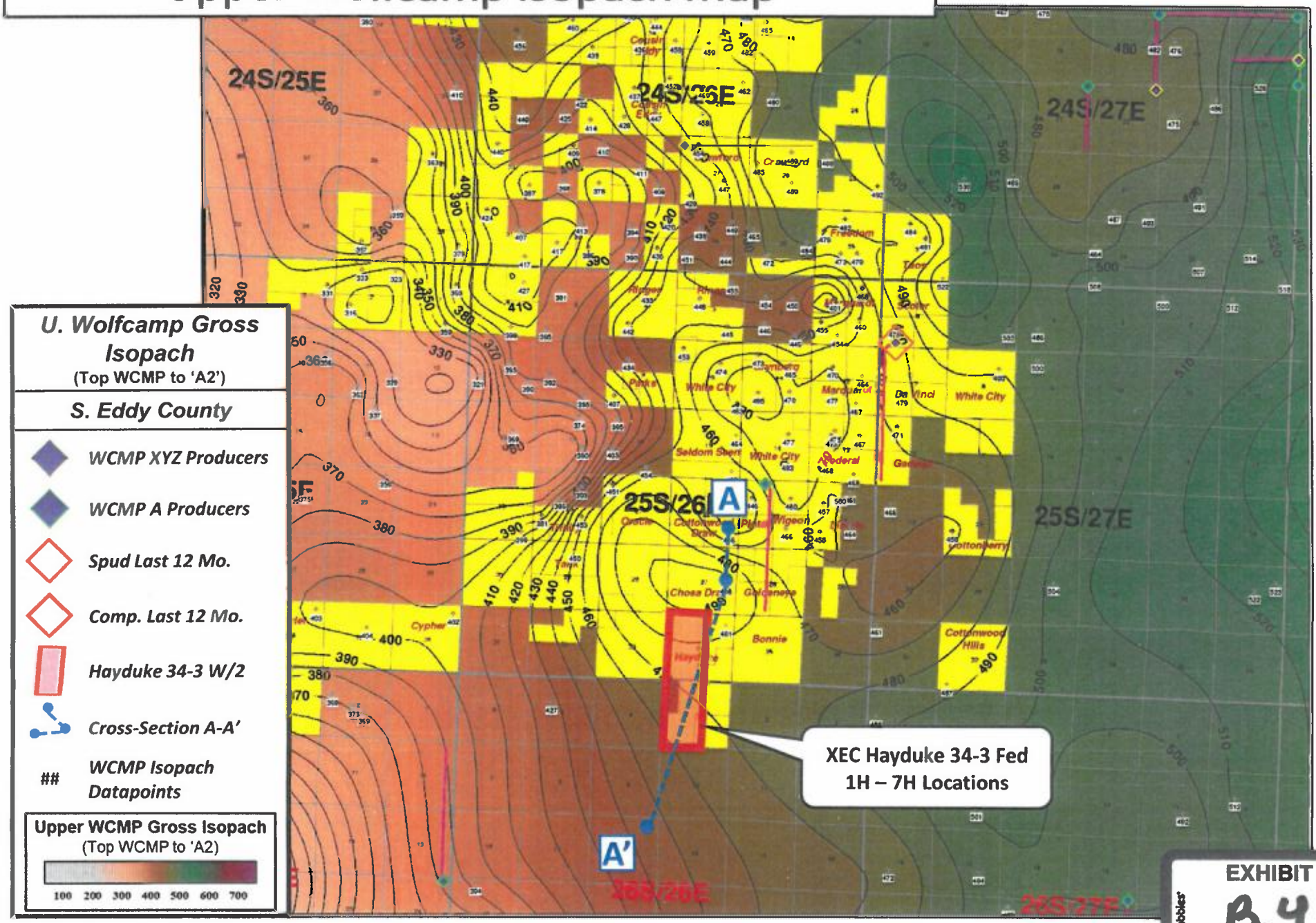


EXHIBIT
B.4

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

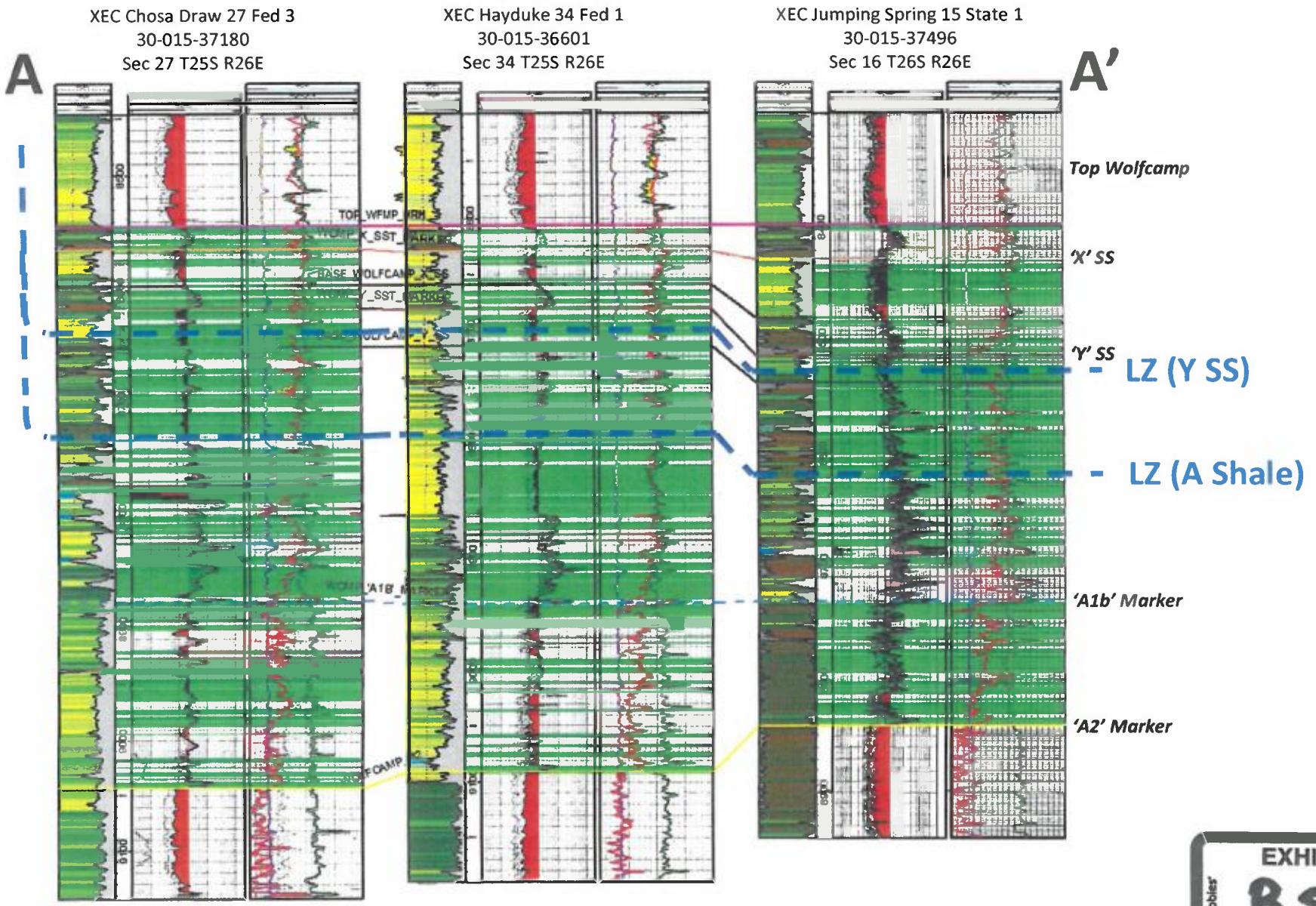


EXHIBIT
tabbies
B.5

Lower Wolfcamp (5H-7H)

Cross-Section Locator Map

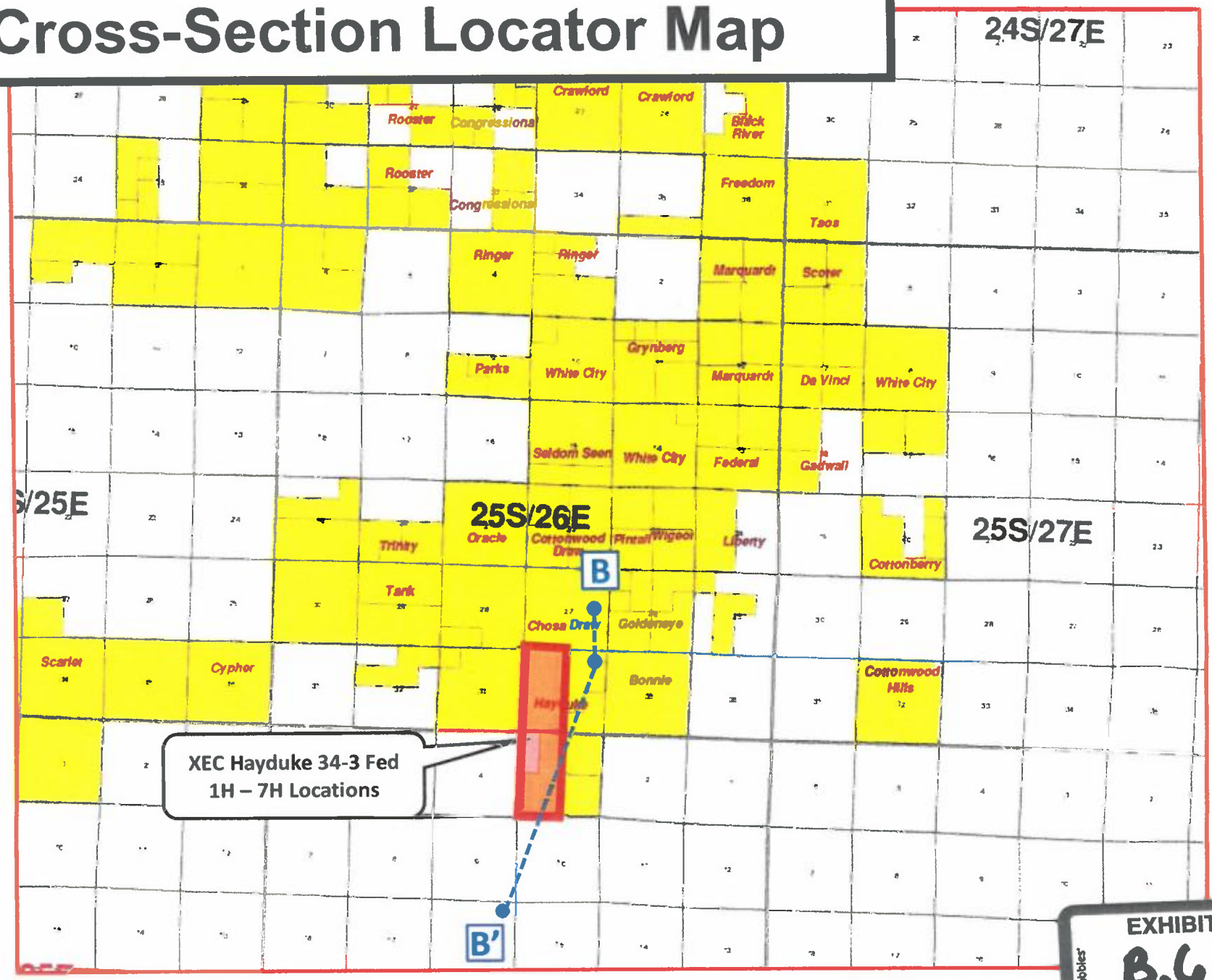


EXHIBIT
B.6

Lower Wolfcamp Isopach Map

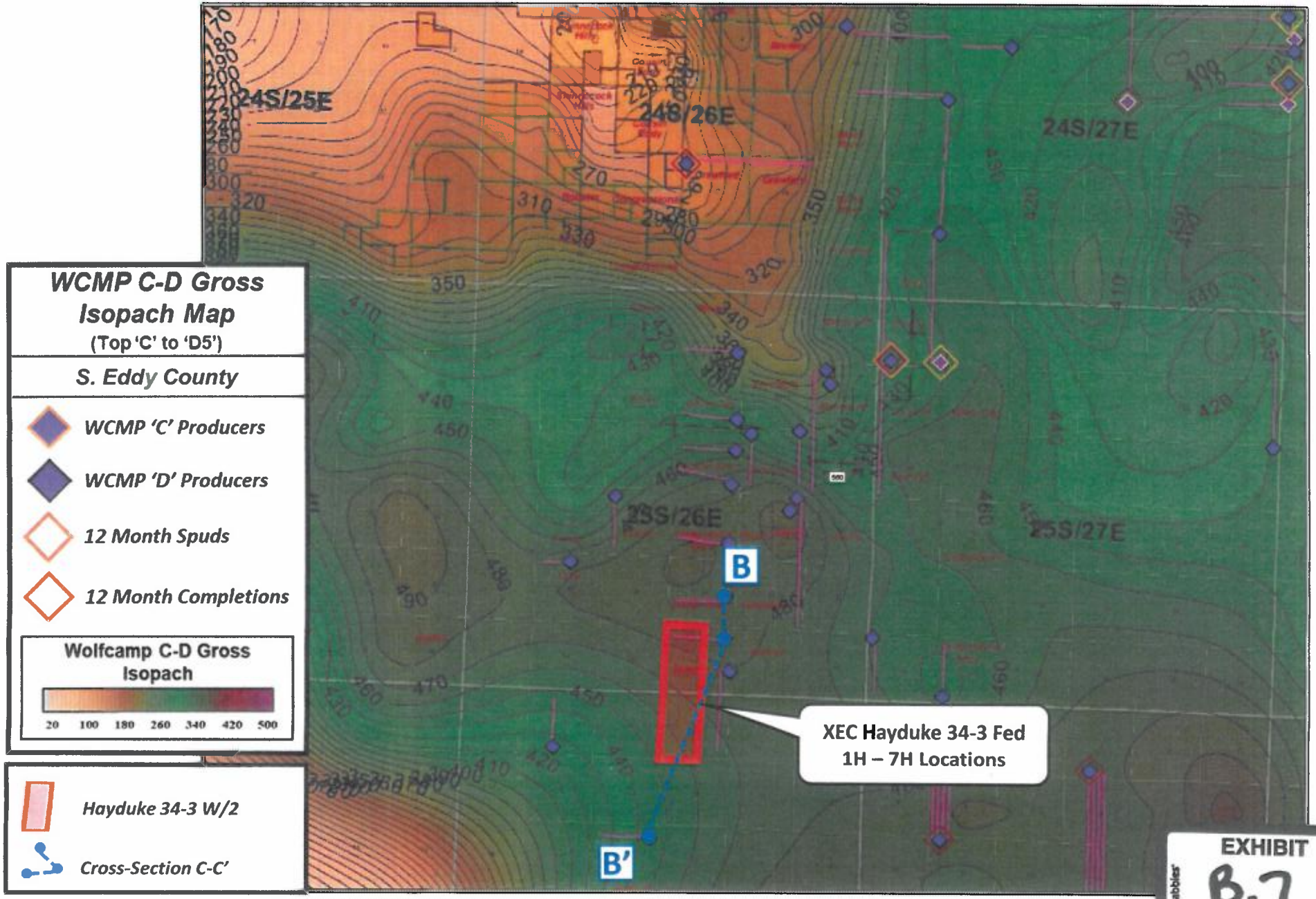


EXHIBIT
B.7

Lower Wolfcamp N-S Cross-Section B-B'

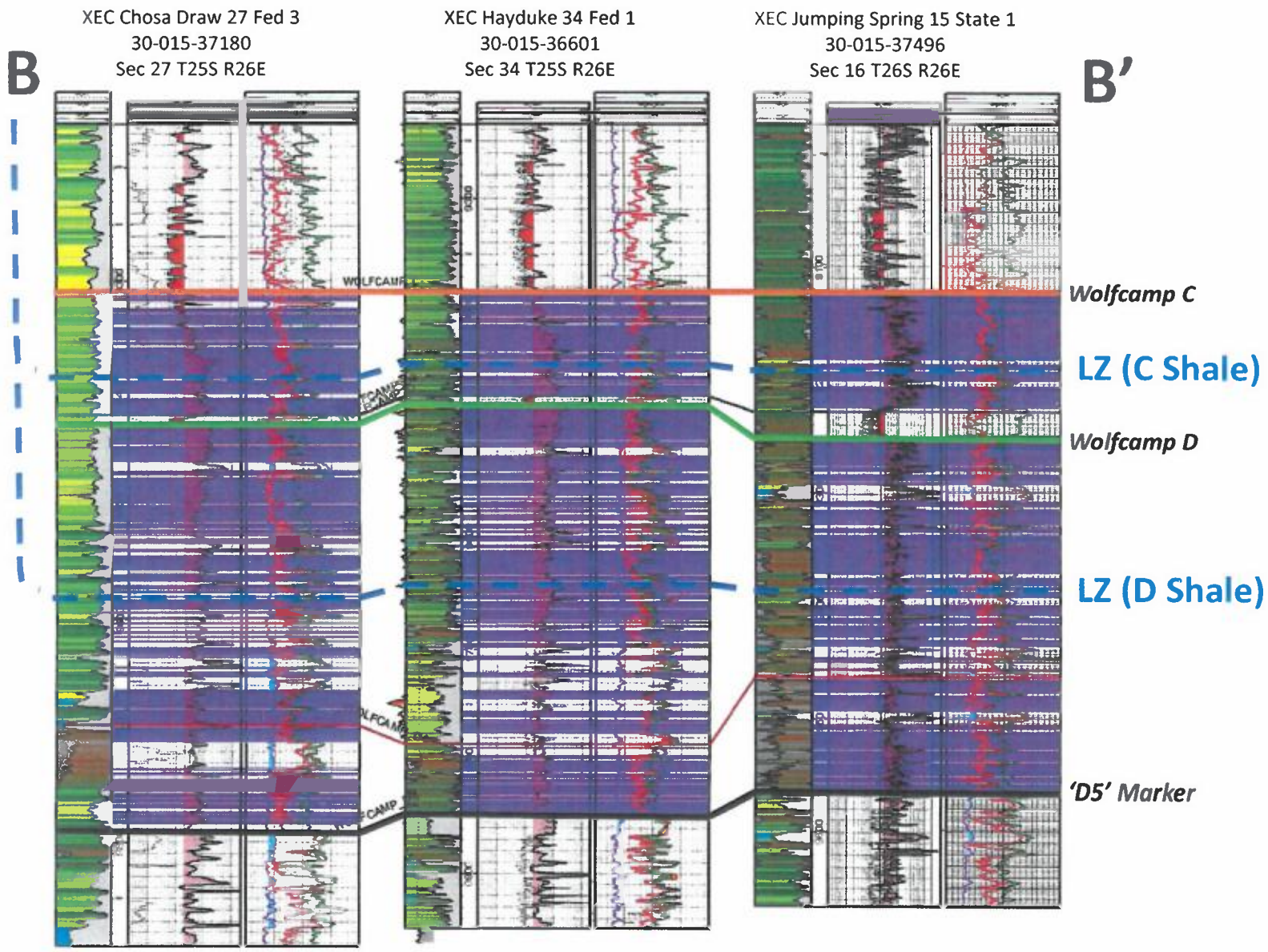


EXHIBIT
B.9

Hayduke 34-3 Fed 1H – 7H

Wolfcamp Fm. Geology Exhibits

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. 20590

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 Application was provided under the notice letters, and that proof of mailing, receipts of mailings, and publication are attached hereto. After notice of the application was mailed to all previously identified interest holders, an additional potential overriding royalty interest holder was discovered and notice was mailed to his last known address on July 8, 2019. 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, and provide notice to each at their last known address.

Lance D. Hough

SUBSCRIBED AND SWORN to before me this 10 day of July 2019 by Lance D. Hough.

SEAL

OFFICIAL SEAL
Zina Crum
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 12-07-2019

Notary Public
My commission expires: 12-07-2019

EXHIBIT
tabbies
C

14-74
8H-
NO. 20590
NO 20591

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

PS Form 3877

Type of Mailing: CERTIFIED MAIL
06/21/2019

Firm Mailing Book ID: 169626

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0060 5098 20	Irwin E Vinnik & Reva Sandra Vinnik 5062 E Princeton Ave Englewood CO 80110	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
2	9314 8699 0430 0060 5098 37	Celeste C Grynberg 5000 S Quebec St., Ste 500 Denver CO 80237	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
3	9314 8699 0430 0060 5098 44	Robert N. Enfield, Trustee Robert N. Enfield Trust c/o Wells Fargo Bank PO Box 41779 Austin TX 78704	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
4	9314 8699 0430 0060 5098 51	Engfield-Coffield Family Revocable Trust PO Box 8028 Santa Fe NM 87504	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
5	9314 8699 0430 0060 5098 68	Howard A Rubin, Inc 623 ½ Camino Rancheros Santa Fe NM 87505	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
6	9314 8699 0430 0060 5098 75	Jerune Allen 245 Nicklaus Drive SE Rio Rancho NM 87124	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
7	9314 8699 0430 0060 5098 82	Legacy Reserves Operating LP PO Box 10848 Midland TX 79702	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
8	9314 8699 0430 0060 5098 99	Chevron U.S.A. 6301 Deauville Blvd Midland TX 79706	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
9	9314 8699 0430 0060 5099 05	Mountain Lion Oil & Gas LLC 7941 Katy freeway #117 Houston TX 77024	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
10	9314 8699 0430 0060 5099 12	EOG Resources, Inc. P.O. Box 4362 Houston TX 77210	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
11	9314 8699 0430 0060 5099 29	Bryan Bell Family LLC c/o Frank Robert Janusa PO Box 24591 New Orleans LA 70184	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
12	9314 8699 0430 0060 5099 36	Rubie Crosby Bell Family LLC c/o Frank Robert Janusa PO Box 24591 New Orleans LA 70184	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
13	9314 8699 0430 0060 5099 43	The Estate of Jerune Allen John A Budagher Pers Rep 3500 Comanche Rd NE Bldg B Albuquerque NM 87107	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
14	9314 8699 0430 0060 5099 50	DMA, Inc 9 Ambleside Drive Bellcair FL 33756	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice

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

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Type of Mailing: CERTIFIED MAIL
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Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
15	9314 8699 0430 0060 5099 67	Charmar, LLC c/o Vikki H Smith 4815 Vista Del Oso Ct NE Albuquerque NM 87109	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
16	9314 8699 0430 0060 5099 74	Lisa M. Enfield, Trustee of Lisa M. Enfield Trust 405 Camino Manzano Santa Fe NM 87505	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
17	9314 8699 0430 0060 5099 81	MLE, LLC PO Box 1683 Santa Fe NM 87504	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
18	9314 8699 0430 0060 5099 98	Richard C. Deason 1301 N Havenhurst #217 West Hollywood CA 90046	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
19	9314 8699 0430 0060 5100 00	Ronald H. Mayer, Trustee of Ronald and Martha Mayer PO Box 2391 Roswell NM 88202	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
20	9314 8699 0430 0060 5100 17	SAP, LLC 4901 Whitney Lane Roswell NM 88203	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
21	9314 8699 0430 0060 5100 24	Barbara Carol Deason 2233 Rock Bridge Ct Yukon OK 73099	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
22	9314 8699 0430 0060 5100 31	Thomas D. Deason 3407 Essex Ave Lubbock TX 79407	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
23	9314 8699 0430 0060 5100 48	Oxy Y-1 Company 5 Greenway Plaza Houston TX 77046	$1.30	$3.50	$1.60	$0.00	82762-0128 Notice
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Modrall Sperling
500 4th Street NW
Suite 1000
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL
06/21/2019

Firm Mailing Book ID: 169665

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Hayduke

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

PS Form 3877

Type of Mailing: CERTIFIED MAIL
07/08/2019

Firm Mailing Book ID: 170393

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0060 9434 26	Jack J. Greenburg 1050 17th Street. Suite 1950 Denver CO 80265	$1.30	$3.50	$1.60	$0.00	82762-0183 Hayduke
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					Grand Total:	$6.40	

List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
1			

JUL - 7 2019

Transaction Details

Recipient:

Sender:

Transaction created by:
User ID:
Firm Mailing Book ID:
Batch ID:

USPS Article Number:	
Return Receipt Article Number:	
Service Options:	Return Receipt - Electronic Certified Mail
Mail Service:	Certified
Reference #:	82762-0183 Hayduke
Postage:	$1.30
Fees:	$5.10
Status:	Mailed
Custom Field 1:	82762-0183 Hayduke
Custom Field 2:	82762-0183 Hayduke
Custom Field 3:	82762-0183 Hayduke

Transaction History

Event Description	Event Date	Details
		[WALZ] - Firm Mailing Book 170393 generated by zinacrum
		[USPS] - PRESHIPMENT INFO SENT USPS AWAITS ITEM at TEMECULA CA
		[USPS] - PROCESSED THROUGH USPS FACILITY at ALBUQUERQUE,NM
		[USPS] - DEPART USPS FACILITY at ALBUQUERQUE,NM

USPS Tracking®

FAQs > (https://www.usps.com/faqs/uspstracking-faqs.htm)

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Tracking Number: 9314869904300060943426 Remove X

Your package is moving within the USPS network and is on track to be delivered to its final destination. It is currently in transit to the next facility.

In-Transit

July 9, 2019
In Transit to Next Facility

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Return Receipt Electronic ∨

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Go to our FAQs section to find answers to your tracking questions.

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001289788

MODRALL SPERLING ROEHL HARRIS & SISK
500 4TH ST NW STE 1000

ALBUQUERQUE NM 87102

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:

06/27/19

Legal Clerk

Subscribed and sworn before me this
27th of June 2019.

State of WI, County of Brown
NOTARY PUBLIC

9-14-21

My Commission Expires

CASE NO. 20590: Notice to all affected parties, as well as the heirs and devisees of, IRWIN E VINNIK AND REVEN SANDA VINNIK; CELESTEC GRYNBERG;ROBERTN. ENFIELD TRUSTEE ROBERT N. ENFIELD TRUST; ENGFIELD-COFFIELD FAMILY REVOCABL TRUST;HOWARD A. RUBIN, INC.; JERUNEALLEN; LEGACY RESERVES OPERATING LP; CHEVRONU.S.A.;MOUNTAIN LION OIL & GAS LLC;EOGRESOURCESINC.;BRYANBELLFAMILY LLC;RUBIECROSBYBELLFAMILY LLC;THE ESTATE OF JERUNE ALLEN; DMA, INC; CHARMAR,LLC;LISA M. ENFIELD,TRUSTEEOF LISA M. ENFIELDTRUST;MLE, LLC; RICHARD C. DEASON;RONALDH. MAYER, TRUSTEEOF RONALD MARTHA MAYER; SAP, LLC; BARBARA CAROL DEASON;THOMAS D. DEASON OXY Y-1 COMPANY; and MACONDO FUND IV, LLC, of Cimarex Energy Co.'s application for approval of 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 July 11, 2019.** 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 Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Hayduke 34-3 Federal Com 1H, 2H, 3H, 4H, 5H, 6H, and 7H** 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 8.5 miles southeast of Whites City, New Mexico. *June 27, 2019*

VICKY FELTY
NOTARY PUBLIC
STATE OF WISCONSIN

Ad#:0001289788
P O : CASE NO. 20590
# of Affidavits :0.00

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001289789

MODRALL SPERLING ROEHL HARRIS & SISK
500 4TH ST NW STE 1000

ALBUQUERQUE NM 87102

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:

06/27/19

Legal Clerk

Subscribed and sworn before me this
27th of June 2019.

State of WI, County of Brown
NOTARY PUBLIC

9-19-21
My Commission Expires

VICKY FELTY
NOTARY PUBLIC
STATE OF WISCONSIN

Ad#:0001289789
P O : CASE NO. 20591
# of Affidavits :0.00

CASE NO. 20591: Notice to all affected parties, as well as the heirs and devisees of, IRWIN E VINNIK AND REVEN SANDA VINNIK; CELESTEC GRYNBERG;ROBERTN. ENFIELD TRUSTEE ROBERT N. ENFIELD TRUST; ENGFIELD-COFFIELD FAMILY REVOCABL TRUST;HOWARD A. RUBIN, INC.; JERUNEALLEN; LEGACY RESERVES OPERATING LP; CHEVRONU.S.A.;MOUNTAIN LION OIL & GAS LLC;EOGRESOURCESINC.; BRYANBELLFAMILYLLC;RUBIECROSBYBELLFAMILY LLC;THE ESTATE OF JERUNE ALLEN; DMA, INC; CHARMAR,LLC;LISAM. ENFIELD,TRUSTEEOF LISA M. ENFIELDTRUST;MLE, LLC; RICHARD C. DEASON;RONALDH. MAYER, TRUSTEEOF RONALD MARTHA MAYER; SAP, LLC; BARBARA CAROL DEASON;THOMAS D. DEASON OXY Y-1 COMPANY;and MACONDO FUND IV, LLC, of Cimarex Energy Co.'s application for approval of 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 July11,2019.** Applicant seeks an order from the Division: (1) to the extent necessary, approving the creation of a 640-acre, more or less, Bone Spring horizontal spacing unit; and, (2) pooling all uncommitted mineral interests within a Bone Spring horizontal spacing unit underlying the W/2 of Section 34, Township 25 South, Range 26 East, and W/2 of Section 3, Township 26 South, Range 26 East, NMPM, Eddy County, New Mexico. This spacing unit will be dedicated to the **Hayduke 34-3 Federal Com 8H, 9H, 10H, and 11H** 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 8.5 miles southeast of Whites City, New Mexico.

June 27, 2019