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.

2. Name of Operator

9. API Well No.
30-025-53021

3a. Address

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

10. Field and Pool, or Exploratory

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 05/10/2024

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
30-025-53021	98094	BOBCAT DRAW; UPPER WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
314104	CASCADE 28 FEDERAL	412H

[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3374.2'

[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	28	25S	33E		210	NORTH	2099	EAST	LEA

[11] Bottom Hole Location If Different From Surface

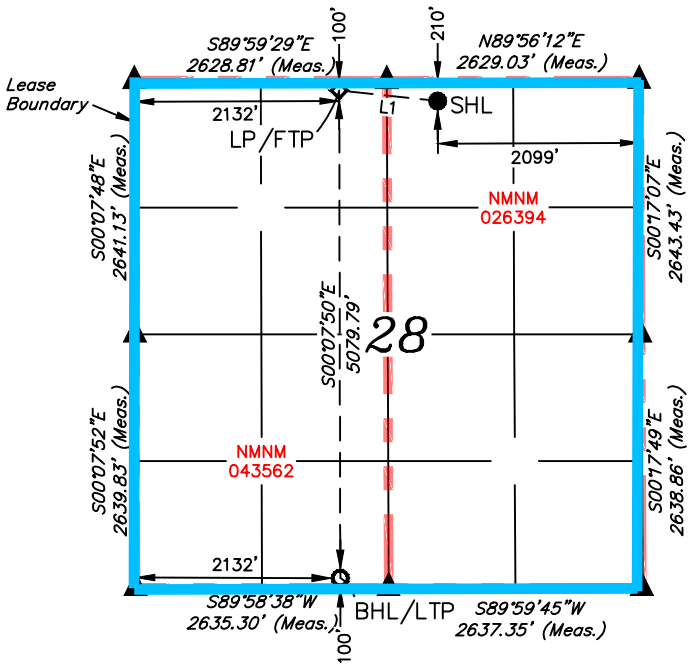
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	25S	33E		100	SOUTH	2132	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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]

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)



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N83°55'00"W	1033.15'

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

2000' 1000' 0' 2000'
SCALE

DRAWN BY: T.J.S. 03-10-23

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°06'29.59" (32.108220°)
LONGITUDE = 103°34'32.05" (103.575570°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°06'29.14" (32.108095°)
LONGITUDE = 103°34'30.35" (103.575098°)
STATE PLANE NAD 83 (N.M. EAST)
N: 403931.57' E: 775961.88'
STATE PLANE NAD 27 (N.M. EAST)
N: 403873.82' E: 734775.64'

NAD 83 (LP/FTP)
LATITUDE = 32°06'30.70" (32.108529°)
LONGITUDE = 103°34'43.99" (103.578886°)
NAD 27 (LP/FTP)
LATITUDE = 32°06'30.26" (32.108404°)
LONGITUDE = 103°34'42.29" (103.578415°)
STATE PLANE NAD 83 (N.M. EAST)
N: 404036.75' E: 774934.27'
STATE PLANE NAD 27 (N.M. EAST)
N: 403978.99' E: 733748.04'

NAD 83 (BHL/LTP)
LATITUDE = 32°05'40.45" (32.094568°)
LONGITUDE = 103°34'44.02" (103.578895°)
NAD 27 (BHL/LTP)
LATITUDE = 32°05'40.00" (32.094443°)
LONGITUDE = 103°34'42.33" (103.578424°)
STATE PLANE NAD 83 (N.M. EAST)
N: 398957.93' E: 774967.05'
STATE PLANE NAD 27 (N.M. EAST)
N: 398900.30' E: 733780.58'

[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.

Shelly M. Bowen 7/10/23
Signature Date

Shelly M. Bowen
Printed Name

shelly.bowen@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.

January 24, 2018
Date of Survey
Signature and Seal of Professional Surveyor:

Certificate Number:

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:** 07/5/2023

II. Type: X 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
Cascade 28 Federal 412H		B, Sec 28 T25S, R33E	210 FNL/2099 FEL	2000	3900	5000

IV. Central Delivery Point Name: Cascade 28 CDP Sales [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
Cascade 28 Federal 412H		12/7/2024	12/25/2024	1/28/2025	2/13/2025	2/13/2025

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:	7/5/2023
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.

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Pressure Rating (PSI): 10M **Rating Depth:** 12590

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? NO

Variance request:

Testing Procedure: A multi-bowl wellhead will be utilized and will be tested per 43 CFR 3172 after the installation on the surface casing. The testing interval shall be for 30 days. Whenever any seal subject to pressure is broken, a full BOPE test shall be performed.
Choke Diagram Attachment:

CHOKE_MANIFOLD_DIAGRAM_412H_20240423121200.pdf

COTERRA_10M_MBU_3T_CFL_10.34_X_7.58_X_5.5_412H_20240423121201.pdf

CIMAREX_10K_PROD_TREE_412H_20240423121201.pdf

CHOKE_HOSE_M14856_412H_20240423121204.pdf

BOP Diagram Attachment:

BOP_DIAGRAM_412H_20240423121211.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	14.75	10.75	NEW	API	N	0	1170	0	1170	3374	2204	1170	J-55	40.5	BUTT	3.12	6.18	BUOY	13.27	BUOY	13.27
2	PRODUCTION	6.75	5.5	NEW	API	Y	0	12055	0	12055	3374	-8681	12055	P-110	20	BUTT	1.42	1.58	BUOY	2.83	BUOY	2.83
3	INTERMEDIATE	9.875	7.625	NEW	API	N	0	12617	0	12457	3374	-9083	12617	L-80	29.7	BUTT	2.44	1.18	BUOY	1.79	BUOY	1.79
4	PRODUCTION	6.75	5.0	NEW	API	Y	12055	17532	11555	12590	-8181	-9216	5477	P-110	18	BUTT	1.64	1.66	BUOY	60.23	BUOY	60.23

Casing Attachments

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080759.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Spec_Sheet_for_Tapered_Prod_5.5_23__P110RY_20240305104847_20240319011322.pdf

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080640.pdf

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080549.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Spec_Sheet_for_Tapered_Prod_5_18__P110RY_20240305104940_20240319011322.pdf

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080731.pdf

Section 4 - Cement

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	745	455	1.72	13.5	782	45	Class C	Bentonite
SURFACE	Tail		745	1170	121	1.34	14.8	162	45	Class C	LCM
INTERMEDIATE	Lead		0	11617	1000	3.64	10.3	3640	49	Tuned Light	LCM
INTERMEDIATE	Tail		11617	12617	207	1.3	14.2	269	49	50:50 POZ:H	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		12417	17532	710	1.3	14.2	864	25	50:50 (POZ H)	Salt bentonite fluid loss dispersant sms

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

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

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	1170	OTHER : Fresh Water	7.83	8.33				25			
1170	12617	OTHER : Brine Diesel Emulsion	8.5	9				25			
12617	17532	OIL-BASED MUD	12	12.5				25			

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,

Coring operation description for the well:

N/A

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8183 **Anticipated Surface Pressure:** 5472

Anticipated Bottom Hole Temperature(F): 191

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

H2S_PLAN_REV.0_20240423122235.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Cascade_412H_Directional_Plan_20230825082102.pdf
Cascade_412H_AC_Summary_20230825082203.pdf
WELL_CONTROL_PLAN_REV.0_20240423123038.pdf
Drilling_Plan_New_Mexico_412H_updated_Drilling_Plan_04222024_20240423123100.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Cascade_412H_NGMP_20230825082241.pdf

Other Variance attachment:

CASCADE_28_FEDERAL_W2E2_71H_Location_Layout_Plat_20240423123123.pdf
CHOKE_HOSE_M14856_412H_20240423123145.pdf

Schlumberger

Coterra Cascade 28 Federal 412H Rev0 kFc 25May23 Anti-Collision Summary Report

Analysis Date-24hr Time:	May 25, 2023 - 04:05 PM (UTC 0)	**Analysis Method:**	3D Least Distance
Client:	COTERRA	**Reference Trajectory:**	Coterra Cascade 28 Federal 412H Rev0 kFc 25May23 (Def Plan)
Field:	NM Lea County (NAD 83)	**Depth Interval:**	Every 10.00 Measured Depth (ft)
Structure:	Coterra Cascade 28 Federal Pad	**Rule Set:**	NAL Procedure: D&M AntiCollision Standard S002
Slot:	Cascade 28 Federal 412H	**Min Pts:**	Absolute minima indicated.
Well:	Cascade 28 Federal 412H	**Engine Version:**	2022.5.0.11
Borehole:	Cascade 28 Federal 412H	**Database \ Project:**	Cascade 28 Federal 412H–COTERRA
Scan MD Range:	0.00ft ~ 17531.71ft		

Trajectory Error Model: ISCWSA0 3 - D 95 % Confidence 2.7955 sigma

Offset Trajectories Summary

Offset Selection Criteria
Bounding box scan: minimum Ct-Ct separation <= 2000ft
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

12 out of 55 are selected

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 in red: Sep-Factor <= 1.5													
Result highlighted in boxed, red and bold: all local minima indicated.													
30-025-08390 - CONLEY-FEDERAL 1 - Blind to 5039ft - P (DefinitiveSurvey)													Fail Major
	1530.17	32.81	1528.31	1497.36	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1529.84	32.81	1527.94	1497.03	**38955.23**	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	1529.82	32.81	1527.92	1497.01	42202.33	MAS = 10.00 (m)	23.00	23.00				WRP	
	1529.77	463.42	1220.20	1066.34	4.97	OSF1.50	360.00	360.00	OSF<5.00			Enter Alert	
	1529.77	1542.72	500.67	-12.95	1.49	OSF1.50	880.00	880.00		OSF<1.50		Enter Minor	
	1529.77	2310.48	-11.10	-780.71	0.99	OSF1.50	1250.00	1250.00			OSF<1.00	Enter Major	
	1529.77	3036.92	-495.40	-1507.16	0.76	OSF1.50	1600.00	1600.00				MinPt-CtCt	
	2195.10	10242.11	-4633.53	-8047.01	**0.32**	OSF1.50	5140.00	5071.42				MinPt-O-SF	
	2197.17	10247.82	**-4635.26**	**-8050.65**	0.32	OSF1.50	5150.00	5081.21				MinPts	
	4172.87	6267.71	-6.16	-2094.84	1.00	OSF1.50	8480.00	8375.87			OSF>1.00	Exit Major	
	5113.85	5114.88	1703.37	-1.03	1.50	OSF1.50	9610.00	9505.87		OSF>1.50		Exit Minor	
	8972.83	5596.25	**5241.48**	3376.58	2.41	OSF1.50	17230.00	12592.37				MINPT-O-EOU	
	9116.58	5802.67	5247.62	**3313.91**	**2.36**	OSF1.50	17531.71	12590.00				MinPts	
Coterra Cascade 28 Federal 403H Rev0 kFc 25May23 (DefinitivePlan)													Fail Minor
	20.00	16.21	18.94	3.79	N/A	MAS = 4.94 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	20.00	16.21	18.94	3.79	N/A	MAS = 4.94 (m)	23.00	23.00				WRP	
	20.00	20.05	6.30	-0.05	1.50	OSF1.50	1330.00	1330.00		OSF<1.50		Enter Minor	
	20.00	24.11	3.60	-4.11	1.23	OSF1.50	1600.00	1600.00				MinPt-CtCt	
	20.16	24.56	**3.46**	-4.40	**1.22**	OSF1.50	1630.00	1630.00				MinPts	
	20.28	24.71	3.48	**-4.43**	1.22	OSF1.50	1640.00	1640.00				MinPt-O-ADP	
	26.95	27.07	8.57	-0.12	1.49	OSF1.50	1800.00	1799.84		OSF>1.50		Exit Minor	
	235.43	71.37	187.53	164.06	5.00	OSF1.50	4710.00	4650.81	OSF>5.00			Exit Alert	
	542.01	163.37	432.77	378.64	5.00	OSF1.50	10990.00	10885.87	OSF<5.00			Enter Alert	
	542.15	175.88	**424.57**	366.27	4.64	OSF1.50	11910.00	11805.87				MINPT-O-EOU	
	542.25	176.00	424.58	**366.24**	4.64	OSF1.50	11930.00	11825.87				MinPt-O-ADP	
	542.84	176.34	424.95	366.50	**4.64**	OSF1.50	11990.00	11885.87				MinPt-O-SF	
	570.72	171.92	455.78	398.80	5.00	OSF1.50	12480.00	12351.34	OSF>5.00			Exit Alert	
	604.84	164.57	**494.80**	440.27	5.54	OSF1.50	13080.00	12624.93				MINPT-O-EOU	
	610.86	184.06	487.82	426.79	5.00	OSF1.50	15080.00	12609.24	OSF<5.00			Enter Alert	
	618.24	231.48	**463.59**	**386.75**	**4.02**	OSF1.50	17531.71	12590.00				MinPts	
Coterra Cascade 28 Federal 413H Rev0 kFc 25May23 (DefinitivePlan)													Warning Alert
	39.90	32.13	38.84	7.77	N/A	MAS = 9.79 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	39.90	32.13	38.84	7.77	109614.73	MAS = 9.79 (m)	23.00	23.00				WRP	
	39.90	32.13	23.50	**7.77**	2.52	MAS = 9.79 (m)	1600.00	1600.00				MinPts	
	40.06	32.13	**23.36**	7.92	2.49	MAS = 9.79 (m)	1630.00	1630.00				MINPT-O-EOU	
	40.75	32.13	23.66	8.62	**2.47**	MAS = 9.79 (m)	1670.00	1669.99				MinPt-O-SF	
	108.59	33.40	86.00	75.19	4.98	OSF1.50	2230.00	2224.97	OSF>5.00			Exit Alert	
	1104.98	180.08	**984.60**	**924.90**	9.25	OSF1.50	12210.00	12104.66				MinPts	
	1106.13	180.88	985.21	**925.25**	9.21	OSF1.50	12880.00	12594.64				MinPt-O-ADP	
	1119.15	243.74	**956.33**	**875.41**	**6.91**	OSF1.50	17531.71	12590.00				MinPts	
Coterra Cascade 28 Federal 404H Rev0 kFc 25May23 (DefinitivePlan)													Warning Alert
	60.00	32.81	58.94	27.19	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	59.99	32.81	58.93	27.18	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	59.99	32.81	47.20	27.18	5.00	MAS = 10.00 (m)	1240.00	1240.00	OSF<5.00			Enter Alert	
	59.99	32.81	43.60	**27.18**	3.83	MAS = 10.00 (m)	1600.00	1600.00				MinPts	
	60.15	32.81	**43.45**	27.34	3.77	MAS = 10.00 (m)	1630.00	1630.00				MINPT-O-EOU	
	61.73	32.81	44.34	28.92	**3.70**	MAS = 10.00 (m)	1700.00	1699.98				MinPt-O-SF	
	96.29	32.81	75.95	63.48	4.93	MAS = 10.00 (m)	2010.00	2008.60	OSF>5.00			Exit Alert	
	1669.14	176.46	**1551.18**	1492.68	14.26	OSF1.50	11980.00	11875.87				MINPT-O-EOU	
	1669.25	176.60	1551.19	**1492.65**	14.25	OSF1.50	12000.00	11895.87				MinPt-O-ADP	
	1669.71	176.79	1551.53	1492.92	**14.24**	OSF1.50	12054.90	11950.77				MinPt-O-SF	
	1691.31	176.68	**1573.19**	1514.63	14.43	OSF1.50	13080.00	12624.93				MINPT-O-EOU	
	1704.41	240.15	**1543.98**	**1464.26**	**10.68**	OSF1.50	17531.71	12590.00				MinPts	
30-025-29191 - RED HILLS 28 FEDERAL COM 1 - INC Only to 17555ft - A (DefinitiveSurvey)													Warning Alert
	2102.63	32.81	2100.76	2069.82	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2102.63	32.81	2100.76	2069.82	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	2102.63	94.66	2038.97	2007.97	33.89	OSF1.50	1600.00	1600.00				MinPt-CtCt	
	2142.74	213.22	**2000.04**	1929.52	15.18	OSF1.50	3680.00	3643.31				MINPT-O-EOU	
	2181.61	260.55	2007.36	**1921.06**	12.63	OSF1.50	4490.00	4435.62				MinPt-O-ADP	
	2362.39	710.25	1888.38	1652.14	5.00	OSF1.50	12010.00	11905.87	OSF<5.00			Enter Alert	
	844.03	755.60	**339.78**	**88.43**	**1.68**	OSF1.50	14660.00	12612.53				MinPts	
	2507.26	755.71	2002.94	1751.55	4.98	OSF1.50	17020.00	12594.02	OSF>5.00			Exit Alert	
	2994.04	755.55	2489.83	2238.49	5.95	OSF1.50	17531.71	12590.00				TD	
30-025-32946 - RED HILLS 28 FEDERAL COM 2 - INC Only to 14845ft - A (DefinitiveSurvey)													Warning Alert
	3039.91	32.81	3038.04	3007.10	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3039.91	32.81	3038.04	3007.10	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	2368.28	711.70	1893.26	1656.58	5.00	OSF1.50	9920.00	9815.87	OSF<5.00			Enter Alert	
	1452.61	933.49	**829.77**	**519.12**	**2.34**	OSF1.50	14320.00	12615.20				MinPts	
	3107.34	933.40	2484.56	2173.93	5.00	OSF1.50	17070.00	12593.62	OSF>5.00			Exit Alert	
	3522.09	933.23	2899.43	2588.86	5.67	OSF1.50	17531.71	12590.00				TD	
30-025-47176 - GREEN DRAKE 21 FED COM 706H - IFR1 to 19896ft - A (DefinitiveSurvey)													Pass
	494.03	32.81	492.17	461.22	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	493.99	32.81	492.12	461.18	69997.60	MAS = 10.00 (m)	23.00	23.00				WRP	
	480.76	32.81	**470.84**	447.95	59.48	MAS = 10.00 (m)	890.00	890.00				MINPT-O-EOU	
	299.06	51.15	264.40	247.90	9.01	OSF1.50	3280.00	3252.04				MinPt-CtCt	
	299.23	51.62	**264.26**	247.61	8.93	OSF1.50	3310.00	3281.38				MINPT-O-EOU	
	299.36	51.77	264.29	**247.58**	8.91	OSF1.50	3320.00	3291.17				MinPt-O-ADP	
	314.07	55.84	276.29	258.23	**8.65**	OSF1.50	3590.00	3555.27				MinPt-O-SF	
	867.61	125.18	783.61	742.44	10.52	OSF1.50	8370.00	8265.87				MinPt-CtCt	
	866.20	135.65	775.21	730.55	9.68	OSF1.50	9100.00	8995.87				MinPt-CtCt	
	867.35	142.18	**772.02**	725.18	9.24	OSF1.50	9560.00	9455.87				MINPT-O-EOU	
	868.27	143.27	772.20	**725.00**	9.18	OSF1.50	9640.00	9535.87				MinPt-O-ADP	
	867.26	156.66	762.26	710.59	8.38	OSF1.50	10550.00	10445.87				MinPt-CtCt	
	867.39	157.14	**762.08**	710.25	8.35	OSF1.50	10590.00	10485.87				MINPT-O-EOU	

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		
	867.58	157.38	762.11	710.20	8.34	OSF1.50	10610.00	10505.87				MinPt-O-ADP	
	874.09	161.58	765.82	712.51	8.18	OSF1.50	10900.00	10795.87				MINPT-O-EOU	
	875.02	162.68	766.01	712.34	8.14	OSF1.50	10980.00	10875.87				MinPt-O-ADP	
	868.77	172.02	753.58	696.75	7.63	OSF1.50	11620.00	11515.87				MinPt-CtCt	
	868.52	177.23	749.86	691.29	7.40	OSF1.50	11980.00	11875.87				MinPt-CtCt	
	868.59	177.44	749.78	691.15	7.39	OSF1.50	12000.00	11895.87				MinPts	
	869.44	177.78	750.41	691.66	7.39	OSF1.50	12054.90	11950.77				MinPt-O-SF	
	5342.67	189.27	5215.98	5153.40	42.67	OSF1.50	17531.71	12590.00				TD	
30-025-47177 - GREEN DRAKE 21 FED COM 727H - IFR1 to 20107ft - A (DefinitiveSurvey)													Pass
	487.92	32.81	486.06	455.12	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	487.87	32.81	486.00	455.07	91216.05	MAS = 10.00 (m)	23.00	23.00				WRP	
	479.69	32.81	472.99	446.88	98.71	MAS = 10.00 (m)	570.00	570.00				MinPts	
	479.81	32.81	472.83	447.00	93.44	MAS = 10.00 (m)	600.00	600.00				MINPT-O-EOU	
	407.01	40.64	379.36	366.37	15.60	OSF1.50	2670.00	2655.36				MinPt-CtCt	
	407.28	41.44	379.10	365.84	15.30	OSF1.50	2720.00	2704.27				MINPT-O-EOU	
	407.67	41.92	379.17	365.76	15.13	OSF1.50	2750.00	2733.61				MinPt-O-ADP	
	446.68	49.76	412.95	396.92	13.88	OSF1.50	3260.00	3232.48				MinPt-O-SF	
	786.87	76.03	735.63	710.84	15.84	OSF1.50	4990.00	4924.70				MinPt-O-SF	
	1051.17	97.83	985.40	953.35	16.37	OSF1.50	6460.00	6362.60				MinPt-O-SF	
	1127.93	114.09	1051.31	1013.84	15.03	OSF1.50	7610.00	7505.87				MinPt-CtCt	
	1123.47	137.66	1031.14	985.81	12.37	OSF1.50	9250.00	9145.87				MinPt-CtCt	
	1123.20	147.82	1024.10	975.38	11.51	OSF1.50	9950.00	9845.87				MinPt-CtCt	
	1123.27	148.03	1024.03	975.24	11.49	OSF1.50	9970.00	9865.87				MINPT-O-EOU	
	1123.35	148.13	1024.04	975.22	11.49	OSF1.50	9980.00	9875.87				MinPt-O-ADP	
	1128.78	155.73	1024.40	973.04	10.97	OSF1.50	10500.00	10395.87				MinPt-CtCt	
	1129.89	158.94	1023.38	970.95	10.76	OSF1.50	10730.00	10625.87				MINPT-O-EOU	
	1131.30	160.63	1023.66	970.67	10.66	OSF1.50	10850.00	10745.87				MinPt-O-ADP	
	1124.64	179.08	1004.74	945.56	9.49	OSF1.50	12170.00	12065.37				MinPts	
	1125.10	179.24	1005.10	945.86	9.48	OSF1.50	12210.00	12104.66				MinPt-O-SF	
	5327.65	190.94	5199.85	5136.71	42.18	OSF1.50	17531.71	12590.00				TD	
30-025-47178 - GREEN DRAKE 21 FED COM 708H - IFR1 to 19958ft - A (DefinitiveSurvey)													Pass
	483.40	32.81	481.54	450.59	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	483.36	32.81	481.48	450.55	33984.05	MAS = 10.00 (m)	23.00	23.00				WRP	
	463.80	32.81	455.43	430.99	71.06	MAS = 10.00 (m)	730.00	730.00				MinPts	
	463.98	32.81	455.24	431.17	67.22	MAS = 10.00 (m)	770.00	770.00				MINPT-O-EOU	
	469.15	32.81	447.09	436.34	22.92	MAS = 10.00 (m)	2130.00	2126.98				MinPts	
	469.40	33.02	446.84	436.38	22.37	OSF1.50	2180.00	2176.05				MINPT-O-EOU	
	469.66	33.33	446.89	436.34	22.17	OSF1.50	2200.00	2195.62				MinPt-O-ADP	
	573.01	47.99	540.46	525.02	18.50	OSF1.50	3150.00	3124.88				MinPt-O-SF	
	1505.86	143.53	1409.61	1362.32	15.90	OSF1.50	9630.00	9525.87				MinPt-CtCt	
	1503.79	155.58	1399.52	1348.21	14.64	OSF1.50	10460.00	10355.87				MinPt-CtCt	
	1504.01	156.50	1399.13	1347.52	14.55	OSF1.50	10530.00	10425.87				MINPT-O-EOU	
	1504.30	156.87	1399.17	1347.43	14.52	OSF1.50	10560.00	10455.87				MinPt-O-ADP	
	1509.65	160.20	1402.30	1349.45	14.27	OSF1.50	10790.00	10685.87				MinPt-O-ADP	
	1505.81	177.93	1386.68	1327.88	12.79	OSF1.50	12000.00	11895.87				MinPt-CtCt	
	1505.91	178.29	1386.54	1327.62	12.77	OSF1.50	12040.00	11935.87				MINPT-O-EOU	
	1505.97	178.37	1386.55	1327.61	12.76	OSF1.50	12050.00	11945.87				MinPt-O-ADP	
	1507.30	178.67	1387.68	1328.64	12.75	OSF1.50	12120.00	12015.78				MinPt-O-SF	
	1512.81	179.44	1392.67	1333.37	12.74	OSF1.50	12230.00	12124.13				MinPt-O-SF	
	5451.25	191.32	5323.19	5259.93	43.07	OSF1.50	17531.71	12590.00				TD	
30-025-46314 - CASCADE 28 FEDERAL 86H - MWD to 17120ft - A (DefinitiveSurvey)													Pass
	742.01	32.81	740.14	709.20	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	741.98	32.81	740.11	709.17	138607.53	MAS = 10.00 (m)	23.00	23.00				WRP	
	723.11	32.81	709.67	690.30	61.28	MAS = 10.00 (m)	1270.00	1270.00				MinPts	
	723.30	32.81	709.51	690.49	59.49	MAS = 10.00 (m)	1310.00	1310.00				MINPT-O-EOU	
	957.71	42.66	928.72	915.05	34.98	OSF1.50	2910.00	2890.12				MinPt-O-SF	
	1031.74	45.67	1000.74	986.07	35.11	OSF1.50	3160.00	3134.66				MinPt-O-SF	
	1417.63	63.05	1375.04	1354.58	34.60	OSF1.50	4340.00	4288.89				MinPt-O-SF	
	1726.53	76.41	1675.03	1650.12	34.61	OSF1.50	5270.00	5198.59				MinPt-O-SF	
	1866.20	82.40	1810.71	1783.80	34.64	OSF1.50	5690.00	5609.41				MinPt-O-SF	
	2141.53	95.69	2077.18	2045.84	34.14	OSF1.50	6540.00	6440.85				MinPt-O-SF	
	2386.61	121.71	2304.92	2264.90	29.80	OSF1.50	8140.00	8035.87				MINPT-O-EOU	
	2390.56	141.28	2295.82	2249.28	25.67	OSF1.50	9480.00	9375.87				MinPt-CtCt	
	2391.83	144.86	2294.71	2246.97	25.04	OSF1.50	9740.00	9635.87				MINPT-O-EOU	
	2392.50	145.63	2294.85	2246.86	24.91	OSF1.50	9800.00	9695.87				MinPt-O-ADP	
	2364.49	179.41	2244.37	2185.07	19.93	OSF1.50	12460.00	12334.61				MinPt-O-SF	
	2364.45	179.41	2244.33	2185.04	19.93	OSF1.50	12480.00	12351.34				MinPts	
	2365.00	179.45	2244.86	2185.55	19.93	OSF1.50	12570.00	12422.60				MinPt-O-SF	
	2386.26	182.79	2263.69	2203.47	19.73	OSF1.50	13080.00	12624.93				MinPts	
	2367.74	204.61	2230.83	2163.14	17.48	OSF1.50	14380.00	12614.73				MinPt-CtCt	
	2367.91	205.20	2230.60	2162.72	17.43	OSF1.50	14420.00	12614.42				MINPT-O-EOU	
	2368.17	205.50	2230.66	2162.67	17.40	OSF1.50	14440.00	12614.26				MinPt-O-ADP	
	2388.54	217.52	2243.02	2171.02	16.58	OSF1.50	14880.00	12610.81				MINPT-O-EOU	
	2389.51	218.66	2243.23	2170.86	16.50	OSF1.50	14930.00	12610.42				MinPt-O-ADP	
	2384.16	242.03	2222.30	2142.13	14.86	OSF1.50	15610.00	12605.08				MinPt-CtCt	
	2384.61	243.43	2221.82	2141.19	14.78	OSF1.50	15670.00	12604.61				MINPT-O-EOU	
	2385.38	244.35	2221.97	2141.03	14.73	OSF1.50	15710.00	12604.29				MinPt-O-ADP	
	2393.11	272.40	2211.00	2120.71	13.24	OSF1.50	16410.00	12598.80				MinPt-CtCt	
	2379.45	293.85	2183.04	2085.60	12.20	OSF1.50	16930.00	12594.72				MinPt-CtCt	
	2380.39	296.81	2182.01	2083.58	12.08	OSF1.50	17030.00	12593.94				MINPT-O-EOU	
	2383.76	302.46	2181.61	2081.30	11.87	OSF1.50	17170.00	12592.84				MINPT-O-EOU	
	2390.33	310.84	2182.59	2079.49	11.58	OSF1.50	17380.00	12591.19				MinPt-O-ADP	
	2397.00	316.27	2185.64	2080.73	11.42	OSF1.50	17531.71	12590.00				MinPt-O-SF	
30-025-46313 - CASCADE 28 FEDERAL 85H - MWD to 16925ft - A (DefinitiveSurvey)													Pass
	761.56	32.81	759.69	728.75	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	761.52	32.81	759.66	728.72	5321781.27	MAS = 10.00 (m)	23.00	23.00				WRP	
	761.48	32.81	758.19	728.67	533.05	MAS = 10.00 (m)	230.00	230.00				MinPts	
	759.65	32.81	749.74	726.84	94.26	MAS = 10.00 (m)	890.00	890.00				MINPT-O-EOU	
	757.87	32.81	745.50	725.06	70.62	MAS = 10.00 (m)	1160.00	1160.00				MinPts	
	758.13	32.81	745.20	725.32	67.14	MAS = 10.00 (m)	1220.00	1220.00				MINPT-O-EOU	
	1019.47	43.04	990.23	976.44	36.90	OSF1.50	2940.00	2919.46				MinPt-O-SF	
	1604.81	66.57	1559.88	1538.24	37.05	OSF1.50	4580.00	4523.65				MinPt-O-SF	
	1769.66	73.96	1719.80	1695.70	36.68	OSF1.50	5070.00	5002.95				MinPt-O-SF	
	2220.78	90.77	2159.71	2130.01	37.35	OSF1.50	6290.00	6196.31				MinPt-O-SF	
	2340.31	95.30	2276.22	2245.01	37.46	OSF1.50	6610.00	6509.39				MinPt-O-SF	
	2459.30	101.20	2391.28	2358.10	37.04	OSF1.50	7010.00	6905.95				MinPt-O-SF	
	2802.83	161.08	2694.89	2641.76	26.36	OSF1.50	10780.00	10675.87				MinPt-CtCt	
	2805.21	169.86	2691.41	2635.34	25.00	OSF1.50	11390.00	11285.87				MinPts	
	2806.40	173.41	2690.28	2632.99	24.48	OSF1.50	11650.00	11545.87				MINPT-O-EOU	
	2807.87	176.05	2689.99	2631.81	24.12	OSF1.50	11830.00	11725.87				MINPT-O-EOU	
	2808.60	177.00	2690.09	2631.60	24.00	OSF1.50	11900.00	11795.87				MinPt-O-ADP	
	2813.15	178.15	2693.87	2634.99	23.88	OSF1.50	12054.90	11950.77				MinPt-O-SF	
	2821.67	179.01	2701.83	2642.67	23.84	OSF1.50	12220.00	12114.41				MinPt-O-ADP	
	2822.34	179.55	2702.13	2642.79	23.77	OSF1.50	12250.00	12143.46				MinPt-O-ADP	
	2823.24	179.87	2702.81	2643.37	23.73	OSF1.50	12360.00	12246.72				MinPt-O-SF	
	2803.15	188.50	2676.98	2614.66	22.48	OSF1.50	13620.00	12620.69				MinPt-CtCt	
	2803.37	189.23	2676.70	2614.13	22.39	OSF1.50	13680.00	12620.22				MINPT-O-EOU	
	2803.78	189.73	2676.78	2614.05	22.33	OSF1.50	13720.00	12619.91				MinPt-O-ADP	
	2813.18	207.67	2674.23	2605.52	20.46	OSF1.50	14540.00	12613.48				MinPt-CtCt	
	2812.75	222.07	2664.19	2590.68	19.12	OSF1.50	15040.00	12609.55				MinPt-CtCt	
	2813.39	223.85	2663.65	2589.54	18.97	OSF1.50	15120.00	12608.92				MINPT-O-EOU	
	2814.17	224.75	2663.83	2589.42	18.90	OSF1.50	15160.00	12608.61				MinPt-O-ADP	
	2813.46	251.74	2645.12	2561.72	16.86	OSF1.50	15900.00	12602.80				MinPt-CtCt	
	2814.48	254.80	2644.11	2559.68	16.66	OSF1.50	16010.00	12601.94				MINPT-O-EOU	
	2815.80	256.77	2644.11	2559.03	16.54	OSF1.50	16070.00	12601.47				MINPT-O-EOU	
	2826.44	272.14	2644.50	2554.29	15.66	OSF1.50	16460.00	12598.41				MINPT-O-EOU	
	2827.38	285.49	2636.54	2541.89	14.93	OSF1.50	16750.00	12596.13				MinPt-CtCt	
	2825.84	313.26	2616.49	2512.58	13.59	OSF1.50	17400.00	12591.03				MinPt-CtCt	
	2826.03	319.13	2612.77	2506.91	13.34	OSF1.50	17531.71	12590.00				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		
30-025-35598 - RED HILLS SWD 1 - INC Only to 6500ft - SWD (DefinitiveSurvey)													Pass
	5044.85	32.81	5042.98	5012.04	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5044.84	32.81	5042.93	5012.03	102855.51	MAS = 10.00 (m)	23.00	23.00				WRP	
	4742.86	466.56	4431.26	4276.30	15.30	OSF1.50	6740.00	6637.46				MinPt-O-SF	
	4742.84	466.56	4431.25	4276.28	15.30	OSF1.50	6750.00	6647.35				MinPts	
	6259.58	184.16	6136.30	6075.43	51.40	OSF1.50	17010.00	12594.09				MinPt-CtCt	
	6260.00	185.36	6135.91	6074.64	51.07	OSF1.50	17080.00	12593.54				MINPT-O-EOU	
	6260.78	186.31	6136.06	6074.47	50.81	OSF1.50	17130.00	12593.15				MinPt-O-ADP	
	6281.47	196.31	6150.09	6085.17	48.36	OSF1.50	17531.71	12590.00				MinPt-O-SF	

Schlumberger

Coterra Cascade 28 Federal 412H Rev0 kFc 25May23 Proposal Geodetic Report

Def Plan

Report Date:	May 25, 2023 - 04:05 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	179.630 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra Cascade 28 Federal Pad / Cascade 28 Federal 412H	**TVD Reference Datum:**	RKB
Well:	Cascade 28 Federal 412H	**TVD Reference Elevation:**	3397.200 ft above MSL
Borehole:	Cascade 28 Federal 412H	**Seabed / Ground Elevation:**	3374.200 ft above MSL
UBHI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.235°
Survey Name:	Coterra Cascade 28 Federal 412H Rev0 kFc 25May23	**Total Gravity Field Strength:**	998.4365mgn (9.80665 Based)
Survey Date:	May 25, 2023	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	114.441 ° / 6112.087 ft / 5.987 / 0.484	**Total Magnetic Field Strength:**	47351.688 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.634°
Location Lat / Long:	32°6'29.59234"N , 103°34'32.05071"W	**Declination Date:**	May 25, 2023
Location Grid N/E Y/X:	N 403931.570 ftUS , E 775961.880 ftUS	**Magnetic Declination Model:**	HDGM 2023
CRS Grid Convergence Angle:	0.4028°	**North Reference:**	Grid North
Grid Scale Factor:	0.99997214	**Grid Convergence Used:**	0.4028°
Version / Patch:	2022.5.0.11	**Total Corr Mag North->Grid North:**	5.8321°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [210' FNL, 2099' FEL]	0.00	0.00	275.84	0.00	-3,397.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964			
	100.00	0.00	275.84	100.00	-3,297.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	200.00	0.00	275.84	200.00	-3,197.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	300.00	0.00	275.84	300.00	-3,097.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	400.00	0.00	275.84	400.00	-2,997.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	500.00	0.00	275.84	500.00	-2,897.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	600.00	0.00	275.84	600.00	-2,797.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	700.00	0.00	275.84	700.00	-2,697.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	800.00	0.00	275.84	800.00	-2,597.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	900.00	0.00	275.84	900.00	-2,497.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
Rustler	995.00	0.00	275.84	995.00	-2,402.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,000.00	0.00	275.84	1,000.00	-2,397.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,100.00	0.00	275.84	1,100.00	-2,297.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,200.00	0.00	275.84	1,200.00	-2,197.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,300.00	0.00	275.84	1,300.00	-2,097.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
Top Salt	1,340.00	0.00	275.84	1,340.00	-2,057.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,400.00	0.00	275.84	1,400.00	-1,997.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,500.00	0.00	275.84	1,500.00	-1,897.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
Nudge, Build 2°/100ft	1,600.00	0.00	275.84	1,600.00	-1,797.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
	1,700.00	2.00	275.84	1,699.98	-1,697.22	-0.19	0.18	-1.74	403,931.75	775,960.14	32.10822062	-103.57557524	2.00	2.00	0.00
	1,800.00	4.00	275.84	1,799.84	-1,597.36	-0.76	0.71	-6.94	403,932.28	775,954.94	32.10822218	-103.57559204	2.00	2.00	0.00
	1,900.00	6.00	275.84	1,899.45	-1,497.75	-1.70	1.60	-15.61	403,933.17	775,946.27	32.10822479	-103.57562002	2.00	2.00	0.00
	2,000.00	8.00	275.84	1,998.70	-1,398.50	-3.02	2.84	-27.74	403,934.41	775,934.15	32.10822843	-103.57565914	2.00	2.00	0.00
	2,100.00	10.00	275.84	2,097.47	-1,299.73	-4.71	4.43	-43.30	403,936.00	775,918.58	32.10823311	-103.57570936	2.00	2.00	0.00
Hold	2,199.78	12.00	275.84	2,195.40	-1,201.80	-6.77	6.37	-62.23	403,937.94	775,899.65	32.10823880	-103.57577046	2.00	2.00	0.00
	2,200.00	12.00	275.84	2,195.62	-1,201.58	-6.78	6.37	-62.28	403,937.94	775,899.60	32.10823882	-103.57577061	0.00	0.00	0.00
	2,300.00	12.00	275.84	2,293.44	-1,103.76	-9.03	8.49	-82.95	403,940.06	775,878.93	32.10824503	-103.57583733	0.00	0.00	0.00
	2,400.00	12.00	275.84	2,391.26	-1,005.94	-11.28	10.61	-103.63	403,942.18	775,858.25	32.10825125	-103.57590405	0.00	0.00	0.00
	2,500.00	12.00	275.84	2,489.07	-908.13	-13.53	12.72	-124.30	403,944.29	775,837.58	32.10825747	-103.57597077	0.00	0.00	0.00
	2,600.00	12.00	275.84	2,586.89	-810.31	-15.78	14.84	-144.98	403,946.41	775,816.91	32.10826368	-103.57603749	0.00	0.00	0.00
	2,700.00	12.00	275.84	2,684.71	-712.49	-18.02	16.96	-165.65	403,948.52	775,796.23	32.10826990	-103.57610421	0.00	0.00	0.00
	2,800.00	12.00	275.84	2,782.52	-614.68	-20.27	19.07	-186.33	403,950.64	775,775.56	32.10827611	-103.57617093	0.00	0.00	0.00
	2,900.00	12.00	275.84	2,880.34	-516.86	-22.52	21.19	-207.01	403,952.76	775,754.88	32.10828233	-103.57623766	0.00	0.00	0.00
	3,000.00	12.00	275.84	2,978.15	-419.05	-24.77	23.30	-227.68	403,954.87	775,734.21	32.10828855	-103.57630438	0.00	0.00	0.00
	3,100.00	12.00	275.84	3,075.97	-321.23	-27.02	25.42	-248.36	403,956.99	775,713.53	32.10829476	-103.57637110	0.00	0.00	0.00
	3,200.00	12.00	275.84	3,173.79	-223.41	-29.27	27.54	-269.03	403,959.11	775,692.86	32.10830098	-103.57643782	0.00	0.00	0.00
	3,300.00	12.00	275.84	3,271.60	-125.60	-31.52	29.65	-289.71	403,961.22	775,672.18	32.10830719	-103.57650454	0.00	0.00	0.00
	3,400.00	12.00	275.84	3,369.42	-27.78	-33.77	31.77	-310.38	403,963.34	775,651.51	32.10831341	-103.57657126	0.00	0.00	0.00
	3,500.00	12.00	275.84	3,467.24	70.04	-36.02	33.89	-331.06	403,965.45	775,630.83	32.10831962	-103.57663798	0.00	0.00	0.00
	3,600.00	12.00	275.84	3,565.05	167.85	-38.27	36.00	-351.73	403,967.57	775,610.16	32.10832584	-103.57670470	0.00	0.00	0.00
	3,700.00	12.00	275.84	3,662.87	265.67	-40.52	38.12	-372.41	403,969.69	775,589.48	32.10833206	-103.57677142	0.00	0.00	0.00
	3,800.00	12.00	275.84	3,760.69	363.49	-42.77	40.23	-393.09	403,971.80	775,568.81	32.10833827	-103.57683814	0.00	0.00	0.00
	3,900.00	12.00	275.84	3,858.50	461.30	-45.02	42.35	-413.76	403,973.92	775,548.13	32.10834449	-103.57690486	0.00	0.00	0.00
	4,000.00	12.00	275.84	3,956.32	559.12	-47.27	44.47	-434.44	403,976.03	775,527.46	32.10835070	-103.57697158	0.00	0.00	0.00
	4,100.00	12.00	275.84	4,054.13	656.93	-49.52	46.58	-455.11	403,978.15	775,506.78	32.10835692	-103.57703830	0.00	0.00	0.00
	4,200.00	12.00	275.84	4,151.95	754.75	-51.77	48.70	-475.79	403,980.27	775,486.11	32.10836313	-103.57710502	0.00	0.00	0.00
	4,300.00	12.00	275.84	4,249.77	852.57	-54.02	50.81	-496.46	403,982.38	775,465.43	32.10836935	-103.57717174	0.00	0.00	0.00
	4,400.00	12.00	275.84	4,347.58	950.38	-56.27	52.93	-517.14	403,984.50	775,444.76	32.10837556	-103.57723846	0.00	0.00	0.00
	4,500.00	12.00	275.84	4,445.40	1,048.20	-58.52	55.05	-537.81	403,986.62	775,424.08	32.10838178	-103.57730518	0.00	0.00	0.00
	4,600.00	12.00	275.84	4,543.22	1,146.02	-60.77	57.16	-558.49	403,988.73	775,403.41	32.10838799	-103.57737191	0.00	0.00	0.00
	4,700.00	12.00	275.84	4,641.03	1,243.83	-63.02	59.28	-579.17	403,990.85	775,382.73	32.10839421	-103.57743863	0.00	0.00	0.00
	4,800.00	12.00	275.84	4,738.85	1,341.65	-65.27	61.40	-599.84	403,992.96	775,362.06	32.10840043	-103.57750535	0.00	0.00	0.00
	4,900.00	12.00	275.84	4,836.67	1,439.47	-67.52	63.51	-620.52	403,995.08	775,341.38	32.10840664	-103.57757207	0.00	0.00	0.00
Lamar	4,995.42	12.00	275.84	4,930.00	1,532.80	-69.66	65.53	-640.24	403,997.10	775,321.65	32.10841257	-103.57763573	0.00	0.00	0.00
	5,000.00	12.00	275.84	4,934.48	1,537.28	-69.77	65.63	-641.19	403,997.20	775,320.71	32.10841286	-103.57763879	0.00	0.00	0.00
Bell Canyon	5,036.31	12.00	275.84	4,970.00	1,572.80	-70.58	66.40	-648.70	403,997.96	775,313.20	32.10841511	-103.57766302	0.00	0.00	0.00
	5,100.00	12.00	275.84	5,032.30	1,635.10	-72.02	67.74	-661.87	403,999.31	775,300.03	32.10841907	-103.57770551	0.00	0.00	0.00
	5,200.00	12.00	275.84	5,130.11	1,732.91	-74.27	69.86	-682.54	404,001.43	775,279.36	32.10842529	-103.57777223	0.00	0.00	0.00
	5,300.00	12.00	275.84	5,227.93	1,830.73	-76.52	71.98	-703.22	404,003.55	775,258.68	32.10843150	-103.57783895	0.00	0.00	0.00
	5,400.00	12.00	275.84	5,325.75	1,928.55	-78.77	74.09	-723.89	404,005.66	775,238.01	32.10843772	-103.57790567	0.00	0.00	0.00
	5,500.00	12.00	275.84	5,423.56	2,026.36	-81.02	76.21	-744.57	404,007.78	775,217.33	32.10844393	-103.57797239	0.00	0.00	0.00
	5,600.00	12.00	275.84	5,521.38	2,124.18	-83.27	78.33	-765.24	404,009.89	775,196.66	32.10845015	-103.57803911	0.00	0.00	0.00
	5,700.00	12.00	275.84	5,619.20	2,222.00	-85.52	80.44	-785.92	404,012.01	775,175.98	32.10845636	-103.57810583	0.00	0.00	0.00
	5,800.00	12.00	275.84	5,717.01	2,319.81	-87.77	82.56	-806.60	404,014.13	775,155.31	32.10846258	-103.57817255	0.00	0.00	0.00
	5,900.00	12.00	275.84	5,814.83	2,417.63	-90.02	84.67	-827.27	404,016.24	775,134.63	32.10846879	-103.57823928	0.00	0.00	0.00
	6,000.00	12.00	275.84	5,912.65	2,515.45	-92.26	86.79	-847.95	404,018.36	775,113.96	32.10847501	-103.57830600	0.00	0.00	0.00
Cherry Canyon	6,073.97	12.00	275.84	5,985.00	2,587.80	-93.93	88.36	-863.24	404,019.92	775,098.67	32.10847960	-103.57835535	0.00	0.00	0.00
	6,100.00	12.00	275.84	6,010.46	2,613.26	-94.51	88.91	-868.62	404,020.47	775,093.28	32.10848122	-103.57837272	0.00	0.00	0.00
	6,200.00	12.00	275.84	6,108.28	2,711.08	-96.76	91.02	-889.30	404,022.59	775,072.61	32.10848743	-103.57843944	0.00	0.00	0.00
	6,300.00	12.00	275.84	6,206.09	2,808.89	-99.01	93.14	-909.97	404,024.71	775,051.93	32.10849365	-103.57850616	0.00	0.00	0.00
	6,400.00	12.00	275.84	6,303.91	2,906.71	-101.26	95.26	-930.65	404,026.82	775,031.26	32.10849986	-103.57857288	0.00	0.00	0.00
	6,500.00	12.00	275.84	6,401.73	3,004.53	-103.51	97.37	-951.32	404,028.94	775,010.58	32.10850608	-103.57863960	0.00	0.00	0.00
Drop 2°/100ft	6,568.13	12.00	275.84	6,468.37	3,071.17	-105.05	98.81	-965.41	404,030.38	774,996.50	32.10851031	-103.57868505	0.00	0.00	0.00
	6,600.00	11.36	275.84	6,499.58	3,102.38	-105.74	99.47	-971.83	404,031.04	774,990.08	32.10851224	-103.57870576	2.00	-2.00	0.00
	6,700.00	9.36	275.84	6,597.95	3,200.75	-107.69	101.30	-989.71	404,032.87	774,972.20	32.10851762	-103.57876348	2.00	-2.00	0.00
	6,800.00	7.36	275.84	6,696.88	3,299.68	-109.26	102.78	-1,004.17	404,034.35	774,957.74	32.10852196	-103.57881014	2.00	-2.00	0.00
	6,900.00	5.36	275.84	6,796.26	3,399.06	-110.46	103.91	-1,015.19	404,035.48	774,946.72	32.10852527	-103.57884569	2.00	-2.00	0.00
	7,000.00	3.36	275.84	6,895.96	3,498.76	-111.28	104.68	-1,022.75	404,036.25	774,939.16	32.10852755	-103.57887009	2.00	-2.00	0.00
	7,100.00	1.36	275.84	6,995.87	3,598.67	-111.73	105.10	-1,026.84	404,036.67	774,935.07	32.10852878	-103.57888329	2.00	-2.00	0.00
Hold	7,167.90	0.00	275.84	7,063.77	3,666.57	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	2.00	-2.00	0.00
	7,200.00	0.00	275.84	7,095.87	3,698.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,300.00	0.00	275.84	7,195.87	3,798.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,400.00	0.00	275.84	7,295.87	3,898.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,500.00	0.00	275.84	7,395.87	3,998.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,600.00	0.00	275.84	7,495.87	4,098.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Brushy Canyon	7,679.13	0.00	275.84	7,575.00	4,177.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,700.00	0.00	275.84	7,595.87	4,198.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,800.00	0.00	275.84	7,695.87	4,298.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	7,900.00	0.00	275.84	7,795.87	4,398.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,000.00	0.00	275.84	7,895.87	4,498.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,100.00	0.00	275.84	7,995.87	4,598.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,200.00	0.00	275.84	8,095.87	4,698.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,300.00	0.00	275.84	8,195.87	4,798.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,400.00	0.00	275.84	8,295.87	4,898.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,500.00	0.00	275.84	8,395.87	4,998.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,600.00	0.00	275.84	8,495.87	5,098.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,700.00	0.00	275.84	8,595.87	5,198.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,800.00	0.00	275.84	8,695.87	5,298.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	8,900.00	0.00	275.84	8,795.87	5,398.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,000.00	0.00	275.84	8,895.87	5,498.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Basal Brushy Canyon	9,024.13	0.00	275.84	8,920.00	5,522.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,100.00	0.00	275.84	8,995.87	5,598.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Bone Spring Lime	9,194.13	0.00	275.84	9,090.00	5,692.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	9,200.00	0.00	275.84	9,095.87	5,698.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Leonard	9,234.13	0.00	275.84	9,130.00	5,732.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,300.00	0.00	275.84	9,195.87	5,798.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,400.00	0.00	275.84	9,295.87	5,898.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Avalon	9,434.13	0.00	275.84	9,330.00	5,932.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,500.00	0.00	275.84	9,395.87	5,998.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,600.00	0.00	275.84	9,495.87	6,098.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,700.00	0.00	275.84	9,595.87	6,198.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,800.00	0.00	275.84	9,695.87	6,298.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	9,900.00	0.00	275.84	9,795.87	6,398.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,000.00	0.00	275.84	9,895.87	6,498.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,100.00	0.00	275.84	9,995.87	6,598.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,200.00	0.00	275.84	10,095.87	6,698.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
1st BS SS	10,209.13	0.00	275.84	10,105.00	6,707.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,300.00	0.00	275.84	10,195.87	6,798.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,400.00	0.00	275.84	10,295.87	6,898.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,500.00	0.00	275.84	10,395.87	6,998.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,600.00	0.00	275.84	10,495.87	7,098.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,700.00	0.00	275.84	10,595.87	7,198.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
2nd BS SS	10,789.13	0.00	275.84	10,685.00	7,287.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,800.00	0.00	275.84	10,695.87	7,298.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	10,900.00	0.00	275.84	10,795.87	7,398.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,000.00	0.00	275.84	10,895.87	7,498.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,100.00	0.00	275.84	10,995.87	7,598.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,200.00	0.00	275.84	11,095.87	7,698.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
3rd BS Carb	11,224.13	0.00	275.84	11,120.00	7,722.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,300.00	0.00	275.84	11,195.87	7,798.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,400.00	0.00	275.84	11,295.87	7,898.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,500.00	0.00	275.84	11,395.87	7,998.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,600.00	0.00	275.84	11,495.87	8,098.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,700.00	0.00	275.84	11,595.87	8,198.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,800.00	0.00	275.84	11,695.87	8,298.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
3rd BS SS	11,889.13	0.00	275.84	11,785.00	8,387.80	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	11,900.00	0.00	275.84	11,795.87	8,398.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	12,000.00	0.00	275.84	11,895.87	8,498.67	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
KOP, Build 8°/100ft	12,054.90	0.00	275.84	11,950.77	8,553.57	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
	12,100.00	3.61	179.63	11,995.84	8,598.64	-110.40	103.76	-1,027.63	404,035.33	774,934.28	32.10852512	-103.57888588	8.00	8.00	0.00
	12,200.00	11.61	179.63	12,094.88	8,697.68	-97.17	90.54	-1,027.55	404,022.10	774,934.36	32.10848875	-103.57888590	8.00	8.00	0.00
	12,300.00	19.61	179.63	12,191.11	8,793.91	-70.29	63.65	-1,027.37	403,995.22	774,934.54	32.10841486	-103.57888595	8.00	8.00	0.00
Wolfcamp	12,309.46	20.36	179.63	12,200.00	8,802.80	-67.05	60.42	-1,027.35	403,991.99	774,934.56	32.10840598	-103.57888596	8.00	8.00	0.00
	12,400.00	27.61	179.63	12,282.67	8,885.47	-30.27	23.64	-1,027.11	403,955.21	774,934.80	32.10830487	-103.57888602	8.00	8.00	0.00
	12,500.00	35.61	179.63	12,367.76	8,970.56	22.10	-28.73	-1,026.78	403,902.84	774,935.13	32.10816093	-103.57888611	8.00	8.00	0.00
	12,600.00	43.61	179.63	12,444.74	9,047.54	85.80	-92.43	-1,026.37	403,839.15	774,935.55	32.10798583	-103.57888622	8.00	8.00	0.00
Build 10°/100ft	12,617.40	45.00	179.63	12,457.20	9,060.00	97.95	-104.58	-1,026.29	403,826.99	774,935.62	32.10795242	-103.57888625	8.00	8.00	0.00
	12,700.00	53.26	179.63	12,511.20	9,114.00	160.36	-166.99	-1,025.88	403,764.59	774,936.03	32.10778089	-103.57888636	10.00	10.00	0.00
	12,800.00	63.26	179.63	12,563.74	9,166.54	245.29	-251.92	-1,025.34	403,679.66	774,936.57	32.10754742	-103.57888651	10.00	10.00	0.00
	12,900.00	73.26	179.63	12,600.73	9,203.53	338.06	-344.69	-1,024.74	403,586.89	774,937.17	32.10729243	-103.57888667	10.00	10.00	0.00
	13,000.00	83.26	179.63	12,621.05	9,223.85	435.85	-442.47	-1,024.11	403,489.11	774,937.80	32.10702365	-103.57888684	10.00	10.00	0.00
Landing Point	13,071.90	90.45	179.63	12,625.00	9,227.80	507.59	-514.21	-1,023.64	403,417.37	774,938.27	32.10682645	-103.57888697	10.00	10.00	0.00
	13,100.00	90.45	179.63	12,624.78	9,227.58	535.69	-542.31	-1,023.46	403,389.27	774,938.45	32.10674921	-103.57888702	0.00	0.00	0.00
	13,200.00	90.45	179.63	12,623.99	9,226.79	635.69	-642.31	-1,022.82	403,289.28	774,939.09	32.10647435	-103.57888719	0.00	0.00	0.00
	13,300.00	90.45	179.63	12,623.21	9,226.01	735.69	-742.30	-1,022.17	403,189.29	774,939.74	32.10619948	-103.57888737	0.00	0.00	0.00
	13,400.00	90.45	179.63	12,622.42	9,225.22	835.68	-842.30	-1,021.53	403,089.30	774,940.39	32.10592462	-103.57888754	0.00	0.00	0.00
	13,500.00	90.45	179.63	12,621.64	9,224.44	935.68	-942.29	-1,020.88	402,989.31	774,941.03	32.10564976	-103.57888772	0.00	0.00	0.00
	13,600.00	90.45	179.63	12,620.85	9,223.65	1,035.68	-1,042.29	-1,020.23	402,889.31	774,941.68	32.10537490	-103.57888790	0.00	0.00	0.00
	13,700.00	90.45	179.63	12,620.07	9,222.87	1,135.67	-1,142.28	-1,019.59	402,789.32	774,942.32	32.10510004	-103.57888807	0.00	0.00	0.00
	13,800.00	90.45	179.63	12,619.28	9,222.08	1,235.67	-1,242.28	-1,018.94	402,689.33	774,942.97	32.10482517	-103.57888825	0.00	0.00	0.00
	13,900.00	90.45	179.63	12,618.50	9,221.30	1,335.67	-1,342.27	-1,018.30	402,589.34	774,943.61	32.10455031	-103.57888842	0.00	0.00	0.00
	14,000.00	90.45	179.63	12,617.71	9,220.51	1,435.66	-1,442.27	-1,017.65	402,489.35	774,944.26	32.10427545	-103.57888860	0.00	0.00	0.00
	14,100.00	90.45	179.63	12,616.93	9,219.73	1,535.66	-1,542.26	-1,017.01	402,389.36	774,944.90	32.10400059	-103.57888877	0.00	0.00	0.00
	14,200.00	90.45	179.63	12,616.14	9,218.94	1,635.66	-1,642.26	-1,016.36	402,289.36	774,945.55	32.10372573	-103.57888895	0.00	0.00	0.00
	14,300.00	90.45	179.63	12,615.36	9,218.16	1,735.65	-1,742.25	-1,015.72	402,189.37	774,946.19	32.10345086	-103.57888913	0.00	0.00	0.00
	14,400.00	90.45	179.63	12,614.57	9,217.37	1,835.65	-1,842.24	-1,015.07	402,089.38	774,946.84	32.10317600	-103.57888930	0.00	0.00	0.00
	14,500.00	90.45	179.63	12,613.79	9,216.59	1,935.65	-1,942.24	-1,014.43	401,989.39	774,947.48	32.10290114	-103.57888948	0.00	0.00	0.00
	14,600.00	90.45	179.63	12,613.00	9,215.80	2,035.65	-2,042.23	-1,013.78	401,889.40	774,948.13	32.10262628	-103.57888965	0.00	0.00	0.00
	14,700.00	90.45	179.63	12,612.22	9,215.02	2,135.64	-2,142.23	-1,013.14	401,789.40	774,948.77	32.10235142	-103.57888983	0.00	0.00	0.00
	14,800.00	90.45	179.63	12,611.44	9,214.24	2,235.64	-2,242.22	-1,012.49	401,689.41	774,949.42	32.10207655	-103.57889000	0.00	0.00	0.00
	14,900.00	90.45	179.63	12,610.65	9,213.45	2,335.64	-2,342.22	-1,011.84	401,589.42	774,950.07	32.10180169	-103.57889018	0.00	0.00	0.00
	15,000.00	90.45	179.63	12,609.87	9,212.67	2,435.63	-2,442.21	-1,011.20	401,489.43	774,950.71	32.10152683	-103.57889036	0.00	0.00	0.00
	15,100.00	90.45	179.63	12,609.08	9,211.88	2,535.63	-2,542.21	-1,010.55	401,389.44	774,951.36	32.10125197	-103.57889053	0.00	0.00	0.00
	15,200.00	90.45	179.63	12,608.30	9,211.10	2,635.63	-2,642.20	-1,009.91	401,289.45	774,952.00	32.10097711	-103.57889071	0.00	0.00	0.00
	15,300.00	90.45	179.63	12,607.51	9,210.31	2,735.62	-2,742.20	-1,009.26	401,189.45	774,952.65	32.10070224	-103.57889088	0.00	0.00	0.00
	15,400.00	90.45	179.63	12,606.73	9,209.53	2,835.62	-2,842.19	-1,008.62	401,089.46	774,953.29	32.10042738	-103.57889106	0.00	0.00	0.00
	15,500.00	90.45	179.63	12,605.94	9,208.74	2,935.62	-2,942.19	-1,007.97	400,989.47	774,953.94	32.10015252	-103.57889123	0.00	0.00	0.00
	15,600.00	90.45	179.63	12,605.16	9,207.96	3,035.61	-3,042.18	-1,007.33	400,889.48	774,954.58	32.09987766	-103.57889141	0.00	0.00	0.00
	15,700.00	90.45	179.63	12,604.37	9,207.17	3,135.61	-3,142.18	-1,006.68	400,789.49	774,955.23	32.09960279	-103.57889158	0.00	0.00	0.00
	15,800.00	90.45	179.63	12,603.59	9,206.39	3,235.61	-3,242.17	-1,006.04	400,689.49	774,955.87	32.09932793	-103.57889176	0.00	0.00	0.00
	15,900.00	90.45	179.63	12,602.80	9,205.60	3,335.61	-3,342.17	-1,005.39	400,589.50	774,956.52	32.09905307	-103.57889193	0.00	0.00	0.00
	16,000.00	90.45	179.63	12,602.02	9,204.82	3,435.60	-3,442.16	-1,004.75	400,489.51	774,957.16	32.09877821	-103.57889211	0.00	0.00	0.00
	16,100.00	90.45	179.63	12,601.23	9,204.03	3,535.60	-3,542.16	-1,004.10	400,389.52	774,957.81	32.09850335	-103.57889228	0.00	0.00	0.00
	16,200.00	90.45	179.63	12,600.45	9,203.25	3,635.60	-3,642.15	-1,003.45	400,289.53	774,958.46	32.09822848	-103.57889246	0.00	0.00	0.00
	16,300.00	90.45	179.63	12,599.67	9,202.47	3,735.59	-3,742.15	-1,002.81	400,189.53	774,959.10	32.09795362	-103.57889264	0.00	0.00	0.00
	16,400.00	90.45	179.63	12,598.88	9,201.68	3,835.59	-3,842.14	-1,002.16	400,089.54	774,959.75	32.09767876	-103.57889281	0.00	0.00	0.00
	16,500.00	90.45	179.63	12,598.10	9,200.90	3,935.59	-3,942.14	-1,001.52	399,989.55	774,960.39	32.09740390	-103.57889299	0.00	0.00	0.00
	16,600.00	90.45	179.63	12,597.31	9,200.11	4,035.58	-4,042.13	-1,000.87	399,889.56	774,961.04	32.09712903	-103.57889316	0.00	0.00	0.00
	16,700.00	90.45	179.63	12,596.53	9,199.33	4,135.58	-4,142.13	-1,000.23	399,789.57	774,961.68	32.09685417	-103.57889334	0.00	0.00	0.00
	16,800.00	90.45	179.63	12,595.74	9,198.54	4,235.58	-4,242.12	-999.58	399,689.58	774,962.33	32.09657931	-103.57889351	0.00	0.00	0.00
	16,900.00	90.45	179.63	12,594.96	9,197.76	4,335.57	-4,342.12	-998.94	399,589.58	774,962.97	32.09630445	-103.57889369	0.00	0.00	0.00
	17,000.00	90.45	179.63	12,594.17	9,196.97	4,435.57	-4,442.11	-998.29	399,489.59	774,963.62	32.09602958	-103.57889386	0.00	0.00	0.00
	17,100.00	90.45	179.63	12,593.39	9,196.19	4,535.57	-4,542.11	-997.65	399,389.60	774,964.26	32.09575472	-103.57889404	0.00	0.00	0.00
	17,200.00	90.45	179.63	12,592.60	9,195.40	4,635.57	-4,642.10	-997.00	399,289.61	774,964.91	32.09547986	-103.57889421	0.00	0.00	0.00
	17,300.00	90.45	179.63	12,591.82	9,194.62	4,735.56	-4,742.10	-996.36	399,189.62	774,965.55	32.09520500	-103.57889439	0.00	0.00	0.00
	17,400.00	90.45	179.63	12,591.03	9,193.83	4,835.56	-4,842.09	-995.71	399,089.62	774,966.20	32.09493014	-103.57889456	0.00	0.00	0.00
	17,500.00	90.45	179.63	12,590.25	9,193.05	4,935.56	-4,942.08	-995.06	398,989.63	774,966.85	32.09465527	-103.57889474	0.00	0.00	0.00
Cascade 28 Federal 412H - BHL	17,531.71	90.45	179.63	12,590.00	9,192.80	4,967.26	-4,973.79	-994.86	398,957.93	774,967.05	32.09456813	-103.57889479	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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 Code	Borehole / Survey
	1	0.000	12,000.000	1/100.000	75 – 9.875 – 6.75	10.75 – 7.625 – 5		A001Mb_MWD	Cascade 28 Federal 412H / Coterra Cascade 28 Federal 412H Rev0 kFc 25May23
	1	12,000.000	17,531.705	1/100.000	6.75	5		A008Mb_MWD+IFR1+MS	Cascade 28 Federal 412H / Coterra Cascade 28 Federal 412H Rev0 kFc 25May23

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
973.800	14.750	10.750	
11,473.800	9.875	7.625	
17,531.705	6.750	5.000	

Schlumberger

Coterra Cascade 28 Federal 412H Rev0 kFc 25May23 Proposal Geodetic Report

Def Plan

Report Date:	May 25, 2023 - 04:08 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	179.630 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra Cascade 28 Federal Pad / Cascade 28 Federal 412H	**TVD Reference Datum:**	RKB
Well:	Cascade 28 Federal 412H	**TVD Reference Elevation:**	3397.200 ft above MSL
Borehole:	Cascade 28 Federal 412H	**Seabed / Ground Elevation:**	3374.200 ft above MSL
UBHI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.235°
Survey Name:	Coterra Cascade 28 Federal 412H Rev0 kFc 25May23	**Total Gravity Field Strength:**	998.4365mgn (9.80665 Based)
Survey Date:	May 25, 2023	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	114.441 ° / 6112.087 ft / 5.987 / 0.484	**Total Magnetic Field Strength:**	47351.688 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.634°
Location Lat / Long:	32°6'29.59234"N , 103°34'32.05071"W	**Declination Date:**	May 25, 2023
Location Grid N/E Y/X:	N 403931.570 ftUS , E 775961.880 ftUS	**Magnetic Declination Model:**	HDGM 2023
CRS Grid Convergence Angle:	0.4028°	**North Reference:**	Grid North
Grid Scale Factor:	0.99997214	**Grid Convergence Used:**	0.4028°
Version / Patch:	2022.5.0.11	**Total Corr Mag North->Grid North:**	5.8321°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL [210' FNL, 2099' FEL]	0.00	0.00	275.84	0.00	-3,397.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964			
Nudge, Build 2°/100ft	1,600.00	0.00	275.84	1,600.00	-1,797.20	0.00	0.00	0.00	403,931.57	775,961.88	32.10822009	-103.57556964	0.00	0.00	0.00
Hold	2,199.78	12.00	275.84	2,195.40	-1,201.80	-6.77	6.37	-62.23	403,937.94	775,899.65	32.10823880	-103.57577046	2.00	2.00	0.00
Drop 2°/100ft	6,568.13	12.00	275.84	6,468.37	3,071.17	-105.05	98.81	-965.41	404,030.38	774,996.50	32.10851031	-103.57868505	0.00	0.00	0.00
Hold	7,167.90	0.00	275.84	7,063.77	3,666.57	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	2.00	-2.00	0.00
KOP, Build 8°/100ft	12,054.90	0.00	275.84	11,950.77	8,553.57	-111.82	105.18	-1,027.64	404,036.75	774,934.27	32.10852902	-103.57888588	0.00	0.00	0.00
Build 10°/100ft	12,617.40	45.00	179.63	12,457.20	9,060.00	97.95	-104.58	-1,026.29	403,826.99	774,935.62	32.10795242	-103.57888625	8.00	8.00	0.00
Landing Point	13,071.90	90.45	179.63	12,625.00	9,227.80	507.59	-514.21	-1,023.64	403,417.37	774,938.27	32.10682645	-103.57888697	10.00	10.00	0.00
Cascade 28 Federal 412H - BHL [100' FSL, 2132' FWL]	17,531.71	90.45	179.63	12,590.00	9,192.80	4,967.26	-4,973.79	-994.86	398,957.93	774,967.05	32.09456813	-103.57889479	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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 Code	Borehole / Survey
	1	0.000	12,000.000	1/100.000	75 – 9.875 – 6.75	10.75 – 7.625 – 5		A001Mb_MWD	Cascade 28 Federal 412H / Coterra Cascade 28 Federal 412H Rev0 kFc 25May23
	1	12,000.000	17,531.705	1/100.000	6.75	5		A008Mb_MWD+IFR1+MS	Cascade 28 Federal 412H / Coterra Cascade 28 Federal 412H Rev0 kFc 25May23

EOU Geometry:

End MD (ft)	Hole Size (in)	Casing Size (in)	Name
973.800	14.750	10.750	
11,473.800	9.875	7.625	
17,531.705	6.750	5.000	

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.

2. Name of Operator

9. API Well No.

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 05/10/2024

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 05/10/2024

Additional Operator Remarks

Location of Well

0. SHL: NWNE / 210 FNL / 2099 FEL / TWSP: 25S / RANGE: 33E / SECTION: 28 / LAT: 32.108222 / LONG: -103.57557 (TVD: 0 feet, MD: 0 feet)

PPP: NWNE / 100 FNL / 2132 FWL / TWSP: 25S / RANGE: 33E / SECTION: 28 / LAT: 32.108529 / LONG: -103.578886 (TVD: 11685 feet, MD: 11725 feet)

BHL: SESW / 100 FSL / 2132 FWL / TWSP: 25S / RANGE: 33E / SECTION: 28 / LAT: 32.094568 / LONG: -103.578895 (TVD: 12320 feet, MD: 17203 feet)

BLM Point of Contact

Name: JORDAN NAVARRETTE
Title: LIE
Phone: (575) 234-5972
Email: jnavarrette@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT

SURFACE USE

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Coterra Energy Inc.
LEASE NO.:	NMNM26394
COUNTY:	Lea County, New Mexico

Wells:

Cascade 28 Federal 403H

Surface Hole Location: 210' FNL & 2079' FEL, Section 28, T. 25 S, R. 33 E.

Bottom Hole Location: 100' FSL & 2584' FEL, Section 28, T. 25 S, R. 33 E.

Cascade 28 Federal 404H

Surface Hole Location: 210' FNL & 2039' FEL, Section 28, T. 25 S, R. 33 E.

Bottom Hole Location: 100' FSL & 1457' FEL, Section 28, T. 25 S, R. 33 E.

Cascade 28 Federal 412H

Surface Hole Location: 210' FNL & 2099' FEL, Section 28, T. 25 S, R. 33 E.

Bottom Hole Location: 100' FSL & 2132' FEL, Section 28, T. 25 S, R. 33 E.

Cascade 28 Federal 413H

Surface Hole Location: 210' FNL & 2059' FEL, Section 28, T. 25 S, R. 33 E.

Bottom Hole Location: 100' FSL & 2021' FEL, Section 28, T. 25 S, R. 33 E.

Approval Date: 05/10/2024

TABLE OF CONTENTS

1. GENERAL PROVISIONS

The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

1.1. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the operator, or any person working on the operator's behalf, on the public or federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area (within 100ft) of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer, in conjunction with a BLM Cultural Resource Specialist, to determine appropriate actions to prevent the loss of significant scientific values. The operator shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

Traditional Cultural Properties (TCPs) are protected by NHPA as codified in 36 CFR 800 for possessing traditional, religious, and cultural significance tied to a certain group of individuals. Though there are currently no designated TCPs within the project area or within a mile of the project area, but it is possible for a TCP to be designated after the approval of this project. **If a TCP is designated in the project area after the project's approval, the BLM Authorized Officer will notify the operator of the following conditions and the duration for which these conditions are required.**

1. Temporary halting of all construction, drilling, and production activities to lower noise.
2. Temporary shut-off of all artificial lights at night.

The operator is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA), specifically NAGPRA Subpart B regarding discoveries, to protect human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered during project work. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and a BLM-CFO Authorized Officer will be notified immediately. The BLM will then be required to be notified, in writing, within 24 hours of the discovery. The written notification should include the geographic location by county and state, the contents of the discovery, and the steps taken to protect said discovery. You must also include any potential threats to the discovery and a conformation that all activity within 100ft of the discovery has ceased and work will not resume until written certification is issued. All work on the entire project must halt for a minimum of 3 days and work cannot resume until an Authorized Officer grants permission to do so.

Any paleontological resource discovered by the operator, or any person working on the operator's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. The operator will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the operator.

1.2. RANGELAND RESOURCES

1.2.1. **Cattleguards**

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

1.2.2. **Fence Requirement**

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

1.2.3. **Livestock Watering Requirement**

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

1.3. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA, New Mexico Department of Agriculture, and BLM requirements and policies.

1.3.1 African Rue (Peganum harmala)

Spraying: The spraying of African Rue must be completed by a licensed or certified applicator. In order to attempt to kill or remove African Rue the proper mix of chemical is needed. The mix consists of 2% Arsenal (Imazapyr) and 2% Roundup (Glyphosate) along with a nonionic surfactant. Any other chemicals or combinations shall be approved by the BLM Noxious Weeds Coordinator prior to treatment. African Rue shall be sprayed in connection to any dirt working activities or disturbances to the site being sprayed. Spraying of African Rue shall be done on immature plants at initial growth through flowering and mature plants between budding and flowering stages. Spraying shall not be conducted after flowering when plant is fruiting. This will ensure optimal intake of chemical and decrease chances of developing herbicide resistance. After spraying, the operator or necessary parties must contact the Carlsbad Field Office to inspect the effectiveness of the application treatment to the plant species. No ground disturbing activities can take place until the inspection by the authorized officer is complete. The operator may contact the Environmental Protection Department or the BLM Noxious Weed Coordinator at (575) 234-5972 or BLM_NM_CFO_NoxiousWeeds@blm.gov.

Management Practices: In addition to spraying for African Rue, good management practices should be followed. All equipment should be washed off using a power washer in a designated containment area. The containment area shall be bermed to allow for containment of the seed to prevent it from entering any open areas of the nearby landscape. The containment area shall be excavated near or adjacent to the well pad at a depth of three feet and just large enough to get equipment inside it to be washed off. This will allow all seeds to be in a centrally located area that can be treated at a later date if the need arises.

1.4. LIGHT POLLUTION

1.4.1. **Downfacing**

All permanent lighting will be pointed straight down at the ground in order to prevent light spill beyond the edge of approved surface disturbance.

1.4.2. **Shielding**

All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source).

1.4.3. **Lighting Color**

Lighting shall be 3,500 Kelvin or less (Warm White) except during drilling, completion, and workover operations. No bluish-white lighting shall be used in permanent outdoor lighting.

2. SPECIAL REQUIREMENTS.

2.1 Lesser Prairie Chicken Timing Stipulations

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

2.2 VISUAL RESOURCE MANAGEMENT

2.5.1 **VRM IV**

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

3. CONSTRUCTION REQUIRENMENTS

3.1 CONSTRCUTION NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at BLM_NM_CFO_Construction_Reclamation@blm.gov at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and COAs on the well site and they shall be made available upon request by the Authorized Officer.

3.2 TOPSOIL

The operator shall strip the topsoil (the A horizon) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. No more than the top 6 inches of topsoil shall be removed. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (the B horizon and below) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

3.3 CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No reserve pits will be used for drill cuttings. The operator shall properly dispose of drilling contents at an authorized disposal site.

3.4 FEDERAL MINERAL PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

3.5 WELL PAD & SURFACING

Any surfacing material used to surface the well pad will be removed at the time of interim and final reclamation.

3.6 EXCLOSURE FENCING (CELLARS & PITS)

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the well cellar is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

The operator will also install and maintain mesh netting for all open well cellars to prevent access to smaller wildlife before and after drilling operations until the well cellar is free of fluids and the operator. Use a maximum netting mesh size of 1 ½ inches. The netting must not have holes or gaps.

3.7 ON LEASE ACESS ROAD

3.7.1 **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

3.7.2 **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements will be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

3.7.3 **Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

3.7.4 **Ditching**

Ditching shall be required on both sides of the road.

3.7.5 **Turnouts**

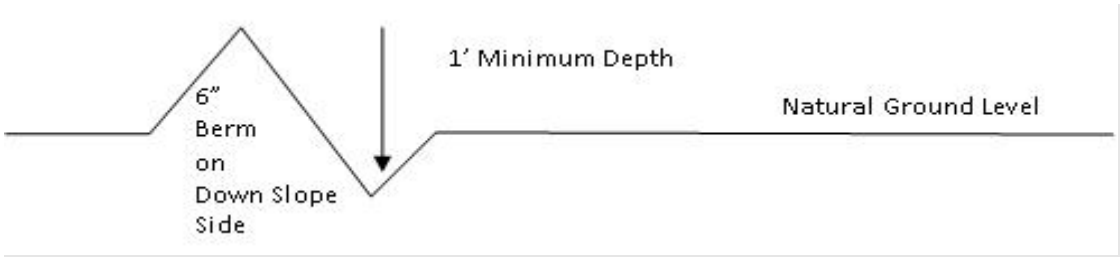
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

3.7.6 **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, leadoff ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4} + 100' = 200' \text{ lead-off ditch interval}$$

3.7.7 **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

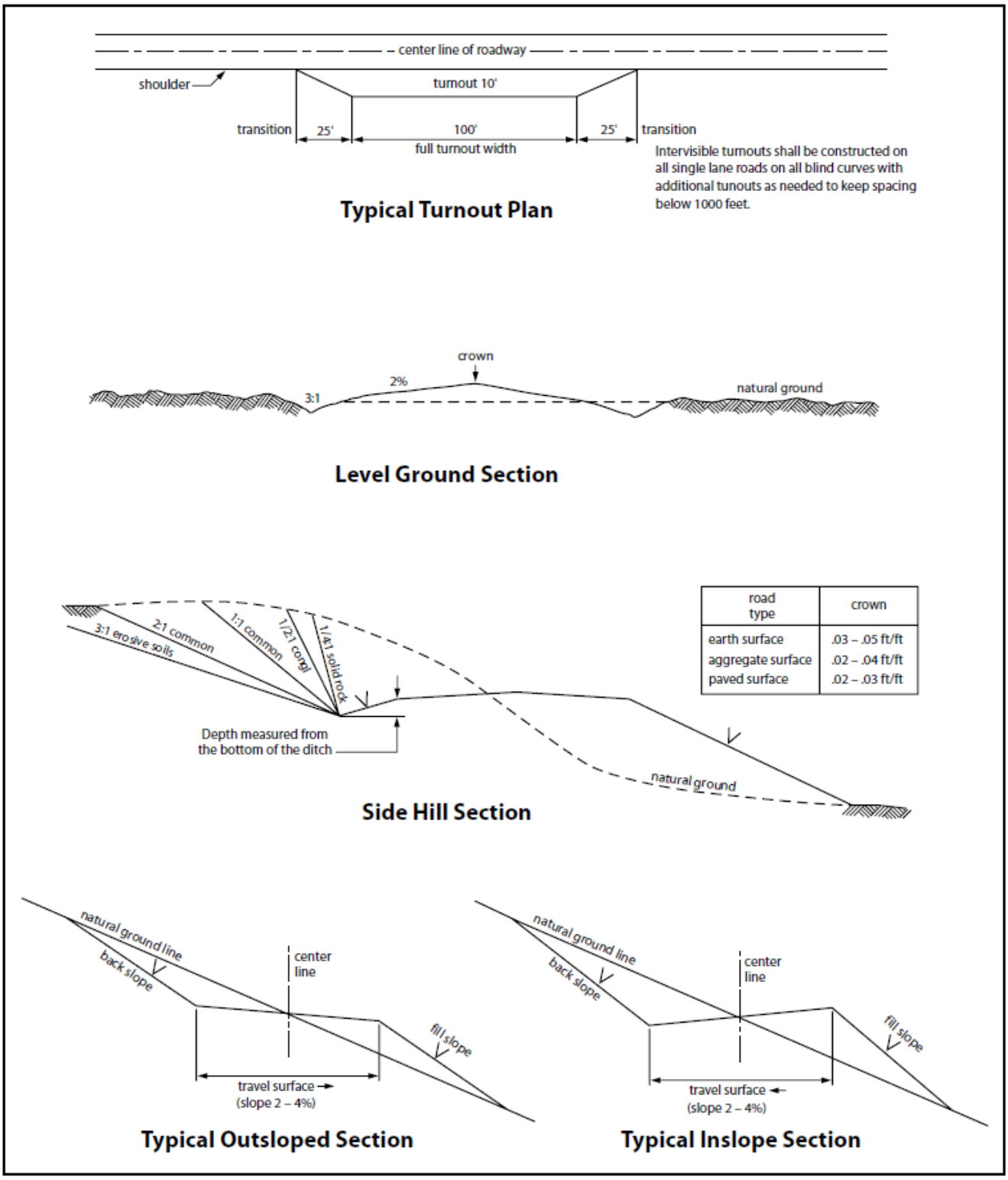


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

4. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

4.1 BURIED PIPELINES

A copy of the application (APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request a copy of your permit during construction to ensure compliance with all stipulations.

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this APD.

2. The Operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the pipeline corridor or on facilities authorized under this APD. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Pipeline corridor (unless the release or threatened release is wholly unrelated to the operator's activity on the pipeline corridor), or resulting from the activity of the Operator on the pipeline corridor. This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant is discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of operator, regardless of fault. Upon failure of operator to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and

fish and wildlife habitats, at the full expense of the operator. Such action by the Authorized Officer shall not relieve operator of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized pipeline corridor.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this pipeline corridor will be 30 feet:

   - Blading of vegetation within the pipeline corridor will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

   - Clearing of brush species within the pipeline corridor will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

   - The remaining area of the pipeline corridor (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The operator shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this pipeline corridor and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire pipeline corridor shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted, and a 6-inch berm will be left over the ditch line to allow for settling back to grade.

10. The pipeline will be identified by signs at the point of origin and completion of the pipeline corridor and at all road crossings. At a minimum, signs will state the operator's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

11. The operator shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the operator before maintenance begins. The operator will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the operator to construct temporary deterrence structures.

12. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

13. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

Approval Date: 05/10/2024

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30-degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them alive at least 100 yards from the trench.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

4.2 OVERHEAD ELECTRIC LINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Operator agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this APD.
2. The operator shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the operator shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the powerline corridor or on facilities authorized under this powerline corridor. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The operator agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Powerline corridor(unless the release or threatened release is wholly unrelated to the operator's activity on the powerline corridor), or resulting from the activity of the Operator on the powerline corridor. This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.
4. There will be no clearing or blading of the powerline corridor unless otherwise agreed to in writing by the Authorized Officer.
5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The operator shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this powerline corridor, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the operator without liability or expense to the United States.
6. Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.
7. The operator shall minimize disturbance to existing fences and other improvements on public lands. The operator is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The operator will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
8. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.
9. Upon cancellation, relinquishment, or expiration of this APD, the operator shall comply with those abandonment procedures as prescribed by the Authorized Officer.
10. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this APD, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.
11. Special Stipulations:
    - For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.
12. Karst stipulations for overhead electric lines
    - Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.
    - The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
    - No further construction will be done until clearance has been issued by the Authorized Officer.

Approval Date: 05/10/2024

- Special restoration stipulations or realignment may be required.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

4.3 RANGLAND MITIGATION FOR PIPELINES

4.5.1 **Fence Requirement**

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment operator prior to crossing any fence(s).

4.5.2 **Cattleguards**

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at road-fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

4.5.3 **Livestock Watering Requirement**

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment operator if any damage occurs to structures that provide water to livestock.

- Livestock operators will be contacted, and adequate crossing facilities will be provided as needed to ensure livestock are not prevented from reaching water sources because of the open trench.

- Wildlife and livestock trails will remain open and passable by adding soft plugs (areas where the trench is excavated and replaced with minimal compaction) during the construction phase. Soft plugs with ramps on either side will be left at all well-defined livestock and wildlife trails along the open trench to allow passage across the trench and provide a means of escape for livestock and wildlife that may enter the trench.
- Trenches will be backfilled as soon as feasible to minimize the amount of open trench. The Operator will avoid leaving trenches open overnight to the extent possible and open trenches that cannot be backfilled immediately will have escape ramps (wooden) placed at no more than 2,500 feet intervals and sloped no more than 45 degrees.

5. PRODUCTION (POST DRILLING)

5.1 WELL STRUCTURES & FACILITIES

5.1.1 **Placement of Production Facilities**

Production facilities must be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

5.1.2 **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

5.1.3. Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

5.1.4. Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

5.1.5. Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

6. RECLAMATION

Stipulations required by the Authorized Officer on specific actions may differ from the following general guidelines

6.1 ROAD AND SITE RECLAMATION

Any roads constructed during the life of the well will have the caliche removed or linear burial. If contaminants are indicated then testing will be required for chlorides and applicable contaminate anomalies for final disposal determination (disposed of in a manner approved by the Authorized Officer within Federal, State and Local statutes, regulations, and ordinances) and seeded to the specifications in sections 6.5 and 6.6.

6.2 EROSION CONTROL

Install erosion control berms, windrows, and hummocks. Windrows must be level and constructed perpendicular to down-slope drainage; steeper slopes will require greater windrow density. Topsoil between windrows must be ripped to a depth of at least 12”, unless bedrock is encountered. Any large boulders pulled up during ripping must be deep-buried on location. Ripping must be perpendicular to down-slope. The surface must be left rough in order to catch and contain rainfall on-site. Any trenches resulting from erosion cause by run-off shall be addressed immediately.

6.3 INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations must undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators must work with BLM surface protection specialists (BLM_NM_CFO_Construction_Reclamation@blm.gov) to devise the best strategies to reduce the size of the location. Interim reclamation must allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche and any other surface material is required. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided in section 6.6.

Upon completion of interim reclamation, the operator shall submit a Sundry Notice, Subsequent Report of Reclamation (Form 3160-5).

6.4 FINAL ABANDONMENT & RECLAMATION

Prior to surface abandonment, the operator shall submit a Notice of Intent Sundry Notice and reclamation plan.

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding will be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM. After earthwork and seeding is completed, the operator is required to submit a Sundry Notice, Subsequent Report of Reclamation.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (BLM_NM_CFO_Construction_Reclamation@blm.gov).

6.5 SEEDING TECHNIQUES

Seeds shall be hydro-seeded, mechanically drilled, or broadcast, with the broadcast-seeded area raked, ripped or dragged to aid in covering the seed. The seed mixture shall be evenly and uniformly planted over the disturbed area.

6.6 SOIL SPECIFIC SEED MIXTURE

The lessee/permitee shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed land application will be accomplished by mechanical planting using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds tend to drop the bottom of the drill and are planted first; the operator shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory BLM or Soil Conservation

District stand is established as determined by the Authorized Officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding or until several months of precipitation have occurred, enabling a full four months of growth, with one or more seed generations being established.

Seed Mixture 2, for Sandy Site

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

Approval Date: 05/10/2024

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Cimarex Energy Company**
LEASE NO.:	**NMNM26394**
LOCATION:	Section 28, T.25 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Cascade 28 Federal 412H**
SURFACE HOLE FOOTAGE:	210'/N & 2099'/E
BOTTOM HOLE FOOTAGE	100'/S & 2132'/W
ATS/API ID:	**ATS-20-2274**
APD ID:	**10400093849**
Sundry ID:	**N/a**

WELL NAME & NO.:	**Cascade 28 Federal 413H**
SURFACE HOLE FOOTAGE:	210'/N & 2059'/E
BOTTOM HOLE FOOTAGE	100'/S & 2021'/W
ATS/API ID:	**ATS-20-2275**
APD ID:	**10400093858**
Sundry ID:	**N/a**

COA

Approval Date: 05/10/2024

H2S	Yes		
Potash	None		
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	Conventional and Multibowl		
Other	☐ 4 String	Capitan Reef: None	☐ WIPP
Other	Pilot Hole: None	☐ Open Annulus	
Cementing	Contingency Squeeze: None	Echo-Meter: None	Primary Cement Squeeze: None
Special Requirements	☐ Water Disposal/Injection	☐ COM	☐ Unit
Special Requirements	☐ Batch Sundry		
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	☑ Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** 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 **10-3/4** inch surface casing shall be set at approximately **1140 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4** inch in diameter.

    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 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 fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. 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.

Option 1:

a. 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.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. Minimum working

pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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. 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.
e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

D. SPECIAL REQUIREMENT (S)

Casing Clearance

Operator casing variance is approved.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are less than 0.5 micron before cementing.

Approval Date: 05/10/2024

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)

☑ 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 **43 CFR part 3170 Subpart 3172** 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 when present.

A. CASING

Approval Date: 05/10/2024

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 integrity 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 integrity 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.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

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 43 CFR 3172.6(b)(9) 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 **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172**.

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.

Long Vo (LVO) 5/8/2024

Approval Date: 05/10/2024

H2S Drilling Operations Plan

Training

All company and contract personnel admitted on location must be trained by a qualified H2S safety instructor to do the following:

1. Characteristics of H2S
2. Physical effects and hazards
3. Principle and operation of H2S detectors, warning system, and briefing areas
4. Evacuation procedure, routes and first aid
5. Proper use of safety equipment & life support systems
6. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H2S Detection and Alarm Systems

1. 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 be placed as deemed necessary
2. An audio alarm system will be installed on the derrick floor and in the top doghouse

Windsock and/or wind streamers

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

Condition Flags & Signs

1. Warning signs on access road to location
2. Flags are to be displayed on sign at the entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates

danger (H2S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.

Well Control Equipment

1. See the pressure control section of this submission.

Communication

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

Drillstem Testing

1. No DSTs or cores are planned at this tmie
2. Drilling contractor supervisor will be required to be familiar with the effects that H2S has on tubular goods and other mechanical equipment.
3. If H2S is encountered, mud system will be altered if necessary to maintain control of the well. A mud gas separator will be brought into service along with H2S scavenger if necessary.

H2S Contingency Plan

Emergency Procedures

In the event of an H2S release, the first responder(s) must:

1. Isolate the area and prevent entry by other persons into the 100 PPM ROE.
2. Evacuate any public places encompassed by the 100 PPM ROE.
3. Be equipped with H2S monitors and air packs in order to control the release.
4. Use the buddy system
5. Take precautions to avoid personal injury during this operation
6. Contact operator and/or local officials to aid in operation. See list of emergency contacts attached.
7. Have received training the detection of H2S, measures for protection against the gas, and equipment used for protection and emergency response

Ignition of the Gas Source

1. 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

Contacting Authorities

1. Coterra 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.
2. 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. Coterra’s response must be in coordination with the State of New Mexico's" Hazardous Materials Emergency Response Plan" (HMER).

Coterra: H2S Plan

Emergency Contacts

Coterra Energy

Charlie Pritchard: Drilling Operations Manager: 432 – 238 – 7084

Darrell Kelly: Vice President EHS: 281 – 589 – 5795

Third Party

PERMIAN REGION CONTACT NUMBERS

CALL 911

Air Ambulance Services

Reeves County Medical - Pecos, TX	432-447-3551
Aero Care - Midland, TX	800-627-2376
Tri State Care Flight - Artesia, NM	800-800-0900
Air Methods - Hobbs, NM	800-242-6199

Fire / Police / Medical Care

Sheriff's Office		Fire Departments		Hospital / Medical Care Facilities	
Andrews County	432-523-5545	Andrews	432-523-3111	Permian Regional Med.	432-523-2200
Reagan County	325-884-2929	Big Lake	325-884-3650	Reagan Memorial Hosp.	325-884-2561
Howard County	432-264-2244	Big Springs	432-264-2303	Scenic Mountain Med Ctr	432-263-1211
Terry County	806-637-2212	Brownfield	806-637-6633		
Crane County	432-558-3571	Crane	432-558-2361	Crane Memorial Hosp.	432-558-3555
Val Verde County	830-774-7513	Del Rio	830-774-8648	Val Verde Regional Med.	830-775-8566
		Denver City	806-592-3516	Yoakum County Hospital	806-592-2121
Pecos County	432-336-3521	Ft. Stockton	432-336-8525		
Glasscock County	432-354-2361	Garden City			
Winkler County	432-586-3461	Kermit	432-586-2577	Winkler County Memorial	432-586-5864
		McCamey	432-652-8232	McCamey Hospital	432-652-8626
Loving County	432-377-2411	Mentone			
Irion County	325-835-2551	Mertzon			
Ward County	432-943-6703	Monahans	432-943-2211	Ward Memorial Hospital	432-943-2511
Ector County	432-335-3050	Odessa	432-335-4650	Odessa Regional Hosp.	432-582-8340
Crocket County	325-392-2661	Ozona	325-392-2626		
Reeves County	432-445-4901	Pecos	505-757-6511	Reeves County Hospital	432-447-3551
Yoakum County	806-456-2377	Plains	806-456-2288		
Garza County	806-495-3595	Post			
Upton County	432-693-2422	Rankin			
Coke County	915-453-2717	Robert Lee			
		Roscoe	325-766-3931		
Hockley County	806-894-3126	Levelland	806-894-3155	Covenant Health	806-894-4963
Tom Green County	325-655-8111	San Angelo	325-657-4355	San Angelo Comm. Med.	325-949-9511
Gaines County	432-758-9871	Seminole	432-758-3621	Memorial Hospital	432-758-5811
Terrell County	432-345-2525	Sanderson			
Scurry County	325-573-3551	Snyder	325-573-3546	DM Cogdell Memorial	325-573-6374
Sterling County	325-378-4771	Sterling City			
Nolan County	325-235-5471	Sweetwater	325-235-8130	Rolling Plains Memorial	325-235-1701
Culberson County	432-283-2060	Van Horn		Culberson Hospital	432-283-2760
New Mexico					
Lea County	505-396-3611	Knowles	505-392-7469	Lea Reg Med Ctr	575-492-5000
Eddy County	575-887-7551	Carlsbad	575-885-3125	Carlsbad Medical	575-887-4100
		Artesia	575-746-5050	Artesia Hospital	575-748-3333
Roosevelt County	575-356-4408				
Chaves County	575-624-7590				

Ground Ambulance Services

Reeves County Medical		Pecos, TX	432-447-3551

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

SUPO Data Report
05/15/2024

APD ID: 10400093849
Submission Date: 08/25/2023
Operator Name: CIMAREX ENERGY COMPANY
Well Name: CASCADE 28 FEDERAL
Well Number: 412H
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:

CASCADE_28_FEDERAL_W2E2_85H___FINAL_PLAT_Access_Road_Plats_Existing_20240115072105.pdf
CASCADE_28_FEDERAL_ACCESS_NETWORK___Road_Network_20240115072106.pdf

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

ROW ID(s)

ID: NMNM140896

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Resurfacing of existing roads will be completed due to excessive use and erosion.

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Cascade_412H_Road_Route_20230825082556.pdf
CASCADE_28_FEDERAL_ACCESS_NETWORK___Road_Network_20240115073457.pdf

New road type: COLLECTOR

Length: 480 Feet
Width (ft.): 30

Max slope (%): 0
Max grade (%): 0

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Best management practices will be used for E&S controls.

New road access plan or profile prepared? N

New road access plan

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Access road engineering design? N

Access road engineering design

Turnout? N

Access surfacing type: GRAVEL

Access topsoil source: BOTH

Access surfacing type description:

Access onsite topsoil source depth: 4

Offsite topsoil source description: onsite and offsite

Onsite topsoil removal process: The topsoil shall be stripped and salvaged to provide for sufficient quantities to be respread to a depth of 4" as determined in the onsite, as needed to disturbed areas needed reclamation. Topsoil shall be stockpiled seperately from subsoil materials

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: CULVERT

Drainage Control comments: Best management practices will be used for E&S controls.

Road Drainage Control Structures (DCS) description: Drainage structures or drainage dips will be place in all natural drainage ways

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Cascade_412H_1_Mile_Radius_20230825083256.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description:

Production Facilities map:

Facility_Layout_Plot_Plan_01302024_20240305103330_20240319004305.pdf

D_9299_20_100__PLOT_PLAN_Rev.1_CTB_Layout_20240422071357.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: OTHER

Describe type: Commercial water NGL CTP Treated Produced Water

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: WATER RIGHT

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

Cascade_412H_Drilling_Water_Route_20230825083359.pdf

Water source comments:

New water well? N

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:**

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

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: YES

Construction Materials description: Caliche and gravel will be obtained from the actual well site if available. In the event that no caliche is found onsite, caliche will be hauled in from BLM-approved caliche pit in Sec 20 NENE 25S 33E or Sec 5 NESE 26S 33E.

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

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.

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

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

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

CASCADE_28_FEDERAL_W2E2_71H_Reclamation_Plat_20240115073845.pdf

Comments: The location showing access roads onto the pad and orientation of the rig with respect to the pad and other facilities are shown on Typical Rig Layout, Exhibit K for each well.

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: Cascade 28 Federal

Multiple Well Pad Number: W2E2-71H

Recontouring

Drainage/Erosion control construction: Pad construction will include drainage control by re-routing drainages around the pad and installing culverts or low water crossings where needed. Erosion control techniques will be used where needed to minimize wind and water erosion and sedimentation loading prior to vegetation establishment.

Drainage/Erosion control reclamation: Area wide drainage will be stabilized and restored so that surface runoff flows, and gradients are returned to the condition present prior to development. Drainage basins will have similar features found in nearby, properly functioning basins.

Well pad proposed disturbance (acres): 4.153	**Well pad interim reclamation (acres):** 3.131	**Well pad long term disturbance (acres):** 1.022
Road proposed disturbance (acres): 0.33	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0.33
Powerline proposed disturbance (acres): 1.28	**Powerline interim reclamation (acres):** 1.28	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 1.28	**Pipeline interim reclamation (acres):** 1.28	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 7.043	**Total interim reclamation:** 5.691	**Total long term disturbance:** 1.352

Disturbance Comments: BLM recommended seed mix will be used for reclamation purposes.

Reconstruction method: Areas to be reclaimed will be graded to approximate original contours and to blend in with adjacent topography. Graded surfaces will be suitable for the replacement of uniform depth of topsoil, will promote cohesion between subsoil and topsoil layers, will reduce wind erosion, and will facilitate moisture capture. Specialist grading techniques may be applied if warranted and could include slope rounding, star-step grading/tracing and/or contour furrowing.

Topsoil redistribution: After compaction relief (ripping/discing) all topsoil will be redistributed on the reclaimed area to a pre-disturbance depth. Topsoil is typically redistributed with a scarper or front-end loader which leaves friable surface to work with. Waterbars and erosion control devices will be installed on reclaimed

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

areas, as necessary, to control topsoil erosion.

Soil treatment: As needed.

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

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: Laci **Last Name:** Luig

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Phone: (432)425-0434 **Email:** laci.luig@coterra.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: Monitoring will be done in accordance with BLM Reclamation guidelines.

Monitoring plan

Success standards: Success standards will be in accordance with BLM Reclamation guidelines.

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

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:**

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Disturbance type: PIPELINE

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:**

Disturbance type: NEW ACCESS ROAD

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:**

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Disturbance type: OTHER

Describe: powerline

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: Onsite on 1/18/2018 with Jeff Robertson and Barry Hunt Onsite on 9/12/2023 with Caroline Kaufman

Other SUPO

CASCADE_28_FEDERAL_W2E2_71H_Location_Layout_20240422071627.pdf

CASCADE_28_FEDERAL_Bulk_Line_Pad_5_Final_03052024_20240422071627.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

CASCADE_28_FEDERAL_Power_Line_Final_03052024_20240422071627.pdf

CASCADE_28_FEDERAL_Road_Network_Final_03052024_20240422071639.pdf

BEGINNING AT THE INTERSECTION OF J-1/ORLA ROAD AND PIPELINE ROAD TO THE EAST (LOCATED AT NAD 83 LATITUDE N32.0650° AND LONGITUDE W103.6743°), PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 5.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN LEFT AND PROCEED IN A NORTHWESTERLY, THEN NORTHEASTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 3.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE BEGINNING OF THE PROPOSED CASCADE 28 FEDERAL ACCESS NETWORK TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY, THEN NORTHERLY, THEN EASTERLY DIRECTION APPROXIMATELY 4,676 TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM THE INTERSECTION OF J-1/ORLA ROAD AND PIPELINE ROAD TO THE EAST (LOCATED AT NAD 83 LATITUDE N32.0650° AND LONGITUDE W103.6743°), TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 9.3 MILES.

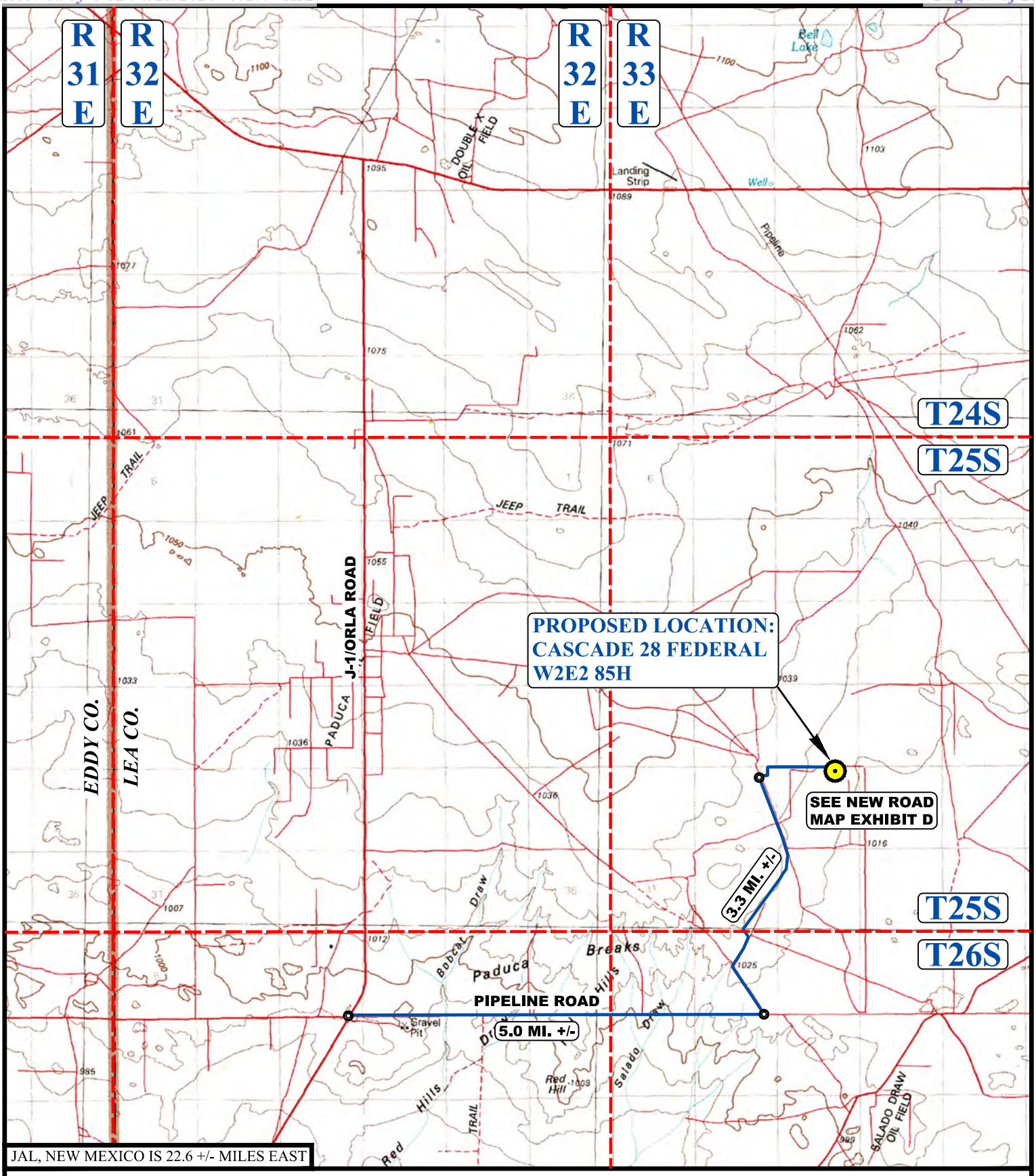
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2 85H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, 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., C.H.	01-24-18	
DRAWN BY	J.L.G.	02-08-18	
ROAD DESCRIPTION			**EXHIBIT A**



JAL, NEW MEXICO IS 22.6 +/- MILES EAST

LEGEND:

PROPOSED LOCATION

N

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2 85H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-24-18	SCALE
DRAWN BY	J.L.G.	02-08-18	1 : 100,000

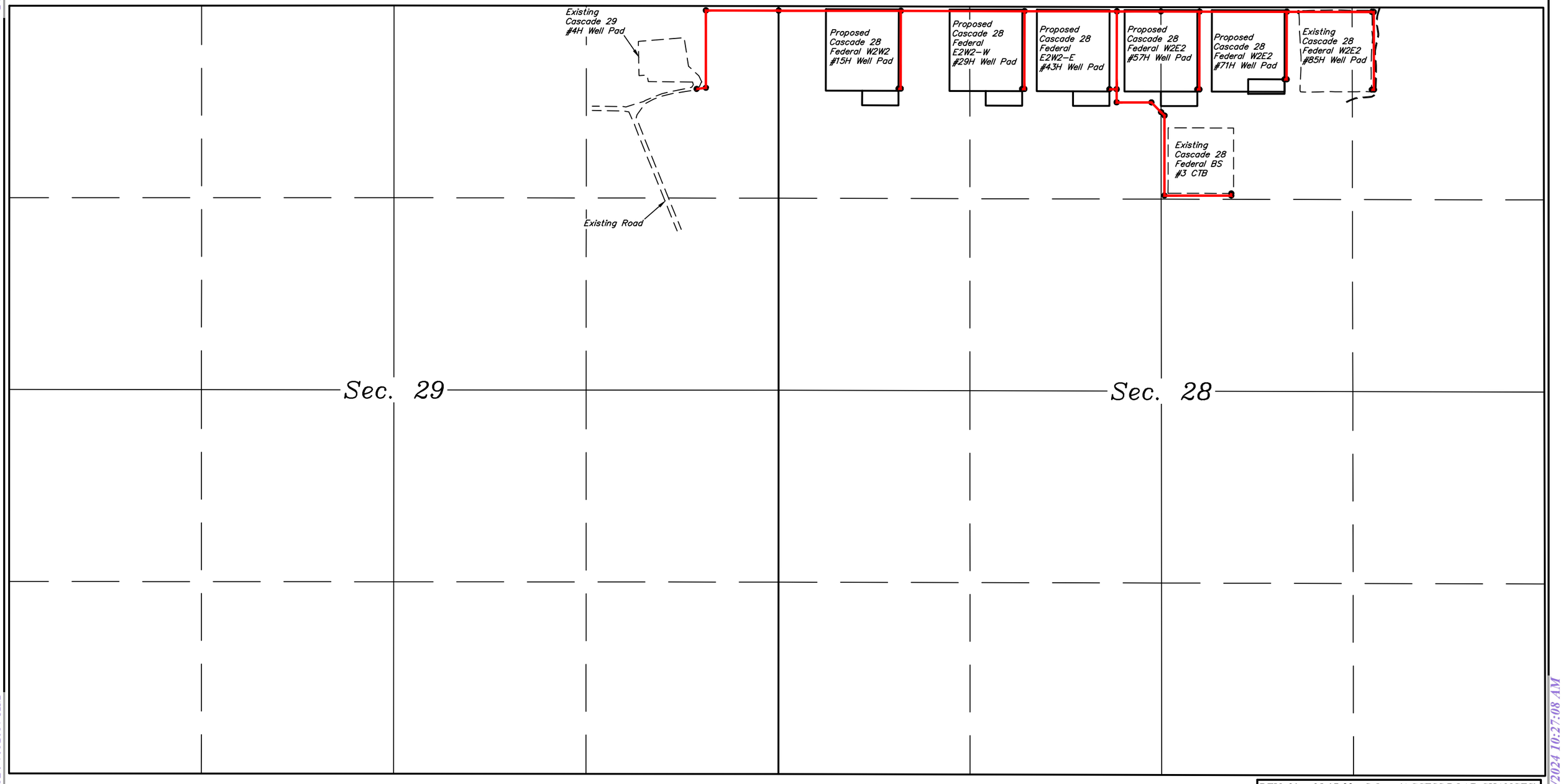
PUBLIC ACCESS ROAD MAP **EXHIBIT B**

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

CIMAREX ENERGY CO.
CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DATE:	DESCRIPTION:
3/1/2018	FINAL PLATS
5/25/2023	ACCESS ROAD RE-ROUTE

UINTAH
ENGINEERING & LAND SURVEYING



LEGEND:

- PROPOSED CENTERLINE
- SECTION LINE
- 1/4 SECTION LINE
- 1/16 SECTION LINE
- PROPERTY LINE

N

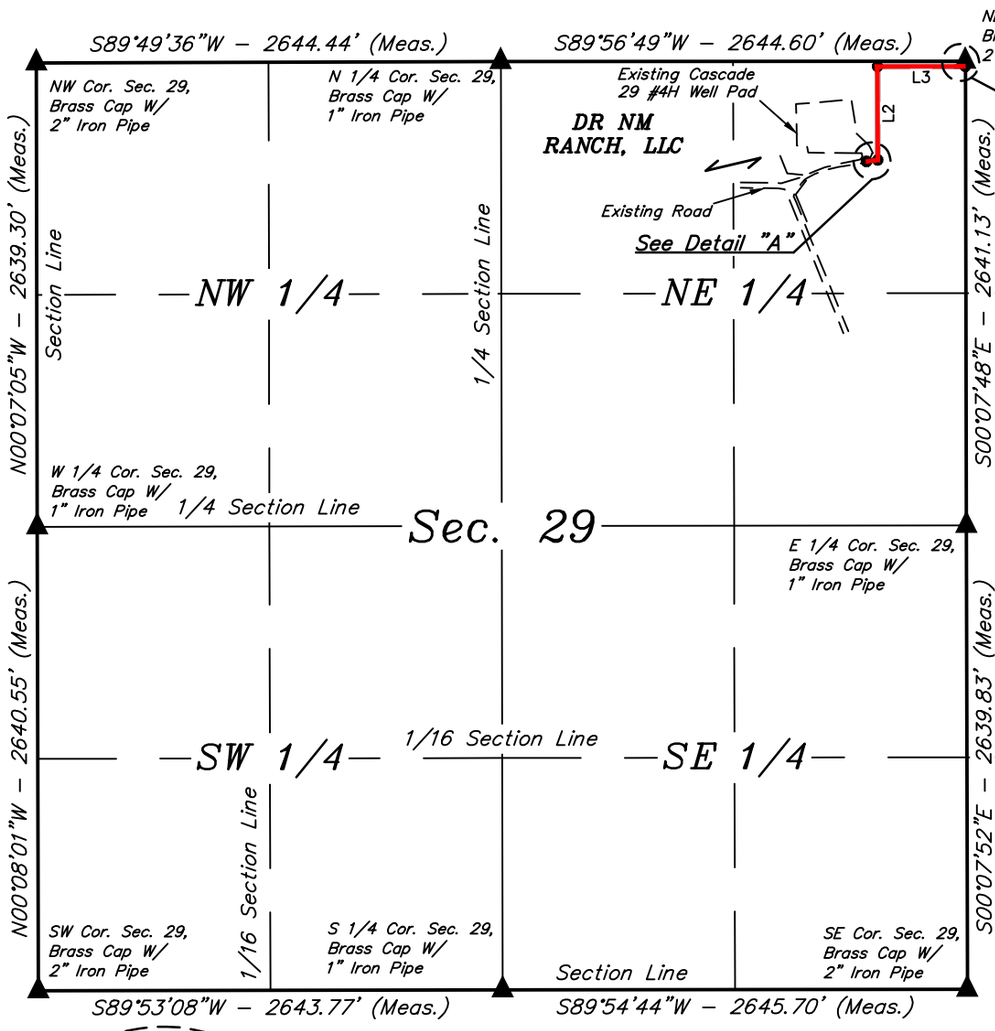
REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

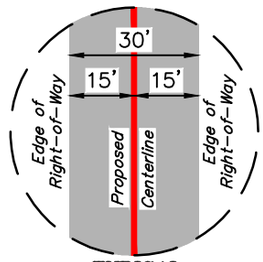
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	**SCALE**
DRAWN BY	L.K.	02-22-18	N/A

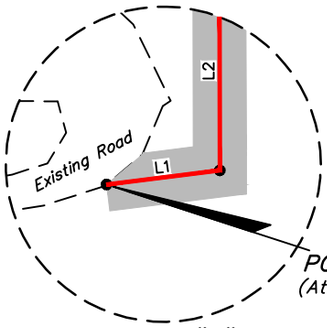
OVERALL ACCESS NETWORK





TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

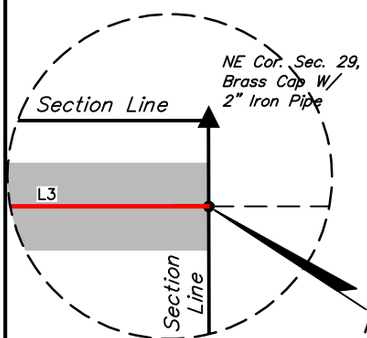
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N82°52'04"E	64.42'
L2	N00°07'38"W	532.44'
L3	N89°59'16"E	499.97'



Detail "A"
No Scale

POINT OF BEGINNING "A" BEARS S44°36'30"W 801.19' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

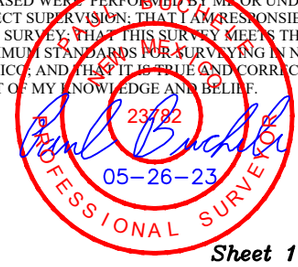


Detail "B"
No Scale

ACREAGE / LENGTH TABLE		
FEET	RODS	ACRES
1096.83	66.47	0.755

▲ = SECTION CORNERS LOCATED.

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.



Sheet 1 of 2

FILE: 63073-A1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:
- The maximum grade of existing ground for the proposed access road is ±0.67%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON DR NM RANCH, LLC LANDS IN SECTION 29, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'
PROPOSED ACCESS R-O-W			EXHIBIT D

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

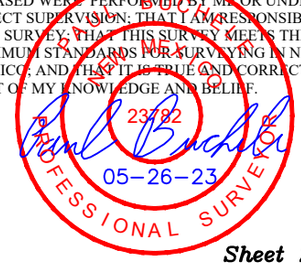
ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 29 BEARS S89°56'49"W 2644.60', THENCE S44°36'30"W 801.19' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF BEGINNING; THENCE N82°52'04"E 64.42'; THENCE N00°07'38"W 532.44'; THENCE N89°59'16"E 499.97' TO A POINT ON THE EAST LINE OF THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF TERMINATION, WHICH BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SAID SECTION 29. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.755 ACRES MORE OR LESS.

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.



Sheet 2 of 2

FILE: 63073-A2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

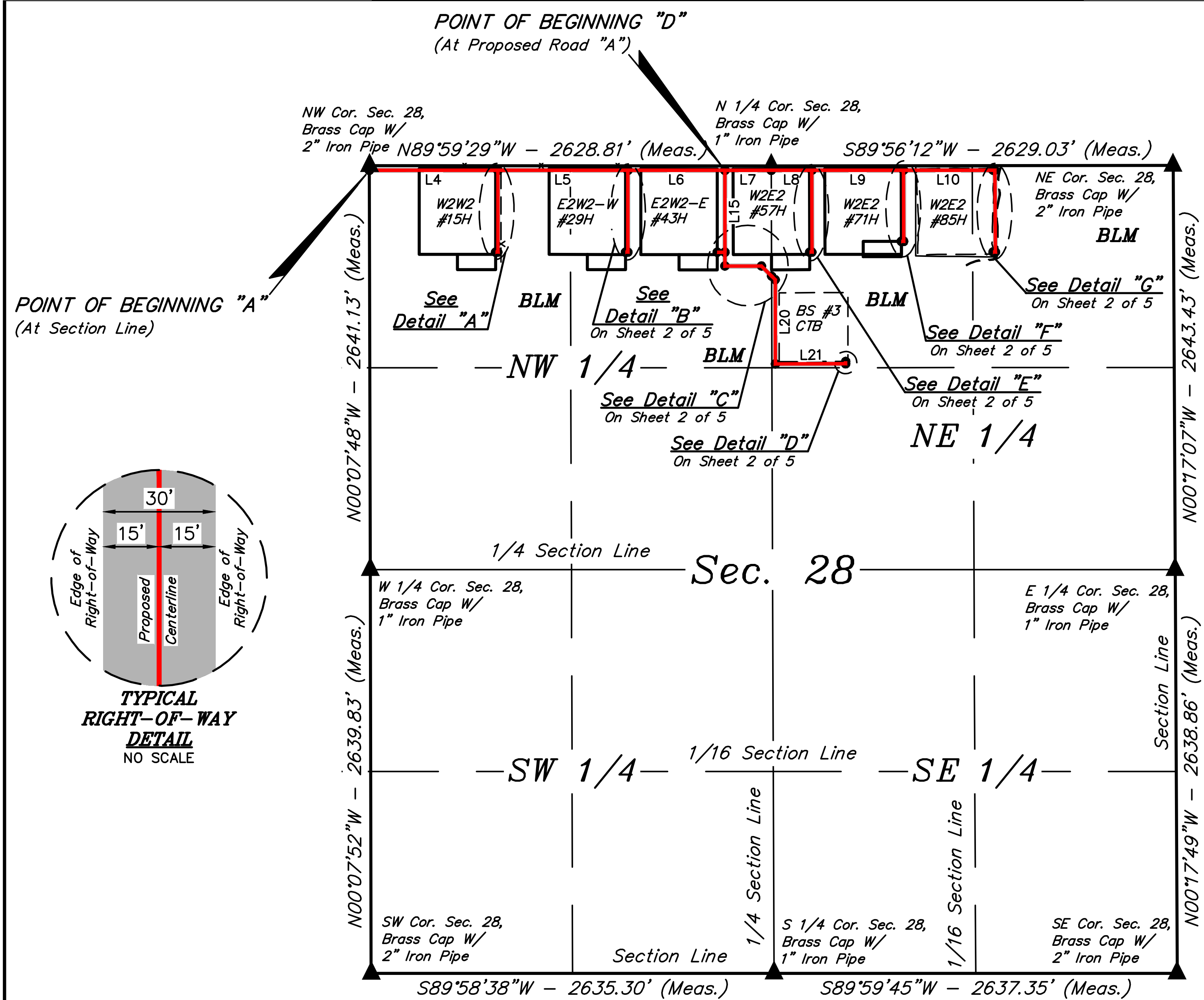
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
ON DR NM RANCH, LLC LANDS IN
SECTION 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

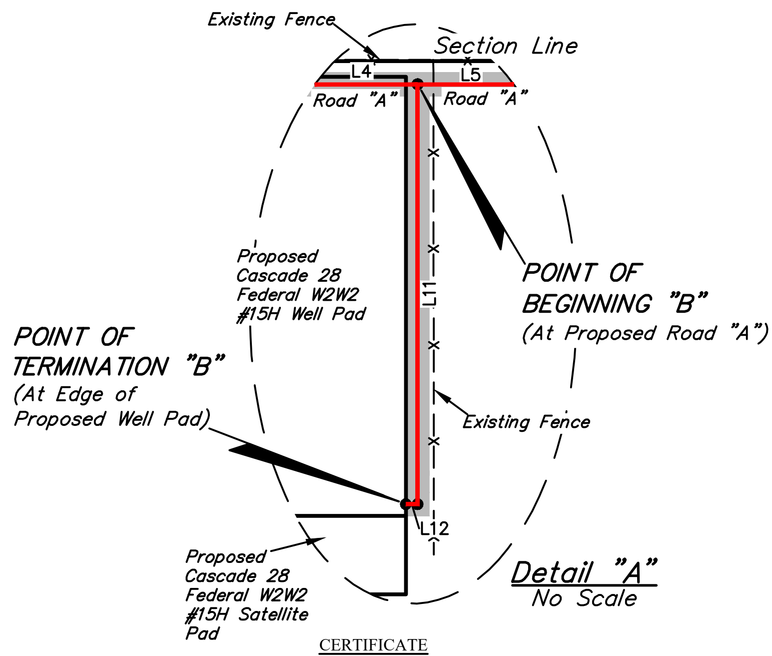
SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	N/A
PROPOSED ACCESS R-O-W			EXHIBIT D

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



Detail "A"
No Scale

LINE TABLE

LINE	DIRECTION	LENGTH
L4	N89°59'16"E	840.87'
L5	N89°59'16"E	850.15'
L6	N89°59'16"E	634.76'
L7	N89°59'16"E	303.06'
L8	N89°59'16"E	265.42'
L9	N89°59'16"E	600.23'
L10	N89°59'16"E	584.81'
L11	S00°00'31"W	535.47'
L12	N89°59'29"W	15.00'
L13	S00°00'58"W	535.71'
L14	N90°00'00"W	15.08'
L15	S00°01'02"W	536.02'
L16	S00°01'02"W	89.94'
L17	S89°59'00"E	239.37'
L18	S45°01'55"E	93.73'

LINE TABLE

LINE	DIRECTION	LENGTH
L19	S45°01'55"E	33.64'
L20	S00°04'15"E	550.08'
L21	N89°55'43"E	459.96'
L22	N00°04'17"W	15.12'
L23	N89°58'58"W	49.83'
L24	S00°03'58"E	535.89'
L25	S89°56'12"W	15.00'
L26	S00°02'22"E	465.36'
L27	S89°56'12"W	15.00'
L28	N89°59'16"E	12.90'
L29	S00°16'56"E	534.83'
L30	S89°57'13"W	14.94'

NOTES:
- The maximum grade of existing ground for the proposed access road "A" is ±4.72%.
- The maximum grade of existing ground for the proposed access road "B" is ±16.63%.
- The maximum grade of existing ground for the proposed access road "C" is ±4.45%.
- The maximum grade of existing ground for the proposed access road "D" is ±7.06%.
- The maximum grade of existing ground for the proposed access road "E" is ±0.25%.
- The maximum grade of existing ground for the proposed access road "F" is ±8.22%.
- The maximum grade of existing ground for the proposed access road "G" is ±24.23%.
- The maximum grade of existing ground for the proposed access road "H" is ±7.70%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05–26–23

Sheet 1 of 5

FILE: 6 3 0 7 3 - B 1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

1000' 500' 0' 1000'

▲ = SECTION CORNERS LOCATED.

N

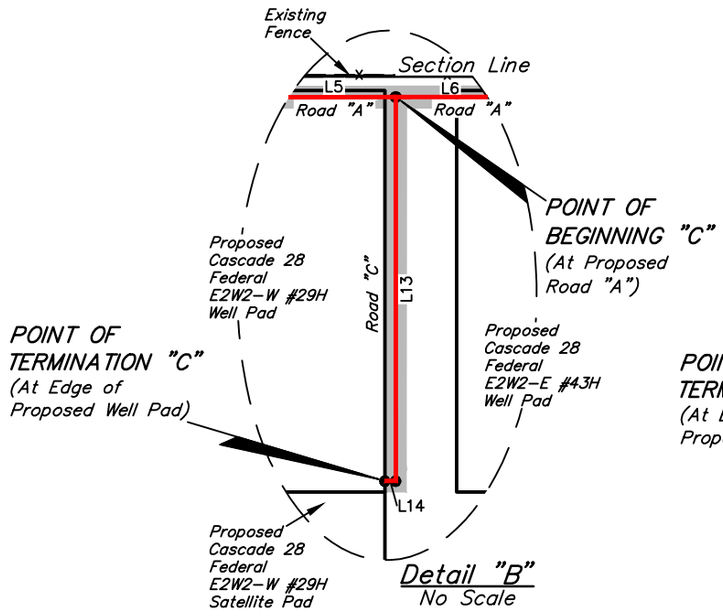
CIMAREX ENERGY CO.

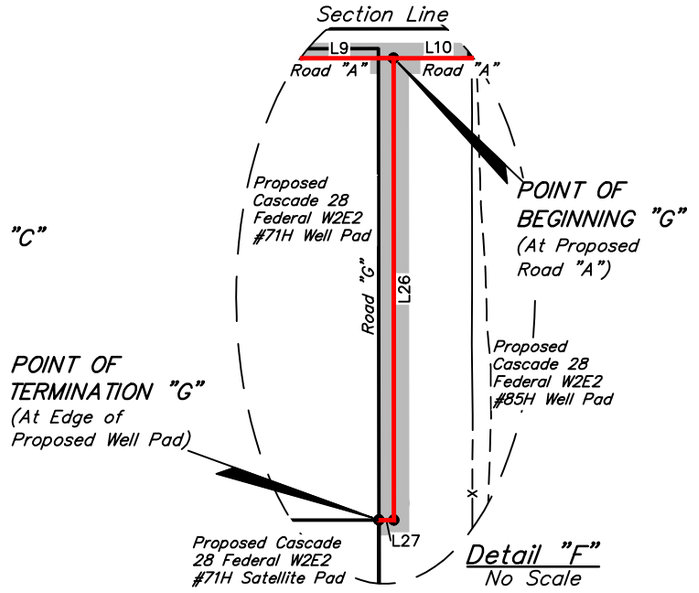
CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

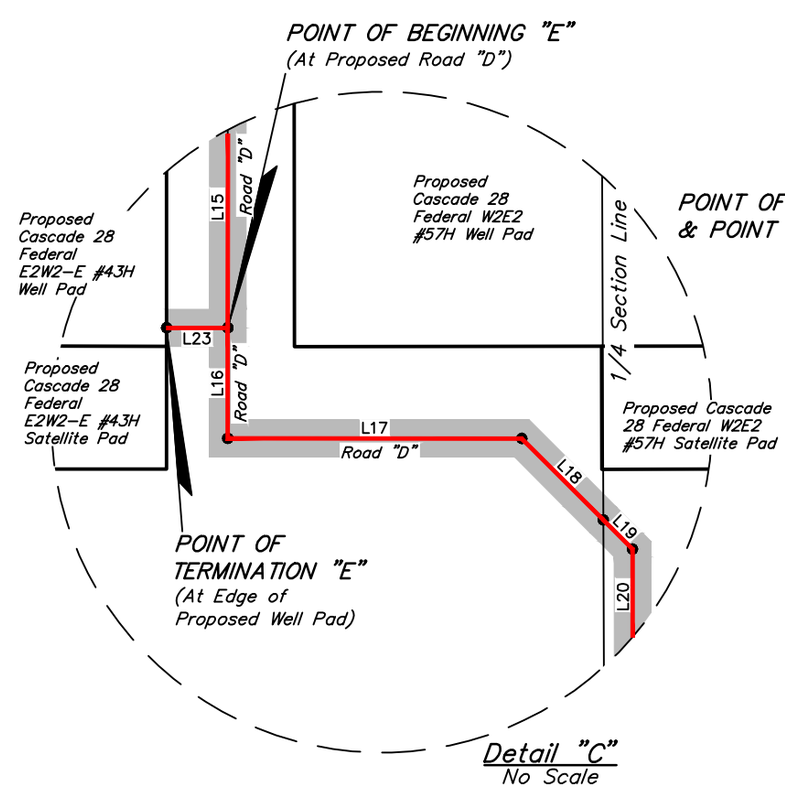
SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

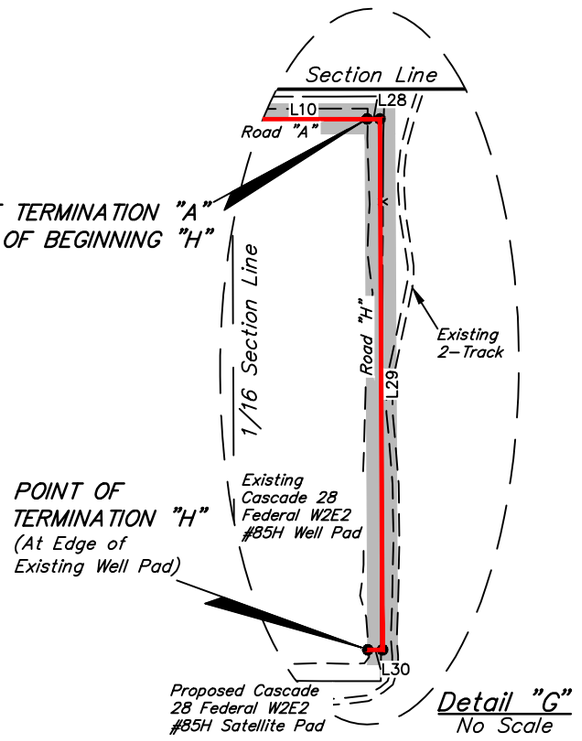
PROPOSED ACCESS R-O-W **EXHIBIT D**

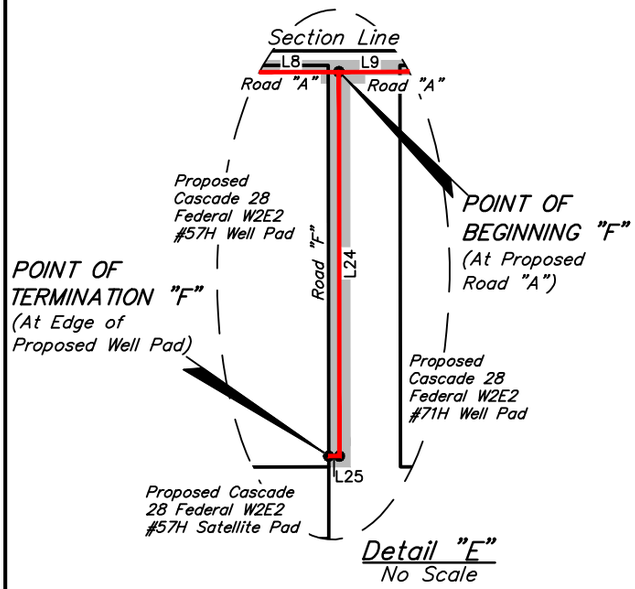
UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

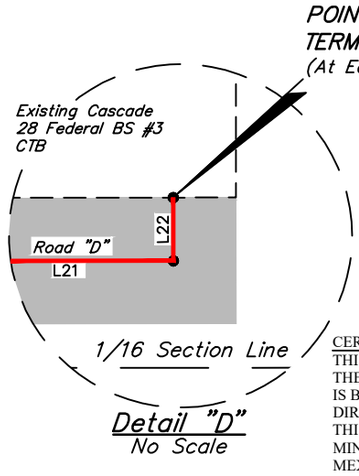












CERTIFICATE

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 2 of 5

FILE: 63073-B2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	N/A

PROPOSED ACCESS R-O-W EXHIBIT D

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

POINT OF BEGINNING "A" BEARS S00°07'48"E 29.84' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "B" BEARS S87°58'49"E 841.46' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "B" BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "C" BEARS S88°13'27"W 938.17' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "C" BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "D" BEARS S84°32'38"W 304.34' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "D" BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "E" BEARS S28°12'55"W 641.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "E" BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "F" BEARS S83°48'22"E 267.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "F" BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "G" BEARS S88°06'08"E 866.22' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "G" BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "H" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "H" BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

ACREAGE / LENGTH TABLE "A"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	2628.84	159.32	1.810
SEC. 28 (NE 1/4)	1450.46	87.91	0.999
TOTAL	4079.30	247.23	2.809

ACREAGE / LENGTH TABLE "B"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.47	33.36	0.379

ACREAGE / LENGTH TABLE "C"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.79	33.38	0.379

ACREAGE / LENGTH TABLE "D"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	959.06	58.12	0.661
SEC. 28 (NE 1/4)	1058.80	64.17	0.729
TOTAL	2017.86	122.29	1.390

ACREAGE / LENGTH TABLE "E"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	49.83	3.02	0.034

ACREAGE / LENGTH TABLE "F"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	550.89	33.39	0.379

ACREAGE / LENGTH TABLE "G"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	480.36	29.11	0.331

ACREAGE / LENGTH TABLE "H"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	562.67	34.10	0.388

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 3 of 5

FILE: 63073-B3

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W EXHIBIT D

UINTAH ENGINEERING & LAND SURVEYING

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

ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S00°07'48"E 29.84' ALONG THE WEST LINE OF THE NW 1/4 NW 1/4 OF SAID SECTION 28 TO THE POINT OF BEGINNING; THENCE N89°59'16"E 840.87'; THENCE CONTINUING N89°59'16"E 850.15'; THENCE CONTINUING N89°59'16"E 634.76'; THENCE CONTINUING N89°59'16"E 303.06' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING N89°59'16"E 265.42'; THENCE CONTINUING N89°59'16"E 600.23'; THENCE CONTINUING N89°59'16"E 584.81' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 2.809 ACRES MORE OR LESS.

ACCESS ROAD "B" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S87°58'49"E 841.46' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'31"W 535.47'; THENCE N89°59'29"W 15.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "C" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S88°13'27"W 938.17' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'58"W 535.71'; THENCE N90°00'00"W 15.08' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "D" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S84°32'38"W 304.34' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°01'02"W 536.02'; THENCE CONTINUING S00°01'02"W 89.94'; THENCE S89°59'00"E 239.37'; THENCE S45°01'55"E 93.73' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING S45°01'55"E 33.64'; THENCE S00°04'15"E 550.08'; THENCE N89°55'43"E 459.96'; THENCE N00°04'17"W 15.12' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 1.390 ACRES MORE OR LESS.

ACCESS ROAD "E" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S28°12'55"W 641.14' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°58'58"W 49.83' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.034 ACRES MORE OR LESS.

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

FILE: 63073-B4

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W **EXHIBIT D**

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

ACCESS ROAD "F" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE N83°48'22"W 267.08' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°03'58"E 535.89'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "G" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE S88°06'08"E 866.22' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°02'22"E 465.36'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.331 ACRES MORE OR LESS.

ACCESS ROAD "H" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 28 BEARS S89°56'12"W 2629.03', THENCE S88°28'14"W 1178.88' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°59'16"E 12.90'; THENCE S00°16'56"E 534.83'; THENCE S89°57'13"W 14.94' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.388 ACRES MORE OR LESS.

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 5 of 5

FILE: 63073-B5

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

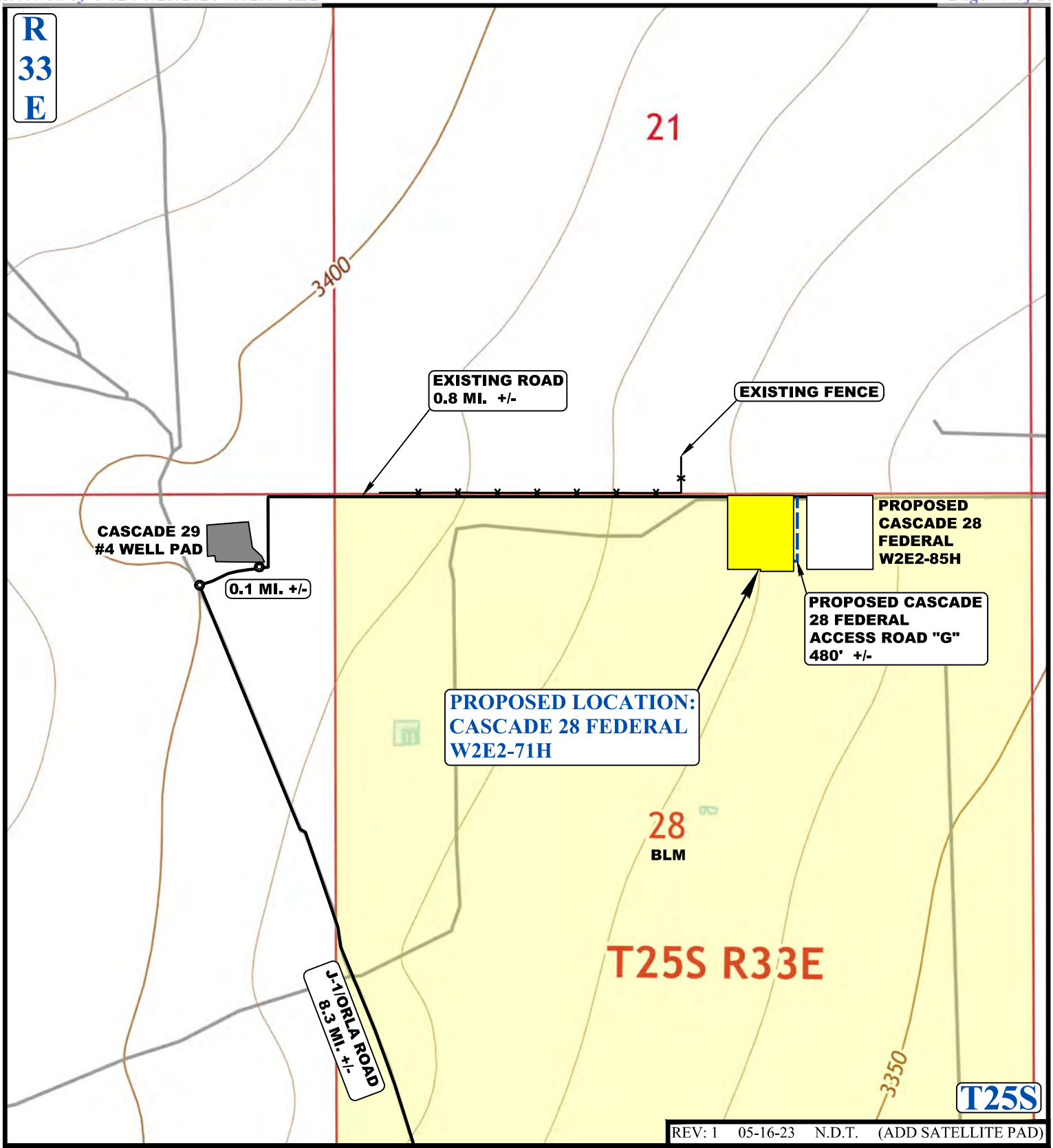
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W EXHIBIT D

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



REV: 1 05-16-23 N.D.T. (ADD SATELLITE PAD)

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- PROPOSED ROAD
- EXISTING FENCE

UINTAH ENGINEERING & LAND SURVEYING

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

N

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2-71H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

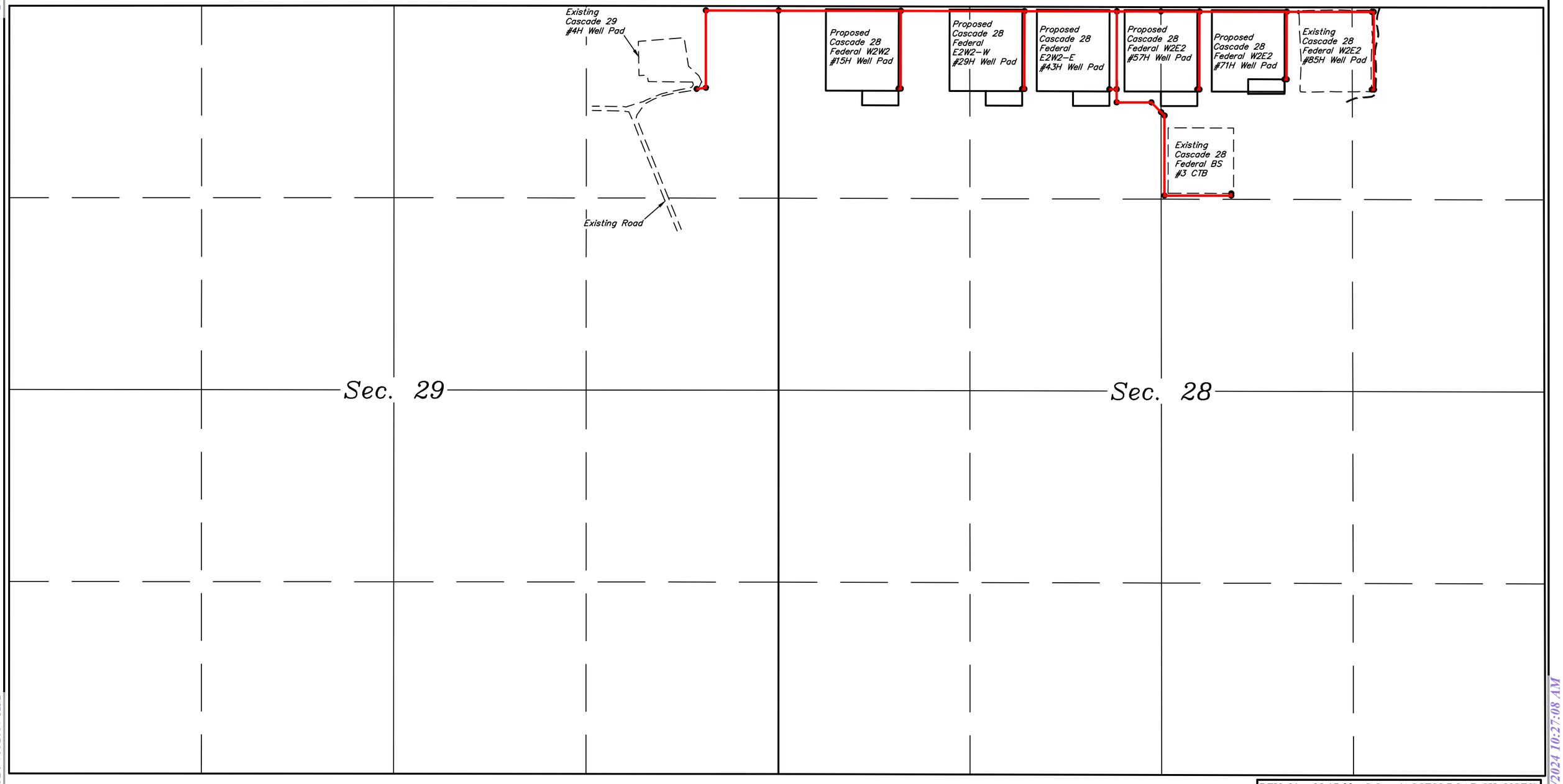
SURVEYED BY	C.H., H.F.	05-12-23	SCALE
DRAWN BY	J.L.G.	02-08-18	1 : 12,000

NEW ROAD MAP **EXHIBIT D**

CIMAREX ENERGY CO.
CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DATE:	DESCRIPTION:
3/1/2018	FINAL PLATS
5/25/2023	ACCESS ROAD RE-ROUTE

UINTAH
ENGINEERING & LAND SURVEYING



LEGEND:

- PROPOSED CENTERLINE
- SECTION LINE
- 1/4 SECTION LINE
- 1/16 SECTION LINE
- PROPERTY LINE

N

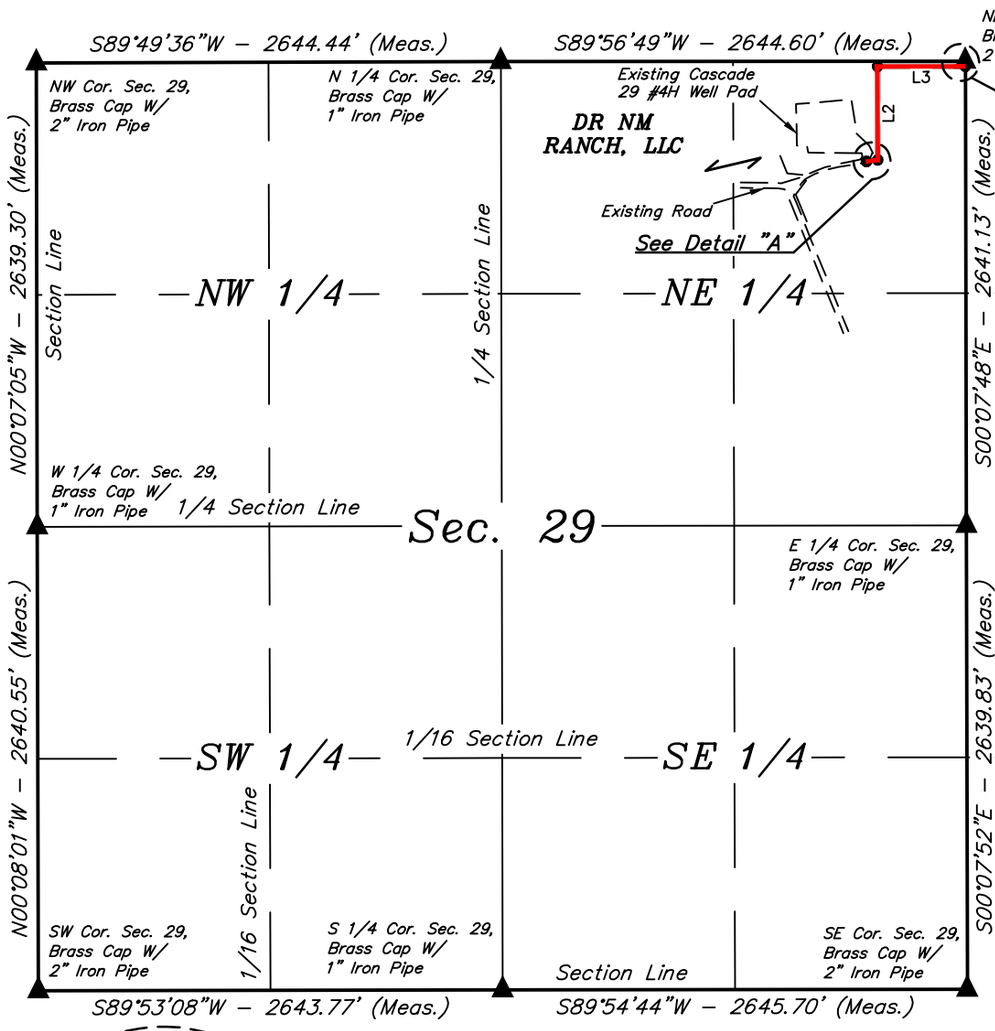
REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

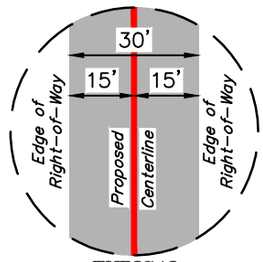
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	**SCALE**
DRAWN BY	L.K.	02-22-18	N/A

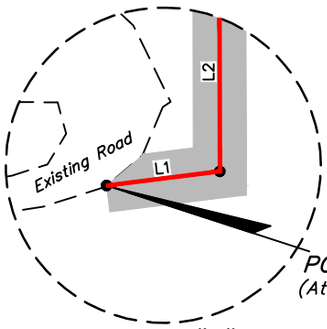
OVERALL ACCESS NETWORK





TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

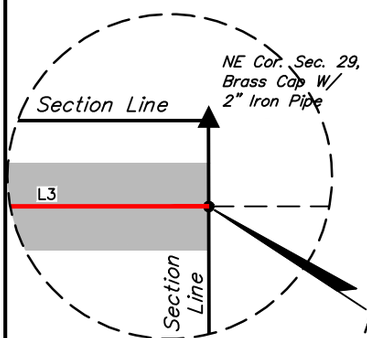
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N82°52'04"E	64.42'
L2	N00°07'38"W	532.44'
L3	N89°59'16"E	499.97'



Detail "A"
No Scale

POINT OF BEGINNING "A" BEARS S44°36'30"W 801.19' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

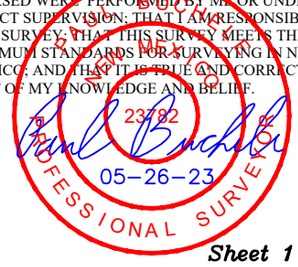


Detail "B"
No Scale

ACREAGE / LENGTH TABLE		
FEET	RODS	ACRES
1096.83	66.47	0.755

▲ = SECTION CORNERS LOCATED.

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.



Sheet 1 of 2

FILE: 63073-A1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:
- The maximum grade of existing ground for the proposed access road is ±0.67%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

N

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON DR NM RANCH, LLC LANDS IN SECTION 29, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'
PROPOSED ACCESS R-O-W			EXHIBIT D

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

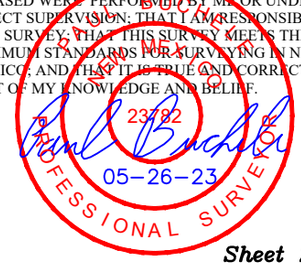
ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 29 BEARS S89°56'49"W 2644.60', THENCE S44°36'30"W 801.19' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF BEGINNING; THENCE N82°52'04"E 64.42'; THENCE N00°07'38"W 532.44'; THENCE N89°59'16"E 499.97' TO A POINT ON THE EAST LINE OF THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF TERMINATION, WHICH BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SAID SECTION 29. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.755 ACRES MORE OR LESS.

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.



Sheet 2 of 2

FILE: 6 3 0 7 3 - A 2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

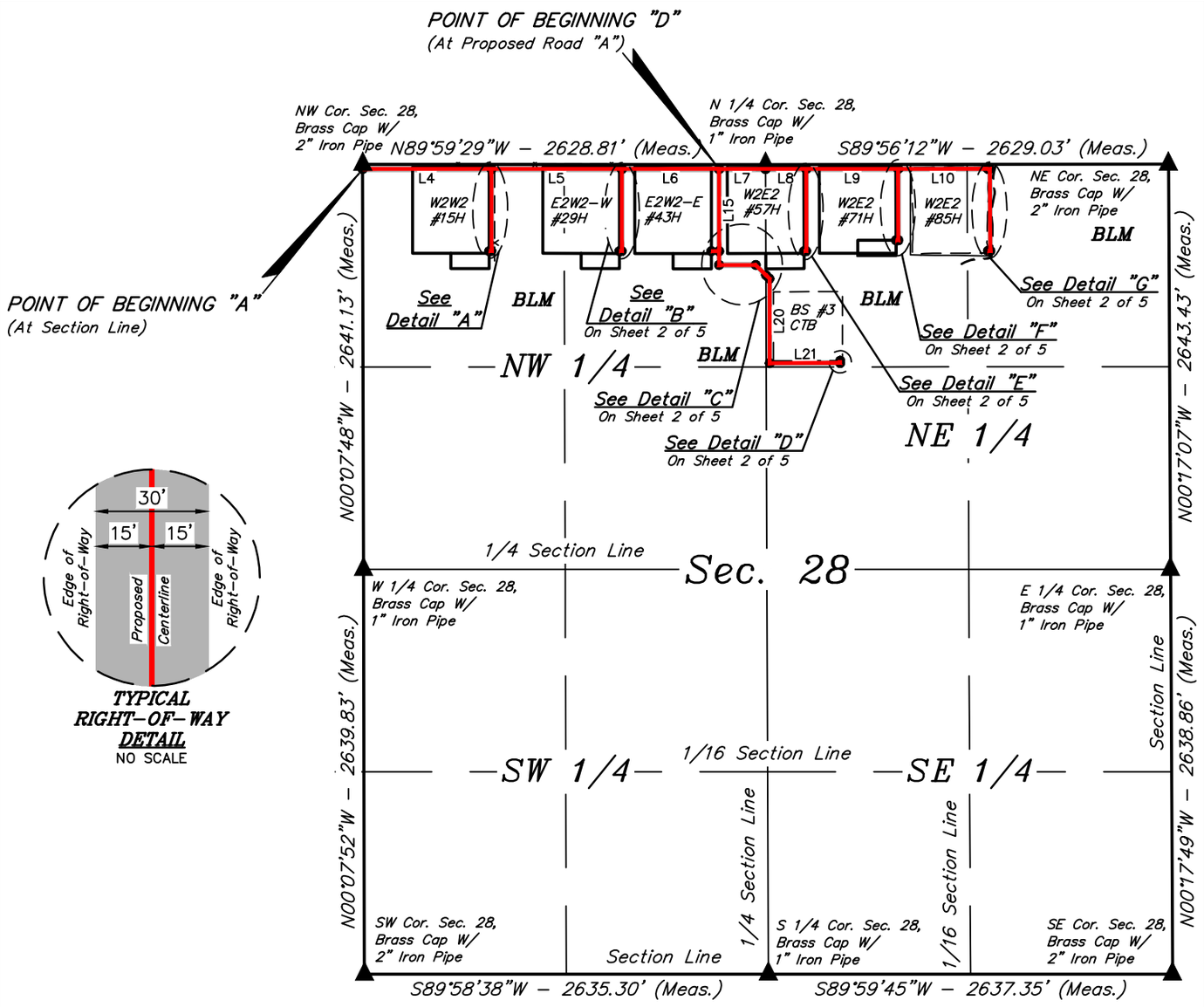
NOTES:

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
ON DR NM RANCH, LLC LANDS IN
SECTION 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	N/A
PROPOSED ACCESS R-O-W			EXHIBIT D

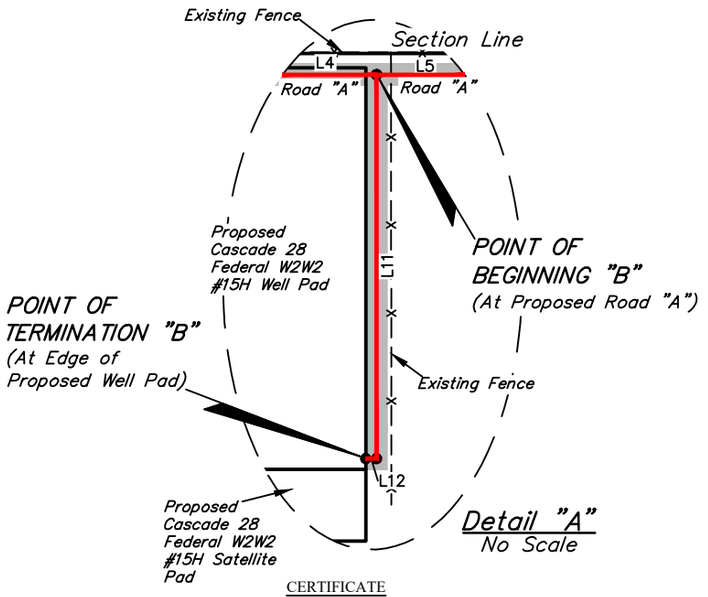
UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

LINE TABLE		
LINE	DIRECTION	LENGTH
L4	N89°59'16"E	840.87'
L5	N89°59'16"E	850.15'
L6	N89°59'16"E	634.76'
L7	N89°59'16"E	303.06'
L8	N89°59'16"E	265.42'
L9	N89°59'16"E	600.23'
L10	N89°59'16"E	584.81'
L11	S00°00'31"W	535.47'
L12	N89°59'29"W	15.00'
L13	S00°00'58"W	535.71'
L14	N90°00'00"W	15.08'
L15	S00°01'02"W	536.02'
L16	S00°01'02"W	89.94'
L17	S89°59'00"E	239.37'
L18	S45°01'55"E	93.73'

LINE TABLE		
LINE	DIRECTION	LENGTH
L19	S45°01'55"E	33.64'
L20	S00°04'15"E	550.08'
L21	N89°55'43"E	459.96'
L22	N00°04'17"W	15.12'
L23	N89°58'58"W	49.83'
L24	S00°03'58"E	535.89'
L25	S89°56'12"W	15.00'
L26	S00°02'22"E	465.36'
L27	S89°56'12"W	15.00'
L28	N89°59'16"E	12.90'
L29	S00°16'56"E	534.83'
L30	S89°57'13"W	14.94'



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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
Frank Buchele
05-26-23

NOTES:

- The maximum grade of existing ground for the proposed access road "A" is ±4.72%.
- The maximum grade of existing ground for the proposed access road "B" is ±16.63%.
- The maximum grade of existing ground for the proposed access road "C" is ±4.45%.
- The maximum grade of existing ground for the proposed access road "D" is ±7.06%.
- The maximum grade of existing ground for the proposed access road "E" is ±0.25%.
- The maximum grade of existing ground for the proposed access road "F" is ±8.22%.
- The maximum grade of existing ground for the proposed access road "G" is ±24.23%.
- The maximum grade of existing ground for the proposed access road "H" is ±7.70%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

Sheet 1 of 5

FILE: 63073-B1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

1000' 500' 0' 1000'

▲ = SECTION CORNERS LOCATED.

N

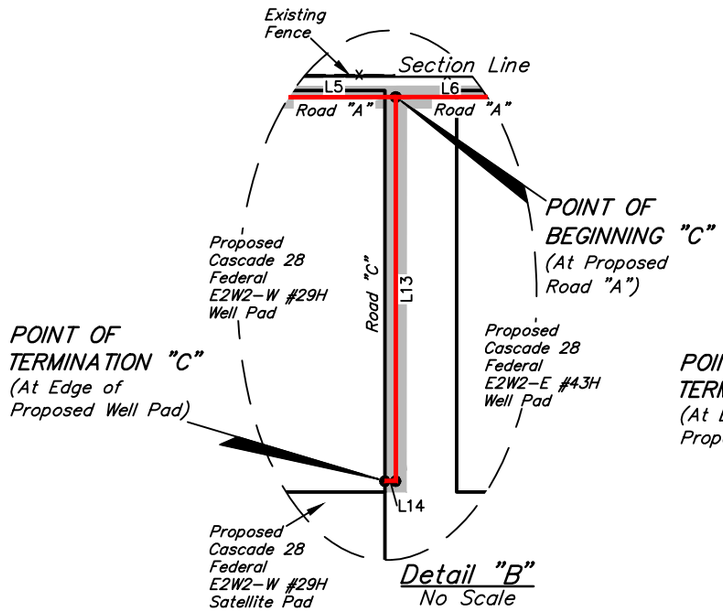
CIMAREX ENERGY CO.

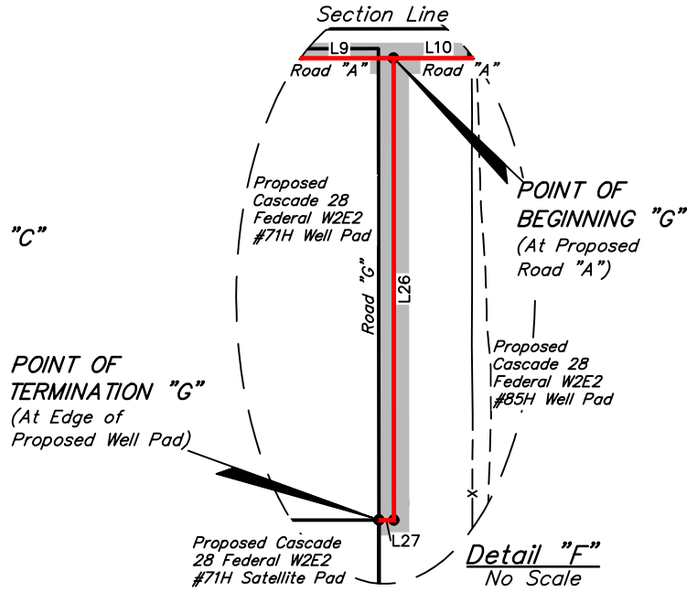
CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

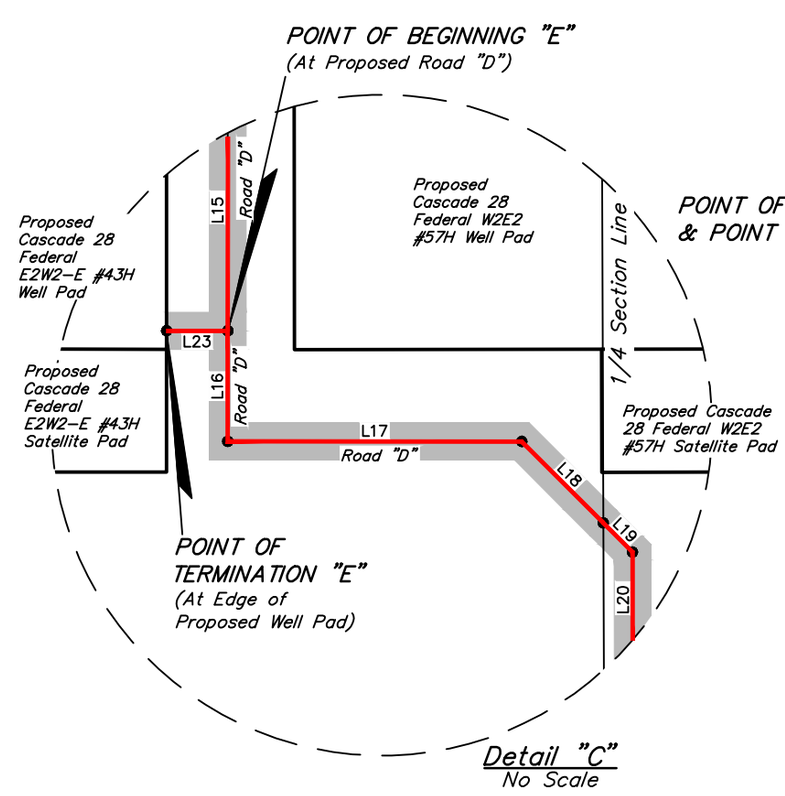
SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

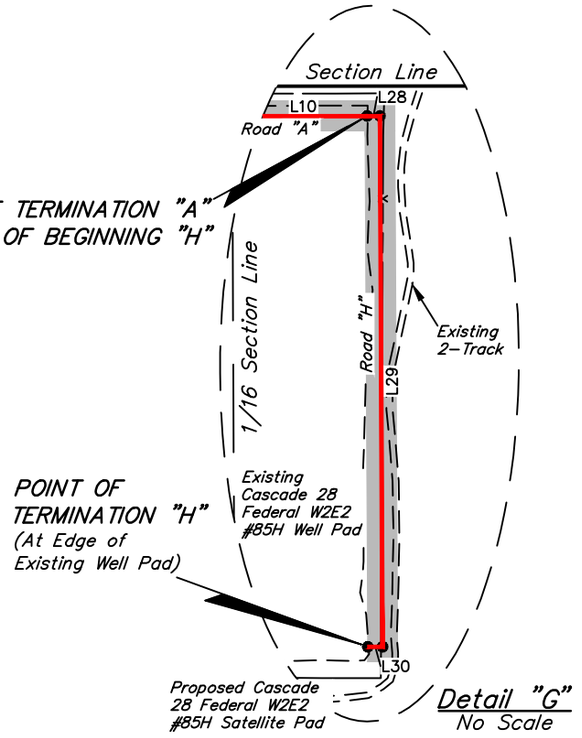
PROPOSED ACCESS R-O-W EXHIBIT D

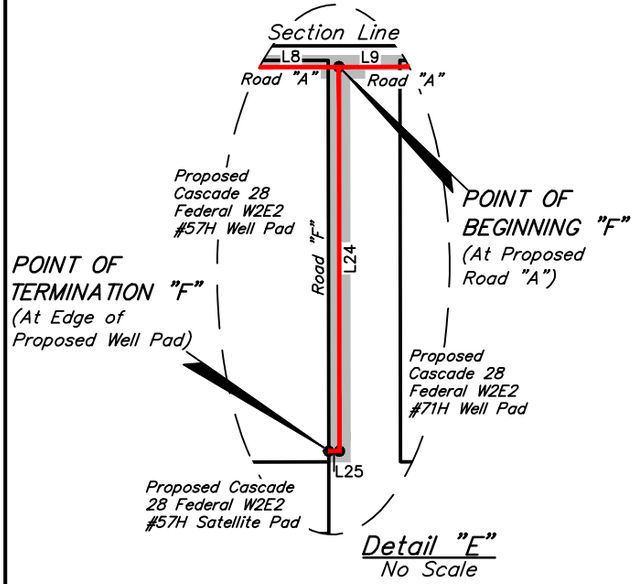
UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

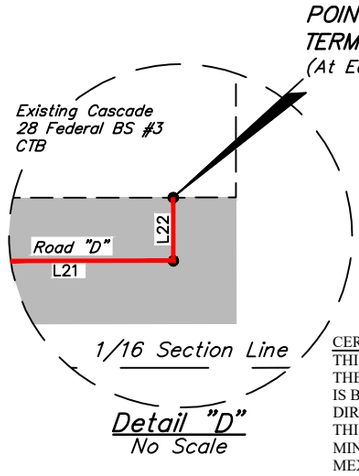












CERTIFICATE

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 2 of 5

FILE: 63073-B2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	N/A
PROPOSED ACCESS R-O-W			EXHIBIT D

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

POINT OF BEGINNING "A" BEARS S00°07'48"E 29.84' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "B" BEARS S87°58'49"E 841.46' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "B" BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "C" BEARS S88°13'27"W 938.17' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "C" BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "D" BEARS S84°32'38"W 304.34' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "D" BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "E" BEARS S28°12'55"W 641.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "E" BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "F" BEARS S83°48'22"E 267.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "F" BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "G" BEARS S88°06'08"E 866.22' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "G" BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "H" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "H" BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

ACREAGE / LENGTH TABLE "A"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	2628.84	159.32	1.810
SEC. 28 (NE 1/4)	1450.46	87.91	0.999
TOTAL	4079.30	247.23	2.809

ACREAGE / LENGTH TABLE "B"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.47	33.36	0.379

ACREAGE / LENGTH TABLE "C"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.79	33.38	0.379

ACREAGE / LENGTH TABLE "D"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	959.06	58.12	0.661
SEC. 28 (NE 1/4)	1058.80	64.17	0.729
TOTAL	2017.86	122.29	1.390

ACREAGE / LENGTH TABLE "E"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	49.83	3.02	0.034

ACREAGE / LENGTH TABLE "F"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	550.89	33.39	0.379

ACREAGE / LENGTH TABLE "G"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	480.36	29.11	0.331

ACREAGE / LENGTH TABLE "H"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	562.67	34.10	0.388

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 3 of 5

FILE: 63073-B3

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W EXHIBIT D

UINTAH ENGINEERING & LAND SURVEYING

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

ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S00°07'48"E 29.84' ALONG THE WEST LINE OF THE NW 1/4 NW 1/4 OF SAID SECTION 28 TO THE POINT OF BEGINNING; THENCE N89°59'16"E 840.87'; THENCE CONTINUING N89°59'16"E 850.15'; THENCE CONTINUING N89°59'16"E 634.76'; THENCE CONTINUING N89°59'16"E 303.06' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING N89°59'16"E 265.42'; THENCE CONTINUING N89°59'16"E 600.23'; THENCE CONTINUING N89°59'16"E 584.81' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 2.809 ACRES MORE OR LESS.

ACCESS ROAD "B" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S87°58'49"E 841.46' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'31"W 535.47'; THENCE N89°59'29"W 15.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "C" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S88°13'27"W 938.17' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'58"W 535.71'; THENCE N90°00'00"W 15.08' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "D" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S84°32'38"W 304.34' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°01'02"W 536.02'; THENCE CONTINUING S00°01'02"W 89.94'; THENCE S89°59'00"E 239.37'; THENCE S45°01'55"E 93.73' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING S45°01'55"E 33.64'; THENCE S00°04'15"E 550.08'; THENCE N89°55'43"E 459.96'; THENCE N00°04'17"W 15.12' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 1.390 ACRES MORE OR LESS.

ACCESS ROAD "E" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S28°12'55"W 641.14' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°58'58"W 49.83' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.034 ACRES MORE OR LESS.

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 4 of 5

FILE: 63073-B4

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W **EXHIBIT D**

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

ACCESS ROAD "F" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE N83°48'22"W 267.08' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°03'58"E 535.89'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "G" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE S88°06'08"E 866.22' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°02'22"E 465.36'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.331 ACRES MORE OR LESS.

ACCESS ROAD "H" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 28 BEARS S89°56'12"W 2629.03', THENCE S88°28'14"W 1178.88' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°59'16"E 12.90'; THENCE S00°16'56"E 534.83'; THENCE S89°57'13"W 14.94' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.388 ACRES MORE OR LESS.

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
PROFESSIONAL SURVEYOR
05-26-23

Sheet 5 of 5

FILE: 63073-B5

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

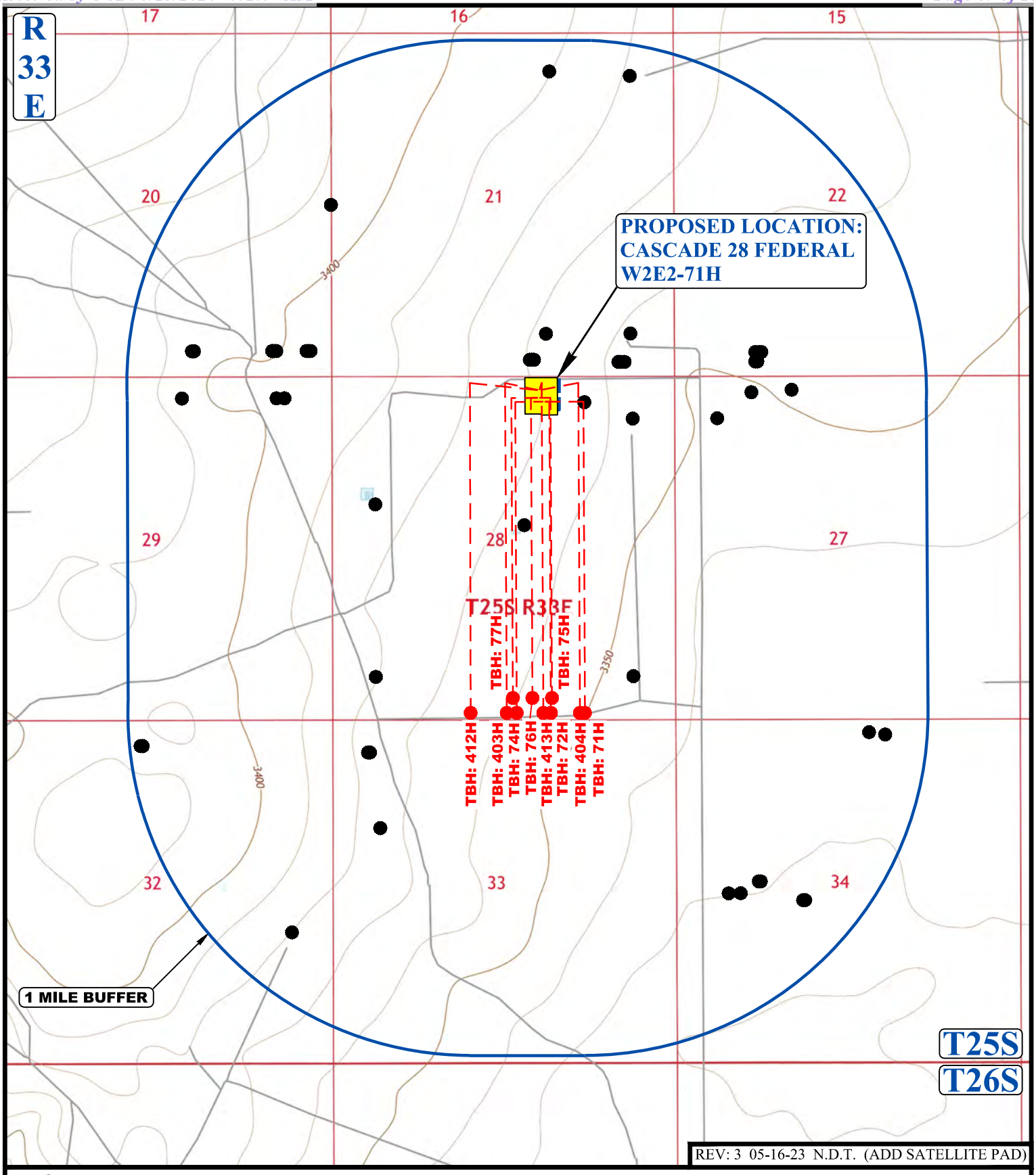
CASCADE 28 FEDERAL ACCESS NETWORK
ON BLM LANDS IN
SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W **EXHIBIT D**

UINTAH ENGINEERING & LAND SURVEYING

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



REV: 3 05-16-23 N.D.T. (ADD SATELLITE PAD)

LEGEND:

● EXISTING WELLS

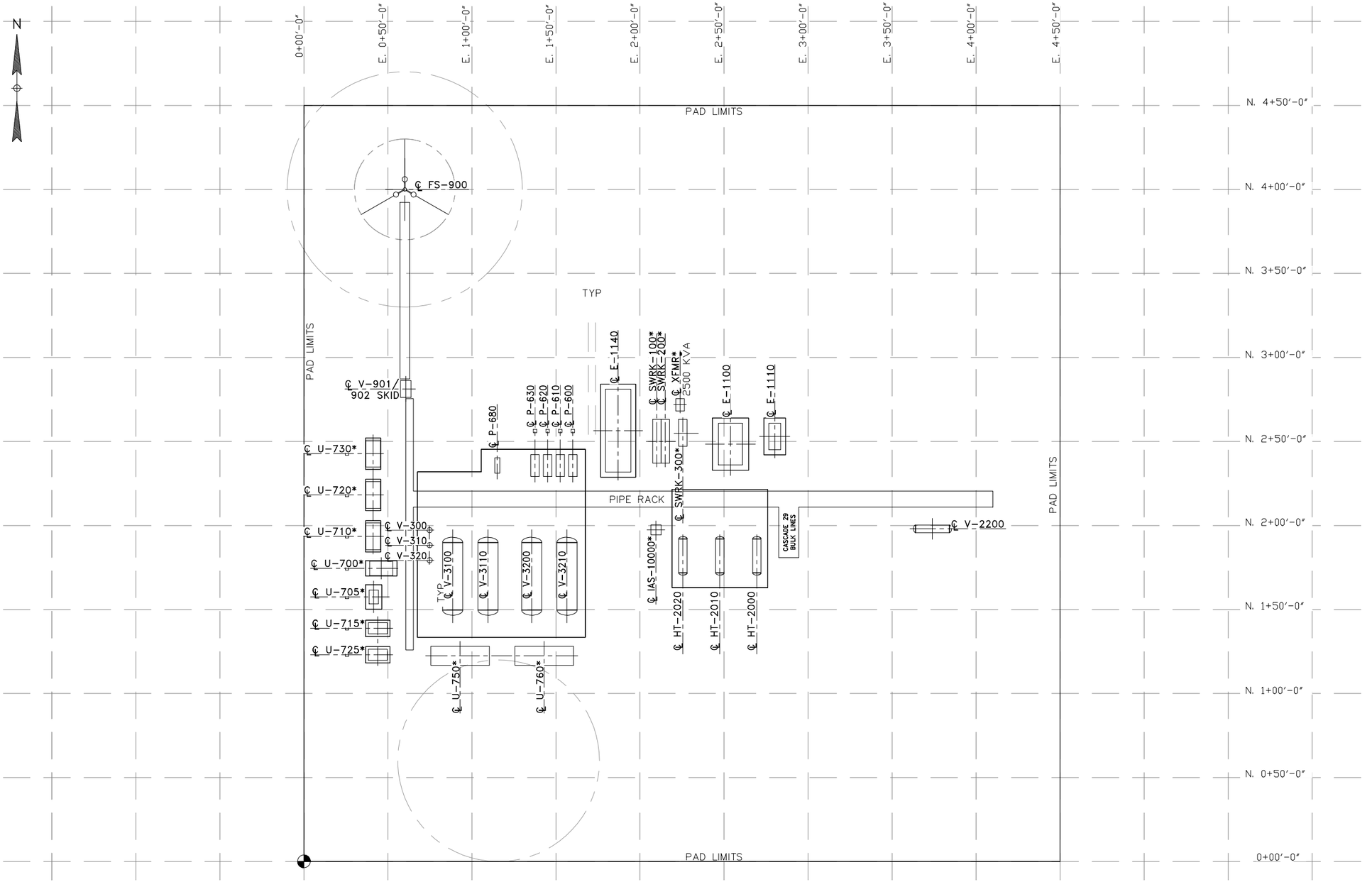
N

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2-71H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-24-18	SCALE
DRAWN BY	J.L.G.	02-08-18	1 : 24,000
1 MILE RADIUS MAP			EXHIBIT E

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



EQUIPMENT		
TAG	DESCRIPTION	HP
V-2200	2PH HZ LP GAS SCRUBBER 54" OD x 20' S/S	
HT-2000	HZ HEATER TREATER 60" OD x 20' S/S	
HT-2010	HZ HEATER TREATER 60" OD x 20' S/S	
HT-2020	HZ HEATER TREATER 60" OD x 20' S/S	
V-300	VAPOR RECOVERY TOWER 36" OD x 40' S/S	
V-310	VAPOR RECOVERY TOWER 36" OD x 40' S/S	
V-320	VAPOR RECOVERY TOWER 36" OD x 40' S/S	
U-700	G17	160
U-705	NK100	30
U-710	FX17V150 (FLOGISTIX RENTAL)	160
U-715	FX10V75 (FLOGISTIX RENTAL)	75
U-720	FX17V150 (FLOGISTIX RENTAL)	160
U-725	FX10V75 (FLOGISTIX RENTAL)	75
U-730	FX17V150 (FLOGISTIX RENTAL)	160
V-3100	750 BBL OIL VESSEL 12' OD x 40' S/S	
V-3110	750 BBL OIL VESSEL 12' OD x 40' S/S	
V-3200	750 BBL WATER VESSEL 12' OD x 40' S/S	
V-3210	750 BBL WATER VESSEL 12' OD x 40' S/S	
U-750	ETP PIPELINE W/ BOOSTER	210
U-760	ETP PIPELINE W/ BOOSTER	210
E-1100	H-13-24 OIL COOLER	40
E-1110	108 VVF OIL COOLER	30
E-1140	H-13-2-48 WATER COOLER	(2) 40
FS-900	TRIPOD 3.0/1.5 MMCFD DUAL FLARE STACK	18
V-911/912	FS-910 DUAL SCUBBER SKID	3
IAS-10000	AIR COMPRESSOR	(2) 7.5
P-600	SKIDDED TRANSFER PUMP	100
P-610	SKIDDED TRANSFER PUMP	100
P-620	SKIDDED TRANSFER PUMP	100
P-630	SKIDDED TRANSFER PUMP	100
P-680	PCP RECIRCULATION PUMP	2

NOTE:

LP 2 SAT BOP3; SWEET;

* FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION

REFERENCE DRAWINGS	
NO.	TITLE

REVISIONS					
NO.	DATE	DESCRIPTION	BY	CHK.	APP.
–	–	–	–	–	

3S ENGINEERING & DESIGN
Midland, Texas 79705
Ph: 432-687-5611 Arlington, Texas 76011
Katy, Texas 77449
WWW.3SENGINEERINGDESIGN.COM
TBPE FIRM REG. #13809
NM FIRM REG. #4545320

ENGINEERING RECORD		
	BY	DATE
DRN:	–	–
DES:	–	
CHK:		
APP:		
AFE No.		
FACILITY ENGR.	–	–
PROJ. ENGR:	–	
SCALE:	NONE	

COTERRA

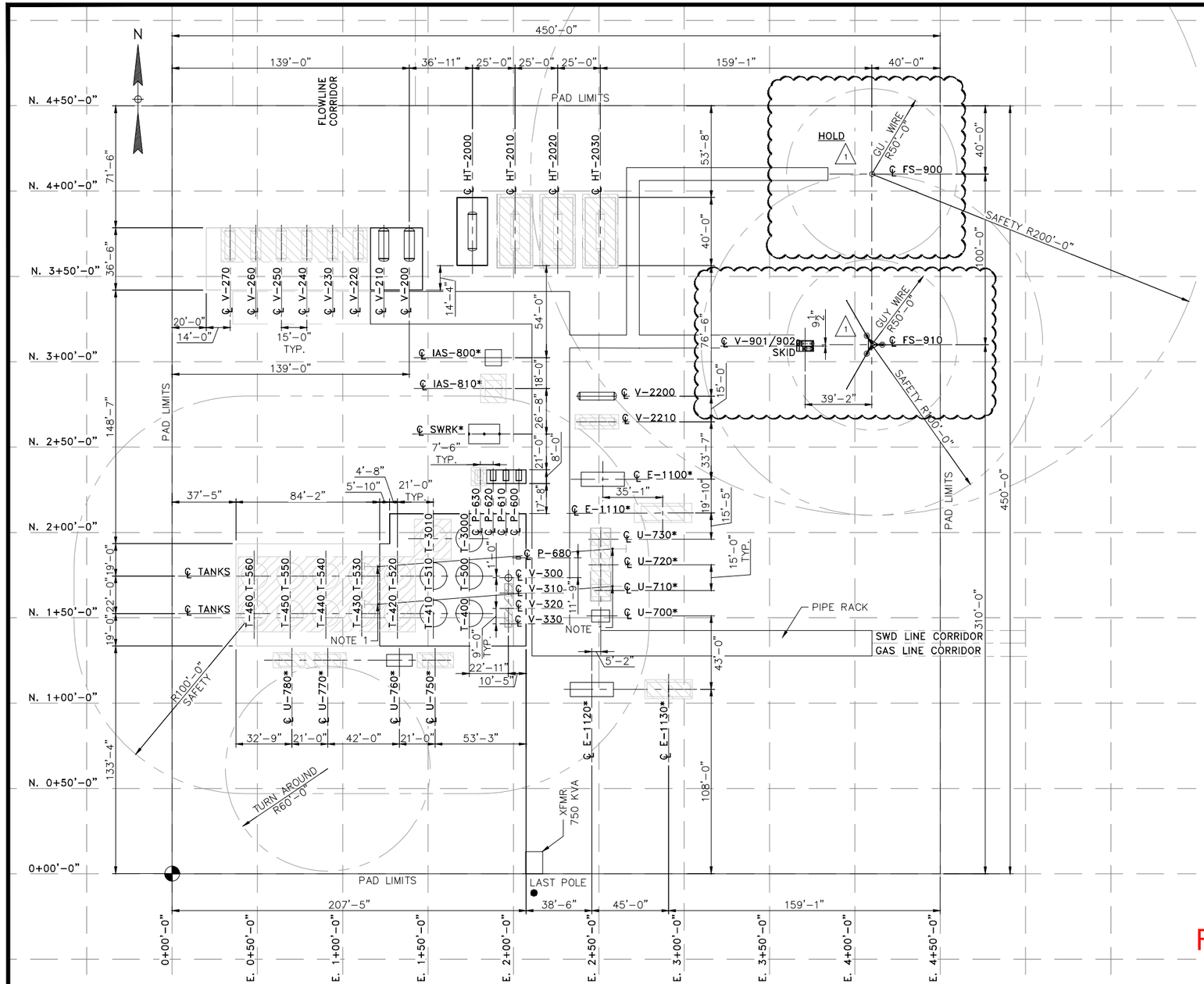
–

GENERAL ARRANGEMENT PLOT PLAN

–

PLOT SCALE NONE	DWG. NO. D-XXXXX-20-100	REV 0
CAD NO.		

O:\01_Coterra\Temp\plot_plan_for_Calvin\D-XXXXX-20-100.dwg 20240125.094807



E-1100/1110
OIL COOLER
60 VVF
7.5 HP

E-1120/1130
WATER COOLER
60 VVF
7.5 HP

FS-900
FLARE
HERO FLARE
8" DUAL 20 MMCFD
8 HP

1 FS-910
FLARE
HERO FLARE
6" DUAL 3MMSCFD/1.5MMSCFD
18 HP
HOLD

HT-2000 THRU 2030
PROD. TREATER
HORIZONTAL HEATER TREATER
60" OD x 20' S/S

IAS-800/810
INSTRUMENT AIR
(2) 7.5 HP

T-3000/3010
GUNBARREL TANK
15'-6" OD x 38'-0" HT
750 BBL

P-600 THRU 630
TRANSFER PUMP
SWD PUMP
25 HP

1 V-901/V-902
SCRUBBER SKID

P-680
RECIRCULATION PUMP
3 HP

T-400 THRU 460
OIL TANK
OIL STORAGE TANK
15'-6" OD x 30'-0" HT
1000 BBL

T-500 THRU 560
WATER TANK
WATER STORAGE TANK
15'-6" OD x 30'-0" HT
1000 BBL

U-700 THRU 730
VAPOR RECOVERY
G12
104 HP

U-750/770
LACT
4" TRUCK LACT

U-760/780
LACT
3" PIPELINE LACT
60 HP

V-300 THRU V-330
LG VRT
2PH LG VRT
36" OD x 40'-0"

V-200 THRU V-270
TEST SEPARTOR
3 PH HZ TEST SEPARATOR
72"00 X 16'-0" S/S

V-2200/2210
LP SCRUBBER
2PH HORIZONTAL VESSEL
54" OD x 20'-0" S/S

LEGEND

FUTURE

REVISED

SEPTEMBER 27, 2019

FOR CONSTRUCTION

NOTE:

LP B2P8; SWEET; OFF PAD

*FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION

1. REFER TO DWG D-9299-20-103 FOR HALO POLE LOCATIONS.

REFERENCE DRAWINGS	
NO.	TITLE

REVISIONS					
NO.	DATE	DESCRIPTION	BY	CHK.	APP.
0	09/23/19	ISSUED FOR CONSTRUCTION	MJB	AL	
1	09/27/19	REVISED FOR CONSTRUCTION	NM	MJB	

3S Services, LLC
ENGINEERING & DESIGN
Ph: 432-687-5611 Midland, Texas 79705
WWW.3SENGINEERINGDESIGN.COM
TBPE FIRM REG. #13809
NM FIRM REG. #4545320
OKLA FIRM REG. #3712353615

ENGINEERING RECORD		
	BY	DATE
DRN:	JV	08/12/19
DES:		
CHK:		
APP:		
AFE No.		
FACILITY ENGR.	C. PAYNE	
PROJ. ENGR:	A. LOZANO	
SCALE:	NONE	

CIMAREX

CASCADE 28 FED CTB
PLOT PLAN

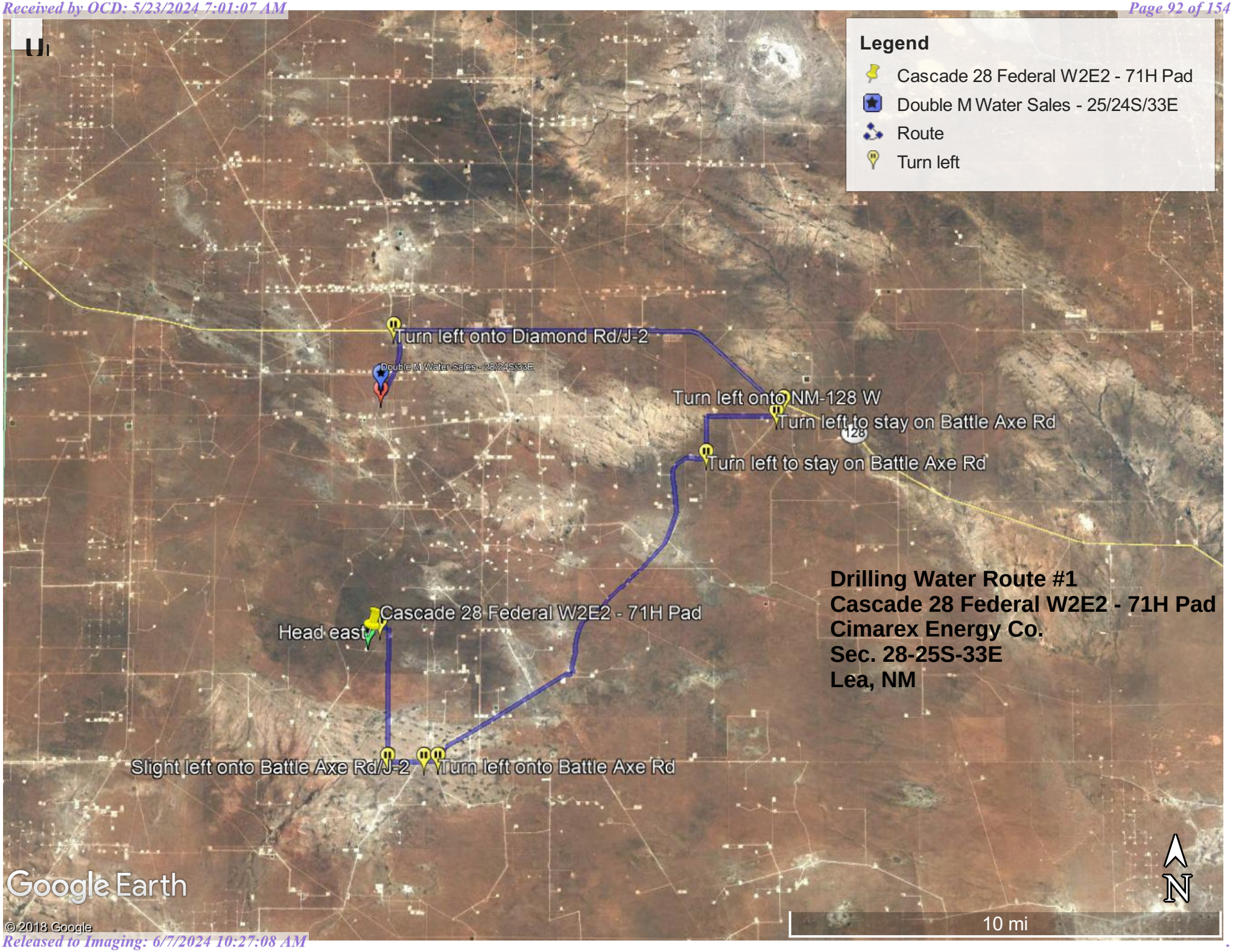
LEA COUNTY NM

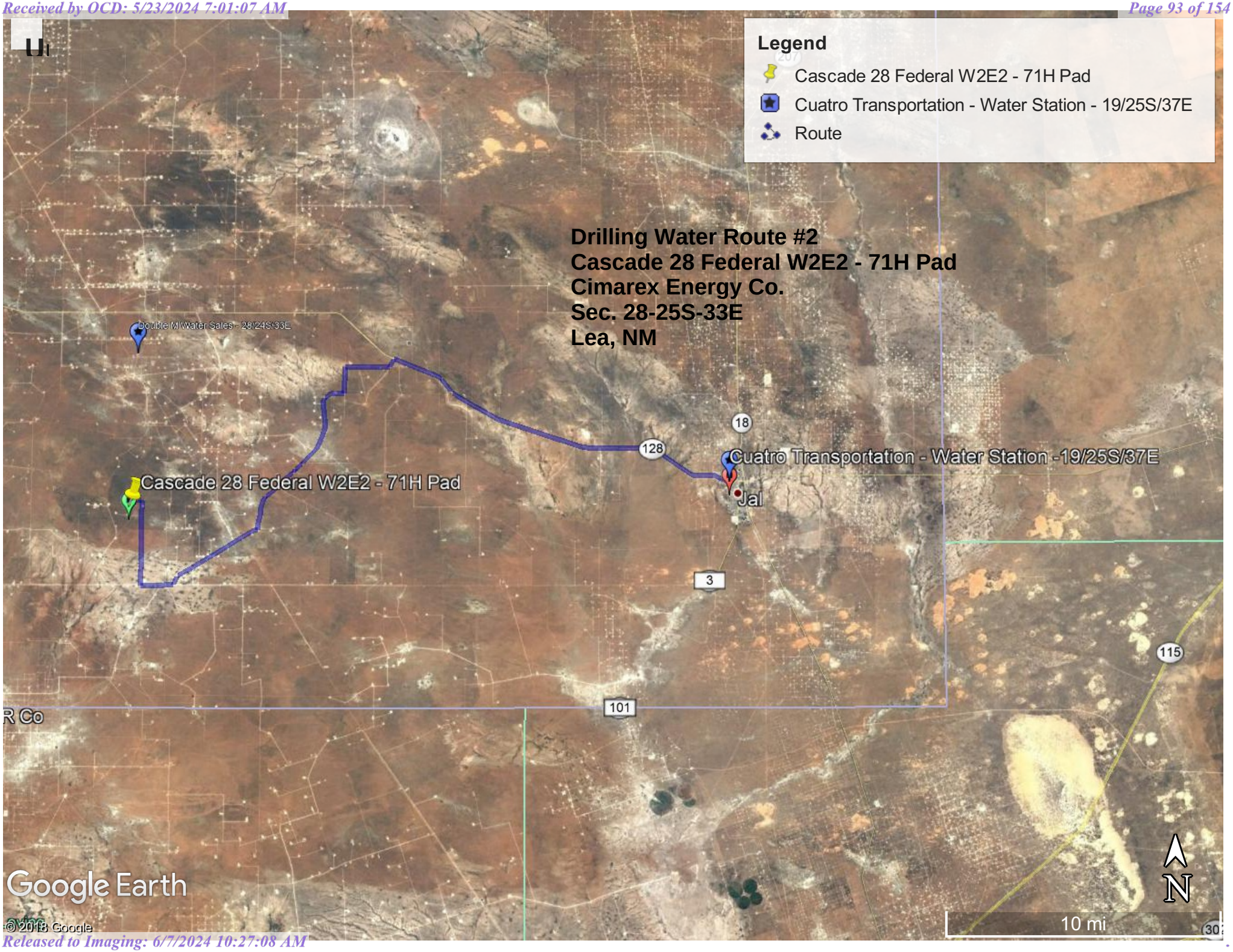
PLOT SCALE NONE
CAD NO.

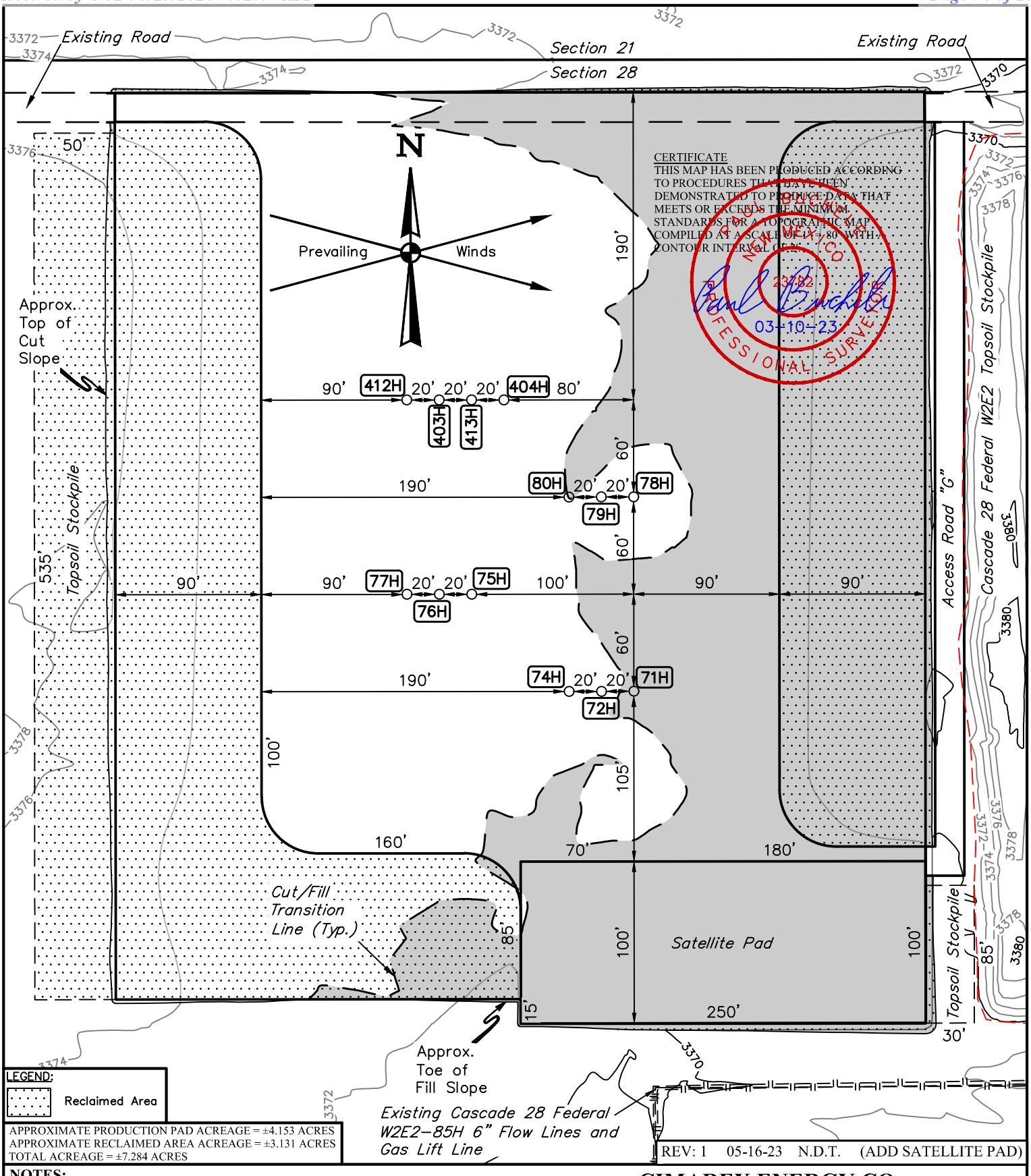
DWG. NO. D-9299-20-100

REV 1

R:\01_Cimarex\9299 - Cascade 28 Fed CTB\2. Eng., Design\2.3 Piping, Mech\2.3.2 Plot Plans\D-9299-20-100.dwg 20190926.171158


Legend
Cascade 28 Federal W2E2 - 71H Pad
Double M Water Sales - 25/24S/33E
Route
Turn left
Turn left onto Diamond Rd/J-2
Double M Water Sales - 28/24S/33E
Turn left onto NM-128 W
Turn left to stay on Battle Axe Rd
128
Turn left to stay on Battle Axe Rd
Cascade 28 Federal W2E2 - 71H Pad
Head east
Slight left onto Battle Axe Rd/J-2
Turn left onto Battle Axe Rd
Drilling Water Route #1
Cascade 28 Federal W2E2 - 71H Pad
Cimarex Energy Co.
Sec. 28-25S-33E
Lea, NM
Google Earth
© 2018 Google
N
10 mi


Legend
Cascade 28 Federal W2E2 - 71H Pad
Cuatro Transportation - Water Station - 19/25S/37E
Route
Drilling Water Route #2
Cascade 28 Federal W2E2 - 71H Pad
Cimarex Energy Co.
Sec. 28-25S-33E
Lea, NM
Double M Water Sales - 28/24S/33E
Cascade 28 Federal W2E2 - 71H Pad
Cuatro Transportation - Water Station -19/25S/37E
Jal
18
128
3
101
115
Google Earth
© 2018 Google
10 mi
N



LEGEND:

Reclaimed Area

APPROXIMATE PRODUCTION PAD ACREAGE = ±4.153 ACRES
APPROXIMATE RECLAIMED AREA ACREAGE = ±3.131 ACRES
TOTAL ACREAGE = ±7.284 ACRES

REV: 1 05-16-23 N.D.T. (ADD SATELLITE PAD)

NOTES:

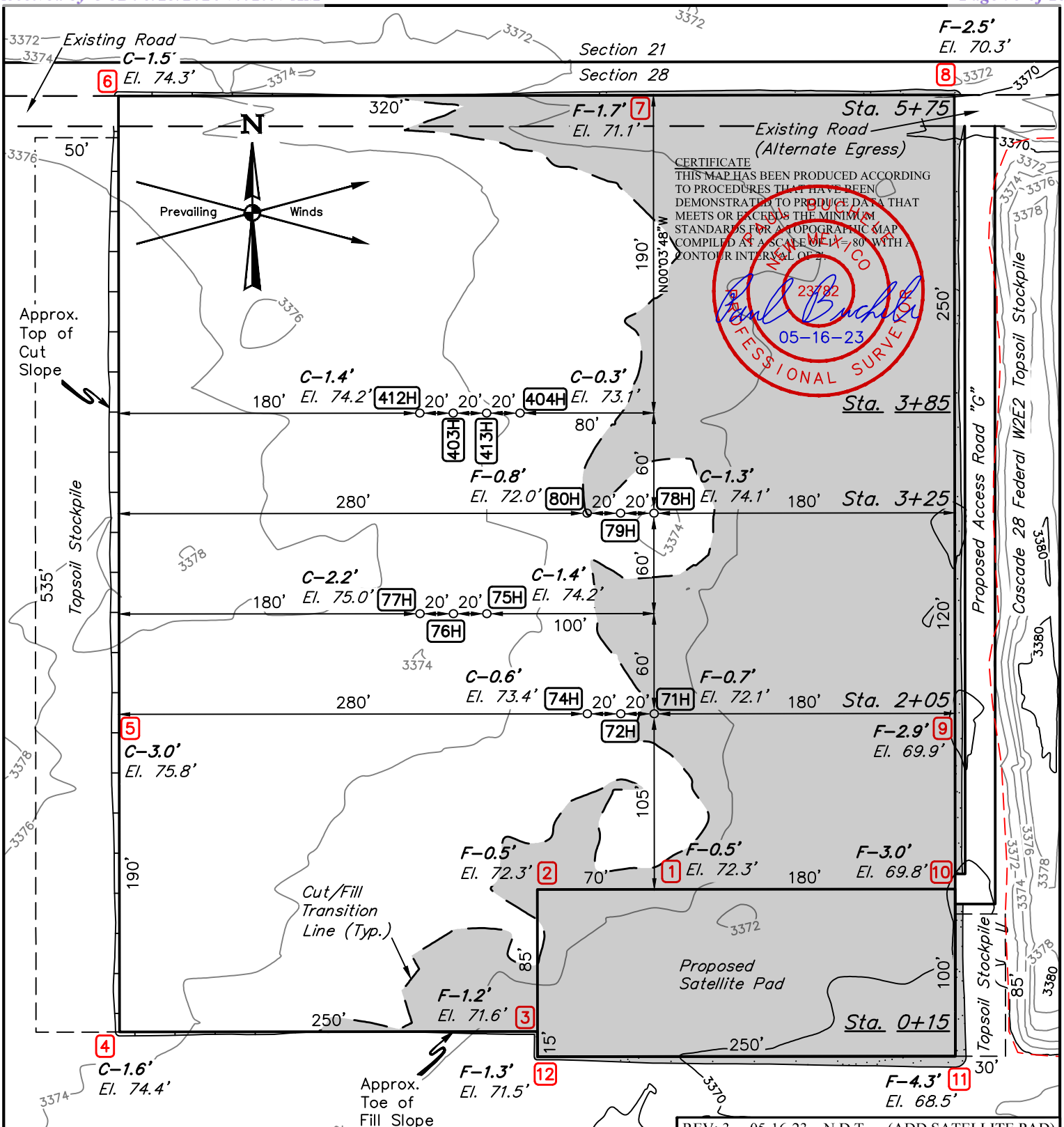
- Contours shown at 2' intervals.

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2-71H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.H., H.F.	05-12-23	SCALE
DRAWN BY	T.J.S.	03-10-23	1" = 80'
INTERIM RECLAMATION			EXHIBIT P

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



REV: 3 05-16-23 N.D.T. (ADD SATELLITE PAD)

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 = **3372.8'**

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.

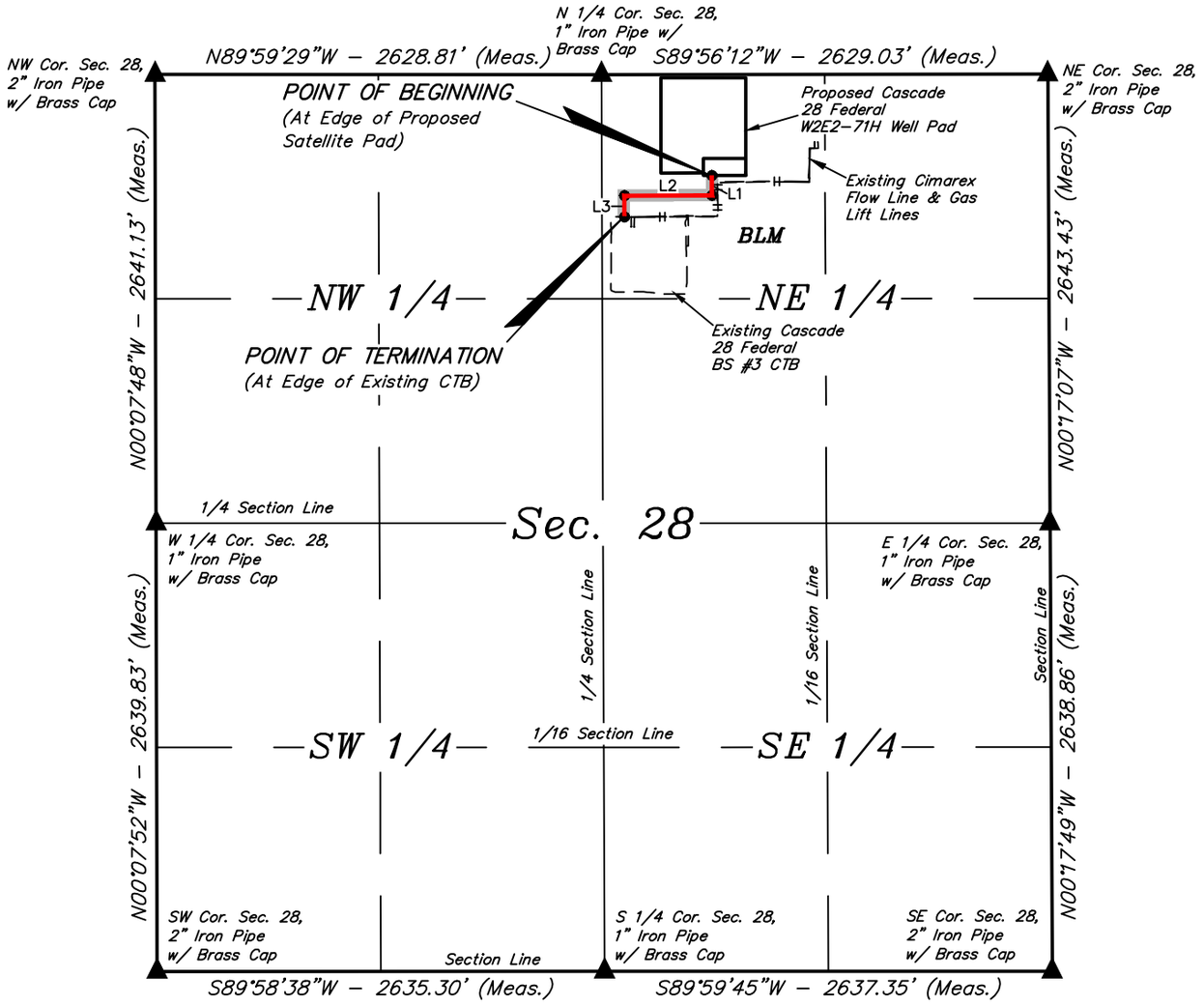
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2-71H
NW 1/4 NE 1/4, SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.H., H.F.	05-12-23	SCALE
DRAWN BY	S.F.	01-25-18	1" = 80'

LOCATION LAYOUT **EXHIBIT J**

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



BULK LINE RIGHT–OF–WAY DESCRIPTION

A 70' WIDE RIGHT–OF–WAY 35' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE S47°36'57"E 881.59' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°09'20"E 117.09'; THENCE S89°50'41"W 515.42'; THENCE S00°09'18"E 125.29' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S09°14'44"E 849.09' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT–OF–WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 1.218 ACRES MORE OR LESS.

POINT OF BEGINNING BEARS S47°36'57"E 881.59' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

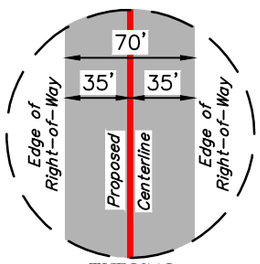
POINT OF TERMINATION BEARS S09°14'44"E 849.09' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S00°09'20"E	117.09'
L2	S89°50'41"W	515.42'
L3	S00°09'18"E	125.29'

1000' 500' 0' 1000'

ACREAGE / LENGTH TABLE			
LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	757.80	45.93	1.218

▲ = SECTION CORNERS LOCATED.



TYPICAL RIGHT–OF–WAY DETAIL
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.

23782
05-17-23
REGISTERED PROFESSIONAL SURVEYOR

NOTES:
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of 103°53'00" (NAD 83)
- Water bars to be constructed along route every 6' of elevation change.

N

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL W2E2-71H
ON BLM LANDS IN
SECTION 28, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.H., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	05-17-23	1" = 1000'
FILE	C-6620-A1		
BULK LINE R-O-W			EXHIBIT M

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

CIMAREX ENERGY CO.

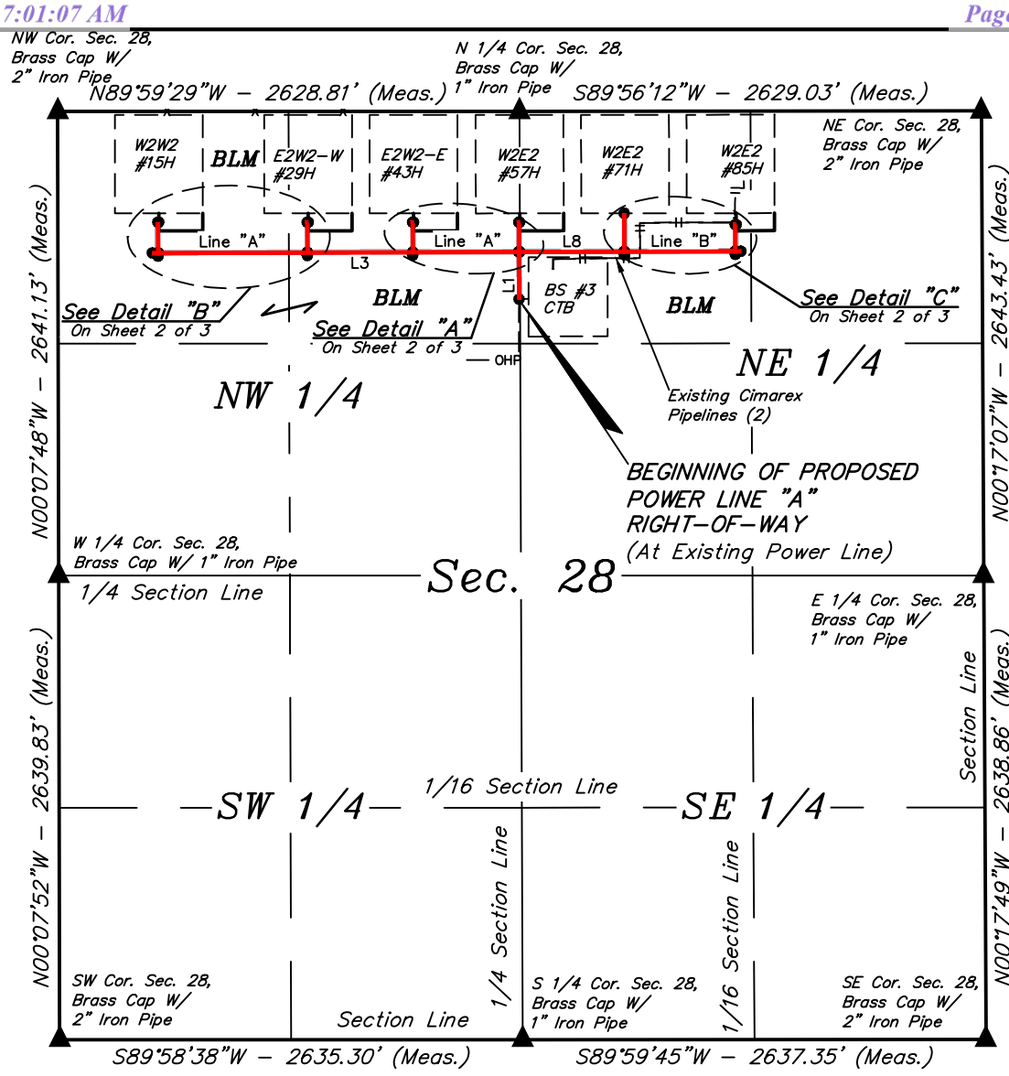
CASCADE 28 FEDERAL POWER LINE NETWORK

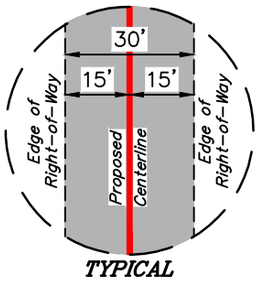
SECTION 28, T25S, R33E, N.M.P.M.,

LEA COUNTY, NEW MEXICO

DATE:	DESCRIPTION:
6/21/2023	FINAL PLATS

UINTAH
ENGINEERING & LAND SURVEYING





TYPICAL RIGHT–OF–WAY DETAIL
NO SCALE

BEGINNING OF POWER LINE "A" BEARS S00°07'04"W 1067.75' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "A" BEARS S42°28'31"E 852.24' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "B" BEARS S00°15'30"W 798.41' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "B" BEARS S62°27'27"E 1390.66' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "C" BEARS S36°49'26"E 995.18' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "C" BEARS S45°49'11"E 831.29' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "D" BEARS S00°15'30"W 798.41' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "D" BEARS S00°06'37"E 630.00' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "E" BEARS S37°12'22"W 1004.66' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "E" BEARS S43°44'52"W 871.98' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "F" BEARS S56°24'30"W 1449.46' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "F" BEARS S62°21'54"W 1357.76' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "G" BEARS S57°05'41"E 1462.98' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "G" BEARS S57°45'59"E 1489.89' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "H" BEARS S57°05'41"E 1462.98' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "H" BEARS S56°30'26"E 1472.85' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "I" BEARS S36°49'26"E 995.18' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "I" BEARS S36°12'46"E 1009.67' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "J" BEARS S37°12'22"W 1004.66' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "J" BEARS S36°35'31"W 1019.02' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "K" BEARS S56°24'30"W 1449.46' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "K" BEARS S55°49'07"W 1459.46' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "L" BEARS S35°22'08"E 987.01' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

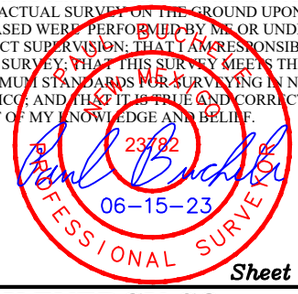
END OF POWER LINE "L" BEARS S34°46'31"E 1001.77' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

BEGINNING OF POWER LINE "M" BEARS S35°22'08"E 987.01' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

END OF POWER LINE "M" BEARS S33°49'21"E 968.92' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

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.



▲ = SECTION CORNERS LOCATED.

Sheet 1 of 4

NOTES:

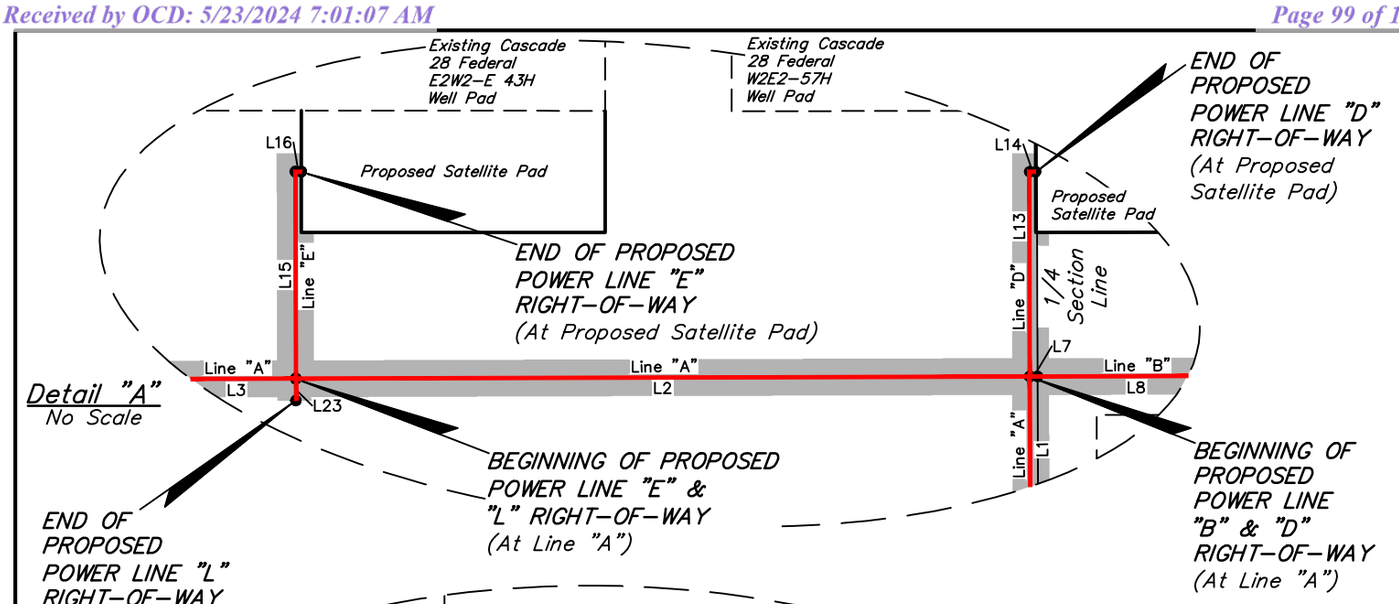
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of 103°53'00" (NAD 83)

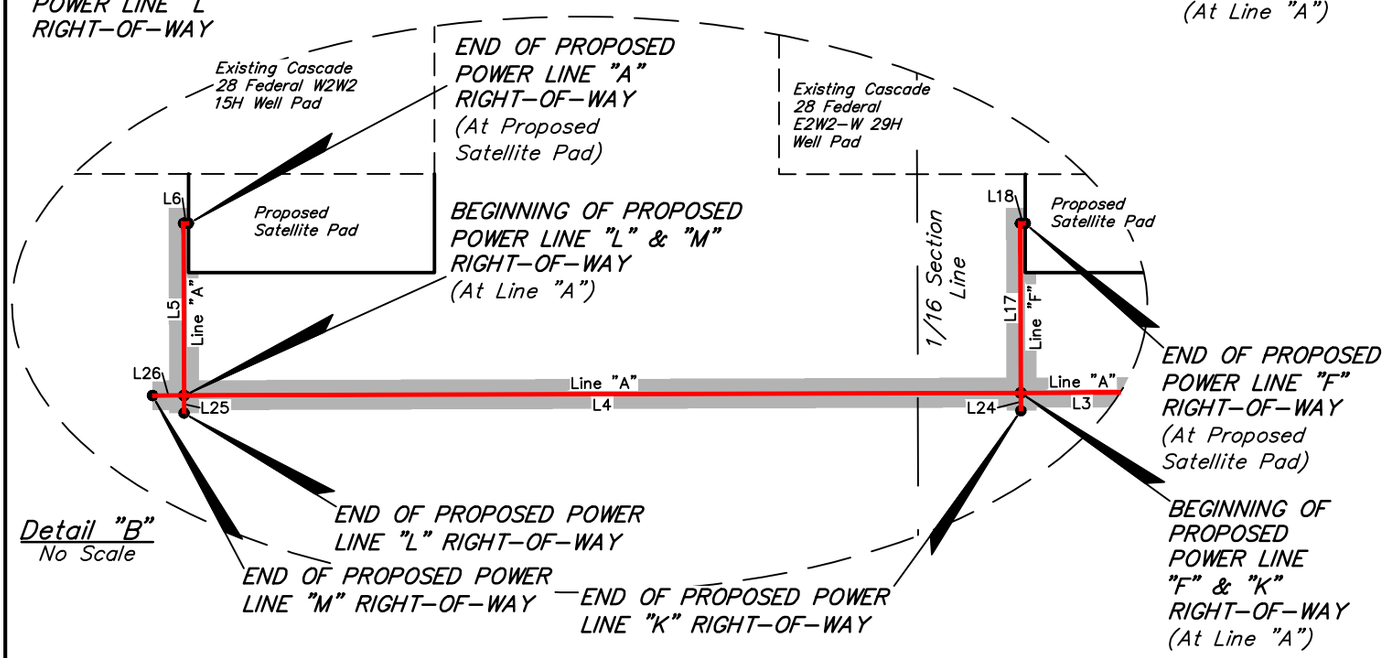
CIMAREX ENERGY CO.

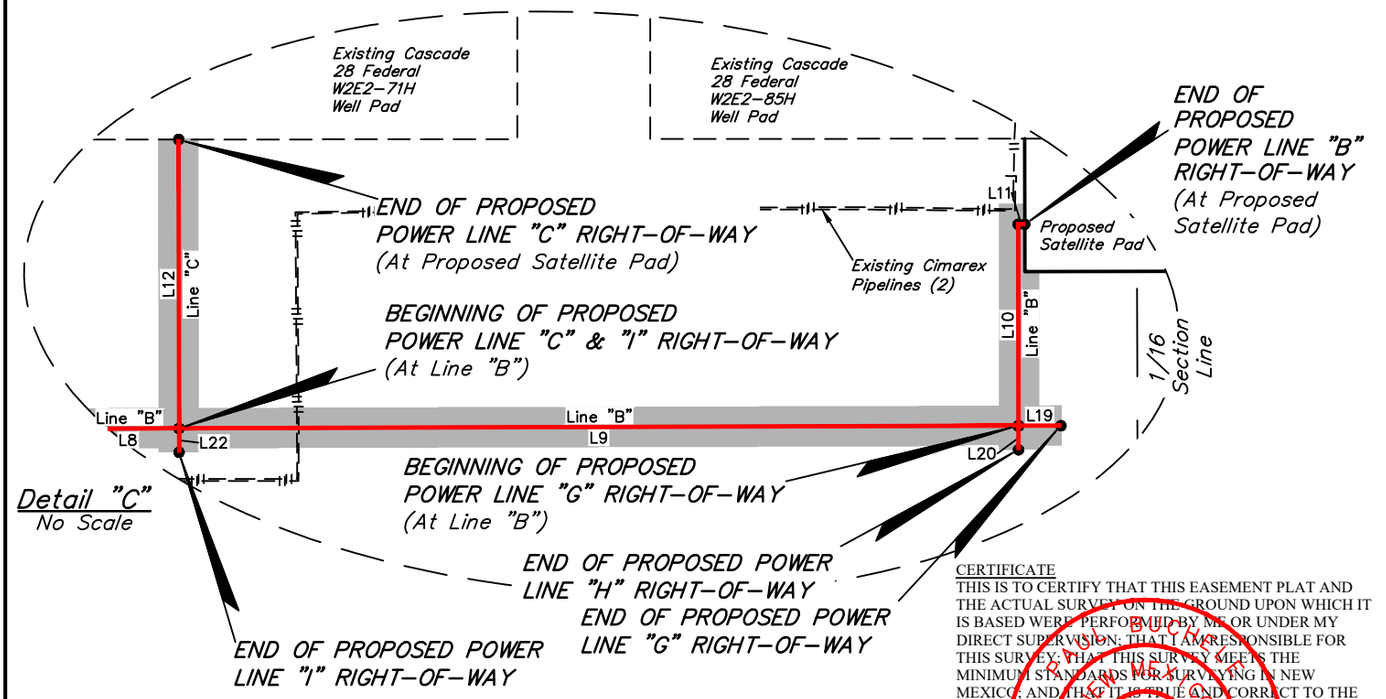
CASCADE 28 FEDERAL POWER LINE NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	A.H.	06-13-23	SCALE
DRAWN BY	L.K.	06-15-23	1" = 1000'
FILE	C-6614-A1		
POWER LINE R-O-W			EXHIBIT I

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







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 PROFESSIONAL SURVEYOR

06–15–23

Sheet 2 of 4

NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of 103°53'00" (NAD 83)

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL POWER LINE NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	A.H.	06-13-23	SCALE
DRAWN BY	L.K.	06-15-23	N/A
FILE	C-6614-A2		
POWER LINE R-O-W			EXHIBIT I

UINTAH ENGINEERING & LAND SURVEYING

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

POWER LINE "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S00°07'04"W 1067.75' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N00°17'54"W 269.36'; THENCE S89°49'52"W 603.90'; THENCE CONTINUING S89°49'52"W 599.91'; THENCE CONTINUING S89°49'52"W 850.09'; THENCE N00°09'17"W 174.76'; THENCE S89°59'19"E 5.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S42°25'29"E 853.59' FROM THE NORTHWEST CORNER OF SAID SECTION 28. 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 1.716 ACRES MORE OR LESS.

POWER LINE "B" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S00°15'30"W 798.41' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N89°49'52"E 6.40'; THENCE CONTINUING N89°49'52"E 593.67'; THENCE CONTINUING N89°49'52"E 631.80'; THENCE N00°04'52"W 151.71'; THENCE N89°55'52"E 5.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28, WHICH BEARS S62°27'27"E 1390.66' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.956 ACRES MORE OR LESS.

POWER LINE "C" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S36°49'26"E 995.18' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N00°04'51"W 217.29' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28, WHICH BEARS S45°49'11"E 831.29' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.150 ACRES MORE OR LESS.

POWER LINE "D" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S00°15'30"W 798.41' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N00°03'49"W 168.39'; THENCE N89°56'34"E 5.00' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S00°06'37"E 630.00' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.112 ACRES MORE OR LESS.

POWER LINE "E" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S37°12'22"W 1004.66' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N00°09'17"W 170.27'; THENCE S89°59'19"E 5.00' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S43°44'52"W 871.98' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.121 ACRES MORE OR LESS.

POWER LINE "F" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S56°24'30"W 1449.46' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N00°09'17"W 172.17'; THENCE N90°00'00"E 5.00' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S62°21'54"W 1357.76' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.122 ACRES MORE OR LESS.

POWER LINE "G" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S57°05'41"E 1462.98' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE N89°49'52"E 32.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28, WHICH BEARS S57°45'59"E 1489.89' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.022 ACRES MORE OR LESS.

POWER LINE "H" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S57°05'41"E 1462.98' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE S00°04'52"E 18.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28, WHICH BEARS S56°30'26"E 1472.85' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.012 ACRES MORE OR LESS.

POWER LINE "I" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NE 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S36°49'26"E 995.18' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE S00°04'51"E 18.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28, WHICH BEARS S36°12'46"E 1009.67' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.012 ACRES MORE OR LESS.

POWER LINE "J" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S37°12'22"W 1004.66' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE S00°09'17"E 18.00' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S36°35'31"W 1019.02' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.012 ACRES MORE OR LESS.

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.

PROFESSIONAL SURVEYOR 23782 06-15-23

Sheet 3 of 4

NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of 103°53'00" (NAD 83)

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL POWER LINE NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	A.H.	06-13-23	SCALE
DRAWN BY	L.K.	06-15-23	N/A
FILE	C-6614-A3		
POWER LINE R-O-W		EXHIBIT I	

UINTAH ENGINEERING & LAND SURVEYING

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

POWER LINE "K" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NE 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S56°24'30"W 1449.46' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE S00°09'17"E 18.00' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S55°49'07"W 1459.46' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.012 ACRES MORE OR LESS.

POWER LINE "L" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S35°22'08"E 987.01' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28, THENCE S00°09'17"E 18.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S34°46'31"E 1001.77' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. 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 0.012 ACRES MORE OR LESS.

POWER LINE "M" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE NW 1/4 NW 1/4 OF SECTION 28, T25S, R33E, N.M.P.M., WHICH BEARS S35°22'08"E 987.01' FROM THE NORTHWEST CORNER OF SAID SECTION 28, THENCE S89°49'52"W 32.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28, WHICH BEARS S33°49'21"E 968.92' FROM THE NORTHWEST CORNER OF SAID SECTION 28. 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 0.022 ACRES MORE OR LESS.

ACREAGE / LENGTH TABLE "A"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	2503.02	151.70	1.658
SEC. 28 (NE 1/4)	BLM	N/A	N/A	0.058
TOTAL		2503.02	151.70	1.716

ACREAGE / LENGTH TABLE "B"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	6.40	0.39	0.004
SEC. 28 (NE 1/4)	BLM	1382.18	83.77	0.952
TOTAL		1388.58	84.16	0.956

ACREAGE / LENGTH TABLE - "C"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	BLM	217.29	13.17	0.150

ACREAGE / LENGTH TABLE "D"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	173.39	10.51	0.088
SEC. 28 (NE 1/4)	BLM	N/A	N/A	0.024
TOTAL		173.39	10.51	0.112

ACREAGE / LENGTH TABLE - "E"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	175.27	10.62	0.121

ACREAGE / LENGTH TABLE - "F"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	177.17	10.74	0.122

ACREAGE / LENGTH TABLE - "G"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	BLM	32.00	1.94	0.022

ACREAGE / LENGTH TABLE - "H"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	18.00	1.09	0.012

ACREAGE / LENGTH TABLE - "I"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	18.00	1.09	0.012

ACREAGE / LENGTH TABLE - "J"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	18.00	1.09	0.012

ACREAGE / LENGTH TABLE - "K"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	18.00	1.09	0.012

ACREAGE / LENGTH TABLE - "L"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	BLM	18.00	1.09	0.012

ACREAGE / LENGTH TABLE - "M"

	OWNERSHIP	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	BLM	32.00	1.94	0.022

LINE TABLE

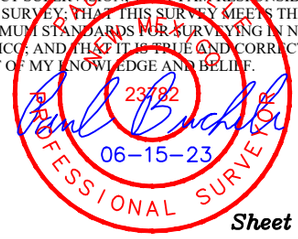
LINE	DIRECTION	LENGTH
L1	N00°17'54"W	269.36'
L2	S89°49'52"W	603.90'
L3	S89°49'52"W	599.91'
L4	S89°49'52"W	850.09'
L5	N00°09'17"W	174.76'
L6	S89°59'19"E	5.00'
L7	N89°49'52"E	6.40'
L8	N89°49'52"E	593.67'
L9	N89°49'52"E	631.80'
L10	N00°04'52"W	151.71'
L11	N89°55'52"E	5.00'
L12	N00°04'51"W	217.29'
L13	N00°03'49"W	168.39'

LINE TABLE

LINE	DIRECTION	LENGTH
L14	N89°56'34"E	5.00'
L15	N00°09'17"W	170.27'
L16	S89°59'19"E	5.00'
L17	N00°09'17"W	172.17'
L18	N90°00'00"E	5.00'
L19	N89°49'52"E	32.00'
L20	S00°04'52"E	18.00'
L22	S00°04'51"E	18.00'
L23	S00°09'17"E	18.00'
L24	S00°09'17"E	18.00'
L25	S00°09'17"E	18.00'
L26	S89°49'52"W	32.00'

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.



NOTES:

- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of 103°53'00" (NAD 83)

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL POWER LINE NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	A.H.	06-13-23	SCALE
DRAWN BY	L.K.	06-15-23	N/A
FILE	C-6614-A4		
POWER LINE R-O-W			EXHIBIT I

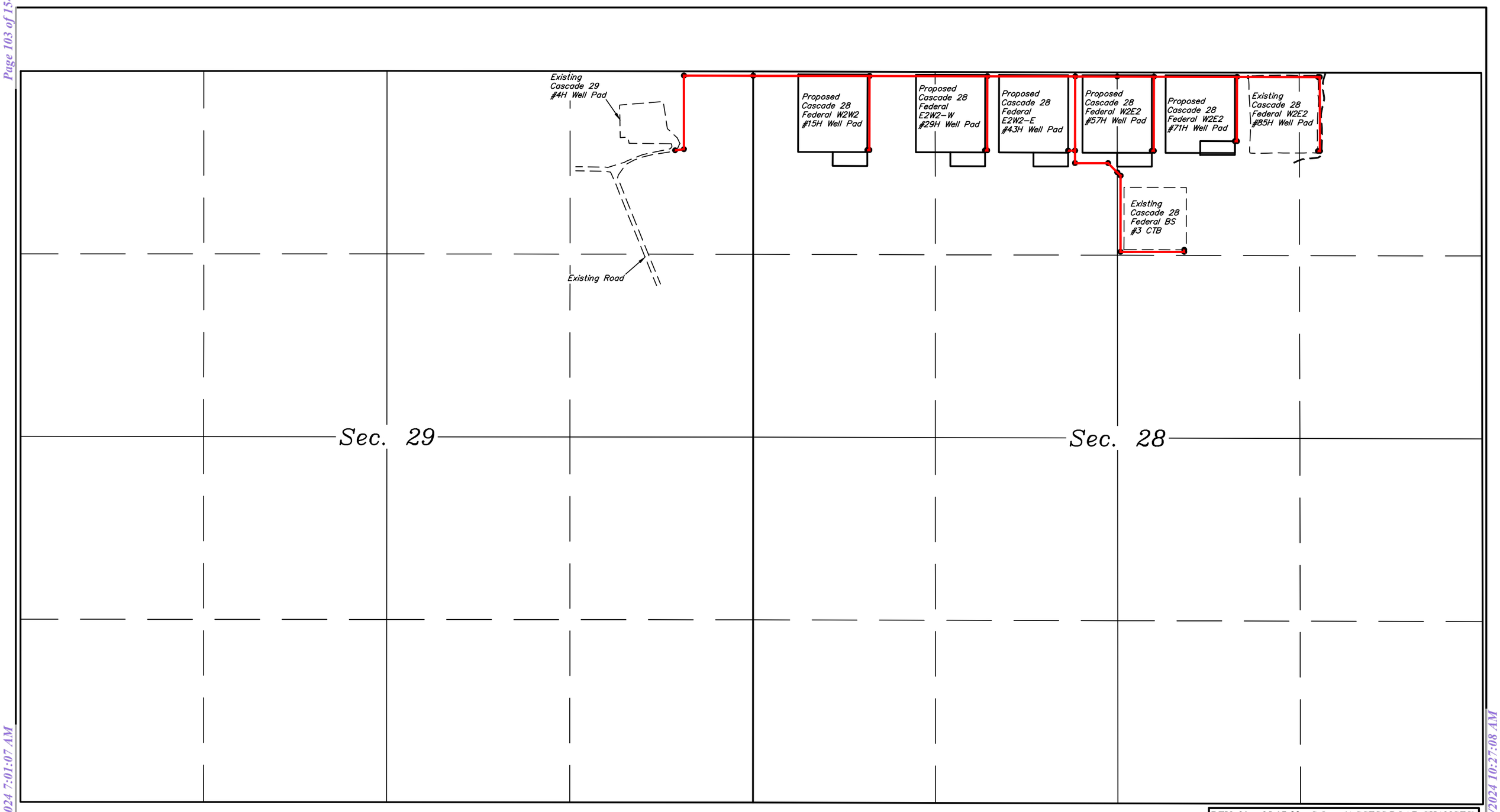
UINTAH ENGINEERING & LAND SURVEYING

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

CIMAREX ENERGY CO.
CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DATE:	DESCRIPTION:
3/1/2018	FINAL PLATS
5/25/2023	ACCESS ROAD RE-ROUTE

UINTAH
ENGINEERING & LAND SURVEYING



LEGEND:

- PROPOSED CENTERLINE
- SECTION LINE
- 1/4 SECTION LINE
- 1/16 SECTION LINE
- PROPERTY LINE

N

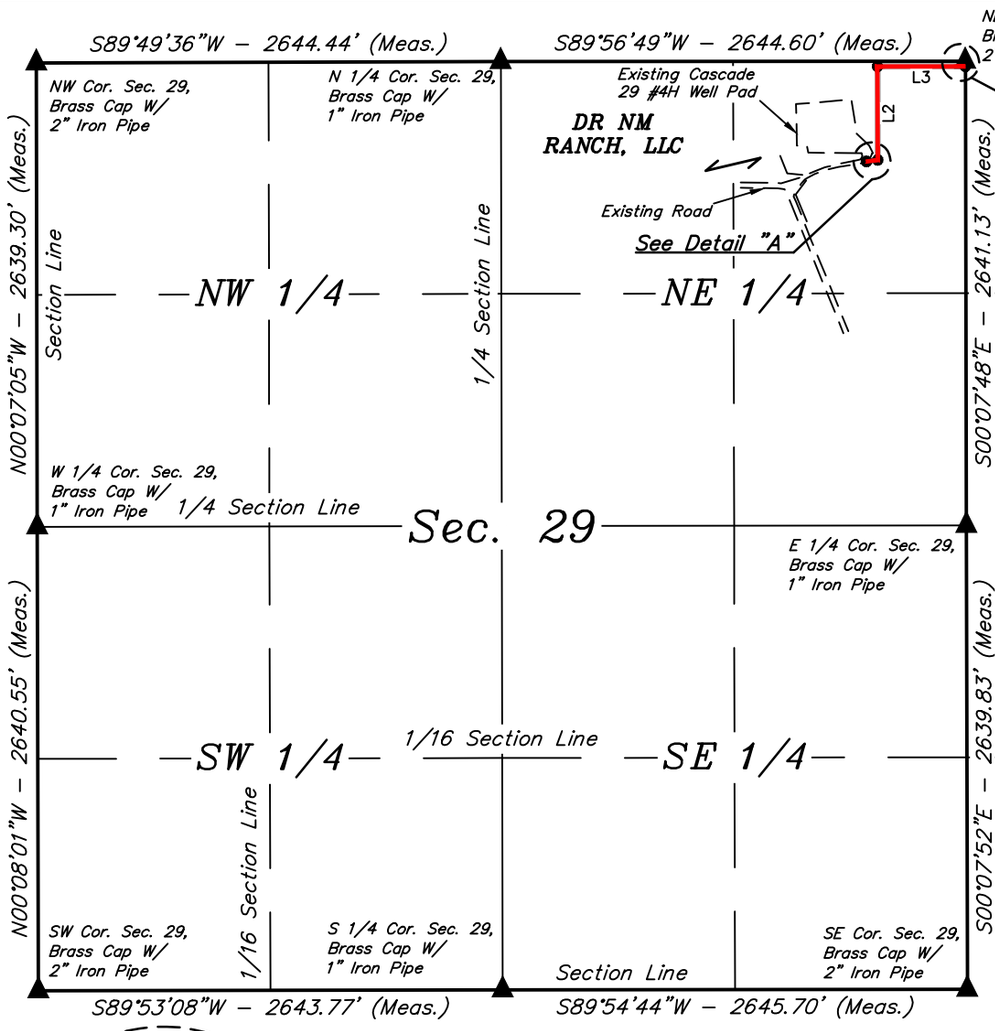
REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

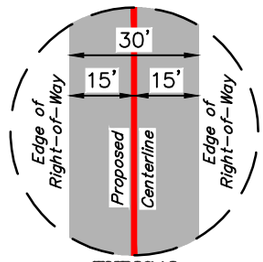
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
SECTIONS 28 & 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	**SCALE**
DRAWN BY	L.K.	02-22-18	N/A

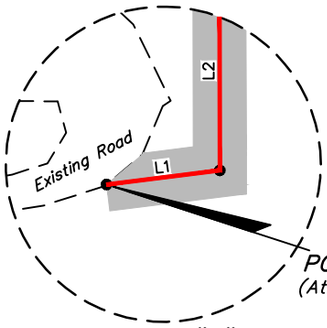
OVERALL ACCESS NETWORK





TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

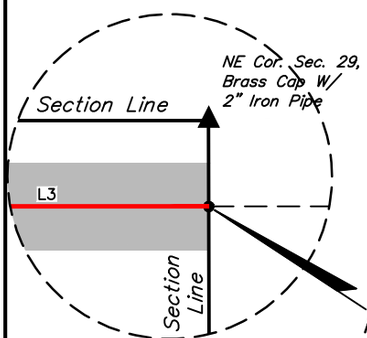
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N82°52'04"E	64.42'
L2	N00°07'38"W	532.44'
L3	N89°59'16"E	499.97'



Detail "A"
No Scale

POINT OF BEGINNING "A" BEARS S44°36'30"W 801.19' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M.

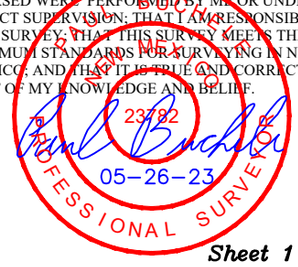


Detail "B"
No Scale

ACREAGE / LENGTH TABLE		
FEET	RODS	ACRES
1096.83	66.47	0.755

▲ = SECTION CORNERS LOCATED.

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.



Sheet 1 of 2

FILE: 63073-A1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:
- The maximum grade of existing ground for the proposed access road is ±0.67%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON DR NM RANCH, LLC LANDS IN SECTION 29, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'
PROPOSED ACCESS R-O-W			EXHIBIT D

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

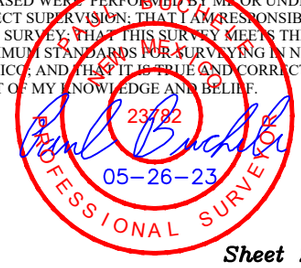
ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 29, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 29 BEARS S89°56'49"W 2644.60', THENCE S44°36'30"W 801.19' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF BEGINNING; THENCE N82°52'04"E 64.42'; THENCE N00°07'38"W 532.44'; THENCE N89°59'16"E 499.97' TO A POINT ON THE EAST LINE OF THE NE 1/4 NE 1/4 OF SAID SECTION 29 AND THE POINT OF TERMINATION, WHICH BEARS S00°07'48"E 29.84' FROM THE NORTHEAST CORNER OF SAID SECTION 29. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.755 ACRES MORE OR LESS.

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.



Sheet 2 of 2

FILE: 6 3 0 7 3 - A 2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

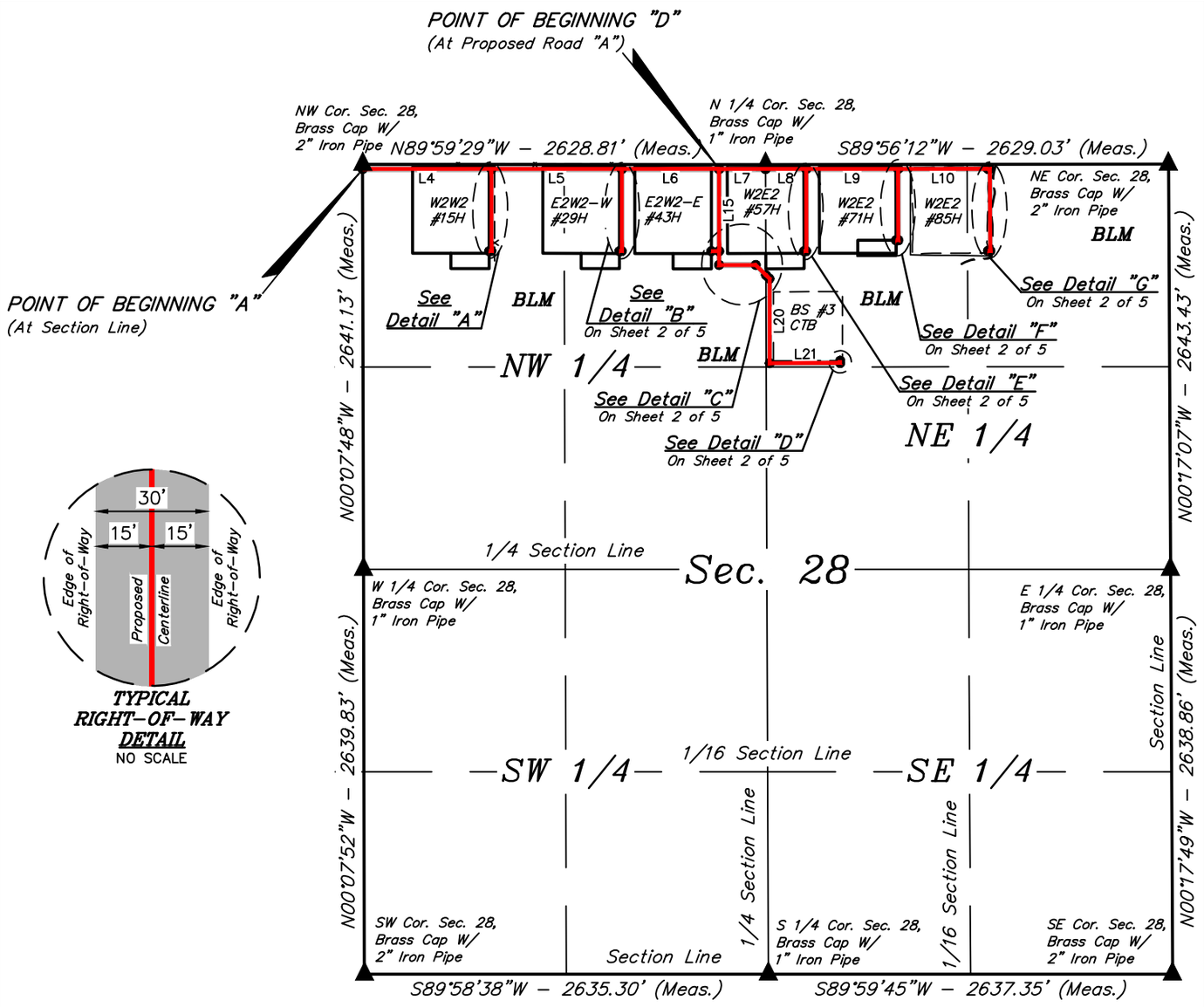
CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK
ON DR NM RANCH, LLC LANDS IN
SECTION 29, T25S, R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., C.H.	01-19-18	SCALE
DRAWN BY	L.K.	02-22-18	N/A
PROPOSED ACCESS R-O-W			EXHIBIT D

UINTAH ENGINEERING & LAND SURVEYING

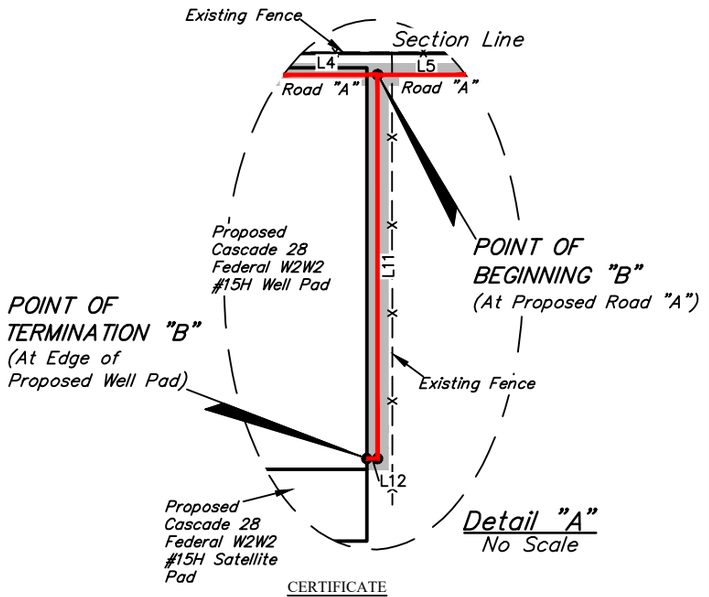
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

LINE TABLE		
LINE	DIRECTION	LENGTH
L4	N89°59'16"E	840.87'
L5	N89°59'16"E	850.15'
L6	N89°59'16"E	634.76'
L7	N89°59'16"E	303.06'
L8	N89°59'16"E	265.42'
L9	N89°59'16"E	600.23'
L10	N89°59'16"E	584.81'
L11	S00°00'31"W	535.47'
L12	N89°59'29"W	15.00'
L13	S00°00'58"W	535.71'
L14	N90°00'00"W	15.08'
L15	S00°01'02"W	536.02'
L16	S00°01'02"W	89.94'
L17	S89°59'00"E	239.37'
L18	S45°01'55"E	93.73'

LINE TABLE		
LINE	DIRECTION	LENGTH
L19	S45°01'55"E	33.64'
L20	S00°04'15"E	550.08'
L21	N89°55'43"E	459.96'
L22	N00°04'17"W	15.12'
L23	N89°58'58"W	49.83'
L24	S00°03'58"E	535.89'
L25	S89°56'12"W	15.00'
L26	S00°02'22"E	465.36'
L27	S89°56'12"W	15.00'
L28	N89°59'16"E	12.90'
L29	S00°16'56"E	534.83'
L30	S89°57'13"W	14.94'



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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
Frank Buchele
05-26-23

NOTES:

- The maximum grade of existing ground for the proposed access road "A" is ±4.72%.
- The maximum grade of existing ground for the proposed access road "B" is ±16.63%.
- The maximum grade of existing ground for the proposed access road "C" is ±4.45%.
- The maximum grade of existing ground for the proposed access road "D" is ±7.06%.
- The maximum grade of existing ground for the proposed access road "E" is ±0.25%.
- The maximum grade of existing ground for the proposed access road "F" is ±8.22%.
- The maximum grade of existing ground for the proposed access road "G" is ±24.23%.
- The maximum grade of existing ground for the proposed access road "H" is ±7.70%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00"

Sheet 1 of 5

FILE: 63073-B1

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

1000' 500' 0' 1000'

▲ = SECTION CORNERS LOCATED.

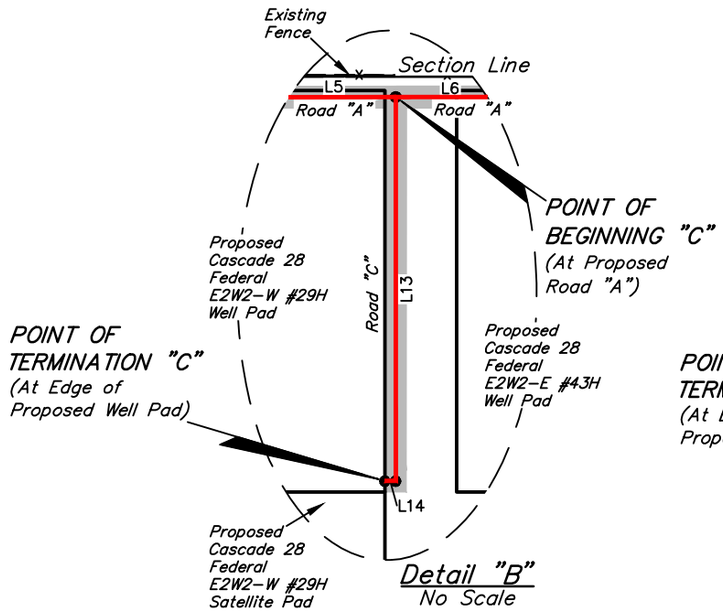
N

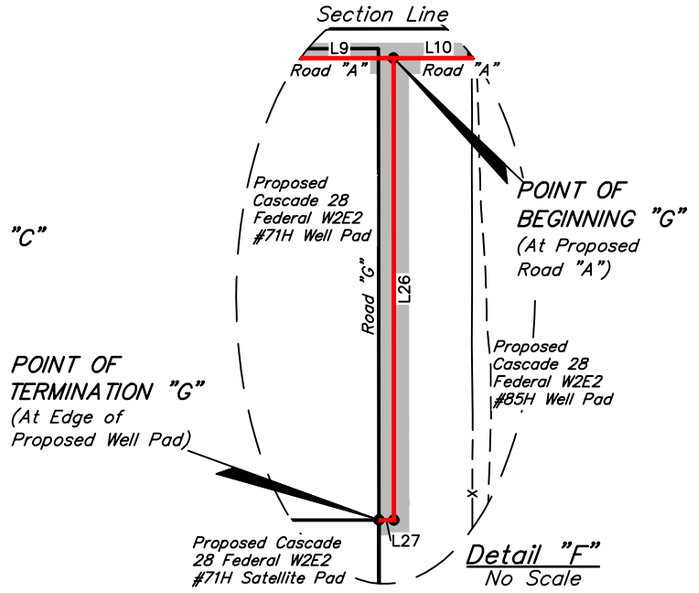
CIMAREX ENERGY CO.

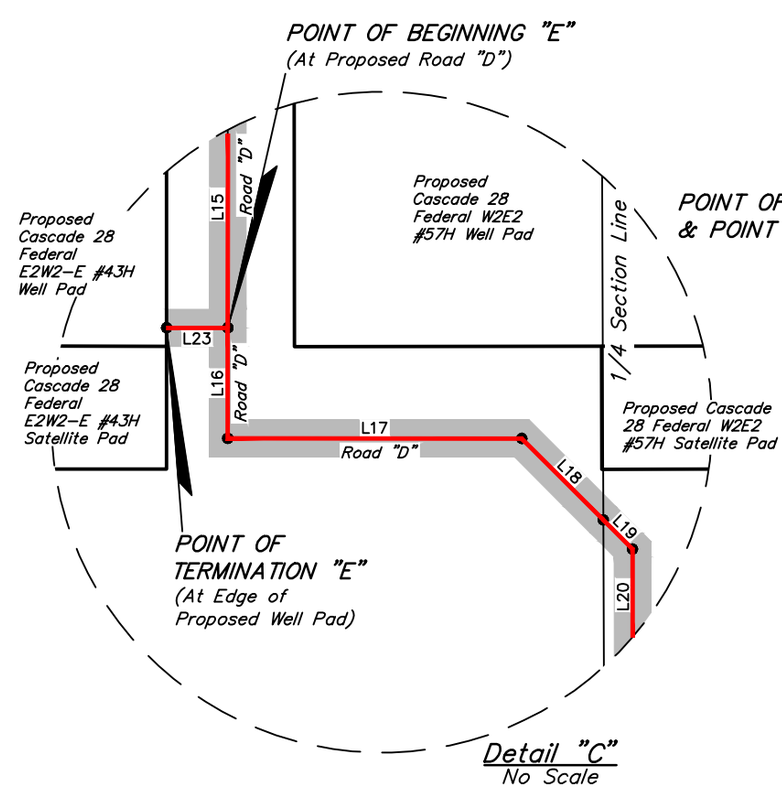
CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

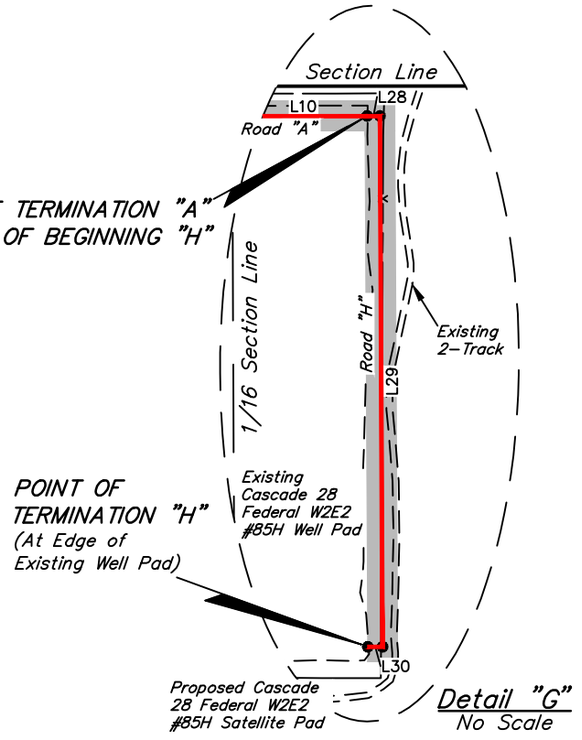
SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'
PROPOSED ACCESS R-O-W			EXHIBIT D

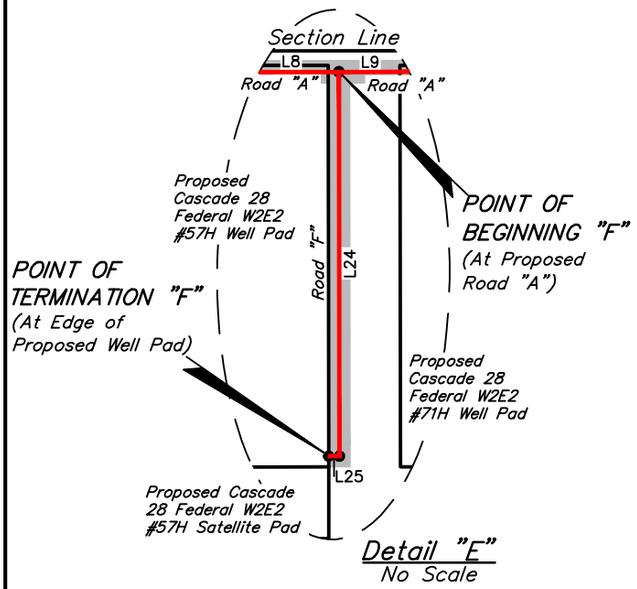
UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

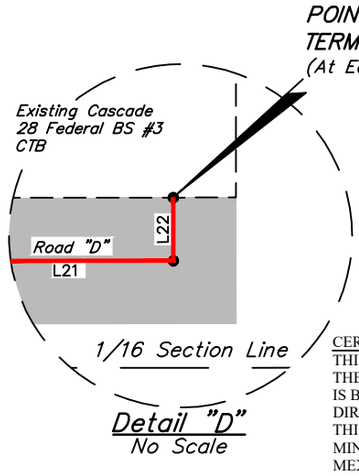












CERTIFICATE

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

FILE: 63073-B2

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	N/A

PROPOSED ACCESS R-O-W EXHIBIT D

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

POINT OF BEGINNING "A" BEARS S00°07'48"E 29.84' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "A" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "B" BEARS S87°58'49"E 841.46' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "B" BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "C" BEARS S88°13'27"W 938.17' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "C" BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "D" BEARS S84°32'38"W 304.34' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "D" BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "E" BEARS S28°12'55"W 641.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "E" BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "F" BEARS S83°48'22"E 267.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "F" BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "G" BEARS S88°06'08"E 866.22' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "G" BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF BEGINNING "H" BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

POINT OF TERMINATION "H" BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M.

ACREAGE / LENGTH TABLE "A"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	2628.84	159.32	1.810
SEC. 28 (NE 1/4)	1450.46	87.91	0.999
TOTAL	4079.30	247.23	2.809

ACREAGE / LENGTH TABLE "B"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.47	33.36	0.379

ACREAGE / LENGTH TABLE "C"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	550.79	33.38	0.379

ACREAGE / LENGTH TABLE "D"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	959.06	58.12	0.661
SEC. 28 (NE 1/4)	1058.80	64.17	0.729
TOTAL	2017.86	122.29	1.390

ACREAGE / LENGTH TABLE "E"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NW 1/4)	49.83	3.02	0.034

ACREAGE / LENGTH TABLE "F"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	550.89	33.39	0.379

ACREAGE / LENGTH TABLE "G"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	480.36	29.11	0.331

ACREAGE / LENGTH TABLE "H"

LOCATION	FEET	RODS	ACRES
SEC. 28 (NE 1/4)	562.67	34.10	0.388

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.

NEW MEXICO 23782 PROFESSIONAL SURVEYOR
05-26-23

Sheet 3 of 5

FILE: 63073-B3

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W **EXHIBIT D**

UINTAH ENGINEERING & LAND SURVEYING

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

ACCESS ROAD "A" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S00°07'48"E 29.84' ALONG THE WEST LINE OF THE NW 1/4 NW 1/4 OF SAID SECTION 28 TO THE POINT OF BEGINNING; THENCE N89°59'16"E 840.87'; THENCE CONTINUING N89°59'16"E 850.15'; THENCE CONTINUING N89°59'16"E 634.76'; THENCE CONTINUING N89°59'16"E 303.06' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING N89°59'16"E 265.42'; THENCE CONTINUING N89°59'16"E 600.23'; THENCE CONTINUING N89°59'16"E 584.81' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S88°28'14"W 1178.88' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 2.809 ACRES MORE OR LESS.

ACCESS ROAD "B" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHWEST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE WEST 1/4 CORNER OF SAID SECTION 28 BEARS S00°07'48"E 2641.13', THENCE S87°58'49"E 841.46' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'31"W 535.47'; THENCE N89°59'29"W 15.00' TO A POINT IN THE NW 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S55°37'00"E 1000.70' FROM THE NORTHWEST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "C" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S88°13'27"W 938.17' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°00'58"W 535.71'; THENCE N90°00'00"W 15.08' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°20'47"W 1107.74' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "D" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S84°32'38"W 304.34' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°01'02"W 536.02'; THENCE CONTINUING S00°01'02"W 89.94'; THENCE S89°59'00"E 239.37'; THENCE S45°01'55"E 93.73' TO A POINT ON THE EAST LINE OF THE NE 1/4 NW 1/4 OF SAID SECTION 28; THENCE CONTINUING S45°01'55"E 33.64'; THENCE S00°04'15"E 550.08'; THENCE N89°55'43"E 459.96'; THENCE N00°04'17"W 15.12' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S20°50'15"E 1368.90' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 1.390 ACRES MORE OR LESS.

ACCESS ROAD "E" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHWEST CORNER OF SAID SECTION 28 BEARS N89°59'29"W 2628.81', THENCE S28°12'55"W 641.14' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°58'58"W 49.83' TO A POINT IN THE NE 1/4 NW 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S31°59'42"W 666.14' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.034 ACRES MORE OR LESS.

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.

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
05-26-23

Sheet 4 of 5

FILE: 63073-B4

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'
PROPOSED ACCESS R-O-W			EXHIBIT D

UINTAH
ENGINEERING & LAND SURVEYING

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

ACCESS ROAD "F" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE N83°48'22"W 267.08' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°03'58"E 535.89'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S23°58'32"E 618.05' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.379 ACRES MORE OR LESS.

ACCESS ROAD "G" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 28 BEARS N89°56'12"E 2629.03', THENCE S88°06'08"E 866.22' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE S00°02'22"E 465.36'; THENCE S89°56'12"W 15.00' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S59°51'51"E 984.08' FROM THE NORTH 1/4 CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.331 ACRES MORE OR LESS.

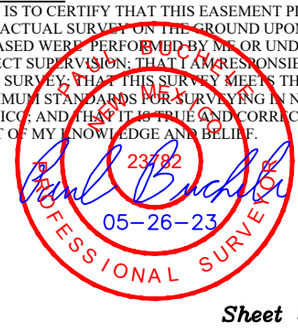
ACCESS ROAD "H" RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

COMMENCING AT THE NORTHEAST CORNER OF SECTION 28, T25S, R33E, N.M.P.M., FROM WHICH THE NORTH 1/4 CORNER OF SAID SECTION 28 BEARS S89°56'12"W 2629.03', THENCE S88°28'14"W 1178.88' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF BEGINNING; THENCE N89°59'16"E 12.90'; THENCE S00°16'56"E 534.83'; THENCE S89°57'13"W 14.94' TO A POINT IN THE NE 1/4 NE 1/4 OF SAID SECTION 28 AND THE POINT OF TERMINATION, WHICH BEARS S64°19'22"W 1306.94' FROM THE NORTHEAST CORNER OF SAID SECTION 28. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. CONTAINS 0.388 ACRES MORE OR LESS.

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.



Sheet 5 of 5

FILE: 63073-B5

REV: 01 05-17-23 S.O. (ACCESS ROAD CHANGES)

NOTES:

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

CIMAREX ENERGY CO.

CASCADE 28 FEDERAL ACCESS NETWORK ON BLM LANDS IN SECTION 28, T25S, R33E, N.M.P.M. LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., H.F.	05-12-23	SCALE
DRAWN BY	L.K.	02-22-18	1" = 1000'

PROPOSED ACCESS R-O-W EXHIBIT D

UINTAH ENGINEERING & LAND SURVEYING

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

AFMSS

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

PWD Data Report

05/15/2024

APD ID: 10400093849 **Submission Date:** 08/25/2023

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

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: CASCADE 28 FEDERAL **Well Number:** 412H

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: CASCADE 28 FEDERAL **Well Number:** 412H

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: CASCADE 28 FEDERAL **Well Number:** 412H

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

05/15/2024

APD ID: 10400093849

Submission Date: 08/25/2023

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL

Well Number: 412H

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 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
	98094	BOBCAT DRAW; UPPER WOLFCAMP

[4] Property Code	[5] Property Name	[6] Well Number
314104	CASCADE 28 FEDERAL	412H
[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3374.2'

[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	28	25S	33E		210	NORTH	2099	EAST	LEA

[11] Bottom Hole Location If Different From Surface

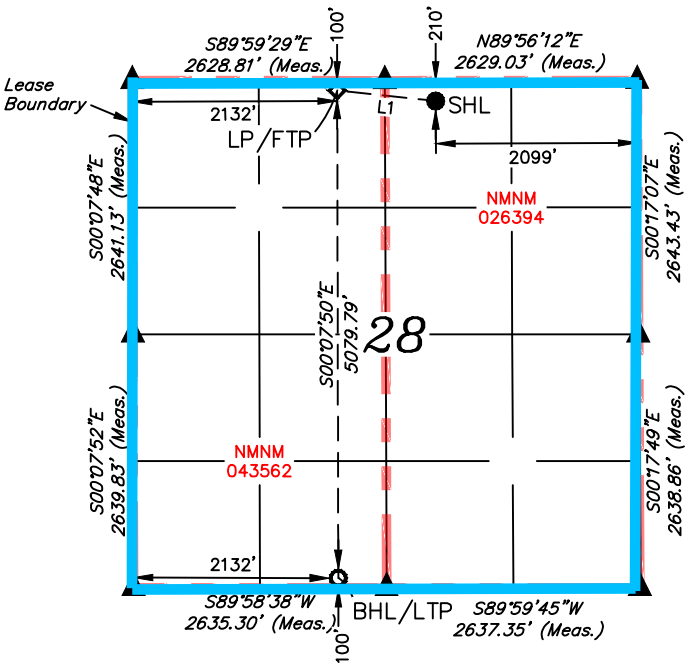
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	25S	33E		100	SOUTH	2132	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640			

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]

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)



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N83°55'00"W	1033.15'

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

SCALE

DRAWN BY: T.J.S. 03-10-23

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°06'29.59" (32.108220°)
LONGITUDE = 103°34'32.05" (103.575570°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°06'29.14" (32.108095°)
LONGITUDE = 103°34'30.35" (103.575098°)
STATE PLANE NAD 83 (N.M. EAST)
N: 403931.57' E: 775961.88'
STATE PLANE NAD 27 (N.M. EAST)
N: 403873.82' E: 734775.64'

NAD 83 (LP/FTP)
LATITUDE = 32°06'30.70" (32.108529°)
LONGITUDE = 103°34'43.99" (103.578886°)
NAD 27 (LP/FTP)
LATITUDE = 32°06'30.26" (32.108404°)
LONGITUDE = 103°34'42.29" (103.578415°)
STATE PLANE NAD 83 (N.M. EAST)
N: 404036.75' E: 774934.27'
STATE PLANE NAD 27 (N.M. EAST)
N: 403978.99' E: 733748.04'

NAD 83 (BHL/LTP)
LATITUDE = 32°05'40.45" (32.094568°)
LONGITUDE = 103°34'44.02" (103.578895°)
NAD 27 (BHL/LTP)
LATITUDE = 32°05'40.00" (32.094443°)
LONGITUDE = 103°34'42.33" (103.578424°)
STATE PLANE NAD 83 (N.M. EAST)
N: 398957.93' E: 774967.05'
STATE PLANE NAD 27 (N.M. EAST)
N: 398900.30' E: 733780.58'

[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.

Shelly M. Bowen 7/10/23
Signature Date

Shelly M. Bowen
Printed Name

shelly.bowen@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.

January 24, 2018
Date of Survey
Signature and Seal of Professional Surveyor:

Certificate Number:

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

Drilling Plan Data Report
05/15/2024

APD ID: 10400093849
Submission Date: 08/25/2023

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL
Well Number: 412H

Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13409355	RUSTLER	0	995	995	ANHYDRITE, SANDSTONE	USEABLE WATER	N
13409356	TOP SALT	-1340	1340	1340	ANHYDRITE	NONE	N
13409349	LAMAR	-4930	4930	4958	LIMESTONE	NONE	N
13409357	BASE OF SALT	-4930	4930	4958	ANHYDRITE	NONE	N
13409359	BELL CANYON	-4970	4970	4999	SANDSTONE	NONE	N
13409360	CHERRY CANYON	-5985	5985	6020	SANDSTONE	NONE	N
13409361	BRUSHY CANYON	-7575	7575	7610	SANDSTONE	NATURAL GAS, OIL	N
13409350	BRUSHY CANYON LOWER	-8920	8920	8955	SANDSTONE	NATURAL GAS	N
13409362	BONE SPRING	-9090	9090	9125	LIMESTONE	NATURAL GAS, OIL	N
13409363	UPPER AVALON SHALE	-9330	9330	9364	SHALE	NATURAL GAS, OIL	N
13409351	BONE SPRING 1ST	-10105	10105	10139	SANDSTONE	NATURAL GAS	N
13409352	BONE SPRING 2ND	-10685	10685	10719	SANDSTONE	NATURAL GAS	N
13409353	BONE SPRING 3RD	-11120	11120	11154	OTHER : Carbonate	NATURAL GAS	N
13409354	BONE SPRING 3RD	-11785	11785	11820	SANDSTONE	NATURAL GAS	N
13409364	WOLFCAMP	-12320	12320	17197	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Pressure Rating (PSI): 10M **Rating Depth:** 12590

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? NO

Variance request:

Testing Procedure: A multi-bowl wellhead will be utilized and will be tested per 43 CFR 3172 after the installation on the surface casing. The testing interval shall be for 30 days. Whenever any seal subject to pressure is broken, a full BOPE test shall be performed.
Choke Diagram Attachment:

CHOKE_MANIFOLD_DIAGRAM_412H_20240423121200.pdf

COTERRA_10M_MBU_3T_CFL_10.34_X_7.58_X_5.5_412H_20240423121201.pdf

CIMAREX_10K_PROD_TREE_412H_20240423121201.pdf

CHOKE_HOSE_M14856_412H_20240423121204.pdf

BOP Diagram Attachment:

BOP_DIAGRAM_412H_20240423121211.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	14.75	10.75	NEW	API	N	0	1170	0	1170	3374	2204	1170	J-55	40.5	BUTT	3.12	6.18	BUOY	13.27	BUOY	13.27
2	PRODUCTION	6.75	5.5	NEW	API	Y	0	12055	0	12055	3374	-8681	12055	P-110	20	BUTT	1.42	1.58	BUOY	2.83	BUOY	2.83
3	INTERMEDIATE	9.875	7.625	NEW	API	N	0	12617	0	12457	3374	-9083	12617	L-80	29.7	BUTT	2.44	1.18	BUOY	1.79	BUOY	1.79
4	PRODUCTION	6.75	5.0	NEW	API	Y	12055	17532	11555	12590	-8181	-9216	5477	P-110	18	BUTT	1.64	1.66	BUOY	60.23	BUOY	60.23

Casing Attachments

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080759.pdf

Casing ID: 2 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Spec_Sheet_for_Tapered_Prod_5.5_23__P110RY_20240305104847_20240319011322.pdf

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080640.pdf

Casing ID: 3 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080549.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Casing Attachments

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Spec_Sheet_for_Tapered_Prod_5_18__P110RY_20240305104940_20240319011322.pdf

Casing Design Assumptions and Worksheet(s):

Cascade_412H_Casing_Assumptions_20230825080731.pdf

Section 4 - Cement

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	745	455	1.72	13.5	782	45	Class C	Bentonite
SURFACE	Tail		745	1170	121	1.34	14.8	162	45	Class C	LCM
INTERMEDIATE	Lead		0	11617	1000	3.64	10.3	3640	49	Tuned Light	LCM
INTERMEDIATE	Tail		11617	12617	207	1.3	14.2	269	49	50:50 POZ:H	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		12417	17532	710	1.3	14.2	864	25	50:50 (POZ H)	Salt bentonite fluid loss dispersant sms

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

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

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	1170	OTHER : Fresh Water	7.83	8.33				25			
1170	12617	OTHER : Brine Diesel Emulsion	8.5	9				25			
12617	17532	OIL-BASED MUD	12	12.5				25			

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,

Coring operation description for the well:

N/A

Operator Name: CIMAREX ENERGY COMPANY

Well Name: CASCADE 28 FEDERAL **Well Number:** 412H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8183 **Anticipated Surface Pressure:** 5472

Anticipated Bottom Hole Temperature(F): 191

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

H2S_PLAN_REV.0_20240423122235.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Cascade_412H_Directional_Plan_20230825082102.pdf
Cascade_412H_AC_Summary_20230825082203.pdf
WELL_CONTROL_PLAN_REV.0_20240423123038.pdf
Drilling_Plan_New_Mexico_412H_updated_Drilling_Plan_04222024_20240423123100.pdf

Other proposed operations facets description:

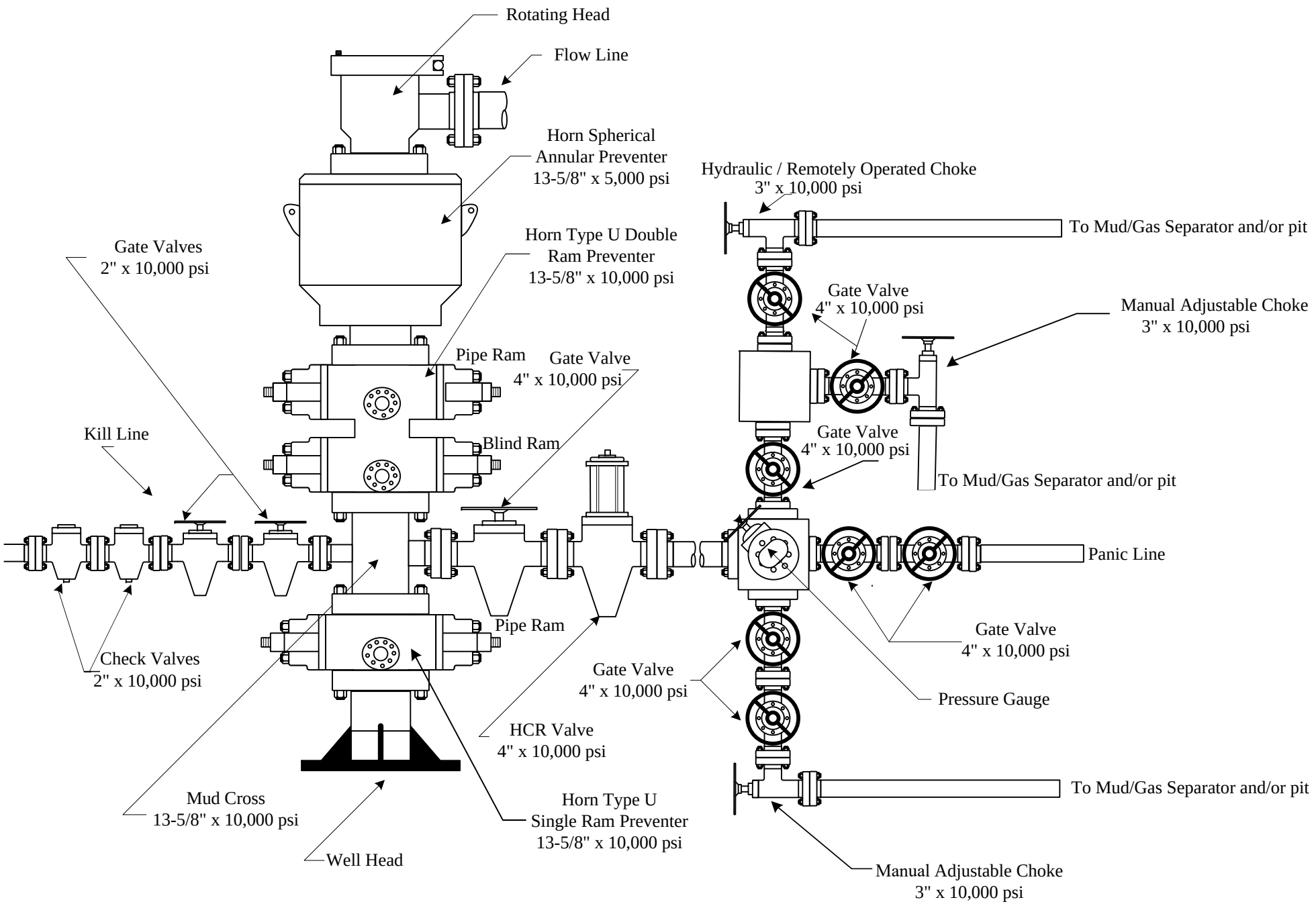
Other proposed operations facets attachment:

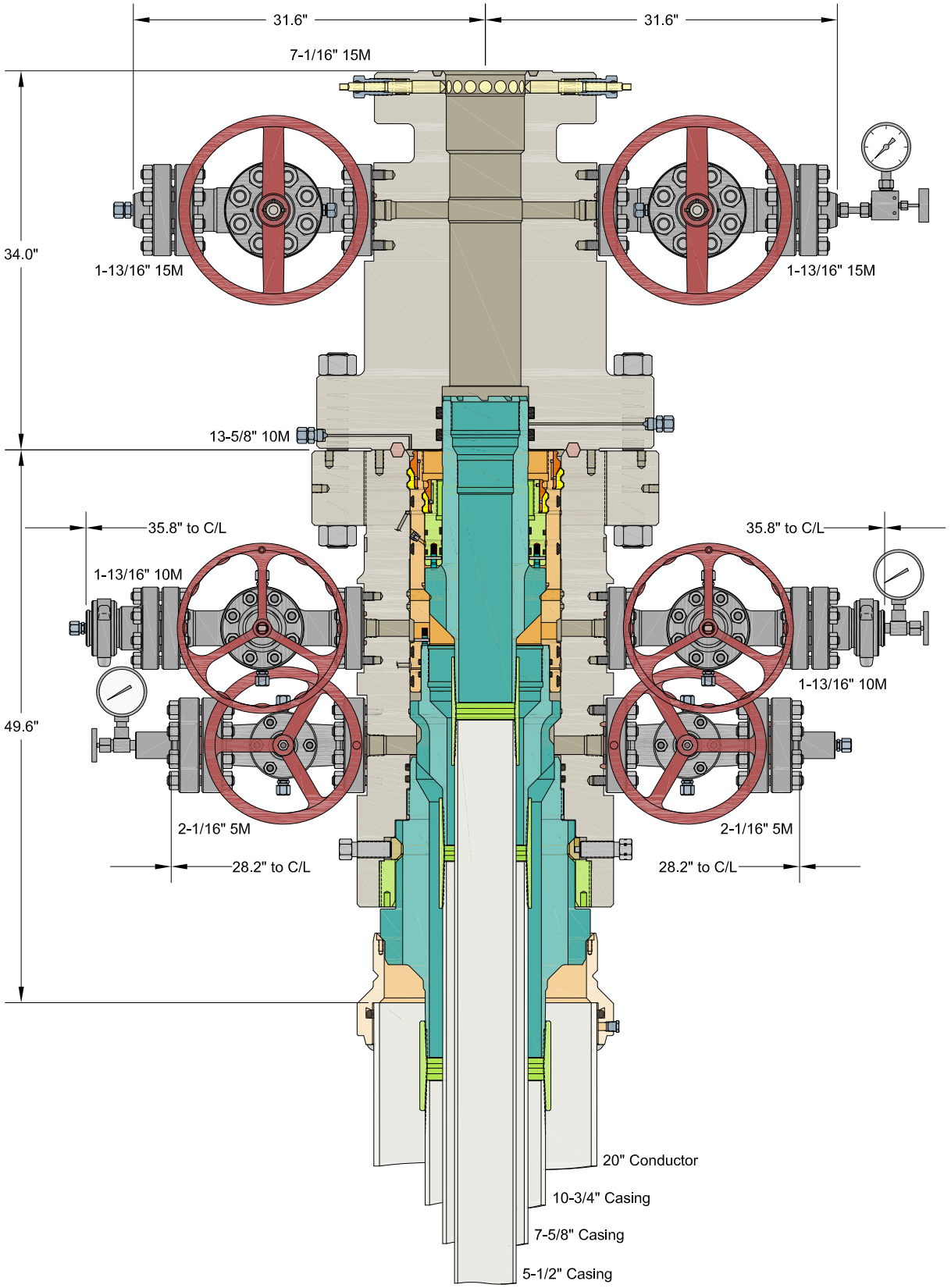
Cascade_412H_NGMP_20230825082241.pdf

Other Variance attachment:

CASCADE_28_FEDERAL_W2E2_71H_Location_Layout_Plat_20240423123123.pdf
CHOKE_HOSE_M14856_412H_20240423123145.pdf

COTERRA





ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	COTERRA ENERGY INC HOBBS, NM		
20" x 10-3/4" x 7-5/8" x 5-1/2" MBU-3T-CFL-R-DBLO-SF Wellhead With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And 7-5/8" & 5-1/2" Mandrel Casing Hangers	DRAWN	VJK	07JUL23
	APPRV		
	DRAWING NO.	HBE0000965	

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

Bill To: 7035

COTERRA ENERGY INC
PO BOX 4544
Attn: GULF COAST OFFICE
HOUSTON TX 77210
US

Ship To: 0

COTERRA ENERGY INC
PO BOX 4544
Attn: GULF COAST OFFICE
HOUSTON TX 77210
US

	Quantity	Price	Ext Price

COTERRA ENERGY INC
DAVID SHAW

HOBBS, NM

MBU-3T-CFL-R SAFEDRILL® WELLHEAD SYSTEM
20" X 10-3/4" X 7-5/8" X 5-1/2"

QUOTATION SUMMARY:

- MBU-3T-CFL ASSEMBLY - $29,839.64
- CASING HANGERS & PACKOFFS - $12,581.24
- TUBING HEAD ASSEMBLY - $19,367.17

CACTUS CONTACT:
RILEY STAFFORD
OFFICE: 405.708.7217
MOBILE: 405.445.2222
EMAIL: riley.stafford@cactuswellhead.com

DUE TO VOLATILITY IN THE STEEL MARKET, PRICING FOR ITEMS MADE FROM NICKEL ALLOYS (EX. 410SS, 17-4PHSS, INCONEL, ETC.) WILL BE VALID FOR TWO WEEKS. CW WILL REVIEW AND ADJUST, IF NECESSARY, AT ORDER PLACEMENT.

PREMIUM THREADED CASING HANGERS/RUNNING TOOLS & CUSTOMER SPECIFIC EQUIPMENT ARE NON-CANCELABLE AND MAY REQUIRE A PURCHASE ORDER (PO) PRIOR TO MANUFACTURING.

SUPPLY CHAIN PRICING IS BASED UPON A 135 DAY DELIVERY ARO. EXPEDITED PRICING CAN BE PROVIDED UPON REQUEST. PRICES ARE F.O.B. CACTUS BOSSIER CITY, LA. THE FOLLOWING QUOTATION DOES NOT INCLUDE PRO RATA FREIGHT AND OTHER APPLICABLE MILEAGE AND SERVICE CHARGES THAT MAY BE CHARGED AT TIME OF INVOICING.

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

		Quantity	Price	Ext Price
	MBU-3T-CFL ASSEMBLY			
1	122079P2	1.00	12,026.00	12,026.00
	HSG,CW,MBU-3T-CFL-R-DBLO-SF,13-3/8,13-5/8 10M,W/TWO 1-13/16 10M FP UPR & TWO 2-1/16 5M FP LWR,W/O 13-5/8 10M THD FLG,6A-PU-AA-2-2			
2	126808P2	0.00	12,168.80	0.00
	HSG,CW,MBU-3T-CFL-R-DBLO-SF,13-3/8,13-5/8 10M,W/TWO 1-13/16 10M FP UPR & TWO 2-1/16 5M FP LWR,W/O 13-5/8 10M THD FLG,TEMP PU,MATL EE,PSL2,PR2			
3	110578	1.00	2,590.00	2,590.00
	FLG,THD,13-5/8 10M W/21.750-2 STUB ACME-2G L.H. BOX THD,31.00 OD,4130 75K & I/T @ -75 DEG F			
4	120455	1.00	2,789.92	2,789.92
	LANDING RING,CW,CTF/MBU-T/3T,20 SOW X 20 SN X 18.13 ID,750K MAX LOAD CAPACITY			
5	130791	1.00	3,990.00	3,990.00
	CSGHGR,CW,MBU-3T-CFL-R,13-3/8,10-3/4 (40.5#) BC PIN BTM X 14.000-2 STUB ACME-2G LEFT HAND PIN TOP,10.040 MIN BORE,4140 110K,TEMP U,MATL AA,PSL2,PR2			
	NOTE: ACCEPTABLE FOR USE WITH 10-3/4 (45.5#) BC J/K-55 CASING			
6	133772	2.00	950.00	1,900.00
	VLV,AOZE,GEN,M-EXP-FB,2-1/16 3/5M FE DD (6A LU DD PSL2 PR1) QPQ TRIM & 4130 STEM			
7	200002	2.00	120.00	240.00
	FLG,COMP,CW,2-1/16 5M X 2 LP,6A-KU-EE-1			
8	BP2T	2.00	42.48	84.96
	BULL PLUG,CW,2 LP X 1/2 NPT,API 6A DD			
9	100048	1.00	59.74	59.74
	FTG,GRS,VENTED CAP,1/2 NPT,4140 -50F W/ELECTROLESS NICKEL COATING NACE,K-MONEL BALL,INCONEL X-750 SPRING			
10	R24	4.00	8.82	35.28
	RING GASKET,R24,2-1/16 3/5M			
11	780067-20E1	16.00	14.70	235.20
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,7/8-9UNC X 6-1/2,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING			
12	107412MV	2.00	2,017.00	4,034.00
	VLV,CW,SB100,1-13/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL2 PR2) QPQ TRIM, API 6A PR2 ANNEX F (BORE VENT HOLE)			
13	122007	2.00	685.00	1,370.00
	ADPT,CW,CFH,1-13/16 10M X 2 FIG 1502 X 1/2 NPT,NACE SVC,TEMP PU, PSL2			
14	100048	1.00	59.74	59.74
	FTG,GRS,VENTED CAP,1/2 NPT,4140 -50F W/ELECTROLESS NICKEL COATING NACE,K-MONEL BALL,INCONEL X-750 SPRING			
15	BX151	4.00	12.77	51.08
	RING GASKET,BX151,1-13/16 10/15/20M			

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

			Quantity	Price	Ext Price
16	780080-20E1		16.00	9.13	146.08
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,3/4-10UNC X 5-1/2,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING				
17	NVA		2.00	55.58	111.16
	NEEDLE VALVE,MFA,1/2 10M				
18	PG5M		1.00	58.24	58.24
	PRESSURE GAUGE,5M,4-1/2 FACE,LIQUID FILLED,1/2 NPT				
19	PG10M		1.00	58.24	58.24
	PRESSURE GAUGE,10M,4-1/2 FACE, LIQUID FILLED,1/2 NPT				
20	132804		0.00	8,024.00	0.00
	RISER ADPT,CW,LRA,20.12 DBLO X 20 SOW TOP X 19.5 ID,8.5 LG,W/8 1-8 UNC-2B TAP HOLES,5.00 DEEP PKT W/1/2 ORINGS & 1/2 NPT TEST PORT,300 PSI MAX WP,A/F 20.12 LANDING RING				
	NOTE: THE AFOREMENTIONED ITEM IS A ONE TIME CHARGE PER RIG; PRICE NOT INCLUDED IN THE TOTAL.				
					29,839.64

CASING HANGERS & PACKOFFS

21	130916		1.00	2,075.00	2,075.00
	CSGHGR,CW,MBU-3T-LWR-TP8,FLUTED,13-5/8 X 7-5/8 (29.7#) BC PIN BTM X 10.250-4 STUB ACME-2G RIGHT HAND BOX TOP,W/11-1/2 OD NECK,4140 110K,TEMP U,MATL AA,PSL2,PR2				
22	130570		1.00	4,006.24	4,006.24
	PACKOFF,CW,MBU-3T,MANDREL,13-5/8 NESTED X 11,W/11.250-4 STUB ACME-2G LH BOX TOP W/RUPTURE DISK & DEEPER GALLERY,4140 110K,STD SVC,NON-NACE				
23	137978		1.00	4,550.00	4,550.00
	CSGHGR,CW,MBU-3T-TP8-UPR,SN,7-5/8,FLUTED,11 NESTED X 5-1/2 (23#) BK-HT PIN BTM X 6.125-4 STUB ACME-2G RIGHT HAND BOX TOP & 5 HBPV THD,SPEC FOR ROTATING CASING STRING,4140 125K,TEMP U,MATL AA,PSL3,PR2				
24	131863		0.00	5,728.80	0.00
	RUN TOOL,CW,CSGHGR,TP8,6.125-4 STUB ACME-2G RIGHT HAND PIN BTM X 5-1/2 (23#) BK-HT BOX TOP,W/4.654 MIN BORE & MAX LOAD CAPACITY 580K,MAX TORQUE 33000 FT-LBS,SPEC FOR ROTATING CASING STRING,4140 125K				
	NOTE:MAX CASING CONNECTION TORQUE PER THREADERS SPEC				
25	115867		1.00	1,950.00	1,950.00
	PACKOFF,CW,CTF-MBU-3T,11,A/F 7.75 SEAL PREP,W/8.750-4 STUB ACME-2G LH BOX TOP,A/F LANDING ON 45 DEG SHOULDER ON HANGER,4130 80K,NACE SVC,PSL2				
					12,581.24

RENTAL TOOLS

26	AR4	3T-CFL DT 10-3/4 X 7-5/8 X 5-1/2 MAN	0.00	2,250.00	0.00
	MBU-3T-R RENTAL TOOLS = $2,250.00 PER WELL FOR THE FIRST 45 DAYS; $195.00 PER DAY THEREAFTER				
	RENTAL TOOLS INCLUDE THE FOLLOWING ITEMS:				
	PN 119126: LIFT RING,CSGHGR,CFL-R,W/14.000-2 STUB ACME-2G LEFT HAND THDS,4140 110K				
	PN 121275: RUN TOOL,CW,CSGHGR,MBU-3T-CFL-R,10-3/4 BC BOX TOP X 14.000-2 STUB ACME-2G LH BOX LANDING				

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

			Quantity	Price	Ext Price

THD,10.00 MIN BORE

PN 118178: TORQUE COLLAR,CW,CSGHGR,MBU-3T-CFL-R,F/16 NECK,4140 110K

PN 104467: COMB TEST PLUG/RET TOOL,CW,13-5/8 X 4-1/2 IF (NC50) BOX BTM & TOP,W/1-1/4 LP BYPASS & SPRING LOADED DOGS

PN 122539: WBUSH,CW,MBU-3T,LWR,13-5/8 X 10. 00 ID X 27.0 LG,W/3/8 UPR ORING & W/O 2.38 GROOVE

PN 121602: RUN TOOL,CW,CSGHGR,TP4,13-5/8 X 7-5/8 BC BOX TOP,10.250-4 STUB ACME-2G RIGHT HAND PIN BTM,MAX LOAD CAPACITY 1000K,MAX TORQUE 18000FT-LBS,SPEC FOR ROTATING CASING STRING

PN 118906: TORQUE COLLAR,CW,F/USE W RUN TOOL,TP,10.250-4 STUB ACME-2G RIGHT HAND PIN BTM AND A/F 11.50 OD X 5.00 LG BOX HGR NECK,MAXIMUM TORQUE 48000 LBF-FT

PN 106277: WASH TOOL,CW,MBU-3T-LR,MBS2 & FLUTED,13-5/8 X 4-1/2 IF (NC50) BOX TOP THD,W/BRUSHES

PN 119451: RUN TOOL,CW,PACKOFF,MBU-3T-UPR,13-5/8 STACK,W/11.250-4 STUB ACME-2G LEFT HAND PIN BTM X 4-1/2 IF (NC50) BOX TOP,W/3/8 BALL BEARINGS

PN 125190: TEST PLUG,CW,MBU-3T INNER,11 X 4-1/2 IF (NC50) BOX BTM & TOP,W/1-1/4 LP BYPASS

PN 123959: WBUSH,CW,MBU-3T(-ONE),UPR,NESTED,13-5/8 X 11 X 7.00 ID X 20.0 LG,A/F 13-5/8 RET TOOL,W/1/4 DRILL HOLES

PN 117319: TORQUE COLLAR,CW,CSGHGR,F/USE W/7.62 OD X 15.38 LG BOX HGR NECK AND 10.83 OD RUNNING TOOL,MAXIMUM TORQUE 35000 LBF-FT

PN 103164: WASH TOOL,CW,CSGHGR,MBU-2LR/MBS2-R (3T),FLUTED,11 X 4-1/2 IF (NC50) BOX TOP THDS,FAB,200 PSI MAX WP

PN 117306: RUN TOOL,CW,PACKOFF,MBU-3T-SN,7-5/8,W/8.750-4 STUB ACME-2G LEFT HAND PIN BTM X 4-1/2 IF (NC50) BOX TOP,W/BALL BEARINGS

PN 116240: SUB,CROSSOVER,CW,5 HBPV PIN THD BTM X 4-1/2 IF (NC50) BOX TOP,18.0 LG,4140 110K

NOTE: CUSTOMER RESPONSIBLE FOR LOST OR DAMAGED BEYOND REPAIR TOOLS. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.

0.00

SAFEDRILL® DRILLING ADAPTER

27	8Q	13 10M X 13 10M CQC ADPT (45D)	0.00	1,700.00	0.00

SAFEDRILL® DRILLING ADAPTER RENTAL PACKAGE = $1,700.00 PER WELL FOR THE FIRST 45 DAYS; $65.00 PER DAY THEREAFTER.

RENTAL TOOLS CONSIST OF THE FOLLOWING ITEMS:

PN 116966: ADPT,DRLG,CW,MBU-3T,13-5/8 10M QUICK CONNECT BTM X 13-5/8 10M STD TOP,TEMP RATING PU

PN 116992: HUB,CW,THD,MBU-3T,13-5/8 10M,W/21.750-2 STUB ACME-2G L.H. BOX THD

NOTE: CUSTOMER RESPONSIBLE FOR LOST, DAMAGED, OR BEYOND REPAIR RENTAL EQUIPMENT. RENTAL

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

			Quantity	Price	Ext Price
	CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT. ACCESSORIES FOR ASSEMBLY ARE NOT INCLUDED IN RENTAL RATE.				
					0.00

7-5/8" OFFLINE CEMENT

28	5O	3T OLC - 7-5/8 RT DAILY RENTAL	0.00	950.00	0.00
	MBU-3T - 7-5/8" OFFLINE CEMENTING RENTAL PACKAGE = $950.00 PER WELL RENTAL TOOLS CONSIST OF THE FOLLOWING ITEMS: PN 133817: CEMENT TOOL,CW,CSGHGR/PACKOFF,MBU-3T-LWR-OLC,NESTED,7-5/8 BC PIN TOP,W/11.250-4 STUB ACME-2G LH PIN THD HOLD DOWN RING,6.964 MIN BORE,5000 PSI MAX WP,4140 125K PN 124993: CIRCULATION PLUG,CW,CTF/MBU-3T,11 NOM,W/ONE WAY 3 HBPV,6A-U-AA-1-1 PN 107010: RUN TOOL,CW,PACKOFF,MBU-LR-LWR,11 X 3-1/2 IF (NC38) BTM & TOP,W/7.500-4 STUB ACME-2G LH PIN BTM NOTE: CUSTOMER RESPONSIBLE FOR LOST OR DAMAGE BEYOND REPAIR TOOLS. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT.				
					0.00

SAFEDRILL® TA CAP

29	7T	13 10M CQC TA CAP (90D)	0.00	1,300.00	0.00
	SAFEDRILL® TA CAP RENTAL PACKAGE = $1,300.00 PER WELL FOR THE FIRST 90 DAYS; $85.00 PER DAY THEREAFTER. PN 117347: TA CAP,CW,MBU-3T-HPS,9,13-5/8 10M QUICK CONNECT,W/ONE 1-13/16 10M FP,VR THD & 1/2 NPT PORT,6A-U-AA-1-1 PN 108499: SECSEAL,CW,TA-HPS,9 X 7-5/8 X 4.31 LG,W/7.731 BORE,6A-U-AA-1-1 PN 116992: HUB,CW,THD,MBU-3T,13-5/8 10M,W/21.750-2 STUB ACME-2G L.H. BOX THD NOTE: CUSTOMER IS RESPONSIBLE FOR LOST, DAMAGED OR BEYOND REPAIR RENTAL EQUIPMENT. RENTAL CHARGES MAY NOT BE APPLIED TO THE PURCHASE PRICE OF EQUIPMENT. ACCESSORIES FOR ASSEMBLY ARE NOT INCLUDED IN RENTAL RATE.				
					0.00

TUBING HEAD ASSEMBLY

30	126002-21MG		1.00	11,108.00	11,108.00
	TBGHD,CW,CTH-DBLHPS-SB,7-5/8,13-5/8 10M X 7-1/16 15M,W/2 1-13/16 15M FP,W/6.375 MIN BORE & 17-4PH LDS,34.0 LG,216A-PU-EE-0,5-3-2				
31	113880MV		2.00	2,792.00	5,584.00
	VLV,CW,SB100,1-13/16 15M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR2F) QPQ TRIM, API 6A PR2 ANNEX F (BORE VENT HOLE)				
32	127140		2.00	150.00	300.00
	FLG,BLIND,CW,1-13/16 15M X 9/16 AUTOCLAVE,REC F/VR PLUG,6A-LU-EE-3				

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

		Quantity	Price	Ext Price
33	100326	1.00	89.73	89.73
	FTG,GRS,VENTED CAP,9/16 AUTOCLAVE,17-4PH BODY, 316SS VENT CAP,INCONEL X-750 SPRING & TUNGSTEN CARBIDE BALL,20,000 PSI SERVICE			
34	BX151	4.00	12.77	51.08
	RING GASKET,BX151,1-13/16 10/15/20M			
35	105477-20E1	16.00	9.76	156.16
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,7/8-9UNC X 6,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING			
36	BX159	1.00	117.60	117.60
	RING GASKET,BX159,13-5/8 10/15/20M			
37	102825-20E1	20.00	67.63	1,352.60
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,1-7/8-8UN X 17-3/4,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING			
38	106012	1.00	120.00	120.00
	ADPT,AUTOCLAVE,HIGH PRESSURE, 9/16 MALE TO 9/16 MALE,316SS,SOUR SERVICE			
39	810023	1.00	289.00	289.00
	NEEDLE VALVE,2 WAY ANGLE,9/16,20KSI,SOUR SERVICE,W/O COLLARS & GLANDS			
40	PG15M	1.00	199.00	199.00
	PRESSURE GAUGE,15M,9/16 AUTOCLAVE,LIQUID FILLED			
				19,367.17

CONTINGENCY EQUIPMENT

	EMERGENCY EQUIPMENT; INVOICED AS REQUIRED:			
41	116998	0.00	2,200.00	0.00
	CSGHGR,CW,MBU-3T-LWR,EMERG,13-5/8 X 9-5/8,6A-PU-DD-3-2			
42	130829	0.00	5,160.00	0.00
	PACKOFF,CW,MBU-3T,EMERG,13-5/8 NESTED X 11 X 9-5/8,W/11.250-4 STUB ACME-2G LH BOX TOP W/RUPTURE DISK & DEEPER GALLERY,4140 110K,STD SVC,NON-NACE			
43	108211	0.00	1,750.00	0.00
	CSGHGR,CW,MBU-3T,UPR/MBU-2LR,UPR,11 X 5-1/2,6A-PU-DD-3-2			
44	117298	0.00	1,800.00	0.00
	PACKOFF,CW,MBU-3T,INNER,EMERG,NESTED,11 X 5-1/2,W/7-5/8 SEAL NECK,5 HBPV THDS & 4.93 MIN BORE,A/F HOLD DOWN RING,4130 75K,NACE SVC			
45	104726	0.00	550.00	0.00
	HOLD DOWN,RING,F/22 CSGHGR 11 X 5-1/2,A/F PACKOFF MBU-LR,13-5/8 10M,W/11.250-4 STUB ACME-2G LH PIN X 8.00 ID X 2.62 LG,4140 110K			
				0.00

For Acceptance of this Quotation
Please Contact Fred Stafford Ph: 713-626-8800
riley.stafford@cactuswellhead.com

Matl:	61,788.05
Labor:	0.00
Misc:	0.00
Sales Tax:	0.00
Total:	61,788.05

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

CACTUS WELLHEAD, LLC PURCHASE TERMS AND CONDITIONS

1. **ACCEPTANCE**: Acceptance of Cactus Wellhead, LLC (herein: Company) Purchase Terms and Conditions (herein: CACTUS Purchase Terms) shall be deemed effective upon shipment of the Products and/or rendering of Services which are the subject of an order by Customer (defined as the party purchasing CACTUS Products and or Services referred on the invoice). Any proposal made by Customer for additional or different terms and conditions or any attempt by Customer to vary in any degree any of the terms and conditions of CACTUS Purchase Terms is hereby rejected.

2. **PRICING**. Each Product and Service shall be invoiced at (and Customer shall pay) the respective price shown on the reverse side hereof, or if no price is shown on the reverse side hereof, at the price shown in the current price list of Company. In addition, Customer shall pay any and all additional charges for mileage, transportation, freight, packing and other related charges, as well as any federal, state or local tax, excise, or charge applicable on the sale, transportation, or use of Products and Services, unless otherwise specified.

3. **TERMS OF PAYMENT**. Customer agrees to pay Company any and all payments due on or before thirty (30) days from invoice date at the designated address of Company. Amounts unpaid after such thirty (30) day period shall bear interest at the lesser of (i) one and one-half percent (1½%) per month or (ii) the maximum rate allowed by law. Customer shall also pay any and all of Company's attorney's fees and court costs if any amounts hereunder are collected by an attorney or through legal proceedings. Company reserves the right, among other remedies, either to terminate this agreement or to suspend further deliveries upon failure of Customer to make any payment as provided herein.

4. **LIMITED WARRANTY**. COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, AS TO THE MERCHANTABILITY, FITNESS FOR PURPOSE, DESCRIPTION, QUALITY, PRODUCTIVENESS, ACCURACY OR ANY OTHER MATTER WITH RESPECT TO PRODUCTS OR SERVICES, ALL SUCH WARRANTIES BEING HEREBY SPECIFICALLY AND EXPRESSLY DISCLAIMED BY COMPANY. COMPANY MAY OFFER TECHNICAL ADVICE OR ASSISTANCE WITH REGARD TO THE PRODUCTS AND SERVICES BASED ON LABORATORY AND/OR FIELD EXPERIENCE AND CUSTOMER UNDERSTANDS AND AGREES THAT SUCH ADVICE REPRESENTS ONLY GOOD FAITH OPINIONS AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE. THE SOLE AND EXPRESS WARRANTY PROVIDED BY COMPANY IS TO WARRANT THAT THE PRODUCTS SOLD AS LISTED ON THE REVERSE SIDE HEREOF COMPLY WITH COMPANY'S SOLE SPECIFICATION AT THE DATE AND TIME OF MANUFACTURE. COMPANY MAKES NO WARRANTY THAT SUCH PRODUCTS SHALL MEET SUCH SPECIFICATION AT ANY TIME AFTER SHIPMENT OF PRODUCTS. USE OF SUCH PRODUCTS IS SPECIFICALLY NOT WARRANTED.

5. **REMEDY**. The exclusive remedy for this warranty for Products shall be limited to, in Company's sole discretion and judgment, the replacement of defective part(s), F.O.B. Company's plant (transportation, redesign, dismantling, disposal of material and installation are not included and shall be borne and paid for by Customer), or repair of defective part(s). . The exclusive remedy for this warranty for Services shall be limited to the repeat of Services performed F.O.B. Company's plant (transportation, redesign, dismantling, disposal of material and installation are not included and shall be borne and paid for by Customer). Any such repeat of Services or replacement or repair of Products shall not include any materials not sold by Company hereunder, and specifically excludes any obligation by Company related to other property of the Customer or any property of third parties. Provided, however, Company may in its sole discretion, decide to instead give Customer credit memorandum for the amounts already paid by Customer to Company for such Product or Service. IN ANY EVENT AND NOTWITHSTANDING THE LANGUAGE TO THE CONTRARY HEREIN, CUSTOMER ACKNOWLEDGES THAT ANY CLAIM IT MAY HAVE ARISING OUT OF OR IN CONNECTION WITH ANY ORIGINAL PRODUCTS AND SERVICES, ANY REPLACEMENT PRODUCTS OR REPEAT OF SERVICES AND THESE CACTUS PURCHASE TERMS SHALL BE LIMITED TO AND NOT EXCEED THE AMOUNT CUSTOMER HAS ACTUALLY PAID TO COMPANY FOR SUCH PRODUCTS AND/OR SERVICES PURSUANT HERETO. If Customer fails to make any such claim within thirty (30) days after completion of Service or delivery of Products, Customer hereby waives (to the extent permitted by applicable law) any and all claims it may or does have with respect to such Products and Services. Unless Customer is an authorized reseller of Company, Company's liability in connection with Products and Services shall extend only to Customer. CUSTOMER HEREBY INDEMNIFIES AND HOLDS COMPANY (AND ITS AGENTS, REPRESENTATIVES, OFFICERS DIRECTORS AND EMPLOYEES) HARMLESS FOR ANY LOSS, EXPENSE OR DAMAGE (WHETHER OF CUSTOMER OR OF ANY THIRD PARTY) ARISING FROM OR IN CONNECTION WITH PRODUCTS AND SERVICES, INCLUDING WITHOUT LIMITATION ANY FAILURE OF SUCH PRODUCTS AND SERVICES TO CONFORM TO CUSTOMER'S ORDER OR SPECIFICATION OR ANY OTHER STANDARD, OR ANY NEGLIGENCE OR BREACH OF WARRANTY BY COMPANY WITH RESPECT TO ANYTHING DONE OR FAILED TO HAVE BEEN DONE BY COMPANY, IF AND TO THE EXTENT THAT SUCH LOSS, EXPENSE OR DAMAGE EXCEEDS THE AMOUNT CUSTOMER HAS ACTUALLY PAID COMPANY PURSUANT HERETO FOR SUCH PRODUCTS OR SERVICES.

6. **INSPECTION**. The results of any inspection or testing reported by the Company to Customer represents only good faith opinions and are not to be construed as warranties or guarantees of the quality, classification, merchantability, fitness for purpose, condition, or liability of any equipment or material that has been inspected or tested by the Company.

7. **INSURANCE**. Each party agrees to maintain comprehensive general liability insurance in the amount of $1,000,000 each occurrence, $2,000,000 general aggregate, and Workers Compensation insurance per statutory requirements providing coverage for the indemnity obligations in this agreement. The Company (and such of its affiliates as it shall designate) including their officers, directors, members, shareholders, partners, joint ventures, employees, agents and representatives shall be named as additional insureds under the policies of Customer on a primary basis to the extent of its indemnification obligations set forth in these CACTUS Purchase Terms, and the policies shall also provide a waiver of subrogation rights in favor of the Company (and such of its affiliates as it shall designate) and their officers, directors, members, shareholders, employees, agents and representatives. The provisions of this Section 7 shall apply and the obligation to maintain insurance of each party in the coverages and amounts set forth herein shall remain in force regardless and independent of the validity or enforceability of the indemnity provisions of Section 8, below; the obligation to obtain insurance is a separate and independent obligation. If the insurance required herein is more or less than allowed by prevailing law, the indemnity obligations in Section 8 below shall be effective only to the maximum extent permitted under applicable law.

8. **INDEMNIFICATION**. The following indemnifications and releases of liability will apply to any Products or Services provided under this contract. COMPANY AND CUSTOMER EXPRESSLY AGREE THAT, TO THE EXTENT REQUIRED BY APPLICABLE LAW TO BE EFFECTIVE, THE INDEMNITIES AND DISCLAIMERS OF WARRANTIES CONTAINED HEREIN ARE "CONSPICUOUS."

A. **Customer Indemnity Obligations**. Customer hereby releases Company from any liability for, and shall protect, defend, indemnify, and hold harmless Company, its parents, affiliates, subsidiaries, partners, joint owners, joint ventures, and its contractors and subcontractors of any tier, and the officers, directors, agents, representatives, employees, insurers, and consultants (specifically excluding any member of Customer Group) of all of the foregoing, and its and their respective successors, heirs and assigns ("Company Group") from and against all costs (including the payment of reasonable attorneys' fees), losses, liabilities, demands, causes of action, damages, or claims of every type and character ("Claims"), arising out of or resulting from or related, directly or indirectly, to (i) injury to, illness or death of Customer its parents, affiliates, subsidiaries, partners, joint owners, joint ventures, and its contractors and subcontractors of any tier, and the officers, directors, agents, representatives, employees, customers, insurers, invitees and consultants of all of the foregoing, and its and their respective successors, heirs and assigns ("Customer Group"), or (ii) loss of or damage to any property of any member of Customer Group, REGARDLESS OF THE CAUSE OF SUCH CLAIMS, INCLUDING THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP, BUT NOT IN THE CASE OF GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY MEMBER OF COMPANY GROUP.

B. **Company Indemnity Obligations**. Company hereby releases Customer from any liability for, and shall protect, defend, indemnify, and hold harmless Customer from and against all Claims arising out of or resulting from or related, directly or indirectly, to (i) injury to, illness or death of any member of Company Group, or (ii) loss of or damage to any property of any member of Company Group, REGARDLESS OF THE CAUSE OF SUCH CLAIMS, INCLUDING THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF CUSTOMER GROUP, BUT NOT IN THE CASE OF GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY MEMBER OF COMPANY GROUP.

C. **Third Party Claims**. Notwithstanding the foregoing, to the extent of its negligence, Company and Customer shall each indemnify, defend and hold harmless from and against all Claims, of every type and character, which are asserted by third parties for bodily injury, death or loss or destruction of property or interests in property in any manner caused by, directly or indirectly resulting from, incident to, connected with or arising out of the work to be performed, Services to be rendered or Products or materials furnished to Customer. When personal injury, death or loss of or damage to property is the result of joint or concurrent negligence of Customer and Company, the indemnitor's duty of indemnification shall be in proportion to its allocable share of such negligence.

D. **Pollution**. Company agrees that it shall be totally responsible for, and shall protect, defend and indemnify, Customer for all losses, damages, claims, demands, costs, charges, and other expenses, including attorneys' fees, for any and all waste and/or hazardous substances which are in Company Group's exclusive possession and control and directly associated with Company Group's equipment and facilities, EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF CUSTOMER GROUP. Customer shall assume all responsibility for, including control and removal of, and shall protect, defend and indemnify Company Group from and against all Claims arising directly or indirectly from all other pollution or contamination which may occur during the conduct of operations hereunder, including, but not limited to, that which may result from fire, blowout, cratering, seepage or any other uncontrolled flow of oil, gas, water or other substance, EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF COMPANY GROUP.

E. **Wild Well**. Customer shall release Company Group of any liability for, and shall protect, defend and indemnify Company Group for any damages, expenses, losses, fines, penalties, costs, expert fees and attorneys' fees arising out of a fire, blow out, cratering, seepage or wild well, including regaining control thereof, debris removal and property restoration and remediation. THIS INDEMNITY APPLIES EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE, ORDINARY OR GROSS) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP.

F. **Underground Damage**. Customer shall release Company Group of any liability for, and shall protect, defend and indemnify Company Group from and against any and all claims, liability and expenses resulting from operations related to the work under this agreement on account of injury to, destruction of, or loss or impairment of any property right in or to oil, gas or other mineral substance or water, if at the time of the act or omission causing such injury, destruction, loss or impairment said substance and not been reduced to physical possession above the surface of the earth, and for any loss or damage to any formation, strata, or reservoir beneath the surface of the earth. THIS INDEMNITY APPLIES EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE, ORDINARY OR GROSS) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP.

G. The foregoing indemnities set forth in these CACTUS Purchase Terms are intended to be enforceable against the parties hereto in accordance with the express terms and scope hereof notwithstanding Texas' Express Negligence Rule or any similar directive that would prohibit or otherwise limit indemnities because of the negligence (whether sole, concurrent, active or passive, ordinary or gross) or other fault or strict liability of Company or Customer.

H. If a claim is asserted against one of the parties to this agreement which may give rise to a claim for indemnity against the other party hereto, the party against whom the claim is first asserted must notify the potential indemnitor in writing and give the potential indemnitor the right to defend or assist in the defense of the claim.

9. **RISK OF LOSS**.

A. Title and risk of loss shall pass to Customer upon delivery as specified in Article 11. Customer's receipt of any material delivered hereunder shall be an unqualified acceptance of, and a waiver by Customer of any and all claims with respect to, such material unless Customer gives Company written notice of claim within thirty (30) days after such receipt. Notwithstanding the foregoing, installation or use of materials or equipment shall unequivocally constitute irrevocable acceptance of said materials. Customer assumes all risk and liability for the results obtained by the use of any material or Products delivered hereunder in work performed by on behalf of Customer or in combination with other or substances. No claim of any kind, whether as to material delivered or for non-delivery of material, and whether or not based on negligence, shall be greater in amount than the purchase price of the

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0000965

Date: 07/07/2023

Valid For 30 Days

material in respect of which such claim is made.

B. For Services, Company shall not be liable for loss or deterioration of any equipment and material of Customer under Company's control or stored on Company's premises after Company has completed its work if such loss or deterioration results from atmospheric condition, Act of God or other occurrence not within the reasonable control of Company.

10. **TERMINATION**. Company reserves the right to terminate the order at issue, or any part hereof, solely for its convenience at any time without cause with notice to Customer. Company shall have the right to cancel any unfilled order without notice to Customer in the event that Customer becomes insolvent, adjudicated bankrupt, petitions for or consents to any relief under any bankruptcy reorganization statute, violates a term of these CACTUS Purchase Terms, or is unable to meet its financial obligations in the normal course of business. In the event of such termination, Company shall immediately stop all work hereunder. Prior to delivery, Customer may terminate this order without cause upon thirty (30) day notice in writing to Company. In the event of such termination, Company at its sole option shall cease work up to thirty (30) days after such notice. Upon the cessation of work, Customer agrees to pay Company a reasonable termination charge consisting of a percentage of the Invoice price, such percentage to reflect the value of the Products, Services or work in progress completed upon the cessation of work. Customer shall also pay promptly to Company any costs incurred due to paying and settling claims of Company's vendors or subcontractors arising out of the termination of the order by Customer.

11. **DELIVERY**. Unless different terms are provided on the face of this order, all items are sold FOB Company's manufacturing facility in Bossier City, LA., and Customer shall bear the cost of transportation to any other named destination. Upon notification of Company of delivery, Customer shall become liable and shall bear all risk of loss associated with the Products at issues regardless of whether the Products are at a location controlled by Company and whether or not caused by the negligence of Company. In the case of Customer pick-up, the truck furnished by Customer is the destination and Company's obligations regarding shipments are fulfilled when the Products are loaded on the truck. Items to be shipped to any other destination outside of the United States are sold FOB port of shipment (Customer will deliver and bear the cost of transportation to the named port and will bear the cost of transportation thereafter to the final destination). The means of shipment and carrier to the point at which Company's liability for transportation costs ceases shall be chosen by Company. Excess packing, marking, shipping, and transportation charges resulting from compliance with Customer's request shall be for Customer's account. Unless otherwise agreed in writing, delivery time is not of the essence.

12. **RETURNS/REFUND**. Within ninety (90) days of delivery, Customer has the option to return any non-defective Products (any Products found to be defective will be subject to the warranty and remedies expressed in paragraphs four (4) and five (5) above). Customer shall bear all costs of shipment and/or transportation for such return and risk of loss for the returned Products shall remain with Customer until re-delivered to Company's Yard. Customer shall receive a full refund for any returns, less a twenty percent (20%) restocking fee. Company at all times reserves the right to designate certain Products as non-refundable in Company's Sales Quote or Sales Order. In addition, any made-to-order , special order, and/or Product manufactured to Customer specifications are NOT returnable.

13. **DELAYS**. If a specific shipping date is either not given or is estimated only, and is not promised on the face of this order or in a separate writing signed by Company, Company will not be responsible for delays in filling this order nor liable for any loss or damages resulting from such delays. If a specific shipping date is promised, Company will not be liable for delays resulting from causes beyond Company's control, including without limitation accidents to machinery, fire, flood, act of God or other casualty, vendor delays, labor disputes, labor shortages, lack of transportation facilities, priorities required by, requested by, or granted for the benefit of any governmental agency, or restrictions imposed by law or governmental regulation.

14. **LIMITATION OF DAMAGES**. Notwithstanding any other provision contained herein, Company shall not be liable to Customer Group or any third party for consequential (whether direct or indirect damages), indirect, incidental, special or punitive damages, howsoever arising, including, but not limited to loss of profits (whether direct or indirect damages), revenues, production or business opportunities, WHETHER OR NOT SUCH LOSSES ARE THE RESULT IN WHOLE OR IN PART FROM THE NEGLIGENCE (WHETHER SOLE, JOINT, CONCURRENT OR COMPARATIVE, ACTIVE OR PASSIVE, ORDINARY OR GROSS) OF COMPANY GROUP, OR ANY DEFECT IN THE PREMISES, PRE-EXISTING CONDITIONS, PATENT OR LATENT, BREACH OF STATUTORY DUTY, STRICT LIABILITY OR ANY OTHER THEORY OF LEGAL LIABILITY OF COMPANY GROUP (EXCLUDING ONLY LOSSES CAUSED BY THE WILLFUL MISCONDUCT OF COMPANY GROUP).

15. **SECURITY INTEREST**. Customer grants Company, and Company reserves, a security interest, covering all Customer's obligations under these terms (including any liability for breach of Customer's obligations), and applying to all of Customer's right, title, and interest in the Leased Equipment, together with all accessions thereto and any proceeds that may arise in connection with the sale or disposition thereof. Customer shall cooperate with Company in the filing of Financing Statements to perfect such security interest. Furthermore, Customer authorizes Company to execute and file Financing Statements without Customer's signature in any jurisdiction in which such procedure is authorized. Customer warrants, covenants and agrees that it will not, without prior written consent of Company, sell, contract to sell, lease, encumber, or dispose of the Leased Equipment or any interest in it until all obligations secured by this security interest have been fully satisfied.

16. **PATENT AND INTELLECTUAL PROPERTY**. The sale of any Products hereunder does not convey any intellectual property license by implication, estoppel or otherwise regarding the Products. Company retains the copyright in all documents, catalogs and plans supplied to Customer pursuant to or ancillary to the contract. Unless otherwise agreed in writing, Customer shall obtain no intellectual property interest in any Company Product.

17. **TAXES**. Unless otherwise specifically provided for herein, Customer shall be liable for all federal, state, or local taxes or import duties assessed by any governmental entity of any jurisdiction in connection with the Products or Services furnished hereunder.

18. **DECEPTIVE TRADE PRACTICES**. Customer acknowledges the application of Section 17.45(4) of the Texas Deceptive Trade Practices Act (Texas Business Commission Code §17.41 et. seq.) (the "Act") to any transaction contemplated hereby and represents that it is not a "consumer" for the purposes of the Act.

19. **NO WAIVER**. Failure to enforce any or all of the provisions in these CACTUS Purchase Terms in any particular instance shall not constitute or be deemed to constitute a waiver of or preclude subsequent enforcement of the same provision or any other provision of these CACTUS Purchase Terms. Should any provision of these CACTUS Purchase Terms be declared invalid or unenforceable all other provisions of these CACTUS Purchase Terms shall remain in full force and effect.

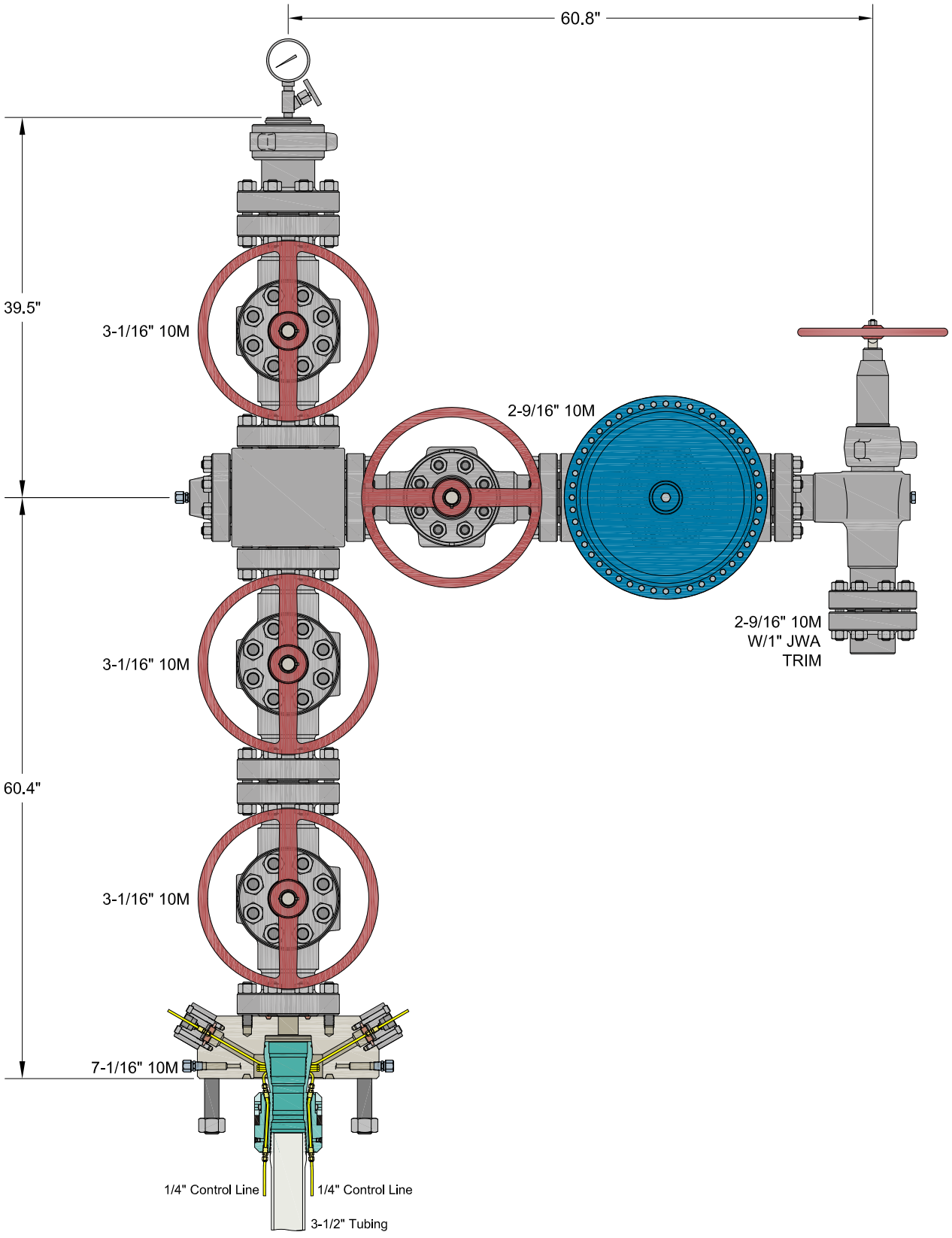
20. **CHOICE OF LAW**. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND SHALL BE PERFORMABLE IN HARRIS COUNTY, TEXAS. WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPALS AND WAIVER OF SAME, EACH PARTY HERETO SUBMITS TO THE JURISDICTION OF THE COURTS OF THE STATE OF TEXAS IN HARRIS COUNTY, TEXAS AND THE FEDERAL COURTS IN AND FOR THE SOUTHERN DISTRICT OF TEXAS SITTING IN HOUSTON, TEXAS IN CONNECTION WITH ANY DISPUTE ARISING UNDER THIS AGREEMENT OR ANY DOCUMENT OR INSTRUMENT ENTERED INTO IN CONNECTION HEREWITH.

21. **AUTHORITY**. Customer warrants and represents that the individual receiving this order at issue on behalf of Customer has the authority to enter into these CACTUS Purchase Terms on behalf of Customer, and that upon receipt these CACTUS Purchase Terms shall be binding upon Customer.

22. **FORCE MAJEURE**. If Company is unable to carry out its obligations hereunder by reason of force majeure, then upon Company's giving of notice and reasonably full particulars of such force majeure in writing to Customer, Company's obligations that are affected by force majeure shall be suspended during the continuance of the force majeure and Company shall not be liable to Customer for any damages incurred by the Customer as a result thereof.

23. **CONFIDENTIALITY**. Customer acknowledges the highly secret and valuable nature of all proprietary inventions, methods, processes, designs, know-how, and trade secrets embodied in the Company's equipment, Products and Services and its components (hereinafter referred to as "Confidential Data"). Accordingly, Customer agrees not to disclose or use any Confidential Data. Customer further agrees to take any and all necessary precautions to prevent disclosure of the Confidential Data associated with the Company's equipment, Products and Services and components thereof to persons other than those employees of Customer for whom such disclosure is necessary for performance of the work hereunder.

24. **COMPLIANCE**. Customer expressly agrees to comply with and abide by, all of the laws of the United States and of the State of Texas, including, but not limited to, OSHA, EPA and all rules and regulations now existing or that may be hereafter promulgated under and in accordance with any such law or laws, and hereby agrees to indemnify and hold Company harmless from any and all claims, demands, or damages incurred by Company arising from Customer's failure to comply with all laws and governmental regulations. The indemnities in this paragraph shall be in addition to any other indemnity obligations between Customer and Company, including any other indemnity obligations contained herein.



ALL DIMENSIONS APPROXIMATE

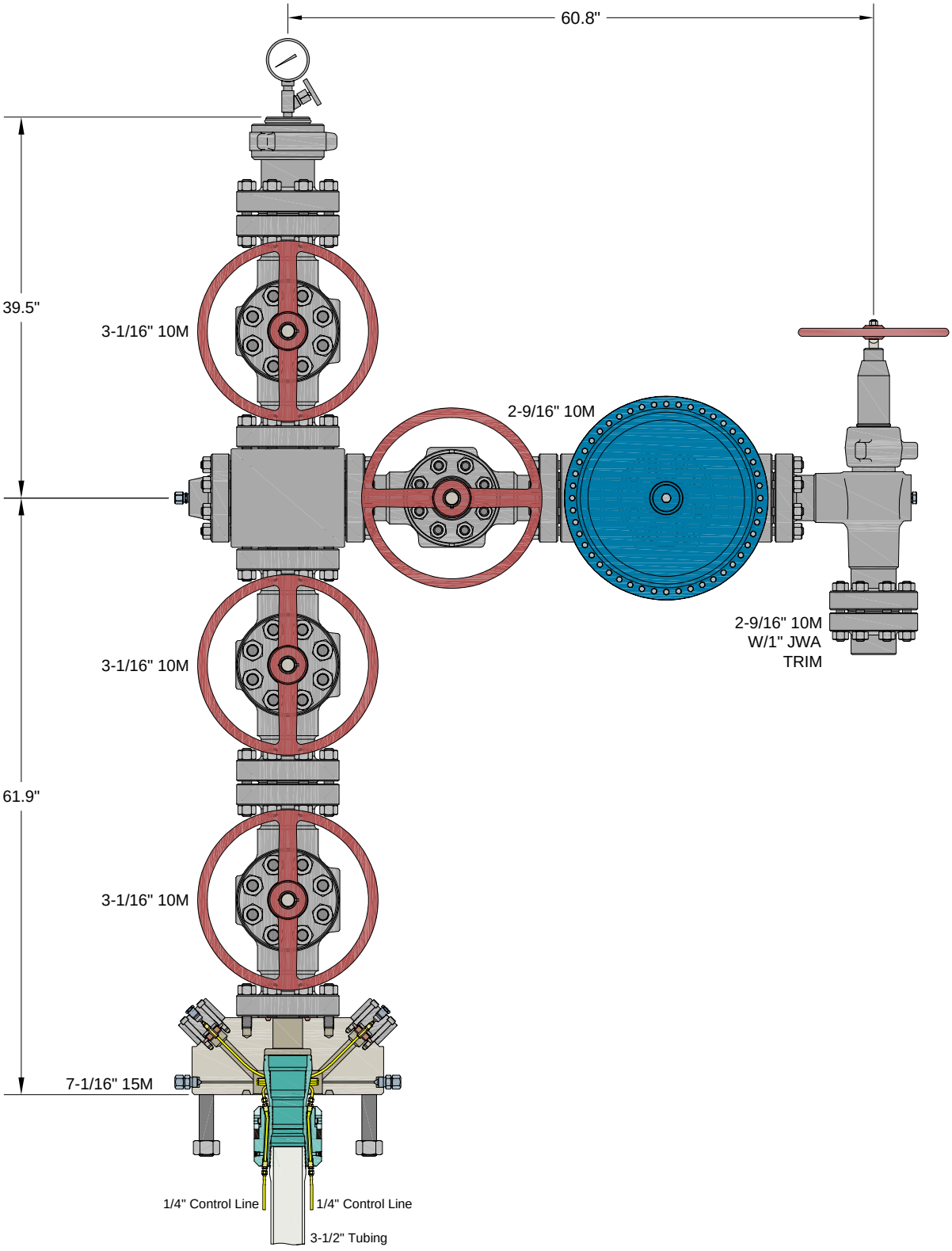
CACTUS WELLHEAD LLC

CIMAREX
HOBBS, NM

7-1/16" 10M x 3-1/16" x 2-9/16" 10M Production Tree Assembly
With 7-1/16" 10M x 3-1/16" 10M T40-CCL Tubing Head Adapter
And 7-1/16" 3-1/2" T40-CCL Tubing Hanger

DRAWN	VJK	05SEP23
APPRV		

DRAWING NO. HBE0001018



ALL DIMENSIONS APPROXIMAT

CACTUS WELLHEAD LLC	CIMAREX HOBBS, NM
7-1/16" 15M x 3-1/16" x 2-9/16" 10M Production Tree Assembly With 7-1/16" 15M x 3-1/16" 10M T40-CCL Tubing Head Adapter And 7-1/16" 3-1/2" T40-CCL Tubing Hanger	DRAWN VJK 13DEC23 APPRV DRAWING NO. HBE0001018

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0001018

Date: 09/08/2023

Valid For 30 Days

Bill To: 7050

CIMAREX
ATTN: DAVID SHAW
202 S CHEYENNE AVENUE SUITE 1000
TULSA OK 74103
US

Ship To: 1016

2023 PRICING REVIEW
202 S Cheyenne Ave Ste 1000
Tulsa OK 74103-3001
US

	Quantity	Price	Ext Price

CIMAREX

HOBBS, NM

PRODUCTION TREE ASSEMBLY
7-1/16" 10M X 3-1/16" 10M X 2-9/16" 10M
OPTIONAL 15M ADAPTER

QUOTATION SUMMARY:

- PRODUCTION TREE ASSEMBLY - $49,338.02

CACTUS CONTACT:
RILEY STAFFORD / MIKE SPINKS
OFFICE: 405.708.7217 (RILEY) / 713.396.5762 (MIKE)
MOBILE: 405.445.2222 (RILEY) / 832.691.7724 (MIKE)
EMAIL: riley.stafford@cactuswellhead.com / mike.spinks@cactuswellhead.com

DUE TO VOLATILITY IN THE STEEL MARKET, PRICING FOR ITEMS MADE FROM NICKEL ALLOYS (EX. 410SS, 17-4PHSS, INCONEL, ETC.) WILL BE VALID FOR TWO WEEKS. CW WILL REVIEW AND ADJUST, IF NECESSARY, AT ORDER PLACEMENT.

PREMIUM THREADED CASING HANGERS/RUNNING TOOLS & CUSTOMER SPECIFIC EQUIPMENT ARE NON-CANCELABLE AND MAY REQUIRE A PURCHASE ORDER (PO) PRIOR TO MANUFACTURING.

SUPPLY CHAIN PRICING IS BASED UPON A 135 DAY DELIVERY ARO. EXPEDITED PRICING CAN BE PROVIDED UPON REQUEST. PRICES ARE F.O.B. CACTUS BOSSIER CITY, LA. THE FOLLOWING QUOTATION DOES NOT INCLUDE APPLICABLE MILEAGE AND SERVICE CHARGES THAT MAY BE CHARGED AT TIME OF INVOICING.

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0001018

Date: 09/08/2023

Valid For 30 Days

		Quantity	Price	Ext Price
	PRODUCTION TREE ASSEMBLY			
1	124314P2	1.00	4,830.00	4,830.00
	ADPT,TBGHD,CW,T40-CCL,7-1/16 10M STD X 3-1/16 10M STD,W/TWO #14 DHCV W/1/4 LP INLETS,10000 PSI MAX WP,TEMP PU,MATL EE,PSL2,PR2			
2	120242MV	1.00	4,343.00	4,343.00
	VLV,CW,SB100,3-1/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR1) QPQ TRIM, API 6A PR1 SECTION 10.5.2 (BORE VENT HOLE)			
3	120242MV	1.00	4,343.00	4,343.00
	VLV,CW,SB100,3-1/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR1) QPQ TRIM, API 6A PR1 SECTION 10.5.2 (BORE VENT HOLE)			
4	128365	1.00	2,650.00	2,650.00
	CRSS,STD,AOZE,3-1/16 10M X 2-9/16 10M,6A-LU-EE-3			
5	120242MV	1.00	4,343.00	4,343.00
	VLV,CW,SB100,3-1/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL3 PR1) QPQ TRIM, API 6A PR1 SECTION 10.5.2 (BORE VENT HOLE)			
6	142800	1.00	1,270.00	1,270.00
	TREECAP,NEWAY,BHTA,B15A,3-1/16 10M X 3-1/2 EU ILT,W/1/2 NPT & 3.06 MIN BORE,MONOGRAMMED,TEMP PU,MATL EE,PSL2			
7	BX154	5.00	10.44	52.20
	RING GASKET,BX154,3-1/16 10/15/20M			
8	780077-20E1	16.00	19.83	317.28
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,1-8UNC X 7,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING			
9	132879	1.00	495.00	495.00
	FLG,BLIND,AOZE,3-1/16 10M X 1/2 NPT,W/HUB,TEMP LU,MATL EE,PSL3			
10	100048	1.00	59.74	59.74
	FTG,GRS,VENTED CAP,1/2 NPT,4140 -50F W/ELECTROLESS NICKEL COATING NACE,K-MONEL BALL,INCONEL X-750 SPRING			
11	115900MV	1.00	3,285.00	3,285.00
	VLV,CW,SB100,2-9/16 10M FE BB/EE-0,5 (API 6A LU BB/EE-0,5 PSL2 PR2) QPQ TRIM, API 6A PR2 ANNEX F (BORE VENT HOLE)			
12	128567	1.00	8,292.00	8,292.00
	VLV/ACT,OMNI,FS-R,2-9/16 10M FE EE HF C/W MODEL DX-18 DIAPHRAGM PNEUMATIC ACTUATOR, FORGED BODY, REVERSE ACTING SLAB GATE, FLOATING SEATS & DIRECTIONAL FLOW BODY BUSHING (FLOW FROM RIGHT TO LEFT): MAT'L CLASS EE, HARDFACE TRIM, TEMP PU (-20 TO 250 F), PSL-2, PR-2; ACTUATOR: MATERIAL CLASS BB, TEMP P (-20F TO 180F) PR-2 (FC TYPE) W/MANUAL OVERRIDE,ACTUATOR REQUIRES 112 PSI TO OPEN AT FULL 10,000 PSI			
13	130652	1.00	7,500.00	7,500.00
	CHOKE,ADJ,HOE,H2,2-9/16 10M FE X FE ALLOY BDY,3" NOMINAL,W/ 2" SSTC TRIM,H2S SERVICE,API MONOGRAMMED,PSL-2 PR-2 TEMP-PU MATL-EE-1.5			
14	120734	1.00	399.00	399.00
	FLG,COMP,AOZE,2-9/16 10M X 2-7/8 EU,5000 PSI MAX WP,TEMP LU,PSL3,PR1			

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0001018

Date: 09/08/2023

Valid For 30 Days

			Quantity	Price	Ext Price
15	BX153		5.00	11.54	57.70
	RING GASKET,BX153,2-9/16 10/15/20M				
16	780067-20E1		24.00	14.70	352.80
	STUD,ALL-THD W/2 HVY HEX NUTS,BLK,7/8-9UNC X 6-1/2,API 20E BSL-1 ASTM A193 GR B7 ALL THREAD STUD W/2 API 20E BSL-1 ASTM A194 GR 2H HEAVY HEX NUTS,NO PLATING				
17	135166		1.00	4,490.00	4,490.00
	TBGHGR,CW,T40-CCL,7-1/16 X 3-1/2 EU API MOD BOX BTM X 3-1/2 EU BOX TOP,W/3 HBPV THD,W/ TWO 1/4 CCL & DOVETAIL SEAL,CF 124316P2,10000 PSI MAX WP,17-4PH SS,TEMP PU,MATL FF-0,5,PSL2,PR2				
18	BX156		1.00	62.48	62.48
	RING GASKET,BX156,7-1/16 10/15/20M				
19	NVS		1.00	61.16	61.16
	NEEDLE VALVE,MFS,1/2 NPT MXF,10M PSI WP,CARBON STEEL BODY, 304/316SS STEM, TFE PACKING (NON-NACE)				
20	PG10M		1.00	58.24	58.24
	PRESSURE GAUGE,10M,4-1/2 FACE, LIQUID FILLED,1/2 NPT				
21	PRO	Prorata Freight	0.75	2,768.56	2,076.42
					49,338.02

OPTIONAL 15M ADAPTER

22	124999P2		0.00	7,423.00	0.00
	ADPT,TBGHD,CW,T40-CCL,7-1/16 15M STD X 3-1/16 10M STD,W/TWO #14 DHCV W/1/4 NPT INLET,10000 PSI MAX WP,TEMP PU,MAT'L EE,PSL2,PR2				
					0.00

For Acceptance of this Quotation
Please Contact Ph: 713-626-8800
sales@cactuswellhead.com

Matl:	47,261.60
Labor:	0.00
Misc:	2,076.42
Sales Tax:	0.00
Total:	49,338.02

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0001018

Date: 09/08/2023

Valid For 30 Days

CACTUS WELLHEAD, LLC PURCHASE TERMS AND CONDITIONS

1. **ACCEPTANCE**: Acceptance of Cactus Wellhead, LLC (herein: Company) Purchase Terms and Conditions (herein: CACTUS Purchase Terms) shall be deemed effective upon shipment of the Products and/or rendering of Services which are the subject of an order by Customer (defined as the party purchasing CACTUS Products and or Services referred on the invoice). Any proposal made by Customer for additional or different terms and conditions or any attempt by Customer to vary in any degree any of the terms and conditions of CACTUS Purchase Terms is hereby rejected.

2. **PRICING**. Each Product and Service shall be invoiced at (and Customer shall pay) the respective price shown on the reverse side hereof, or if no price is shown on the reverse side hereof, at the price shown in the current price list of Company. In addition, Customer shall pay any and all additional charges for mileage, transportation, freight, packing and other related charges, as well as any federal, state or local tax, excise, or charge applicable on the sale, transportation, or use of Products and Services, unless otherwise specified.

3. **TERMS OF PAYMENT**. Customer agrees to pay Company any and all payments due on or before thirty (30) days from invoice date at the designated address of Company. Amounts unpaid after such thirty (30) day period shall bear interest at the lesser of (i) one and one-half percent (1½%) per month or (ii) the maximum rate allowed by law. Customer shall also pay any and all of Company's attorney's fees and court costs if any amounts hereunder are collected by an attorney or through legal proceedings. Company reserves the right, among other remedies, either to terminate this agreement or to suspend further deliveries upon failure of Customer to make any payment as provided herein.

4. **LIMITED WARRANTY**. COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, AS TO THE MERCHANTABILITY, FITNESS FOR PURPOSE, DESCRIPTION, QUALITY, PRODUCTIVENESS, ACCURACY OR ANY OTHER MATTER WITH RESPECT TO PRODUCTS OR SERVICES, ALL SUCH WARRANTIES BEING HEREBY SPECIFICALLY AND EXPRESSLY DISCLAIMED BY COMPANY. COMPANY MAY OFFER TECHNICAL ADVICE OR ASSISTANCE WITH REGARD TO THE PRODUCTS AND SERVICES BASED ON LABORATORY AND/OR FIELD EXPERIENCE AND CUSTOMER UNDERSTANDS AND AGREES THAT SUCH ADVICE REPRESENTS ONLY GOOD FAITH OPINIONS AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE. THE SOLE AND EXPRESS WARRANTY PROVIDED BY COMPANY IS TO WARRANT THAT THE PRODUCTS SOLD AS LISTED ON THE REVERSE SIDE HEREOF COMPLY WITH COMPANY'S SOLE SPECIFICATION AT THE DATE AND TIME OF MANUFACTURE. COMPANY MAKES NO WARRANTY THAT SUCH PRODUCTS SHALL MEET SUCH SPECIFICATION AT ANY TIME AFTER SHIPMENT OF PRODUCTS. USE OF SUCH PRODUCTS IS SPECIFICALLY NOT WARRANTED.

5. **REMEDY**. The exclusive remedy for this warranty for Products shall be limited to, in Company's sole discretion and judgment, the replacement of defective part(s), F.O.B. Company's plant (transportation, redesign, dismantling, disposal of material and installation are not included and shall be borne and paid for by Customer), or repair of defective part(s). . The exclusive remedy for this warranty for Services shall be limited to the repeat of Services performed F.O.B. Company's plant (transportation, redesign, dismantling, disposal of material and installation are not included and shall be borne and paid for by Customer). Any such repeat of Services or replacement or repair of Products shall not include any materials not sold by Company hereunder, and specifically excludes any obligation by Company related to other property of the Customer or any property of third parties. Provided, however, Company may in its sole discretion, decide to instead give Customer credit memorandum for the amounts already paid by Customer to Company for such Product or Service. IN ANY EVENT AND NOTWITHSTANDING THE LANGUAGE TO THE CONTRARY HEREIN, CUSTOMER ACKNOWLEDGES THAT ANY CLAIM IT MAY HAVE ARISING OUT OF OR IN CONNECTION WITH ANY ORIGINAL PRODUCTS AND SERVICES, ANY REPLACEMENT PRODUCTS OR REPEAT OF SERVICES AND THESE CACTUS PURCHASE TERMS SHALL BE LIMITED TO AND NOT EXCEED THE AMOUNT CUSTOMER HAS ACTUALLY PAID TO COMPANY FOR SUCH PRODUCTS AND/OR SERVICES PURSUANT HERETO. If Customer fails to make any such claim within thirty (30) days after completion of Service or delivery of Products, Customer hereby waives (to the extent permitted by applicable law) any and all claims it may or does have with respect to such Products and Services. Unless Customer is an authorized reseller of Company, Company's liability in connection with Products and Services shall extend only to Customer. CUSTOMER HEREBY INDEMNIFIES AND HOLDS COMPANY (AND ITS AGENTS, REPRESENTATIVES, OFFICERS DIRECTORS AND EMPLOYEES) HARMLESS FOR ANY LOSS, EXPENSE OR DAMAGE (WHETHER OF CUSTOMER OR OF ANY THIRD PARTY) ARISING FROM OR IN CONNECTION WITH PRODUCTS AND SERVICES, INCLUDING WITHOUT LIMITATION ANY FAILURE OF SUCH PRODUCTS AND SERVICES TO CONFORM TO CUSTOMER'S ORDER OR SPECIFICATION OR ANY OTHER STANDARD, OR ANY NEGLIGENCE OR BREACH OF WARRANTY BY COMPANY WITH RESPECT TO ANYTHING DONE OR FAILED TO HAVE BEEN DONE BY COMPANY, IF AND TO THE EXTENT THAT SUCH LOSS, EXPENSE OR DAMAGE EXCEEDS THE AMOUNT CUSTOMER HAS ACTUALLY PAID COMPANY PURSUANT HERETO FOR SUCH PRODUCTS OR SERVICES.

6. **INSPECTION**. The results of any inspection or testing reported by the Company to Customer represents only good faith opinions and are not to be construed as warranties or guarantees of the quality, classification, merchantability, fitness for purpose, condition, or liability of any equipment or material that has been inspected or tested by the Company.

7. **INSURANCE**. Each party agrees to maintain comprehensive general liability insurance in the amount of $1,000,000 each occurrence, $2,000,000 general aggregate, and Workers Compensation insurance per statutory requirements providing coverage for the indemnity obligations in this agreement. The Company (and such of its affiliates as it shall designate) including their officers, directors, members, shareholders, partners, joint ventures, employees, agents and representatives shall be named as additional insureds under the policies of Customer on a primary basis to the extent of its indemnification obligations set forth in these CACTUS Purchase Terms, and the policies shall also provide a waiver of subrogation rights in favor of the Company (and such of its affiliates as it shall designate) and their officers, directors, members, shareholders, employees, agents and representatives. The provisions of this Section 7 shall apply and the obligation to maintain insurance of each party in the coverages and amounts set forth herein shall remain in force regardless and independent of the validity or enforceability of the indemnity provisions of Section 8, below; the obligation to obtain insurance is a separate and independent obligation. If the insurance required herein is more or less than allowed by prevailing law, the indemnity obligations in Section 8 below shall be effective only to the maximum extent permitted under applicable law.

8. **INDEMNIFICATION**. The following indemnifications and releases of liability will apply to any Products or Services provided under this contract. COMPANY AND CUSTOMER EXPRESSLY AGREE THAT, TO THE EXTENT REQUIRED BY APPLICABLE LAW TO BE EFFECTIVE, THE INDEMNITIES AND DISCLAIMERS OF WARRANTIES CONTAINED HEREIN ARE "CONSPICUOUS."

A. **Customer Indemnity Obligations**. Customer hereby releases Company from any liability for, and shall protect, defend, indemnify, and hold harmless Company, its parents, affiliates, subsidiaries, partners, joint owners, joint ventures, and its contractors and subcontractors of any tier, and the officers, directors, agents, representatives, employees, insurers, and consultants (specifically excluding any member of Customer Group) of all of the foregoing, and its and their respective successors, heirs and assigns ("Company Group") from and against all costs (including the payment of reasonable attorneys' fees), losses, liabilities, demands, causes of action, damages, or claims of every type and character ("Claims"), arising out of or resulting from or related, directly or indirectly, to (i) injury to, illness or death of Customer its parents, affiliates, subsidiaries, partners, joint owners, joint ventures, and its contractors and subcontractors of any tier, and the officers, directors, agents, representatives, employees, customers, insurers, invitees and consultants of all of the foregoing, and its and their respective successors, heirs and assigns ("Customer Group"), or (ii) loss of or damage to any property of any member of Customer Group, REGARDLESS OF THE CAUSE OF SUCH CLAIMS, INCLUDING THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP, BUT NOT IN THE CASE OF GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY MEMBER OF COMPANY GROUP.

B. **Company Indemnity Obligations**. Company hereby releases Customer from any liability for, and shall protect, defend, indemnify, and hold harmless Customer from and against all Claims arising out of or resulting from or related, directly or indirectly, to (i) injury to, illness or death of any member of Company Group, or (ii) loss of or damage to any property of any member of Company Group, REGARDLESS OF THE CAUSE OF SUCH CLAIMS, INCLUDING THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF CUSTOMER GROUP, BUT NOT IN THE CASE OF GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY MEMBER OF COMPANY GROUP.

C. **Third Party Claims**. Notwithstanding the foregoing, to the extent of its negligence, Company and Customer shall each indemnify, defend and hold harmless from and against all Claims, of every type and character, which are asserted by third parties for bodily injury, death or loss or destruction of property or interests in property in any manner caused by, directly or indirectly resulting from, incident to, connected with or arising out of the work to be performed, Services to be rendered or Products or materials furnished to Customer. When personal injury, death or loss of or damage to property is the result of joint or concurrent negligence of Customer and Company, the indemnitor's duty of indemnification shall be in proportion to its allocable share of such negligence.

D. **Pollution**. Company agrees that it shall be totally responsible for, and shall protect, defend and indemnify, Customer for all losses, damages, claims, demands, costs, charges, and other expenses, including attorneys' fees, for any and all waste and/or hazardous substances which are in Company Group's exclusive possession and control and directly associated with Company Group's equipment and facilities, EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF CUSTOMER GROUP. Customer shall assume all responsibility for, including control and removal of, and shall protect, defend and indemnify Company Group from and against all Claims arising directly or indirectly from all other pollution or contamination which may occur during the conduct of operations hereunder, including, but not limited to, that which may result from fire, blowout, cratering, seepage or any other uncontrolled flow of oil, gas, water or other substance, EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF COMPANY GROUP.

E. **Wild Well**. Customer shall release Company Group of any liability for, and shall protect, defend and indemnify Company Group for any damages, expenses, losses, fines, penalties, costs, expert fees and attorneys' fees arising out of a fire, blow out, cratering, seepage or wild well, including regaining control thereof, debris removal and property restoration and remediation. THIS INDEMNITY APPLIES EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE, ORDINARY OR GROSS) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP.

F. **Underground Damage**. Customer shall release Company Group of any liability for, and shall protect, defend and indemnify Company Group from and against any and all claims, liability and expenses resulting from operations related to the work under this agreement on account of injury to, destruction of, or loss or impairment of any property right in or to oil, gas or other mineral substance or water, if at the time of the act or omission causing such injury, destruction, loss or impairment said substance and not been reduced to physical possession above the surface of the earth, and for any loss or damage to any formation, strata, or reservoir beneath the surface of the earth. THIS INDEMNITY APPLIES EVEN IF THE LOSSES, DAMAGES, CLAIMS, DEMANDS, COSTS, FEES, AND EXPENSES ARE CAUSED NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE, ORDINARY OR GROSS) STRICT LIABILITY, OR ANY OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY MEMBER OF COMPANY GROUP.

G. The foregoing indemnities set forth in these CACTUS Purchase Terms are intended to be enforceable against the parties hereto in accordance with the express terms and scope hereof notwithstanding Texas' Express Negligence Rule or any similar directive that would prohibit or otherwise limit indemnities because of the negligence (whether sole, concurrent, active or passive, ordinary or gross) or other fault or strict liability of Company or Customer.

H. If a claim is asserted against one of the parties to this agreement which may give rise to a claim for indemnity against the other party hereto, the party against whom the claim is first asserted must notify the potential indemnitor in writing and give the potential indemnitor the right to defend or assist in the defense of the claim.

9. **RISK OF LOSS**.

A. Title and risk of loss shall pass to Customer upon delivery as specified in Article 11. Customer's receipt of any material delivered hereunder shall be an unqualified acceptance of, and a waiver by Customer of any and all claims with respect to, such material unless Customer gives Company written notice of claim within thirty (30) days after such receipt. Notwithstanding the foregoing, installation or use of materials or equipment shall unequivocally constitute irrevocable acceptance of said materials. Customer assumes all risk and liability for the results obtained by the use of any material or Products delivered hereunder in work performed by on behalf of Customer or in combination with other or substances. No claim of any kind, whether as to material delivered or for non-delivery of material, and whether or not based on negligence, shall be greater in amount than the purchase price of the

Cactus

Quotation

Hobbs, NM
4120 W Carlsbad Hwy
Hobbs NM 88240
Phone: 817-682-8336

Quote Number : HBE0001018

Date: 09/08/2023

Valid For 30 Days

material in respect of which such claim is made.

B. For Services, Company shall not be liable for loss or deterioration of any equipment and material of Customer under Company's control or stored on Company's premises after Company has completed its work if such loss or deterioration results from atmospheric condition, Act of God or other occurrence not within the reasonable control of Company.

10. **TERMINATION**. Company reserves the right to terminate the order at issue, or any part hereof, solely for its convenience at any time without cause with notice to Customer. Company shall have the right to cancel any unfilled order without notice to Customer in the event that Customer becomes insolvent, adjudicated bankrupt, petitions for or consents to any relief under any bankruptcy reorganization statute, violates a term of these CACTUS Purchase Terms, or is unable to meet its financial obligations in the normal course of business. In the event of such termination, Company shall immediately stop all work hereunder. Prior to delivery, Customer may terminate this order without cause upon thirty (30) day notice in writing to Company. In the event of such termination, Company at its sole option shall cease work up to thirty (30) days after such notice. Upon the cessation of work, Customer agrees to pay Company a reasonable termination charge consisting of a percentage of the Invoice price, such percentage to reflect the value of the Products, Services or work in progress completed upon the cessation of work. Customer shall also pay promptly to Company any costs incurred due to paying and settling claims of Company's vendors or subcontractors arising out of the termination of the order by Customer.

11. **DELIVERY**. Unless different terms are provided on the face of this order, all items are sold FOB Company's manufacturing facility in Bossier City, LA., and Customer shall bear the cost of transportation to any other named destination. Upon notification of Company of delivery, Customer shall become liable and shall bear all risk of loss associated with the Products at issues regardless of whether the Products are at a location controlled by Company and whether or not caused by the negligence of Company. In the case of Customer pick-up, the truck furnished by Customer is the destination and Company's obligations regarding shipments are fulfilled when the Products are loaded on the truck. Items to be shipped to any other destination outside of the United States are sold FOB port of shipment (Customer will deliver and bear the cost of transportation to the named port and will bear the cost of transportation thereafter to the final destination). The means of shipment and carrier to the point at which Company's liability for transportation costs ceases shall be chosen by Company. Excess packing, marking, shipping, and transportation charges resulting from compliance with Customer's request shall be for Customer's account. Unless otherwise agreed in writing, delivery time is not of the essence.

12. **RETURNS/REFUND**. Within ninety (90) days of delivery, Customer has the option to return any non-defective Products (any Products found to be defective will be subject to the warranty and remedies expressed in paragraphs four (4) and five (5) above). Customer shall bear all costs of shipment and/or transportation for such return and risk of loss for the returned Products shall remain with Customer until re-delivered to Company's Yard. Customer shall receive a full refund for any returns, less a twenty percent (20%) restocking fee. Company at all times reserves the right to designate certain Products as non-refundable in Company's Sales Quote or Sales Order. In addition, any made-to-order , special order, and/or Product manufactured to Customer specifications are NOT returnable.

13. **DELAYS**. If a specific shipping date is either not given or is estimated only, and is not promised on the face of this order or in a separate writing signed by Company, Company will not be responsible for delays in filling this order nor liable for any loss or damages resulting from such delays. If a specific shipping date is promised, Company will not be liable for delays resulting from causes beyond Company's control, including without limitation accidents to machinery, fire, flood, act of God or other casualty, vendor delays, labor disputes, labor shortages, lack of transportation facilities, priorities required by, requested by, or granted for the benefit of any governmental agency, or restrictions imposed by law or governmental regulation.

14. **LIMITATION OF DAMAGES**. Notwithstanding any other provision contained herein, Company shall not be liable to Customer Group or any third party for consequential (whether direct or indirect damages), indirect, incidental, special or punitive damages, howsoever arising, including, but not limited to loss of profits (whether direct or indirect damages), revenues, production or business opportunities, WHETHER OR NOT SUCH LOSSES ARE THE RESULT IN WHOLE OR IN PART FROM THE NEGLIGENCE (WHETHER SOLE, JOINT, CONCURRENT OR COMPARATIVE, ACTIVE OR PASSIVE, ORDINARY OR GROSS) OF COMPANY GROUP, OR ANY DEFECT IN THE PREMISES, PRE-EXISTING CONDITIONS, PATENT OR LATENT, BREACH OF STATUTORY DUTY, STRICT LIABILITY OR ANY OTHER THEORY OF LEGAL LIABILITY OF COMPANY GROUP (EXCLUDING ONLY LOSSES CAUSED BY THE WILLFUL MISCONDUCT OF COMPANY GROUP).

15. **SECURITY INTEREST**. Customer grants Company, and Company reserves, a security interest, covering all Customer's obligations under these terms (including any liability for breach of Customer's obligations), and applying to all of Customer's right, title, and interest in the Leased Equipment, together with all accessions thereto and any proceeds that may arise in connection with the sale or disposition thereof. Customer shall cooperate with Company in the filing of Financing Statements to perfect such security interest. Furthermore, Customer authorizes Company to execute and file Financing Statements without Customer's signature in any jurisdiction in which such procedure is authorized. Customer warrants, covenants and agrees that it will not, without prior written consent of Company, sell, contract to sell, lease, encumber, or dispose of the Leased Equipment or any interest in it until all obligations secured by this security interest have been fully satisfied.

16. **PATENT AND INTELLECTUAL PROPERTY**. The sale of any Products hereunder does not convey any intellectual property license by implication, estoppel or otherwise regarding the Products. Company retains the copyright in all documents, catalogs and plans supplied to Customer pursuant to or ancillary to the contract. Unless otherwise agreed in writing, Customer shall obtain no intellectual property interest in any Company Product.

17. **TAXES**. Unless otherwise specifically provided for herein, Customer shall be liable for all federal, state, or local taxes or import duties assessed by any governmental entity of any jurisdiction in connection with the Products or Services furnished hereunder.

18. **DECEPTIVE TRADE PRACTICES**. Customer acknowledges the application of Section 17.45(4) of the Texas Deceptive Trade Practices Act (Texas Business Commission Code §17.41 et. seq.) (the "Act") to any transaction contemplated hereby and represents that it is not a "consumer" for the purposes of the Act.

19. **NO WAIVER**. Failure to enforce any or all of the provisions in these CACTUS Purchase Terms in any particular instance shall not constitute or be deemed to constitute a waiver of or preclude subsequent enforcement of the same provision or any other provision of these CACTUS Purchase Terms. Should any provision of these CACTUS Purchase Terms be declared invalid or unenforceable all other provisions of these CACTUS Purchase Terms shall remain in full force and effect.

20. **CHOICE OF LAW**. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND SHALL BE PERFORMABLE IN HARRIS COUNTY, TEXAS. WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPALS AND WAIVER OF SAME, EACH PARTY HERETO SUBMITS TO THE JURISDICTION OF THE COURTS OF THE STATE OF TEXAS IN HARRIS COUNTY, TEXAS AND THE FEDERAL COURTS IN AND FOR THE SOUTHERN DISTRICT OF TEXAS SITTING IN HOUSTON, TEXAS IN CONNECTION WITH ANY DISPUTE ARISING UNDER THIS AGREEMENT OR ANY DOCUMENT OR INSTRUMENT ENTERED INTO IN CONNECTION HEREWITH.

21. **AUTHORITY**. Customer warrants and represents that the individual receiving this order at issue on behalf of Customer has the authority to enter into these CACTUS Purchase Terms on behalf of Customer, and that upon receipt these CACTUS Purchase Terms shall be binding upon Customer.

22. **FORCE MAJEURE**. If Company is unable to carry out its obligations hereunder by reason of force majeure, then upon Company's giving of notice and reasonably full particulars of such force majeure in writing to Customer, Company's obligations that are affected by force majeure shall be suspended during the continuance of the force majeure and Company shall not be liable to Customer for any damages incurred by the Customer as a result thereof.

23. **CONFIDENTIALITY**. Customer acknowledges the highly secret and valuable nature of all proprietary inventions, methods, processes, designs, know-how, and trade secrets embodied in the Company's equipment, Products and Services and its components (hereinafter referred to as "Confidential Data"). Accordingly, Customer agrees not to disclose or use any Confidential Data. Customer further agrees to take any and all necessary precautions to prevent disclosure of the Confidential Data associated with the Company's equipment, Products and Services and components thereof to persons other than those employees of Customer for whom such disclosure is necessary for performance of the work hereunder.

24. **COMPLIANCE**. Customer expressly agrees to comply with and abide by, all of the laws of the United States and of the State of Texas, including, but not limited to, OSHA, EPA and all rules and regulations now existing or that may be hereafter promulgated under and in accordance with any such law or laws, and hereby agrees to indemnify and hold Company harmless from any and all claims, demands, or damages incurred by Company arising from Customer's failure to comply with all laws and governmental regulations. The indemnities in this paragraph shall be in addition to any other indemnity obligations between Customer and Company, including any other indemnity obligations contained herein.

Gates Engineering & Services UK Ltd		CERTIFICATE OF CONFORMITY	
Doc. Ref.	Form-056		
Revision	4		

Gates SO No. 31675	**Customer Name & Address:** **Gates Engineering & Services North America** **7603, Prairie Oak Drive** **Suite 190** **Houston, TX 77086** **United States**
Clients PO No: 1714987/ 0	
Description: 3" Choke & Kill Hose x 35ft	

This is to certify that the components listed below have been supplied in accordance API 16C & with the referenced order number above. The assemblies listed below have been manufactured and tested in the UK

SPECIFICATION

ITEM	DESCRIPTION	Drawing Num	QTY
2	3" Choke & Kill Hose x 35ft complete with 4.1/16" API 6A 10K Fixed Flange with BX155 Inlaid Ring Groove on one end & 4.1/16" API 6A 10K Swivel Flange with BX155 Inlaid Ring Groove On the other end	31675-DW-001, Rev 0	1
	Hose Batch: 120839		
	Hose Assembly: 120840		
	Customer Tag: N/A		
	Working Pressure: 10000 PSI		
	Test Pressure: 15000 PSI		
	Standard: API 16C		
	PSL: FSL 3		
	Material Grade: F		
	Temperature Rating: -25 to +100 Deg C		

Accepted by..S A Tait..... 17/02/20 ..... **for and on behalf of Gates Engineering & Services UK Ltd**

Gates Engineering & Services UK Limited QA Approved

Gates Engineering & Services UK Ltd		PRESSURE TEST CERTIFICATE	
Doc. Ref.	Form-051		
Revision	9		

	Certificate No:
☐ BURST ☑ HYDROSTATIC ☐ CYCLIC	31675-002

Product:	3” Choke & Kill Hose	**Hose WO/Batch:**	120839
Assembly WO:	120840	**Length:**	35Ft
SO No:	31675	**Date:**	11/02/20
Client:	Gates Engineering & Services North America	**Client Reference:**	1714987/ 0

Inner Diameter:	3	**Inch**		
Working Pressure:	10000	**Psi**	690	**bar**
Test Pressure:	15000	**Psi**	1034	**bar**
Burst Pressure:	22500	**Psi**	1551	**bar**

Hose Description:	3” Choke & Kill Hose x 35ft complete with 4.1/16" API 6A 10K Fixed Flange with BX155 Inlaid Ring Groove on one end & 4.1/16" API 6A 10K Swivel Flange with BX155 Inlaid Ring Groove On the other end	
Item No	**Qty**	**Part Code**	**Customer Tag No (if applicable)**
2	1	HA31623-001	N/A

Details of Test:	Pressure tested with water at ambient temperature for 60 minutes at test pressure 1034 BAR, Chart recording done with Yokagawa Data Logger S/N: S5NC08915 Transducer ESI GS4200EX3000DE ID:TD/DC-002, S/N: 2018-741502 Calibration Certificate No: IKMCERTL9111
Results:	Pressure Loss: 11.4 Bar Acceptance Criteria: Pressure loss not to exceed - 34.47 Bar or 500 PSI

GESUK Ltd	Third Party
17/02/20	

CR 374

File Message : 120840 FAT
Device Type : DX2000
Serial No. : S5NC08915

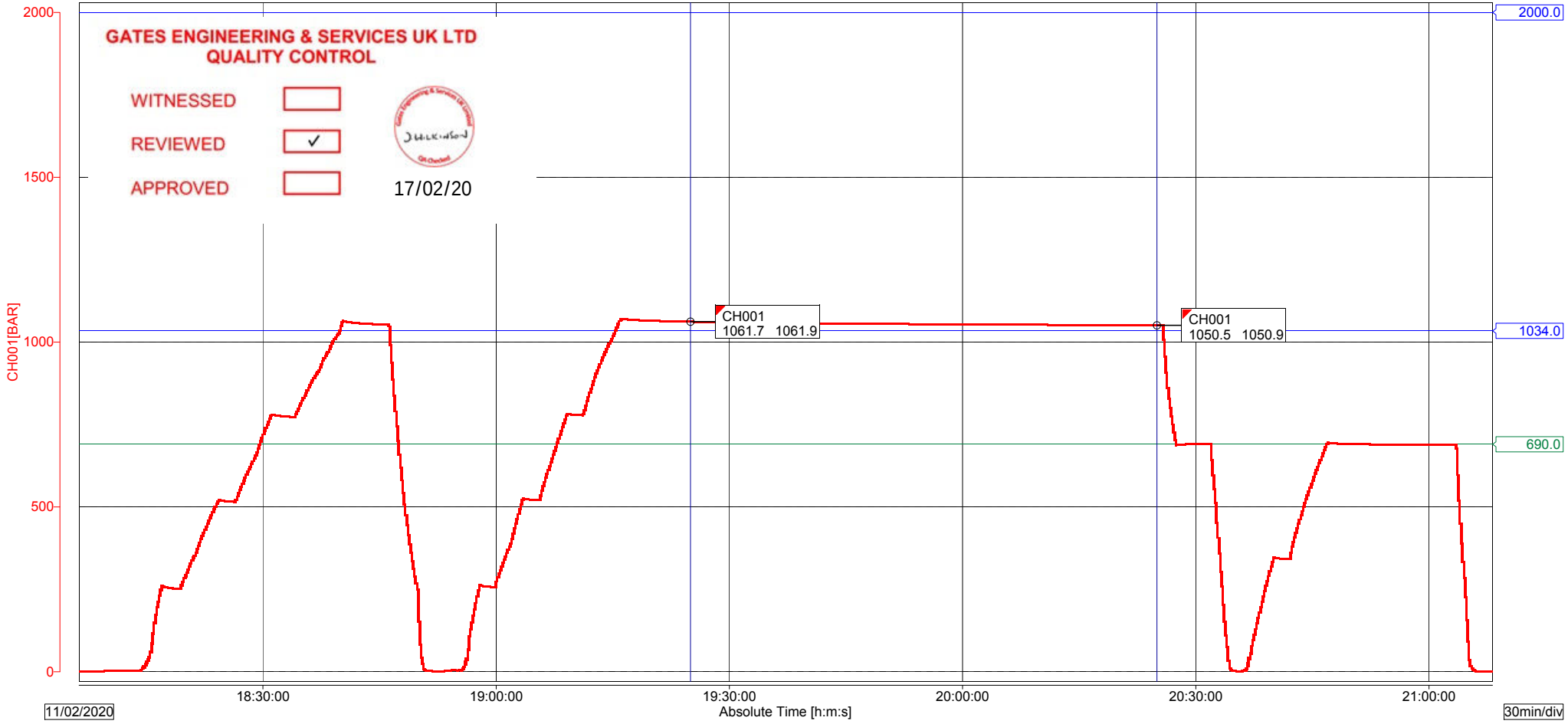
Start Time : 11/02/2020 18:06:20.000
Stop Time : 11/02/2020 21:08:10.000

Print Groups : GROUP 1
Print Range : 11/02/2020 18:06:20.000 - 11/02/2020 21:08:10.000
Comment : Factory Acceptance Test

		Cursor A	Cursor B	Difference
Data No.		472	832	360
Absolute Time		11/02/2020 19:25:00.000	11/02/2020 20:25:00.000	01:00:00.000
Channel		Value A	Value B	Value B-A
CH001 [BAR]	Max	1061.9	1050.9	-11.0
	Min	1061.7	1050.5	-11.2

Section 472 - 832 11/02/2020 19:25:00.000 - 11/02/2020 20:25:00.000

Channel	MIN	MAX	P-P	Mean	RMS
CH001[BAR]	1050.5	1061.9	11.4	1055.0	1055.1



TUSK LIFTING

REPORT OF THOROUGH EXAMINATION OF LIFTING EQUIPMENT

IN ACCORDANCE WITH LIFTING OPERATIONS AND LIFTING EQUIPMENT REGULATIONS 1998

ALL ITEMS ON THIS REPORT ARE SAFE TO USE

NAME & ADDRESS OF COMPANY FOR WHOM THE EXAMINATION WAS MADE	ADDRESS OF THE PREMISES WHERE THE EXAMINATION WAS MADE		
Gates Engineering & Services UK Ltd Bassington Drive Bassington Industrial Estate Cramlington NE23 8AS	Tusk Lifting Ltd 49D Sadler Forster Way Teesside Industrial Estate Stockton-On-Tees TS17 9JY	DATE OF REPORT	08/01/2020
		REPORT NO	13322
		CUSTOMER REFERENCE	052628
		CONTRACT NO.	0000059501

QTY	ID NO.	DESCRIPTION OF EQUIPMENT INCLUDING MANUFACTURER AND DATE OF MANUFACTURE	SWL / WLL	EWL	EXAM REASON (SEE BELOW)	TEST APPLIED	LATEST DATE OF NEXT THOROUGH EXAMINATION
50.00	643615/1 - 643615/50	10mm x 6ft HCP Coated Chain Sling c/w 4.75t Safety Pin Bow Shackle each end	4 TONNE	6 FT	B	VISUAL	08/07/2020

REASON FOR EXAMINATION: **A** - NEW INSTALLATION OR NEW LOCATION; **B** - WITHIN 6 MONTHS; **C** - WITHIN 12 MONTHS; **D** - WRITTEN SCHEME; **E** - EXCEPTIONAL CIRCUMSTANCES.

NAME AND QUALIFICATION OF PERSON MAKING THE REPORT

Jimmy Joyce, Company Approved Examiner

SIGNATURE

NAME OF THE PERSON AUTHENTICATING THE REPORT

Julie Montgomery, Planner

SIGNATURE

DATE OF THOROUGH EXAMINATION **08/01/2020**

OPERATING INSTRUCTIONS CAN BE FOUND ON OUR WEBSITE, HTTP://WWW.TUSKLIFTING.CO.UK
THE ORIGINAL MANUFACTURERS EC DECLARATION OF CONFORMITY IS HELD ON FILE AT OUR PREMISES AND IS AVAILABLE UPON REQUEST

Tusk Lifting Ltd.
49D Sadler Forster Way. Teesside Industrial Estate.
Stockton On Tees. TS17 9JY

T. 01642 915330
E. teesside@tusklifting.co.uk
W. tusklifting.co.uk

VAT. GB258876247
REG. 10497383

MAMMOET

LEEA Full Member

IMB52628

William Hackett
Lifting Products Limited

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001
ENVIRONMENTAL SYSTEM CERTIFICATION DNV·GL ISO 14001
SAFETY SYSTEM CERTIFICATION DNV·GL ISO 45001
LEEA Full Member

DUAL PURPOSE DOCUMENT

EC DECLARATION OF CONFORMITY — A

DECLARATION

I DECLARE THAT THE ITEMS DESCRIBED ON THIS DOCUMENT COMPLY WITH THE REQUIREMENTS OF THE MACHINERY DIRECTIVE 2006/42/EC

MANUFACTURER'S CERTIFICATE — B

CERTIFIED ON BEHALF OF THE COMPANY

T.J. BURGESS 17/12/2019

Delivery Address

TUSK LIFTING LTD (STOCK)
49D SADLER FORSTER WAY
TEESIDE INDUSTRIAL ESTATE
STOCKTON ON TEES
TS17 9JY

Supplied To:	TUS002
Certificate Number:	**L072222**
Customer Order No:	7557
Date Received:	17/12/2019

PRODUCTS REQUIRING A DECLARATION OF CONFORMITY ARE INDICATED BY (A)
THOSE REQUIRING JUST A MANUFACTURER'S CERTIFICATE BY (B)

Authorised person for the configuration of the declaration documents: Tim Burgess, William Hackett Lifting Products, Alnwick, UK

A/B	Batch	Lot No / Serial No	Product	Description	Qty	Working Load Limit	Proof Load	Min Breaking Load
A	P02637	643615/1-50	HNZZZ.100.TUSK	10mm grade 10 chain sling assembly. Comprising of: 1 x 4.75t Safety Bow Shackle, 1 x 10mm connector, 10mm grade 10 chain, 1 x 10mm connector and 1 x 4.75t Safety Bow Shackle.	50	4t		

OAK DRIVE, LIONHEART ENTERPRISE PARK, ALNWICK, NORTHUMBERLAND NE66 2EU
Tel. + 44 (0) 1665 604200 Fax. + 44 (0) 1665 604204 Email: info@williamhackett.co.uk
Website: www.williamhackett.co.uk Co. Registration No. 09679580 VAT Reg. No. 217 3508 23

Report Version 2-5

IMB52628

William Hackett
Lifting Products Limited

3.1 Material Certificate

DATE: 18.12.2019	**PURCHASE ORDER NO. 7557**

CUSTOMER	TUSK LIFTING LIMITED
ADDRESS	49D SADLER FORSTER WAY TEESIDE IND EST STOCKTON ON TEES TS17 9JY

PRODUCT CODE: ASV.100.5	Marking: 1235
DESCRIPTION: 10MM GRADE 10 LIFTING CHAIN – Q61076	

Chemical Composition –

	%
C	0,215
Si	0,216
Mn	1,222
P	0,0076
S	0,0071
Ni	0,947
Cr	0,554
Cu	-
Mo	0,595
AL	0,0337

Trading & Registered Office: Oak Drive, Lionheart Enterprise Park, Alnwick, Northumberland NE66 2EU
Tel: +44 (0) 1665 604200 Fax: +44 (0) 1665 604204 Email: info@williamhackett.co.uk
Website: www.williamhackett.co.uk CRN: 09679580 VAT Registration No. 217 3508 23

YOKE®
Safety is our first priority™

YOKE INDUSTRIAL CORP.
#39,33rd Road, Taichung Industrial Park,
TAICHUNG 407, TAIWAN
TEL:+886-4-2350 8088
FAX:+886-4-2350 1001

Q6|259

IMB52628

Test Certificate

80059145-000730

TO : WILLIAM HACKETT LIFTING PRODUCTS LTD
Oak Drive,
Lionheart Enterprise Park,
Alnwick, Northumberland, NE66 2EU,
United Kingdom
Tel: 44-1665604200

Invoice NO: 90059797

Description: ITEM: X-015-10
G100,Connecting Link,10mm,3/8"
Batch No : YUA
Quantity : 1,800 PC

C	Si	Mn	P	S	Cr	Mo	Ni	Fe
0.18~0.30	0.15~0.40	0.70~1.30	<0.035	<0.04	0.40~1.10	0.15~0.40	0.40~1.00	other

Material :	Alloy Steel
Mini. Breaking Load :	157kN
Magnetic Flux Crack Tested :	100% of above quantity

Proof Load Test 100% :	98.1kN
Fatigue Rate 20000 cycle :	58.8kN
Working Load Limit :	4.0tonnes

TESTING ACCORDING TO ASTM A952/A 952M、DIN PAS 1061、EN1677-1
ISO 9001:2015 Certification by DNV and API
Inspection Test Certificate meet the EN 10204 3.1

TEST RESULT
Pass

YOKE INDUSTRIAL CORP.
Jason Yu
Dated: May 14, 2019
Qualification: QA Manager

YOKE INDUSTRIAL CORP.
#39,33rd Road, Taichung Industrial Park,
TAICHUNG 407, TAIWAN
TEL:+886-4-2350 8088
FAX:+886-4-2350 1001

Safety is our first priority™

061396

IMB52628

Test Certificate

80062821-000450

TO: WILLIAM HACKETT LIFTING PRODUCTS,LTD
Oak Drive,
Lionheart Enterprise Park,
Alnwick, Northumberland, NE66 2EU,
United Kingdom
Tel: 44-1665604200

Invoice NO: 90064302

Description: ITEM: DA-808-19
DA Bolt Pin Anchor Shackle, 3/4"
(Your PO no. 601644)
Batch No : AAA/AA
Quantity : 1,142 PC

C	Si	Mn	P	S	Cr	Mo	Ni	Fe
0.38~0.43	0.15~0.35	0.60~1.00	<0.035	<0.040	0.90~1.00	0.15~0.30	<0.1%	other

Material :	Alloy Steel	Proof Load Test 100% :	93kN
Mini. Breaking Load :	373kN	Fatigue Rate 20000 cycle :	70kN
Magnetic Flux Crack Tested :	100% of above quantity	Impact Test (-40℃) :	42J
Working Load Limit :	4.75tonnes		

TESTING ACCORDING TO EN 13889、RR-C-271F、DNVGL-ST-E273、EN 12079-2、IMO/MSC Circular 860
ISO 9001:2015 Certification by DNVGL and API
Inspection Test Certificate meet the EN 10204 3.1
These shackle have been designed, approved and tested in accordance with
DNVGL-ST-E271 Offshore Containers
This certificate is based on DNVGL type approval NO. S-8059

TEST RESULT
Pass

YOKE INDUSTRIAL CORP.
Jason Yu
Dated: September 30, 2019
Qualification: QA Manager

IML52690

TUSK LIFTING

REPORT OF THOROUGH EXAMINATION OF LIFTING EQUIPMENT

IN ACCORDANCE WITH LIFTING OPERATIONS AND LIFTING EQUIPMENT REGULATIONS 1998

ALL ITEMS ON THIS REPORT ARE SAFE TO USE

NAME & ADDRESS OF COMPANY FOR WHOM THE EXAMINATION WAS MADE	ADDRESS OF THE PREMISES WHERE THE EXAMINATION WAS MADE		
Gates Engineering & Services UK Ltd Bassington Drive Bassington Industrial Estate Cramlington NE23 8AS	Tusk Lifting Ltd 49D Sadler Forster Way Teesside Industrial Estate Stockton-On-Tees TS17 9JY	DATE OF REPORT	21/01/2020
		REPORT NO	13586
		CUSTOMER REFERENCE	052690
		CONTRACT NO.	0000059627

QTY	ID NO.	DESCRIPTION OF EQUIPMENT INCLUDING MANUFACTURER AND DATE OF MANUFACTURE	SWL / WLL	EWL	EXAM REASON (SEE BELOW)	TEST APPLIED	LATEST DATE OF NEXT THOROUGH EXAMINATION
30.00	IMK52690/01 - IMK52690/30	3.6T Safety Clamp CS Galv - 195MM Material CERT : GI9268	3.6 TONNE	-	B	PROOF LOAD	21/07/2020
20.00	IML52690/01 - IML52690/20	3.6T Safety Clamp CS Galv - 195MM Material CERT : GI9268	3.6 TONNE	-	B	PROOF LOAD	21/07/2020

REASON FOR EXAMINATION: **A** - NEW INSTALLATION OR NEW LOCATION; **B** - WITHIN 6 MONTHS; **C** - WITHIN 12 MONTHS; **D** - WRITTEN SCHEME; **E** - EXCEPTIONAL CIRCUMSTANCES.

NAME AND QUALIFICATION OF PERSON MAKING THE REPORT

Jimmy Joyce, Company Approved Examiner

SIGNATURE

NAME OF THE PERSON AUTHENTICATING THE REPORT

Julie Montgomery, Planner

SIGNATURE

DATE OF THOROUGH EXAMINATION **21/01/2020**

OPERATING INSTRUCTIONS CAN BE FOUND ON OUR WEBSITE, HTTP://WWW.TUSKLIFTING.CO.UK
THE ORIGINAL MANUFACTURERS EC DECLARATION OF CONFORMITY IS HELD ON FILE AT OUR PREMISES AND IS AVAILABLE UPON REQUEST

Tusk Lifting Ltd.
49D Sadler Forster Way. Teesside Industrial Estate.
Stockton On Tees. TS17 9JY

T. 01642 915330
E. teesside@tusklifting.co.uk
W. tusklifting.co.uk

VAT. GB258876247
REG. 10497383

MAMMOET

LEEA Full Member

IML52690

CELSA STEEL UK
OFFICES: Build. 58, Castle Works, East Moors Road
CF24 5NN Cardiff (United Kingdom)

CELSA GROUP

CELSA MANUFACTURING UK

CE UK MADE

LRV ID N: 0038
06
Cert No: 0038/CPR/LRQ4002811/1
DOP: CELSAUK001 EN10025
Hot rolled structural steel products

INSPECTION CERTIFICATE
BS-EN 10204-2004, TYPE 3.1

Standard
BS-EN 10025-2004

Customer:
CARTER STEEL LTD
YARM ROAD, STOCKTON
TS18 3SA STOCKTON
United Kingdom

Destination:
CARTER STEEL LTD
YARM ROAD, STOCKTON
TS18 3SA STOCKTON
United Kingdom

Delivery number: 2550169238
Order number : 15705941
Your order : 11049

MATERIAL Hot rolled structural steel products	CAST	C %	MN %	SI %	S %	P %	Cr %	N %	Ni %	Cu %	Mo %	V %	CE %	Reh MPA	Rm MPA	A 5.65 %	T °C	Impact 1 J	Impact 2 J	Impact 3 J	Impact Avg. J
S275 JR+AR FL130X10 L.6m	CM124288	0.10	0.53	0.14	0.026	0.020	0.117	0.010	0.14	0.55	0.021	0.001	0.260	328	464	34.8					
S275 JR+AR FL130X10 L.6m	CM124288	0.10	0.53	0.14	0.026	0.020	0.117	0.010	0.14	0.55	0.021	0.001	0.260	325	467	35.3					
S275 JR+AR FL130X10 L.6m	CM124288	0.10	0.53	0.14	0.026	0.020	0.117	0.010	0.14	0.55	0.021	0.001	0.260	329	465	35.2					
S275 JR+AR FL130X10 L.6m	CM124288	0.10	0.53	0.14	0.026	0.020	0.117	0.010	0.14	0.55	0.021	0.001	0.260	323	465	35.2					
S275 JR+AR FL130X12 L.6m	CM124207	0.10	0.56	0.16	0.035	0.022	0.124	0.009	0.14	0.47	0.021	0.001	0.259	317	452	33.8		Red.	X		
S275 JR+AR FL130X12 L.6m	CM124207	0.10	0.56	0.16	0.035	0.022	0.124	0.009	0.14	0.47	0.021	0.001	0.259	323	451	33.8					
S275 JR+AR FL150X12 L.6m	CM127200	0.10	0.54	0.15	0.023	0.018	0.086	0.010	0.11	0.44	0.014	0.002	0.250	313	448	32.5					
S275 JR+AR FL150X12 L.6m	CM127200	0.10	0.54	0.15	0.023	0.018	0.086	0.010	0.11	0.44	0.014	0.002	0.250	308	450	32.0					
S275 JR+AR FL150X6 L.6m	CM127310	0.11	0.57	0.15	0.023	0.019	0.105	0.008	0.10	0.40	0.015	0.001	0.260	298	462	37.6					
S275 JR+AR FL150X6 L.6m	CM127310	0.11	0.57	0.15	0.023	0.019	0.105	0.008	0.10	0.40	0.015	0.001	0.260	319	459	32.5					
S275 JR+AR FL150X6 L.6m	CM127310	0.11	0.57	0.15	0.023	0.019	0.105	0.008	0.10	0.40	0.015	0.001	0.260	318	457	37.5					
S275 JR+AR FL50X15 L.6m	CM124647	0.08	0.53	0.14	0.023	0.020	0.097	0.012	0.20	0.52	0.021	0.001	0.244	320	448	33.2					
S275 JR+AR FL50X15 L.6m	CM124647	0.08	0.53	0.14	0.023	0.020	0.097	0.012	0.20	0.52	0.021	0.001	0.244	329	447	33.8					
S275 JR+AR FL50X15 L.6m	CM124647	0.08	0.53	0.14	0.023	0.020	0.097	0.012	0.20	0.52	0.021	0.001	0.244	326	448	33.9					
S275 JR+AR FL50X15 L.6m	CM124647	0.08	0.53	0.14	0.023	0.020	0.097	0.012	0.20	0.52	0.021	0.001	0.244	322	447	33.5					

The materials has been evaluated and radiation is within national limits
Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.

Steel making process :
Electric arc

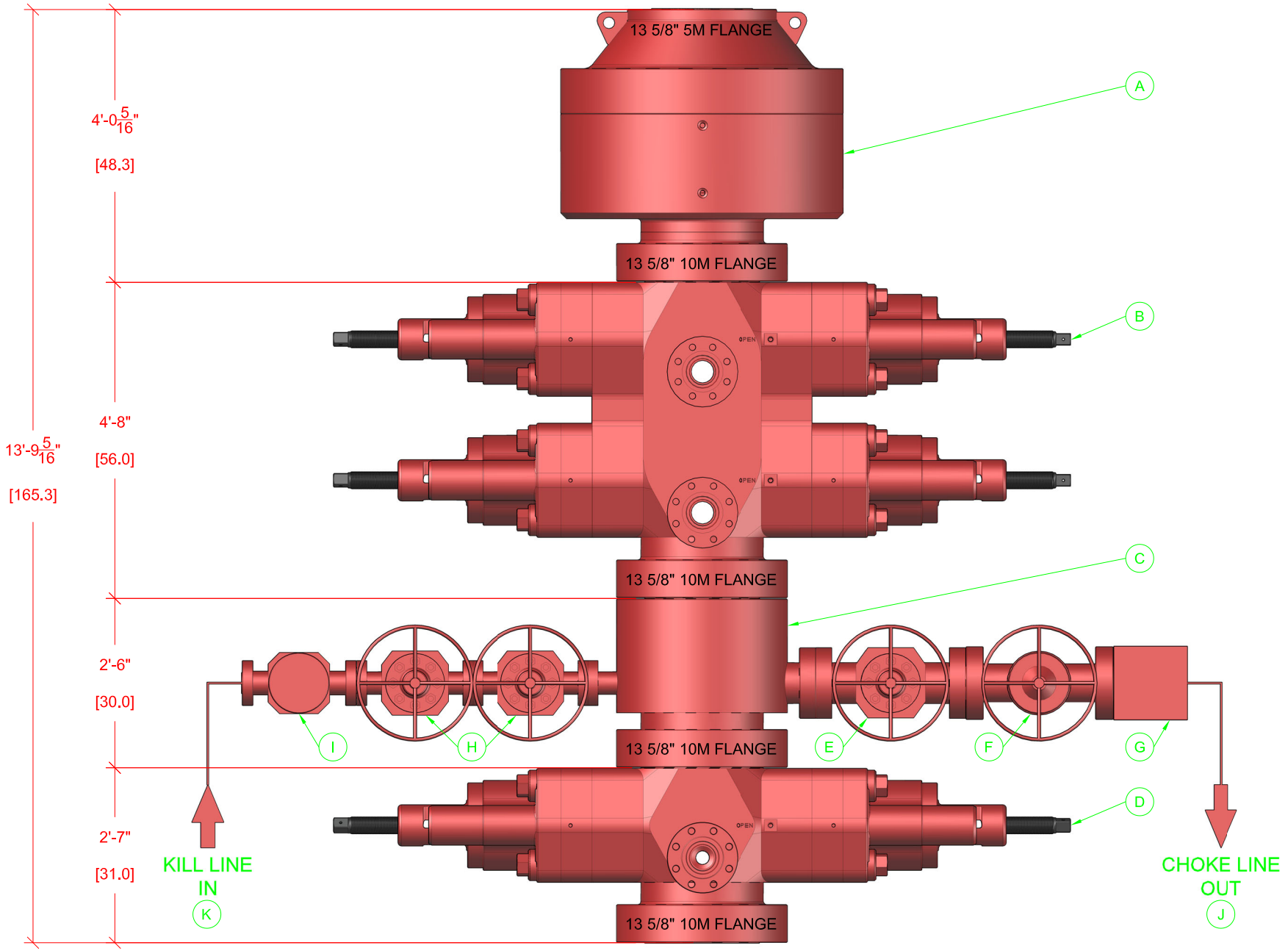
Certified that the material detailed hereon meets the requirements of the specified standard.

Cardiff, 20.08.2019

Stuart Thomas
Quality Manager

THIS IS A VERIFIED TRUE COPY OF AN ORIGINAL CERTIFICATE
CARTER STEEL LTD

CARTER STEEL LTD
DATE 21.8.2019
ORDER No 1104-9
CHECKED BY:
PAGE: 1 2



BOP EQUIPMENT INFORMATION

DESCRIPTION	MODEL	QTY
ANNULAR BOP	13 5/8" 5M	1
DOUBLE RAM BOP	13 5/8" 10M TYPE-U	1
MUD CROSS	13 5/8" 10M	1
SINGLE RAM BOP	13 5/8" 10M TYPE-U	1
GATE VALVE	4 1/16" 10M FC MANUAL	1
HCR VALVE	4 1/16" 10M HCR	1

ITEM	DESCRIPTION	MODEL	QTY
G	STUDDED BLOCK	4 1/16" 10M	1
H	GATE VALE	2 1/16" 10M FC MANUAL	2
I	CHECK VALVE	2 1/16" 10M	1
J	CHOKE HOSE	4 1/16" 10M	1
K	KILL HOSE	2 1/16" 10M	1
L			

SYM	DATE	REVISION	BY

TOLERANCE UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES

DECIMAL	DIMENSION	CONCENTRICITY
X.X	± .1	.1 F.I.R.
X.XX	± .06	.06 F.I.R.
X.XXX	± .010	.010 F.I.R.

ANGLES ± .5 DEGREES

ACAD FILE: CAC148-A-005-00-RO

CUSTOMER INFO:

FILE: R-148_BOP.dwg

DWG BY	IJA	9/10/2021
CHK BY		
APP BY		

SCALE: 1:25

CACTUS Drilling Co., L.L.C.
Oklahoma City, OK, U.S.A.
Tel: 405-577-5347 Fax: 405-577-9306

TITLE:
RIG 148
BOP STACK-UP

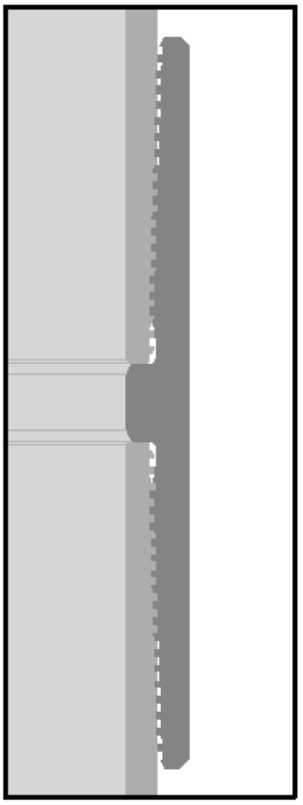
SIZE A | CAC148-A005 | SHEET 1/1

Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
DWC/C-IS PLUS Casing STANDARD	5-1/2 in	23.00 lb/ft (0.415 in)	VST P110 RY

	Material
VST P110 RY	Grade
110,000	Minimum Yield Strength (psi.)
125,000	Minimum Ultimate Strength (psi.)
	Pipe Dimensions
5.500	Nominal Pipe Body O.D. (in.)
4.670	Nominal Pipe Body I.D. (in.)
0.415	Nominal Wall Thickness (in.)
23.00	Nominal Weight (lbs./ft.)
22.56	Plain End Weight (lbs./ft.)
6.630	Nominal Pipe Body Area (sq. in.)
	Pipe Body Performance Properties
729,000	Minimum Pipe Body Yield Strength (lbs.)
14,540	Minimum Collapse Pressure (psi.)
14,530	Minimum Internal Yield Pressure (psi.)
13,300	Hydrostatic Test Pressure (psi.)
	Connection Dimensions
6.300	Connection O.D. (in.)
4.670	Connection I.D. (in.)
4.545	Connection Drift Diameter (in.)
4.13	Make-up Loss (in.)
6.630	Critical Area (sq. in.)
100.0	Joint Efficiency (%)
	Connection Performance Properties
729,000	Joint Strength (lbs.)
22,640	Reference String Length (ft) 1.4 Design Factor
759,000	API Joint Strength (lbs.)
729,000	Compression Rating (lbs.)
14,540	API Collapse Pressure Rating (psi.)
14,530	API Internal Pressure Resistance (psi.)
91.7	Maximum Uniaxial Bend Rating [degrees/100 ft]
	Approximated Field End Torque Values
17,700	Minimum Final Torque (ft.-lbs.)
20,400	Maximum Final Torque (ft.-lbs.)
23,000	Connection Yield Torque (ft.-lbs.)

VAM USA
2107 CityWest Boulevard Suite 1300
Houston, TX 77042
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com



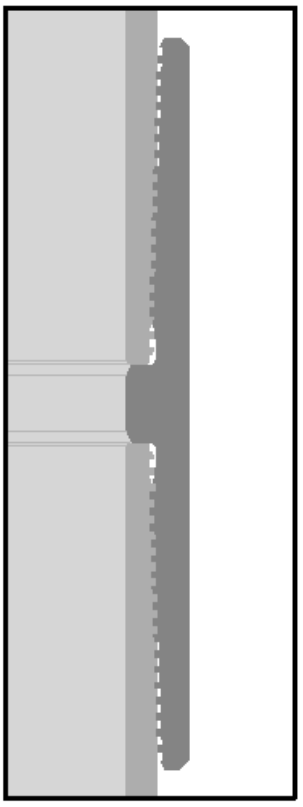
For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

10/08/2020 3:58 PM

VAM USA
2107 CityWest Boulevard Suite 1300
Houston, TX 77042
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com

DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.



10/08/2020 3:58 PM

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 347035

CONDITIONS

Operator: CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 347035
	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	6/7/2024
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	6/7/2024
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	6/7/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	6/7/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	6/7/2024