Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

[333385]

2. Name of Operator

[215099]

9. API Well No. **30-025-51264**

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory **[50460]**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NGMP REC 03/29/2023

KZ
04/03/2023

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/21/2023

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-51264	50460	Quail Ridge; Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
333385	MESCALERO RIDGE 21-28 FED COM	3H

[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3761.0'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	21	19S	34E		484	NORTH	2160	EAST	LEA

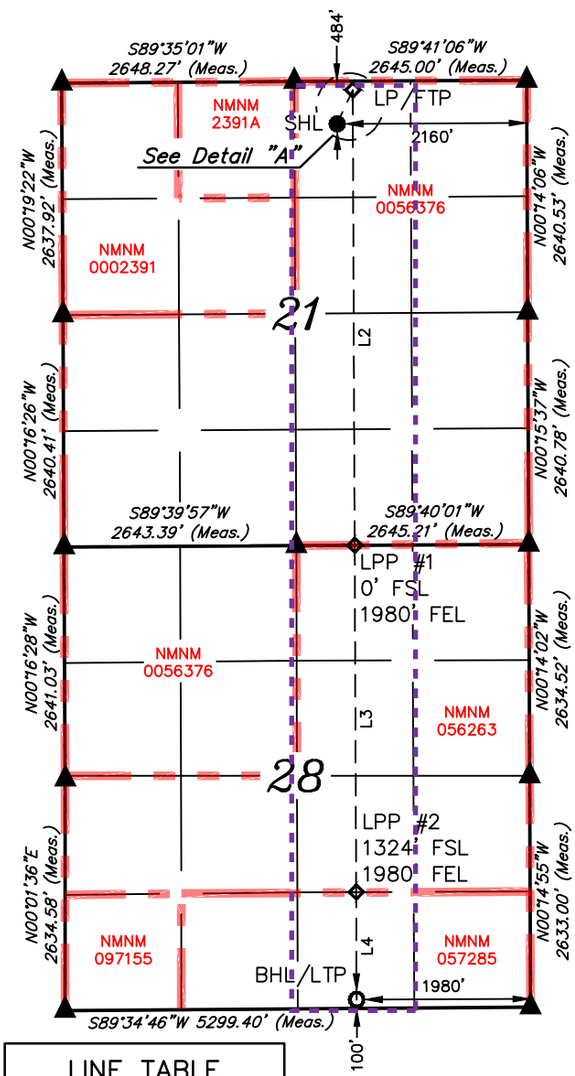
[11] Bottom Hole Location If Different From Surface

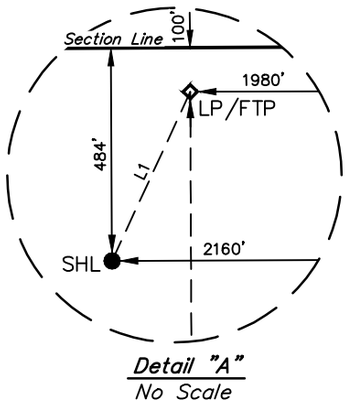
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	28	19S	34E		100	SOUTH	1980	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]





Detail "A"
No Scale

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S24°49'21"W	424.26'
L2	S00°14'40"E	5181.92'
L3	S00°14'40"E	3946.78'
L4	S00°14'40"E	1223.76'

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

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

2000' 1000' 0' 2000'
SCALE

NAD 83 (SURFACE LOCATION)
LATITUDE = 32°39'06.01" (32.651670°)
LONGITUDE = 103°33'49.28" (103.563689°)
NAD 27 (SURFACE LOCATION)
LATITUDE = 32°39'05.57" (32.651547°)
LONGITUDE = 103°33'47.50" (103.563195°)
STATE PLANE NAD 83 (N.M. EAST)
N: 601666.88' E: 778218.20'
STATE PLANE NAD 27 (N.M. EAST)
N: 601603.41' E: 737038.07'

NAD 83 (LP/FTP)
LATITUDE = 32°39'09.82" (32.652727°)
LONGITUDE = 103°33'47.18" (103.563107°)
NAD 27 (LP/FTP)
LATITUDE = 32°39'09.37" (32.652603°)
LONGITUDE = 103°33'45.41" (103.562613°)
STATE PLANE NAD 83 (N.M. EAST)
N: 602052.62' E: 778394.65'
STATE PLANE NAD 27 (N.M. EAST)
N: 601989.14' E: 737214.52'

NAD 83 (LPP #1)
LATITUDE = 32°38'18.55" (32.638486°)
LONGITUDE = 103°33'47.11" (103.563086°)
NAD 27 (LPP #1)
LATITUDE = 32°38'18.11" (32.638363°)
LONGITUDE = 103°33'45.33" (103.562593°)
STATE PLANE NAD 83 (N.M. EAST)
N: 596871.76' E: 778438.71'
STATE PLANE NAD 27 (N.M. EAST)
N: 596808.45' E: 737258.44'

NAD 83 (LPP #2)
LATITUDE = 32°37'39.50" (32.627640°)
LONGITUDE = 103°33'47.05" (103.563070°)
NAD 27 (LPP #2)
LATITUDE = 32°37'39.06" (32.627517°)
LONGITUDE = 103°33'45.28" (103.562577°)
STATE PLANE NAD 83 (N.M. EAST)
N: 592925.80' E: 778472.26'
STATE PLANE NAD 27 (N.M. EAST)
N: 592862.60' E: 737291.88'

NAD 83 (BHL/LTP)
LATITUDE = 32°37'27.40" (32.624277°)
LONGITUDE = 103°33'47.03" (103.563065°)
NAD 27 (BHL/LTP)
LATITUDE = 32°37'26.95" (32.624154°)
LONGITUDE = 103°33'45.26" (103.562572°)
STATE PLANE NAD 83 (N.M. EAST)
N: 591702.28' E: 778482.66'
STATE PLANE NAD 27 (N.M. EAST)
N: 591639.13' E: 737302.24'

DRAWN BY: C.C. 07-12-21
REV: 2 09-19-22 T.J.S. (ADD LPP POINTS)

[17] OPERATOR CERTIFICATION

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

Kanicia Schlichting 11/3/2022
Signature Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@coterra.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

June 03, 2017
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
09-19-22
PROFESSIONAL SURVEYOR

Certificate Number:

Intent ☐ As Drilled ☐

API # 30-025-51264		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 3/29/23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Mescalero Ridge 21-28 Federal Com 3H		B, Sec 21 T19S, R34E	484 FNL/2160 FEL	1314	1039	3044
	30-025-51264					

IV. Central Delivery Point Name: _Mescalero Ridge 21-28 CDP_ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Mescalero Ridge 21-28 Federal Com 3H		9/1/24	10/1/24	1/13/25	1/22/25	1/22/25
	30-025-51264					

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Sarah Jordan
Printed Name:	Sarah Jordan
Title:	Regulatory Analyst
E-mail Address:	sarah.jordan@coterra.com
Date:	3/29/23
Phone:	432/620-1909

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

From State of New Mexico, Natural Gas Management Plan

VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.

XEC Standard Response

Standard facility gas process flow begins at the inlet separator. These vessels are designed based off of forecasted rates and residence times in accordance with, and often greater than, API 12J. The separated gas is then routed to an additional separation vessel (ie sales scrubber) in order to extract liquids that may have carried over or developed due to the decrease in pressure. The sales scrubber is sized based on API 521. From the sales scrubber, the gas leaves the facility and enters the gas midstream gathering network.

Cimarex
VII. Operational Practices

Cimarex values the sustainable development of New Mexico's natural resources. Venting and flaring of natural gas is a source of waste in the industry, and Cimarex will ensure that its values are aligned with those of NMOCD. As such, Cimarex plans to take pointed steps to ensure compliance with Subsection A through F of 19.15.27.8 NMAC.

Specifically, below are the steps Cimarex will plan to follow under routine well commissioning and operations.

1. Capture or combust natural gas during drilling operations where technically feasible, using the best industry practices and control technologies.
    a. All flares during these operations will be a minimum of 100ft away from the nearest surface-hole location.
2. All gas present during post-completion drill-out and flow back will be routed through separation equipment, and, if technically feasible, flare unsellable vapors rather than vent. Lastly, formal sales separator commissioning to process well-stream fluids and send gas to a gas flow line/collection system or use the gas for on-site fuel or beneficial usage, gas as soon as is safe and technically feasible.
3. Cimarex will ensure the flare or combustion equipment is properly sized to handle expected flow rates, ensure this equipment is equipped with an automatic or continuous ignition source, and ensure this equipment is designed for proper combustion efficiency.
4. If Cimarex must flare because gas is not meeting pipeline specifications, Cimarex will limit flaring to <60 days, analyze gas composition at least twice per week, and route gas into a gathering pipeline as soon as pipeline specifications are met.
5. Under routine production operations, Cimarex will not flare/vent unless:
    a. Venting or flaring occurs due to an emergency or equipment malfunction.
    b. Venting or flaring occurs as a result of unloading practices, and an operator is onsite (or within 30 minutes of drive time and posts contact information at the wellsite) until the end of unloading practice.
    c. The venting or flaring occurs during automated plungerlift operations, in which case the Cimarex operator will work to optimize the plungerlift system to minimize venting/flaring.
    d. The venting or flaring occurs during downhole well maintenance, in which case Cimarex will work to minimize venting or flaring operations to the extent that it does not pose a risk to safe operations.
    e. The well is an exploratory well, the division has approved the well as an exploratory well, venting or flaring is limited to 12 months, as approved by the division, and venting/flaring does not cause Cimarex to breach its State-wide 98% gas capture requirement.
    f. Venting or flaring occurs because the stock tanks or other low-pressure vessels are being gauged, sampled, or liquids are being loaded out.
    g. The venting or flaring occurs because pressurized vessels are being maintained and are being blown-down or depressurized.
    h. Venting or flaring occurs as a result of normal dehydration unit operations.

i. Venting or flaring occurs as a result of bradenhead testing.
j. Venting or flaring occurs as a result of normal compressor operations, including general compressor operations, compressor engines and turbines.
k. Venting or flaring occurs as a result of a packer leakage test.
l. Venting or flaring occurs as a result of a production test lasting less than 24 hours unless otherwise approved by the division.
m. Venting or flaring occurs as a result of new equipment commissioning and is necessary to purge impurities from the pipeline or production equipment.

6. Cimarex will maintain its equipment in accordance with its Operations and Maintenance Program, to ensure venting or flaring events are minimized and that equipment is properly functioning.
7. Cimarex will install automatic tank gauging equipment on all production facilities constructed after May 25, 2021, to ensure minimal emissions from tank gauging practices.
8. By November 25, 2022, all Cimarex facilities equipped with flares or combustors will be equipped with continuous pilots or automatic igniters, and technology to ensure proper function, i.e. thermocouple, fire-eye, etc…
9. Cimarex will perform AVO (audio, visual, olfactory) facility inspections in accordance with NMOCD requirements. Specifically, Cimarex will:
    a. Perform weekly inspections during the first year of production, and so long as production is greater than 60 MCFD.
    b. If production is less than 60 MCFD, Cimarex will perform weekly AVO inspections when an operator is present on location, and inspections at least once per calendar month with at least 20 calendar days between inspections.
10. Cimarex will measure or estimate the volume of vented, flared or beneficially used natural gas, regardless of the reason or authorization for such venting or flaring.
11. On all facilities constructed after May 25, 2021, Cimarex will install metering where feasible and in accordance with available technology and best engineering practices, in an effort to measure how much gas could have been vented or flared.
    a. In areas where metering is not technically feasible, such as low-pressure/low volume venting or flaring applications, engineering estimates will be used such that the methodology could be independently verified.
12. Cimarex will fulfill the division's requirements for reporting and filing of venting or flaring that exceeds 50 MCF in volume or last eight hours or more cumulatively within any 24-hour period.

VIII. Best Management Practices to minimize venting during active and planned maintenance

Cimarex strives to ensure minimal venting occurs during active and planned maintenance activities. Below is a description of common maintenance practices, and the steps Cimarex takes to limit venting exposure.

- **Workovers:**
  - Always strive to kill well when performing downhole maintenance.
  - If vapors or trapped pressure is present and must be relieved then:
    - Initial blowdown to production facility:
      - Route vapors to LP flare if possible/applicable
    - Blowdown to portable gas buster tank:
      - Vent to existing or portable flare if applicable.

- **Stock tank servicing:**
  - Minimize time spent with thief hatches open.
  - When cleaning or servicing via manway, suck tank bottoms to ensure minimal volatiles exposed to atmosphere.
    - Connect vacuum truck to low pressure flare while cleaning bottoms to limit venting.
  - Isolate the vent lines and overflows on the tank being serviced from other tanks.

- **Pressure vessel/compressor servicing and associated blowdowns:**
  - Route to flare where possible.
  - Blow vessel down to minimum available pressure via pipeline, prior to venting vessel.
  - Preemptively changing anodes to reduce failures and extended corrosion related servicing.
  - When cleaning or servicing via manway, suck vessel bottoms to ensure minimal volatiles exposed to atmosphere.

- **Flare/combustor maintenance:**
  - Minimize downtime by coordinating with vendor and Cimarex staff travel logistics.
  - Utilizing preventative and predictive maintenance programs to replace high wear components before failure.
  - Because the flare/combustor is the primary equipment used to limit venting practices, ensure flare/combustor is properly maintained and fully operational at all times via routine maintenance, temperature telemetry, onsite visual inspections.

The Cimarex expectation is to limit all venting exposure. Equipment that may not be listed on this document is still expected to be maintained and associated venting during such maintenance minimized.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Cimarex**
LEASE NO.:	**NMNM056376**
LOCATION:	Section 21, T.19S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Mescalero Ridge 21-28 Fed Com 3H
SURFACE HOLE FOOTAGE:	484'/N & 2160'/E
BOTTOM HOLE FOOTAGE	100'/S & 1980'/E

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☑ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Artesia Group and Morrow** formations. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1880** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

Approval Date: 03/21/2023

hours or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept 1/3rd fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

- In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

- **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
  (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)

  - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

  - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

3. The minimum required fill of cement behind the **7** inch production casing is:
   - Cement should tie-back at least **200 feet** into the previous casing, whichever is greater. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, or capitan reef.

4. The minimum required fill of cement behind the Choose an item. inch production liner is:

- Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    a. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    b. Manufacturer representative shall install the test plug for the initial BOP test.
    c. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

Approval Date: 03/21/2023

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

Approval Date: 03/21/2023

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin

after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
ZS012523

Approval Date: 03/21/2023

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

03/29/2023

Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: AMITHY CRAWFORD **Signed on:** 08/25/2021

Title: Regulatory Analyst

Street Address: 600 N MARIENFELD STE 600

City: MIDLAND **State:** TX **Zip:** 79701

Phone: (432)620-1909

Email address: AMITHY.CRAWFORD@COTERRA.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data
03/29/2023

APD ID: 10400078657
Submission Date: 08/25/2021
Operator Name: CIMAREX ENERGY COMPANY
Well Name: MESCALERO RIDGE 21-28 FEDERAL COM
Well Number: 3H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
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Section 1 - General

APD ID: 10400078657
Tie to previous NOS? Y
Submission Date: 08/25/2021
BLM Office: Carlsbad
User: AMITHY CRAWFORD
Title: Regulatory Analyst
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM056376
Lease Acres:
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? Y
Permitting Agent? NO
APD Operator: CIMAREX ENERGY COMPANY
Operator letter of

Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY
Operator Address: 1700 LINCOLN STREET SUITE 1800
Zip: 80203
Operator PO Box:
Operator City: DENVER
State: CO
Operator Phone: (303)295-3995
Operator Internet Address: hknauls@cimarex.com

Section 2 - Well Information

Well in Master Development Plan? NO
Master Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: MESCALERO RIDGE 21-28 FEDERAL COM
Well Number: 3H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: [50460] QUAIL RIDGE; BONE SPRING
Pool Name: [50460] QUAIL RIDGE; BONE SPRING

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** Y **New surface disturbance?** N

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Mescalero Ridge 21 Fededral **Number:** W2E2

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 26 Miles **Distance to nearest well:** 80 FT **Distance to lease line:** 544 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: MESCALERO_RIDGE_21_FEDERAL_3H___C_102_20221110095039.pdf

Well work start Date: 11/30/2021 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	484	FNL	2160	FEL	19S	34E	21	Aliquot NWNE	32.65167	-103.563689	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 056376	3761	0	0	Y
KOP Leg #1	484	FNL	2160	FEL	19S	34E	21	Aliquot NWNE	32.65167	-103.563689	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 056376	-5920	9681	9681	Y
PPP Leg #1-1	100	FNL	1980	FEL	19S	34E	21	Aliquot NWNE	32.652727	-103.563107	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 056376	-6239	10019	10000	Y

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-2	0	FSL	1980	FEL	19S	34E	28	Aliquot NWNE	32.638486	-103.563086	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 56263	-6589	14800	10350	Y
PPP Leg #1-3	1324	FSL	1980	FEL	19S	34E	28	Aliquot SWSE	32.62764	-103.563037	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 57285	-6589	14800	10350	Y
EXIT Leg #1	100	FSL	1980	FEL	19S	34E	28	Aliquot SWSE	32.624277	-103.563065	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 57285	-6589	20059	10350	Y
BHL Leg #1	100	FSL	1980	FEL	19S	34E	28	Aliquot SWSE	32.624277	-103.563065	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 57285	-6589	20059	10350	Y

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
03/29/2023

APD ID: 10400078657
Submission Date: 08/25/2021
Operator Name: CIMAREX ENERGY COMPANY
Well Name: MESCALERO RIDGE 21-28 FEDERAL COM
Well Number: 3H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
6833654	RUSTLER	0	1630	1630	ANHYDRITE, SANDSTONE	USEABLE WATER	N
6833655	SALADO	-1700	1700	1700	ANHYDRITE	NONE	N
6833656	BASE OF SALT	-3260	3260	3260	ANHYDRITE	NONE	N
6833657	LAMAR	-4960	4960	4960	SANDSTONE	NONE	N
6901160	BELL CANYON	-5330	5330	5330	SANDSTONE	NONE	N
6901161	CHERRY CANYON	-5975	5975	5975	SANDSTONE	NONE	N
6833658	BRUSHY CANYON	-6505	6505	6505	SANDSTONE	NATURAL GAS, OIL	N
6833659	BONE SPRING	-8250	8250	8250	LIMESTONE	NATURAL GAS, OIL	N
6833660	BONE SPRING 1ST	-9480	9480	9480	SANDSTONE	NATURAL GAS, OIL	N
6833661	BONE SPRING 2ND	-10000	10000	10000	SANDSTONE	NATURAL GAS, OIL	N
6833662	BONE SPRING 3RD	-10570	10570	10570	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M
Rating Depth: 5460

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.
Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 2000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 2000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 2000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing strings utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_2M_Choke_20210825142422.pdf

BOP Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_2M_BOP_20210825142430.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 10550

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.
Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing strings utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_Choke_3M_20210825145124.pdf

BOP Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_BOP_3M_20210825145131.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Pressure Rating (PSI): 5M **Rating Depth:** 20059

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.
Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Slips will be utilized after running and cementing the production casing. After installation of the slips and wellhead on the production casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_5M_Choke_20210825151904.pdf

BOP Diagram Attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_5M_BOP_20210825151912.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1680	0	1680	3761	2081	1680	J-55	54.5	ST&C	1.55	3.77	BUOY	5.61	BUOY	5.61
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5460	0	5460	3761	-1699	5460	J-55	40	LT&C	1.39	1.35	BUOY	2.88	BUOY	2.88
3	PRODUCTION	8.75	7.0	NEW	API	N	0	8781	0	8781	3761	-5020	8781	L-80	29	LT&C	1.71	1.99	BUOY	1.96	BUOY	1.96

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
4	PRODUCTION	8.75	7.0	NEW	API	N	8781	10550	8781	10310	-5020	-6549	1769	L-80	29	LT&C	1.45	1.69	BUOY	13.24	BUOY	13.24
5	COMPLETION SYSTEM	6	4.5	NEW	API	N	8682	20059	8682	10350	-4921	-6589	11377	P-110	11.6	BUTT	1.56	2.21	BUOY	18.97	BUOY	18.97

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Mescalero_Ridge_21_28_Fed_Com_3H_Casing_Assumptions_20210825153329.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Mescalero_Ridge_21_28_Fed_Com_3H_Casing_Assumptions_20210825153412.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Casing Attachments

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Mescalero_Ridge_21_28_Fed_Com_3H_Casing_Assumptions_20210825153519.pdf

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Mescalero_Ridge_21_28_Fed_Com_3H_Casing_Assumptions_20210825153616.pdf

Casing ID: 5 **String** COMPLETION SYSTEM

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Mescalero_Ridge_21_28_Fed_Com_3H_Casing_Assumptions_20210825153732.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	0	0
SURFACE	Lead		0	1680	814	1.72	13.5	1400	45	Class C	Bentonite
SURFACE	Tail		0	1680	218	1.34	14.8	292	45	Class C	LCM
INTERMEDIATE	Lead		0	5460	1020	1.88	12.9	1917	51	35:65 (POZ C)	Salt Bentonite
INTERMEDIATE	Tail		0	5460	288	1.36	14.8	391	51	Class C	LCM
PRODUCTION	Lead		0	10550	286	3.45	10.5	986	25	NeoCem	N/A
PRODUCTION	Tail		0	10550	151	1.3	14.2	196	25	50:50 (POZ H)	Salt Bentonite Fluid Loss Dispersant SMS
COMPLETION SYSTEM	Lead		8682	20059	707	1.3	14.2	919	10	50:50 POZ H	Salt + Bentonite + Fluid Loss + Dispersant + SMS

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1680	OTHER : Fresh Water	7.83	8.33							
1680	5460	OTHER : Cut BRine or OBM	9.8	10.3							
5460	10550	OTHER : Cut brine or OBM	8.5	9							
10550	20059	OIL-BASED MUD	8.5	9							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

No DST Planned

List of open and cased hole logs run in the well:

GAMMA RAY LOG,DIRECTIONAL SURVEY,COMPENSATED NEUTRON LOG,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4843 **Anticipated Surface Pressure:** 2565

Anticipated Bottom Hole Temperature(F): 173

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Lost circulation may be encountered in the Delaware mountain group. Abnormal pressure as well as hole stability issues may be encountered in the Wolfcamp.

Contingency Plans geoharzards description:

Lost circulation material will be available, as well as additional drilling fluid along with the fluid volume in the drilling rig pit system. Drilling fluid can be mixed on location or mixed in vendor mud plant and trucked to location if needed. Sufficient barite will be available to maintain appropriate mud weight for the Wolfcamp interval.

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Mescalero_Ridge_21_28_Fed_Com_3H_H2S_Plan_20210825154448.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Mescalero_Ridge_21_Fed_Com_3H_Directional_20210825154509.pdf

Mescalero_Ridge_21_Fed_Com_3H_AC_Report_20210825154516.pdf

Other proposed operations facets description:

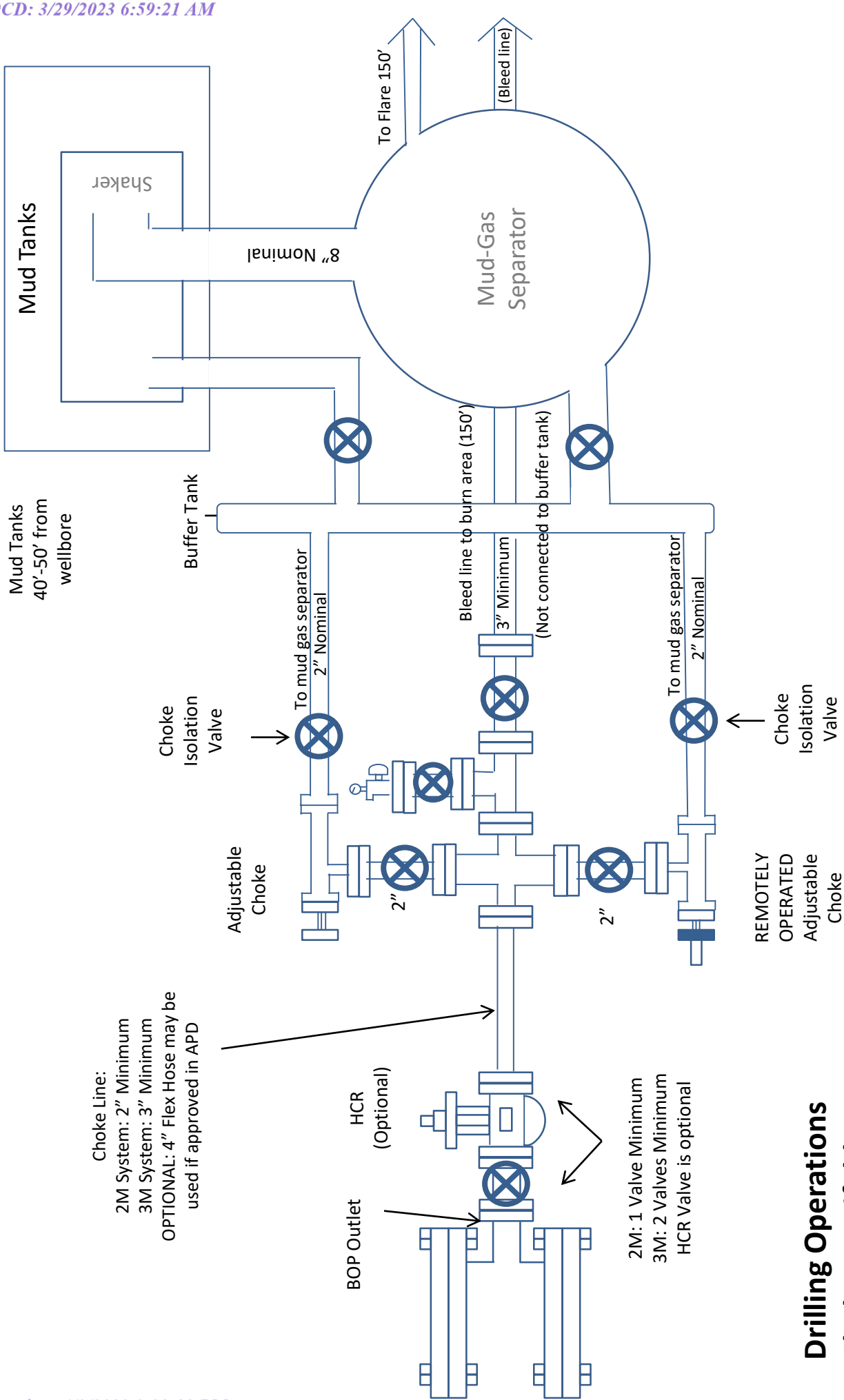
Other proposed operations facets attachment:

Mescalero_Ridge_21_28_Fed_Com_3H_Drilling_Plan_20210825160936.pdf

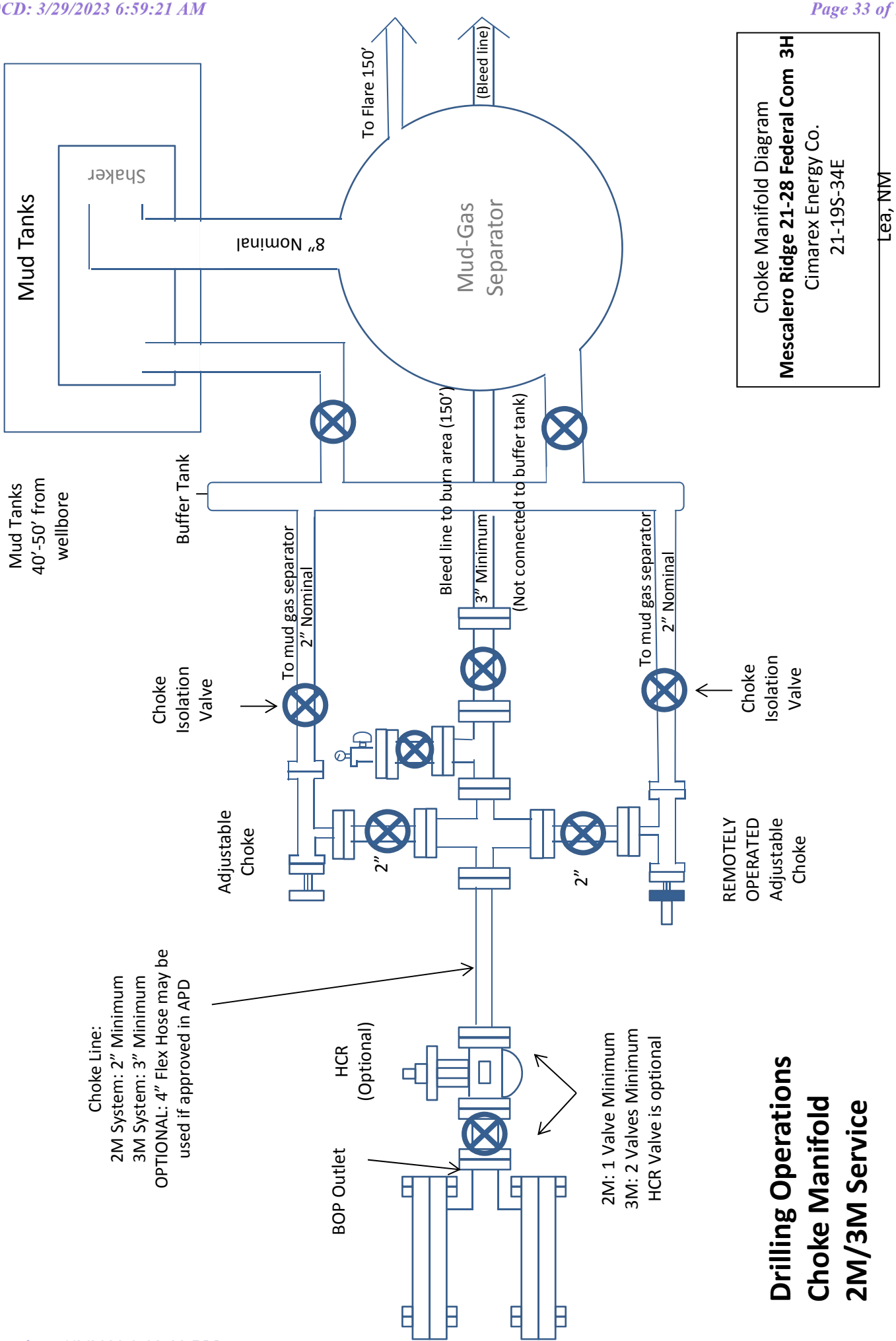
Other Variance attachment:

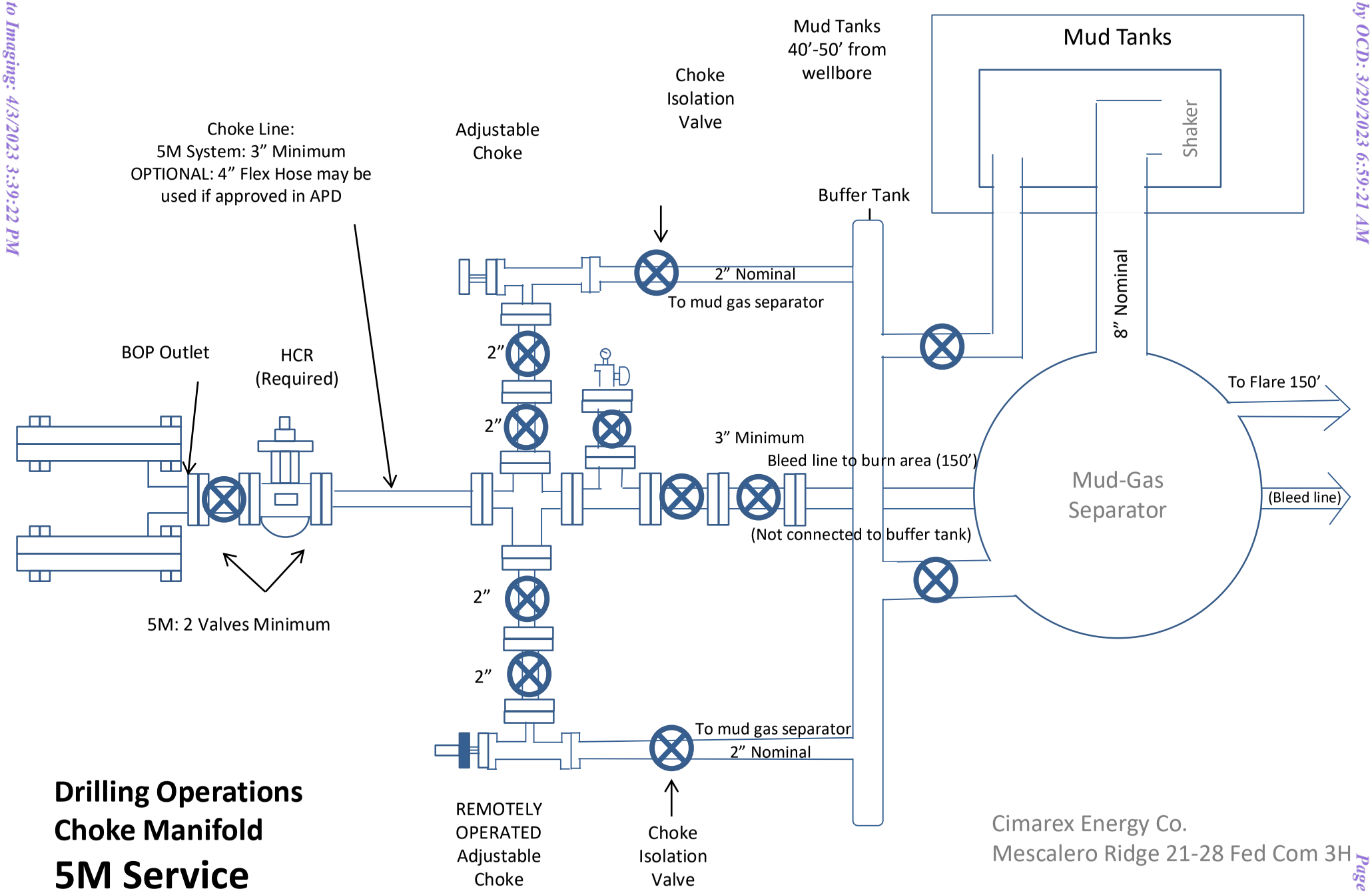
Mescalero_Ridge_21_28_Fed_Com_3H_Flex_Hose_20210825154543.pdf

Mescalero_Ridge_21_28_Fed_Com_3H_Multibowl_20210825154556.pdf



Drilling Operations
Choke Manifold
2M/3M Service


Mud Tanks
Shaker
8" Nominal
Mud-Gas Separator
To Flare 150'
(Bleed line)
Choke Manifold Diagram
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM
Mud Tanks 40'-50' from wellbore
Buffer Tank
Bleed line to burn area (150')
(Not connected to buffer tank)
3" Minimum
To mud gas separator
2" Nominal
Choke Isolation Valve
Adjustable Choke
REMOTELY OPERATED Adjustable Choke
2"
Choke Line:
2M System: 2" Minimum
3M System: 3" Minimum
OPTIONAL: 4" Flex Hose may be used if approved in APD
HCR (Optional)
BOP Outlet
2M: 1 Valve Minimum
3M: 2 Valves Minimum
HCR Valve is optional
Drilling Operations
Choke Manifold
2M/3M Service

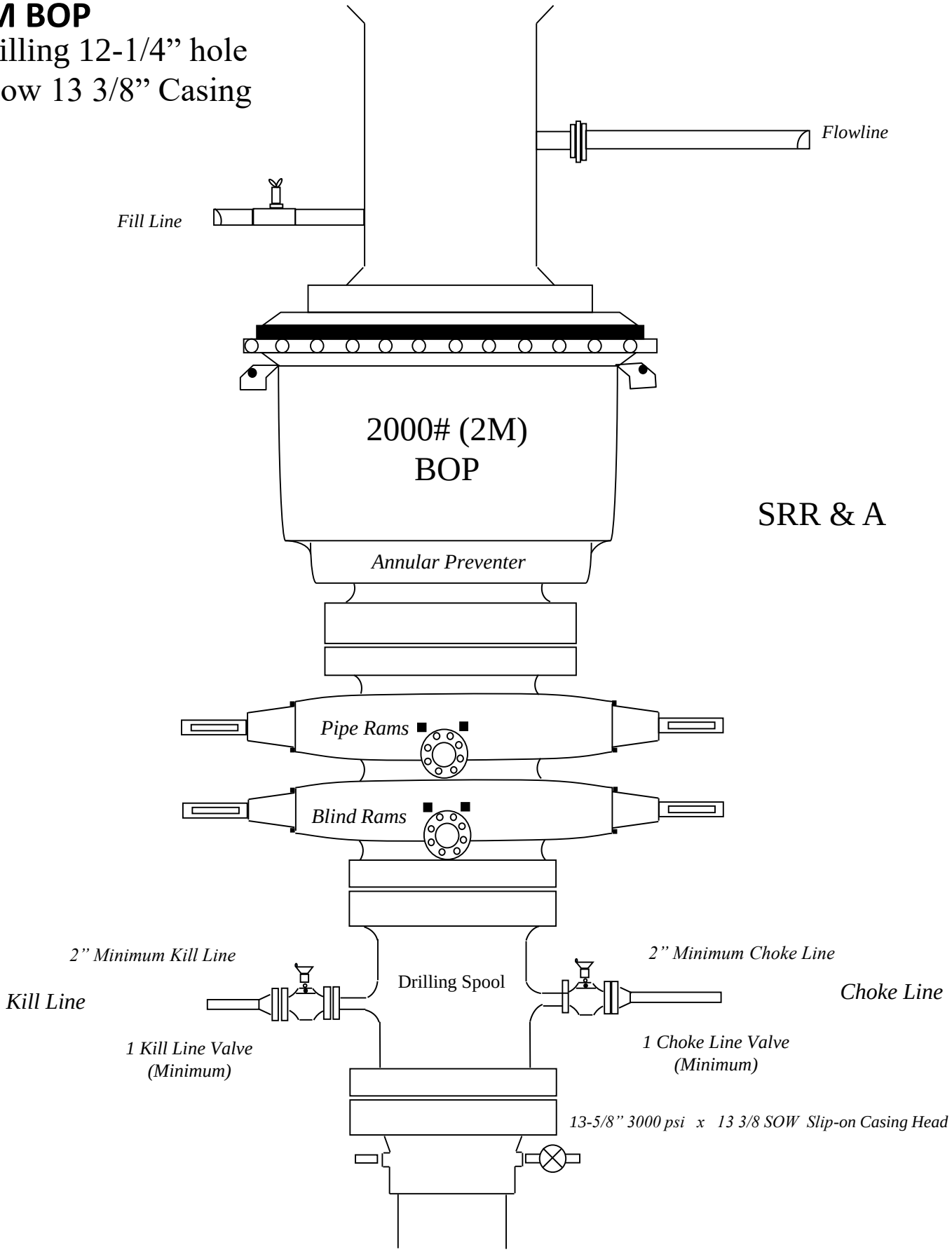


Drilling Operations
Choke Manifold
5M Service

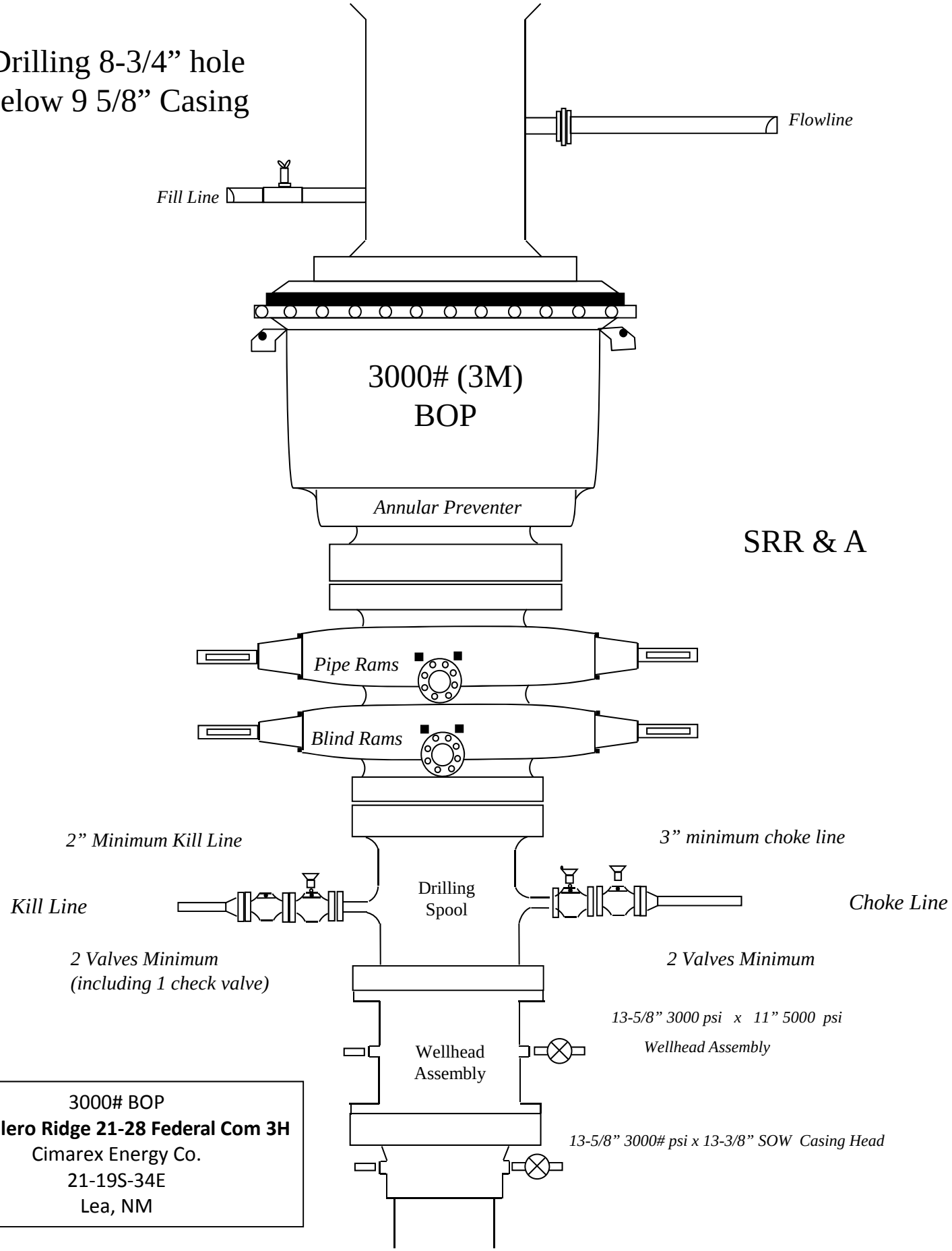
Cimarex Energy Co.
Mescalero Ridge 21-28 Fed Com 3H

2M BOP

Drilling 12-1/4” hole
below 13 3/8” Casing



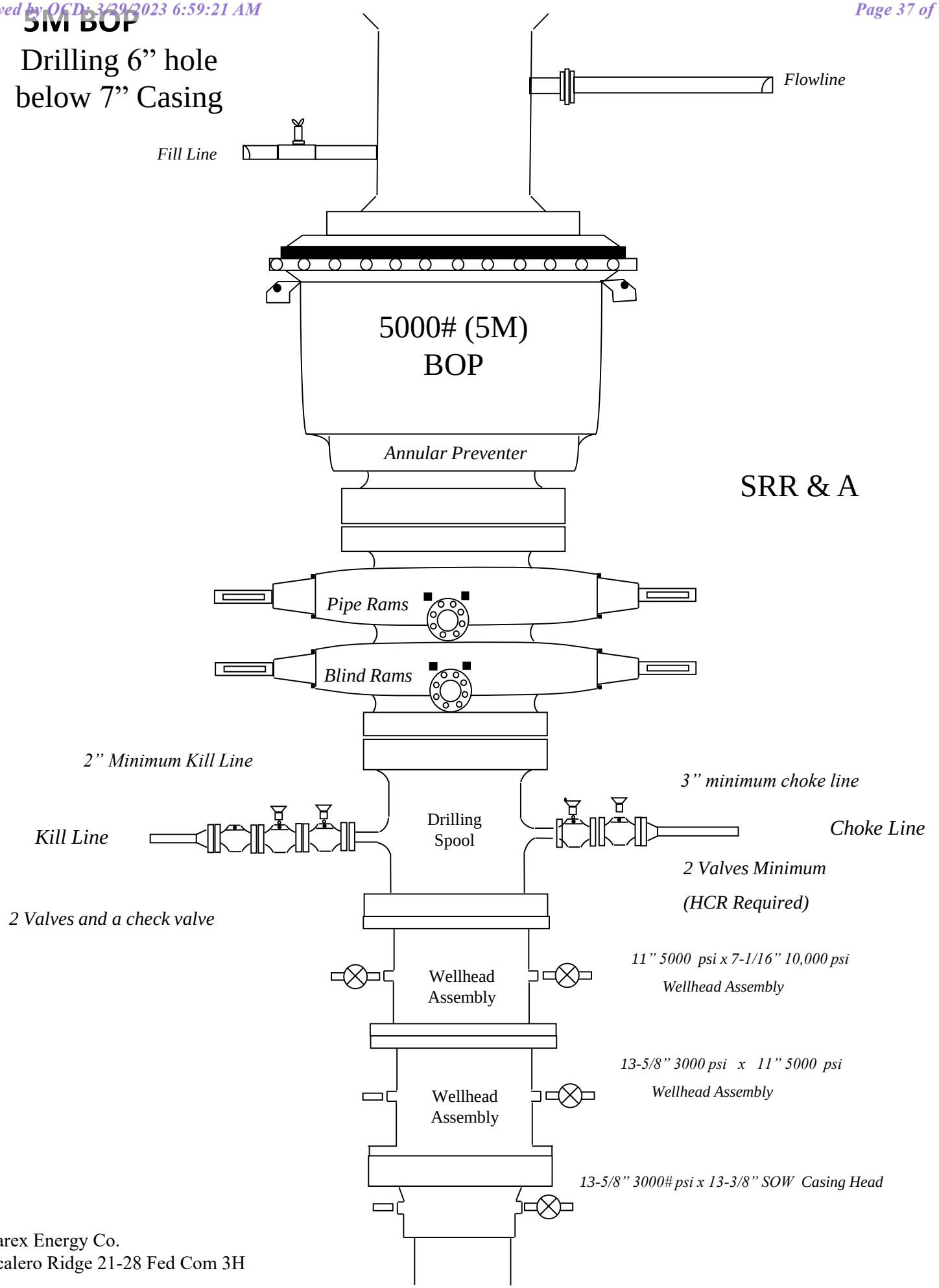
Drilling 8-3/4" hole below 9 5/8" Casing



3000# BOP
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM

5M BOP

Drilling 6” hole
below 7” Casing



SRR & A

Cimarex Energy Co.
Mescalero Ridge 21-28 Fed Com 3H

Mescalero Ridge 21-28 Federal Com 3H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Mescalero Ridge 21-28 Federal Com 3H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Mescalero Ridge 21-28 Federal Com 3H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Mescalero Ridge 21-28 Federal Com 3H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Mescalero Ridge 21-28 Federal Com 3H

Casing Assumptions

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Hydrogen Sulfide Drilling Operations Plan
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
UL: B, Sec. 21, 19S, 34E
Lea Co., NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:

A. Characteristics of H_2S
B. Physical effects and hazards
C. Principal and operation of H2S detectors, warning system and briefing areas.
D. Evacuation procedure, routes and first aid.
E. Proper use of safety equipment & life support systems
F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H_2S Detection and Alarm Systems:

A. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.

B. An audio alarm system will be installed on the derrick floor and in the top doghouse.

3 Windsock and/or wind streamers:

A. Windsock at mudpit area should be high enough to be visible.
B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

A. Warning sign on access road to location.
B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H_2S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.

5 Well control equipment:

A. See exhibit "E-1"

6 Communication:

A. While working under masks chalkboards will be used for communication.
B. Hand signals will be used where chalk board is inappropriate.
C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing:
No DSTs r cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

H_2S Contingency Plan
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
UL: B, Sec. 21, 19S, 34E
Lea Co., NM

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must:

« Isolate the area and prevent entry by other persons into the 100 ppm ROE.
« Evacuate any public places encompassed by the 100 ppm ROE.
« Be equipped with H_2S monitors and air packs in order to control the release.
« Use the "buddy system" to ensure no injuries occur during the 432-620-1975
« Take precautions to avoid personal injury during this operation.
« Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
« Have received training in the:
  · Detection of H_2S, and
  · Measures for protection against the gas,
  · Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H_2S and SO_2

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S Contingency Plan Emergency Contacts
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
UL: B, Sec. 21, 19S, 34E
Lea Co., NM

Company Office			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			

Key Personnel

Name	**Title**	**Office**	**Mobile**
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Superintendent	432-620-1975	432-238-7084
Roy Shirley	Construction Superintendent		432-634-2136

Artesia		
Ambulance	911	
State Police	575-746-2703	
City Police	575-746-2703	
Sheriff's Office	575-746-9888	
Fire Department	**575-746-2701**	
Local Emergency Planning Committee	575-746-2122	
New Mexico Oil Conservation Division	575-748-1283	

Carlsbad		
Ambulance	911	
State Police	575-885-3137	
City Police	575-885-2111	
Sheriff's Office	575-887-7551	
Fire Department	**575-887-3798**	
Local Emergency Planning Committee	575-887-6544	
US Bureau of Land Management	575-887-6544	

Santa Fe	
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

National	
National Emergency Response Center (Washington, D.C.)	800-424-8802

Medical	
Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other			
Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

Schlumberger

Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21 Proposal Geodetic Report

(Non-Def Plan)

CIMAREX

Report Date:	July 22, 2021 - 12:34 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex Energy	**Vertical Section Azimuth:**	179.512 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Mescalero Ridge 21-28 Fed Com 3H / New Slot	**TVD Reference Datum:**	RKB
Well:	Mescalero Ridge 21-28 Fed Com 3H	**TVD Reference Elevation:**	3784.000 ft above MSL
Borehole:	Mescalero Ridge 21-28 Fed Com 3H	**Seabed / Ground Elevation:**	3761.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.390 °
Survey Name:	Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21	**Total Gravity Field Strength:**	998.5087mgn (9.80665 Based)
Survey Date:	July 22, 2021	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.874 ° / 10018.011 ft / 6.296 / 0.968	**Total Magnetic Field Strength:**	47898.934 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.538 °
Location Lat / Long:	N 32° 39' 6.01159", W 103° 33' 49.28047"	**Declination Date:**	July 22, 2021
Location Grid N/E Y/X:	N 601666.880 ftUS, E 778218.200 ftUS	**Magnetic Declination Model:**	HDGM 2021
CRS Grid Convergence Angle:	0.4153 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99997335	**Grid Convergence Used:**	0.4153 °
Version / Patch:	2.10.826.8	**Total Corr Mag North->Grid North:**	5.9749 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
SHL [484' FNL, 2160' FEL]	0.00	0.00	178.48	0.00	0.00	0.00	0.00	N/A	601666.88	778218.20	32.65	-103.56
	100.00	0.00	136.54	100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	200.00	0.00	136.54	200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	300.00	0.00	136.54	300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	400.00	0.00	136.54	400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	500.00	0.00	136.54	500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	600.00	0.00	136.54	600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	700.00	0.00	136.54	700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	800.00	0.00	136.54	800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	900.00	0.00	136.54	900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1000.00	0.00	136.54	1000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1100.00	0.00	136.54	1100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1200.00	0.00	136.54	1200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1300.00	0.00	136.54	1300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1400.00	0.00	136.54	1400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1500.00	0.00	136.54	1500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1600.00	0.00	136.54	1600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Rustler	*1630.00*	*0.00*	*136.54*	*1630.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
Top of Salt (Salado)	1700.00	0.00	136.54	1700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1800.00	0.00	136.54	1800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	1900.00	0.00	136.54	1900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2000.00	0.00	136.54	2000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2100.00	0.00	136.54	2100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2200.00	0.00	136.54	2200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2300.00	0.00	136.54	2300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2400.00	0.00	136.54	2400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2500.00	0.00	136.54	2500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2600.00	0.00	136.54	2600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2700.00	0.00	136.54	2700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2800.00	0.00	136.54	2800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	2900.00	0.00	136.54	2900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3000.00	0.00	136.54	3000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3100.00	0.00	136.54	3100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3200.00	0.00	136.54	3200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Base of Salt	*3260.00*	*0.00*	*136.54*	*3260.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
	3300.00	0.00	136.54	3300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3400.00	0.00	136.54	3400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3500.00	0.00	136.54	3500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3600.00	0.00	136.54	3600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3700.00	0.00	136.54	3700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3800.00	0.00	136.54	3800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	3900.00	0.00	136.54	3900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4000.00	0.00	136.54	4000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4100.00	0.00	136.54	4100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4200.00	0.00	136.54	4200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4300.00	0.00	136.54	4300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4400.00	0.00	136.54	4400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4500.00	0.00	136.54	4500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4600.00	0.00	136.54	4600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4700.00	0.00	136.54	4700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4800.00	0.00	136.54	4800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	4900.00	0.00	136.54	4900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5000.00	0.00	136.54	5000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5100.00	0.00	136.54	5100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5200.00	0.00	136.54	5200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5300.00	0.00	136.54	5300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5400.00	0.00	136.54	5400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Delaware Sands	*5480.00*	*0.00*	*136.54*	*5480.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
	5500.00	0.00	136.54	5500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5600.00	0.00	136.54	5600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5700.00	0.00	136.54	5700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5800.00	0.00	136.54	5800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	5900.00	0.00	136.54	5900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6000.00	0.00	136.54	6000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6100.00	0.00	136.54	6100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6200.00	0.00	136.54	6200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6300.00	0.00	136.54	6300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6400.00	0.00	136.54	6400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6500.00	0.00	136.54	6500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6600.00	0.00	136.54	6600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6700.00	0.00	136.54	6700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Brushy Canyon	*6720.00*	*0.00*	*136.54*	*6720.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
	6800.00	0.00	136.54	6800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	6900.00	0.00	136.54	6900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7000.00	0.00	136.54	7000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	7100.00	0.00	136.54	7100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7200.00	0.00	136.54	7200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7300.00	0.00	136.54	7300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7400.00	0.00	136.54	7400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7500.00	0.00	136.54	7500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7600.00	0.00	136.54	7600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7700.00	0.00	136.54	7700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7800.00	0.00	136.54	7800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	7900.00	0.00	136.54	7900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8000.00	0.00	136.54	8000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8100.00	0.00	136.54	8100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8200.00	0.00	136.54	8200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Bone Spring	*8250.00*	*0.00*	*136.54*	*8250.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
	8300.00	0.00	136.54	8300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8400.00	0.00	136.54	8400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8500.00	0.00	136.54	8500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8600.00	0.00	136.54	8600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8700.00	0.00	136.54	8700.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8800.00	0.00	136.54	8800.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	8900.00	0.00	136.54	8900.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9000.00	0.00	136.54	9000.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9100.00	0.00	136.54	9100.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9200.00	0.00	136.54	9200.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9300.00	0.00	136.54	9300.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9400.00	0.00	136.54	9400.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
1st Bone Spring Sand	*9480.00*	*0.00*	*136.54*	*9480.00*	*0.00*	*0.00*	*0.00*	*0.00*	*601666.88*	*778218.20*	*32.65*	*-103.56*
	9500.00	0.00	136.54	9500.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9600.00	0.00	136.54	9600.00	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
KOP - Build 10°/100' DLS	9681.92	0.00	136.54	9681.92	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
	9700.00	1.81	136.54	9700.00	0.21	-0.21	0.20	10.00	601666.67	778218.40	32.65	-103.56
	9800.00	11.81	136.54	9799.17	8.87	-8.80	8.34	10.00	601658.08	778226.54	32.65	-103.56
	9900.00	21.81	136.54	9894.77	30.00	-29.76	28.21	10.00	601637.12	778246.40	32.65	-103.56
	10000.00	31.81	136.54	9983.91	62.96	-62.46	59.19	10.00	601604.42	778277.39	32.65	-103.56
2nd Bone Spring Sand	*10019.13*	*33.72*	*136.54*	*10000.00*	*70.54*	*-69.97*	*66.31*	*10.00*	*601596.91*	*778284.51*	*32.65*	*-103.56*
Build & Turn 10°/100' DLS	10031.92	35.00	136.54	10010.55	75.82	-75.21	71.27	10.00	601591.67	778289.47	32.65	-103.56
	10100.00	39.09	145.59	10064.92	107.95	-107.13	96.86	10.00	601559.75	778315.06	32.65	-103.56
	10200.00	46.10	156.17	10138.59	167.34	-166.25	129.32	10.00	601500.64	778347.51	32.65	-103.56
	10300.00	53.88	164.40	10202.90	239.59	-238.28	154.80	10.00	601428.60	778373.00	32.65	-103.56
	10400.00	62.11	171.11	10255.90	322.51	-321.05	172.54	10.00	601345.83	778390.73	32.65	-103.56
	10500.00	70.62	176.85	10295.98	413.58	-412.04	181.99	10.00	601254.85	778400.18	32.65	-103.56
Build 5°/100' DLS	10550.66	75.00	179.51	10310.95	461.95	-460.40	183.51	10.00	601206.49	778401.71	32.65	-103.56
	10600.00	77.47	179.51	10322.69	509.86	-508.32	183.92	5.00	601158.58	778402.11	32.65	-103.56
	10700.00	82.47	179.51	10340.11	608.30	-606.75	184.76	5.00	601060.15	778402.95	32.65	-103.56
	10800.00	87.47	179.51	10348.88	707.89	-706.33	185.61	5.00	600960.57	778403.80	32.65	-103.56
Landing Point	10850.66	90.00	179.51	10350.00	758.53	-756.97	186.04	5.00	600909.93	778404.23	32.65	-103.56
	10900.00	90.00	179.51	10350.00	807.87	-806.31	186.46	0.00	600860.59	778404.65	32.65	-103.56
	11000.00	90.00	179.51	10350.00	907.87	-906.31	187.31	0.00	600760.60	778405.50	32.65	-103.56
	11100.00	90.00	179.51	10350.00	1007.87	-1006.30	188.16	0.00	600660.61	778406.36	32.65	-103.56
	11200.00	90.00	179.51	10350.00	1107.87	-1106.30	189.01	0.00	600560.61	778407.21	32.65	-103.56
	11300.00	90.00	179.51	10350.00	1207.87	-1206.30	189.86	0.00	600460.62	778408.06	32.65	-103.56
	11400.00	90.00	179.51	10350.00	1307.87	-1306.29	190.72	0.00	600360.62	778408.91	32.65	-103.56
	11500.00	90.00	179.51	10350.00	1407.87	-1406.29	191.57	0.00	600260.63	778409.76	32.65	-103.56
	11600.00	90.00	179.51	10350.00	1507.87	-1506.29	192.42	0.00	600160.64	778410.61	32.65	-103.56
	11700.00	90.00	179.51	10350.00	1607.87	-1606.28	193.27	0.00	600060.64	778411.47	32.65	-103.56
	11800.00	90.00	179.51	10350.00	1707.87	-1706.28	194.12	0.00	599960.65	778412.32	32.65	-103.56
	11900.00	90.00	179.51	10350.00	1807.87	-1806.27	194.98	0.00	599860.66	778413.17	32.65	-103.56
	12000.00	90.00	179.51	10350.00	1907.87	-1906.27	195.83	0.00	599760.66	778414.02	32.65	-103.56
	12100.00	90.00	179.51	10350.00	2007.87	-2006.27	196.68	0.00	599660.67	778414.87	32.65	-103.56
	12200.00	90.00	179.51	10350.00	2107.87	-2106.26	197.53	0.00	599560.68	778415.72	32.65	-103.56
	12300.00	90.00	179.51	10350.00	2207.87	-2206.26	198.38	0.00	599460.68	778416.58	32.65	-103.56
	12400.00	90.00	179.51	10350.00	2307.87	-2306.26	199.23	0.00	599360.69	778417.43	32.65	-103.56
	12500.00	90.00	179.51	10350.00	2407.87	-2406.25	200.09	0.00	599260.70	778418.28	32.65	-103.56
	12600.00	90.00	179.51	10350.00	2507.87	-2506.25	200.94	0.00	599160.70	778419.13	32.64	-103.56
	12700.00	90.00	179.51	10350.00	2607.87	-2606.25	201.79	0.00	599060.71	778419.98	32.64	-103.56
	12800.00	90.00	179.51	10350.00	2707.87	-2706.24	202.64	0.00	598960.72	778420.84	32.64	-103.56
	12900.00	90.00	179.51	10350.00	2807.87	-2806.24	203.49	0.00	598860.72	778421.69	32.64	-103.56
	13000.00	90.00	179.51	10350.00	2907.87	-2906.23	204.34	0.00	598760.73	778422.54	32.64	-103.56
	13100.00	90.00	179.51	10350.00	3007.87	-3006.23	205.20	0.00	598660.74	778423.39	32.64	-103.56
	13200.00	90.00	179.51	10350.00	3107.87	-3106.23	206.05	0.00	598560.74	778424.24	32.64	-103.56
	13300.00	90.00	179.51	10350.00	3207.87	-3206.22	206.90	0.00	598460.75	778425.09	32.64	-103.56
	13400.00	90.00	179.51	10350.00	3307.87	-3306.22	207.75	0.00	598360.75	778425.95	32.64	-103.56
	13500.00	90.00	179.51	10350.00	3407.87	-3406.22	208.60	0.00	598260.76	778426.80	32.64	-103.56
	13600.00	90.00	179.51	10350.00	3507.87	-3506.21	209.45	0.00	598160.77	778427.65	32.64	-103.56
	13700.00	90.00	179.51	10350.00	3607.87	-3606.21	210.31	0.00	598060.77	778428.50	32.64	-103.56
	13800.00	90.00	179.51	10350.00	3707.87	-3706.21	211.16	0.00	597960.78	778429.35	32.64	-103.56
	13900.00	90.00	179.51	10350.00	3807.87	-3806.20	212.01	0.00	597860.79	778430.20	32.64	-103.56
	14000.00	90.00	179.51	10350.00	3907.87	-3906.20	212.86	0.00	597760.79	778431.06	32.64	-103.56
	14100.00	90.00	179.51	10350.00	4007.87	-4006.19	213.71	0.00	597660.80	778431.91	32.64	-103.56
	14200.00	90.00	179.51	10350.00	4107.87	-4106.19	214.57	0.00	597560.81	778432.76	32.64	-103.56
	14300.00	90.00	179.51	10350.00	4207.87	-4206.19	215.42	0.00	597460.81	778433.61	32.64	-103.56
	14400.00	90.00	179.51	10350.00	4307.87	-4306.18	216.27	0.00	597360.82	778434.46	32.64	-103.56
	14500.00	90.00	179.51	10350.00	4407.87	-4406.18	217.12	0.00	597260.83	778435.31	32.64	-103.56
	14600.00	90.00	179.51	10350.00	4507.87	-4506.18	217.97	0.00	597160.83	778436.17	32.64	-103.56
	14700.00	90.00	179.51	10350.00	4607.87	-4606.17	218.82	0.00	597060.84	778437.02	32.64	-103.56
	14800.00	90.00	179.51	10350.00	4707.87	-4706.17	219.68	0.00	596960.85	778437.87	32.64	-103.56
	14900.00	90.00	179.51	10350.00	4807.87	-4806.17	220.53	0.00	596860.85	778438.72	32.64	-103.56
	15000.00	90.00	179.51	10350.00	4907.87	-4906.16	221.38	0.00	596760.86	778439.57	32.64	-103.56
	15100.00	90.00	179.51	10350.00	5007.87	-5006.16	222.23	0.00	596660.87	778440.42	32.64	-103.56
	15200.00	90.00	179.51	10350.00	5107.87	-5106.15	223.08	0.00	596560.87	778441.28	32.64	-103.56
	15300.00	90.00	179.51	10350.00	5207.87	-5206.15	223.93	0.00	596460.88	778442.13	32.64	-103.56
	15400.00	90.00	179.51	10350.00	5307.87	-5306.15	224.79	0.00	596360.88	778442.98	32.64	-103.56
	15500.00	90.00	179.51	10350.00	5407.87	-5406.14	225.64	0.00	596260.89	778443.83	32.64	-103.56
	15600.00	90.00	179.51	10350.00	5507.87	-5506.14	226.49	0.00	596160.90	778444.68	32.64	-103.56
	15700.00	90.00	179.51	10350.00	5607.87	-5606.14	227.34	0.00	596060.90	778445.53	32.64	-103.56
	15800.00	90.00	179.51	10350.00	5707.87	-5706.13	228.19	0.00	595960.91	778446.39	32.64	-103.56
	15900.00	90.00	179.51	10350.00	5807.87	-5806.13	229.04	0.00	595860.92	778447.24	32.64	-103.56
	16000.00	90.00	179.51	10350.00	5907.87	-5906.13	229.90	0.00	595760.92	778448.09	32.64	-103.56
	16100.00	90.00	179.51	10350.00	6007.87	-6006.12	230.75	0.00	595660.93	778448.94	32.64	-103.56
	16200.00	90.00	179.51	10350.00	6107.87	-6106.12	231.60	0.00	595560.94	778449.79	32.63	-103.56
	16300.00	90.00	179.51	10350.00	6207.87	-6206.11	232.45	0.00	595460.94	778450.64	32.63	-103.56
	16400.00	90.00	179.51	10350.00	6307.87	-6306.11	233.30	0.00	595360.95	778451.50	32.63	-103.56
	16500.00	90.00	179.51	10350.00	6407.87	-6406.11	234.16	0.00	595260.96	778452.35	32.63	-103.56
	16600.00	90.00	179.51	10350.00	6507.87	-6506.10	235.01	0.00	595160.96	778453.20	32.63	-103.56
	16700.00	90.00	179.51	10350.00	6607.87	-6606.10	235.86	0.00	595060.97	778454.05	32.63	-103.56

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	16800.00	90.00	179.51	10350.00	6707.87	-6706.10	236.71	0.00	594960.98	778454.90	32.63	-103.56
	16900.00	90.00	179.51	10350.00	6807.87	-6806.09	237.56	0.00	594860.98	778455.76	32.63	-103.56
	17000.00	90.00	179.51	10350.00	6907.87	-6906.09	238.41	0.00	594760.99	778456.61	32.63	-103.56
	17100.00	90.00	179.51	10350.00	7007.87	-7006.09	239.27	0.00	594660.99	778457.46	32.63	-103.56
	17200.00	90.00	179.51	10350.00	7107.87	-7106.08	240.12	0.00	594561.00	778458.31	32.63	-103.56
	17300.00	90.00	179.51	10350.00	7207.87	-7206.08	240.97	0.00	594461.01	778459.16	32.63	-103.56
	17400.00	90.00	179.51	10350.00	7307.87	-7306.07	241.82	0.00	594361.01	778460.01	32.63	-103.56
	17500.00	90.00	179.51	10350.00	7407.87	-7406.07	242.67	0.00	594261.02	778460.87	32.63	-103.56
	17600.00	90.00	179.51	10350.00	7507.87	-7506.07	243.52	0.00	594161.03	778461.72	32.63	-103.56
	17700.00	90.00	179.51	10350.00	7607.87	-7606.06	244.38	0.00	594061.03	778462.57	32.63	-103.56
	17800.00	90.00	179.51	10350.00	7707.87	-7706.06	245.23	0.00	593961.04	778463.42	32.63	-103.56
	17900.00	90.00	179.51	10350.00	7807.87	-7806.06	246.08	0.00	593861.05	778464.27	32.63	-103.56
	18000.00	90.00	179.51	10350.00	7907.87	-7906.05	246.93	0.00	593761.05	778465.12	32.63	-103.56
	18100.00	90.00	179.51	10350.00	8007.87	-8006.05	247.78	0.00	593661.06	778465.98	32.63	-103.56
	18200.00	90.00	179.51	10350.00	8107.87	-8106.05	248.63	0.00	593561.07	778466.83	32.63	-103.56
	18300.00	90.00	179.51	10350.00	8207.87	-8206.04	249.49	0.00	593461.07	778467.68	32.63	-103.56
	18400.00	90.00	179.51	10350.00	8307.87	-8306.04	250.34	0.00	593361.08	778468.53	32.63	-103.56
	18500.00	90.00	179.51	10350.00	8407.87	-8406.03	251.19	0.00	593261.09	778469.38	32.63	-103.56
	18600.00	90.00	179.51	10350.00	8507.87	-8506.03	252.04	0.00	593161.09	778470.23	32.63	-103.56
	18700.00	90.00	179.51	10350.00	8607.87	-8606.03	252.89	0.00	593061.10	778471.09	32.63	-103.56
	18800.00	90.00	179.51	10350.00	8707.87	-8706.02	253.75	0.00	592961.11	778471.94	32.63	-103.56
	18900.00	90.00	179.51	10350.00	8807.87	-8806.02	254.60	0.00	592861.11	778472.79	32.63	-103.56
	19000.00	90.00	179.51	10350.00	8907.87	-8906.02	255.45	0.00	592761.12	778473.64	32.63	-103.56
	19100.00	90.00	179.51	10350.00	9007.87	-9006.01	256.30	0.00	592661.12	778474.49	32.63	-103.56
	19200.00	90.00	179.51	10350.00	9107.87	-9106.01	257.15	0.00	592561.13	778475.34	32.63	-103.56
	19300.00	90.00	179.51	10350.00	9207.87	-9206.01	258.00	0.00	592461.14	778476.20	32.63	-103.56
	19400.00	90.00	179.51	10350.00	9307.87	-9306.00	258.86	0.00	592361.14	778477.05	32.63	-103.56
	19500.00	90.00	179.51	10350.00	9407.87	-9406.00	259.71	0.00	592261.15	778477.90	32.63	-103.56
	19600.00	90.00	179.51	10350.00	9507.87	-9506.00	260.56	0.00	592161.16	778478.75	32.63	-103.56
	19700.00	90.00	179.51	10350.00	9607.87	-9605.99	261.41	0.00	592061.16	778479.60	32.63	-103.56
	19800.00	90.00	179.51	10350.00	9707.87	-9705.99	262.26	0.00	591961.17	778480.45	32.62	-103.56
	19900.00	90.00	179.51	10350.00	9807.87	-9805.98	263.11	0.00	591861.18	778481.31	32.62	-103.56
	20000.00	90.00	179.51	10350.00	9907.87	-9905.98	263.97	0.00	591761.18	778482.16	32.62	-103.56
Cimarex Mescalero Ridge 21-28 Fed Com 3H - PBHL[100'FSL,1980'FEL]	20058.91	90.00	179.51	10350.00	9966.78	-9964.89	264.47	0.00	591702.28	778482.66	32.62	-103.56

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Mescalero Ridge 21-28 Fed Com 3H / Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM
	1	23.000	20058.907	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Mescalero Ridge 21-28 Fed Com 3H / Cimarex Mescalero Ridge 21-

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Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21 Proposal
Geodetic Report
(Non-Def Plan)

CIMAREX

Report Date:	July 22, 2021 - 12:34 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex Energy	**Vertical Section Azimuth:**	179.512 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Mescalero Ridge 21-28 Fed Com 3H / New Slot	**TVD Reference Datum:**	RKB
Well:	Mescalero Ridge 21-28 Fed Com 3H	**TVD Reference Elevation:**	3784.000 ft above MSL
Borehole:	Mescalero Ridge 21-28 Fed Com 3H	**Seabed / Ground Elevation:**	3761.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.390 °
Survey Name:	Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21	**Total Gravity Field Strength:**	998.5087mgn (9.80665 Based)
Survey Date:	July 22, 2021	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.874 ° / 10018.011 ft / 6.296 / 0.968	**Total Magnetic Field Strength:**	47898.934 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.538 °
Location Lat / Long:	N 32° 39' 6.01159", W 103° 33' 49.28047"	**Declination Date:**	July 22, 2021
Location Grid N/E Y/X:	N 601666.880 ftUS, E 778218.200 ftUS	**Magnetic Declination Model:**	HDGM 2021
CRS Grid Convergence Angle:	0.4153 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99997335	**Grid Convergence Used:**	0.4153 °
Version / Patch:	2.10.826.8	**Total Corr Mag North->Grid North:**	5.9749 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
SHL [484' FNL, 2160' FEL]	0.00	0.00	178.48	0.00	0.00	0.00	0.00	N/A	601666.88	778218.20	32.65	-103.56
KOP - Build 10°/100' DLS	9681.92	0.00	136.54	9681.92	0.00	0.00	0.00	0.00	601666.88	778218.20	32.65	-103.56
Build & Turn 10°/100' DLS	10031.92	35.00	136.54	10010.55	75.82	-75.21	71.27	10.00	601591.67	778289.47	32.65	-103.56
Build 5°/100' DLS	10550.66	75.00	179.51	10310.95	461.95	-460.40	183.51	10.00	601206.49	778401.71	32.65	-103.56
Landing Point Cimarex Mescalero Ridge 21-28 Fed Com 3H - PBHL[100'FSL,1980'FEL]	10850.66	90.00	179.51	10350.00	758.53	-756.97	186.04	5.00	600909.93	778404.23	32.65	-103.56
	20058.91	90.00	179.51	10350.00	9966.78	-9964.89	264.47	0.00	591702.28	778482.66	32.62	-103.56

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Mescalero Ridge 21-28 Fed Com 3H / Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM
	1	23.000	20058.907	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Mescalero Ridge 21-28 Fed Com 3H / Cimarex Mescalero Ridge 21-

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Cimarex Energy

Rev 0

CIMAREX

Borehole:	Well:	Field:	Structure:
Mescalero Ridge 21-28 Fed Com 3H	Mescalero Ridge 21-28 Fed Com 3H	NM Lea County (NAD 83)	Cimarex Mescalero Ridge 21-28 Fed Com 3H

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	HDGM 2021	Dip:	60.538°	Date:	22-Jul-2021	Lat:	N 32 39 6.01	Northing:	601666.88ftUS	Grid Conv:	0.4153°	Slot:	New Slot	TVD Ref:	RKB(3784ft above MSL)
MagDec:	6.39°	FS:	47898.934nT	Gravity FS:	998.509mgn (9.80665 Based)	Lon:	W 103 33 49.28	Easting:	778218.2ftUS	Scale Fact:	0.99997335	Plan:	Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21		

Critical Points

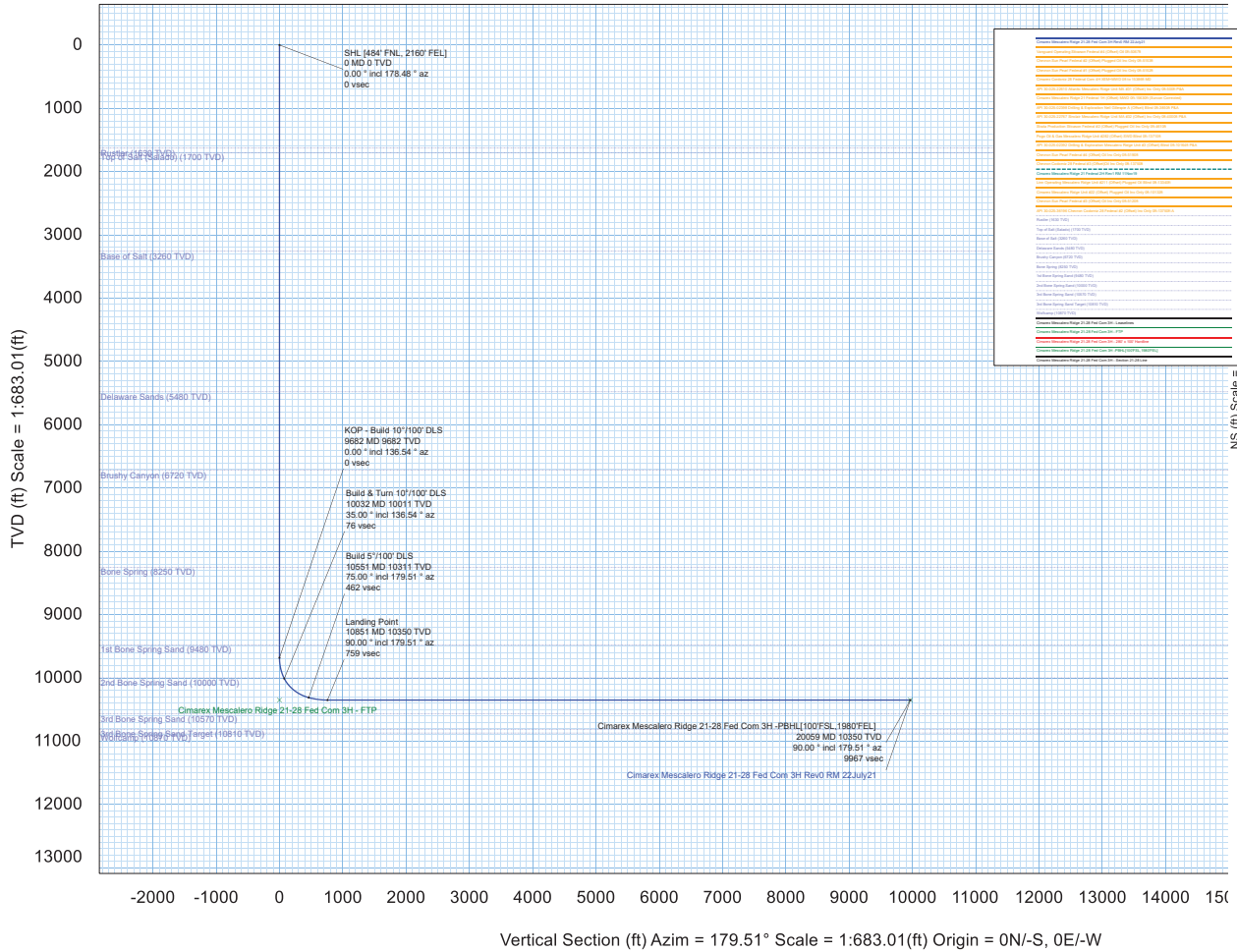
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [484' FNL, 2160' FEL]	0.00	0.00	178.48	0.00	0.00	0.00	0.00	
Rustler	1630.00	0.00	136.54	1630.00	0.00	0.00	0.00	0.00
Top of Salt (Salado)	1700.00	0.00	136.54	1700.00	0.00	0.00	0.00	0.00
Base of Salt	3260.00	0.00	136.54	3260.00	0.00	0.00	0.00	0.00
Delaware Sands	5480.00	0.00	136.54	5480.00	0.00	0.00	0.00	0.00
Brushy Canyon	6720.00	0.00	136.54	6720.00	0.00	0.00	0.00	0.00
Bone Spring	8250.00	0.00	136.54	8250.00	0.00	0.00	0.00	0.00
1st Bone Spring Sand	9480.00	0.00	136.54	9480.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100' DLS	9681.92	0.00	136.54	9681.92	0.00	0.00	0.00	0.00
2nd Bone Spring Sand	10019.13	33.72	136.54	10000.00	70.54	-69.97	66.31	10.00
Build & Turn 10°/100' DLS	10031.92	35.00	136.54	10010.55	75.82	-75.21	71.27	10.00
Build 5°/100' DLS	10550.66	75.00	179.51	10310.95	461.95	-460.40	183.51	10.00
Landing Point	10850.66	90.00	179.51	10350.00	758.53	-756.97	186.04	5.00
Cimarex Mescalero Ridge 21-28 Fed Com 3H - PBHL[100'FSL,1980'FEL]	20058.91	90.00	179.51	10350.00	9966.78	-9964.89	264.47	0.00
3rd Bone Spring Sand	NaN			10570.00				
3rd Bone Spring Sand Target	NaN			10810.00				
Wolfcamp	NaN			10870.00				

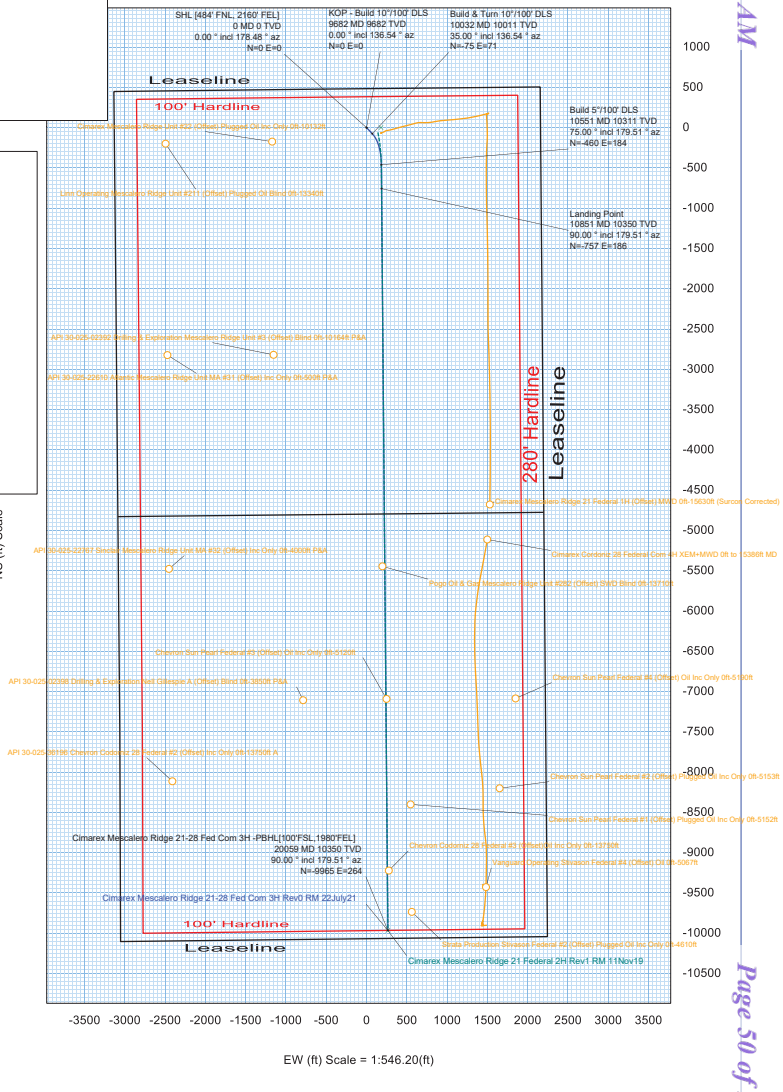
CONTROLLED

Plan ref	Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21
Drawing ref	
Copy number	of 3
Date	22-Jul-2021

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for





Schlumberger CIMAREX

Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21 Anti-Collision Summary Report

Analysis Date-24hr Time: July 22, 2021 - 12:31
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure: Cimarex Mescalero Ridge 21-28 Fed Com 3H
Slot: New Slot
Well: Mescalero Ridge 21-28 Fed Com 3H
Borehole: Mescalero Ridge 21-28 Fed Com 3H
Scan MD Range: 0.00ft ~ 20058.91ft

Analysis Method: 3D Least Distance
Reference Trajectory: Cimarex Mescalero Ridge 21-28 Fed Com 3H Rev0 RM 22July21 (Non-Def
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: All local minima indicated.
Version / Patch: 2.10.826.8
Database \ Project: us1455vsm3172\drilling -NM Lea County 2.10

Trajectory Error Model: ISCWSA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria
Wellhead distance scan: Restricted within 61123.96 ft
Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
Results highlighted: Sep-Factor separation <= 1.50 ft													
Chevron Codorniz 28 Federal #3 (Offset)Oil Inc Only 0ft-13750ft (Def Survey)													Fail Major
	9208.28	32.81	9207.15	9175.47	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9208.10	32.81	9206.93	9175.29	296425.65	MAS = 10.00 (m)	23.00	23.00				WRP	
	9207.88	32.81	9206.58	9175.07	54995.91	MAS = 10.00 (m)	90.00	90.00				MinPts	
	9207.61	58.57	9168.19	9149.04	240.43	OSF1.50	1280.00	1280.00				MinPt-CtCt	
	9204.13	105.33	9133.53	9098.80	132.48	OSF1.50	2170.00	2170.00				MinPt-CtCt	
	9204.42	106.31	9133.17	9098.11	131.26	OSF1.50	2250.00	2250.00				MINPT-O-EOU	
	9204.77	106.75	9133.23	9098.03	130.72	OSF1.50	2290.00	2290.00				MinPt-O-ADP	
	9202.27	133.66	9112.78	9068.61	104.14	OSF1.50	2700.00	2700.00				MinPt-CtCt	
	9203.43	137.19	9111.59	9066.24	101.45	OSF1.50	2880.00	2880.00				MINPT-O-EOU	
	9204.70	138.71	9111.85	9065.99	100.34	OSF1.50	2960.00	2960.00				MinPt-O-ADP	
	9200.87	182.58	9078.77	9018.29	76.06	OSF1.50	3650.00	3650.00				MinPt-CtCt	
	9202.14	186.28	9077.57	9015.85	74.54	OSF1.50	3840.00	3840.00				MINPT-O-EOU	
	9203.80	188.26	9077.92	9015.54	73.77	OSF1.50	3940.00	3940.00				MinPt-O-ADP	
	9204.53	221.05	9056.78	8983.48	62.77	OSF1.50	4390.00	4390.00				MinPt-CtCt	
	9213.02	246.37	9048.40	8966.65	56.34	OSF1.50	5080.00	5080.00				MINPT-O-EOU	
	9207.24	352.69	8971.74	8854.55	39.28	OSF1.50	6910.00	6910.00				MinPt-CtCt	
	9212.94	471.26	8898.39	8741.68	29.39	OSF1.50	9170.00	9170.00				MinPt-CtCt	
	1782.03	544.55	1415.04	1237.48	4.98	OSF1.50	17520.00	10350.00	OSF<5.00			Enter Alert	
	542.78	544.38	175.33	-1.60	1.50	OSF1.50	18760.00	10350.00		OSF<1.50		Enter Minor	
	362.92	544.35	-4.59	-181.43	0.99	OSF1.50	18940.00	10350.00			OSF<1.00	Enter Major	
	16.19	553.45	-356.75	-537.26	0.01	OSF1.50	19290.00	10350.00				MinPt-O-SF	
	10.15	565.75	-368.82	-555.61	0.01	OSF1.50	19300.00	10350.00				MinPts	
	347.00	530.69	-7.18	-183.70	0.98	OSF1.50	19650.00	10350.00			OSF>1.00	Exit Major	
	526.87	530.41	172.88	-3.54	1.49	OSF1.50	19830.00	10350.00		OSF>1.50		Exit Minor	
	755.64	530.09	401.88	225.56	2.14	OSF1.50	20058.91	10350.00				TD	
Pogo Oil & Gas Mescalero Ridge Unit #282 (Offset) SWD Blind 0ft-13710ft (Def Survey)													Fail Major
	5449.37	32.81	5448.08	5416.56	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5449.15	32.81	5447.83	5416.34	161461.92	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	5449.00	1638.29	4356.38	3810.71	4.99	OSF1.50	5320.00	5320.00	OSF<5.00			Enter Alert	
	3219.20	3222.93	1068.98	-3.73	1.50	OSF1.50	12320.00	10350.00		OSF<1.50		Enter Minor	
	2149.27	3224.41	-2.43	-1075.15	1.00	OSF1.50	13390.00	10350.00			OSF<1.00	Enter Major	
	30.86	3222.93	-2118.84	-3192.07	0.01	OSF1.50	15530.00	10350.00				MinPts	
	29.51	3221.10	-2118.32	-3191.59	0.01	OSF1.50	15540.00	10350.00				MinPt-CtCt	
	2141.14	3219.43	-5.58	-1078.29	1.00	OSF1.50	17680.00	10350.00			OSF>1.00	Exit Major	
	3211.07	3219.44	1064.35	-8.36	1.50	OSF1.50	18750.00	10350.00		OSF>1.50		Exit Minor	
	4519.94	3219.44	2373.22	1300.50	2.11	OSF1.50	20058.91	10350.00				TD	
API 30-025-02392 Drilling & Exploration Mescalero Ridge Unit #3 (Offset) Blind 0ft-10164ft P&A (Def Survey)													Fail Major
	3046.83	32.81	3045.55	3014.02	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3046.64	32.81	3045.33	3013.84	125685.75	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	3046.63	32.81	3045.32	3013.82	130174.32	MAS = 10.00 (m)	23.00	23.00				WRP	
	3046.59	915.28	2435.97	2131.31	5.00	OSF1.50	3050.00	3050.00	OSF<5.00			Enter Alert	
	3039.82	3043.11	1010.64	-3.30	1.50	OSF1.50	9820.00	9818.67		OSF<1.50		Enter Minor	
	2104.91	3157.26	-0.79	-1052.35	1.00	OSF1.50	11300.00	10350.00			OSF<1.00	Enter Major	
	1365.77	3145.56	-731.70	-1779.79	0.65	OSF1.50	12900.00	10350.00				MinPts	
	2102.38	3156.35	-2.29	-1053.98	1.00	OSF1.50	14500.00	10350.00			OSF>1.00	Exit Major	
	3158.85	3160.61	1051.34	-1.76	1.50	OSF1.50	15750.00	10350.00		OSF>1.50		Exit Minor	
	7286.38	3163.32	5177.08	4123.07	3.46	OSF1.50	20058.91	10350.00				TD	
Cimarex Mescalero Ridge 21 Federal 2H Rev1 RM 11Nov19 (Def Plan)													Fail Minor
	152.30	32.81	151.02	119.50	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	152.30	32.81	151.02	119.50	679700.69	MAS = 10.00 (m)	23.00	23.00				WRP	
	152.30	46.62	120.79	105.68	5.00	OSF1.50	4870.00	4870.00	OSF<5.00			Enter Alert	
	92.08	92.56	29.89	-0.49	1.49	OSF1.50	9970.00	9958.01		OSF<1.50		Enter Minor	
	63.81	92.53	1.69	-28.72	1.03	OSF1.50	10080.00	10049.26				MinPts	
	90.75	92.74	28.50	-1.99	1.47	OSF1.50	10170.00	10117.37		OSF>1.50		Exit Minor	
	300.26	93.21	237.69	207.06	4.88	OSF1.50	10440.00	10273.56	OSF>5.00			Exit Alert	
	440.74	133.19	351.52	307.55	5.00	OSF1.50	14440.00	10350.00	OSF<5.00			Enter Alert	
	416.90	304.87	213.22	112.03	2.05	OSF1.50	20058.91	10350.00				MinPts	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
Linn Operating Mescalero Ridge Unit #211 (Offset) Plugged Oil Blind 0ft-13340ft (Def Survey)													Fail Minor
	2503.47	32.81	2502.34	2470.67	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2503.26	32.81	2502.11	2470.45	95841.86	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	2503.24	32.81	2502.09	2470.44	101784.30	MAS = 10.00 (m)	23.00	23.00				WRP	
	2503.21	753.80	2000.30	1749.41	4.99	OSF1.50	2480.00	2480.00	OSF<5.00			Enter Alert	
	2503.21	2504.82	832.95	-1.62	1.50	OSF1.50	8050.00	8050.00		OSF<1.50		Enter Minor	
	2503.21	3017.85	490.93	-514.64	1.24	OSF1.50	9681.92	9681.92				MinPt-CtCt	
	2520.54	3072.89	471.57	-552.35	1.23	OSF1.50	9860.00	9857.15				MINPT-O-EOU	
	2529.16	3084.71	472.31	-555.55	1.23	OSF1.50	9900.00	9894.77				MinPt-O-SF	
	2539.49	3096.20	474.97	-556.72	1.23	OSF1.50	9940.00	9931.36				MinPt-O-ADP	
	3225.56	3227.76	1073.35	-2.19	1.50	OSF1.50	12070.00	10350.00		OSF>1.50		Exit Minor	
	10148.41	3228.16	7995.93	6920.25	4.72	OSF1.50	20058.91	10350.00				TD	
Cimarex Mescalero Ridge Unit #22 (Offset) Plugged Oil Inc Only 0ft-10132ft (Def Survey)													Warning Alert
	1190.37	32.81	1189.24	1157.56	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1189.96	32.81	1188.79	1157.15	25597.24	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	1189.93	32.81	1188.76	1157.12	28327.46	MAS = 10.00 (m)	23.00	23.00				WRP	
	1186.30	42.74	1157.42	1143.55	42.72	OSF1.50	860.00	860.00				MinPt-CtCt	
	1184.17	124.19	1101.00	1059.99	14.42	OSF1.50	2420.00	2420.00				MinPt-CtCt	
	1179.61	201.04	1045.20	978.56	8.84	OSF1.50	3870.00	3870.00				MinPt-CtCt	
	1181.43	207.41	1042.78	974.02	8.58	OSF1.50	4020.00	4020.00				MINPT-O-EOU	
	1183.70	210.14	1043.23	973.56	8.49	OSF1.50	4090.00	4090.00				MinPt-O-ADP	
	1182.44	275.08	998.68	907.36	6.47	OSF1.50	5320.00	5320.00				MinPt-CtCt	
	1182.30	349.32	949.04	832.98	5.09	OSF1.50	6740.00	6740.00				MinPt-CtCt	
	1182.86	355.98	945.16	826.88	5.00	OSF1.50	6880.00	6880.00	OSF<5.00			Enter Alert	
	1186.00	439.94	892.32	746.05	4.05	OSF1.50	8480.00	8480.00				MinPt-CtCt	
	1188.27	504.66	851.46	683.62	3.54	OSF1.50	9700.00	9700.00				MinPt-CtCt	
	1188.77	506.21	850.91	682.55	3.53	OSF1.50	9730.00	9729.94				MINPT-O-EOU	
	1189.61	507.17	851.12	682.44	3.52	OSF1.50	9750.00	9749.84				MinPt-O-ADP	
	1193.56	509.54	853.49	684.02	3.52	OSF1.50	9800.00	9799.17				MinPt-O-SF	
	1737.74	523.85	1388.12	1213.88	4.98	OSF1.50	11330.00	10350.00	OSF>5.00			Exit Alert	
	9898.15	527.64	9546.01	9370.51	28.20	OSF1.50	20058.91	10350.00				TD	
Cimarex Mescalero Ridge 21 Federal 1H (Offset) MWD 0ft-15630ft (Surcon Corrected) (Def Survey)													Pass
	189.72	32.81	188.70	156.91	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	189.71	32.81	188.69	156.91	254846.67	MAS = 10.00 (m)	23.00	23.00				WRP	
	189.32	32.81	186.14	156.51	87.01	MAS = 10.00 (m)	450.00	450.00				MinPts	
	188.75	32.81	182.04	155.94	33.01	MAS = 10.00 (m)	1220.00	1220.00				MinPts	
	187.30	32.81	177.41	154.49	21.01	MAS = 10.00 (m)	1900.00	1900.00				MinPts	
	187.35	32.81	177.37	154.54	20.81	MAS = 10.00 (m)	1930.00	1930.00				MINPT-O-EOU	
	240.60	32.81	223.36	207.79	14.77	MAS = 10.00 (m)	3690.00	3690.00				MinPt-O-SF	
	1167.58	49.73	1134.09	1117.85	35.92	OSF1.50	7070.00	7070.00				MinPt-O-SF	
	1494.97	59.78	1454.78	1435.19	38.14	OSF1.50	8100.00	8100.00				MinPt-O-SF	
	1509.71	70.61	1462.30	1439.11	32.52	OSF1.50	9700.00	9700.00				MinPt-O-SF	
	1400.05	68.17	1354.26	1331.88	31.25	OSF1.50	10220.00	10152.27				MinPt-O-SF	
	1395.13	67.74	1349.62	1327.38	31.34	OSF1.50	10300.00	10202.90				MinPts	
	1377.94	63.86	1335.03	1314.08	32.87	OSF1.50	11010.00	10350.00				MinPt-CtCt	
	1377.95	63.89	1335.02	1314.06	32.85	OSF1.50	11020.00	10350.00				MINPT-O-EOU	
	1377.98	63.92	1335.03	1314.08	32.84	OSF1.50	11030.00	10350.00				MinPt-O-ADP	
	1378.62	64.67	1335.17	1313.96	32.47	OSF1.50	11170.00	10350.00				MINPT-O-EOU	
	1378.73	64.80	1335.19	1313.93	32.40	OSF1.50	11190.00	10350.00				MinPt-O-ADP	
	1382.85	67.97	1337.19	1314.87	30.96	OSF1.50	11550.00	10350.00				MinPt-CtCt	
	1383.00	72.03	1334.64	1310.97	29.19	OSF1.50	11870.00	10350.00				MinPt-CtCt	
	1377.72	85.35	1320.48	1292.37	24.49	OSF1.50	12590.00	10350.00				MinPt-CtCt	
	1378.12	86.38	1320.19	1291.74	24.20	OSF1.50	12640.00	10350.00				MINPT-O-EOU	
	1378.47	86.79	1320.27	1291.68	24.09	OSF1.50	12660.00	10350.00				MinPt-O-ADP	
	1388.97	102.78	1320.11	1286.19	20.46	OSF1.50	13340.00	10350.00				MinPt-CtCt	
	1390.53	112.11	1315.45	1278.42	18.76	OSF1.50	13730.00	10350.00				MinPt-CtCt	
	1371.99	140.36	1278.08	1231.63	14.76	OSF1.50	14780.00	10350.00				MinPt-CtCt	
	1372.26	141.13	1277.83	1231.12	14.68	OSF1.50	14810.00	10350.00				MINPT-O-EOU	
	1372.49	141.38	1277.90	1231.11	14.66	OSF1.50	14820.00	10350.00				MinPt-O-ADP	
	1386.11	144.52	1289.43	1241.60	14.48	OSF1.50	14980.00	10350.00				MinPt-O-SF	
	5451.77	97.34	5386.54	5354.43	84.89	OSF1.50	20058.91	10350.00				TD	
Cimarex Cordoniz 28 Federal Com 4H XEM+MWD 0ft to 15386ft MD (Def Survey)													Pass
	10013.08	32.81	10011.10	9980.27	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	10012.98	32.81	10010.99	9980.17	669108.91	MAS = 10.00 (m)	23.00	23.00				WRP	
	10009.97	32.81	10001.41	9977.16	1521.22	MAS = 10.00 (m)	1410.00	1410.00				MinPts	
	10010.17	32.81	10001.21	9977.36	1433.39	MAS = 10.00 (m)	1530.00	1530.00				MINPT-O-EOU	
	10010.41	32.81	10001.22	9977.61	1386.29	MAS = 10.00 (m)	1590.00	1590.00				MINPT-O-EOU	
	1389.60	296.65	1190.47	1092.95	7.10	OSF1.50	14990.00	10350.00				MinPts	
	1317.63	239.73	1156.38	1077.89	8.37	OSF1.50	15400.00	10350.00				MinPt-O-SF	
	1261.53	232.10	1105.61	1029.43	8.26	OSF1.50	15760.00	10350.00				MinPt-O-SF	
	1226.03	225.24	1074.99	1000.79	8.24	OSF1.50	16120.00	10350.00				MinPt-O-SF	
	1217.37	220.09	1069.93	997.29	8.36	OSF1.50	16380.00	10350.00				MinPt-O-ADP	
	1216.73	219.34	1069.81	997.39	8.39	OSF1.50	16420.00	10350.00				MINPT-O-EOU	
	1215.94	217.00	1070.62	998.94	8.47	OSF1.50	16550.00	10350.00				MinPt-CtCt	
	1294.99	198.57	1161.95	1096.42	9.87	OSF1.50	18570.00	10350.00				MINPT-O-EOU	
	1295.06	198.66	1161.96	1096.40	9.86	OSF1.50	18580.00	10350.00				MinPt-O-ADP	
	1301.48	200.40	1167.21	1101.07	9.82	OSF1.50	18780.00	10350.00				MinPt-O-SF	
	1328.84	203.06	1192.81	1125.78	9.90	OSF1.50	19090.00	10350.00				MinPt-O-SF	
	1332.23	205.48	1194.58	1126.75	9.81	OSF1.50	19340.00	10350.00				MinPts	
	1168.16	219.28	1021.17	948.88	8.06	OSF1.50	19990.00	10350.00				MinPts	
	1168.22	219.41	1021.18	948.81	8.06	OSF1.50	20000.00	10350.00				MinPt-O-ADP	
	1170.29	220.26	1022.79	950.04	8.03	OSF1.50	20058.91	10350.00				MinPt-O-SF	
API 30-025-36196 Chevron Codorniz 28 Federal #2 (Offset) Inc Only 0ft-13750ft A (Def Survey)													Pass
	8465.50	32.81	8464.22	8432.69	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8465.34	32.81	8464.03	8432.54	335811.34	MAS = 10.00 (m)	23.00	23.00				WRP	
	8464.38	32.81	8454.50	8431.57	984.49	MAS = 10.00 (m)	400.00	400.00				MinPts	
	8463.09	61.43	8421.71	8401.66	211.06	OSF1.50	1320.00	1320.00				MinPt-CtCt	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	8462.35	114.80	8385.39	8347.55	111.81	OSF1.50	2350.00	2350.00				MinPt-CtCt	
	8460.72	159.32	8354.08	8301.40	80.29	OSF1.50	3200.00	3200.00				MinPt-CtCt	
	8463.29	187.77	8337.68	8275.52	68.07	OSF1.50	3750.00	3750.00				MinPt-CtCt	
	8464.28	190.69	8336.72	8273.58	67.02	OSF1.50	3910.00	3910.00				MINPT-O-EOU	
	8463.83	211.18	8322.62	8252.65	60.48	OSF1.50	4200.00	4200.00				MinPt-CtCt	
	8464.50	213.31	8321.86	8251.19	59.87	OSF1.50	4330.00	4330.00				MINPT-O-EOU	
	8464.15	230.45	8310.08	8233.69	55.39	OSF1.50	4570.00	4570.00				MinPt-CtCt	
	8464.20	254.97	8293.80	8209.23	50.04	OSF1.50	5040.00	5040.00				MinPt-CtCt	
	8460.70	302.39	8258.68	8158.31	42.14	OSF1.50	5930.00	5930.00				MinPt-CtCt	
	8461.35	397.79	8195.73	8063.56	32.01	OSF1.50	7760.00	7760.00				MinPt-CtCt	
	8458.82	469.84	8145.16	7988.98	27.08	OSF1.50	9110.00	9110.00				MinPt-CtCt	
	8459.10	470.78	8144.81	7988.32	27.02	OSF1.50	9190.00	9190.00				MINPT-O-EOU	
	8459.46	471.24	8144.87	7988.22	27.00	OSF1.50	9230.00	9230.00				MinPt-O-ADP	
	8458.82	489.79	8131.86	7969.03	25.97	OSF1.50	9500.00	9500.00				MinPt-CtCt	
	8459.47	491.65	8131.27	7967.82	25.87	OSF1.50	9620.00	9620.00				MINPT-O-EOU	
	2655.58	556.81	2283.95	2098.77	7.17	OSF1.50	18180.00	10350.00				MinPt-CtCt	
	2655.59	556.88	2283.91	2098.71	7.17	OSF1.50	18190.00	10350.00				MINPT-O-EOU	
	2655.64	556.95	2283.91	2098.69	7.17	OSF1.50	18200.00	10350.00				MinPt-O-ADP	
	2656.71	557.34	2284.72	2099.37	7.16	OSF1.50	18260.00	10350.00				MinPt-O-SF	
	3251.58	558.30	2878.95	2693.28	8.75	OSF1.50	20058.91	10350.00				TD	
API 30-025-22610 Atlantic Mescalero Ridge Unit MA #31 (Offset) Inc Only 0ft-500ft P&A (Def Survey)													Pass
	3761.85	32.81	3760.57	3729.04	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3761.54	32.81	3760.21	3728.74	79889.37	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	3760.65	32.81	3744.30	3727.84	249.62	MAS = 10.00 (m)	540.00	540.00				MinPts	
	3751.92	112.55	3676.46	3639.37	50.57	OSF1.50	2210.00	2210.00				MinPt-CtCt	
	3752.53	114.47	3675.79	3638.06	49.72	OSF1.50	2300.00	2300.00				MINPT-O-EOU	
	3751.93	178.92	3632.21	3573.00	31.67	OSF1.50	3490.00	3490.00				MinPt-CtCt	
	3752.95	182.17	3631.07	3570.78	31.11	OSF1.50	3620.00	3620.00				MINPT-O-EOU	
	3755.34	214.63	3611.82	3540.71	26.40	OSF1.50	4190.00	4190.00				MinPt-CtCt	
	3752.61	259.38	3579.26	3493.23	21.80	OSF1.50	5040.00	5040.00				MinPt-CtCt	
	3752.91	260.46	3578.84	3492.45	21.71	OSF1.50	5100.00	5100.00				MinPts	
	5927.31	133.59	5837.83	5793.73	67.19	OSF1.50	12890.00	10350.00				MinPt-CtCt	
	5927.49	134.10	5837.66	5793.39	66.93	OSF1.50	12940.00	10350.00				MINPT-O-EOU	
	5927.68	134.32	5837.71	5793.36	66.82	OSF1.50	12960.00	10350.00				MinPt-O-ADP	
	7344.00	224.57	7193.86	7119.43	49.33	OSF1.50	17230.00	10350.00				MinPt-O-SF	
	9298.90	261.35	9124.24	9037.55	53.63	OSF1.50	20058.91	10350.00				TD	
Chevron Sun Pearl Federal #1 (Offset) Plugged Oil Inc Only 0ft-5152ft (Def Survey)													Pass
	8425.92	32.81	8424.79	8393.11	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8425.73	32.81	8424.57	8392.92	265017.44	MAS = 10.00 (m)	23.00	23.00				WRP	
	8425.52	32.81	8424.19	8392.71	41640.48	MAS = 10.00 (m)	90.00	90.00				MinPts	
	8424.21	93.71	8361.36	8330.49	136.47	OSF1.50	1890.00	1890.00				MinPt-CtCt	
	8414.32	179.15	8294.50	8235.17	70.89	OSF1.50	3510.00	3510.00				MinPt-CtCt	
	8415.18	181.67	8293.68	8233.51	69.91	OSF1.50	3660.00	3660.00				MINPT-O-EOU	
	8416.34	183.09	8293.90	8233.25	69.37	OSF1.50	3740.00	3740.00				MinPt-O-ADP	
	8411.67	226.69	8260.16	8184.98	55.93	OSF1.50	4420.00	4420.00				MinPt-CtCt	
	8418.62	267.79	8239.72	8150.83	47.35	OSF1.50	5230.00	5230.00				MinPt-CtCt	
	8418.62	267.79	8239.71	8150.83	47.35	OSF1.50	5240.00	5240.00				MinPts	
	8419.30	267.85	8240.35	8151.45	47.34	OSF1.50	5340.00	5340.00				MinPt-O-SF	
	5125.37	183.82	5002.45	4941.55	42.07	OSF1.50	18500.00	10350.00				MinPt-CtCt	
	5126.04	185.76	5001.82	4940.28	41.64	OSF1.50	18580.00	10350.00				MINPT-O-EOU	
	5126.84	186.75	5001.96	4940.09	41.42	OSF1.50	18620.00	10350.00				MinPt-O-ADP	
	5357.97	225.92	5206.99	5132.06	35.75	OSF1.50	20058.91	10350.00				MinPt-O-SF	
Chevron Sun Pearl Federal #3 (Offset) Oil Inc Only 0ft-5120ft (Def Survey)													Pass
	7100.15	32.81	7099.02	7067.34	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7099.94	32.81	7098.77	7067.13	205978.11	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	7099.73	32.81	7098.46	7066.92	51652.59	MAS = 10.00 (m)	80.00	80.00				MinPts	
	7096.62	95.40	7032.64	7001.22	112.90	OSF1.50	1920.00	1920.00				MinPt-CtCt	
	7094.36	198.94	6961.36	6895.42	53.79	OSF1.50	3910.00	3910.00				MinPt-CtCt	
	7092.03	244.65	6928.55	6847.38	43.68	OSF1.50	4780.00	4780.00				MinPt-CtCt	
	7096.84	265.92	6919.19	6830.93	40.20	OSF1.50	5320.00	5320.00				MinPts	
	7097.03	265.93	6919.36	6831.09	40.20	OSF1.50	5330.00	5330.00				MinPt-O-SF	
	6911.44	183.66	6788.63	6727.78	56.79	OSF1.50	12580.00	10350.00				MinPt-O-SF	
	5153.45	154.65	5049.98	4998.80	50.34	OSF1.50	17190.00	10350.00				MinPt-CtCt	
	5154.14	156.59	5049.37	4997.55	49.72	OSF1.50	17270.00	10350.00				MINPT-O-EOU	
	5155.20	157.84	5049.60	4997.36	49.33	OSF1.50	17320.00	10350.00				MinPt-O-ADP	
	5900.41	235.22	5743.22	5665.19	37.80	OSF1.50	20058.91	10350.00				MinPt-O-SF	
Chevron Sun Pearl Federal #2 (Offset) Plugged Oil Inc Only 0ft-5153ft (Def Survey)													Pass
	8361.15	32.81	8360.02	8328.34	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8360.97	32.81	8359.82	8328.17	296088.59	MAS = 10.00 (m)	23.00	23.00				WRP	
	8360.81	32.81	8359.53	8328.00	55011.13	MAS = 10.00 (m)	80.00	80.00				MinPts	
	8363.10	91.25	8301.89	8271.85	139.18	OSF1.50	1840.00	1840.00				MinPt-CtCt	
	8362.51	201.82	8227.59	8160.69	62.49	OSF1.50	3960.00	3960.00				MinPt-CtCt	
	8365.18	267.72	8186.33	8097.47	47.06	OSF1.50	5230.00	5230.00				MinPt-CtCt	
	8365.19	267.74	8186.32	8097.45	47.06	OSF1.50	5240.00	5240.00				MinPts	
	8366.07	267.81	8187.16	8098.26	47.05	OSF1.50	5350.00	5350.00				MinPt-O-SF	
	5310.60	193.06	5181.52	5117.55	41.50	OSF1.50	18310.00	10350.00				MinPt-CtCt	
	5311.26	194.85	5180.98	5116.41	41.12	OSF1.50	18390.00	10350.00				MINPT-O-EOU	
	5312.04	195.77	5181.15	5116.27	40.93	OSF1.50	18430.00	10350.00				MinPt-O-ADP	
	5592.28	236.63	5434.15	5355.65	35.61	OSF1.50	20058.91	10350.00				MinPt-O-SF	
Chevron Sun Pearl Federal #4 (Offset) Oil Inc Only 0ft-5190ft (Def Survey)													Pass
	7319.99	32.81	7318.86	7287.18	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7319.81	32.81	7318.65	7287.00	266981.06	MAS = 10.00 (m)	23.00	23.00				WRP	
	7319.68	32.81	7318.43	7286.87	63961.18	MAS = 10.00 (m)	70.00	70.00				MinPts	
	7320.18	110.99	7245.81	7209.19	99.93	OSF1.50	2220.00	2220.00				MinPt-CtCt	
	7320.37	199.70	7186.86	7120.67	55.29	OSF1.50	3920.00	3920.00				MinPt-CtCt	
	7325.14	212.26	7183.25	7112.88	52.03	OSF1.50	4320.00	4320.00				MINPT-O-EOU	
	7322.72	270.43	7142.05	7052.29	40.78	OSF1.50	5260.00	5260.00				MinPts	
	7323.31	270.49	7142.61	7052.82	40.78	OSF1.50	5350.00	5350.00				MinPt-O-SF	
	6415.20	177.33	6296.60	6237.87	54.60	OSF1.50	13640.00	10350.00				MinPt-O-SF	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	5341.51	175.12	5224.39	5166.39	46.04	OSF1.50	17190.00	10350.00				MinPt-CtCt	
	5342.07	176.83	5223.80	5165.24	45.60	OSF1.50	17270.00	10350.00				MINPT-O-EOU	
	5342.80	177.71	5223.95	5165.09	45.38	OSF1.50	17310.00	10350.00				MinPt-O-ADP	
	6061.83	246.68	5897.00	5815.15	37.02	OSF1.50	20058.91	10350.00				MinPt-O-SF	
Vanguard Operating Stivason Federal #4 (Offset) Oil 0ft-5067ft (Def Survey)													Pass
	9500.48	32.81	9499.35	9467.67	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9500.30	32.81	9499.14	9467.49	329121.51	MAS = 10.00 (m)	23.00	23.00				WRP	
	9500.11	32.81	9498.83	9467.30	63605.49	MAS = 10.00 (m)	90.00	90.00				MinPts	
	9500.70	32.81	9498.30	9467.90	7459.74	MAS = 10.00 (m)	330.00	330.00				MINPT-O-EOU	
	9501.71	32.81	9498.15	9468.90	3904.93	MAS = 10.00 (m)	600.00	600.00				MINPT-O-EOU	
	9529.78	32.81	9513.74	9496.97	639.30	MAS = 10.00 (m)	3330.00	3330.00				MINPT-O-EOU	
	9530.61	32.81	9513.72	9497.80	604.70	MAS = 10.00 (m)	3520.00	3520.00				MINPT-O-EOU	
	9531.50	32.81	9513.67	9498.69	570.84	MAS = 10.00 (m)	3760.00	3760.00				MINPT-O-EOU	
	9543.54	35.56	9519.46	9507.99	415.79	OSF1.50	5190.00	5190.00				MINPT-O-EOU	
	9543.65	35.69	9519.48	9507.96	414.21	OSF1.50	5210.00	5210.00				MinPt-O-ADP	
	10564.90	59.70	10524.73	10505.20	270.55	OSF1.50	9681.92	9681.92				MinPt-O-SF	
	5341.89	206.13	5204.10	5135.77	39.08	OSF1.50	19530.00	10350.00				MinPt-CtCt	
	5342.62	208.25	5203.41	5134.37	38.68	OSF1.50	19620.00	10350.00				MINPT-O-EOU	
	5343.43	209.18	5203.60	5134.25	38.52	OSF1.50	19660.00	10350.00				MinPt-O-ADP	
	5367.81	217.79	5222.24	5150.03	37.16	OSF1.50	20058.91	10350.00				MinPt-O-SF	
Strata Production Stivason Federal #2 (Offset) Plugged Oil Inc Only 0ft-4610ft (Def Survey)													Pass
	9743.99	32.81	9742.86	9711.19	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9743.80	32.81	9742.63	9710.99	292462.44	MAS = 10.00 (m)	23.00	23.00				WRP	
	9743.54	32.81	9742.21	9710.73	49917.14	MAS = 10.00 (m)	100.00	100.00				MinPts	
	9741.28	97.64	9675.81	9643.64	151.38	OSF1.50	1970.00	1970.00				MinPt-CtCt	
	9741.41	199.33	9608.15	9542.08	73.72	OSF1.50	3930.00	3930.00				MinPt-CtCt	
	9743.60	207.18	9605.11	9536.42	70.92	OSF1.50	4230.00	4230.00				MINPT-O-EOU	
	9746.37	210.52	9605.65	9535.85	69.81	OSF1.50	4370.00	4370.00				MinPt-O-ADP	
	9750.83	239.64	9590.69	9511.19	61.32	OSF1.50	4700.00	4700.00				MinPt-CtCt	
	9750.83	239.65	9590.68	9511.18	61.31	OSF1.50	4710.00	4710.00				MinPts	
	9752.60	239.78	9592.37	9512.82	61.29	OSF1.50	4890.00	4890.00				MinPt-O-SF	
	5653.85	212.30	5511.94	5441.55	40.15	OSF1.50	19830.00	10350.00				MinPt-CtCt	
	5654.55	214.42	5511.22	5440.12	39.76	OSF1.50	19920.00	10350.00				MINPT-O-EOU	
	5655.55	215.61	5511.44	5439.94	39.55	OSF1.50	19970.00	10350.00				MinPt-O-ADP	
	5658.43	217.73	5512.90	5440.70	39.18	OSF1.50	20058.91	10350.00				MinPt-O-SF	
API 30-025-22767 Sinclair Mescalero Ridge Unit MA #32 (Offset) Inc Only 0ft-4000ft P&A (Def Survey)													Pass
	5997.78	32.81	5996.49	5964.97	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5997.56	32.81	5996.24	5964.75	176040.97	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	5997.04	32.81	5983.73	5964.24	498.47	MAS = 10.00 (m)	460.00	460.00				MinPts	
	6000.52	122.51	5918.42	5878.01	74.23	OSF1.50	2430.00	2430.00				MinPt-CtCt	
	5999.30	202.61	5863.79	5796.68	44.69	OSF1.50	3970.00	3970.00				MinPt-CtCt	
	6002.21	211.40	5860.84	5790.80	42.84	OSF1.50	4260.00	4260.00				MINPT-O-EOU	
	6003.31	212.91	5860.94	5790.40	42.54	OSF1.50	4310.00	4310.00				MinPt-O-ADP	
	6003.55	212.94	5861.16	5790.61	42.54	OSF1.50	4320.00	4320.00				MinPt-O-SF	
	6737.93	145.47	6640.51	6592.45	70.08	OSF1.50	15550.00	10350.00				MinPt-CtCt	
	6738.42	146.95	6640.02	6591.47	69.38	OSF1.50	15630.00	10350.00				MINPT-O-EOU	
	6739.21	147.89	6640.19	6591.32	68.94	OSF1.50	15680.00	10350.00				MinPt-O-ADP	
	7903.78	226.34	7752.46	7677.44	52.67	OSF1.50	19680.00	10350.00				MinPt-O-SF	
	8108.28	231.73	7953.37	7876.55	52.77	OSF1.50	20058.91	10350.00				TD	
API 30-025-02398 Drilling & Exploration Nell Gillespie A (Offset) Blind 0ft-3850ft P&A (Def Survey)													Pass
	7150.84	32.81	7149.55	7118.03	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7150.66	32.81	7149.34	7117.85	250248.50	MAS = 10.00 (m)	23.00	23.00				WRP	
	7150.52	1176.27	6365.91	5974.25	9.13	OSF1.50	3910.00	3910.00				MinPt-CtCt	
	7150.52	1178.79	6364.23	5971.73	9.11	OSF1.50	3920.00	3920.00				MinPts	
	6513.56	241.89	6351.87	6271.67	40.60	OSF1.50	17190.00	10350.00				MinPt-CtCt	
	6515.23	245.52	6351.13	6269.72	40.01	OSF1.50	17340.00	10350.00				MINPT-O-EOU	
	6528.25	260.29	6354.30	6267.96	37.80	OSF1.50	17630.00	10350.00				MinPt-O-ADP	
	7116.49	544.21	6753.26	6572.28	19.66	OSF1.50	20058.91	10350.00				MinPt-O-SF	

1. Geological Formations

TVD of target 10,350
MD at TD 20,059

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1630	Useable Water	
Salado	1700	N/A	
Base Of Salt	3260	N/A	
Lamar	4960	N/A	
Bell Canyon	5330	N/A	
Cherry Canyon	5975	N/A	
Brushy Canyon	6505	Hydrocarbons	
Bone Spring	8250	Hydrocarbons	
1st Bone Spring	9480	Hydrocarbons	
2nd Bone Spring	10000	Hydrocarbons	
3rd Bone Spring	10570	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	Y

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	814	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	218	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	1020	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	288	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Production	286	10.50	3.45	22.18	N/A	Lead: NeoCem
	151	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS
Completion System	707	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	51
Production	5260	25
Completion System	10350	10

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

4. Pressure Control Equipment

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	2M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	3M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		
6	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	Y	Are anchors required by manufacturer?

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1680'	Fresh Water	7.83 - 8.33	28	N/C
1680' to 5460'	Cut Brine or OBM	9.80 - 10.30	27-70	N/C
5460' to 10550'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
10550' to 20059'	OBM	8.50 - 9.00	50-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
X	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4843 psi
Abnormal Temperature	No

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
	H2S is present
	H2S plan is attached

8. Other Facets of Operation

9. Wellhead

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

A solid steel body pack-off will be utilized after running and cementing the production casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

All casing strings will be tested as per Onshore Order No.2 to atleast 0.22 psi/ft or 1,500 whichever is greater and not to exceed 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

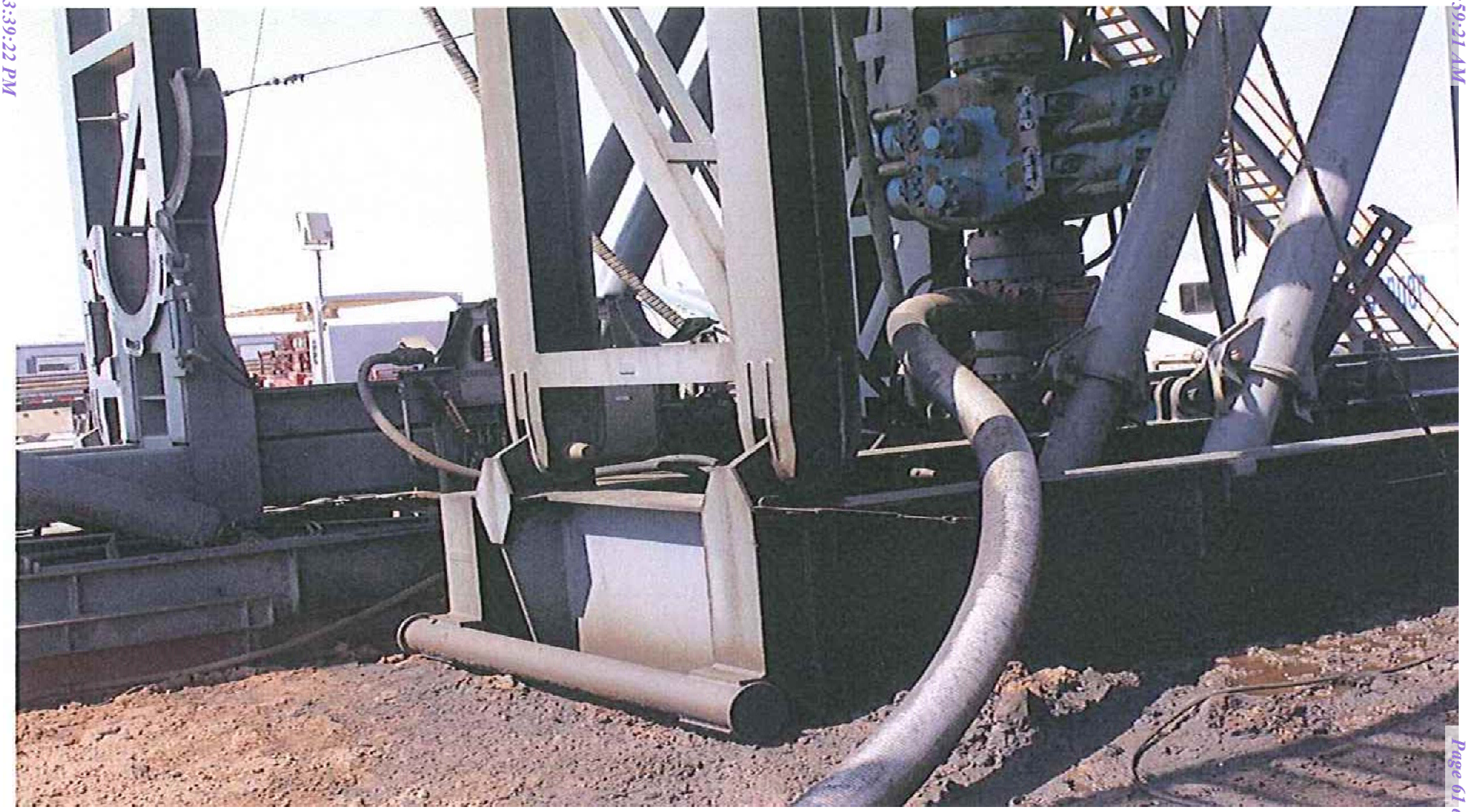
Co-Flex Hose

Mescalero Ridge 21-28 Federal Com 3H

Cimarex Energy Co.

21-19S-34E

Lea, NM



Co-Flex Hose Hydrostatic Test
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM

Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
Oderco Inc	odyd-271

HOSE SPECIFICATIONS

Type:	Hose Length:
Stainless Steel Armor Choke & Kill Hose	45'ft.

I.D.	O.D.
4 INCHES	9 INCHES

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 PSI	15,000 PSI	0 PSI

COUPLINGS

Stem Part No.	Ferrule No.
OKC OKC	OKC OKC
Type of Coupling: Swage-It	

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
15 MIN.	0 PSI

Hose Assembly Serial Number:	Hose Serial Number:
79793	OKC

Comments:

Date:	Tested:	Approved:
3/8/2011	A. Jaime Sanchez	

Co-Flex Hose Hydrostatic Test
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM

Midwest Hose & Specialty, Inc.

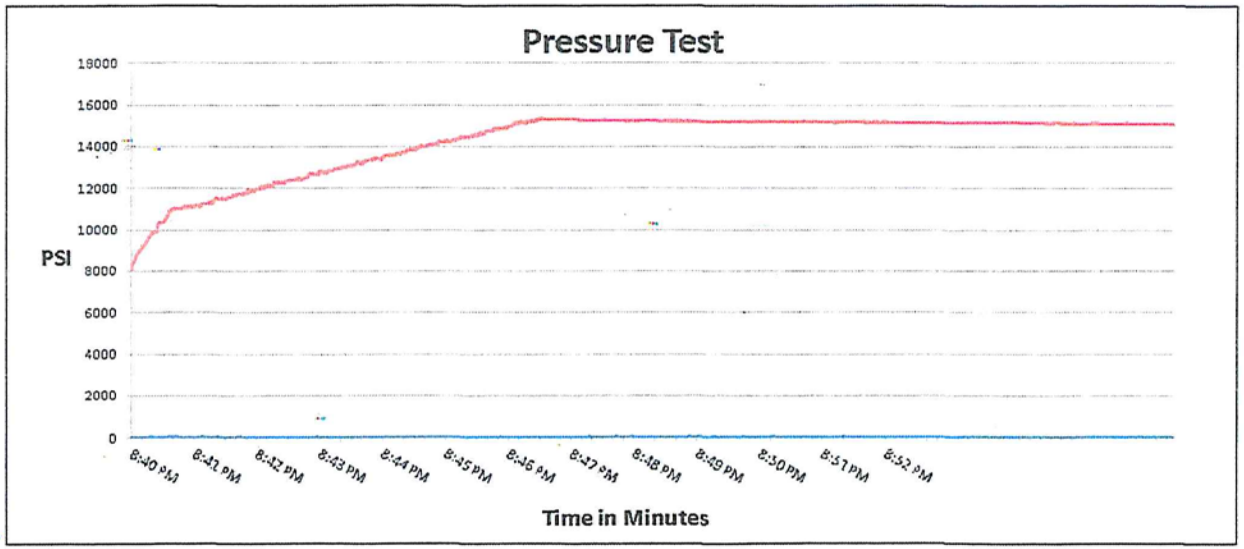
Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

Hose Specifications		Verification	
Hose Type	Length	Type of Fitting	Coupling Method
C & K	45'	4 1/16 10K	Swage
I.D.	O.D.	Die Size	Final O.D.
4"	6.09"	6.38"	6.25"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standard Safety Multiplier Applies	5544	79793



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 Minutes		15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Zac Mcconnell*

Approved By: *Kim Thomas*

Co-Flex Hose
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer:	PO
DEM	ODYD-271

SPECIFICATIONS

Sales Order	Dated:
79793	3/8/2011

We hereby cerify that the material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards

Supplier:
Midwest Hose & Specialty, Inc.
10640 Tanner Road
Houston, Texas 77041

Comments:

Approved:	Date:
Jamal Garcia	3/8/2011

Midwest Hose & Specialty, Inc.

Co-Flex Hose
Mescalero Ridge 21-28 Federal Com 3H
Cimarex Energy Co.
21-19S-34E
Lea, NM

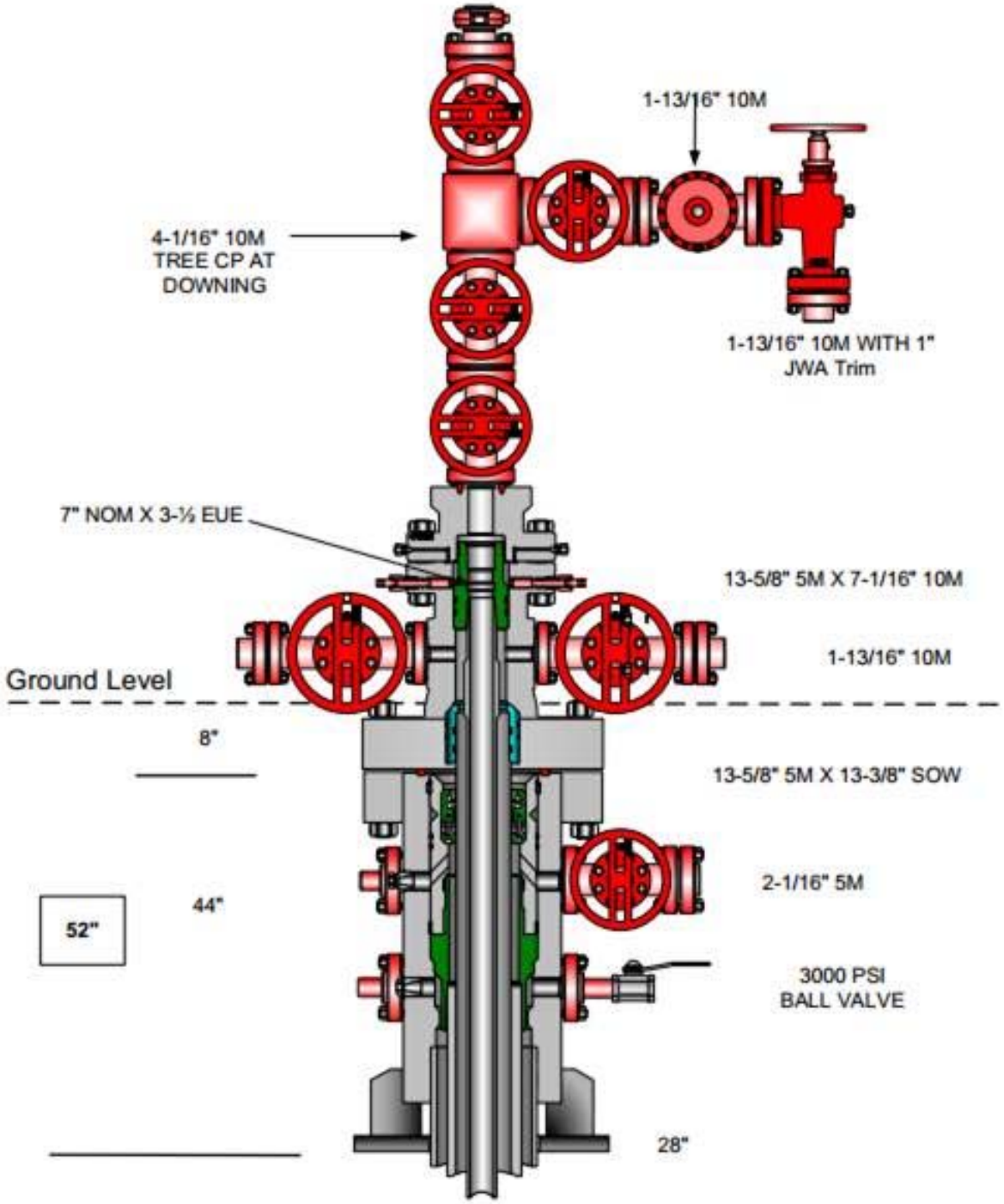
Specification Sheet
Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets.The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unibolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

P.O. Box 96558 – 1421 S.E. 29th St. Oklahoma City, OK 73143 * (405) 670-6718 * Fax: (405) 670-6816

Multi-bowl Wellhead Diagram



Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1680	1680	13-3/8"	54.50	J-55	ST&C	1.55	3.77	5.61
12 1/4	0	5460	5460	9-5/8"	40.00	J-55	BT&C	1.39	1.35	2.88
8 3/4	0	8781	8781	7"	29.00	L-80	LT&C	1.71	1.99	1.96
8 3/4	8781	10550	10310	7"	29.00	L-80	LT&C	1.45	1.69	13.24
6	8682	20059	10350	4-1/2"	11.60	P-110	BT&C	1.56	2.21	18.97
							BLM Minimum Safety Factor	1.125	1	1.6 Dry 1.8 Wet

Multi-bowl Wellhead Diagram
Mescalero Ridge 21-28 Fed Com 3H
Cimarex Energy Co.
21-19S-34E
Lea County, NM

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

SUPO Data Report
03/29/2023

APD ID: 10400078657
Submission Date: 08/25/2021
Operator Name: CIMAREX ENERGY COMPANY
Well Name: MESCALERO RIDGE 21-28 FEDERAL COM
Well Number: 3H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Mescalero_Ridge_21_28_Fed_Com_2H_Existing_Access_20210420090332.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT
Row(s) Exist? YES

ROW ID(s)

ID: NM139121

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Mescalero_Ridge_21_28_Fed_Com_3H_One_Mile_20210825155052.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Existing Roads will be used. Existing well pad and Battery will be used. Bulklines: 8 12" buried bulklines. Bulkline Route is existing and we are requesting to upgrade from flowlines to bulklines. Please see Attachment G1 for route

Production Facilities map:

Mescalero_Ridge_21_Fed_CTB_EXISTING_Battery_Layout_20210420090441.pdf

Mescalero_Ridge_21_28_Fed_Com_Bulkline_ROW_20210825155307.pdf

Mescalero_Ridge_21_28_Fed_Com_3H_SUPO_20210825155357.pdf

Mescalero_Ridge_21_28_Fed_Com_3H_Temp_Frac_Water_Route_20210825160211.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: MUNICIPAL

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Permit Number:

Water source transport method: TRUCKING

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 5000

Source volume (acre-feet): 0.64446548

Source volume (gal): 210000

Water source and transportation

Mescalero_Ridge_21_Fed_Drilling_Water_Route_20210825155434.pdf

Water source comments:

New water well? N

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: NO

Construction Materials description:

Construction Materials source location

Section 7 - Methods for Handling

Waste type: DRILLING

Waste content description: Drilling Fluids, drill cuttings, water and other waste produced from the well during drilling operations.
Amount of waste: 15000 barrels

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Haul to R360 Environmental Solutions, 4507 Carlsbad Hwy, Hobbs, NM 88240

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Waste type: SEWAGE

Waste content description: Human Waste

Amount of waste: 300 gallons

Waste disposal frequency : Weekly

Safe containment description: Waste will be properly contained and disposed of properly at a state approved disposal facility.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and dispose human waste to City of Toyah TX waste water facility.

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations

Amount of waste: 32500 pounds

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: A licensed 3rd party hauls trash to Lea County Landfill

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

Mescalero_Ridge_21_28_Fed_Com_3H_Wellsite_Layout_20210825155625.pdf

Mescalero_Ridge_21_W2E2_Pad_20210825155833.docx

Comments: This well pad has wells: Mescalero Ridge 21 Federal 1H (Existing) & Mescalero Ridge 21-28 Federal Com 2H 3H 4H 5H 6H 7H 8H

Section 10 - Plans for Surface

Type of disturbance: No New Surface Disturbance **Multiple Well Pad Name:** Mescalero Ridge 21 Fededral

Multiple Well Pad Number: W2E2

Recontouring

Mescalero_Ridge_21_28_Fed_Com_Interim_Reclamation_20210825160013.pdf

Drainage/Erosion control construction: To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

Drainage/Erosion control reclamation: All disturbed and re-contoured areas would be reseeded according to specifications. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Well pad proposed disturbance (acres):	**Well pad interim reclamation (acres):** 0	**Well pad long term disturbance (acres):** 0
Road proposed disturbance (acres):	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres):	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres):	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres):	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 0	**Total interim reclamation:** 0	**Total long term disturbance:** 0

Disturbance Comments:

Reconstruction method: After well plugging, all disturbed areas would be returned to the original contour or a contour that blends with the surrounding landform including roads unless the surface owner requests that they be left intact. In consultation with the surface owners it will be determined if any gravel or similar materials used to reinforce an area are to be removed, buried, or left in place during final reclamation. Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated. As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching, or fertilizing. Reclamation, Re-vegetation, and Drainage: All disturbed and re-contoured areas would be reseeded using techniques outlined under Phase I and II of this plan or as specified by the land owner. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.

Topsoil redistribution: The original stock piled topsoil, if any, will be spread evenly over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pad, production facilities, roads, pipelines, and power line corridors as close as possible to the original topography. The location will then be seeded.

Soil treatment: The soil surface would be prepared to provide a seedbed for reestablishment of desirable vegetation. Establish control of erosion and invasion of non-native plants to reestablish plant community.
Existing Vegetation at the well pad: N/A

Existing Vegetation at the well pad

Existing Vegetation Community at the road: N/A

Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: N/A

Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Seedling transplant description

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation

Operator Contact/Responsible Official

First Name: Amity **Last Name:** Crawford

Phone: (432)620-1909 **Email:** acrawford@cimarex.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: N/A

Weed treatment plan

Monitoring plan description: N/A

Monitoring plan

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW

SUPO Additional Information:

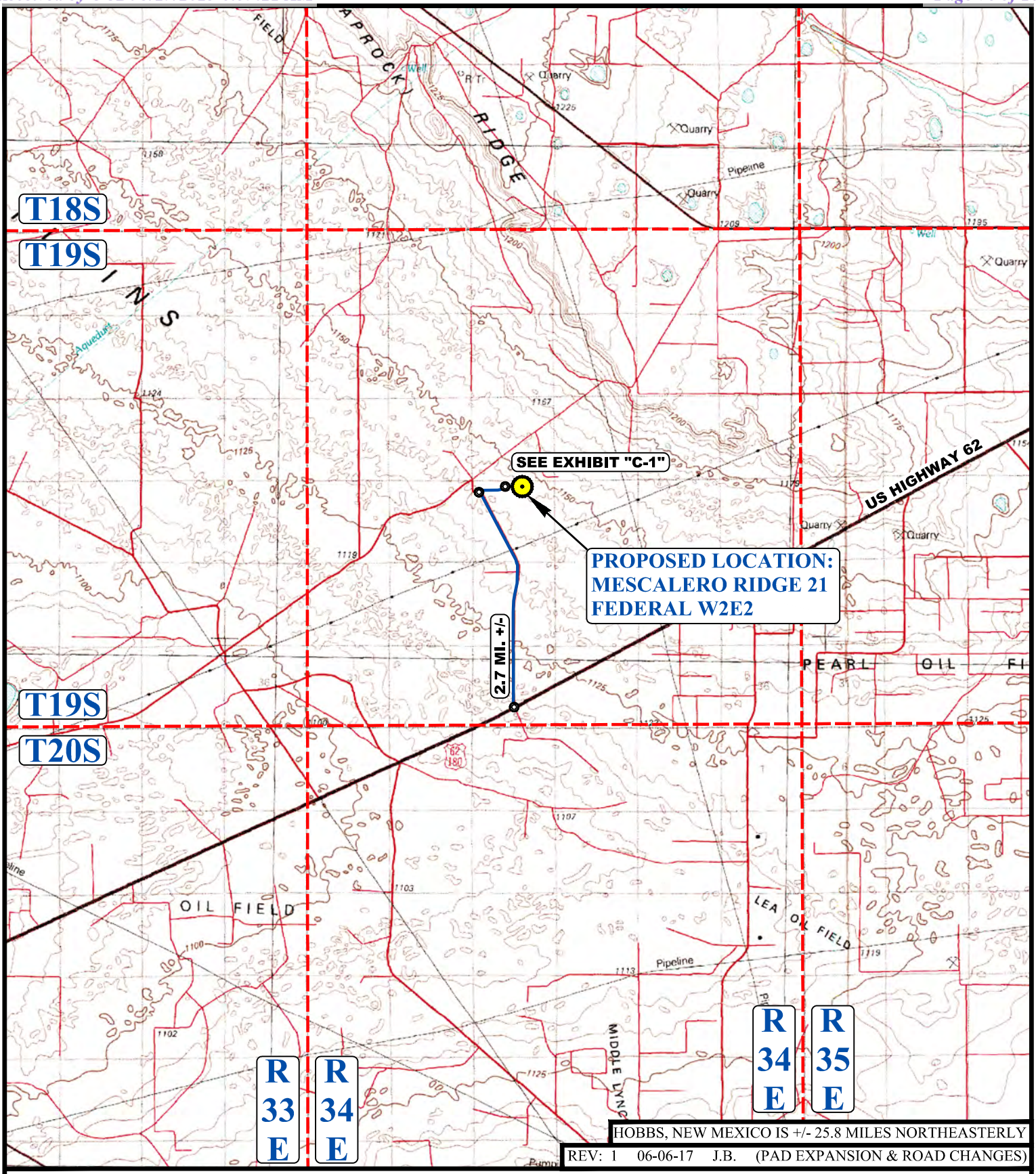
Use a previously conducted onsite? Y

Previous Onsite information: V-Door West. Top soil Northwest. Fence off the entire NE corner of pad due to Burrowing Owl. Interim reclamation: All sides. Access road off NW corner and tying into previous 1H staked access to the west. 500' x 500' pad = 310' north, 180' east, 190' south and 320' west.

Other SUPO

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H



HOBBS, NEW MEXICO IS +/- 25.8 MILES NORTHEASTERLY

REV: 1 06-06-17 J.B. (PAD EXPANSION & ROAD CHANGES)

LEGEND:

⊙ **PROPOSED LOCATION**

N

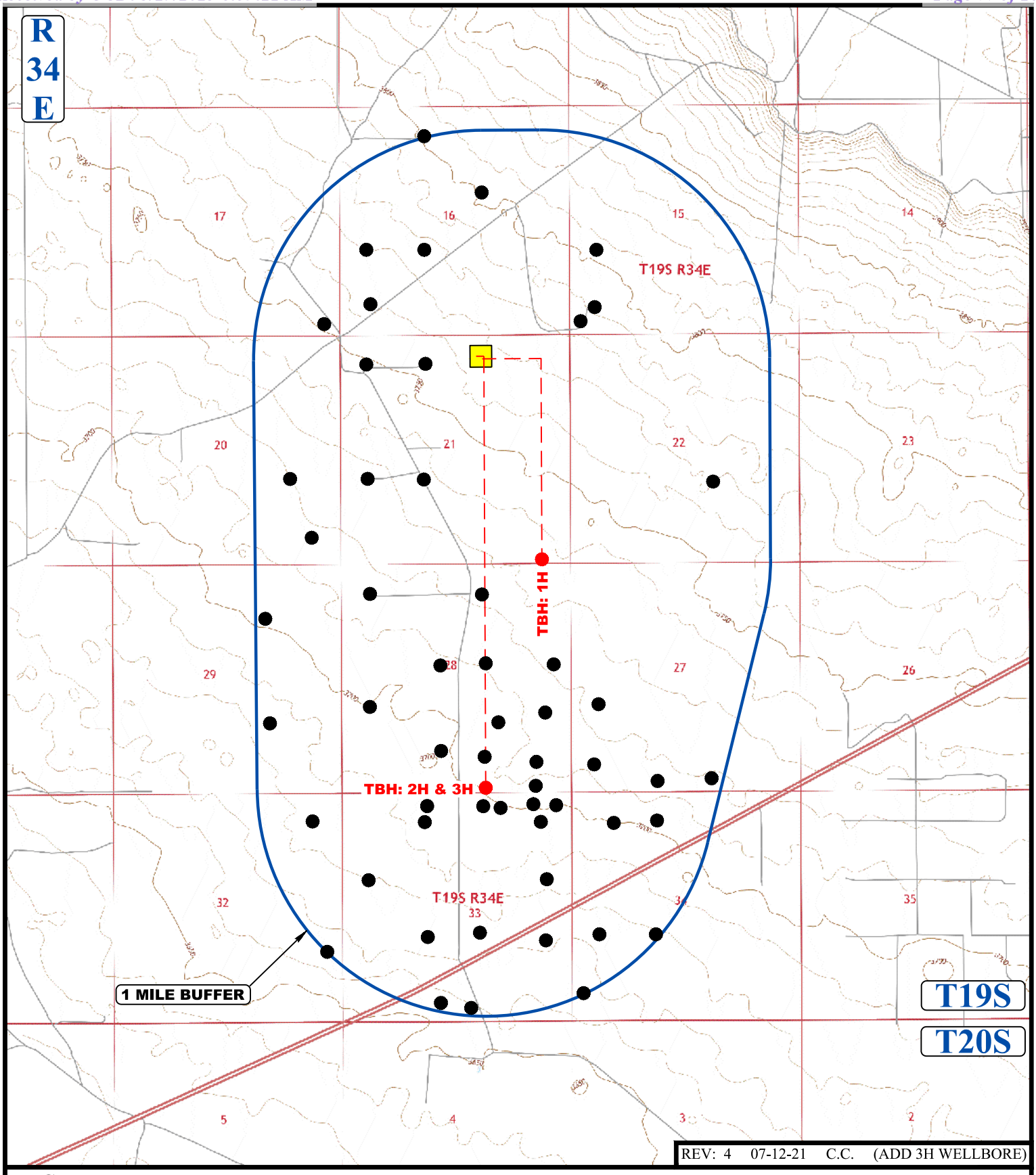
CIMAREX ENERGY CO

MESCALERO RIDGE 21 FEDERAL W2E2
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.J., G.H.	09-15-14	SCALE
DRAWN BY	M.M.	09-19-14	1 : 100,000

PUBLIC ACCESS ROAD MAP **EXHIBIT B**

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



REV: 4 07-12-21 C.C. (ADD 3H WELLBORE)

LEGEND:

● EXISTING WELLS

N

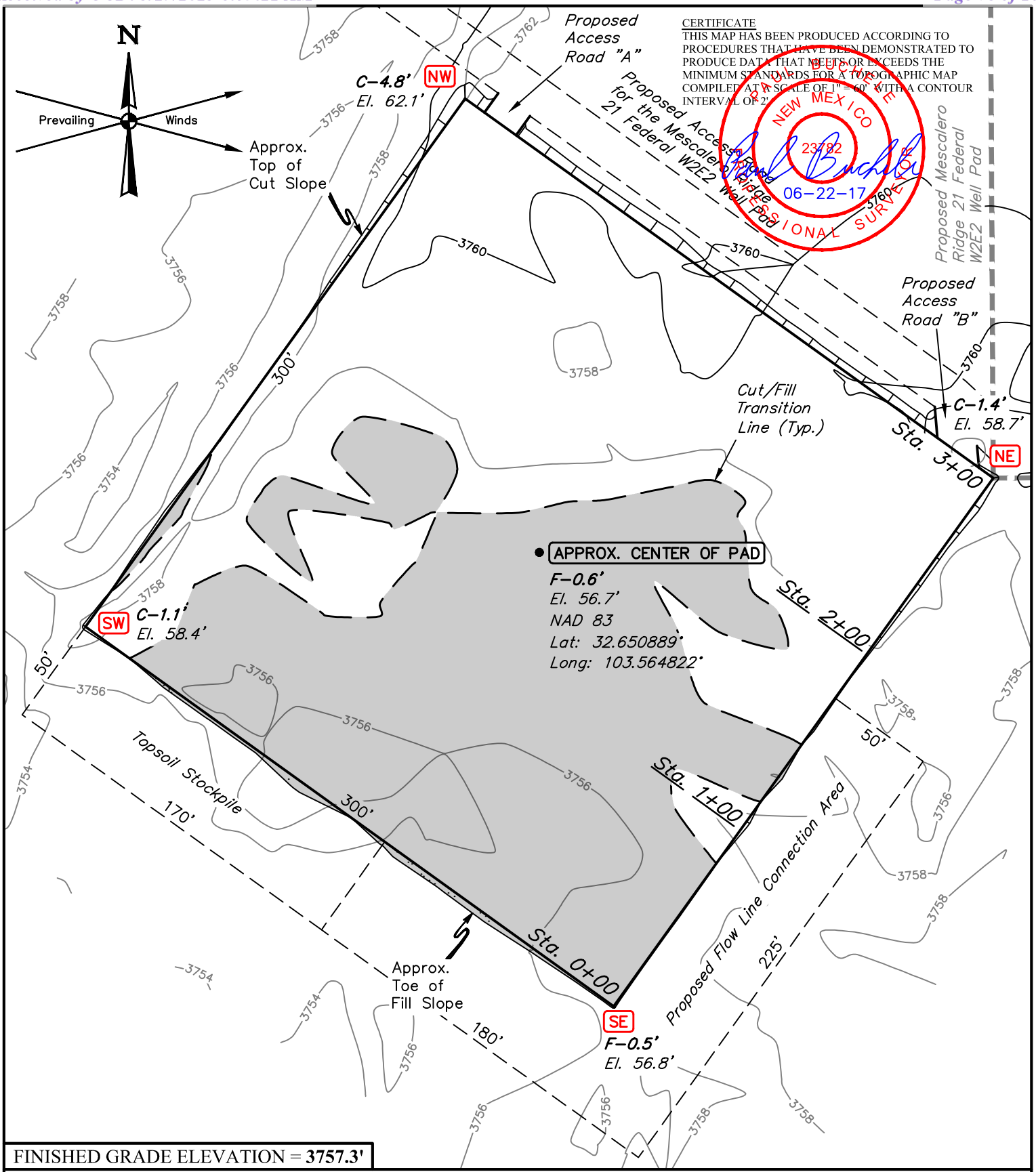
CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.J., G.H.	09-15-14	SCALE
DRAWN BY	M.M.	09-19-14	1 : 36,000
ONE MILE RADIUS PLAT			EXHIBIT A

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



FINISHED GRADE ELEVATION = **3757.3'**

NOTES:

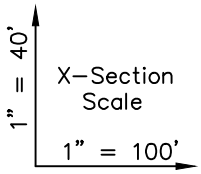
- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

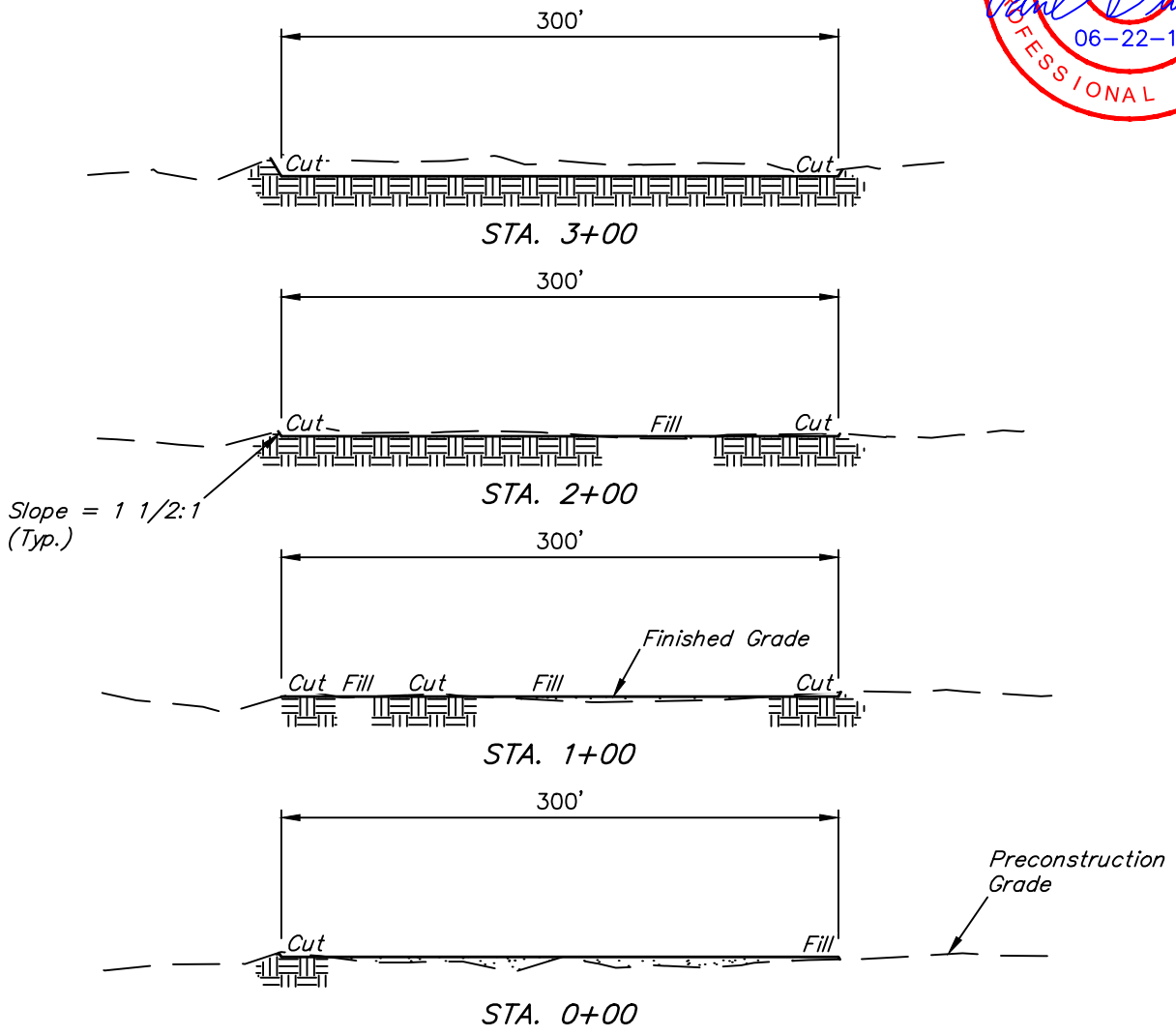
CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL CTB
NW 1/4 NE 1/4 & NE 1/4 NW 1/4
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-02-17	SCALE
DRAWN BY	S.F.	06-13-17	1" = 60'
LOCATION LAYOUT			EXHIBIT F

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017





APPROXIMATE EARTHWORK QUANTITIES	
(4") TOPSOIL STRIPPING	1,150 Cu. Yds.
REMAINING LOCATION	1,950 Cu. Yds.
TOTAL CUT	**3,100 Cu. Yds.**
FILL	**1,950 Cu. Yds.**
EXCESS MATERIAL	1,150 Cu. Yds.
TOPSOIL	1,150 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	**0 Cu. Yds.**

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	**ACRES**
WELL SITE DISTURBANCE	NA	±2.316
FLOW LINE CONNECTION AREA DISTURBANCE	NA	±0.407
30' WIDE ACCESS ROAD "A" R-O-W DISTURBANCE	±19.99'	±0.014
30' WIDE ACCESS ROAD "B" R-O-W DISTURBANCE	±26.26'	±0.018
30' WIDE SWD FLOW LINE R-O-W DISTURBANCE	±13,059.00'	±8.994
30' WIDE POWER LINE R-O-W DISTURBANCE	±2,493.26'	±1.717
TOTAL SURFACE USE AREA		**±13.466**

NOTES:
- Fill quantity includes 5% for compaction.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

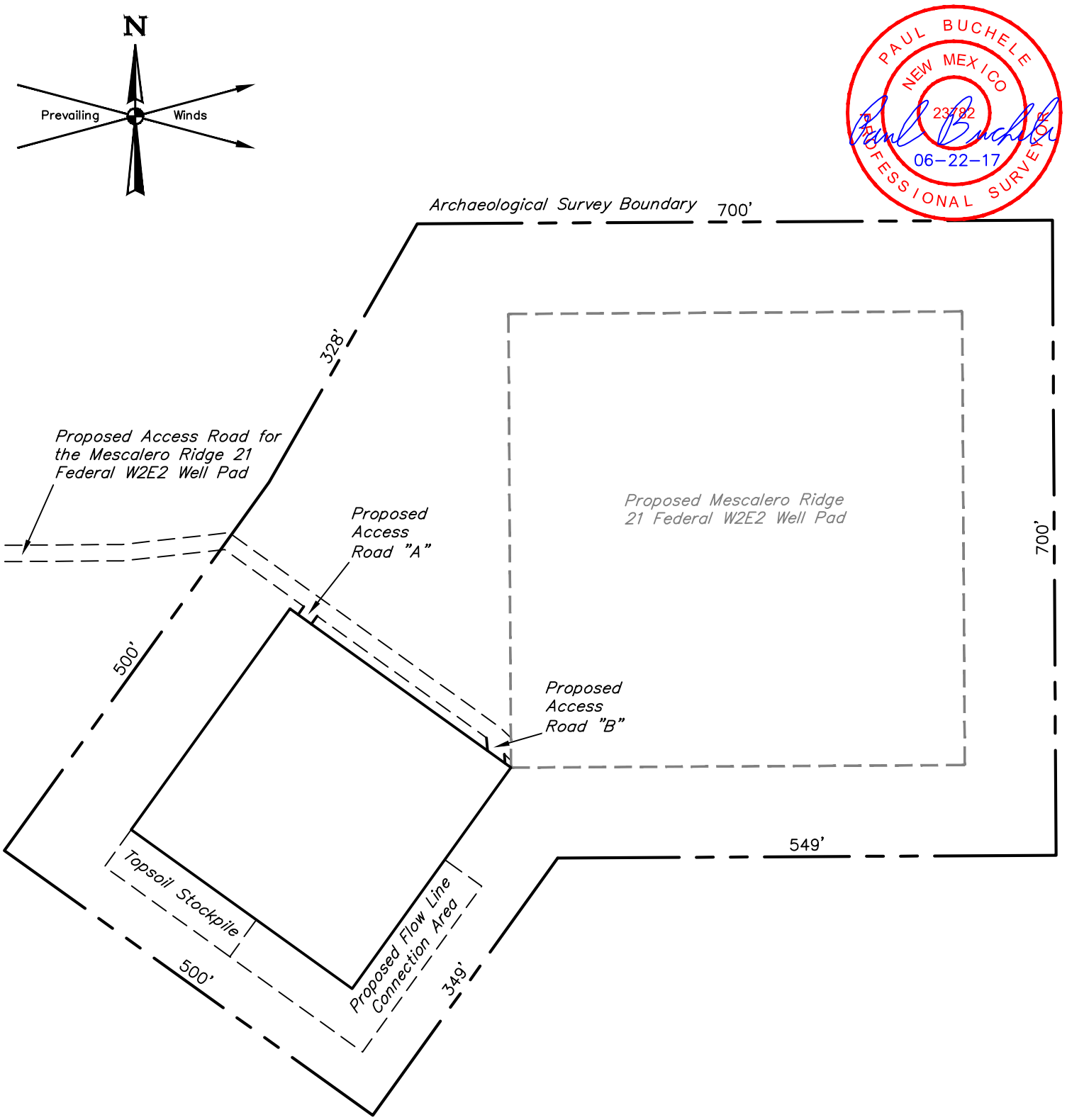
CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL CTB
NW 1/4 NE 1/4 & NE 1/4 NW 1/4
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	C.T., J.R.	06-02-17	**SCALE**
DRAWN BY	S.F.	06-13-17	AS SHOWN

TYPICAL CROSS SECTIONS **EXHIBIT F**



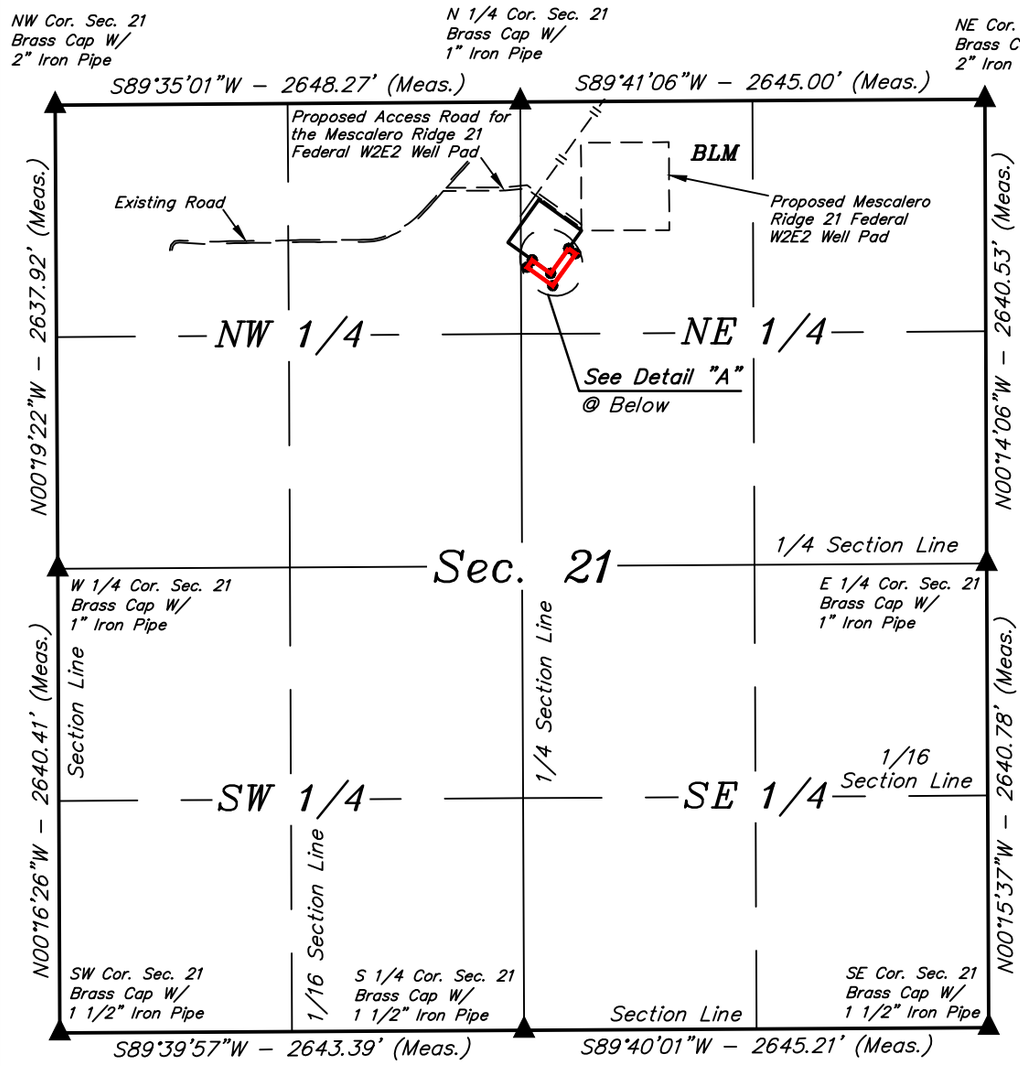
NOTES:

CIMAREX ENERGY CO.

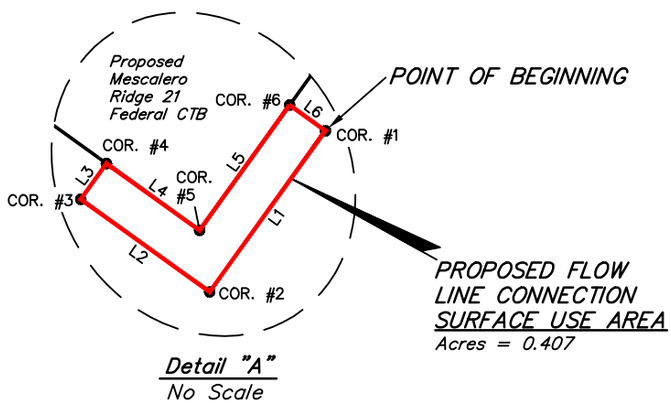
MESCALERO RIDGE 21 FEDERAL CTB
NW 1/4 NE 1/4 & NE 1/4 NW 1/4
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-02-17	**SCALE**
DRAWN BY	S.F.	06-13-17	1" = 150'
ARCHAEOLOGICAL SURVEY BOUNDARY			**EXHIBIT F**

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



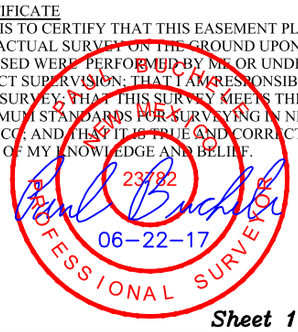
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S35°42'12"W	225.00'
L2	N54°17'48"W	180.00'
L3	N35°42'12"E	50.00'
L4	S54°17'48"E	130.00'
L5	N35°42'12"E	175.00'
L6	S54°17'48"E	50.00'



Detail "A"
No Scale

CERTIFICATE

THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



1000' 500' 0' 1000'

▲ = SECTION CORNERS LOCATED.

FILE: 61825-A1

Sheet 1 of 2

NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

N

CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL CTB
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-01-17	SCALE
DRAWN BY	S.F.	06-13-17	1" = 1000'

FLOW LINE CONNECTION Exhibit F

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

FLOW LINE CONNECTION SURFACE USE AREA DESCRIPTION

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 21, T19S, R34E, N.M.P.M., WHICH BEARS S20°08'04"E 919.04' FROM THE NORTH 1/4 CORNER OF SAID SECTION 21, THENCE S35°42'12"W 225.00'; THENCE N54°17'48"W 180.00'; THENCE N35°42'12"E 50.00'; THENCE S54°17'48"E 130.00'; THENCE N35°42'12"E 175.00'; THENCE S54°17'48"E 50.00' TO THE POINT OF BEGINNING. CONTAINS 0.407 ACRES MORE OR LESS.

MESCALERO RIDGE 21 FEDERAL CTB			
SECTION CORNER	DESCRIPTION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
NW COR. SEC. 21, T19S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°39'10.68"	W 103°34'25.93"
N 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°39'10.79"	W 103°33'54.96"
NE COR. SEC. 21, T19S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°39'10.85"	W 103°33'24.03"
E 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°38'44.73"	W 103°33'24.00"
SE COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.60"	W 103°33'23.95"
S 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.53"	W 103°33'54.88"
SW COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.46"	W 103°34'25.79"
W 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°38'44.58"	W 103°34'25.85"

MESCALERO RIDGE 21 FEDERAL CTB FLOW LINE CONNECTION SUA		
CORNER	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
1	N 32°39'02.24"	W 103°33'51.29"
2	N 32°39'00.44"	W 103°33'52.83"
3	N 32°39'01.48"	W 103°33'54.54"
4	N 32°39'01.88"	W 103°33'54.20"
5	N 32°39'01.13"	W 103°33'52.97"
6	N 32°39'02.53"	W 103°33'51.77"

CERTIFICATE

THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

STATE OF NEW MEXICO
23782
Paul Buchanan
06-22-17
PROFESSIONAL SURVEYOR

POINT OF BEGINNING BEARS S20°08'04"E 919.04' FROM THE NORTH 1/4 CORNER OF SECTION 21, T19S, R34E, N.M.P.M.

FILE: 6 1 8 2 5-A2

Sheet 2 of 2

NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

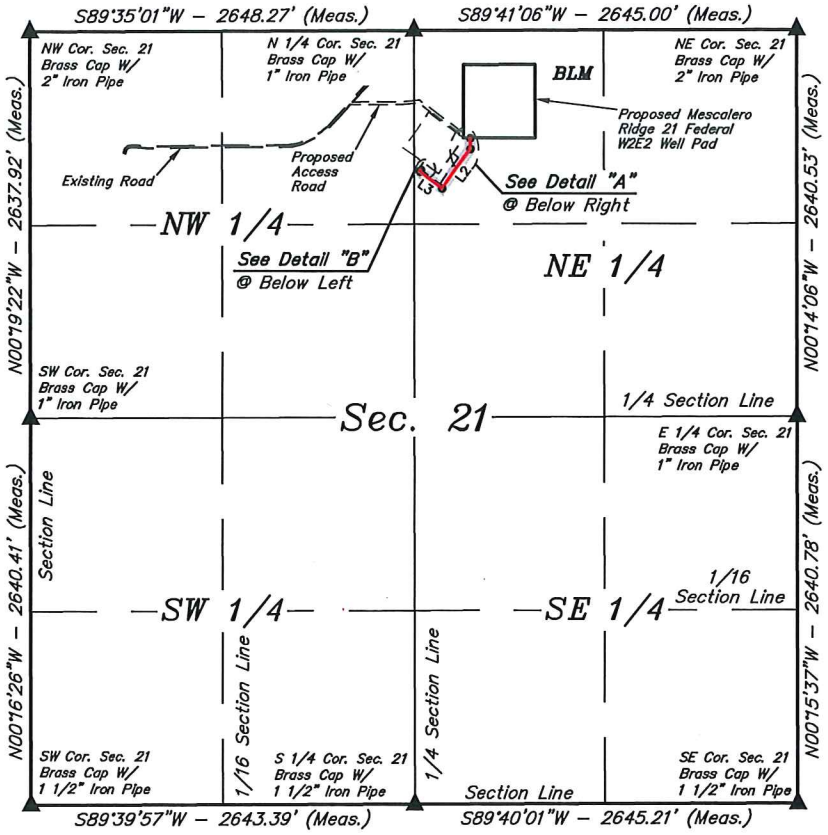
CIMAREX ENERGY CO.

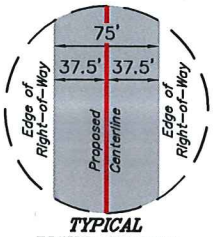
MESCALERO RIDGE 21 FEDERAL CTB
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-01-17	SCALE
DRAWN BY	S.F.	06-13-17	N/A

FLOW LINE CONNECTION Exhibit F

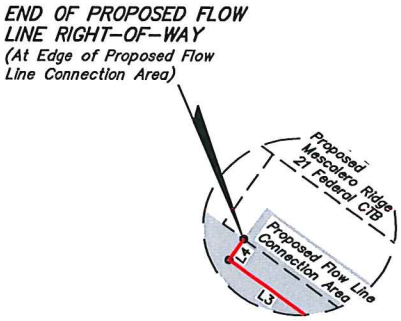
UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



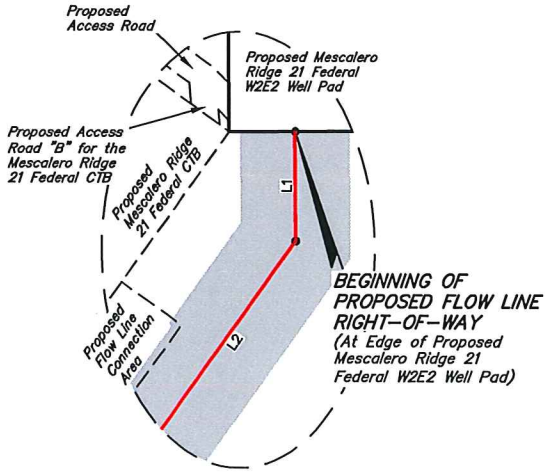


TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°17'55"E	74.04'
L2	S35°42'21"W	331.62'
L3	N54°19'27"W	194.95'
L4	N35°39'02"E	15.09'



Detail "B"
No Scale



Detail "A"
No Scale

ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 21 (NE 1/4)	BLM	615.71	37.32	1.060

▲ = SECTION CORNERS LOCATED.

CERTIFICATE
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STATE OF NEW MEXICO 23782 PROFESSIONAL SURVEYOR 05-02-19

FILE: 61807-A1

Sheet 1 of 2

REV: 01 05-02-19 J.P.P. (UPDATE ROW WIDTH)

NOTES:
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

N

CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2 (ROW 3)
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-03-17	SCALE
DRAWN BY	S.F.	06-09-17	1" = 1000'
FLOW LINE R-O-W			EXHIBIT G-1

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

FLOW LINE RIGHT–OF–WAY DESCRIPTION

A 75' WIDE RIGHT–OF–WAY 37.5' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 21, T19S, R34E, N.M.P.M., WHICH BEARS S28°16'54"E 831.15' FROM THE NORTH 1/4 CORNER OF SAID SECTION 21, THENCE S00°17'55"E 74.04'; THENCE S35°42'21"W 331.62'; THENCE N54°19'27"W 194.95'; THENCE N35°39'02"E 15.09' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 21, WHICH BEARS S03°04'48"E 950.68' FROM THE NORTH 1/4 CORNER OF SAID SECTION 21. THE SIDE LINES OF SAID DESCRIBED RIGHT–OF–WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A TRANSVERSE MERCATOR PROJECTION WITH A CENTRAL MERIDIAN OF W103°53'00". CONTAINS 1.060 ACRES MORE OR LESS.

MESCALERO RIDGE 21 FEDERAL W2E2			
SECTION CORNER	DESCRIPTION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
NW COR. SEC. 21, T19S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°39'10.68"	W 103°34'25.93"
N 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°39'10.79"	W 103°33'54.96"
NE COR. SEC. 21, T19S, R34E	BRASS CAP WITH 2" IRON PIPE	N 32°39'10.85"	W 103°33'24.03"
E 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°38'44.73"	W 103°33'24.00"
SE COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.60"	W 103°33'23.95"
S 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.53"	W 103°33'54.88"
SW COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1 1/2" IRON PIPE	N 32°38'18.46"	W 103°34'25.79"
W 1/4 COR. SEC. 21, T19S, R34E	BRASS CAP WITH 1" IRON PIPE	N 32°38'44.58"	W 103°34'25.85"

MESCALERO RIDGE 21 FEDERAL W2E2 (ROW 3) FLOW LINE			
NUMBER	STATION	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
BEGIN	0+00	N 32°39'03.54"	W 103°33'50.38"
1	0+74.04	N 32°39'02.80"	W 103°33'50.38"
2	4+05.67	N 32°39'00.15"	W 103°33'52.65"
3	6+00.62	N 32°39'01.27"	W 103°33'54.50"
END	6+15.71	N 32°39'01.40"	W 103°33'54.40"

CERTIFICATE

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STATE OF NEW MEXICO 23782 PROFESSIONAL SURVEYOR

05–02–19

BEGINNING OF FLOW LINE BEARS S28°16'54"E 831.15' FROM THE NORTH 1/4 CORNER OF SECTION 21, T19S, R34E, N.M.P.M.

END OF FLOW LINE BEARS S03°04'48"E 950.68' FROM THE NORTH 1/4 CORNER OF SECTION 21, T19S, R34E, N.M.P.M.

FILE: 61807-A2

Sheet 2 of 2

REV: 01 05-02-19 J.P.P. (UPDATE ROW WIDTH)

NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2 (ROW 3)
SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	06-03-17	SCALE
DRAWN BY	S.F.	06-09-17	N/A
FLOW LINE R-O-W			EXHIBIT G-1

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

Cimarex Mescalero Ridge 21-28 Fed Com #3H
Surface Use Plan

Upon approval of the Application for Permit to Drill (APD) the following surface use plan of operations will be followed and carried out. The surface use plan outlines the proposed surface disturbance. If any other disturbance is needed after the APD is approved, a BLM sundry notice or right of way application will be submitted for approval prior to any additional surface disturbance.

Existing Roads

- Directions to location - Exhibit A.
- Public access route - Exhibit B.
- Existing access road for the proposed project. Please see Exhibit B and C.
- Cimarex Energy will:
    - Improve and/or maintain existing road(s) condition the same as or better than before the operations began.
    - Provide plans for improvement and /or maintenance of existing roads if requested.
    - Repair or replace damaged or deteriorated structures as needed. Including cattle guards and culverts.
    - Prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.
    - Obtain written BLM approval prior to the application of surfactants, binding agents, or other dust suppression chemicals on the roadways.
- The maximum width of the driving surface will be 18'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

New or Reconstructed Access Roads

No New Roads are Needed. Well Pad & CTB are existing

Well Radius Map

Please see Exhibit E for wells within one mile or proposed well SHL and BHL.

Proposed or Existing Production Facility

An exsiting facility will be used:

- Mescalero Ridge 21 Federal CTB - Exhibit F
    - Facility pad location layout and cut and fill
    - Facility pad archeological boundary
    - Facility pad flowline corridor

Gas Pipeline Specifications

- No pipeline proposed. A 3rd party will be laying a gas pipeline to the well. Custody transfer meter will be on pad.

Salt Water Disposal Specifications

- No SWD Proposed

Power Lines

- No Power Proposed.

Well Site Location

- An existing well pad will be used to drill the proposed well.
- Well pad will not require expansion in order to accommodate additional drilling wells.
- Well pad previously approved.

Bulkline Pipelines

- Bulkline
  - Cimarex Energy plans to construct on-lease bulklines to service the well.
  - Bulklines will be buried and require a construction width of 75'.
  - 8- 12" HP steel for oil, gas, and water production.
  - Length: 616'.
  - MAOP: 1,500 psi; Anticipated working pressure: 200-300 psi.
  - Please see Exhibit M for proposed on lease route.

Water Resources

- A temporary surface fresh water pipeline(s) will be utilized for this project.
- Cimarex plans to lay the fresh water surface pipeline(s) prior to commencement of the stimulation job.
- 10" lay-flat surface pipeline.
- The surface pipeline(s) will follow the road from a frac pit to the well.
- Length: 13,188'.
- Operating pressure: <140 psi.
- Fresh water will be purchased from a 3rd party.
- Please see Exhibit O for proposed route.

Methods of Handling Waste

- Drilling fluids, produced oil, and water from the well during drilling and completion operations will be stored safely and disposed of properly in a NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around well site will be collected for disposal.
- Human waste and grey water will be contained and disposed of properly at a state approved disposal site.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste will be removed and disposed of properly at a state approved disposal site.
- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Waste Minimization Plan
See Gas Capture Plan.

Ancillary Facilities
No camps or airstrips to be constructed.

Interim and Final Reclamation

- Rehabilitation of the location will start in a timely manner after all proposed drilling wells have been drilled from the pad or if drilling operations have ceased as outlined below:
  - No approved or pending drill permits for wells located on the drill pad
  - No drilling activity for 5 years from the drill pad
- Surfacing materials will be removed and returned to a mineral pit or recycled to repair or build roads and well pads.
- Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.
- Exhibit P illustrates the proposed Surface Reclamation plans after cessation of drilling operations as outlined above.
  - The areas of the location not essential to production facilities and operations will be reclaimed and seeded per BLM requirements.
- Operator will amend the surface reclamation plan if well is a dry hole and/or a single well pad.

Cimarex Mescalero Ridge 21-28 Fed Com #3H
Surface Use Plan

Surface Ownership

- The wellsite is on surface owned by Bureau of Land Management.
- A copy of Surface Use Agreement has been given to the surface owner.
- The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.

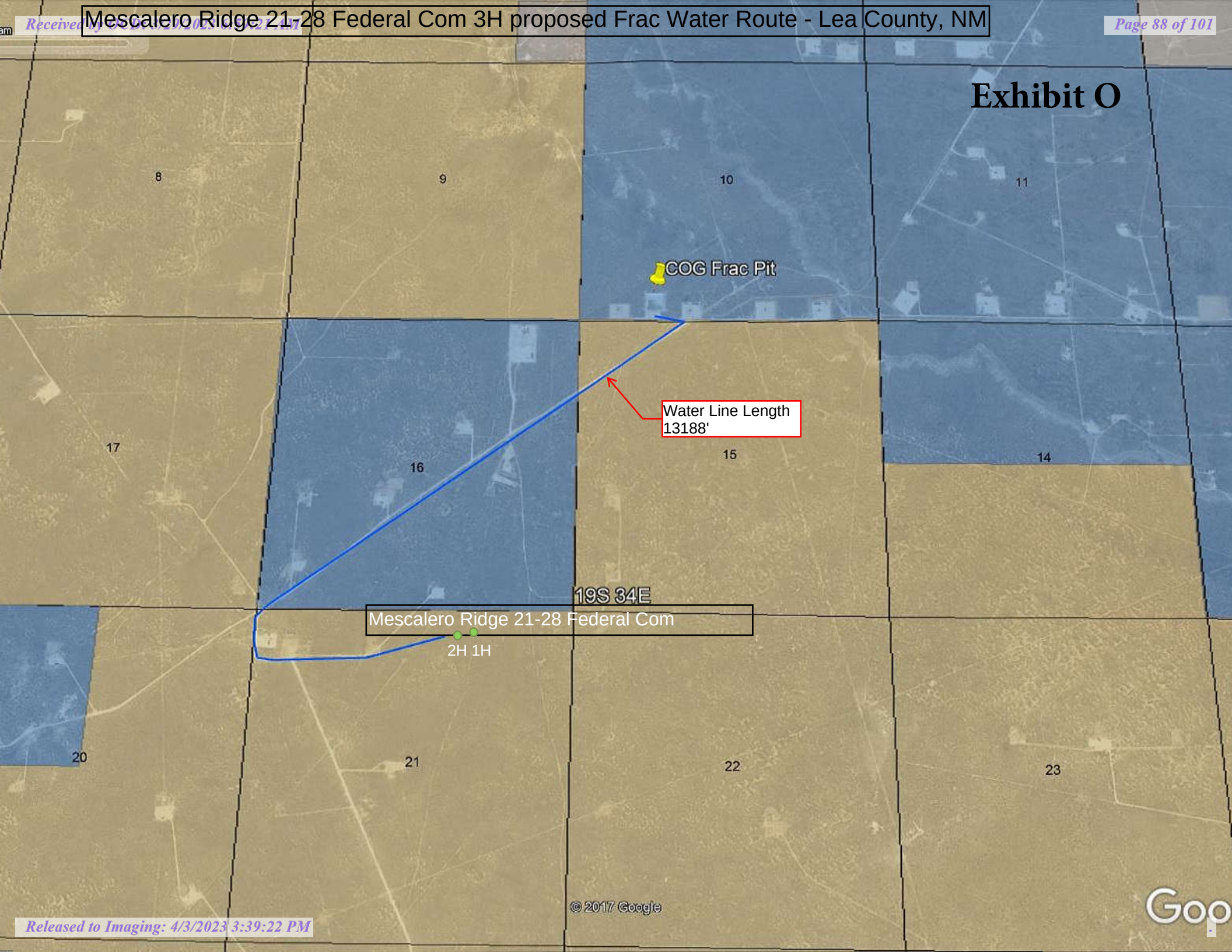
Cultural Resource Survey - Archeology

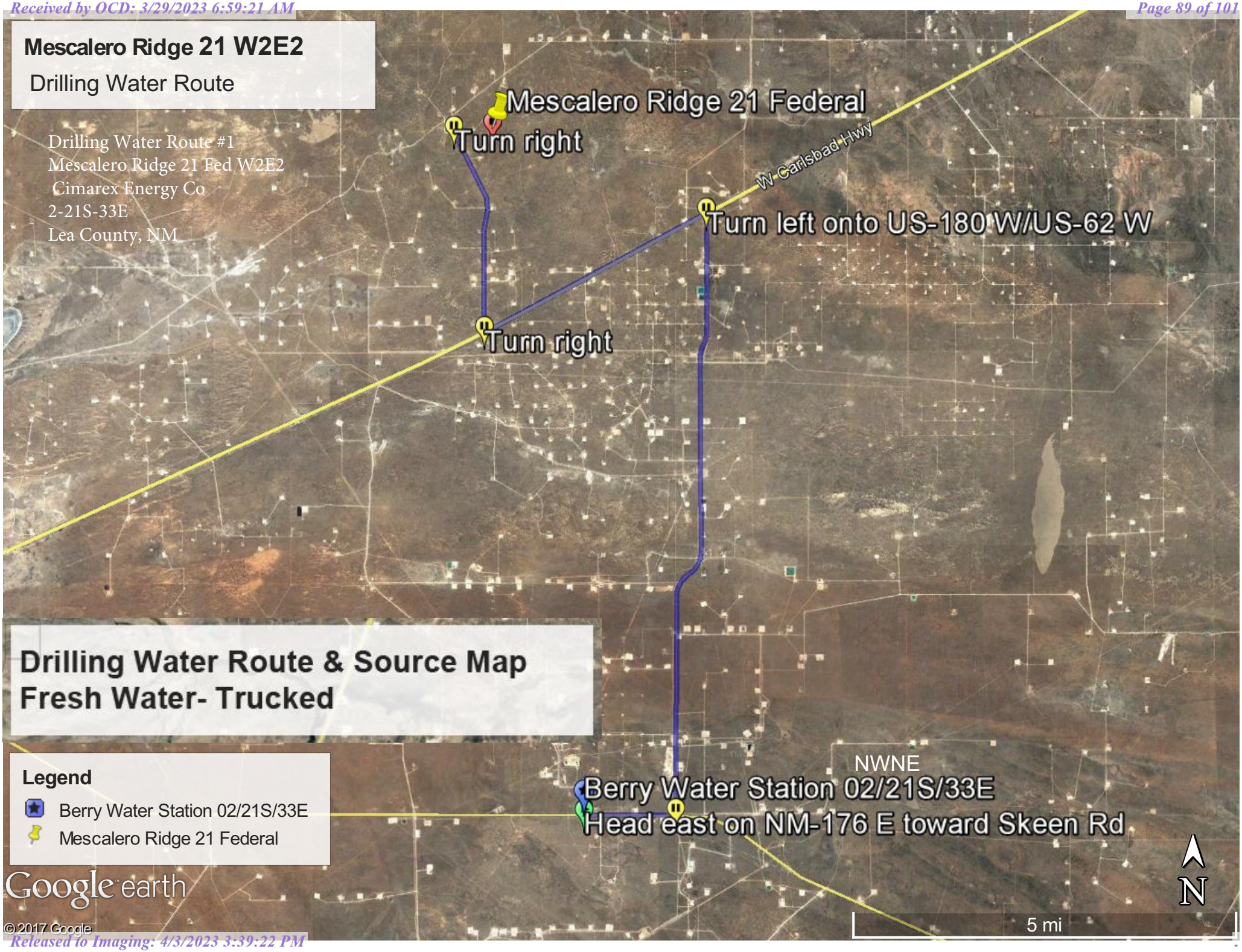
- Cultural Resources Survey will be conducted for the entire project as proposed in the APD and submitted to the BLM for review and approval.

On Site Notes and Information
Onsite Date: 5/16/2017
BLM Personnel on site: Jeff Robertson & Dustin Mudgett
Cimarex Energy personnel on site: Barry Hunt
Pertinent information from onsite:

Mescalero Ridge 21-28 Federal Com 3H proposed Frac Water Route - Lea County, NM

Exhibit O

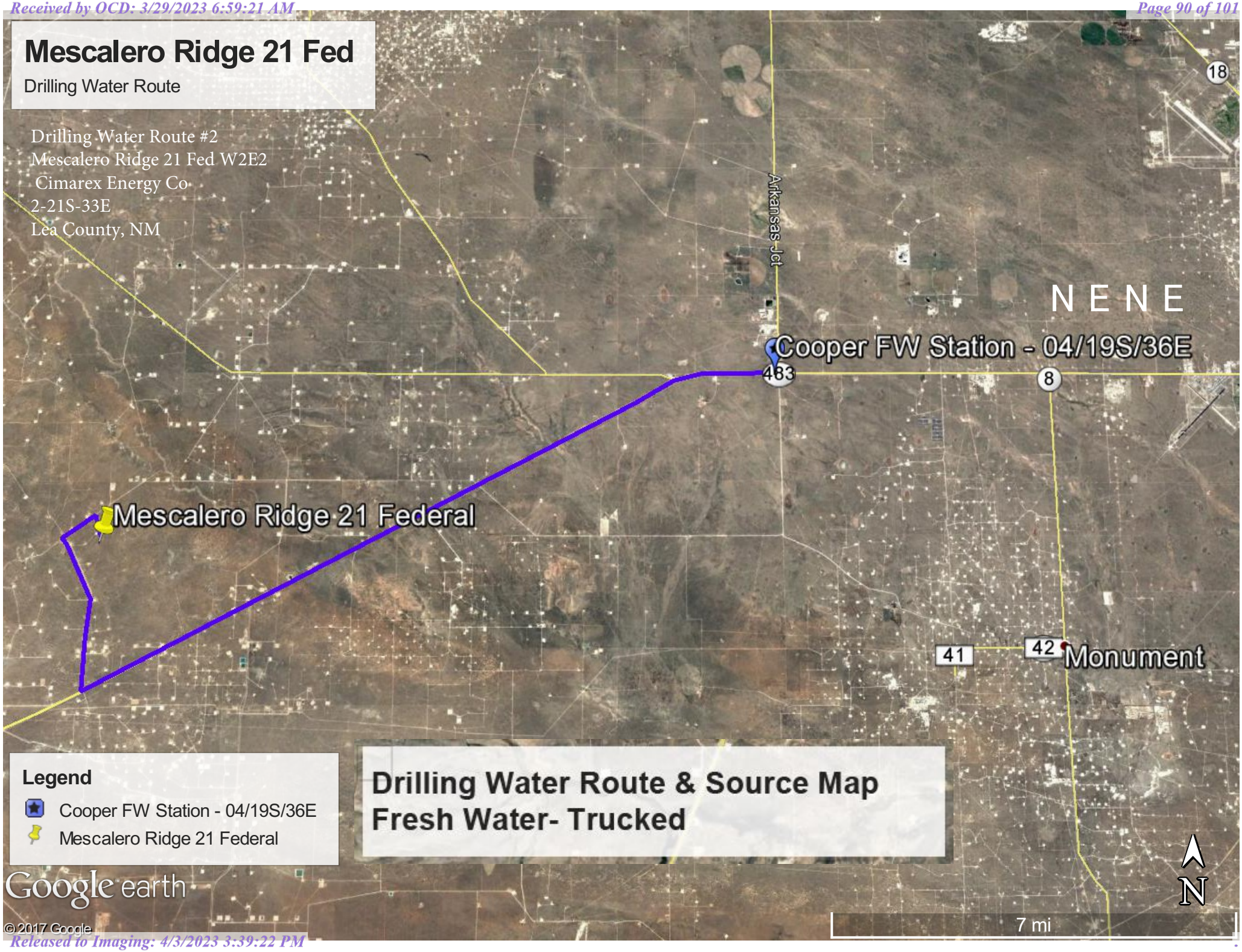


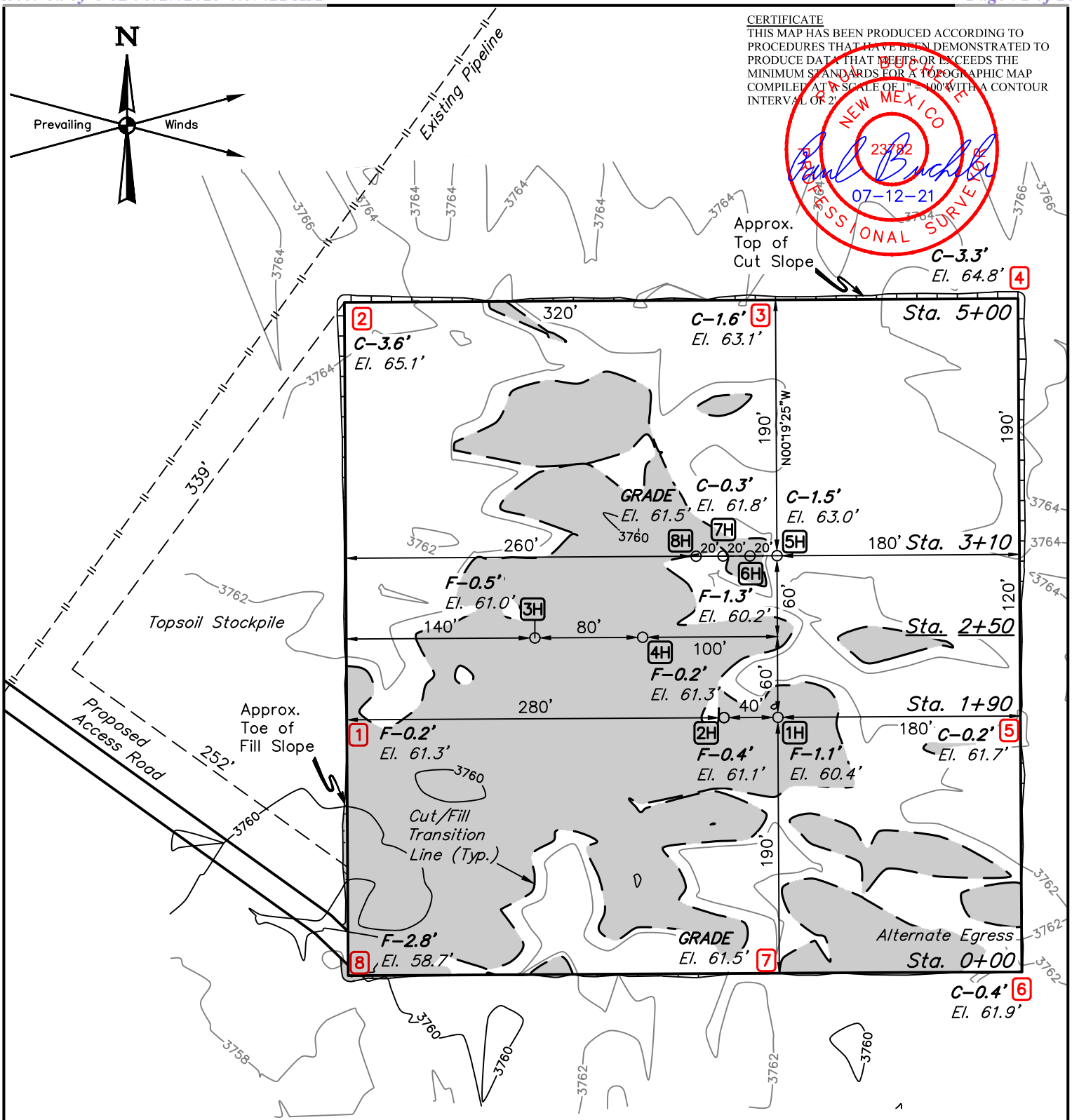

Mescalero Ridge 21 W2E2
Drilling Water Route
Drilling Water Route #1
Mescalero Ridge 21 Fed W2E2
Cimarex Energy Co
2-21S-33E
Lea County, NM
Mescalero Ridge 21 Federal
Turn right
W Carlsbad Hwy
Turn left onto US-180 W/US-62 W
Turn right
Drilling Water Route & Source Map
Fresh Water- Trucked
Legend
Berry Water Station 02/21S/33E
Mescalero Ridge 21 Federal
NWNE
Berry Water Station 02/21S/33E
Head east on NM-176 E toward Skeen Rd
Google earth
© 2017 Google
5 mi
N

Mescalero Ridge 21 Fed

Drilling Water Route

Drilling Water Route #2
Mescalero Ridge 21 Fed W2E2
Cimarex Energy Co
2-21S-33E
Lea County, NM





CERTIFICATE
THIS MAP HAS BEEN PRODUCED ACCORDING TO PROCEDURES THAT HAVE BEEN DEMONSTRATED TO PRODUCE DATA THAT MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR A TOPOGRAPHIC MAP COMPILED AT A SCALE OF 1" = 100' WITH A CONTOUR INTERVAL OF 2'.

PAUL BUCHELE — NEW MEXICO — 23782 — 07-12-21 — PROFESSIONAL SURVEYOR

REV: 4	07-12-21	C.C.	(SHL CHANGE)

NOTE: Earthwork calculations require a fill @ some location stakes for balance. All fill is to be compacted to a minimum of 95% of the maximum dry density obtained by aashto method t-99.

FINISHED GRADE ELEVATION = **3761.5'**

NOTES:

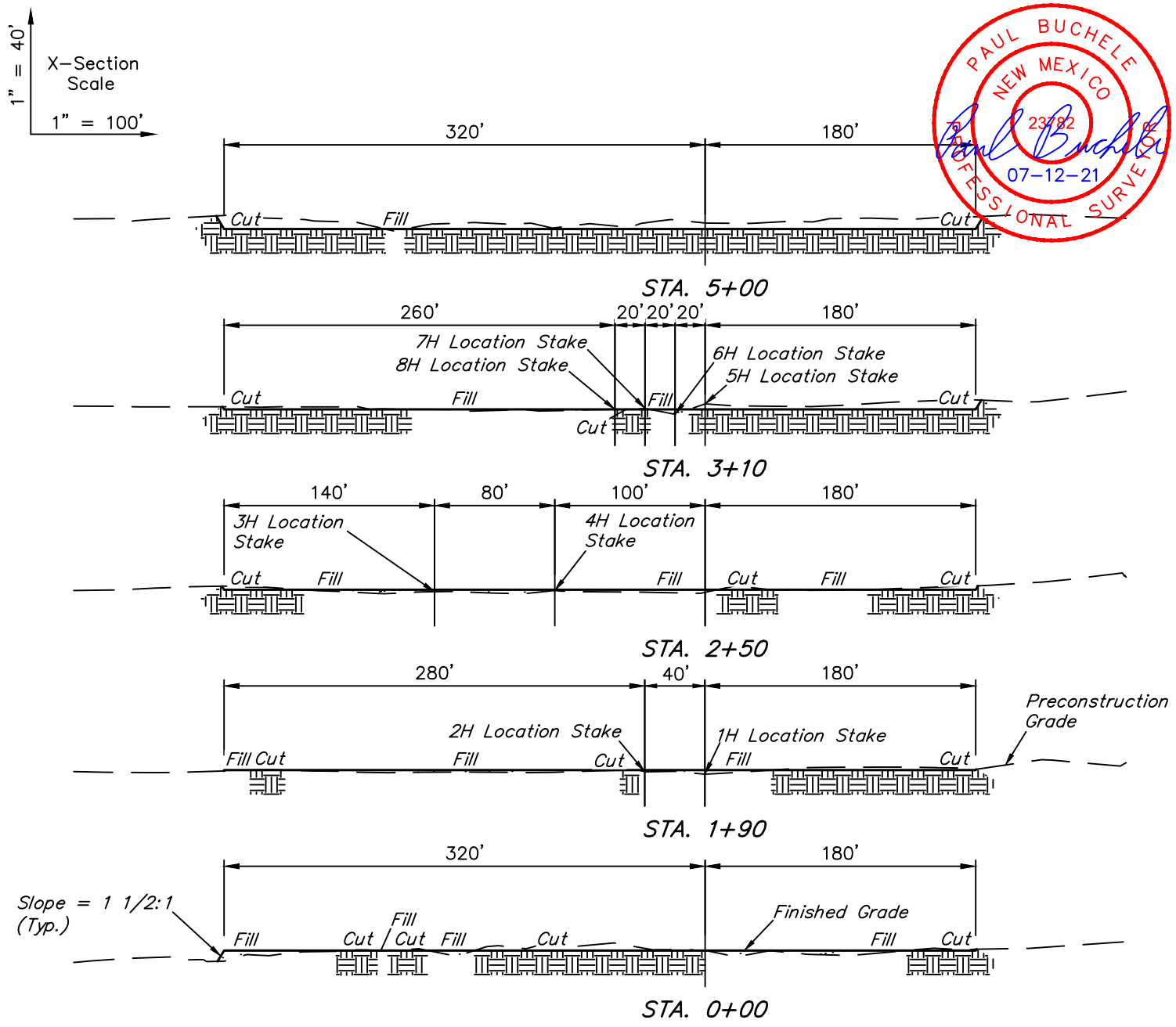
- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ.)
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.J., G.H.	09-02-14	SCALE
DRAWN BY	S.F.	09-24-14	1" = 100'
LOCATION LAYOUT			EXHIBIT D

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 07-12-21

APPROXIMATE EARTHWORK QUANTITIES	
(4") TOPSOIL STRIPPING	3,140 Cu. Yds.
REMAINING LOCATION	4,070 Cu. Yds.
TOTAL CUT	**7,210 Cu. Yds.**
FILL	**4,070 Cu. Yds.**
EXCESS MATERIAL	3,140 Cu. Yds.
TOPSOIL	3,140 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	**0 Cu. Yds.**

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	**ACRES**
WELL SITE DISTURBANCE	NA	±6.800
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±853.01'	±0.587
30' WIDE (ROW 1) FLOW LINE R-O-W DISTURBANCE	±145.90'	±0.100
30' WIDE (ROW 2) FLOW LINE R-O-W DISTURBANCE	±396.06'	±0.273
75' WIDE (ROW 3) FLOW LINE R-O-W DISTURBANCE	±615.71'	±1.060
TOTAL SURFACE USE AREA		**±8.820**

REV: 5 07-12-21 C.C. (SHL CHANGE)

NOTES:
- Fill quantity includes 5% for compaction.
- Cut/Fill slopes 1 1/2:1 (Typ.)

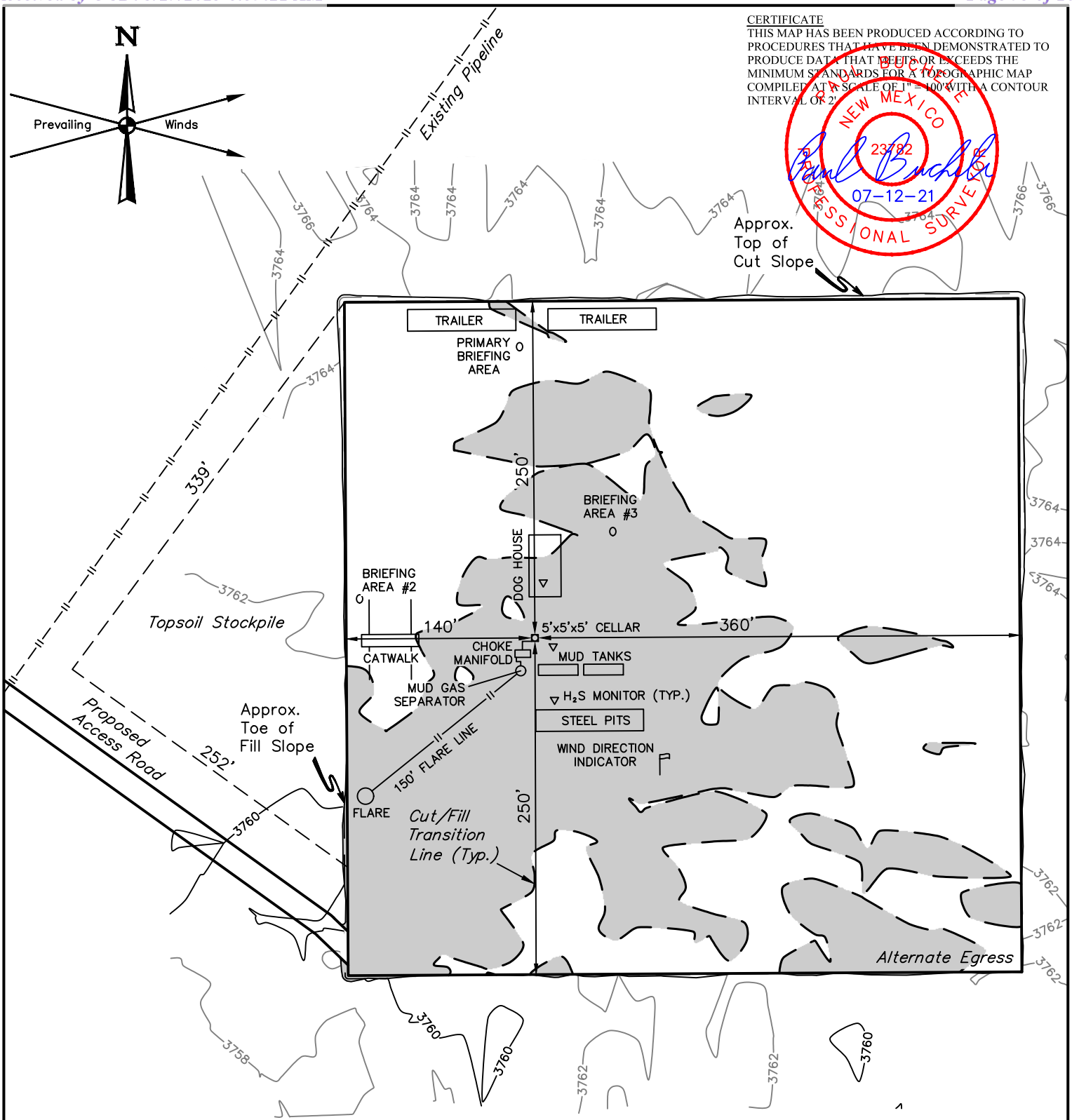
CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	C.J., G.H.	09-02-14	**SCALE**
DRAWN BY	S.F.	09-24-14	AS SHOWN

TYPICAL CROSS SECTIONS **EXHIBIT D**



CERTIFICATE
THIS MAP HAS BEEN PRODUCED ACCORDING TO PROCEDURES THAT HAVE BEEN DEMONSTRATED TO PRODUCE DATA THAT MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR A TOPOGRAPHIC MAP COMPILED AT A SCALE OF 1" = 100' WITH A CONTOUR INTERVAL OF 2'.

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
07-12-21

NOTES:

- Contours shown at 2' intervals.
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

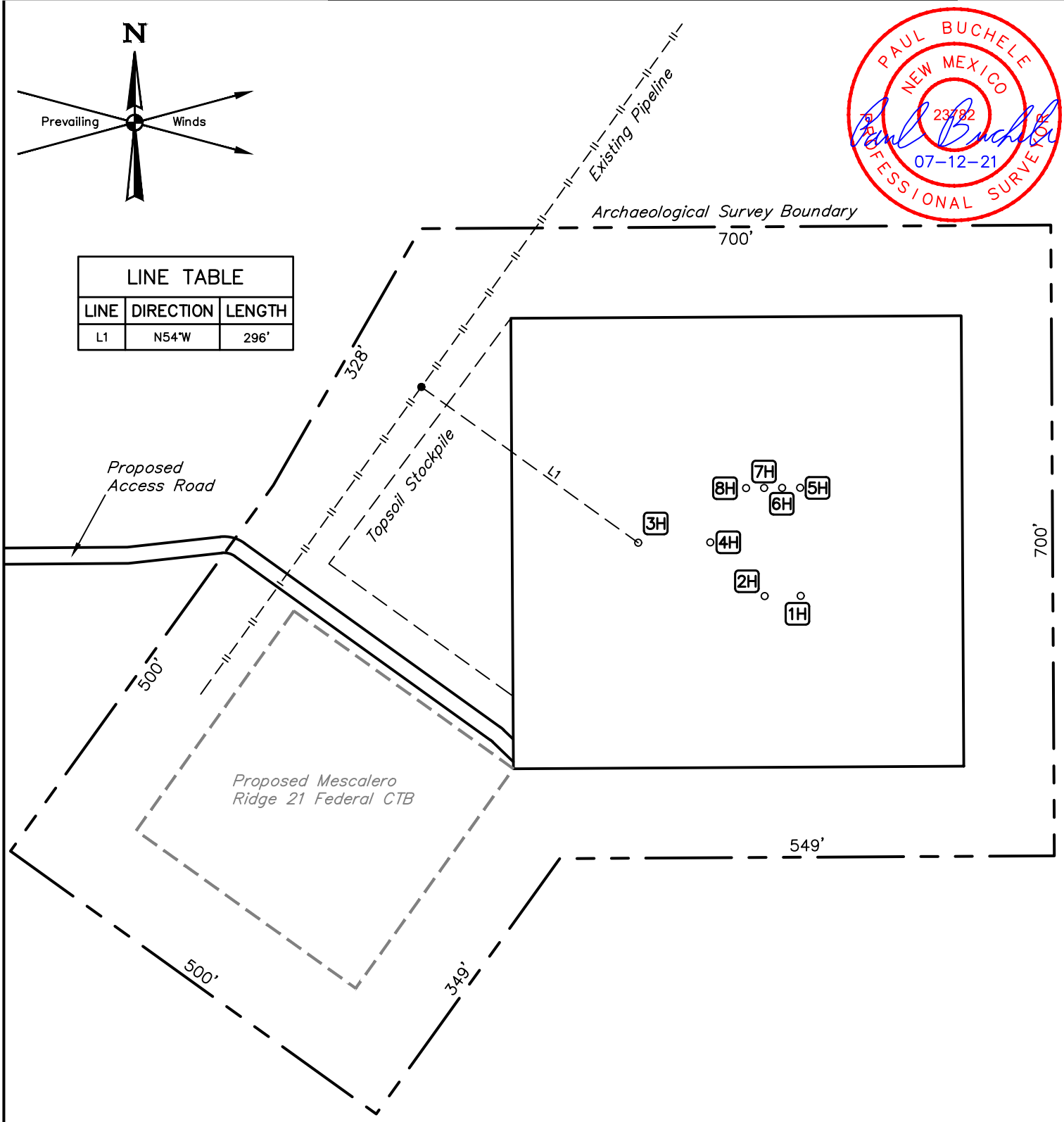
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

UINTAH ENGINEERING & LAND SURVEYING

CIMAREX ENERGY CO.

MESCALERO RIDGE 21-28 FED COM 3H
484' FNL 2160' FEL
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.J., G.H.	09-02-14	SCALE
DRAWN BY	C.C.	07-12-21	1" = 100'
TYPICAL RIG LAYOUT			EXHIBIT D



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N54°W	296'

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
07-12-21

REV: 4	07-12-21	C.C.	(SHL CHANGE)

NOTES:

- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.

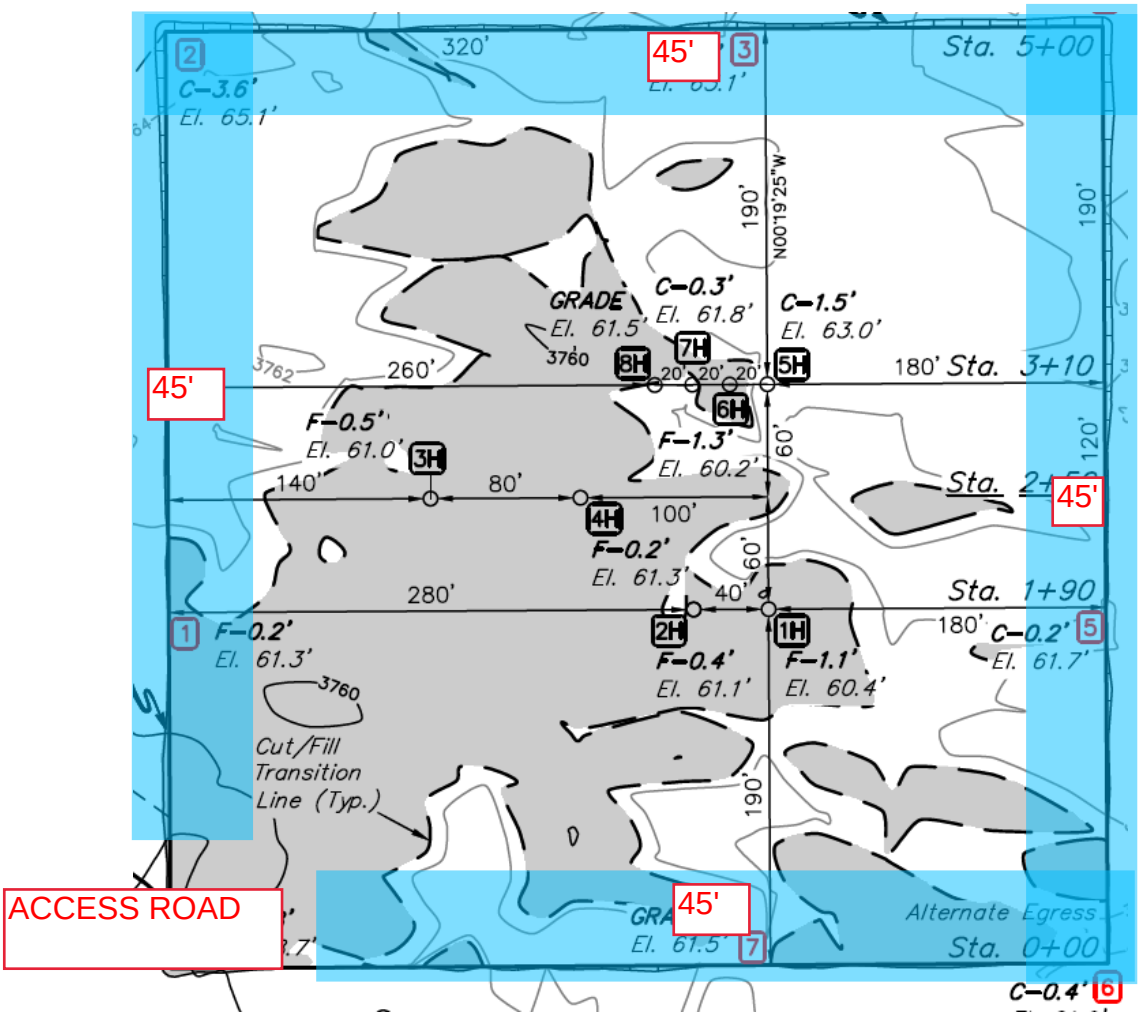
CIMAREX ENERGY CO.

MESCALERO RIDGE 21 FEDERAL W2E2
NW 1/4 NE 1/4, SECTION 21, T19S, R34E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	C.J., G.H.	09-02-14	SCALE
DRAWN BY	S.F.	09-24-14	1" = 150'
ARCHAEOLOGICAL SURVEY BOUNDARY			EXHIBIT D



Pad will be reclaimed after cessation of drilling operations.
Please see Surface Use Plan for pad reclamation plans.

N

Well locations

Interim Reclamation

Exhibit P
Interim Reclamation Diagram
Mescalero Ridge 21 Fed W2E2
Cimarex Energy Co.
Sec 21-19S-34E
Lea Cty, NM

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

PWD Data Report

03/29/2023

APD ID: 10400078657 **Submission Date:** 08/25/2021

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information

Section 4 -

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection

Underground Injection Control (UIC) Permit?

UIC Permit

Section 5 - Surface

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 -

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM **Well Number:** 3H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Bond Info Data

03/29/2023

APD ID: 10400078657
Submission Date: 08/25/2021

Operator Name: CIMAREX ENERGY COMPANY

Well Name: MESCALERO RIDGE 21-28 FEDERAL COM
Well Number: 3H

Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Bond

Federal/Indian APD: FED

BLM Bond number: NMB001188

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 201735

CONDITIONS

Operator:	OGRID:
CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	215099
	Action Number: 201735
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	4/3/2023
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	4/3/2023
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	4/3/2023
pkautz	Cement is required to circulate on both surface and production strings of casing	4/3/2023