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.

[334691]

2. Name of Operator

[215099]

9. API Well No.

30-025-52015

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[53805]**

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

At surface

At proposed prod. zone

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

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

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

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

NGMP Rec 09/25/2023

KZ
09/27/2023

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 09/22/2023

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-52015	53805	Sand Dunes; Bone Spring, South

[4] Property Code	[5] Property Name	[6] Well Number
334691	JAMES 20-29 FEDERAL COM	42H

[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3679.8'

[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
D	20	23S	32E		280	NORTH	840	WEST	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	29	23S	32E		100	SOUTH	1386	WEST	LEA

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

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

[16]

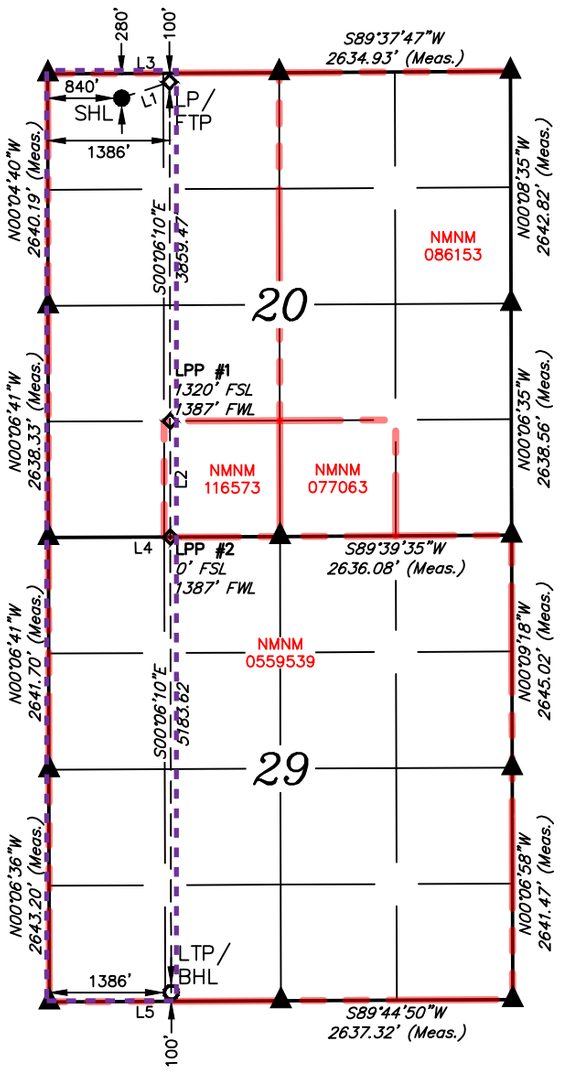
NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°17'47.41" (32.296504°)
LONGITUDE = 103°42'08.97" (103.702491°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°17'46.97" (32.296380°)
LONGITUDE = 103°42'07.22" (103.702007°)
STATE PLANE NAD 83 (N.M. EAST)
N: 472173.96' E: 736260.85'
STATE PLANE NAD 27 (N.M. EAST)
N: 472114.40' E: 695077.54'

NAD 83 (LP/FTP)
LATITUDE = 32°17'49.21" (32.297003°)
LONGITUDE = 103°42'02.61" (103.700724°)
NAD 27 (LP/FTP)
LATITUDE = 32°17'48.77" (32.296879°)
LONGITUDE = 103°42'00.86" (103.700239°)
STATE PLANE NAD 83 (N.M. EAST)
N: 472358.72' E: 736805.81'
STATE PLANE NAD 27 (N.M. EAST)
N: 472299.15' E: 695622.50'

NAD 83 (LPP #1)
LATITUDE = 32°17'11.02" (32.286396°)
LONGITUDE = 103°42'02.60" (103.700723°)
NAD 27 (LPP #1)
LATITUDE = 32°17'10.58" (32.286273°)
LONGITUDE = 103°42'00.86" (103.700239°)
STATE PLANE NAD 83 (N.M. EAST)
N: 468500.02' E: 736828.92'
STATE PLANE NAD 27 (N.M. EAST)
N: 468440.56' E: 695645.50'

NAD 83 (LPP #2)
LATITUDE = 32°16'57.97" (32.282769°)
LONGITUDE = 103°42'02.60" (103.700722°)
NAD 27 (LPP #2)
LATITUDE = 32°16'57.52" (32.282645°)
LONGITUDE = 103°42'00.86" (103.700238°)
STATE PLANE NAD 83 (N.M. EAST)
N: 467180.46' E: 736836.82'
STATE PLANE NAD 27 (N.M. EAST)
N: 467121.03' E: 695653.37'

NAD 83 (LTP/BHL)
LATITUDE = 32°16'06.68" (32.268523°)
LONGITUDE = 103°42'02.60" (103.700721°)
NAD 27 (LTP/BHL)
LATITUDE = 32°16'06.24" (32.268399°)
LONGITUDE = 103°42'00.85" (103.700237°)
STATE PLANE NAD 83 (N.M. EAST)
N: 461997.88' E: 736867.85'
STATE PLANE NAD 27 (N.M. EAST)
N: 461938.59' E: 695684.25'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N71°30'45"E	575.53'
L2	S00°06'10"E	1319.83'
L3	S89°43'55"W	2633.52'
L4	S89°45'51"W	2635.30'
L5	S89°42'40"W	2636.37'

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

2000' 1000' 0' 2000'

SCALE

DRAWN BY: D.M.C. 08-10-22

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

[17] OPERATOR CERTIFICATION

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

Signature 10/26/22 Date

Kanicia Schlichting
Printed Name

kanicia.schlichting@coterra.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

August 30, 2017
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 08-10-22

Certificate Number:

Intent ☐ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

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

Latitude	Longitude	NAD

First Take Point (FTP)

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

Latitude	Longitude	NAD

Last Take Point (LTP)

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

Latitude	Longitude	NAD

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

Is this well an infill well? ☐

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

API #

Operator Name:	Property Name:	Well Number

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

Additional Operator Remarks

Location of Well

0. SHL: NENW / 280 FNL / 840 FWL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.296504 / LONG: -103.702491 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 1386 FWL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.297003 / LONG: -103.700724 (TVD: 10880 feet, MD: 11370 feet)

PPP: NENW / 0 FSL / 1387 FWL / TWSP: 23S / RANGE: 32E / SECTION: 29 / LAT: 32.282769 / LONG: -103.700722 (TVD: 10880 feet, MD: 15829 feet)

PPP: SESW / 1320 FSL / 1387 FWL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.286396 / LONG: -103.700723 (TVD: 10880 feet, MD: 14510 feet)

BHL: SESW / 100 FSL / 1386 FWL / TWSP: 23S / RANGE: 32E / SECTION: 29 / LAT: 32.268523 / LONG: -103.700721 (TVD: 10880 feet, MD: 21012 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.

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:** 1/11/2023

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
James 20-29 Federal Com 42H		D, Sec 20 T23S, R32E	280 FNL/840 FWL	1057	2665	3173

IV. Central Delivery Point Name: James 19 CTB 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
James 20-29 Federal Com 42H		11/1/2024	12/17/2024	1/16/2025	1/30/2025	1/30/2025

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:	1/11/2023
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.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Cimarex**
LEASE NO.:	**NMNM055939**
LOCATION:	Section 20, T.23 S, R.32 E., NMPM
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	James 20-29 Fed Com 42H
SURFACE HOLE FOOTAGE:	280'/N & 840'/W
BOTTOM HOLE FOOTAGE:	100'/S & 1386'/W

COA

H_2S	◉ Yes	○ No		
Potash / WIPP	◉ None	○ Secretary	○ R-111-P	☐ WIPP
Cave / Karst	◉ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	◉ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☐ DV Tool
Special Req	☐ Break Testing	☐ Water Disposal	☑ COM	☐ Unit
Variance	☑ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☐ Capitan Reef
Variance	☐ Four-String	☑ Offline Cementing	☐ Fluid-Filled	☐ Open Annulus
☐ **Batch APD / Sundry**				

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware Group** formation. As a result, the Hydrogen Sulfide area must meet all requirements from **43 CFR 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1340** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. **Excess calculates to 23%. Additional cement maybe required.**

   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

 Approval Date: 09/22/2023

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.

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

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

3. The minimum required fill of cement behind the **7** inch production casing is:
   - Cement should tie-back at least **200 feet** into previous casing string.

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

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:
   - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification. **Excess calculates to 10%. Additional cement maybe required.**

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the casing shoe shall be **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 must be followed.

Approval Date: 09/22/2023

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Offline Cementing

Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

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

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

☒ Eddy County
Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, **BLM_NM_CFO_DrillingNotifications@BLM.GOV**
(575) 361-2822

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

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

a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   - BOP/BOPE test to be conducted per **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.

A. CASING

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

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

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours.

WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing 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 part 3170 Subpart 3172** 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.

ZS 9/14/2023

Approval Date: 09/22/2023

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

Operator Certification Data Report

09/25/2023

Operator

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

NAME: **Signed on:** 05/05/2023

Title:

Street Address:

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

Phone:

Email address:

Field

Representative Name:

Street Address:

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

Phone:

Email address:

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

Application Data
09/25/2023

APD ID: 10400088885
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 20-29 FEDERAL COM
Well Number: 42H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400088885
Tie to previous NOS? N
Submission Date: 10/30/2022
BLM Office: Carlsbad
User: KANICIA02 SCHLICHTING
Title: Regulatory Specialist
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM0559539
Lease Acres:
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
Agreement number:
Agreement name:
Keep application confidential? N
Permitting Agent? NO
APD Operator: CIMAREX ENERGY COMPANY
Operator letter of

Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY
Operator Address: 6001 DEAUVILLE BLVD STE 300N
Zip: 79706
Operator PO Box:
Operator City: MIDLAND
State: TX
Operator Phone: (303)295-3995
Operator Internet Address: hknauls@cimarex.com

Section 2 - Well Information

Well in Master Development Plan? NO
Master Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: JAMES 20-29 FEDERAL COM
Well Number: 42H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: SAND DUNES
Pool Name: BONE SPRING SOUTH

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** James 20 Federal **Number:** W2W2

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 33 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 280 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: JAMES_20_FEDERAL_W2W2_42H_C102_20221030202758.pdf

Well work start Date: 05/31/2023 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 23782 **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	280	FNL	840	FWL	23S	32E	20	Aliquot NENW	32.296504	-103.702491	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	3680	0	0	Y
KOP Leg #1	280	FNL	840	FWL	23S	32E	20	Aliquot NENW	32.296504	-103.702491	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	-6608	10322	10288	Y
PPP Leg #1-1	100	FNL	1386	FWL	23S	32E	20	Aliquot NENW	32.297003	-103.700724	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	-7200	11370	10880	Y

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-2	1320	FSL	1387	FWL	23S	32E	20	Aliquot SESW	32.286396	-103.700723	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 116573	-7200	14510	10880	Y
PPP Leg #1-3	0	FSL	1387	FWL	23S	32E	29	Aliquot NENW	32.282769	-103.700722	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	-7200	15829	10880	Y
EXIT Leg #1	100	FSL	1386	FWL	23S	32E	29	Aliquot SESW	32.268523	-103.700721	LEA	NEW MEXICO	FIRST PRIN	F	NMNM 0559539	-7200	21012	10880	Y
BHL Leg #1	100	FSL	1386	FWL	23S	32E	29	Aliquot SESW	32.268523	-103.700721	LEA	NEW MEXICO	FIRST PRIN	F	NMNM 0559539	-7200	21012	10880	Y

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

Drilling Plan Data Report
09/25/2023

APD ID: 10400088885
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 20-29 FEDERAL COM
Well Number: 42H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12177756	RUSTLER	3680	1090	1090	ANHYDRITE	USEABLE WATER	N
12177757	TOP SALT	2280	1400	1400	SALT	NONE	N
12177758	BOTTOM SALT	-1035	4715	4737	SALT	NONE	N
12177759	BELL CANYON	-1136	4816	4838	SANDSTONE	NONE	N
12177760	CHERRY CANYON	-1999	5679	5708	SANDSTONE	NONE	N
12177761	BRUSHY CANYON	-3287	6967	7001	SANDSTONE	NATURAL GAS, OIL	N
12177762	BONE SPRING LIME	-4990	8670	8704	LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
12177763	BONE SPRING 1ST	-6100	9780	9814	SANDSTONE	NATURAL GAS, OIL	N
12177764	BONE SPRING 2ND	-6547	10227	10261	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M
Rating Depth: 4786

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

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

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 2000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 2000 psi test. Annular will be tested to working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Slips will be utilized after running and cementing the production casing. After installation of the slips and wellhead on the production casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 2000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 2000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

James_20_29_Fed_Com_Choke_2M_3M_20221030205525.pdf

BOP Diagram Attachment:

James_20_29_Fed_Com_BOP_2M_20221030205510.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 11072

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

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

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 8-3/4" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Slips will be utilized after running and cementing the production casing. After installation of the slips and wellhead on the production casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

James_20_29_Fed_Com_Choke_2M_3M_20221030205542.pdf

BOP Diagram Attachment:

James_20_29_Fed_Com_BOP_3M_20221030205557.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Pressure Rating (PSI): 5M **Rating Depth:** 21012

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

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

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 6" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Slips will be utilized after running and cementing the production casing. After installation of the slips and wellhead on the production casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi test. Annular will be tested to 100% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

James_20_29_Fed_Com_Choke_5M_20221030205615.pdf

BOP Diagram Attachment:

James_20_29_Fed_Com_BOP_5M_20221030205628.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1140	0	1140	3680	2540	1140	H-40	48	ST&C	1.5	3.5	BUOY	5.88	BUOY	5.88
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4786	0	4786	3680	-1106	4786	HCK-55	40	LT&C	1.49	1.54	BUOY	2.93	BUOY	2.93
3	PRODUCTION	8.75	7.0	NEW	API	N	0	10322	0	10322	3680	-6642	10322	P-110	29	LT&C	1.77	2.32	BUOY	2.54	BUOY	2.54

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
4	PRODUCTION	8.75	7.0	NEW	API	N	10322	11072	10322	10841	-6642	-7161	750	P-110	29	BUTT	1.68	2.21	BUOY	61.72	BUOY	61.72
5	COMPLETION SYSTEM	6	4.5	NEW	API	N	9321	21012	9321	10880	-5641	-7200	11691	P-110	11.6	BUTT	1.41	1.99	BUOY	20.29	BUOY	20.29

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

James_20_29_Fed_Com_42H_Casing_Assumptions_20221030205806.pdf

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

James_20_29_Fed_Com_42H_Casing_Assumptions_20221030205823.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Casing Attachments

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

James_20_29_Fed_Com_42H_Casing_Assumptions_20221030205936.pdf

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

James_20_29_Fed_Com_42H_Casing_Assumptions_20221030210214.pdf

Casing ID: 5 **String** COMPLETION SYSTEM

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

James_20_29_Fed_Com_42H_Casing_Assumptions_20221030210050.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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	1140	553	1.72	13.5	951	45	Class C	Bentonite
SURFACE	Tail		0	1140	148	1.34	14.8	198	45	Class C	LCM
INTERMEDIATE	Lead		0	4786	985	1.72	14.8	1694	50	Class C	Bentonite
INTERMEDIATE	Tail		0	4786	276	1.36	14.8	375	50	Class C	Retarder
PRODUCTION	Lead		4586	11072	681	1.88	12.9	1280	25	35:65 (POZ:C)	Salt + Bentonite
PRODUCTION	Tail		4586	11072	125	1.36	14.8	170	25	Class C	Retarder
COMPLETION SYSTEM	Lead		10705	21012	737	1.3	14.5	958	10	50:50 (POZ:H)	Salt + Bentonite + Fluid Loss + Dispersant + SMS

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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	1140	OTHER : Fresh water, spud mud	7.83	8.33							
1140	4786	OTHER : Brine Water	9.8	10.3							
4786	11072	OTHER : Cut Brine or OBM	8.5	9							
11072	21012	OIL-BASED MUD	8.5	9							

Section 6 - Test, Logging, Coring

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

No DST Planned

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

GAMMA RAY LOG,COMPENSATED NEUTRON LOG,DIRECTIONAL SURVEY,

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5374 **Anticipated Surface Pressure:** 2980

Anticipated Bottom Hole Temperature(F): 178

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

James_20_29_Federal_41H_42H_Surface_Use_Plan_20221030211813.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

James_20_29_Fed_Com_42H_Directional_Survey_20221030212032.pdf

James_20_29_Fed_Com_42H_AC_Report_20221030212033.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

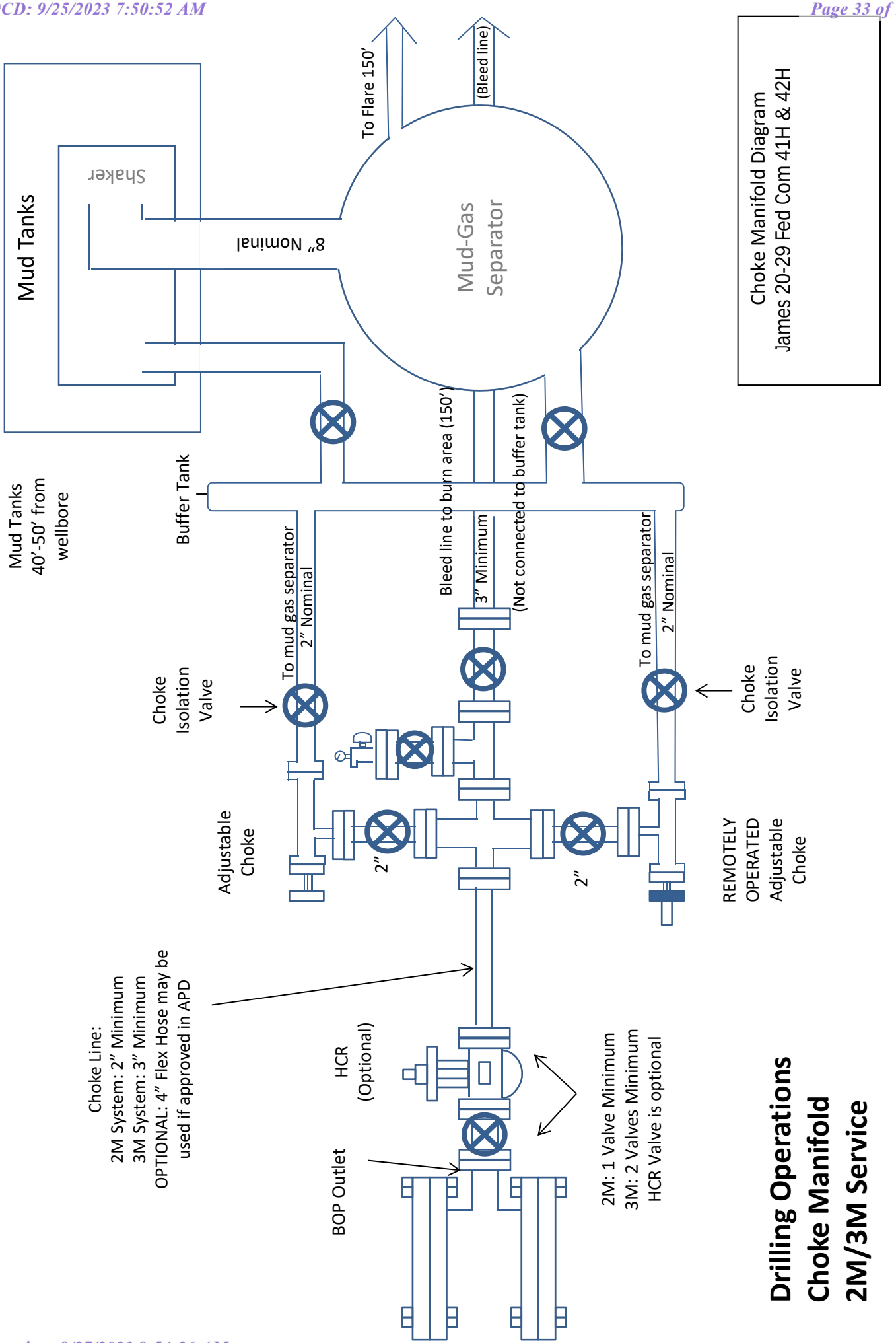
James_20_29_Fed_Com_42H_Drilling_Plan_20221030212054.pdf

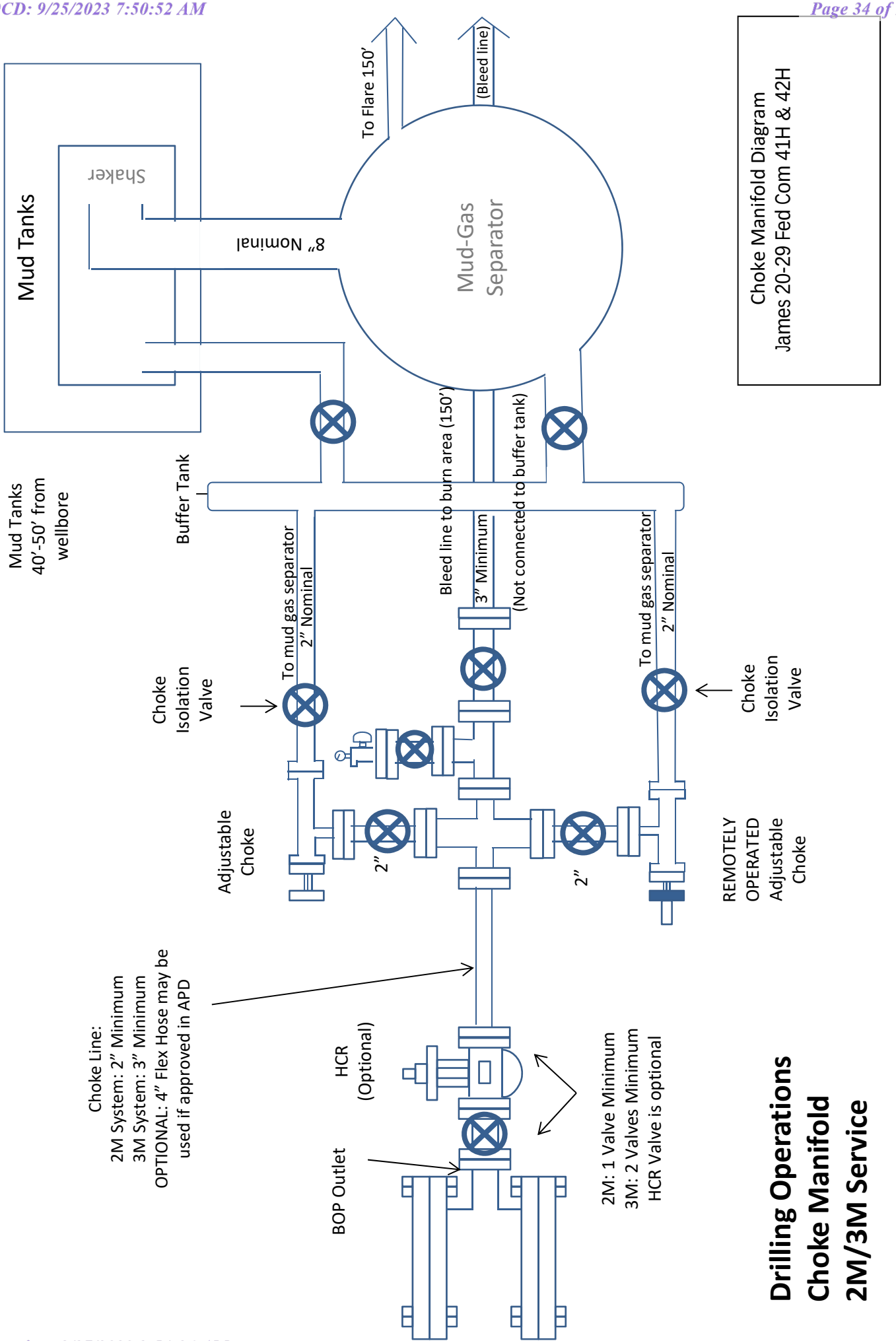
Other Variance attachment:

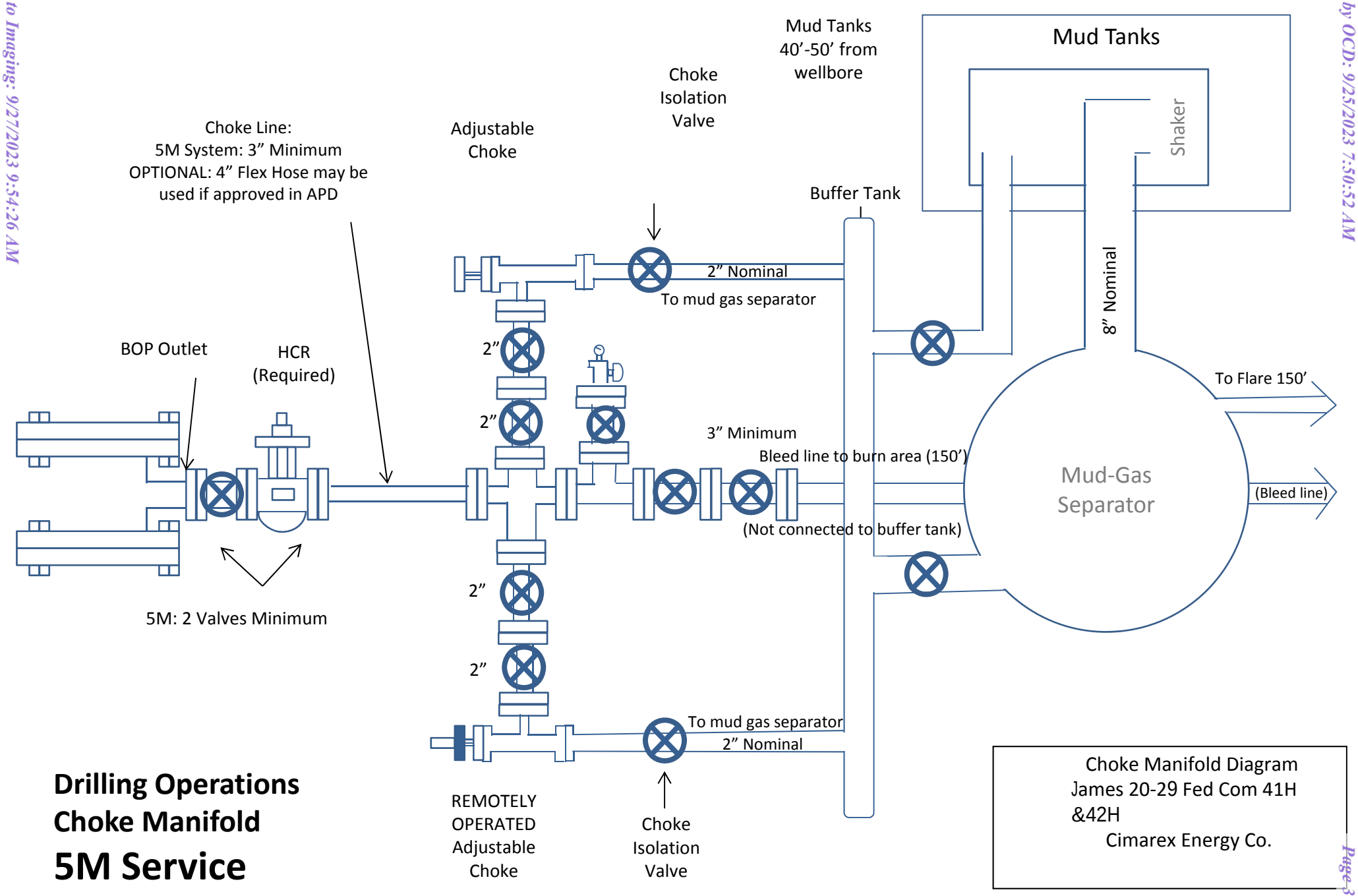
Offline_Cement_Procedure_20221028132816.pdf

James_20_29_Fed_Com_41H_42H_Flex_Hose_20221030212157.pdf

James_20_29_Fed_Com_42H_Multibowl_13.375_20221030212217.pdf


Choke Manifold Diagram
James 20-29 Fed Com 41H & 42H
Mud Tanks
Shaker
8" Nominal
Mud-Gas Separator
To Flare 150'
(Bleed line)
Mud Tanks 40'-50' from wellbore
Buffer Tank
Bleed line to burn area (150')
3" Minimum
(Not connected to buffer tank)
To mud gas separator
2" Nominal
To mud gas separator
2" Nominal
Choke Isolation Valve
Choke Isolation Valve
Adjustable Choke
REMOTELY OPERATED Adjustable Choke
2"
2"
Choke Line:
2M System: 2" Minimum
3M System: 3" Minimum
OPTIONAL: 4" Flex Hose may be used if approved in APD
HCR (Optional)
BOP Outlet
2M: 1 Valve Minimum
3M: 2 Valves Minimum
HCR Valve is optional
Drilling Operations
Choke Manifold
2M/3M Service

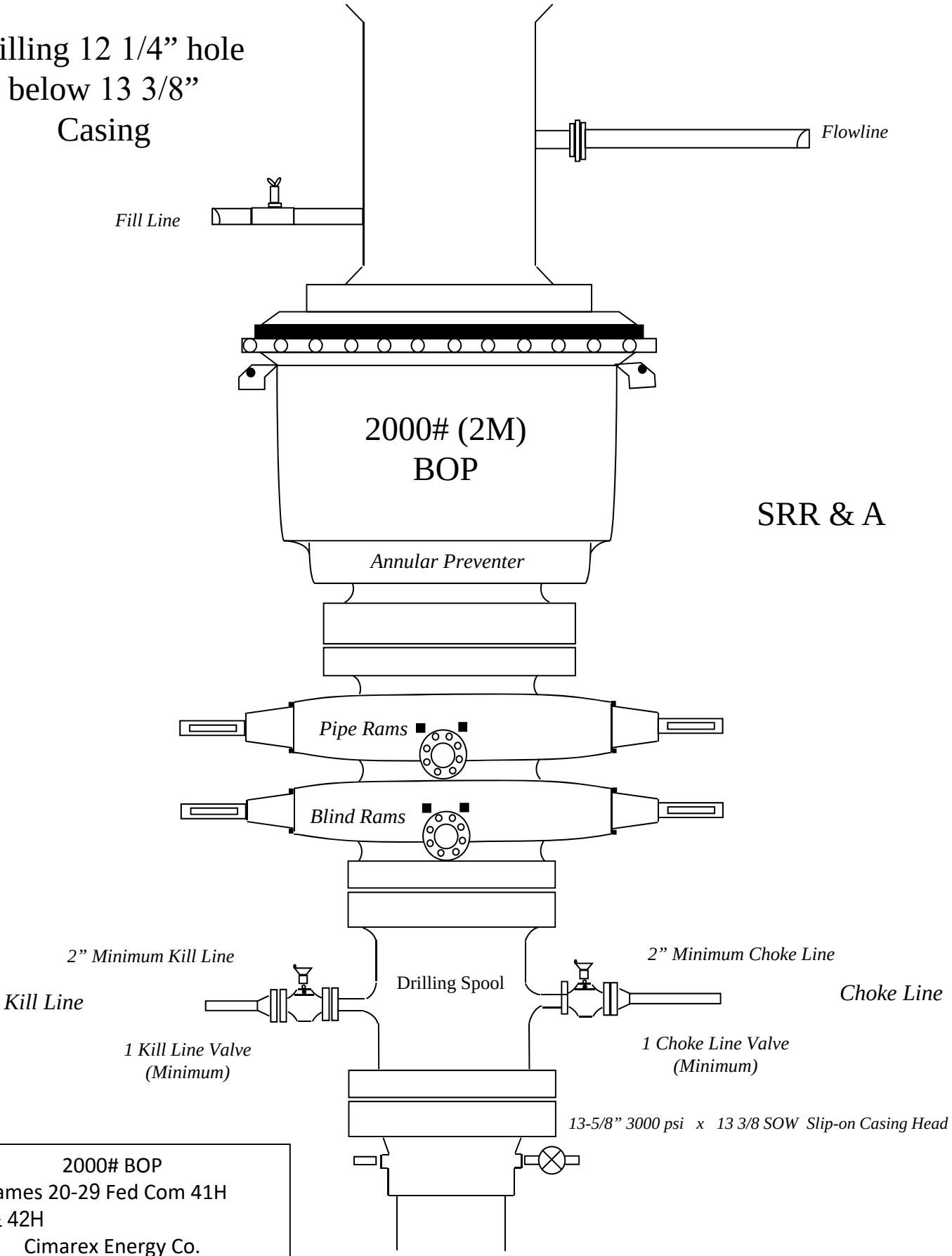

Choke Manifold Diagram
James 20-29 Fed Com 41H & 42H
Mud Tanks
Shaker
8" Nominal
Mud-Gas Separator
To Flare 150'
(Bleed line)
Mud Tanks 40'-50' from wellbore
Buffer Tank
Bleed line to burn area (150')
3" Minimum
(Not connected to buffer tank)
To mud gas separator
2" Nominal
To mud gas separator
2" Nominal
Choke Isolation Valve
Choke Isolation Valve
Adjustable Choke
REMOTELY OPERATED Adjustable Choke
2"
2"
Choke Line:
2M System: 2" Minimum
3M System: 3" Minimum
OPTIONAL: 4" Flex Hose may be used if approved in APD
HCR (Optional)
BOP Outlet
2M: 1 Valve Minimum
3M: 2 Valves Minimum
HCR Valve is optional
Drilling Operations
Choke Manifold
2M/3M Service



Drilling Operations
Choke Manifold
5M Service

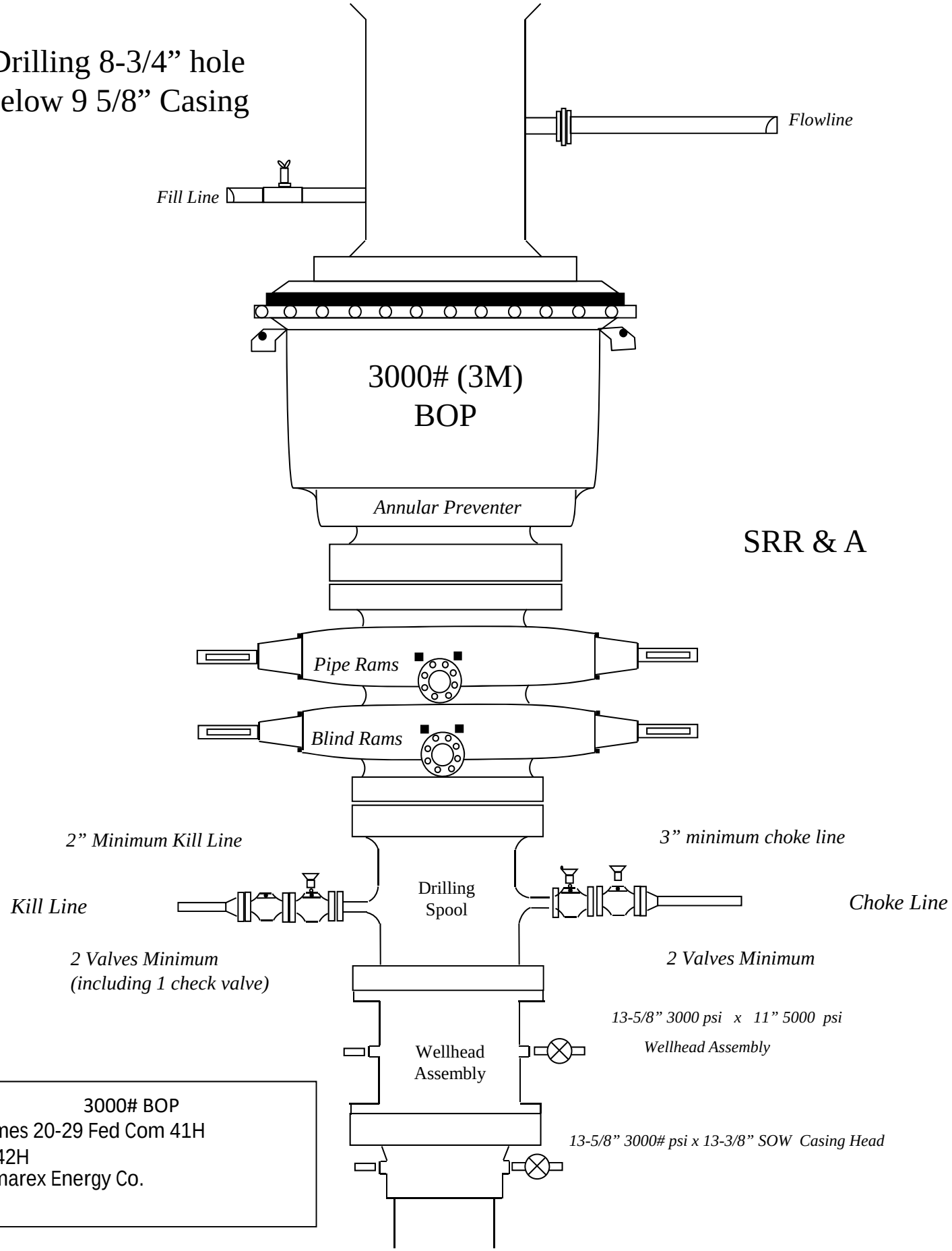
Choke Manifold Diagram
James 20-29 Fed Com 41H
&42H
Cimarex Energy Co.

Drilling 12 1/4" hole below 13 3/8" Casing



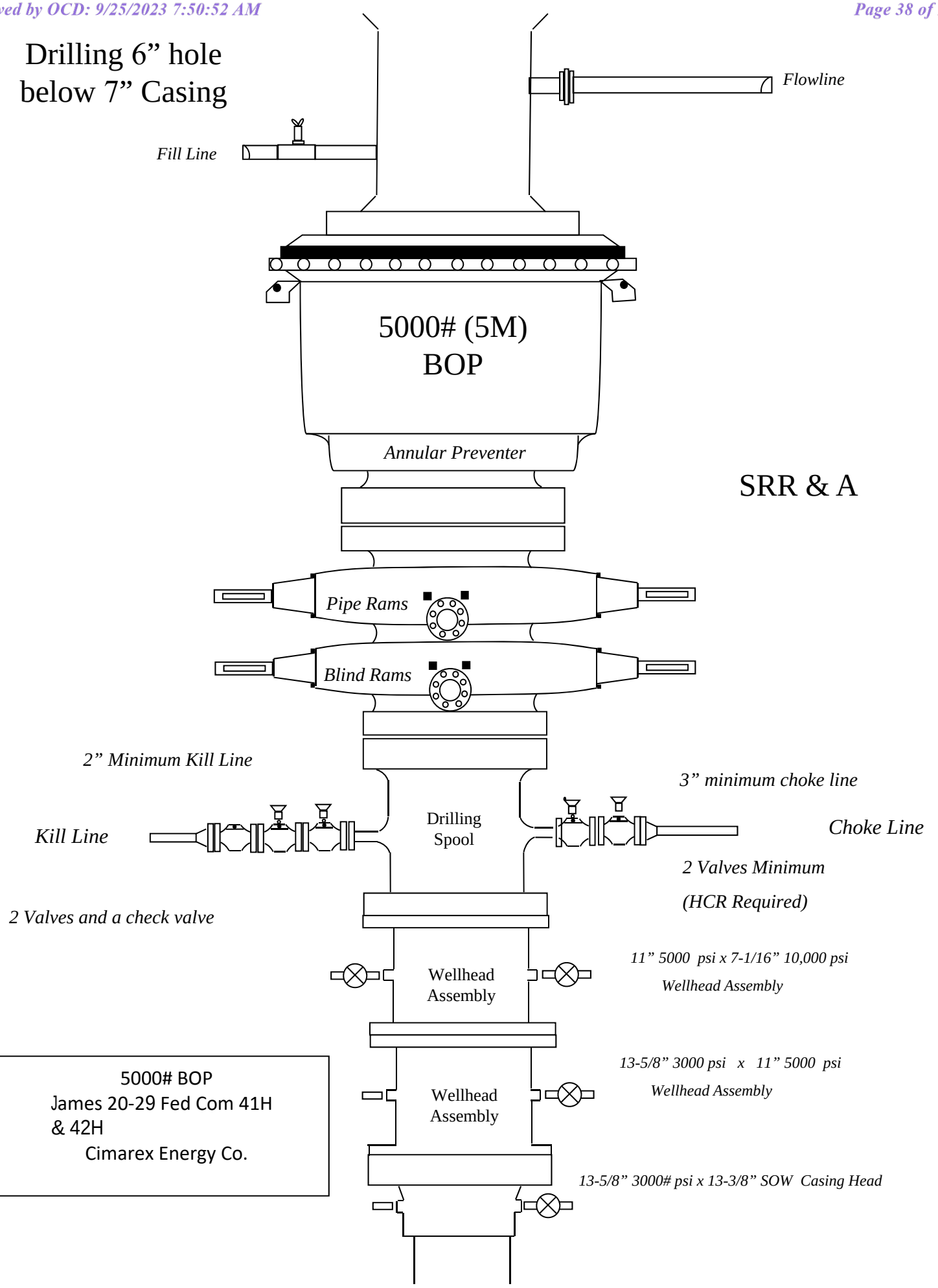
2000# BOP
James 20-29 Fed Com 41H & 42H
Cimarex Energy Co.

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



3000# BOP
James 20-29 Fed Com 41H & 42H
Cimarex Energy Co.

Drilling 6” hole below 7” Casing



SRR & A

5000# BOP
James 20-29 Fed Com 41H & 42H
Cimarex Energy Co.

James 20-29 Fed Com 42H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
8 3/4	10322	11072	10841	7"	29.00	P-110	BT&C	1.68	2.21	61.72
6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

James 20-29 Fed Com 42H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
8 3/4	10322	11072	10841	7"	29.00	P-110	BT&C	1.68	2.21	61.72
6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

James 20-29 Fed Com 42H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
8 3/4	10322	11072	10841	7"	29.00	P-110	BT&C	1.68	2.21	61.72
6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

James 20-29 Fed Com 42H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
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6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

James 20-29 Fed Com 42H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
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6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

Cimarex James 20-29 Federal Com 41H & 42H
Surface Use Plan

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

Existing Roads

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

New or Reconstructed Access Roads

No new roads are proposed for this project.

Well Radius Map

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

Proposed or Existing Production Facility

An existing battery will be utilized for the project if the well is productive.

- James 19 Federal CTB
  - Battery Pad diagram - Exhibit F
  - Battery will not require an expansion in order to accomodate additional production equipment for the project.
  - Battery Pad location previously approved
    - APD: James 19 Federal 31H.

Gas Pipeline Specifications

- No new gas pipelines are required for this project.

Salt Water Disposal Specifications

- No new SWD pipelines are required for this project.

Power Lines

- No new power line is required for this project.

Well Site Location

- An existing well pad will be used to drill the proposed well.
  - Wells drilled or to be drilled: 42H.
- Well pad will not require expansion in order to accommodate additional drilling wells. .
- Well pad previously approved. APD: James 20-29 Federal Com 37H.

Flowlines and Bulklines

We will apply for off lease ROW.

All proposed pipelines will be constructed in a 75' ROW corridor.

Cimarex James 20-29 Federal Com 41H
Surface Use Plan

- Bulkline / Flowlines:

◦ 1 12" Steel Flowline carrying oil gas and water
◦ 4 12" steel bulklines carrying oil gas or water
◦ 1 4" fiber optic cable
◦ 1 12" Air poly line

Water Resources

No temporary fresh water pipelines are proposed for this project.

Methods of Handling Waste

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

Ancillary Facilities

No camps or airstrips to be constructed.

Interim and Final Reclamation

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

Surface Ownership

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

Cultural Resource Survey - Archeology

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

On Site Notes and Information

Onsite Date: 8/29/2017
BLM Personnel on site: Jesse Bassett
Cimarex Energy personnel on site: Barry Hunt
Pertinent information from onsite:

BEGINNING AT THE INTERSECTION OF JAL HIGHWAY/HIGHWAY 128 AND AN EXISTING ROAD TO THE NORTHEAST (LOCATED AT NAD 83 LATITUDE N32.2408° AND LONGITUDE W103.7256°), PROCEED IN A NORTHEASTERLY DIRECTION 2.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST, TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN LEFT AND PROCEED IN A WESTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 1.1 MILES TO THE EXISTING JAMES 20 FEDERAL #2 AND THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE JAMES 19 FEDERAL W2E2 TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY, THEN WESTERLY DIRECTION APPROXIMATELY 2,306 TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTH; FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 76' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM THE INTERSECTION OF JAL HIGHWAY/HIGHWAY 128 AND AN EXISTING ROAD TO THE NORTHEAST (LOCATED AT NAD 83 LATITUDE N32.2408° AND LONGITUDE W103.7256°) TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 5.5 MILES.

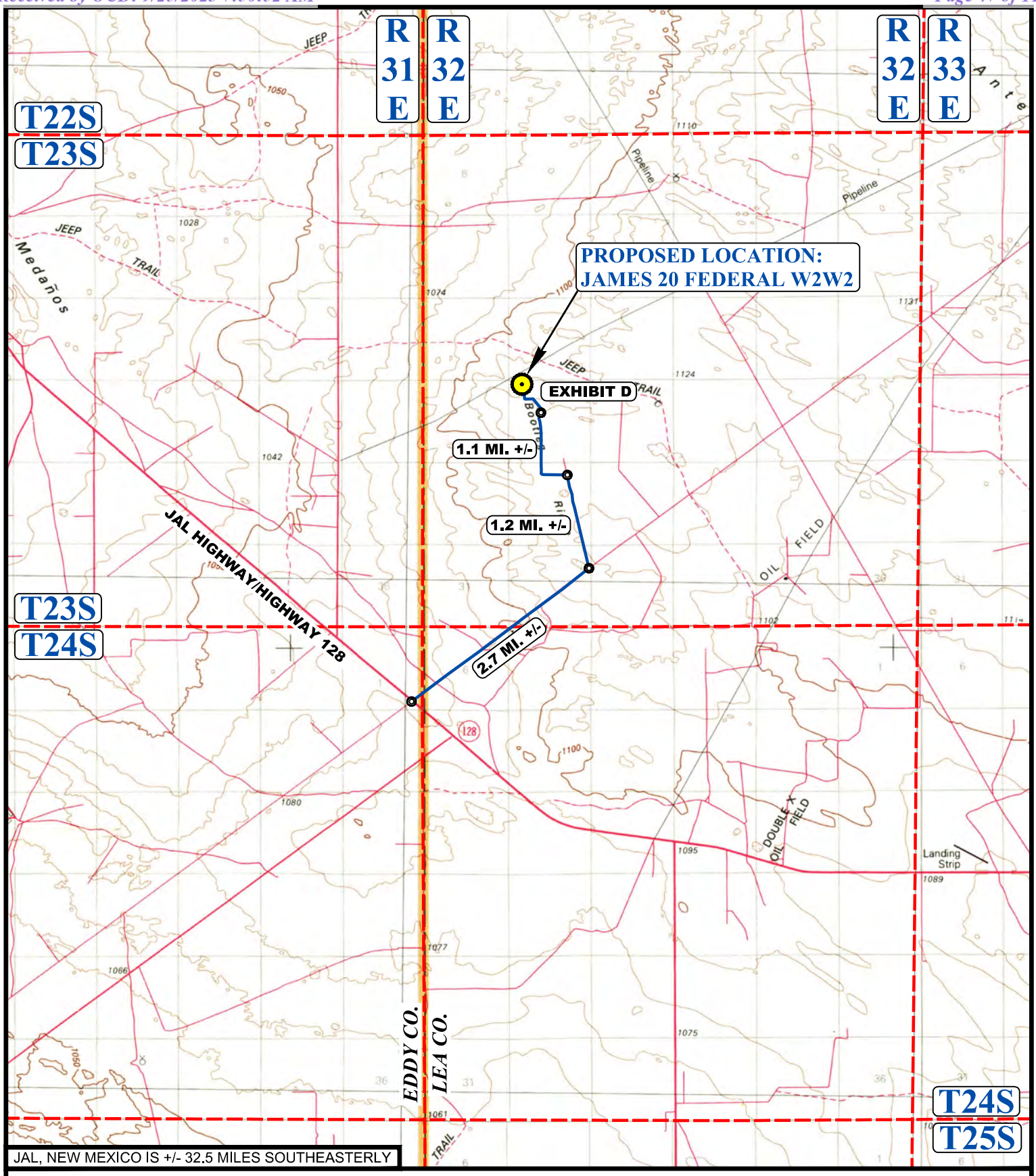
CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	
DRAWN BY	J.L.G.	09-25-17	

EXHIBIT A **ROAD DESCRIPTION** **EXHIBIT A**

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



LEGEND:

⊙ **PROPOSED LOCATION**

N

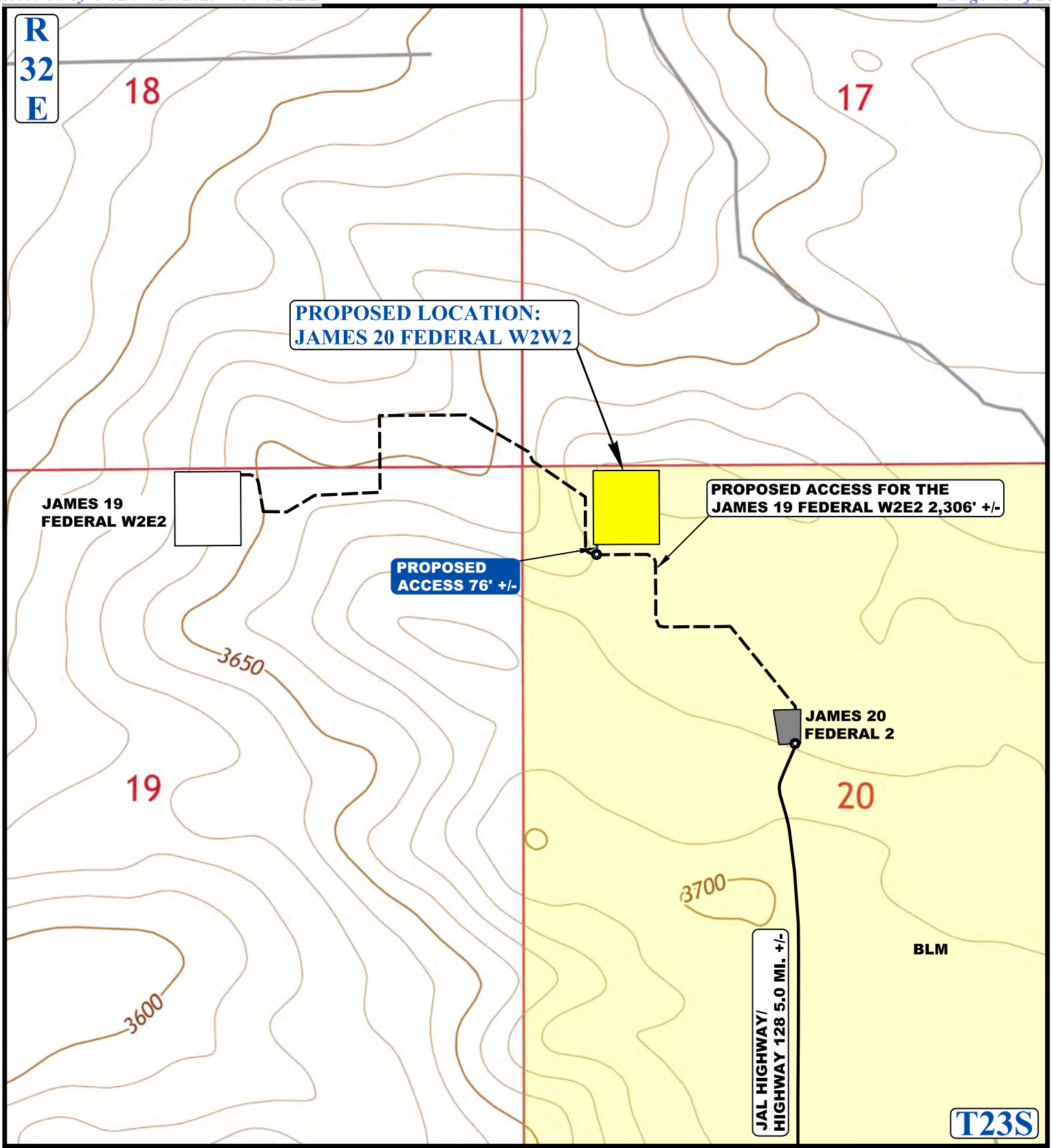
CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 100,000

PUBLIC ACCESS ROUTE MAP | **EXHIBIT B**

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



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
- PROPOSED ROAD (SERVICING OTHER WELLS)

UINTAH ENGINEERING & LAND SURVEYING

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

N

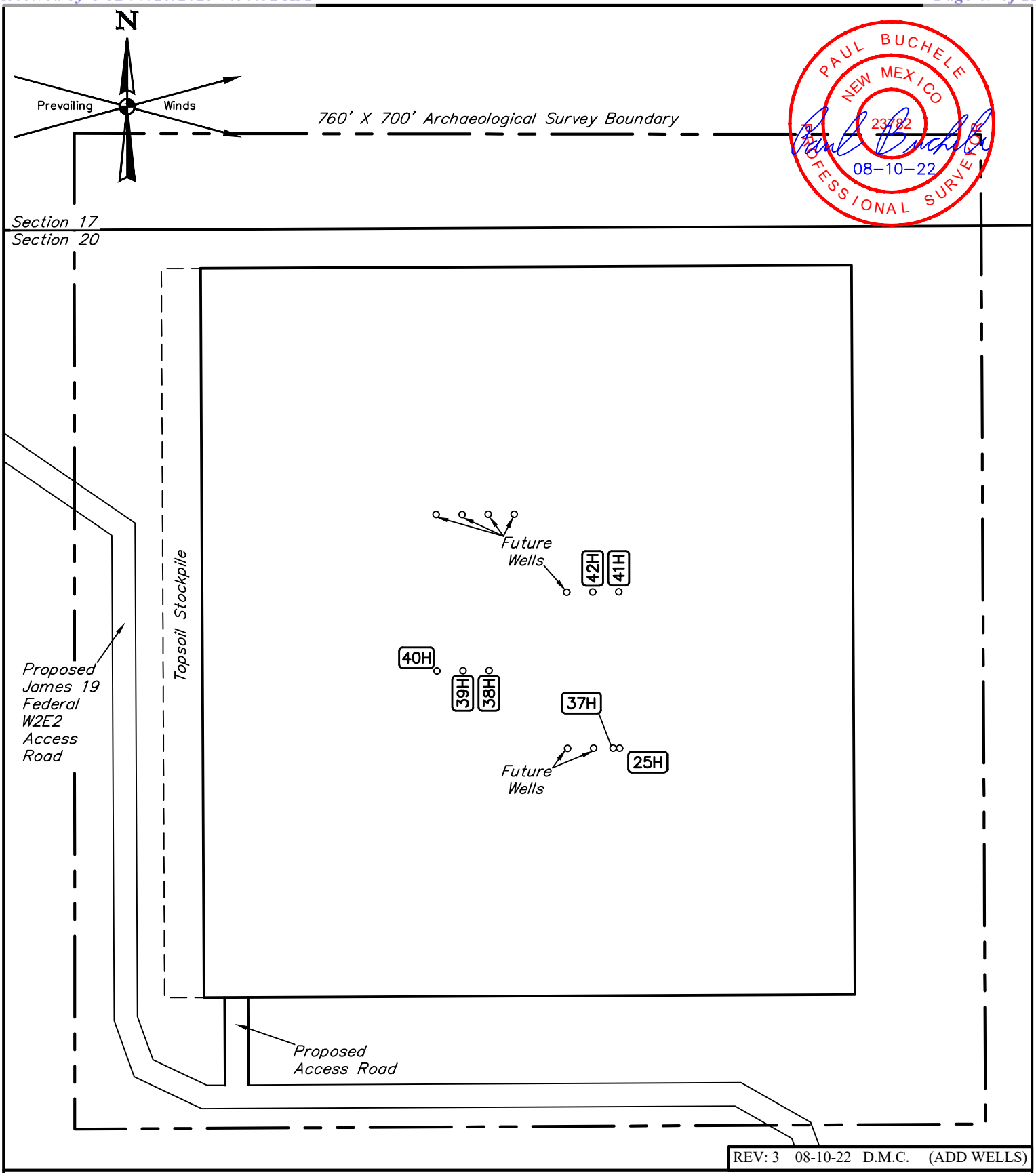
CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 12,000

NEW ROAD PLAT/MAP **EXHIBIT D**

EXHIBIT C



REV: 3 08-10-22 D.M.C. (ADD WELLS)

NOTES:

CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	08-30-17	SCALE
DRAWN BY	C.D.	09-26-17	1" = 100'
ARCHAEOLOGICAL SURVEY BOUNDARY			EXHIBIT L

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

Schlumberger

COTERRA

Coterra James 20-29 Federal Com 42H Rev0 kFc 08Sep22 Proposal
Geodetic Report
(Def Plan)

Report Date:	September 08, 2022 - 11:41 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	179.660 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra James 20-29 Federal Com 42H / 42H	**TVD Reference Datum:**	RKB = 23ft
Well:	James 20-29 Federal Com 42H	**TVD Reference Elevation:**	3702.800 ft above MSL
Borehole:	James 20-29 Federal Com 42H	**Seabed / Ground Elevation:**	3679.800 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.405 °
Survey Name:	Coterra James 20-29 Federal Com 42H Rev0 kFc 08Sep22	**Total Gravity Field Strength:**	998.4356mgn (9.80665 Based)
Survey Date:	September 08, 2022	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	104.000 ° / 10936.994 ft / 6.342 / 1.005	**Total Magnetic Field Strength:**	47628.341 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.913 °
Location Lat / Long:	N 32° 17' 47.41293", W 103° 42' 8.96787"	**Declination Date:**	September 08, 2022
Location Grid N/E Y/X:	N 472173.960 ftUS, E 736260.850 ftUS	**Magnetic Declination Model:**	HDGM 2022
CRS Grid Convergence Angle:	0.3371 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99995261	**Grid Convergence Used:**	0.3371 °
Version / Patch:	2.10.832.2	**Total Corr Mag North->Grid North:**	6.0682 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °)	Longitude (E/W °)
SHL [280' FNL, 840' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	472173.96	736260.85	N 32.296504	W 103.702491
	100.00	0.00	71.27	100.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	200.00	0.00	71.27	200.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	300.00	0.00	71.27	300.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	400.00	0.00	71.27	400.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	500.00	0.00	71.27	500.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	600.00	0.00	71.27	600.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	700.00	0.00	71.27	700.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	800.00	0.00	71.27	800.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	900.00	0.00	71.27	900.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	1000.00	0.00	71.27	1000.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
Rustler	*1090.00*	*0.00*	*71.27*	*1090.00*	*0.00*	*0.00*	*0.00*	*0.00*	*472173.96*	*736260.85*	*N 32.296504*	*W 103.702491*
	1100.00	0.00	71.27	1100.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	1200.00	0.00	71.27	1200.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	1300.00	0.00	71.27	1300.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
Top of Salt	1400.00	0.00	71.27	1400.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	1500.00	0.00	71.27	1500.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
Nudge, Build 2°/100ft	1600.00	0.00	71.27	1600.00	0.00	0.00	0.00	0.00	472173.96	736260.85	N 32.296504	W 103.702491
	1700.00	2.00	71.27	1699.98	-0.55	0.56	1.65	2.00	472174.52	736262.50	N 32.296505	W 103.702486
	1800.00	4.00	71.27	1799.84	-2.20	2.24	6.61	2.00	472176.20	736267.46	N 32.296510	W 103.702470
	1900.00	6.00	71.27	1899.45	-4.95	5.04	14.86	2.00	472179.00	736275.71	N 32.296517	W 103.702443
Hold	1950.01	7.00	71.27	1949.14	-6.74	6.86	20.22	2.00	472180.82	736281.07	N 32.296522	W 103.702425
	2000.00	7.00	71.27	1998.76	-8.66	8.81	25.99	0.00	472182.77	736286.84	N 32.296527	W 103.702407
	2100.00	7.00	71.27	2098.01	-12.50	12.73	37.54	0.00	472186.69	736298.38	N 32.296538	W 103.702369
	2200.00	7.00	71.27	2197.27	-16.35	16.64	49.08	0.00	472190.60	736309.93	N 32.296549	W 103.702332
	2300.00	7.00	71.27	2296.52	-20.19	20.55	60.62	0.00	472194.51	736321.47	N 32.296559	W 103.702295
	2400.00	7.00	71.27	2395.78	-24.04	24.47	72.16	0.00	472198.42	736333.01	N 32.296570	W 103.702257
	2500.00	7.00	71.27	2495.03	-27.88	28.38	83.70	0.00	472202.34	736344.55	N 32.296580	W 103.702220
	2600.00	7.00	71.27	2594.28	-31.73	32.29	95.25	0.00	472206.25	736356.09	N 32.296591	W 103.702182
	2700.00	7.00	71.27	2693.54	-35.57	36.20	106.79	0.00	472210.16	736367.63	N 32.296601	W 103.702145
	2800.00	7.00	71.27	2792.79	-39.42	40.12	118.33	0.00	472214.08	736379.17	N 32.296612	W 103.702107
	2900.00	7.00	71.27	2892.05	-43.26	44.03	129.87	0.00	472217.99	736390.72	N 32.296623	W 103.702070
	3000.00	7.00	71.27	2991.30	-47.10	47.94	141.41	0.00	472221.90	736402.26	N 32.296633	W 103.702033
	3100.00	7.00	71.27	3090.56	-50.95	51.86	152.96	0.00	472225.81	736413.80	N 32.296644	W 103.701995
	3200.00	7.00	71.27	3189.81	-54.79	55.77	164.50	0.00	472229.73	736425.34	N 32.296654	W 103.701958
	3300.00	7.00	71.27	3289.07	-58.64	59.68	176.04	0.00	472233.64	736436.88	N 32.296665	W 103.701920
	3400.00	7.00	71.27	3388.32	-62.48	63.60	187.58	0.00	472237.55	736448.42	N 32.296675	W 103.701883
	3500.00	7.00	71.27	3487.58	-66.33	67.51	199.12	0.00	472241.47	736459.96	N 32.296686	W 103.701845
	3600.00	7.00	71.27	3586.83	-70.17	71.42	210.67	0.00	472245.38	736471.51	N 32.296696	W 103.701808
	3700.00	7.00	71.27	3686.08	-74.02	75.34	222.21	0.00	472249.29	736483.05	N 32.296707	W 103.701771
	3800.00	7.00	71.27	3785.34	-77.86	79.25	233.75	0.00	472253.21	736494.59	N 32.296718	W 103.701733
	3900.00	7.00	71.27	3884.59	-81.71	83.16	245.29	0.00	472257.12	736506.13	N 32.296728	W 103.701696
	4000.00	7.00	71.27	3983.85	-85.55	87.08	256.83	0.00	472261.03	736517.67	N 32.296739	W 103.701658
	4100.00	7.00	71.27	4083.10	-89.39	90.99	268.38	0.00	472264.94	736529.21	N 32.296749	W 103.701621
	4200.00	7.00	71.27	4182.36	-93.24	94.90	279.92	0.00	472268.86	736540.75	N 32.296760	W 103.701583
	4300.00	7.00	71.27	4281.61	-97.08	98.81	291.46	0.00	472272.77	736552.30	N 32.296770	W 103.701546
	4400.00	7.00	71.27	4380.87	-100.93	102.73	303.00	0.00	472276.68	736563.84	N 32.296781	W 103.701509
	4500.00	7.00	71.27	4480.12	-104.77	106.64	314.54	0.00	472280.60	736575.38	N 32.296792	W 103.701471
	4600.00	7.00	71.27	4579.38	-108.62	110.55	326.09	0.00	472284.51	736586.92	N 32.296802	W 103.701434
	4700.00	7.00	71.27	4678.63	-112.46	114.47	337.63	0.00	472288.42	736598.46	N 32.296813	W 103.701396
Base of Salt	*4736.64*	*7.00*	*71.27*	*4715.00*	*-113.87*	*115.90*	*341.86*	*0.00*	*472289.86*	*736602.69*	*N 32.296817*	*W 103.701383*
Lamar	*4761.83*	*7.00*	*71.27*	*4740.00*	*-114.84*	*116.89*	*344.76*	*0.00*	*472290.84*	*736605.60*	*N 32.296819*	*W 103.701373*
	4800.00	7.00	71.27	4777.89	-116.31	118.38	349.17	0.00	472292.33	736610.00	N 32.296823	W 103.701359
Bell Canyon	*4838.40*	*7.00*	*71.27*	*4816.00*	*-117.78*	*119.88*	*353.60*	*0.00*	*472293.84*	*736614.43*	*N 32.296827*	*W 103.701345*
	4900.00	7.00	71.27	4877.14	-120.15	122.29	360.71	0.00	472296.25	736621.54	N 32.296834	W 103.701321
	5000.00	7.00	71.27	4976.39	-124.00	126.21	372.25	0.00	472300.16	736633.09	N 32.296844	W 103.701284
	5100.00	7.00	71.27	5075.65	-127.84	130.12	383.80	0.00	472304.07	736644.63	N 32.296855	W 103.701247
	5200.00	7.00	71.27	5174.90	-131.68	134.03	395.34	0.00	472307.99	736656.17	N 32.296866	W 103.701209
	5300.00	7.00	71.27	5274.16	-135.53	137.95	406.88	0.00	472311.90	736667.71	N 32.296876	W 103.701172
	5400.00	7.00	71.27	5373.41	-139.37	141.86	418.42	0.00	472315.81	736679.25	N 32.296887	W 103.701134
	5500.00	7.00	71.27	5472.67	-143.22	145.77	429.96	0.00	472319.73	736690.79	N 32.296897	W 103.701097
	5600.00	7.00	71.27	5571.92	-147.06	149.69	441.51	0.00	472323.64	736702.33	N 32.296908	W 103.701059
	5700.00	7.00	71.27	5671.18	-150.91	153.60	453.05	0.00	472327.55	736713.88	N 32.296918	W 103.701022
Cherry Canyon	*5707.88*	*7.00*	*71.27*	*5679.00*	*-151.21*	*153.91*	*453.96*	*0.00*	*472327.86*	*736714.79*	*N 32.296919*	*W 103.701019*
	5800.00	7.00	71.27	5770.43	-154.75	157.51	464.59	0.00	472331.46	736725.42	N 32.296929	W 103.700985
	5900.00	7.00	71.27	5869.69	-158.60	161.43	476.13	0.00	472335.38	736736.96	N 32.296940	W 103.700947
	6000.00	7.00	71.27	5968.94	-162.44	165.34	487.67	0.00	472339.29	736748.50	N 32.296950	W 103.700910
	6100.00	7.00	71.27	6068.19	-166.29	169.25	499.22	0.00	472343.20	736760.04	N 32.296961	W 103.700872
	6200.00	7.00	71.27	6167.45	-170.13	173.16	510.76	0.00	472347.12	736771.58	N 32.296971	W 103.700835
	6300.00	7.00	71.27	6266.70	-173.98	177.08	522.30	0.00	472351.03	736783.12	N 32.296982	W 103.700798
Drop 2°/100ft	6321.33	7.00	71.27	6287.88	-174.80	177.91	524.76	0.00	472351.86	736785.59	N 32.296984	W 103.700790
	6400.00	5.43	71.27	6366.08	-177.48	180.65	532.83	2.00	472354.60	736793.65	N 32.296991	W 103.700763
	6500.00	3.43	71.27	6465.78	-179.92	183.12	540.14	2.00	472357.08	736800.96	N 32.296998	W 103.700740
	6600.00	1.43	71.27	6565.68	-181.25	184.48	544.15	2.00	472358.43	736804.97	N 32.297002	W 103.700727
Hold	6671.35	0.00	71.27	6637.02	-181.53	184.77	544.99	2.00	472358.72	736805.81	N 32.297003	W 103.700724
	6700.00	0.00	71.27	6665.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °)	Longitude (E/W °)
	6800.00	0.00	71.27	6765.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	6900.00	0.00	71.27	6865.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7000.00	0.00	71.27	6965.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
Brushy Canyon	*7001.33*	*0.00*	*71.27*	*6967.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
	7100.00	0.00	71.27	7065.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7200.00	0.00	71.27	7165.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7300.00	0.00	71.27	7265.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7400.00	0.00	71.27	7365.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7500.00	0.00	71.27	7465.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7600.00	0.00	71.27	7565.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7700.00	0.00	71.27	7665.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7800.00	0.00	71.27	7765.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	7900.00	0.00	71.27	7865.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8000.00	0.00	71.27	7965.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8100.00	0.00	71.27	8065.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8200.00	0.00	71.27	8165.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8300.00	0.00	71.27	8265.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8400.00	0.00	71.27	8365.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8500.00	0.00	71.27	8465.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8600.00	0.00	71.27	8565.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8700.00	0.00	71.27	8665.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
BS/BS Lime	*8704.33*	*0.00*	*71.27*	*8670.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
Leonard	*8789.33*	*0.00*	*71.27*	*8755.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
	8800.00	0.00	71.27	8765.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	8900.00	0.00	71.27	8865.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9000.00	0.00	71.27	8965.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9100.00	0.00	71.27	9065.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
Avalon	*9167.33*	*0.00*	*71.27*	*9133.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
	9200.00	0.00	71.27	9165.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9300.00	0.00	71.27	9265.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9400.00	0.00	71.27	9365.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9500.00	0.00	71.27	9465.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9600.00	0.00	71.27	9565.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9700.00	0.00	71.27	9665.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	9800.00	0.00	71.27	9765.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
1st BS Sand	*9814.33*	*0.00*	*71.27*	*9780.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
	9900.00	0.00	71.27	9865.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	10000.00	0.00	71.27	9965.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	10100.00	0.00	71.27	10065.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	10200.00	0.00	71.27	10165.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
2nd BS Carb	*10261.33*	*0.00*	*71.27*	*10227.00*	*-181.53*	*184.77*	*544.99*	*0.00*	*472358.72*	*736805.81*	*N 32.297003*	*W 103.700724*
	10300.00	0.00	71.27	10265.67	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
KOP, Build 10°/100ft	10321.85	0.00	71.27	10287.52	-181.53	184.77	544.99	0.00	472358.72	736805.81	N 32.297003	W 103.700724
	10400.00	7.82	179.66	10365.43	-176.21	179.45	545.02	10.00	472353.40	736805.84	N 32.296988	W 103.700724
2nd BS Sand	*10419.80*	*9.80*	*179.66*	*10385.00*	*-173.18*	*176.42*	*545.04*	*10.00*	*472350.37*	*736805.86*	*N 32.296980*	*W 103.700724*
	10500.00	17.82	179.66	10462.82	-154.06	157.29	545.15	10.00	472331.25	736805.97	N 32.296927	W 103.700724
	10600.00	27.82	179.66	10554.88	-115.33	118.57	545.38	10.00	472292.52	736806.21	N 32.296821	W 103.700724
	10700.00	37.82	179.66	10638.81	-61.20	64.44	545.71	10.00	472238.40	736806.53	N 32.296672	W 103.700724
	10800.00	47.82	179.66	10712.07	6.67	-3.43	546.11	10.00	472170.53	736806.94	N 32.296485	W 103.700724
	10900.00	57.82	179.66	10772.44	86.24	-83.00	546.59	10.00	472090.97	736807.41	N 32.296267	W 103.700724
	11000.00	67.82	179.66	10818.06	175.08	-171.84	547.12	10.00	472002.13	736807.94	N 32.296022	W 103.700724
Build 5°/100ft	11071.85	75.00	179.66	10840.95	243.13	-239.89	547.53	10.00	471934.08	736808.35	N 32.295835	W 103.700724
	11100.00	76.41	179.66	10847.91	270.42	-267.17	547.69	5.00	471906.80	736808.52	N 32.295760	W 103.700724
	11200.00	81.41	179.66	10867.14	368.52	-365.27	548.28	5.00	471808.71	736809.10	N 32.295491	W 103.700724
	11300.00	86.41	179.66	10877.75	467.92	-464.67	548.87	5.00	471709.31	736809.70	N 32.295218	W 103.700724
2nd BS Sand Target	*11370.44*	*89.93*	*179.66*	*10880.00*	*538.32*	*-535.07*	*549.30*	*5.00*	*471638.92*	*736810.12*	*N 32.295024*	*W 103.700724*
Landing Point	11371.85	90.00	179.66	10880.00	539.72	-536.47	549.30	5.00	471637.52	736810.13	N 32.295020	W 103.700724
	11400.00	90.00	179.66	10880.00	567.87	-564.62	549.47	0.00	471609.37	736810.30	N 32.294943	W 103.700724
	11500.00	90.00	179.66	10880.00	667.87	-664.62	550.07	0.00	471509.37	736810.90	N 32.294668	W 103.700724
	11600.00	90.00	179.66	10880.00	767.87	-764.62	550.67	0.00	471409.38	736811.49	N 32.294393	W 103.700724
	11700.00	90.00	179.66	10880.00	867.87	-864.62	551.27	0.00	471309.39	736812.09	N 32.294118	W 103.700724
	11800.00	90.00	179.66	10880.00	967.87	-964.62	551.87	0.00	471209.39	736812.69	N 32.293843	W 103.700724
	11900.00	90.00	179.66	10880.00	1067.87	-1064.61	552.47	0.00	471109.40	736813.29	N 32.293568	W 103.700724
	12000.00	90.00	179.66	10880.00	1167.87	-1164.61	553.07	0.00	471009.41	736813.89	N 32.293294	W 103.700724
	12100.00	90.00	179.66	10880.00	1267.87	-1264.61	553.66	0.00	470909.41	736814.49	N 32.293019	W 103.700724
	12200.00	90.00	179.66	10880.00	1367.87	-1364.61	554.26	0.00	470809.42	736815.09	N 32.292744	W 103.700724
	12300.00	90.00	179.66	10880.00	1467.87	-1464.61	554.86	0.00	470709.43	736815.69	N 32.292469	W 103.700723
	12400.00	90.00	179.66	10880.00	1567.87	-1564.60	555.46	0.00	470609.43	736816.28	N 32.292194	W 103.700723
	12500.00	90.00	179.66	10880.00	1667.87	-1664.60	556.06	0.00	470509.44	736816.88	N 32.291919	W 103.700723
	12600.00	90.00	179.66	10880.00	1767.87	-1764.60	556.66	0.00	470409.45	736817.48	N 32.291644	W 103.700723
	12700.00	90.00	179.66	10880.00	1867.87	-1864.60	557.26	0.00	470309.45	736818.08	N 32.291370	W 103.700723
	12800.00	90.00	179.66	10880.00	1967.87	-1964.60	557.86	0.00	470209.46	736818.68	N 32.291095	W 103.700723
	12900.00	90.00	179.66	10880.00	2067.87	-2064.60	558.46	0.00	470109.47	736819.28	N 32.290820	W 103.700723
	13000.00	90.00	179.66	10880.00	2167.87	-2164.59	559.05	0.00	470009.47	736819.88	N 32.290545	W 103.700723
	13100.00	90.00	179.66	10880.00	2267.87	-2264.59	559.65	0.00	469909.48	736820.48	N 32.290270	W 103.700723
	13200.00	90.00	179.66	10880.00	2367.87	-2364.59	560.25	0.00	469809.49	736821.07	N 32.289995	W 103.700723
	13300.00	90.00	179.66	10880.00	2467.87	-2464.59	560.85	0.00	469709.49	736821.67	N 32.289720	W 103.700723
	13400.00	90.00	179.66	10880.00	2567.87	-2564.59	561.45	0.00	469609.50	736822.27	N 32.289446	W 103.700723
	13500.00	90.00	179.66	10880.00	2667.87	-2664.58	562.05	0.00	469509.51	736822.87	N 32.289171	W 103.700723
	13600.00	90.00	179.66	10880.00	2767.87	-2764.58	562.65	0.00	469409.51	736823.47	N 32.288896	W 103.700723
	13700.00	90.00	179.66	10880.00	2867.87	-2864.58	563.25	0.00	469309.52	736824.07	N 32.288621	W 103.700723
	13800.00	90.00	179.66	10880.00	2967.87	-2964.58	563.84	0.00	469209.53	736824.67	N 32.288346	W 103.700723
	13900.00	90.00	179.66	10880.00	3067.87	-3064.58	564.44	0.00	469109.53	736825.27	N 32.288071	W 103.700723
	14000.00	90.00	179.66	10880.00	3167.87	-3164.58	565.04	0.00	469009.54	736825.86	N 32.287796	W 103.700723
	14100.00	90.00	179.66	10880.00	3267.87	-3264.57	565.64	0.00	468909.55	736826.46	N 32.287522	W 103.700723
	14200.00	90.00	179.66	10880.00	3367.87	-3364.57	566.24	0.00	468809.55	736827.06	N 32.287247	W 103.700723
	14300.00	90.00	179.66	10880.00	3467.87	-3464.57	566.84	0.00	468709.56	736827.66	N 32.286972	W 103.700723
	14400.00	90.00	179.66	10880.00	3567.87	-3564.57	567.44	0.00	468609.57	736828.26	N 32.286697	W 103.700723
	14500.00	90.00	179.66	10880.00	3667.87	-3664.57	568.04	0.00	468509.57	736828.86	N 32.286422	W 103.700723
NMNM0559539 exit to NMNM116573 enter Lease Cross	*14509.53*	*90.00*	*179.66*	*10880.00*	*3677.41*	*-3674.10*	*568.09*	*0.00*	*468500.04*	*736828.91*	*N 32.286396*	*W 103.700723*
	14600.00	90.00	179.66	10880.00	3767.87	-3764.56	568.63	0.00	468409.58	736829.46	N 32.286147	W 103.700723
	14700.00	90.00	179.66	10880.00	3867.87	-3864.56	569.23	0.00	468309.59	736830.06	N 32.285872	W 103.700723
	14800.00	90.00	179.66	10880.00	3967.87	-3964.56	569.83	0.00	468209.59	736830.65	N 32.285597	W 103.700723
	14900.00	90.00	179.66	10880.00	4067.87	-4064.56	570.43	0.00	468109.60	736831.25	N 32.285323	W 103.700723
	15000.00	90.00	179.66	10880.00	4167.87	-4164.56	571.03	0.00	468009.61	736831.85	N 32.285048	W 103.700723
	15100.00	90.00	179.66	10880.00	4267.87	-4264.56	571.63	0.00	467909.61	736832.45	N 32.284773	W 103.700723
	15200.00	90.00	179.66	10880.00	4367.87	-4364.55	572.23	0.00	467809.62	736833.05	N 32.284498	W 103.700723
	15300.00	90.00	179.66	10880.00	4467.87	-4464.55	572.83	0.00	467709.63	736833.65	N 32.284223	W 103.700723
	15400.00	90.00	179.66	10880.00	4567.87	-4564.55	573.43	0.00	467609.63	736834.25	N 32.283948	W 103.700723
	15500.00	90.00	179.66	10880.00	4667.87	-4664.55	574.02	0.00	467509.64	736834.85	N 32.283673	W 103.700723
	15600.00	90.00	179.66	10880.00	4767.87	-4764.55	574.62	0.00	467409.65	736835.44	N 32.283399	W 103.700723
	15700.00	90.00	179.66	10880.00	4867.87	-4864.55	575.22	0.00	467309.66	736836.04	N 32.283124	W 103.700722
	15800.00	90.00	179.66	10880.00	4967.87	-4964.54	575.82	0.00	467209.66	736836.64	N 32.282849	W 103.700722

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °)	Longitude (E/W °)
Section 20-29 Line, NMNM116573 exit to NMNM0559539 enter Lease Cross	*15829.21*	*90.00*	*179.66*	*10880.00*	*4997.08*	*-4993.75*	*576.00*	*0.00*	*467180.46*	*736836.82*	*N 32.282769*	*W 103.700722*
	15900.00	90.00	179.66	10880.00	5067.87	-5064.54	576.42	0.00	467109.67	736837.24	N 32.282574	W 103.700722
	16000.00	90.00	179.66	10880.00	5167.87	-5164.54	577.02	0.00	467009.68	736837.84	N 32.282299	W 103.700722
	16100.00	90.00	179.66	10880.00	5267.87	-5264.54	577.62	0.00	466909.68	736838.44	N 32.282024	W 103.700722
	16200.00	90.00	179.66	10880.00	5367.87	-5364.54	578.22	0.00	466809.69	736839.04	N 32.281749	W 103.700722
	16300.00	90.00	179.66	10880.00	5467.87	-5464.53	578.81	0.00	466709.70	736839.64	N 32.281475	W 103.700722
	16400.00	90.00	179.66	10880.00	5567.87	-5564.53	579.41	0.00	466609.70	736840.23	N 32.281200	W 103.700722
	16500.00	90.00	179.66	10880.00	5667.87	-5664.53	580.01	0.00	466509.71	736840.83	N 32.280925	W 103.700722
	16600.00	90.00	179.66	10880.00	5767.87	-5764.53	580.61	0.00	466409.72	736841.43	N 32.280650	W 103.700722
	16700.00	90.00	179.66	10880.00	5867.87	-5864.53	581.21	0.00	466309.72	736842.03	N 32.280375	W 103.700722
	16800.00	90.00	179.66	10880.00	5967.87	-5964.53	581.81	0.00	466209.73	736842.63	N 32.280100	W 103.700722
	16900.00	90.00	179.66	10880.00	6067.87	-6064.52	582.41	0.00	466109.74	736843.23	N 32.279825	W 103.700722
	17000.00	90.00	179.66	10880.00	6167.87	-6164.52	583.01	0.00	466009.74	736843.83	N 32.279551	W 103.700722
	17100.00	90.00	179.66	10880.00	6267.87	-6264.52	583.60	0.00	465909.75	736844.43	N 32.279276	W 103.700722
	17200.00	90.00	179.66	10880.00	6367.87	-6364.52	584.20	0.00	465809.76	736845.02	N 32.279001	W 103.700722
	17300.00	90.00	179.66	10880.00	6467.87	-6464.52	584.80	0.00	465709.76	736845.62	N 32.278726	W 103.700722
	17400.00	90.00	179.66	10880.00	6567.87	-6564.51	585.40	0.00	465609.77	736846.22	N 32.278451	W 103.700722
	17500.00	90.00	179.66	10880.00	6667.87	-6664.51	586.00	0.00	465509.78	736846.82	N 32.278176	W 103.700722
	17600.00	90.00	179.66	10880.00	6767.87	-6764.51	586.60	0.00	465409.78	736847.42	N 32.277901	W 103.700722
	17700.00	90.00	179.66	10880.00	6867.87	-6864.51	587.20	0.00	465309.79	736848.02	N 32.277626	W 103.700722
	17800.00	90.00	179.66	10880.00	6967.87	-6964.51	587.80	0.00	465209.80	736848.62	N 32.277352	W 103.700722
	17900.00	90.00	179.66	10880.00	7067.87	-7064.51	588.39	0.00	465109.80	736849.22	N 32.277077	W 103.700722
	18000.00	90.00	179.66	10880.00	7167.87	-7164.50	588.99	0.00	465009.81	736849.81	N 32.276802	W 103.700722
	18100.00	90.00	179.66	10880.00	7267.87	-7264.50	589.59	0.00	464909.82	736850.41	N 32.276527	W 103.700722
	18200.00	90.00	179.66	10880.00	7367.87	-7364.50	590.19	0.00	464809.82	736851.01	N 32.276252	W 103.700722
	18300.00	90.00	179.66	10880.00	7467.87	-7464.50	590.79	0.00	464709.83	736851.61	N 32.275977	W 103.700722
	18400.00	90.00	179.66	10880.00	7567.87	-7564.50	591.39	0.00	464609.84	736852.21	N 32.275702	W 103.700722
	18500.00	90.00	179.66	10880.00	7667.87	-7664.49	591.99	0.00	464509.84	736852.81	N 32.275428	W 103.700722
	18600.00	90.00	179.66	10880.00	7767.87	-7764.49	592.59	0.00	464409.85	736853.41	N 32.275153	W 103.700722
	18700.00	90.00	179.66	10880.00	7867.87	-7864.49	593.19	0.00	464309.86	736854.01	N 32.274878	W 103.700722
	18800.00	90.00	179.66	10880.00	7967.87	-7964.49	593.78	0.00	464209.86	736854.60	N 32.274603	W 103.700722
	18900.00	90.00	179.66	10880.00	8067.87	-8064.49	594.38	0.00	464109.87	736855.20	N 32.274328	W 103.700722
	19000.00	90.00	179.66	10880.00	8167.87	-8164.49	594.98	0.00	464009.88	736855.80	N 32.274053	W 103.700722
	19100.00	90.00	179.66	10880.00	8267.87	-8264.48	595.58	0.00	463909.88	736856.40	N 32.273778	W 103.700721
	19200.00	90.00	179.66	10880.00	8367.87	-8364.48	596.18	0.00	463809.89	736857.00	N 32.273504	W 103.700721
	19300.00	90.00	179.66	10880.00	8467.87	-8464.48	596.78	0.00	463709.90	736857.60	N 32.273229	W 103.700721
	19400.00	90.00	179.66	10880.00	8567.87	-8564.48	597.38	0.00	463609.90	736858.20	N 32.272954	W 103.700721
	19500.00	90.00	179.66	10880.00	8667.87	-8664.48	597.98	0.00	463509.91	736858.80	N 32.272679	W 103.700721
	19600.00	90.00	179.66	10880.00	8767.87	-8764.48	598.57	0.00	463409.92	736859.39	N 32.272404	W 103.700721
	19700.00	90.00	179.66	10880.00	8867.87	-8864.47	599.17	0.00	463309.92	736859.99	N 32.272129	W 103.700721
	19800.00	90.00	179.66	10880.00	8967.87	-8964.47	599.77	0.00	463209.93	736860.59	N 32.271854	W 103.700721
	19900.00	90.00	179.66	10880.00	9067.87	-9064.47	600.37	0.00	463109.94	736861.19	N 32.271579	W 103.700721
	20000.00	90.00	179.66	10880.00	9167.87	-9164.47	600.97	0.00	463009.94	736861.79	N 32.271305	W 103.700721
	20100.00	90.00	179.66	10880.00	9267.87	-9264.47	601.57	0.00	462909.95	736862.39	N 32.271030	W 103.700721
	20200.00	90.00	179.66	10880.00	9367.87	-9364.46	602.17	0.00	462809.96	736862.99	N 32.270755	W 103.700721
	20300.00	90.00	179.66	10880.00	9467.87	-9464.46	602.77	0.00	462709.96	736863.59	N 32.270480	W 103.700721
	20400.00	90.00	179.66	10880.00	9567.87	-9564.46	603.36	0.00	462609.97	736864.18	N 32.270205	W 103.700721
	20500.00	90.00	179.66	10880.00	9667.87	-9664.46	603.96	0.00	462509.98	736864.78	N 32.269930	W 103.700721
	20600.00	90.00	179.66	10880.00	9767.87	-9764.46	604.56	0.00	462409.99	736865.38	N 32.269655	W 103.700721
	20700.00	90.00	179.66	10880.00	9867.87	-9864.46	605.16	0.00	462309.99	736865.98	N 32.269381	W 103.700721
	20800.00	90.00	179.66	10880.00	9967.87	-9964.45	605.76	0.00	462210.00	736866.58	N 32.269106	W 103.700721
	20900.00	90.00	179.66	10880.00	10067.87	-10064.45	606.36	0.00	462110.01	736867.18	N 32.268831	W 103.700721
	21000.00	90.00	179.66	10880.00	10167.87	-10164.45	606.96	0.00	462010.01	736867.78	N 32.268556	W 103.700721
2nd BS Sand Target James 20-29 Federal Com 42H - BHL [100' FSL, 1386' FWL]	21012.13	90.00	179.66	10880.00	10180.01	-10176.58	607.03	0.00	461997.88	736867.85	N 32.268523	W 103.700721

Survey Type: Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	23.000	1/100.000	30.000	30.000		A001Mb_MWD-Depth Only	James 20-29 Federal Com 42H / Coterra James 20-29 Federal Com
	1	23.000	10300.000	1/100.000	30.000	30.000		A001Mb_MWD	James 20-29 Federal Com 42H / Coterra James 20-29 Federal Com
	1	10300.000	21012.133	1/100.000	30.000	30.000		A008Mb_MWD+IFR1+MS	James 20-29 Federal Com 42H / Coterra James 20-29 Federal Com

Schlumberger COTERRA

Coterra James 20-29 Federal Com 42H Rev0 kFc 08Sep22 Anti-Collision Summary Report

Analysis Date-24hr Time:	September 08, 2022 - 23:42	**Analysis Method:**	3D Least Distance
Client:	COTERRA	**Reference Trajectory:**	Coterra James 20-29 Federal Com 42H Rev0 kFc 08Sep22 (Def Plan)
Field:	NM Lea County (NAD 83)	**Depth Interval:**	Every 10.00 Measured Depth (ft)
Structure:	Coterra James 20-29 Federal Com 42H	**Rule Set:**	NAL Procedure: D&M AntiCollision Standard S002
Slot:	42H	**Min Pts:**	All local minima indicated.
Well:	James 20-29 Federal Com 42H	**Version / Patch:**	2.10.832.2
Borehole:	James 20-29 Federal Com 42H	**Database \ Project:**	localhost\drilling-project1
Scan MD Range:	0.00ft ~ 21012.13ft		

Trajectory Error Model: ISCWSA0 3-D 95.000% Confidence 2.7955 sigma

Offset Trajectories Summary

Offset Selection Criteria
Wellhead distance scan: Not performed!
Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
30-025-08118 - Federal-Estill Ae 1 - Blind to 4947ft - P (Def Survey)													Fail Major
	5093.99	32.81	5091.49	5061.19	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5093.96	32.81	5091.45	5061.15	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	5093.94	32.81	5091.44	5061.14	N/A	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	
	5093.94	32.81	5091.44	5061.13	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	5093.94	1533.83	4070.56	3560.11	4.99	OSF1.50	810.00	810.00	OSF<5.00			Enter Alert	
	5075.06	5093.03	1678.87	-17.97	1.49	OSF1.50	2530.00	2524.81		OSF<1.50		Enter Minor	
	5048.15	7585.75	-9.85	-2537.60	1.00	OSF1.50	3740.00	3725.79			OSF<1.00	Enter Major	
	5024.31	10168.07	-1755.23	-5143.76	0.74	OSF1.50	5020.00	4996.25				MinPt-O-ADP	
	5024.21	10167.94	-1755.26	-5143.74	0.74	OSF1.50	5030.00	5006.17				MINPT-O-EOU	
	5024.12	10167.78	-1755.23	-5143.66	0.74	OSF1.50	5040.00	5016.10				MinPt-O-SF	
	5023.97	10166.73	-1754.68	-5142.76	0.74	OSF1.50	5080.00	5055.80				MinPt-CtCt	
	5820.68	8739.62	-6.56	-2918.93	1.00	OSF1.50	7980.00	7945.67			OSF>1.00	Exit Major	
	7126.58	7138.85	2366.52	-12.27	1.50	OSF1.50	10080.00	10045.67		OSF>1.50		Exit Minor	
	6257.78	3346.67	4025.83	2911.11	2.81	OSF1.50	15210.00	10880.00				MinPt-CtCt	
	7352.18	6052.45	3316.38	1299.73	1.82	OSF1.50	19070.00	10880.00				MINPT-O-EOU	
	8053.47	6911.12	3445.22	1142.35	1.75	OSF1.50	20280.00	10880.00				MinPt-O-ADP	
	8357.30	7193.00	3561.13	1164.30	1.74	OSF1.50	20750.00	10880.00				MinPt-O-SF	
	8533.30	7338.28	3640.28	1195.02	1.74	OSF1.50	21012.13	10880.00				TD	
Coterra James 20-29 Federal Com 41H Rev0 kFc 08Sep22 (Def Plan)													Fail Minor
	19.99	16.49	17.49	3.50	N/A	MAS = 5.03 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	19.99	16.49	17.49	3.50	N/A	MAS = 5.03 (m)	23.00	23.00				WRP	
	19.99	20.06	5.78	-0.07	1.49	OSF1.50	1230.00	1230.00		OSF<1.50		Enter Minor	
	19.99	24.12	3.08	-4.13	1.21	OSF1.50	1500.00	1500.00				MinPt-CtCt	
	20.15	24.57	2.93	-4.42	1.20	OSF1.50	1530.00	1530.00				MinPts	
	20.27	24.71	2.96	-4.45	1.20	OSF1.50	1540.00	1540.00				MinPt-O-ADP	
	28.06	28.12	8.48	-0.06	1.50	OSF1.50	1780.00	1779.88		OSF>1.50		Exit Minor	
	134.06	42.02	105.21	92.04	4.99	OSF1.50	2760.00	2753.09	OSF>5.00			Exit Alert	
	801.74	154.73	697.76	647.01	7.88	OSF1.50	10160.00	10125.67				MinPt-CtCt	
	801.94	155.37	697.53	646.57	7.84	OSF1.50	10220.00	10185.67				MINPT-O-EOU	
	802.13	155.60	697.56	646.53	7.83	OSF1.50	10240.00	10205.67				MinPt-O-ADP	
	803.94	156.56	698.73	647.38	7.80	OSF1.50	10321.85	10287.52				MinPt-O-SF	
	846.80	255.88	675.38	590.92	5.00	OSF1.50	16950.00	10880.00	OSF<5.00			Enter Alert	
	846.78	368.91	600.01	477.87	3.46	OSF1.50	21000.00	10880.00				MinPt-CtCt	
	846.79	369.24	599.80	477.55	3.45	OSF1.50	21012.13	10880.00				MinPts	
30-025-45603 - James 20-29 Federal Com 38H - Corrected MWD to 22061 ft - A (Def Survey)													Warning Alert
	100.07	32.81	97.57	67.26	N/A	MAS = 10.00 (m)	0.00	0.00				MinPts	
	100.08	32.81	97.57	67.27	42640.24	MAS = 10.00 (m)	23.00	23.00				WRP	
	102.01	32.81	92.35	69.20	13.90	MAS = 10.00 (m)	810.00	810.00				MinPts	
	80.02	32.81	61.79	47.22	4.93	MAS = 10.00 (m)	1680.00	1679.99	OSF<5.00			Enter Alert	
	49.74	33.84	26.35	15.90	2.26	OSF1.50	2190.00	2187.34				MinPt-CtCt	
	49.89	34.31	26.18	15.58	2.23	OSF1.50	2220.00	2217.12				MINPT-O-EOU	
	50.14	34.62	26.23	15.52	2.22	OSF1.50	2240.00	2236.97				MinPt-O-ADP	
	50.52	34.93	26.40	15.59	2.22	OSF1.50	2260.00	2256.82				MinPt-O-SF	
	226.63	69.84	179.23	156.78	4.99	OSF1.50	4550.00	4529.75	OSF>5.00			Exit Alert	
	374.85	90.73	313.53	284.12	6.33	OSF1.50	5850.00	5820.06				MinPt-O-SF	
	404.42	98.78	337.73	305.64	6.26	OSF1.50	6360.00	6326.29				MinPt-O-SF	
	649.64	128.30	563.28	521.34	7.72	OSF1.50	8330.00	8295.67				MINPT-O-EOU	
	651.03	129.91	563.60	521.13	7.64	OSF1.50	8440.00	8405.67				MinPt-O-ADP	
	652.87	133.54	563.01	519.33	7.44	OSF1.50	8700.00	8665.67				MinPt-CtCt	
	653.50	135.74	562.17	517.75	7.33	OSF1.50	8850.00	8815.67				MINPT-O-EOU	
	632.60	157.98	526.45	474.62	6.08	OSF1.50	10620.00	10572.40				MinPt-CtCt	
	632.60	158.05	526.40	474.55	6.08	OSF1.50	10630.00	10581.03				MINPT-O-EOU	
	632.66	158.12	526.42	474.55	6.07	OSF1.50	10640.00	10589.57				MinPt-O-ADP	
	633.23	158.31	526.86	474.92	6.07	OSF1.50	10670.00	10614.64				MinPt-O-SF	
	1189.80	120.58	1108.58	1069.22	15.08	OSF1.50	11850.00	10880.00				MinPt-CtCt	
	1190.03	121.13	1108.44	1068.89	15.02	OSF1.50	11910.00	10880.00				MINPT-O-EOU	
	1190.27	121.43	1108.49	1068.84	14.98	OSF1.50	11940.00	10880.00				MinPt-O-ADP	
	1168.11	135.89	1076.68	1032.22	13.11	OSF1.50	13090.00	10880.00				MinPt-CtCt	
	1168.82	137.72	1076.17	1031.09	12.94	OSF1.50	13200.00	10880.00				MINPT-O-EOU	
	1170.49	141.10	1075.59	1029.39	12.64	OSF1.50	13380.00	10880.00				MINPT-O-EOU	
	1170.89	141.62	1075.64	1029.27	12.60	OSF1.50	13410.00	10880.00				MinPt-O-ADP	
	1194.95	176.14	1076.69	1018.81	10.30	OSF1.50	14950.00	10880.00				MinPt-CtCt	
	1195.21	176.87	1076.47	1018.35	10.26	OSF1.50	14990.00	10880.00				MINPT-O-EOU	
	1207.67	223.25	1058.00	984.42	8.19	OSF1.50	16730.00	10880.00				MinPt-CtCt	
	1207.01	231.13	1052.09	975.88	7.90	OSF1.50	17010.00	10880.00				MinPt-CtCt	
	1170.14	272.24	987.81	897.90	6.49	OSF1.50	18420.00	10880.00				MinPt-CtCt	
	1168.37	280.52	980.52	887.85	6.29	OSF1.50	18700.00	10880.00				MinPt-CtCt	
	1151.78	311.47	943.30	840.31	5.58	OSF1.50	19730.00	10880.00				MinPt-CtCt	
	1151.54	318.07	938.66	833.47	5.46	OSF1.50	19950.00	10880.00				MinPt-CtCt	
	1151.85	331.16	930.24	820.69	5.25	OSF1.50	20380.00	10880.00				MinPt-CtCt	
	1150.53	337.59	924.64	812.94	5.14	OSF1.50	20590.00	10880.00				MinPt-CtCt	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	1152.22	347.51	919.71	804.70	5.00	OSF1.50	20920.00	10880.00	OSF<5.00			Enter Alert	
	1152.68	349.23	919.02	803.45	4.98	OSF1.50	20980.00	10880.00				MinPts	
	1153.47	349.31	919.76	804.16	4.98	OSF1.50	21012.13	10880.00				TD	
30-025-45604 - James 20-29 Federal Com 39H - Corrected MWD to 21906ft - A (Def Survey)													Warning Alert
	116.57	32.81	114.07	83.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	116.56	32.81	114.05	83.75	28267.58	MAS = 10.00 (m)	23.00	23.00				WRP	
	116.08	32.81	111.35	83.28	50.78	MAS = 10.00 (m)	290.00	290.00				MinPts	
	121.15	32.81	107.75	88.34	10.88	MAS = 10.00 (m)	1160.00	1160.00				MINPT-O-EOU	
	121.81	32.81	102.92	89.00	7.28	MAS = 10.00 (m)	1710.00	1709.97				MinPts	
	122.03	32.81	102.75	89.22	7.12	MAS = 10.00 (m)	1750.00	1749.93				MINPT-O-EOU	
	127.43	32.81	106.69	94.62	6.85	MAS = 10.00 (m)	1900.00	1899.45				MinPt-O-SF	
	416.65	77.23	364.33	339.42	8.31	OSF1.50	5040.00	5016.10				MinPt-O-SF	
	587.80	136.26	496.12	451.53	6.56	OSF1.50	9090.00	9055.67				MinPt-CtCt	
	587.89	136.63	495.97	451.26	6.55	OSF1.50	9120.00	9085.67				MINPT-O-EOU	
	587.98	136.75	495.98	451.23	6.54	OSF1.50	9130.00	9095.67				MinPt-O-ADP	
	578.27	147.37	479.19	430.90	5.96	OSF1.50	9850.00	9815.67				MinPt-CtCt	
	578.39	147.74	479.06	430.65	5.95	OSF1.50	9880.00	9845.67				MINPT-O-EOU	
	578.49	147.86	479.08	430.63	5.94	OSF1.50	9890.00	9855.67				MinPt-O-ADP	
	590.58	152.42	488.13	438.16	5.88	OSF1.50	10230.00	10195.67				MinPt-O-SF	
	1158.27	129.90	1070.84	1028.37	13.61	OSF1.50	11840.00	10880.00				MinPt-CtCt	
	1158.69	130.84	1070.64	1027.86	13.51	OSF1.50	11960.00	10880.00				MINPT-O-EOU	
	1159.08	131.34	1070.69	1027.74	13.47	OSF1.50	12020.00	10880.00				MinPt-O-ADP	
	1165.30	137.19	1073.01	1028.11	12.95	OSF1.50	12510.00	10880.00				MINPT-O-EOU	
	1165.70	137.67	1073.09	1028.03	12.91	OSF1.50	12550.00	10880.00				MinPt-O-ADP	
	1170.62	145.64	1072.69	1024.98	12.24	OSF1.50	13050.00	10880.00				MinPt-CtCt	
	1169.19	157.86	1063.12	1011.33	11.26	OSF1.50	13690.00	10880.00				MinPt-CtCt	
	1169.53	175.20	1051.90	994.34	10.14	OSF1.50	14480.00	10880.00				MinPt-CtCt	
	1170.77	178.62	1050.86	992.15	9.95	OSF1.50	14640.00	10880.00				MINPT-O-EOU	
	1171.62	179.65	1051.02	991.97	9.90	OSF1.50	14690.00	10880.00				MinPt-O-ADP	
	1172.41	205.38	1034.65	967.02	8.65	OSF1.50	15680.00	10880.00				MinPt-CtCt	
	1172.95	208.41	1033.17	964.53	8.53	OSF1.50	15810.00	10880.00				MINPT-O-EOU	
	1173.47	209.01	1033.29	964.46	8.51	OSF1.50	15840.00	10880.00				MinPt-O-ADP	
	1167.57	231.24	1012.58	936.34	7.64	OSF1.50	16660.00	10880.00				MinPt-CtCt	
	1168.83	241.53	1006.97	927.29	7.32	OSF1.50	17030.00	10880.00				MinPt-CtCt	
	1150.74	277.39	964.98	873.35	6.27	OSF1.50	18280.00	10880.00				MinPt-CtCt	
	1152.23	281.54	963.70	870.69	6.18	OSF1.50	18440.00	10880.00				MINPT-O-EOU	
	1154.50	284.15	964.23	870.34	6.14	OSF1.50	18540.00	10880.00				MinPt-O-ADP	
	1165.23	321.60	950.00	843.63	5.47	OSF1.50	19760.00	10880.00				MinPt-CtCt	
	1166.29	324.91	948.85	841.38	5.41	OSF1.50	19890.00	10880.00				MINPT-O-EOU	
	1169.53	345.43	938.41	824.10	5.10	OSF1.50	20540.00	10880.00				MinPt-CtCt	
	1169.65	352.85	933.59	816.80	5.00	OSF1.50	20780.00	10880.00	OSF<5.00			Enter Alert	
	1169.62	354.02	932.77	815.60	4.98	OSF1.50	20820.00	10880.00				MinPt-CtCt	
	1166.61	359.99	925.78	806.62	4.88	OSF1.50	21012.13	10880.00				MinPts	
Cimarex James Federal 20H MWD 0ft to 12150ft (Def Survey)													Warning Alert
	5274.87	32.81	5272.37	5242.06	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5274.83	32.81	5272.26	5242.02	71340.25	MAS = 10.00 (m)	23.00	23.00				WRP	
	5274.43	32.81	5270.76	5241.62	4537.54	MAS = 10.00 (m)	170.00	170.00				MinPts	
	5274.72	32.81	5268.08	5241.91	1272.56	MAS = 10.00 (m)	470.00	470.00				MinPts	
	5266.96	32.81	5247.45	5234.15	309.53	MAS = 10.00 (m)	1750.00	1749.93				MinPts	
	5267.98	32.81	5246.51	5235.17	277.58	MAS = 10.00 (m)	1950.00	1949.13				MINPT-O-EOU	
	5269.26	32.93	5246.47	5236.33	259.64	OSF1.50	2080.00	2078.16				MINPT-O-EOU	
	5272.78	39.12	5245.87	5233.66	215.88	OSF1.50	2480.00	2475.18				MINPT-O-EOU	
	5281.29	63.71	5237.98	5217.58	129.36	OSF1.50	4040.00	4023.55				MINPT-O-EOU	
	5283.76	66.71	5238.46	5217.05	123.37	OSF1.50	4240.00	4222.06				MinPt-O-ADP	
	5293.72	73.02	5244.20	5220.69	112.54	OSF1.50	4660.00	4638.93				MinPts	
	5340.05	96.13	5275.14	5243.93	85.51	OSF1.50	6080.00	6048.34				MinPts	
	5354.91	105.83	5283.52	5249.08	77.70	OSF1.50	6780.00	6745.67				MINPT-O-EOU	
	5355.28	106.26	5283.60	5249.02	77.38	OSF1.50	6820.00	6785.67				MinPt-O-ADP	
	5358.77	109.62	5284.86	5249.15	75.00	OSF1.50	7050.00	7015.67				MINPT-O-EOU	
	5359.21	110.11	5284.97	5249.10	74.67	OSF1.50	7090.00	7055.67				MinPt-O-ADP	
	5362.85	115.32	5285.13	5247.53	71.27	OSF1.50	7440.00	7405.67				MINPT-O-EOU	
	5363.81	116.45	5285.34	5247.35	70.57	OSF1.50	7530.00	7495.67				MinPt-O-ADP	
	5368.60	120.53	5287.42	5248.07	68.20	OSF1.50	7800.00	7765.67				MINPT-O-EOU	
	5368.90	120.87	5287.49	5248.04	68.00	OSF1.50	7830.00	7795.67				MinPt-O-ADP	
	5373.23	124.76	5289.22	5248.47	65.90	OSF1.50	8090.00	8055.67				MINPT-O-EOU	
	5373.95	125.63	5289.37	5248.32	65.44	OSF1.50	8160.00	8125.67				MinPt-O-ADP	
	5375.70	127.48	5289.87	5248.21	64.49	OSF1.50	8290.00	8255.67				MinPt-O-ADP	
	5391.01	135.99	5299.52	5255.02	60.55	OSF1.50	8900.00	8865.67				MinPt-O-ADP	
	5406.03	146.78	5307.34	5259.25	56.18	OSF1.50	9600.00	9565.67				MINPT-O-EOU	
	5406.37	147.20	5307.41	5259.17	56.02	OSF1.50	9640.00	9605.67				MinPt-O-ADP	
	5413.00	152.29	5310.64	5260.71	54.18	OSF1.50	10000.00	9965.67				MinPt-O-ADP	
	5420.09	156.60	5314.86	5263.49	52.73	OSF1.50	10300.00	10265.67				MinPts	
	572.71	174.33	455.66	398.38	4.98	OSF1.50	15590.00	10880.00	OSF<5.00			Enter Alert	
	298.45	202.86	162.38	95.59	2.22	OSF1.50	16080.00	10880.00				MinPts	
	582.51	177.98	463.02	404.53	4.96	OSF1.50	16580.00	10880.00	OSF>5.00			Exit Alert	
	4934.00	175.98	4815.85	4758.02	42.64	OSF1.50	21012.13	10880.00				TD	
30-025-45067 - Alley Cat 17-20 FEDERAL COM 216H - MWD to 21324ft - A (Def Survey)													Warning Alert
	6647.02	32.81	6645.48	6614.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6646.84	32.81	6645.27	6614.03	239635.82	MAS = 10.00 (m)	23.00	23.00				WRP	
	6646.72	32.81	6645.01	6613.91	39903.16	MAS = 10.00 (m)	70.00	70.00				MinPts	
	6647.82	32.81	6644.28	6615.01	3322.44	MAS = 10.00 (m)	320.00	320.00				MINPT-O-EOU	
	1613.16	303.95	1410.01	1309.21	7.99	OSF1.50	10620.00	10572.40				MinPt-CtCt	
	1613.21	304.24	1409.87	1308.97	7.99	OSF1.50	10640.00	10589.57				MINPT-O-EOU	
	1613.31	304.39	1409.87	1308.92	7.98	OSF1.50	10650.00	10598.03				MinPt-O-ADP	
	1633.04	313.44	1423.57	1319.60	7.85	OSF1.50	11010.00	10821.76				MINPT-O-EOU	
	1633.38	313.80	1423.67	1319.58	7.84	OSF1.50	11020.00	10825.29				MinPt-O-ADP	
	1631.31	333.09	1408.74	1298.22	7.37	OSF1.50	11600.00	10880.00				MinPt-CtCt	
	1632.17	342.02	1403.64	1290.15	7.18	OSF1.50	11830.00	10880.00				MinPt-CtCt	
	1632.53	343.07	1403.30	1289.46	7.16	OSF1.50	11880.00	10880.00				MINPT-O-EOU	
	1633.04	343.68	1403.41	1289.37	7.15	OSF1.50	11910.00	10880.00				MinPt-O-ADP	
	1634.32	365.93	1389.86	1268.39	6.72	OSF1.50	12430.00	10880.00				MinPt-CtCt	
	1636.67	381.80	1381.62	1254.87	6.45	OSF1.50	12850.00	10880.00				MINPT-O-EOU	
	1658.25	457.84	1352.51	1200.41	5.45	OSF1.50	14620.00	10880.00				MinPt-CtCt	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	1654.97	476.38	1336.87	1178.59	5.22	OSF1.50	15040.00	10880.00				MinPt-CtCt	
	1661.23	499.82	1327.50	1161.41	5.00	OSF1.50	15600.00	10880.00	OSF<5.00			Enter Alert	
	1666.62	510.02	1326.10	1156.61	4.91	OSF1.50	15840.00	10880.00				MinPts	
	1666.88	510.24	1326.21	1156.65	4.91	OSF1.50	15850.00	10880.00				MinPt-O-SF	
	1682.99	506.10	1345.07	1176.89	5.00	OSF1.50	16040.00	10880.00	OSF>5.00			Exit Alert	
	5469.12	236.63	5310.85	5232.49	34.89	OSF1.50	21012.13	10880.00				TD	
30-025-29495 - James Federal 2 - Blind+INC Only to 8151ft - A (Def Survey)													Warning Alert
	9678.72	32.81	9676.22	9645.91	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9678.62	32.81	9676.11	9645.81	692223.13	MAS = 10.00 (m)	23.00	23.00				WRP	
	9678.57	32.81	9665.17	9645.77	887.52	MAS = 10.00 (m)	1600.00	1600.00				MinPts	
	9678.88	32.81	9664.85	9646.07	839.24	MAS = 10.00 (m)	1690.00	1689.99				MINPT-O-EOU	
	9774.49	2532.28	8085.47	7242.21	5.79	OSF1.50	5110.00	5085.57				MinPts	
	9821.27	2534.94	8130.47	7286.32	5.82	OSF1.50	7020.00	6985.67				MinPt-CtCt	
	9821.30	2535.04	8130.44	7286.27	5.82	OSF1.50	7070.00	7035.67				MINPT-O-EOU	
	9821.33	2535.08	8130.45	7286.26	5.82	OSF1.50	7090.00	7055.67				MinPt-O-ADP	
	9822.15	2535.42	8131.04	7286.73	5.82	OSF1.50	7280.00	7245.67				MinPt-O-SF	
	9827.37	2537.18	8135.09	7290.19	5.81	OSF1.50	7770.00	7735.67				MinPt-O-SF	
	9826.55	2536.49	8134.72	7290.06	5.82	OSF1.50	7800.00	7765.67				MinPt-O-ADP	
	9816.84	2538.63	8123.59	7278.21	5.80	OSF1.50	8240.00	8205.67				MinPts	
	7963.93	2392.14	6368.34	5571.79	5.00	OSF1.50	12970.00	10880.00	OSF<5.00			Enter Alert	
	3770.40	1794.34	2573.34	1976.06	3.15	OSF1.50	17840.00	10880.00				MinPt-O-SF	
	3195.76	1399.62	2261.84	1796.14	3.43	OSF1.50	18770.00	10880.00				MinPt-O-ADP	
	2986.93	1145.46	2222.45	1841.47	3.92	OSF1.50	19210.00	10880.00				MINPT-O-EOU	
	2828.74	851.47	2260.26	1977.27	4.99	OSF1.50	19660.00	10880.00	OSF>5.00			Exit Alert	
	2714.08	489.04	2387.22	2225.04	8.36	OSF1.50	20460.00	10880.00				MinPt-CtCt	
	2770.24	704.16	2299.96	2066.07	5.92	OSF1.50	21012.13	10880.00				MinPts	
30-025-45602 - James 20 Federal 037H - Corrected MWD to 20191ft - A (Def Survey)													Pass
	84.88	32.81	82.38	52.07	N/A	MAS = 10.00 (m)	0.00	0.00				MinPts	
	84.90	32.81	82.39	52.09	10542.24	MAS = 10.00 (m)	23.00	23.00				WRP	
	85.05	32.81	82.32	52.24	352.12	MAS = 10.00 (m)	70.00	70.00				MINPT-O-EOU	
	85.30	32.81	82.34	52.49	179.92	MAS = 10.00 (m)	110.00	110.00				MINPT-O-EOU	
	94.45	32.81	79.04	61.64	7.12	MAS = 10.00 (m)	1380.00	1380.00				MinPts	
	95.55	32.81	77.97	62.74	6.17	MAS = 10.00 (m)	1600.00	1600.00				MINPT-O-EOU	
	102.17	32.81	82.62	69.36	5.85	MAS = 10.00 (m)	1800.00	1799.84				MinPt-O-SF	
	1011.21	108.72	937.89	902.49	14.24	OSF1.50	7420.00	7385.67				MinPt-O-SF	
	1025.31	110.22	951.00	915.09	14.24	OSF1.50	7510.00	7475.67				MinPt-O-SF	
	1037.35	111.51	962.18	925.85	14.24	OSF1.50	7590.00	7555.67				MinPt-O-SF	
	1101.55	117.09	1022.66	984.47	14.39	OSF1.50	7990.00	7955.67				MinPt-O-SF	
	1114.24	118.42	1034.46	995.82	14.39	OSF1.50	8070.00	8035.67				MinPt-O-SF	
	1179.24	133.12	1089.66	1046.12	13.51	OSF1.50	8890.00	8855.67				MinPt-CtCt	
	1159.13	150.36	1058.06	1008.78	11.73	OSF1.50	10080.00	10045.67				MinPt-CtCt	
	1159.30	150.87	1057.89	1008.43	11.69	OSF1.50	10120.00	10085.67				MINPT-O-EOU	
	1159.51	151.12	1057.93	1008.39	11.68	OSF1.50	10140.00	10105.67				MinPt-O-ADP	
	1163.70	152.25	1061.36	1011.45	11.63	OSF1.50	10260.00	10225.67				MinPt-O-SF	
	1177.75	153.63	1074.50	1024.13	11.66	OSF1.50	11480.00	10880.00				MinPt-CtCt	
	1177.78	153.72	1074.46	1024.06	11.66	OSF1.50	11500.00	10880.00				MINPT-O-EOU	
	1177.82	153.78	1074.47	1024.04	11.65	OSF1.50	11510.00	10880.00				MinPt-O-ADP	
	1193.98	164.80	1083.28	1029.18	11.01	OSF1.50	12690.00	10880.00				MINPT-O-EOU	
	1194.42	165.31	1083.37	1029.10	10.98	OSF1.50	12730.00	10880.00				MinPt-O-ADP	
	1189.84	171.89	1074.41	1017.95	10.51	OSF1.50	13190.00	10880.00				MinPt-CtCt	
	1182.40	186.96	1056.93	995.44	9.59	OSF1.50	14060.00	10880.00				MinPt-CtCt	
	1180.64	193.80	1050.61	986.84	9.24	OSF1.50	14410.00	10880.00				MinPt-CtCt	
	1180.47	198.53	1047.28	981.94	9.01	OSF1.50	14640.00	10880.00				MinPt-CtCt	
	1179.95	206.45	1041.49	973.51	8.66	OSF1.50	15010.00	10880.00				MinPt-CtCt	
	1179.74	209.80	1039.05	969.95	8.52	OSF1.50	15160.00	10880.00				MinPt-CtCt	
	1179.78	218.72	1033.13	961.05	8.17	OSF1.50	15550.00	10880.00				MinPt-CtCt	
	1180.41	221.22	1032.09	959.18	8.08	OSF1.50	15660.00	10880.00				MINPT-O-EOU	
	1180.97	221.88	1032.21	959.08	8.06	OSF1.50	15690.00	10880.00				MinPt-O-ADP	
	1174.19	268.02	994.67	906.16	6.62	OSF1.50	17510.00	10880.00				MinPt-CtCt	
	1174.80	282.83	985.41	891.97	6.27	OSF1.50	18060.00	10880.00				MinPt-CtCt	
	1175.99	298.54	976.13	877.45	5.95	OSF1.50	18630.00	10880.00				MinPt-CtCt	
	1178.14	312.26	969.14	865.89	5.69	OSF1.50	19120.00	10880.00				MinPt-CtCt	
	1178.03	318.48	964.88	859.55	5.58	OSF1.50	19340.00	10880.00				MinPt-CtCt	
	1177.77	326.45	959.31	851.32	5.44	OSF1.50	19620.00	10880.00				MinPt-CtCt	
	1178.51	335.33	954.13	843.18	5.30	OSF1.50	19930.00	10880.00				MinPt-CtCt	
	1185.51	351.90	950.07	833.61	5.08	OSF1.50	20510.00	10880.00				MINPT-O-EOU	
	1187.84	354.68	950.56	833.17	5.05	OSF1.50	20610.00	10880.00				MinPt-O-ADP	
	1190.76	358.63	950.84	832.13	5.00	OSF1.50	20740.00	10880.00				MINPT-O-EOU	
	1190.93	358.86	950.86	832.07	5.00	OSF1.50	20750.00	10880.00				MinPt-O-ADP	
	1191.93	359.32	951.55	832.62	5.00	OSF1.50	20780.00	10880.00				MinPt-O-SF	
	1224.72	357.25	985.72	867.47	5.17	OSF1.50	21012.13	10880.00				TD	
Cimarex James 29 Federal 36H MWD to 13872ft (Def Survey)													Pass
	5207.60	32.81	5205.10	5174.79	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5207.51	32.81	5204.87	5174.71	36739.94	MAS = 10.00 (m)	23.00	23.00				WRP	
	5207.22	32.81	5204.12	5174.42	8666.70	MAS = 10.00 (m)	110.00	110.00				MinPts	
	5215.77	32.81	5197.55	5182.96	331.72	MAS = 10.00 (m)	1640.00	1640.00				MINPT-O-EOU	
	5319.72	71.54	5271.20	5248.19	115.53	OSF1.50	4580.00	4559.53				MinPts	
	5402.11	107.19	5329.82	5294.92	77.36	OSF1.50	6910.00	6875.67				MINPT-O-EOU	
	5406.77	112.90	5330.67	5293.87	73.43	OSF1.50	7320.00	7285.67				MinPt-O-ADP	
	5409.35	115.66	5331.41	5293.69	71.67	OSF1.50	7510.00	7475.67				MinPt-O-ADP	
	5413.52	119.69	5332.89	5293.83	69.26	OSF1.50	7790.00	7755.67				MinPt-O-ADP	
	5416.30	122.43	5333.85	5293.88	67.71	OSF1.50	7980.00	7945.67				MinPt-O-ADP	
	5534.16	142.82	5438.11	5391.33	59.13	OSF1.50	9980.00	9945.67				MinPt-O-SF	
	1481.29	162.15	1372.30	1319.08	13.89	OSF1.50	16650.00	10880.00				MinPt-CtCt	
	1481.66	163.34	1371.93	1318.32	13.79	OSF1.50	16700.00	10880.00				MINPT-O-EOU	
	1482.26	164.06	1372.06	1318.21	13.74	OSF1.50	16730.00	10880.00				MinPt-O-ADP	
	1485.12	175.47	1367.31	1309.65	12.86	OSF1.50	17240.00	10880.00				MinPt-CtCt	
	1480.26	220.21	1332.62	1260.05	10.18	OSF1.50	18980.00	10880.00				MinPt-CtCt	
	1472.42	232.96	1316.28	1239.46	9.57	OSF1.50	19440.00	10880.00				MinPt-CtCt	
	1473.06	234.90	1315.63	1238.16	9.49	OSF1.50	19510.00	10880.00				MINPT-O-EOU	
	1474.75	236.84	1316.02	1237.91	9.42	OSF1.50	19580.00	10880.00				MinPt-O-ADP	
	1479.42	241.64	1317.49	1237.78	9.26	OSF1.50	19750.00	10880.00				MinPt-O-ADP	
	1576.02	275.17	1391.74	1300.85	8.66	OSF1.50	20970.00	10880.00				MinPt-O-SF	
	1581.99	275.68	1397.37	1306.31	8.67	OSF1.50	21012.13	10880.00				TD	

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		
Coterra James 29-32 Federal Com 25H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6241.49	32.81	6238.99	6208.68	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6241.49	32.81	6238.96	6208.68	207158.19	MAS = 10.00 (m)	23.00	23.00				WRP	
	5678.80	161.18	5570.51	5517.62	53.66	OSF1.50	10300.00	10265.67				MinPt-CtCt	
	5678.81	161.29	5570.46	5517.53	53.62	OSF1.50	10321.85	10287.52				MinPt-O-SF	
	1575.20	211.78	1433.18	1363.42	11.27	OSF1.50	16830.00	10880.00				MinPt-CtCt	
	1577.78	305.61	1373.21	1272.18	7.80	OSF1.50	21012.13	10880.00				MinPts	
Cimarex James Federal 20H ST01 MWD 8951ft to 14067ft (Def Survey)													Pass
	5274.87	32.81	5272.37	5242.06	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5274.83	32.81	5272.26	5242.02	71340.24	MAS = 10.00 (m)	23.00	23.00				WRP	
	5274.43	32.81	5270.76	5241.62	4537.54	MAS = 10.00 (m)	170.00	170.00				MinPts	
	5274.72	32.81	5268.08	5241.91	1272.56	MAS = 10.00 (m)	470.00	470.00				MinPts	
	5266.96	32.81	5247.45	5234.15	309.53	MAS = 10.00 (m)	1750.00	1749.93				MinPts	
	5267.98	32.81	5246.51	5235.17	277.58	MAS = 10.00 (m)	1950.00	1949.13				MINPT-O-EOU	
	5269.26	32.93	5246.47	5236.33	259.64	OSF1.50	2080.00	2078.16				MINPT-O-EOU	
	5272.78	39.12	5245.87	5233.66	215.88	OSF1.50	2480.00	2475.18				MINPT-O-EOU	
	5281.29	63.71	5237.98	5217.58	129.36	OSF1.50	4040.00	4023.55				MINPT-O-EOU	
	5283.76	66.71	5238.46	5217.05	123.37	OSF1.50	4240.00	4222.06				MinPt-O-ADP	
	5293.72	73.02	5244.20	5220.69	112.54	OSF1.50	4660.00	4638.93				MinPts	
	5340.05	96.13	5275.14	5243.93	85.51	OSF1.50	6080.00	6048.34				MinPts	
	5354.91	105.83	5283.52	5249.08	77.70	OSF1.50	6780.00	6745.67				MINPT-O-EOU	
	5355.28	106.26	5283.60	5249.02	77.38	OSF1.50	6820.00	6785.67				MinPt-O-ADP	
	5358.77	109.62	5284.86	5249.15	75.00	OSF1.50	7050.00	7015.67				MINPT-O-EOU	
	5359.21	110.11	5284.97	5249.10	74.67	OSF1.50	7090.00	7055.67				MinPt-O-ADP	
	5362.85	115.32	5285.13	5247.53	71.27	OSF1.50	7440.00	7405.67				MINPT-O-EOU	
	5363.81	116.45	5285.34	5247.35	70.57	OSF1.50	7530.00	7495.67				MinPt-O-ADP	
	5368.60	120.53	5287.42	5248.07	68.20	OSF1.50	7800.00	7765.67				MINPT-O-EOU	
	5368.90	120.87	5287.49	5248.04	68.00	OSF1.50	7830.00	7795.67				MinPt-O-ADP	
	5373.23	124.76	5289.22	5248.47	65.90	OSF1.50	8090.00	8055.67				MINPT-O-EOU	
	5373.95	125.63	5289.37	5248.32	65.44	OSF1.50	8160.00	8125.67				MinPt-O-ADP	
	5375.70	127.48	5289.87	5248.21	64.49	OSF1.50	8290.00	8255.67				MinPt-O-ADP	
	5391.01	135.99	5299.52	5255.02	60.55	OSF1.50	8900.00	8865.67				MinPt-O-ADP	
	5509.80	144.34	5412.74	5365.46	58.24	OSF1.50	10080.00	10045.67				MinPt-O-SF	
	1630.06	166.90	1517.96	1463.16	14.85	OSF1.50	16410.00	10880.00				MinPt-CtCt	
	1630.48	168.21	1517.51	1462.27	14.74	OSF1.50	16460.00	10880.00				MINPT-O-EOU	
	1630.91	168.72	1517.59	1462.19	14.69	OSF1.50	16480.00	10880.00				MinPt-O-ADP	
	1673.15	198.61	1539.91	1474.54	12.78	OSF1.50	17600.00	10880.00				MinPt-CtCt	
	1674.98	204.27	1537.97	1470.71	12.43	OSF1.50	17810.00	10880.00				MINPT-O-EOU	
	1663.68	258.03	1490.83	1405.65	9.75	OSF1.50	19620.00	10880.00				MinPt-CtCt	
	1667.10	296.97	1468.28	1370.12	8.48	OSF1.50	20770.00	10880.00				MinPt-CtCt	
	1667.36	297.75	1468.02	1369.61	8.46	OSF1.50	20800.00	10880.00				MINPT-O-EOU	
	1667.56	297.99	1468.07	1369.57	8.45	OSF1.50	20810.00	10880.00				MinPt-O-ADP	
	1673.76	300.17	1472.82	1373.59	8.42	OSF1.50	20920.00	10880.00				MinPt-O-SF	
	1684.48	301.30	1482.78	1383.18	8.44	OSF1.50	21012.13	10880.00				TD	
Cimarex James 29 Federal 35H MWD to 13649ft (Def Survey)													Pass
	5342.56	32.81	5340.06	5309.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5342.49	32.81	5339.98	5309.68	669122.18	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	5342.48	32.81	5339.98	5309.67	805630.48	MAS = 10.00 (m)	23.00	23.00				WRP	
	5342.33	32.81	5339.53	5309.52	17574.64	MAS = 10.00 (m)	90.00	90.00				MinPts	
	5342.53	32.81	5339.32	5309.72	7484.95	MAS = 10.00 (m)	150.00	150.00				MINPT-O-EOU	
	5345.19	32.81	5339.72	5312.38	1803.45	MAS = 10.00 (m)	380.00	380.00				MINPT-O-EOU	
	5345.53	32.81	5335.66	5312.72	725.73	MAS = 10.00 (m)	800.00	800.00				MinPts	
	5349.62	32.81	5331.82	5316.81	349.47	MAS = 10.00 (m)	1620.00	1620.00				MINPT-O-EOU	
	5641.28	113.57	5564.74	5527.71	76.15	OSF1.50	7360.00	7325.67				MINPT-O-EOU	
	5643.03	115.74	5565.04	5527.29	74.72	OSF1.50	7520.00	7485.67				MinPt-O-ADP	
	5646.16	118.61	5566.25	5527.55	72.91	OSF1.50	7720.00	7685.67				MinPt-O-ADP	
	5649.01	121.45	5567.22	5527.57	71.21	OSF1.50	7910.00	7875.67				MinPt-O-ADP	
	5835.51	144.78	5738.15	5690.73	61.50	OSF1.50	10250.00	10215.67				MinPt-O-SF	
	1744.36	177.04	1625.49	1567.31	14.97	OSF1.50	16820.00	10880.00				MinPt-CtCt	
	1744.72	177.94	1625.26	1566.78	14.90	OSF1.50	16860.00	10880.00				MINPT-O-EOU	
	1745.12	178.38	1625.36	1566.73	14.86	OSF1.50	16880.00	10880.00				MinPt-O-ADP	
	1745.98	186.74	1620.65	1559.24	14.19	OSF1.50	17230.00	10880.00				MinPt-CtCt	
	1747.49	193.13	1617.90	1554.36	13.73	OSF1.50	17480.00	10880.00				MinPt-CtCt	
	1733.86	217.47	1588.05	1516.39	12.08	OSF1.50	18370.00	10880.00				MinPt-CtCt	
	1739.15	239.65	1578.55	1499.50	10.98	OSF1.50	19090.00	10880.00				MinPt-CtCt	
	1705.57	269.35	1525.17	1436.22	9.57	OSF1.50	20040.00	10880.00				MinPt-CtCt	
	1706.63	272.17	1524.35	1434.46	9.48	OSF1.50	20140.00	10880.00				MINPT-O-EOU	
	1708.59	274.52	1524.75	1434.07	9.41	OSF1.50	20220.00	10880.00				MinPt-O-ADP	
	1760.91	296.31	1562.53	1464.60	8.98	OSF1.50	20950.00	10880.00				MinPt-O-SF	
	1768.43	296.76	1569.76	1471.67	9.00	OSF1.50	21012.13	10880.00				TD	
30-025-46023 - Alley Cat 17-20 Fed Com 524H - MWD to 19813ft - A (Def Survey)													Pass
	6705.06	32.81	6702.56	6672.25	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6704.87	32.81	6702.34	6672.06	231271.94	MAS = 10.00 (m)	23.00	23.00				WRP	
	6704.60	32.81	6700.33	6671.79	3799.85	MAS = 10.00 (m)	270.00	270.00				MinPts	
	1862.88	316.40	1651.11	1546.48	8.89	OSF1.50	9400.00	9365.67				MinPt-O-SF	
	1862.49	316.26	1650.81	1546.22	8.89	OSF1.50	9430.00	9395.67				MinPts	
	1862.46	316.21	1650.83	1546.26	8.89	OSF1.50	9440.00	9405.67				MinPt-CtCt	
	2386.93	290.06	2192.72	2096.86	12.44	OSF1.50	11510.00	10880.00				MINPT-O-EOU	
	2387.54	290.78	2192.85	2096.76	12.41	OSF1.50	11540.00	10880.00				MinPt-O-ADP	
	2379.69	330.58	2158.47	2049.11	10.87	OSF1.50	12520.00	10880.00				MinPt-CtCt	
	2380.12	331.83	2158.07	2048.29	10.83	OSF1.50	12590.00	10880.00				MINPT-O-EOU	
	2380.58	332.36	2158.17	2048.22	10.81	OSF1.50	12620.00	10880.00				MinPt-O-ADP	
	2394.35	365.04	2150.15	2029.31	9.90	OSF1.50	13430.00	10880.00				MINPT-O-EOU	
	2395.54	366.51	2150.37	2029.04	9.86	OSF1.50	13490.00	10880.00				MinPt-O-ADP	
	2413.00	386.36	2154.59	2026.64	9.42	OSF1.50	13980.00	10880.00				MINPT-O-EOU	
	2406.78	416.13	2128.53	1990.66	8.72	OSF1.50	14630.00	10880.00				MinPt-CtCt	
	2409.69	424.10	2126.13	1985.60	8.56	OSF1.50	14870.00	10880.00				MINPT-O-EOU	
	2412.50	434.86	2121.76	1977.64	8.36	OSF1.50	15040.00	10880.00				MinPt-CtCt	
	2417.22	449.58	2116.67	1967.64	8.10	OSF1.50	15420.00	10880.00				MINPT-O-EOU	
	2420.03	454.25	2116.37	1965.78	8.03	OSF1.50	15530.00	10880.00				MINPT-O-EOU	
	2423.34	458.25	2117.01	1965.10	7.97	OSF1.50	15640.00	10880.00				MinPt-O-ADP	
	2433.61	467.07	2121.40	1966.54	7.85	OSF1.50	15880.00	10880.00				MinPt-O-SF	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	5780.90	251.18	5612.61	5529.72	34.85	OSF1.50	21012.13	10880.00				TD	
30-025-34926 - Tomcat `20` Federal 2 - INC Only to 8840ft - A (Def Survey)													Pass
	2471.74	32.81	2469.24	2438.93	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2471.42	32.81	2468.87	2438.61	58947.48	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	2469.49	40.45	2441.68	2429.03	97.50	OSF1.50	890.00	890.00				MinPt-CtCt	
	1973.13	342.12	1744.21	1631.01	8.70	OSF1.50	6640.00	6605.68				MinPt-CtCt	
	1970.19	422.92	1687.41	1547.27	7.02	OSF1.50	8160.00	8125.67				MinPt-CtCt	
	1974.69	462.45	1665.56	1512.24	6.43	OSF1.50	8920.00	8885.67				MinPts	
	1974.72	462.47	1665.57	1512.25	6.43	OSF1.50	8930.00	8895.67				MinPt-O-SF	
	2798.40	337.77	2572.39	2460.63	12.51	OSF1.50	11770.00	10880.00				MinPt-O-SF	
	10158.38	467.03	9846.20	9691.35	32.79	OSF1.50	21012.13	10880.00				TD	
30-025-38050 - James 20 Federal 2 - INC Only to 8850ft - A (Def Survey)													Pass
	2060.97	32.81	2058.47	2028.16	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2060.91	32.81	2058.40	2028.10	275530.76	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	2060.89	32.81	2058.39	2028.08	N/A	MAS = 10.00 (m)	20.00	20.00				MinPts	
	2060.89	32.81	2058.39	2028.08	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	2056.60	68.83	2009.88	1987.77	46.45	OSF1.50	1380.00	1380.00				MinPt-CtCt	
	1996.71	282.04	1807.85	1714.67	10.70	OSF1.50	5450.00	5423.04				MinPt-CtCt	
	1997.63	361.62	1755.72	1636.01	8.33	OSF1.50	6950.00	6915.67				MinPt-CtCt	
	1999.85	452.57	1697.31	1547.28	6.66	OSF1.50	8670.00	8635.67				MinPt-CtCt	
	2001.81	465.93	1690.35	1535.88	6.47	OSF1.50	8920.00	8885.67				MinPts	
	2105.01	180.26	1984.01	1924.75	17.74	OSF1.50	12560.00	10880.00				MinPt-CtCt	
	2105.06	180.35	1983.99	1924.71	17.73	OSF1.50	12570.00	10880.00				MINPT-O-EOU	
	2105.15	180.46	1984.01	1924.69	17.72	OSF1.50	12580.00	10880.00				MinPt-O-ADP	
	2746.68	337.70	2520.71	2408.98	12.28	OSF1.50	14320.00	10880.00				MinPt-O-SF	
	8714.61	465.93	8403.15	8248.68	28.20	OSF1.50	21012.13	10880.00				TD	
30-025-37786 - James 20 Federal 1 - INC Only to 8889ft - A (Def Survey)													Pass
	3238.22	32.81	3235.72	3205.41	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3238.22	32.81	3235.72	3205.41	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	3238.23	32.81	3235.62	3205.42	30260.08	MAS = 10.00 (m)	23.00	23.00				WRP	
	3235.39	56.89	3196.63	3178.50	89.16	OSF1.50	1100.00	1100.00				MinPt-CtCt	
	3240.58	150.64	3139.32	3089.94	32.79	OSF1.50	2880.00	2872.20				MinPt-CtCt	
	3249.96	220.92	3101.84	3029.03	22.30	OSF1.50	4180.00	4162.51				MinPt-CtCt	
	3256.76	239.61	3096.18	3017.15	20.59	OSF1.50	4610.00	4589.30				MINPT-O-EOU	
	3263.07	290.56	3068.53	2972.51	16.98	OSF1.50	5490.00	5462.74				MinPt-CtCt	
	3283.49	382.89	3027.39	2900.60	12.94	OSF1.50	7260.00	7225.67				MinPt-CtCt	
	3292.99	468.96	2979.52	2824.03	10.58	OSF1.50	8860.00	8825.67				MinPt-CtCt	
	3293.10	472.36	2977.36	2820.74	10.51	OSF1.50	8930.00	8895.67				MinPts	
	3293.29	472.41	2977.51	2820.87	10.50	OSF1.50	8960.00	8925.67				MinPt-O-SF	
	2716.92	336.24	2491.93	2380.69	12.20	OSF1.50	12140.00	10880.00				MinPt-O-SF	
	2081.01	191.75	1952.34	1889.26	16.47	OSF1.50	13890.00	10880.00				MinPt-CtCt	
	2081.13	191.99	1952.31	1889.14	16.45	OSF1.50	13910.00	10880.00				MINPT-O-EOU	
	2081.27	192.15	1952.34	1889.12	16.44	OSF1.50	13920.00	10880.00				MinPt-O-ADP	
	2689.18	343.54	2459.32	2345.64	11.82	OSF1.50	15590.00	10880.00				MinPt-O-SF	
	7423.06	468.76	7109.72	6954.31	23.87	OSF1.50	21012.13	10880.00				TD	
30-025-38447 - Lonecat Federal 001 - INC Only to 8870ft - A (Def Survey)													Pass
	4498.17	32.81	4495.67	4465.36	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4498.15	32.81	4495.65	4465.35	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	4498.16	32.81	4495.44	4465.35	20681.22	MAS = 10.00 (m)	23.00	23.00				WRP	
	4495.44	41.86	4466.70	4453.58	171.21	OSF1.50	830.00	830.00				MinPt-CtCt	
	4494.62	91.76	4432.62	4402.86	75.49	OSF1.50	1760.00	1759.92				MinPt-CtCt	
	4529.09	209.15	4388.82	4319.94	32.86	OSF1.50	4080.00	4063.25				MINPT-O-EOU	
	4538.24	246.25	4373.24	4292.00	27.91	OSF1.50	4610.00	4589.30				MinPt-CtCt	
	4538.64	247.40	4372.87	4291.24	27.78	OSF1.50	4680.00	4658.78				MINPT-O-EOU	
	4539.05	247.89	4372.95	4291.16	27.73	OSF1.50	4710.00	4688.56				MinPt-O-ADP	
	4543.37	252.74	4374.04	4290.63	27.22	OSF1.50	4880.00	4857.29				MinPt-O-ADP	
	4566.61	312.25	4357.61	4254.35	22.10	OSF1.50	5980.00	5949.09				MINPT-O-EOU	
	4580.00	386.03	4321.81	4193.97	17.90	OSF1.50	7320.00	7285.67				MinPt-CtCt	
	4581.27	440.58	4286.72	4140.69	15.68	OSF1.50	8370.00	8335.67				MinPt-CtCt	
	4587.18	469.84	4273.12	4117.34	14.72	OSF1.50	8920.00	8885.67				MinPts	
	4587.52	469.92	4273.40	4117.60	14.71	OSF1.50	8970.00	8935.67				MinPt-O-SF	
	2701.99	332.31	2479.62	2369.68	12.28	OSF1.50	13480.00	10880.00				MinPt-O-SF	
	2083.31	199.28	1949.62	1884.03	15.86	OSF1.50	15200.00	10880.00				MinPt-CtCt	
	2083.52	199.79	1949.50	1883.73	15.82	OSF1.50	15230.00	10880.00				MINPT-O-EOU	
	2083.90	200.23	1949.58	1883.67	15.79	OSF1.50	15250.00	10880.00				MinPt-O-ADP	
	2663.40	344.35	2433.00	2319.05	11.68	OSF1.50	16860.00	10880.00				MinPt-O-SF	
	6173.63	461.22	5865.32	5712.41	20.18	OSF1.50	21012.13	10880.00				TD	
30-025-41852 - James 29 Federal 38H ST01 - MWD to 13640ft - A (Def Survey)													Pass
	5722.27	32.81	5719.77	5689.46	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5722.17	32.81	5718.98	5689.36	8291.18	MAS = 10.00 (m)	23.00	23.00				WRP	
	5628.81	77.62	5576.23	5551.19	112.34	OSF1.50	4930.00	4906.92				MinPt-CtCt	
	5530.90	129.40	5443.80	5401.50	65.35	OSF1.50	8370.00	8335.67				MinPt-CtCt	
	5532.71	135.24	5441.71	5397.47	62.49	OSF1.50	8800.00	8765.67				MINPT-O-EOU	
	5532.84	135.41	5441.74	5397.43	62.41	OSF1.50	8820.00	8785.67				MinPt-O-ADP	
	5660.82	143.35	5564.42	5517.47	60.26	OSF1.50	10050.00	10015.67				MinPt-O-SF	
	2091.00	196.74	1959.00	1894.26	16.13	OSF1.50	17090.00	10880.00				MinPt-CtCt	
	2091.42	198.05	1958.55	1893.37	16.02	OSF1.50	17150.00	10880.00				MINPT-O-EOU	
	2091.98	198.70	1958.69	1893.29	15.97	OSF1.50	17180.00	10880.00				MinPt-O-ADP	
	2095.55	201.74	1960.22	1893.81	15.76	OSF1.50	17300.00	10880.00				MINPT-O-EOU	
	2097.63	207.57	1958.41	1890.05	15.32	OSF1.50	17510.00	10880.00				MinPt-CtCt	
	2083.50	225.78	1932.15	1857.72	13.98	OSF1.50	18120.00	10880.00				MinPt-CtCt	
	2086.23	237.80	1926.86	1848.43	13.28	OSF1.50	18510.00	10880.00				MINPT-O-EOU	
	2087.69	254.05	1917.48	1833.63	12.43	OSF1.50	18970.00	10880.00				MinPt-CtCt	
	2088.63	256.94	1916.50	1831.69	12.30	OSF1.50	19070.00	10880.00				MINPT-O-EOU	
	2087.65	298.12	1888.07	1789.53	10.58	OSF1.50	20180.00	10880.00				MinPt-CtCt	
	2089.71	305.20	1885.41	1784.51	10.34	OSF1.50	20400.00	10880.00				MINPT-O-EOU	
	2091.35	307.23	1885.70	1784.12	10.28	OSF1.50	20470.00	10880.00				MinPt-O-ADP	
	2099.05	311.22	1890.74	1787.83	10.19	OSF1.50	20650.00	10880.00				MinPt-O-SF	
	2156.41	311.97	1947.59	1844.44	10.44	OSF1.50	21012.13	10880.00				TD	

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		
30-025-37778 - James Federal 12 - INC Only to 8865ft - A (Def Survey)													Pass
	5773.00	32.81	5770.50	5740.19	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5772.98	32.81	5770.47	5740.17	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	5772.97	32.81	5770.47	5740.17	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	5772.69	32.81	5762.59	5739.88	760.00	MAS = 10.00 (m)	340.00	340.00				MinPts	
	5770.77	82.04	5715.24	5688.73	108.78	OSF1.50	1630.00	1630.00				MinPt-CtCt	
	5814.42	227.72	5661.77	5586.70	38.71	OSF1.50	4410.00	4390.79				MINPT-O-EOU	
	5819.97	234.35	5662.90	5585.62	37.64	OSF1.50	4600.00	4579.38				MinPt-O-ADP	
	5852.23	310.51	5644.39	5541.72	28.49	OSF1.50	5990.00	5959.01				MINPT-O-EOU	
	5869.73	374.89	5618.97	5494.84	23.63	OSF1.50	7200.00	7165.67				MinPt-CtCt	
	5874.95	390.45	5613.82	5484.50	22.71	OSF1.50	7630.00	7595.67				MINPT-O-EOU	
	5884.38	464.03	5574.19	5420.34	19.12	OSF1.50	8880.00	8845.67				MinPt-CtCt	
	5884.66	464.78	5573.97	5419.88	19.09	OSF1.50	8940.00	8905.67				MINPT-O-EOU	
	5884.86	465.02	5574.01	5419.84	19.08	OSF1.50	8960.00	8925.67				MinPt-O-ADP	
	5886.94	466.26	5575.26	5420.68	19.03	OSF1.50	9070.00	9035.67				MinPt-O-SF	
	2650.83	327.98	2431.35	2322.85	12.20	OSF1.50	14870.00	10880.00				MinPt-O-SF	
	2086.20	218.17	1939.92	1868.03	14.49	OSF1.50	16510.00	10880.00				MinPt-CtCt	
	2086.48	218.78	1939.80	1867.70	14.45	OSF1.50	16540.00	10880.00				MINPT-O-EOU	
	2086.91	219.27	1939.89	1867.63	14.42	OSF1.50	16560.00	10880.00				MinPt-O-ADP	
	2601.69	344.17	2371.42	2257.53	11.41	OSF1.50	18060.00	10880.00				MinPt-O-SF	
	4966.12	448.85	4666.05	4517.27	16.68	OSF1.50	21012.13	10880.00				TD	
Coterra James 29-32 Federal Com 32H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6143.19	32.81	6140.69	6110.38	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6143.19	32.81	6140.66	6110.38	206321.55	MAS = 10.00 (m)	23.00	23.00				WRP	
	2161.55	203.16	2025.28	1958.39	16.14	OSF1.50	16070.00	10880.00				MinPt-CtCt	
	2161.61	203.43	2025.16	1958.18	16.12	OSF1.50	16090.00	10880.00				MINPT-O-EOU	
	2161.71	203.56	2025.17	1958.14	16.11	OSF1.50	16100.00	10880.00				MinPt-O-ADP	
	2174.45	206.05	2036.24	1968.39	16.01	OSF1.50	16310.00	10880.00				MinPt-O-SF	
	2410.96	304.32	2207.24	2106.63	11.97	OSF1.50	21012.13	10880.00				MinPts	
30-025-36721 - James Federal 5 - INC Only to 8664ft - A (Def Survey)													Pass
	7143.86	32.81	7142.21	7111.05	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7143.78	32.81	7142.12	7110.97	687453.68	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	7143.77	32.81	7142.11	7110.96	711288.00	MAS = 10.00 (m)	23.00	23.00				WRP	
	7143.76	32.81	7142.04	7110.95	111206.36	MAS = 10.00 (m)	40.00	40.00				MinPts	
	7141.87	57.18	7103.20	7084.69	192.89	OSF1.50	1150.00	1150.00				MinPt-CtCt	
	7155.13	141.13	7060.49	7014.00	76.93	OSF1.50	2640.00	2633.99				MinPt-CtCt	
	7166.14	171.00	7051.59	6995.14	63.46	OSF1.50	3390.00	3378.40				MINPT-O-EOU	
	7188.78	224.92	7038.25	6963.86	48.29	OSF1.50	4330.00	4311.39				MINPT-O-EOU	
	7194.52	231.86	7039.40	6962.66	46.87	OSF1.50	4560.00	4539.67				MinPt-O-ADP	
	7228.96	379.11	6975.68	6849.86	28.72	OSF1.50	7270.00	7235.67				MinPt-CtCt	
	7230.42	386.40	6972.27	6844.02	28.18	OSF1.50	7510.00	7475.67				MINPT-O-EOU	
	7231.88	388.16	6972.55	6843.72	28.06	OSF1.50	7590.00	7555.67				MinPt-O-ADP	
	7230.81	451.21	6929.45	6779.60	24.12	OSF1.50	8640.00	8605.67				MinPt-CtCt	
	7231.00	456.37	6926.20	6774.63	23.85	OSF1.50	8750.00	8715.67				MinPts	
	7232.05	456.54	6927.14	6775.51	23.84	OSF1.50	8860.00	8825.67				MinPt-O-SF	
	2767.19	316.06	2555.94	2451.13	13.19	OSF1.50	16390.00	10880.00				MinPt-O-SF	
	2368.04	264.53	2191.14	2103.51	13.50	OSF1.50	17820.00	10880.00				MinPt-CtCt	
	2368.21	265.08	2190.94	2103.13	13.48	OSF1.50	17850.00	10880.00				MINPT-O-EOU	
	2368.53	265.50	2190.98	2103.04	13.46	OSF1.50	17870.00	10880.00				MinPt-O-ADP	
	2760.29	344.36	2530.17	2415.93	12.07	OSF1.50	19240.00	10880.00				MinPt-O-SF	
	3973.22	420.26	3692.50	3552.97	14.23	OSF1.50	21012.13	10880.00				TD	
Coterra James 29-32 Federal Com 24H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6250.41	32.81	6247.91	6217.60	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6250.41	32.81	6247.88	6217.60	207454.45	MAS = 10.00 (m)	23.00	23.00				WRP	
	5961.02	153.56	5857.81	5807.46	59.17	OSF1.50	10000.00	9965.67				MinPt-CtCt	
	5961.10	153.91	5857.66	5807.19	59.03	OSF1.50	10040.00	10005.67				MINPT-O-EOU	
	5961.24	154.07	5857.69	5807.17	58.97	OSF1.50	10060.00	10025.67				MinPt-O-ADP	
	5968.52	155.87	5863.78	5812.66	58.35	OSF1.50	10321.85	10287.52				MinPt-O-SF	
	2439.57	210.33	2298.51	2229.24	17.59	OSF1.50	16820.00	10880.00				MinPt-CtCt	
	2442.19	304.95	2238.05	2137.24	12.10	OSF1.50	21012.13	10880.00				MinPts	
30-025-35812 - James Federal 3 - INC Only to 8610ft - A (Def Survey)													Pass
	8434.15	32.81	8431.65	8401.35	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8434.15	32.81	8431.65	8401.34	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	8434.15	32.81	8431.63	8401.34	417041.75	MAS = 10.00 (m)	23.00	23.00				WRP	
	8432.11	88.74	8372.11	8343.36	146.61	OSF1.50	1710.00	1709.97				MinPt-CtCt	
	8471.62	200.67	8337.00	8270.94	64.10	OSF1.50	3920.00	3904.44				MINPT-O-EOU	
	8484.76	216.47	8339.61	8268.29	59.46	OSF1.50	4320.00	4301.46				MinPt-O-ADP	
	8506.62	285.03	8315.76	8221.59	45.15	OSF1.50	5490.00	5462.74				MINPT-O-EOU	
	8520.98	302.75	8318.31	8218.23	42.56	OSF1.50	5930.00	5899.46				MinPt-O-ADP	
	8533.04	382.73	8277.05	8150.31	33.65	OSF1.50	7330.00	7295.67				MinPt-CtCt	
	8536.03	451.91	8233.92	8084.12	28.48	OSF1.50	8650.00	8615.67				MinPt-CtCt	
	8536.03	451.94	8233.90	8084.09	28.48	OSF1.50	8660.00	8625.67				MINPT-O-EOU	
	8536.05	451.96	8233.90	8084.08	28.48	OSF1.50	8670.00	8635.67				MinPt-O-ADP	
	8537.88	452.21	8235.57	8085.67	28.47	OSF1.50	8830.00	8795.67				MinPt-O-SF	
	2708.55	306.05	2503.68	2402.49	13.37	OSF1.50	17970.00	10880.00				MinPt-O-SF	
	2444.65	280.52	2256.81	2164.14	13.18	OSF1.50	19140.00	10880.00				MinPt-CtCt	
	2444.88	281.13	2256.63	2163.75	13.15	OSF1.50	19170.00	10880.00				MINPT-O-EOU	
	2445.24	281.58	2256.69	2163.66	13.13	OSF1.50	19190.00	10880.00				MinPt-O-ADP	
	2780.08	347.28	2547.73	2432.80	12.08	OSF1.50	20460.00	10880.00				MinPt-O-SF	
	3081.49	376.98	2829.34	2704.51	12.33	OSF1.50	21012.13	10880.00				TD	
30-025-41362 - James Federal 21H ST01 - MWD to 13935ft - A (Def Survey)													Pass
	5720.54	32.81	5718.04	5687.73	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5720.52	32.81	5717.99	5687.71	175414.24	MAS = 10.00 (m)	23.00	23.00				WRP	
	5718.43	32.81	5706.47	5685.62	604.49	MAS = 10.00 (m)	990.00	990.00				MinPts	
	5718.41	32.81	5704.55	5685.60	503.14	MAS = 10.00 (m)	1180.00	1180.00				MinPts	
	5680.70	70.50	5632.87	5610.20	125.25	OSF1.50	4490.00	4470.20				MinPt-CtCt	
	5682.86	75.66	5631.59	5607.20	116.47	OSF1.50	4840.00	4817.59				MINPT-O-EOU	
	5684.06	77.08	5631.84	5606.98	114.27	OSF1.50	4940.00	4916.84				MinPt-O-ADP	

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		
	5691.02	102.73	5621.70	5588.29	85.13	OSF1.50	6570.00	6535.70				MinPt-CtCt	
	5691.57	111.59	5616.34	5579.98	78.22	OSF1.50	7200.00	7165.67				MinPt-CtCt	
	5690.38	119.51	5609.87	5570.87	72.92	OSF1.50	7760.00	7725.67				MinPt-CtCt	
	5691.44	122.87	5608.69	5568.57	70.89	OSF1.50	8020.00	7985.67				MINPT-O-EOU	
	5691.71	123.27	5608.69	5568.44	70.66	OSF1.50	8050.00	8015.67				MINPT-O-EOU	
	5695.61	128.40	5609.18	5567.22	67.83	OSF1.50	8410.00	8375.67				MINPT-O-EOU	
	5700.99	135.18	5610.03	5565.80	64.42	OSF1.50	8880.00	8845.67				MINPT-O-EOU	
	5701.08	135.29	5610.06	5565.80	64.37	OSF1.50	8890.00	8855.67				MinPt-O-ADP	
	5841.00	144.07	5744.12	5696.93	61.86	OSF1.50	10200.00	10165.67				MinPt-O-SF	
	2590.27	181.35	2468.54	2408.92	21.70	OSF1.50	16200.00	10880.00				MinPt-CtCt	
	2590.61	182.39	2468.18	2408.22	21.58	OSF1.50	16250.00	10880.00				MINPT-O-EOU	
	2590.97	182.81	2468.26	2408.16	21.53	OSF1.50	16270.00	10880.00				MinPt-O-ADP	
	2593.64	184.90	2469.54	2408.74	21.31	OSF1.50	16350.00	10880.00				MinPt-O-ADP	
	2598.47	188.45	2472.00	2410.02	20.94	OSF1.50	16450.00	10880.00				MINPT-O-EOU	
	2598.77	188.76	2472.09	2410.01	20.91	OSF1.50	16460.00	10880.00				MinPt-O-ADP	
	2601.11	192.31	2472.07	2408.80	20.54	OSF1.50	16570.00	10880.00				MinPt-CtCt	
	2601.03	200.34	2466.64	2400.70	19.70	OSF1.50	16900.00	10880.00				MinPt-CtCt	
	2598.87	209.01	2458.70	2389.86	18.86	OSF1.50	17230.00	10880.00				MinPt-CtCt	
	2599.57	211.16	2457.96	2388.41	18.67	OSF1.50	17320.00	10880.00				MINPT-O-EOU	
	2600.54	212.34	2458.14	2388.20	18.57	OSF1.50	17370.00	10880.00				MinPt-O-ADP	
	2586.90	238.47	2427.09	2348.43	16.43	OSF1.50	18190.00	10880.00				MinPt-CtCt	
	2585.43	250.17	2417.82	2335.26	15.64	OSF1.50	18530.00	10880.00				MinPt-CtCt	
	2584.01	281.43	2395.56	2302.58	13.88	OSF1.50	19360.00	10880.00				MinPt-CtCt	
	2587.34	291.99	2391.85	2295.35	13.39	OSF1.50	19660.00	10880.00				MINPT-O-EOU	
	2589.18	294.21	2392.21	2294.98	13.30	OSF1.50	19730.00	10880.00				MinPt-O-ADP	
	2597.11	313.96	2386.97	2283.14	12.50	OSF1.50	20180.00	10880.00				MinPt-CtCt	
	2599.36	320.80	2384.66	2278.56	12.24	OSF1.50	20380.00	10880.00				MINPT-O-EOU	
	2605.91	338.43	2379.46	2267.48	11.62	OSF1.50	20810.00	10880.00				MINPT-O-EOU	
	2606.14	338.70	2379.50	2267.44	11.62	OSF1.50	20820.00	10880.00				MinPt-O-ADP	
	2614.90	341.02	2386.71	2273.87	11.58	OSF1.50	20980.00	10880.00				MinPt-O-SF	
	2617.83	341.37	2389.42	2276.46	11.58	OSF1.50	21012.13	10880.00				TD	
30-025-46251 - Alley Cat 17-20 Federal Com 525H - MWD to 19992ft - A (Def Survey)													Pass
	6720.05	32.81	6717.55	6687.24	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6719.86	32.81	6717.33	6687.05	232307.18	MAS = 10.00 (m)	23.00	23.00				WRP	
	6719.72	32.81	6717.06	6686.91	40245.84	MAS = 10.00 (m)	70.00	70.00				MinPts	
	2723.47	308.98	2516.65	2414.49	13.32	OSF1.50	9500.00	9465.67				MinPts	
	2723.50	309.02	2516.65	2414.48	13.32	OSF1.50	9510.00	9475.67				MinPt-O-ADP	
	2724.21	309.17	2517.26	2415.04	13.31	OSF1.50	9560.00	9525.67				MinPt-O-SF	
	3034.45	301.78	2832.43	2732.67	15.20	OSF1.50	10920.00	10782.79				MinPt-O-SF	
	3080.86	314.34	2870.47	2766.53	14.81	OSF1.50	11250.00	10873.53				MinPt-O-ADP	
	3085.15	331.02	2863.64	2754.13	14.08	OSF1.50	11650.00	10880.00				MinPt-CtCt	
	3087.87	337.11	2862.30	2750.76	13.83	OSF1.50	11860.00	10880.00				MINPT-O-EOU	
	3091.10	340.99	2862.94	2750.11	13.69	OSF1.50	11980.00	10880.00				MinPt-O-ADP	
	3090.95	375.28	2839.93	2715.67	12.43	OSF1.50	12680.00	10880.00				MinPt-CtCt	
	3092.46	399.48	2825.31	2692.98	11.68	OSF1.50	13250.00	10880.00				MinPt-CtCt	
	3101.21	421.90	2819.11	2679.31	11.08	OSF1.50	13830.00	10880.00				MINPT-O-EOU	
	3101.72	422.66	2819.11	2679.06	11.06	OSF1.50	13850.00	10880.00				MINPT-O-EOU	
	3106.78	431.05	2818.58	2675.73	10.87	OSF1.50	14030.00	10880.00				MINPT-O-EOU	
	3113.58	440.15	2819.31	2673.43	10.66	OSF1.50	14250.00	10880.00				MinPt-O-ADP	
	3122.02	449.50	2821.52	2672.52	10.47	OSF1.50	14450.00	10880.00				MINPT-O-EOU	
	3138.12	485.81	2813.42	2652.31	9.73	OSF1.50	15110.00	10880.00				MinPt-CtCt	
	3133.51	513.80	2790.14	2619.71	9.19	OSF1.50	15770.00	10880.00				MinPt-CtCt	
	3133.54	513.85	2790.14	2619.68	9.18	OSF1.50	15780.00	10880.00				MinPts	
	3133.98	514.01	2790.48	2619.98	9.18	OSF1.50	15820.00	10880.00				MinPt-O-SF	
	6111.32	321.86	5895.91	5789.45	28.69	OSF1.50	21012.13	10880.00				TD	
30-025-35843 - James Federal 4 - INC Only to 8632ft - A (Def Survey)													Pass
	8570.74	32.81	8569.08	8537.93	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8570.72	32.81	8569.06	8537.91	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	8570.71	32.81	8569.04	8537.90	426317.71	MAS = 10.00 (m)	23.00	23.00				MinPts	
	8572.39	76.68	8520.72	8495.71	171.35	OSF1.50	1540.00	1540.00				MinPt-CtCt	
	8585.83	165.60	8474.87	8420.22	78.54	OSF1.50	3120.00	3110.41				MinPt-CtCt	
	8596.08	224.59	8445.80	8371.49	57.83	OSF1.50	4240.00	4222.06				MinPt-CtCt	
	8596.22	225.00	8445.68	8371.23	57.72	OSF1.50	4290.00	4271.69				MINPT-O-EOU	
	8596.43	225.24	8445.72	8371.20	57.66	OSF1.50	4320.00	4301.46				MinPt-O-ADP	
	8599.15	237.23	8440.45	8361.93	54.74	OSF1.50	4500.00	4480.12				MINPT-O-EOU	
	8599.24	237.33	8440.47	8361.91	54.72	OSF1.50	4520.00	4499.97				MinPt-O-ADP	
	8626.67	366.60	8381.72	8260.07	35.45	OSF1.50	7040.00	7005.67				MinPt-CtCt	
	8627.94	452.04	8326.03	8175.90	28.73	OSF1.50	8660.00	8625.67				MinPt-CtCt	
	8628.04	453.44	8325.20	8174.61	28.64	OSF1.50	8720.00	8685.67				MinPts	
	8629.91	453.66	8326.92	8176.25	28.63	OSF1.50	8870.00	8835.67				MinPt-O-SF	
	2729.91	340.10	2502.63	2389.81	12.09	OSF1.50	19130.00	10880.00				MinPt-CtCt	
	2730.05	340.56	2502.46	2389.48	12.08	OSF1.50	19160.00	10880.00				MINPT-O-EOU	
	2730.32	340.89	2502.51	2389.43	12.07	OSF1.50	19180.00	10880.00				MinPt-O-ADP	
	2852.48	363.22	2609.78	2489.26	11.83	OSF1.50	19960.00	10880.00				MinPt-O-SF	
	3314.24	401.88	3045.77	2912.36	12.42	OSF1.50	21012.13	10880.00				TD	
30-025-35233 - Tomcat `20` Federal 4 - INC Only to 8600ft - A (Def Survey)													Pass
	3126.02	32.81	3123.52	3093.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3125.99	32.81	3123.29	3093.19	15255.05	MAS = 10.00 (m)	23.00	23.00				WRP	
	3123.96	32.81	3103.15	3091.15	170.53	MAS = 10.00 (m)	570.00	570.00				MinPts	
	2798.11	396.14	2533.18	2401.97	10.65	OSF1.50	7510.00	7475.67				MinPt-CtCt	
	2801.44	455.38	2497.02	2346.06	9.27	OSF1.50	8650.00	8615.67				MinPts	
	2801.47	455.40	2497.04	2346.08	9.27	OSF1.50	8660.00	8625.67				MinPt-O-SF	
	3052.90	320.86	2838.16	2732.04	14.37	OSF1.50	12570.00	10880.00				MinPt-CtCt	
	3052.92	320.90	2838.16	2732.03	14.37	OSF1.50	12580.00	10880.00				MinPts	
	3194.93	338.85	2968.20	2856.08	14.24	OSF1.50	13510.00	10880.00				MinPt-O-SF	
	8979.07	457.67	8673.13	8521.40	29.58	OSF1.50	21012.13	10880.00				TD	
30-025-35525 - Tomcat `20` Federal 6 - INC Only to 8954ft - A (Def Survey)													Pass
	4015.06	32.81	4012.56	3982.25	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4015.05	32.81	4012.22	3982.24	12082.05	MAS = 10.00 (m)	23.00	23.00				WRP	
	4014.48	32.81	4002.78	3981.68	435.90	MAS = 10.00 (m)	400.00	400.00				MinPts	
	3840.56	342.41	3611.45	3498.15	16.94	OSF1.50	6610.00	6575.68				MinPt-CtCt	
	3837.38	404.94	3566.59	3432.44	14.29	OSF1.50	7780.00	7745.67				MinPt-CtCt	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	3842.24	468.98	3528.76	3373.26	12.35	OSF1.50	8990.00	8955.67				MinPt-CtCt	
	3842.25	469.00	3528.75	3373.25	12.35	OSF1.50	9000.00	8965.67				MinPts	
	3842.42	469.05	3528.89	3373.37	12.35	OSF1.50	9030.00	8995.67				MinPt-O-SF	
	2816.78	361.81	2574.74	2454.97	11.75	OSF1.50	13890.00	10880.00				MinPt-CtCt	
	2816.78	361.86	2574.71	2454.92	11.75	OSF1.50	13900.00	10880.00				MINPT-O-EOU	
	2816.82	361.91	2574.71	2454.91	11.75	OSF1.50	13910.00	10880.00				MinPt-O-ADP	
	2841.74	366.06	2596.86	2475.68	11.71	OSF1.50	14270.00	10880.00				MinPt-O-SF	
	7655.04	470.89	7340.28	7184.15	24.51	OSF1.50	21012.13	10880.00				TD	
30-025-35888 - James Federal 6 - INC Only to 8700ft - A (Def Survey)													Pass
	7486.73	32.81	7484.23	7453.92	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7486.71	32.81	7484.08	7453.90	55360.95	MAS = 10.00 (m)	23.00	23.00				WRP	
	7485.76	32.81	7475.30	7452.95	940.25	MAS = 10.00 (m)	330.00	330.00				MinPts	
	7479.34	81.15	7424.41	7398.20	142.60	OSF1.50	1590.00	1590.00				MinPt-CtCt	
	7473.60	179.00	7353.44	7294.60	63.50	OSF1.50	3460.00	3447.87				MinPt-CtCt	
	7475.27	244.01	7311.77	7231.26	46.41	OSF1.50	4700.00	4678.63				MinPt-CtCt	
	7475.80	245.53	7311.28	7230.27	46.13	OSF1.50	4800.00	4777.89				MINPT-O-EOU	
	7476.44	246.28	7311.42	7230.16	45.99	OSF1.50	4850.00	4827.51				MinPt-O-ADP	
	7478.50	319.03	7264.98	7159.48	35.43	OSF1.50	6100.00	6068.19				MinPt-CtCt	
	7479.75	423.68	7196.46	7056.07	26.63	OSF1.50	8120.00	8085.67				MinPt-CtCt	
	7485.87	456.71	7180.56	7029.15	24.71	OSF1.50	8790.00	8755.67				MinPts	
	7486.88	456.84	7181.48	7030.03	24.71	OSF1.50	8880.00	8845.67				MinPt-O-SF	
	2982.81	366.41	2737.70	2616.39	12.28	OSF1.50	17850.00	10880.00				MinPt-CtCt	
	2982.88	366.65	2737.61	2616.23	12.28	OSF1.50	17870.00	10880.00				MINPT-O-EOU	
	2983.09	366.90	2737.66	2616.19	12.27	OSF1.50	17890.00	10880.00				MinPt-O-ADP	
	3040.75	377.20	2788.46	2663.56	12.16	OSF1.50	18440.00	10880.00				MinPt-O-SF	
	4347.56	439.26	4053.89	3908.30	14.92	OSF1.50	21012.13	10880.00				TD	
30-025-42091 - James 29 Federal 039H - MWD to 13997ft - A (Def Survey)													Pass
	6091.40	32.81	6088.90	6058.59	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6091.38	32.81	6088.86	6058.57	277173.88	MAS = 10.00 (m)	23.00	23.00				WRP	
	6091.38	32.81	6088.78	6058.57	59748.67	MAS = 10.00 (m)	40.00	40.00				MinPts	
	6091.94	32.81	6088.35	6059.13	5561.90	MAS = 10.00 (m)	180.00	180.00				MINPT-O-EOU	
	5940.17	103.13	5870.59	5837.05	88.51	OSF1.50	6600.00	6565.68				MinPt-CtCt	
	5940.90	104.84	5870.17	5836.06	87.04	OSF1.50	6740.00	6705.67				MINPT-O-EOU	
	5947.39	112.33	5871.67	5835.06	81.19	OSF1.50	7290.00	7255.67				MinPt-O-ADP	
	5952.17	118.16	5872.56	5834.01	77.16	OSF1.50	7690.00	7655.67				MINPT-O-EOU	
	5954.13	120.71	5872.82	5833.42	75.52	OSF1.50	7880.00	7845.67				MinPt-O-ADP	
	5959.98	125.73	5875.33	5834.25	72.52	OSF1.50	8240.00	8205.67				MinPt-O-ADP	
	5962.94	128.44	5876.48	5834.50	70.99	OSF1.50	8430.00	8395.67				MinPt-O-ADP	
	6123.07	145.13	6025.48	5977.94	64.37	OSF1.50	10300.00	10265.67				MinPt-O-SF	
	2999.10	184.08	2875.55	2815.03	24.75	OSF1.50	16200.00	10880.00				MinPt-CtCt	
	2999.37	184.79	2875.34	2814.58	24.66	OSF1.50	16240.00	10880.00				MINPT-O-EOU	
	2999.52	184.97	2875.38	2814.55	24.64	OSF1.50	16250.00	10880.00				MinPt-O-ADP	
	3071.77	194.67	2941.16	2877.10	23.96	OSF1.50	16870.00	10880.00				MinPt-O-SF	
	3096.30	254.53	2925.78	2841.77	18.41	OSF1.50	18550.00	10880.00				MinPt-CtCt	
	3089.05	268.49	2909.22	2820.55	17.41	OSF1.50	18930.00	10880.00				MinPt-CtCt	
	3089.79	270.56	2908.58	2819.23	17.28	OSF1.50	19010.00	10880.00				MINPT-O-EOU	
	3094.00	275.77	2909.32	2818.23	16.97	OSF1.50	19170.00	10880.00				MinPt-O-ADP	
	3101.34	313.77	2891.33	2787.57	14.93	OSF1.50	20050.00	10880.00				MinPt-CtCt	
	3102.92	319.19	2889.29	2783.73	14.69	OSF1.50	20210.00	10880.00				MINPT-O-EOU	
	3104.80	321.41	2889.69	2783.39	14.59	OSF1.50	20280.00	10880.00				MinPt-O-ADP	
	3114.88	346.10	2883.32	2768.78	13.59	OSF1.50	20750.00	10880.00				MinPt-CtCt	
	3115.11	346.89	2883.01	2768.22	13.56	OSF1.50	20790.00	10880.00				MINPT-O-EOU	
	3115.41	347.26	2883.07	2768.15	13.54	OSF1.50	20810.00	10880.00				MinPt-O-ADP	
	3125.67	350.46	2891.20	2775.21	13.46	OSF1.50	21012.13	10880.00				MinPt-O-SF	
30-025-36028 - James Federal 7 - INC Only to 8603ft - A (Def Survey)													Pass
	6265.37	32.81	6262.75	6232.57	50617.91	MAS = 10.00 (m)	0.00	0.00				Surface	
	6265.35	32.81	6262.05	6232.54	7815.62	MAS = 10.00 (m)	23.00	23.00				WRP	
	6264.57	32.81	6256.31	6231.76	1088.15	MAS = 10.00 (m)	220.00	220.00				MinPts	
	6258.38	78.96	6204.90	6179.42	122.73	OSF1.50	1480.00	1480.00				MinPt-CtCt	
	6241.64	162.74	6132.31	6078.90	58.40	OSF1.50	3140.00	3130.26				MinPt-CtCt	
	6226.52	236.64	6067.92	5989.88	39.87	OSF1.50	4510.00	4490.05				MinPt-CtCt	
	6226.88	237.77	6067.53	5989.11	39.68	OSF1.50	4590.00	4569.45				MINPT-O-EOU	
	6227.36	238.33	6067.64	5989.03	39.59	OSF1.50	4630.00	4609.15				MinPt-O-ADP	
	6222.57	272.37	6040.15	5950.20	34.57	OSF1.50	5170.00	5145.13				MinPt-CtCt	
	6215.98	360.55	5974.78	5855.43	26.03	OSF1.50	6830.00	6795.67				MinPt-CtCt	
	6219.46	454.33	5915.75	5765.14	20.64	OSF1.50	8630.00	8595.67				MinPt-CtCt	
	6219.47	454.36	5915.73	5765.11	20.64	OSF1.50	8640.00	8605.67				MinPts	
	6220.09	454.48	5916.27	5765.61	20.63	OSF1.50	8720.00	8685.67				MinPt-O-SF	
	3064.67	343.69	2834.71	2720.98	13.46	OSF1.50	16520.00	10880.00				MinPt-CtCt	
	3064.78	344.01	2834.60	2720.77	13.45	OSF1.50	16550.00	10880.00				MINPT-O-EOU	
	3064.88	344.12	2834.63	2720.76	13.45	OSF1.50	16560.00	10880.00				MinPt-O-ADP	
	3168.82	360.36	2927.75	2808.46	13.27	OSF1.50	17330.00	10880.00				MinPt-O-SF	
	5434.45	444.42	5137.33	4990.03	18.44	OSF1.50	21012.13	10880.00				TD	
30-025-45066 - Alley Cat 17-20 Federal Com 215H - MWD to 21436ft - A (Def Survey)													Pass
	7098.29	32.81	7095.79	7065.49	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7098.15	32.81	7095.63	7065.34	328222.29	MAS = 10.00 (m)	23.00	23.00				WRP	
	7098.07	32.81	7095.44	7065.26	53978.17	MAS = 10.00 (m)	60.00	60.00				MinPts	
	3114.68	299.73	2914.03	2814.95	15.71	OSF1.50	10590.00	10545.99				MinPt-CtCt	
	3114.87	300.39	2913.77	2814.47	15.67	OSF1.50	10630.00	10581.03				MINPT-O-EOU	
	3115.31	300.94	2913.85	2814.37	15.65	OSF1.50	10660.00	10606.38				MinPt-O-ADP	
	3131.01	313.71	2921.04	2817.31	15.08	OSF1.50	11020.00	10825.29				MINPT-O-EOU	
	3126.70	340.72	2898.72	2785.98	13.86	OSF1.50	11730.00	10880.00				MinPt-CtCt	
	3124.49	376.29	2872.80	2748.20	12.53	OSF1.50	12610.00	10880.00				MinPt-CtCt	
	3122.37	394.05	2858.83	2728.31	11.95	OSF1.50	13040.00	10880.00				MinPt-CtCt	
	3123.33	404.51	2852.82	2718.82	11.64	OSF1.50	13290.00	10880.00				MinPt-CtCt	
	3127.47	415.96	2849.32	2711.50	11.34	OSF1.50	13620.00	10880.00				MINPT-O-EOU	
	3131.46	424.55	2847.60	2706.91	11.12	OSF1.50	13810.00	10880.00				MINPT-O-EOU	
	3133.62	427.14	2848.03	2706.48	11.06	OSF1.50	13900.00	10880.00				MinPt-O-ADP	
	3142.59	457.68	2836.64	2684.91	10.35	OSF1.50	14520.00	10880.00				MinPt-CtCt	
	3124.66	516.72	2779.35	2607.94	9.11	OSF1.50	15860.00	10880.00				MinPt-CtCt	
	3124.67	516.79	2779.31	2607.89	9.11	OSF1.50	15870.00	10880.00				MINPT-O-EOU	
	3124.71	516.84	2779.31	2607.87	9.11	OSF1.50	15880.00	10880.00				MinPt-O-ADP	

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		
	3125.39	517.06	2779.84	2608.32	9.10	OSF1.50	15930.00	10880.00				MinPt-O-SF	
	6023.22	330.31	5802.18	5692.91	27.55	OSF1.50	21012.13	10880.00				TD	
Coterra James 29-32 Federal Com 23H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6259.38	32.81	6256.88	6226.57	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6259.38	32.81	6256.85	6226.57	210225.36	MAS = 10.00 (m)	23.00	23.00				WRP	
	6223.27	103.56	6153.40	6119.71	92.33	OSF1.50	6360.00	6326.29				MinPt-CtCt	
	6224.13	106.30	6152.43	6117.83	89.91	OSF1.50	6520.00	6485.74				MINPT-O-EOU	
	3180.66	200.46	3046.19	2980.20	24.08	OSF1.50	16100.00	10880.00				MinPt-CtCt	
	3180.83	200.88	3046.08	2979.95	24.03	OSF1.50	16130.00	10880.00				MINPT-O-EOU	
	3180.94	201.02	3046.10	2979.92	24.02	OSF1.50	16140.00	10880.00				MinPt-O-ADP	
	3267.52	306.34	3062.46	2961.17	16.12	OSF1.50	21012.13	10880.00				MinPts	
30-025-37089 - Continental APJ Federal 8 - INC Only to 8750ft - A (Def Survey)													Pass
	5546.43	32.81	5543.93	5513.62	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5546.42	32.81	5543.43	5513.62	11234.34	MAS = 10.00 (m)	23.00	23.00				WRP	
	5545.28	32.81	5534.62	5512.47	679.25	MAS = 10.00 (m)	330.00	330.00				MinPts	
	5546.72	46.81	5514.68	5499.91	187.68	OSF1.50	940.00	940.00				MinPt-CtCt	
	5435.52	346.01	5204.02	5089.52	23.72	OSF1.50	6620.00	6585.68				MinPt-CtCt	
	5434.03	445.60	5136.13	4988.43	18.39	OSF1.50	8510.00	8475.67				MinPt-CtCt	
	5435.30	460.30	5127.60	4975.00	17.80	OSF1.50	8830.00	8795.67				MinPts	
	5435.50	460.33	5127.78	4975.18	17.80	OSF1.50	8850.00	8815.67				MinPt-O-SF	
	3187.69	370.13	2940.10	2817.56	13.00	OSF1.50	15540.00	10880.00				MinPt-CtCt	
	3187.75	370.28	2940.06	2817.46	12.99	OSF1.50	15560.00	10880.00				MINPT-O-EOU	
	3187.82	370.36	2940.08	2817.46	12.99	OSF1.50	15570.00	10880.00				MinPt-O-ADP	
	3223.54	376.18	2971.92	2847.36	12.93	OSF1.50	16020.00	10880.00				MinPt-O-SF	
	6332.44	459.00	6025.61	5873.45	20.80	OSF1.50	21012.13	10880.00				TD	
30-025-34693 - Tomcat 20 Federal 1 - INC Only to 8850ft - A (Def Survey)													Pass
	4031.63	32.81	4029.13	3998.82	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4031.52	32.81	4029.01	3998.71	380969.84	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	4031.52	32.81	4029.01	3998.71	458691.20	MAS = 10.00 (m)	23.00	23.00				WRP	
	4027.30	35.76	4002.62	3991.54	181.51	OSF1.50	680.00	680.00				MinPt-CtCt	
	3485.22	379.90	3231.12	3105.32	13.84	OSF1.50	7180.00	7145.67				MinPt-CtCt	
	3479.12	469.21	3165.48	3009.91	11.17	OSF1.50	8860.00	8825.67				MinPt-CtCt	
	3479.21	472.15	3163.61	3007.06	11.10	OSF1.50	8930.00	8895.67				MinPts	
	3479.27	472.16	3163.66	3007.11	11.10	OSF1.50	8940.00	8905.67				MinPt-O-SF	
	10635.63	480.31	10314.59	10155.32	33.38	OSF1.50	21012.13	10880.00				TD	
Coterra James 29-32 Federal Com 31H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6152.06	32.81	6149.56	6119.25	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6152.06	32.81	6149.53	6119.25	211659.08	MAS = 10.00 (m)	23.00	23.00				WRP	
	6146.44	33.39	6123.35	6113.05	298.35	OSF1.50	2180.00	2177.42				MinPt-CtCt	
	6146.84	34.70	6122.88	6112.15	286.26	OSF1.50	2290.00	2286.60				MINPT-O-EOU	
	6147.43	35.42	6122.99	6112.02	280.03	OSF1.50	2350.00	2346.15				MinPt-O-ADP	
	3554.38	204.06	3417.51	3350.32	26.43	OSF1.50	16100.00	10880.00				MinPt-CtCt	
	3554.48	204.46	3417.34	3350.02	26.38	OSF1.50	16130.00	10880.00				MINPT-O-EOU	
	3554.69	204.72	3417.37	3349.97	26.35	OSF1.50	16150.00	10880.00				MinPt-O-ADP	
	3616.43	212.19	3474.13	3404.24	25.85	OSF1.50	16770.00	10880.00				MinPt-O-SF	
	3721.24	306.07	3516.36	3415.17	18.38	OSF1.50	21012.13	10880.00				MinPts	
30-025-46252 - Alley Cat 17-20 Federal Com 526H - MWD to 19952ft - A (Def Survey)													Pass
	6735.05	32.81	6732.55	6702.25	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6734.87	32.81	6732.34	6702.06	233346.25	MAS = 10.00 (m)	23.00	23.00				WRP	
	6734.73	32.81	6732.07	6701.92	40293.38	MAS = 10.00 (m)	70.00	70.00				MinPts	
	6727.45	32.81	6712.96	6694.65	560.90	MAS = 10.00 (m)	1290.00	1290.00				MinPts	
	6598.08	52.81	6562.04	6545.27	196.66	OSF1.50	3730.00	3715.86				MinPt-CtCt	
	3610.89	310.77	3402.87	3300.12	17.56	OSF1.50	9500.00	9465.67				MinPt-CtCt	
	3610.93	310.91	3402.82	3300.02	17.55	OSF1.50	9520.00	9485.67				MINPT-O-EOU	
	3611.00	310.98	3402.84	3300.01	17.55	OSF1.50	9530.00	9495.67				MinPt-O-ADP	
	3615.27	311.81	3406.56	3303.46	17.52	OSF1.50	9680.00	9645.67				MinPt-O-SF	
	3901.37	342.44	3672.24	3558.93	17.20	OSF1.50	11630.00	10880.00				MINPT-O-EOU	
	3904.52	346.17	3672.90	3558.35	17.03	OSF1.50	11750.00	10880.00				MinPt-O-ADP	
	3895.46	391.59	3633.56	3503.87	15.01	OSF1.50	12680.00	10880.00				MinPt-CtCt	
	3893.70	403.28	3624.02	3490.42	14.56	OSF1.50	12940.00	10880.00				MinPt-CtCt	
	3877.76	442.38	3582.01	3435.38	13.21	OSF1.50	13790.00	10880.00				MinPt-CtCt	
	3888.78	479.41	3568.34	3409.37	12.22	OSF1.50	14640.00	10880.00				MINPT-O-EOU	
	3890.18	481.10	3568.61	3409.08	12.18	OSF1.50	14700.00	10880.00				MinPt-O-ADP	
	3894.83	485.20	3570.53	3409.63	12.10	OSF1.50	14830.00	10880.00				MinPt-O-ADP	
	3924.94	513.54	3581.75	3411.40	11.51	OSF1.50	15430.00	10880.00				MinPt-O-ADP	
	3938.86	534.12	3581.94	3404.74	11.11	OSF1.50	15780.00	10880.00				MINPT-O-EOU	
	3942.34	538.31	3582.63	3404.03	11.03	OSF1.50	15900.00	10880.00				MinPt-O-ADP	
	3945.22	541.84	3583.16	3403.38	10.97	OSF1.50	15980.00	10880.00				MinPt-O-ADP	
	3947.79	542.49	3585.30	3405.30	10.96	OSF1.50	16040.00	10880.00				MinPt-O-SF	
	6502.65	400.44	6234.86	6102.21	24.50	OSF1.50	21012.13	10880.00				TD	
30-025-41363 - James Federal 22H ST01 - MWD to 13853ft - A (Def Survey)													Pass
	6427.65	32.81	6425.15	6394.84	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6427.63	32.81	6425.10	6394.82	177782.39	MAS = 10.00 (m)	23.00	23.00				WRP	
	6423.71	32.81	6408.43	6390.90	502.40	MAS = 10.00 (m)	1320.00	1320.00				MinPts	
	6273.10	101.95	6204.30	6171.15	94.58	OSF1.50	6540.00	6505.72				MinPt-CtCt	
	6273.55	103.75	6203.55	6169.80	92.90	OSF1.50	6660.00	6625.67				MINPT-O-EOU	
	6279.04	120.57	6197.83	6158.47	79.74	OSF1.50	7830.00	7795.67				MinPt-CtCt	
	6281.42	130.01	6193.91	6151.41	73.86	OSF1.50	8520.00	8485.67				MINPT-O-EOU	
	6282.12	130.84	6194.07	6151.29	73.40	OSF1.50	8590.00	8555.67				MinPt-O-ADP	
	6283.87	132.69	6194.57	6151.18	72.37	OSF1.50	8720.00	8685.67				MinPt-O-ADP	
	6285.81	134.49	6195.32	6151.32	71.41	OSF1.50	8850.00	8815.67				MinPts	
	6286.56	135.20	6195.59	6151.36	71.03	OSF1.50	8900.00	8865.67				MinPt-O-ADP	
	6444.70	144.55	6347.50	6300.15	68.03	OSF1.50	10300.00	10265.67				MinPt-O-SF	
	3736.93	190.08	3609.38	3546.85	29.86	OSF1.50	16240.00	10880.00				MinPt-CtCt	
	3737.18	190.95	3609.05	3546.23	29.73	OSF1.50	16290.00	10880.00				MINPT-O-EOU	
	3737.62	191.47	3609.14	3546.15	29.65	OSF1.50	16320.00	10880.00				MinPt-O-ADP	

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		
	3749.08	207.60	3609.84	3541.48	27.40	OSF1.50	16920.00	10880.00				MinPt-CtCt	
	3749.54	208.96	3609.41	3540.59	27.22	OSF1.50	16990.00	10880.00				MINPT-O-EOU	
	3750.24	209.75	3609.57	3540.48	27.12	OSF1.50	17030.00	10880.00				MinPt-O-ADP	
	3709.67	264.81	3532.30	3444.86	21.20	OSF1.50	18680.00	10880.00				MinPt-CtCt	
	3726.21	320.22	3511.90	3405.99	17.58	OSF1.50	20100.00	10880.00				MINPT-O-EOU	
	3733.31	335.30	3508.94	3398.00	16.82	OSF1.50	20450.00	10880.00				MINPT-O-EOU	
	3738.03	342.22	3509.05	3395.81	16.49	OSF1.50	20620.00	10880.00				MINPT-O-EOU	
	3744.70	350.92	3509.92	3393.78	16.11	OSF1.50	20830.00	10880.00				MinPt-O-ADP	
	3755.09	353.39	3518.66	3401.70	16.04	OSF1.50	21012.13	10880.00				MinPt-O-SF	
30-025-36031 - James Federal 9 - INC Only to 8657ft - A (Def Survey)													Pass
	9077.50	32.81	9075.00	9044.69	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9077.49	32.81	9074.76	9044.68	40542.78	MAS = 10.00 (m)	23.00	23.00				WRP	
	9077.07	32.81	9069.25	9044.27	1705.01	MAS = 10.00 (m)	250.00	250.00				MinPts	
	9076.73	38.57	9050.18	9038.16	377.39	OSF1.50	780.00	780.00				MinPt-CtCt	
	9065.54	144.32	8968.49	8921.22	95.86	OSF1.50	2870.00	2862.27				MinPt-CtCt	
	9056.65	221.15	8908.39	8835.51	62.12	OSF1.50	4310.00	4291.54				MinPt-CtCt	
	9052.87	254.94	8882.08	8797.93	53.78	OSF1.50	4940.00	4916.84				MinPt-CtCt	
	9053.37	256.45	8881.57	8796.92	53.46	OSF1.50	5050.00	5026.02				MINPT-O-EOU	
	9053.94	257.13	8881.68	8796.81	53.32	OSF1.50	5100.00	5075.65				MinPt-O-ADP	
	9045.36	311.15	8837.10	8734.22	43.95	OSF1.50	5990.00	5959.01				MinPt-CtCt	
	9041.71	395.98	8776.90	8645.74	34.46	OSF1.50	7570.00	7535.67				MinPt-CtCt	
	9049.59	455.77	8744.90	8593.81	29.94	OSF1.50	8700.00	8665.67				MinPt-CtCt	
	9049.60	455.84	8744.87	8593.76	29.93	OSF1.50	8720.00	8685.67				MinPts	
	9051.95	456.14	8747.02	8595.81	29.92	OSF1.50	8910.00	8875.67				MinPt-O-SF	
	3772.89	425.85	3488.15	3347.03	13.36	OSF1.50	19170.00	10880.00				MinPt-CtCt	
	3773.02	426.19	3488.06	3346.83	13.35	OSF1.50	19200.00	10880.00				MINPT-O-EOU	
	3773.12	426.31	3488.08	3346.81	13.35	OSF1.50	19210.00	10880.00				MinPt-O-ADP	
	3799.84	431.45	3511.38	3368.39	13.28	OSF1.50	19620.00	10880.00				MinPt-O-SF	
	4199.38	451.24	3897.72	3748.14	14.03	OSF1.50	21012.13	10880.00				TD	
30-025-35145 - Tomcat `20` Federal 3 - INC Only to 8600ft - A (Def Survey)													Pass
	4285.33	32.81	4282.83	4252.52	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4285.31	32.81	4282.63	4252.50	23860.84	MAS = 10.00 (m)	23.00	23.00				WRP	
	4281.28	37.01	4255.77	4244.27	185.95	OSF1.50	680.00	680.00				MinPt-CtCt	
	4283.93	54.93	4246.47	4229.00	122.49	OSF1.50	1020.00	1020.00				MINPT-O-EOU	
	4277.32	76.11	4225.74	4201.20	87.11	OSF1.50	1370.00	1370.00				MinPt-CtCt	
	3872.97	375.24	3621.98	3497.73	15.58	OSF1.50	7070.00	7035.67				MinPt-CtCt	
	3875.95	456.88	3570.53	3419.07	12.79	OSF1.50	8650.00	8615.67				MinPts	
	3876.11	456.93	3570.65	3419.18	12.79	OSF1.50	8680.00	8645.67				MinPt-O-SF	
	4055.60	388.94	3795.48	3666.66	15.73	OSF1.50	12580.00	10880.00				MinPt-CtCt	
	4055.61	388.96	3795.47	3666.65	15.73	OSF1.50	12590.00	10880.00				MinPts	
	4060.02	389.59	3799.47	3670.44	15.72	OSF1.50	12770.00	10880.00				MinPt-O-SF	
	9356.30	463.66	9046.36	8892.64	30.42	OSF1.50	21012.13	10880.00				TD	
30-025-36773 - James Federal 11 - INC Only to 8639ft - A (Def Survey)													Pass
	8038.20	32.81	8035.70	8005.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8038.17	32.81	8034.45	8005.36	6618.86	MAS = 10.00 (m)	23.00	23.00				WRP	
	8036.06	32.81	8021.85	8003.25	686.36	MAS = 10.00 (m)	340.00	340.00				MinPts	
	7965.06	265.49	7787.23	7699.56	45.41	OSF1.50	5140.00	5115.35				MinPt-CtCt	
	7949.60	354.82	7712.23	7594.79	33.84	OSF1.50	6740.00	6705.67				MinPt-CtCt	
	7951.25	435.50	7660.08	7515.75	27.54	OSF1.50	8290.00	8255.67				MinPt-CtCt	
	7956.09	449.72	7655.44	7506.36	26.68	OSF1.50	8720.00	8685.67				MINPT-O-EOU	
	7959.07	457.21	7653.43	7501.85	26.25	OSF1.50	8840.00	8805.67				MinPts	
	4041.74	421.65	3759.81	3620.09	14.46	OSF1.50	17860.00	10880.00				MinPt-CtCt	
	4041.84	421.93	3759.72	3619.91	14.45	OSF1.50	17890.00	10880.00				MINPT-O-EOU	
	4041.93	422.02	3759.74	3619.90	14.44	OSF1.50	17900.00	10880.00				MinPt-O-ADP	
	4067.69	426.53	3782.50	3641.16	14.38	OSF1.50	18320.00	10880.00				MinPt-O-SF	
	5124.80	459.61	4817.56	4665.19	16.81	OSF1.50	21012.13	10880.00				TD	
30-025-35234 - Tomcat `20` Federal 5 - INC Only to 8650ft - A (Def Survey)													Pass
	4970.71	32.81	4968.21	4937.90	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4970.70	32.81	4967.88	4937.90	15514.36	MAS = 10.00 (m)	23.00	23.00				WRP	
	4970.02	32.81	4958.46	4937.22	548.29	MAS = 10.00 (m)	400.00	400.00				MinPts	
	4673.23	370.54	4425.38	4302.70	19.04	OSF1.50	7130.00	7095.67				MinPt-CtCt	
	4673.26	452.77	4370.58	4220.49	15.56	OSF1.50	8690.00	8655.67				MinPt-CtCt	
	4673.27	452.79	4370.58	4220.48	15.56	OSF1.50	8700.00	8665.67				MinPts	
	4673.53	452.85	4370.80	4220.68	15.56	OSF1.50	8740.00	8705.67				MinPt-O-SF	
	4045.37	393.48	3782.21	3651.89	15.51	OSF1.50	13880.00	10880.00				MinPt-CtCt	
	4045.38	393.53	3782.20	3651.85	15.51	OSF1.50	13890.00	10880.00				MINPT-O-EOU	
	4045.42	393.57	3782.20	3651.84	15.51	OSF1.50	13900.00	10880.00				MinPt-O-ADP	
	4058.07	395.44	3793.60	3662.62	15.48	OSF1.50	14200.00	10880.00				MinPt-O-SF	
	8200.23	460.42	7892.45	7739.82	26.85	OSF1.50	21012.13	10880.00				TD	
30-025-36772 - James Federal 10 - INC Only to 8645ft - A (Def Survey)													Pass
	6915.59	32.81	6913.09	6882.78	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6915.56	32.81	6912.16	6882.75	7651.50	MAS = 10.00 (m)	23.00	23.00				WRP	
	6914.50	32.81	6906.10	6881.69	1171.15	MAS = 10.00 (m)	220.00	220.00				MinPts	
	6909.92	64.95	6865.79	6844.97	165.91	OSF1.50	1200.00	1200.00				MinPt-CtCt	
	6779.80	354.23	6542.81	6425.56	28.90	OSF1.50	6710.00	6675.67				MinPt-CtCt	
	6789.53	433.49	6499.70	6356.04	23.62	OSF1.50	8230.00	8195.67				MinPt-CtCt	
	6791.22	457.46	6485.42	6333.76	22.38	OSF1.50	8690.00	8655.67				MinPts	
	6792.30	457.64	6486.37	6334.65	22.38	OSF1.50	8800.00	8765.67				MinPt-O-SF	
	4048.33	412.06	3772.79	3636.26	14.82	OSF1.50	16540.00	10880.00				MinPt-CtCt	
	4048.36	412.22	3772.71	3636.14	14.81	OSF1.50	16560.00	10880.00				MINPT-O-EOU	
	4048.49	412.38	3772.74	3636.11	14.81	OSF1.50	16580.00	10880.00				MinPt-O-ADP	
	4070.71	416.05	3792.51	3654.66	14.76	OSF1.50	16970.00	10880.00				MinPt-O-SF	
	6029.55	462.17	5720.61	5567.38	19.67	OSF1.50	21012.13	10880.00				TD	
30-025-37296 - Tomcat 20 Federal 7 - INC Only to 8650ft - A (Def Survey)													Pass
	5875.69	32.81	5873.10	5842.89	59267.39	MAS = 10.00 (m)	0.00	0.00				MinPts	
	5875.71	32.81	5872.74	5842.90	12583.70	MAS = 10.00 (m)	23.00	23.00				WRP	
	5869.20	38.91	5842.43	5830.29	241.71	OSF1.50	750.00	750.00				MinPt-CtCt	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	5869.39	39.44	5842.27	5829.95	238.24	OSF1.50	800.00	800.00				MINPT-O-EOU	
	5869.66	39.76	5842.32	5829.90	236.20	OSF1.50	830.00	830.00				MinPt-O-ADP	
	5863.37	82.83	5807.31	5780.53	109.43	OSF1.50	1550.00	1550.00				MinPt-CtCt	
	5670.82	345.87	5439.41	5324.95	24.76	OSF1.50	6640.00	6605.68				MinPt-CtCt	
	5666.29	429.99	5378.80	5236.30	19.87	OSF1.50	8220.00	8185.67				MinPt-CtCt	
	5671.16	444.41	5374.05	5226.75	19.24	OSF1.50	8630.00	8595.67				MINPT-O-EOU	
	5673.08	453.79	5369.72	5219.28	18.85	OSF1.50	8720.00	8685.67				MinPts	
	5673.54	453.85	5370.14	5219.69	18.85	OSF1.50	8760.00	8725.67				MinPt-O-SF	
	4054.48	400.60	3786.58	3653.88	15.27	OSF1.50	15210.00	10880.00				MinPt-CtCt	
	4054.50	400.66	3786.56	3653.84	15.27	OSF1.50	15220.00	10880.00				MINPT-O-EOU	
	4054.54	400.73	3786.56	3653.82	15.26	OSF1.50	15230.00	10880.00				MinPt-O-ADP	
	4073.53	403.71	3803.55	3669.82	15.22	OSF1.50	15600.00	10880.00				MinPt-O-SF	
	7081.25	460.45	6773.44	6620.79	23.19	OSF1.50	21012.13	10880.00				TD	
30-025-31515 - James Federal 1 - INC Only+Blind to 6160ft - SWD (Def Survey)													Pass
	9900.34	32.81	9897.84	9867.53	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	9900.33	32.81	9897.57	9867.52	38646.91	MAS = 10.00 (m)	23.00	23.00				WRP	
	9899.94	32.81	9892.43	9867.13	1976.92	MAS = 10.00 (m)	220.00	220.00				MinPts	
	9899.62	76.33	9847.90	9823.29	201.08	OSF1.50	1440.00	1440.00				MinPt-CtCt	
	9904.41	148.86	9804.33	9755.55	101.48	OSF1.50	2770.00	2763.02				MinPt-CtCt	
	9909.64	203.03	9773.45	9706.60	74.11	OSF1.50	3790.00	3775.41				MinPt-CtCt	
	9911.98	210.42	9770.86	9701.56	71.49	OSF1.50	4080.00	4063.25				MINPT-O-EOU	
	9914.88	213.92	9771.43	9700.96	70.33	OSF1.50	4220.00	4202.21				MinPt-O-ADP	
	9915.52	248.29	9749.16	9667.23	60.50	OSF1.50	4660.00	4638.93				MinPt-CtCt	
	9915.98	249.73	9748.67	9666.26	60.15	OSF1.50	4770.00	4748.11				MINPT-O-EOU	
	9916.52	250.37	9748.77	9666.14	59.99	OSF1.50	4820.00	4797.74				MinPt-O-ADP	
	9959.44	2235.43	8468.32	7724.01	6.69	OSF1.50	6100.00	6068.19				MinPts	
	9961.86	2235.55	8470.66	7726.31	6.69	OSF1.50	6270.00	6236.93				MinPt-O-SF	
	6582.47	1600.38	5514.71	4982.08	6.18	OSF1.50	16330.00	10880.00				MinPt-O-SF	
	5209.54	993.51	4546.37	4216.03	7.88	OSF1.50	20020.00	10880.00				MinPt-O-ADP	
	5198.99	981.69	4543.69	4217.30	7.96	OSF1.50	20260.00	10880.00				MINPT-O-EOU	
	5197.85	979.16	4544.24	4218.69	7.98	OSF1.50	20370.00	10880.00				MinPt-CtCt	
	5237.52	1000.95	4569.39	4236.57	7.86	OSF1.50	21012.13	10880.00				MinPt-O-SF	

1. Geological Formations

TVD of target 10,880
MD at TD 21,012

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1090	Useable Water	
Top of Salt	1400	N/A	
Base of Salt	4715	N/A	
Lamar	4740	N/A	
Bell Canyon	4816	N/A	
Cherry Canyon	5679	Hydrocarbons	
Brushy Canyon	6967	Hydrocarbons	
Bone Spring Lime	8670	Hydrocarbons	
1st Bone Spring	9780	Hydrocarbons	
2nd Bone Spring	10227	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
8 3/4	10322	11072	10841	7"	29.00	P-110	BT&C	1.68	2.21	61.72
6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
					BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

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

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

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	553	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	148	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	985	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	276	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Production	681	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	125	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Completion System	737	14.50	1.30	5.79	20	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + Expanding Agent + Retarder + Antifoam

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	50
Production	4586	25
Completion System	10872	10

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

4. Pressure Control Equipment

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

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

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1140'	FW Spud Mud	7.83 - 8.33	30-32	N/C
1140' to 4786'	Brine Water	9.80 - 10.30	30-32	N/C
4786' to 11072'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
11072 to 21012'	OBM	9.00 - 9.50	50-70	N/C

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

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

6. Logging and Testing Procedures

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

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5374 psi
Abnormal Temperature	No

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

8. Other Facets of Operation

9. Wellhead

A multi-bowl wellhead system will be utilized.

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

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

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

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

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

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

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

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

10.Other Variances

Cimarex requests to perform offline cementing. OLC procedure as follows: 1. Land casing on solid body mandrel hanger. Engagepackoff and lock ring 2. Install BPV. 3. Skid rig. 4. Check for pressure and remove BPV. 5. Circulate down casing, taking returns through casing valves. 6. Pump lead and tail cement. 7. Displace cement and bump the plug. 8. Ensure floats are holding pressure. 9. RD cement crew. 10. Install BPV and TA cap.

Cimarex requests permission to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for surface cement to harden on this 42H well. Surface cement will be pumped and we will ensure floats hold, do a green cement test and then skid to the next well on pad. We will not perform any operations on this 42H well until at least 8 hours and when both tail and lead slurry reach 500 psi. The mandrel hangeris made up on the last joint of 13 3/8" casing and then lowered down with and landing joint. It is then lowered down until the mandrel contacts the landing ring which is pre-welded to the conductor pipe. At this point the 13 3/8"casing is entirely supported by the conductor pipe via the landing ring/mandrel and is independent from the rig. This allows us to walk the rig away from the 42H well and begin work on the next well while the cement is hardening. There is no way for the casing to be moved or knocked off center since it is hanging from the landing ring.

Cementing Operational Workflow

Conventional Cementing

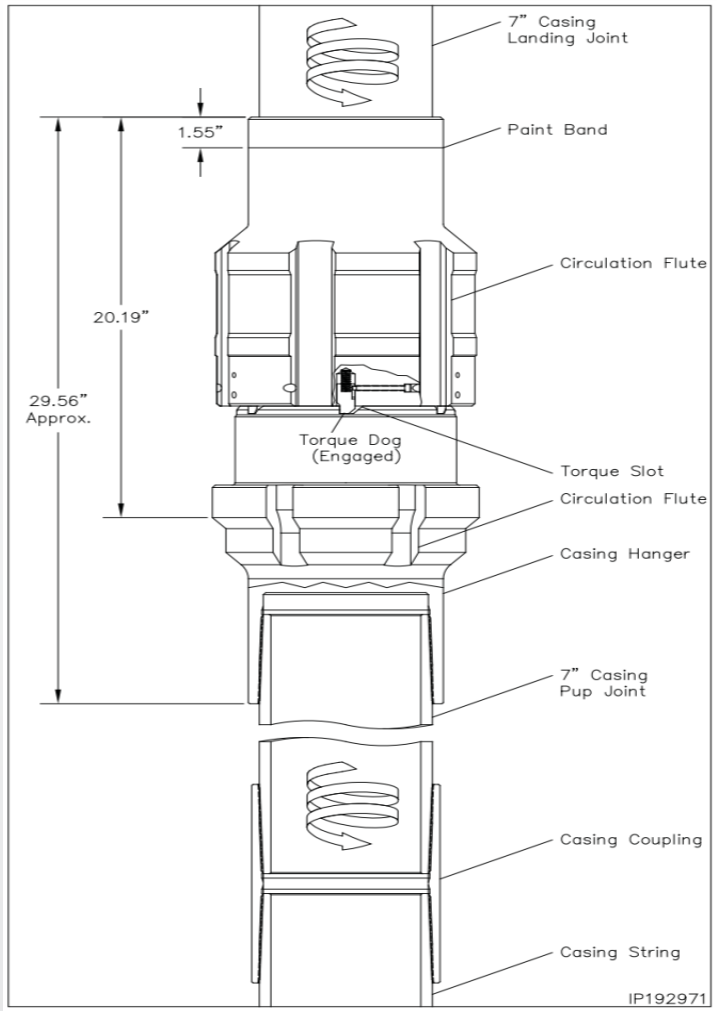
1. Land casing on fluted mandrel hanger
2. Circulate down casing, taking returns through BOP stack
3. Pump lead and tail cement
4. Displace cement and bump the plug
5. Ensure floats are holding pressure
6. RD cement crew
7. Install packoff to isolate pressure
8. Install BPV and skid rig

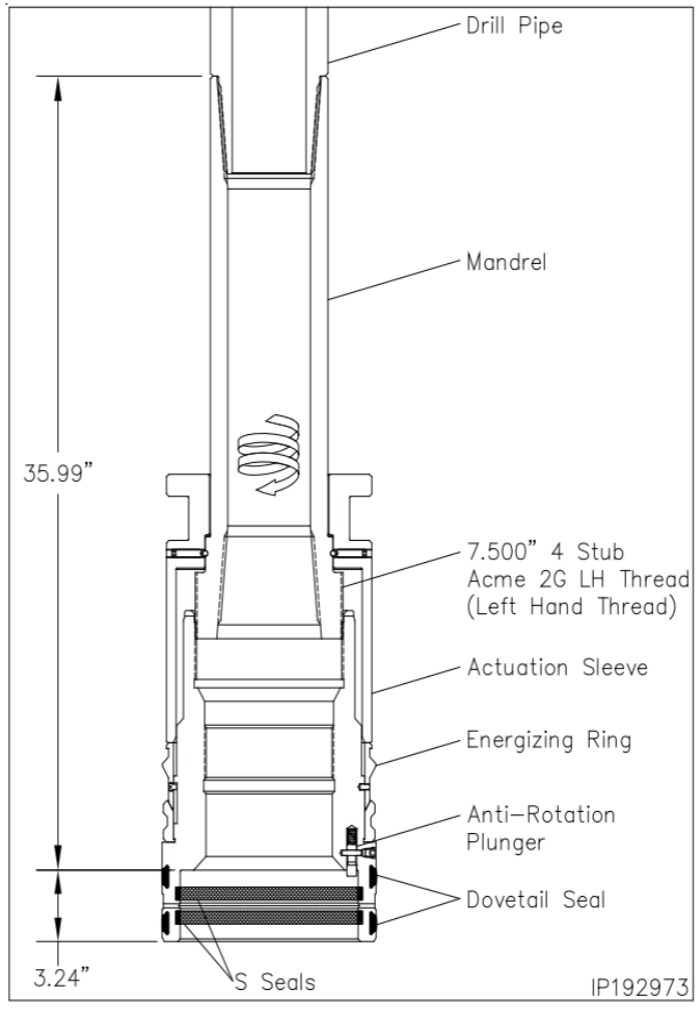
Offline Cementing

1. Land casing on **solid body** mandrel hanger
   a) Engage packoff and lockring
2. Install BPV
3. Skid rig
4. Check for pressure and remove BPV
5. Circulate down casing, taking returns through casing valves
6. Pump lead and tail cement
7. Displace cement and bump the plug
8. Ensure floats are holding pressure
9. RD cement crew
10. Install BPV and TA cap

Conventional Cementing Equipment-Fluted Mandrel

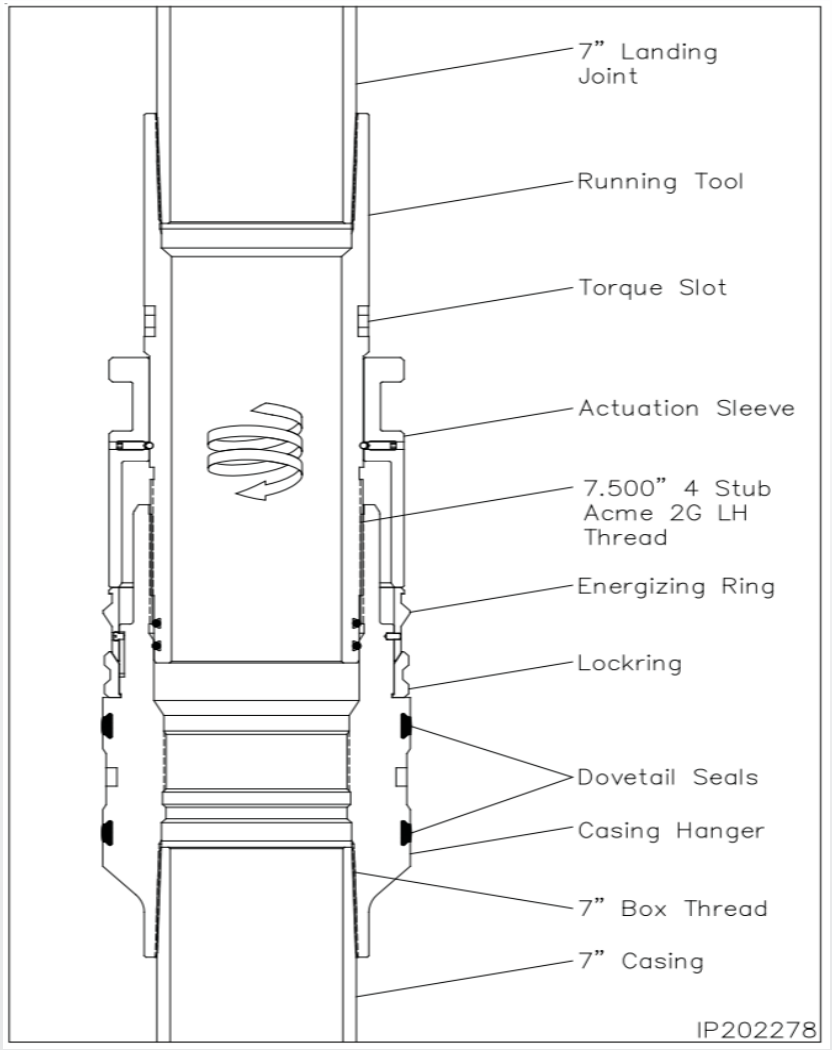
- Fluted Hanger allows returns up past the hanger body
- Returns throughout cement job flow up through BOP stack and into flowline
- Packoff is installed **after** cement job to isolate pressure above and below hanger
- Lockring engaged during packoff installation



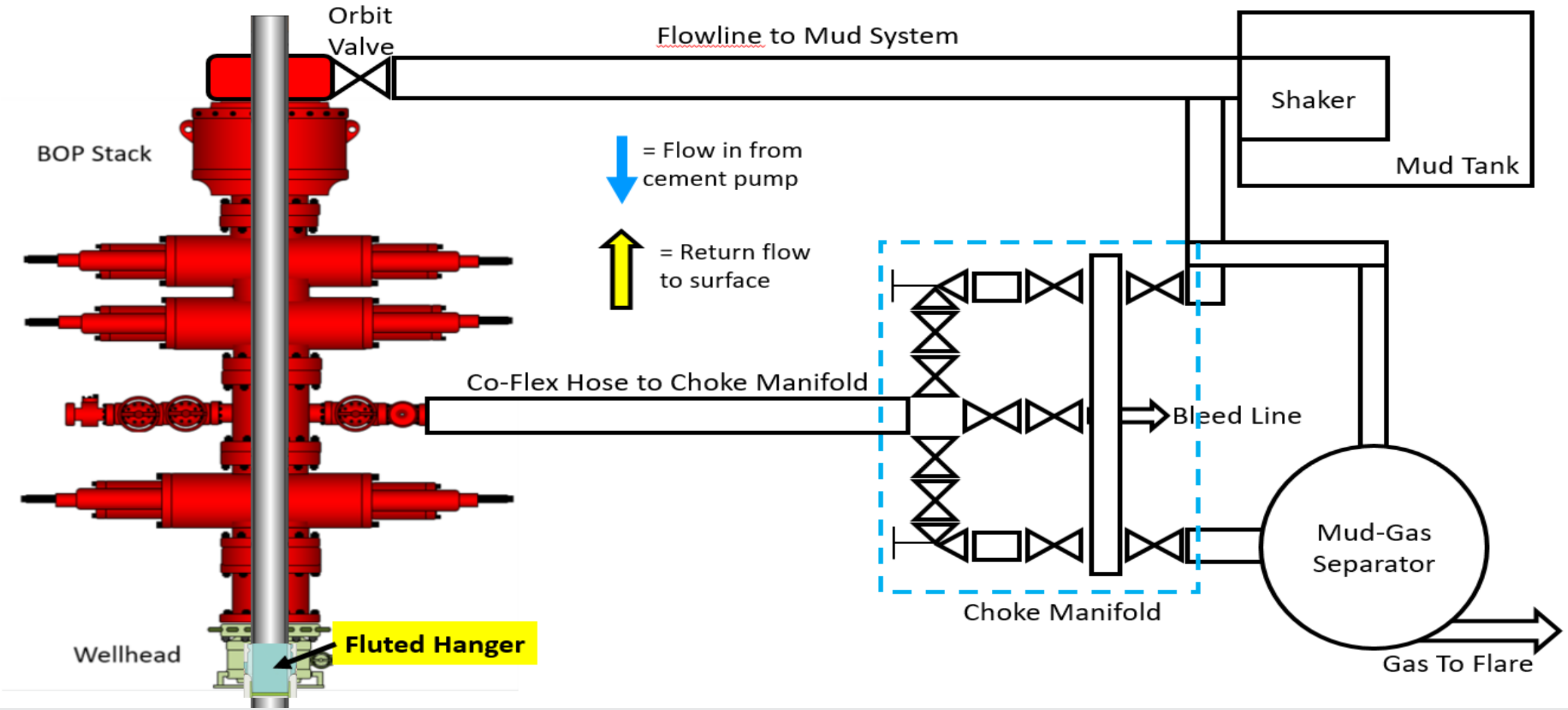


Offline Cementing Equipment-Solid Body Mandrel Hanger

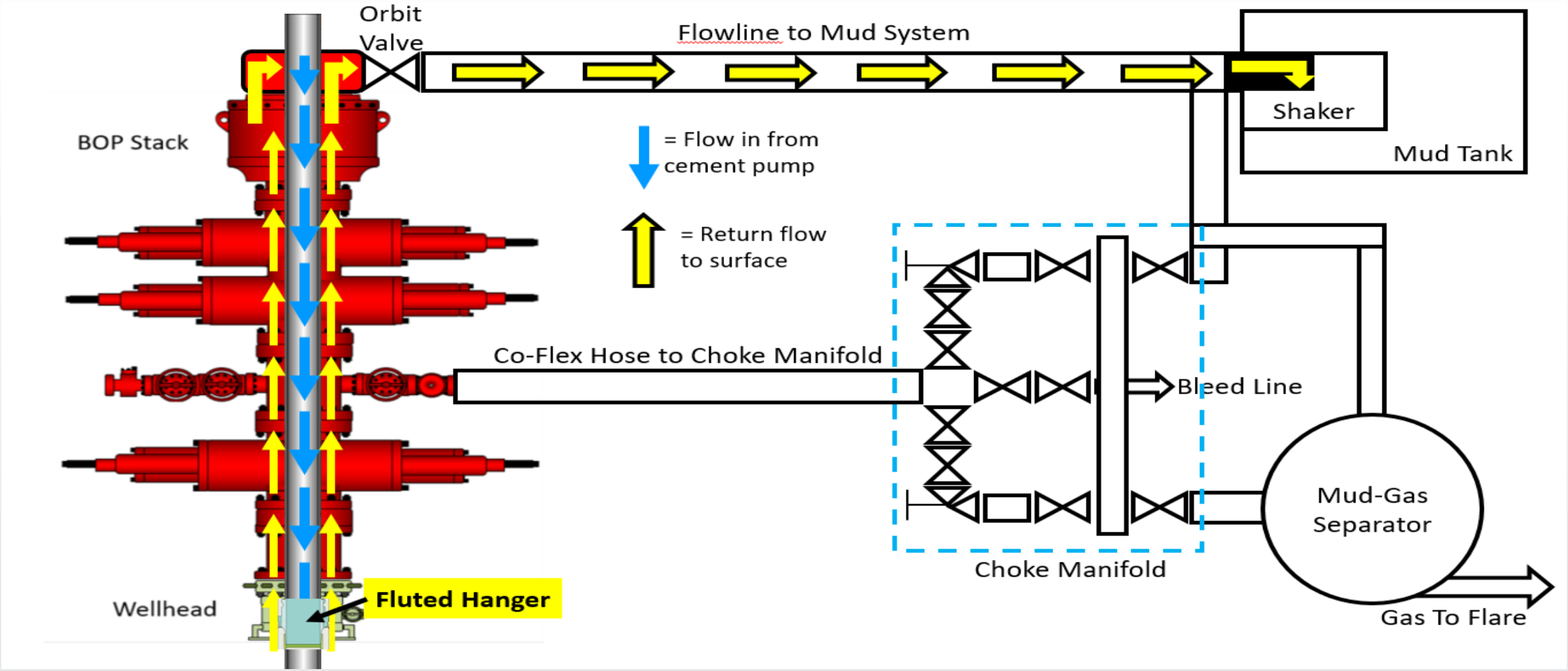
- Solid Body Mandrel Hanger allows for casing to be landed and pressure isolated in one step, **prior** to cementing
- Lockring is engaged to lock casing in place
- Casing is isolated and returns throughout cement job flow through the casing valves and through flowback iron independent of rig



Conventional Cementing Flow Diagram



Conventional Cementing Flow Diagram



Offline Cementing -- Intermediate Casing

= Flow in from cement pump

= Return flow to surface

Cement Company Iron

Tank

Mud-Gas Separator

Gas To Flare

Solid Body Hanger

3” Flowback Iron

Same process flow as other casing valve

Choke Manifold

Open Top Tank

Offline Cementing -- Intermediate Casing

= Flow in from cement pump

= Return flow to surface

Cement Company Iron

Tank

Mud-Gas Separator

Gas To Flare

Solid Body Hanger

3” Flowback Iron

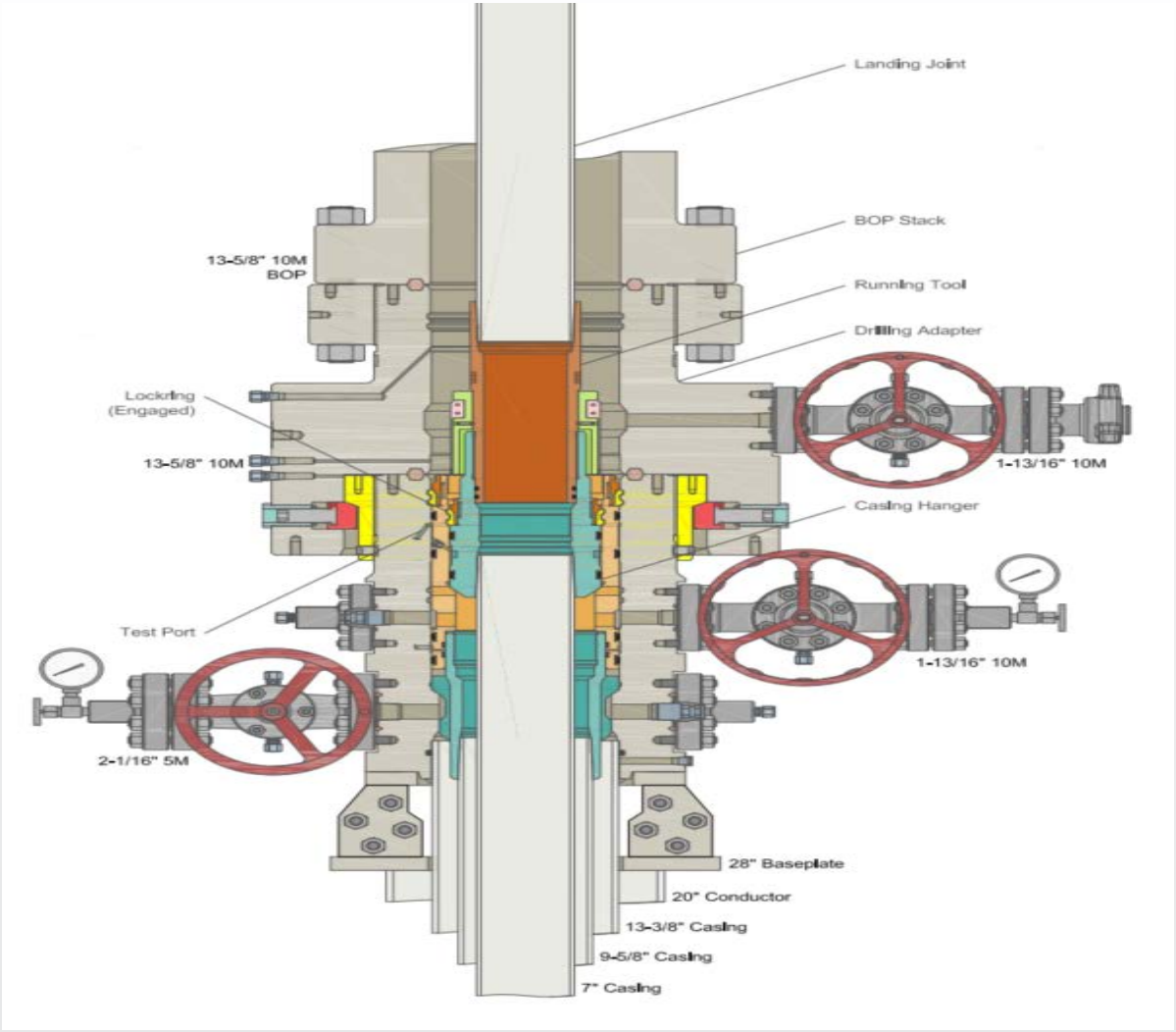
Same process flow as other casing valve

Choke Manifold

Open Top Tank

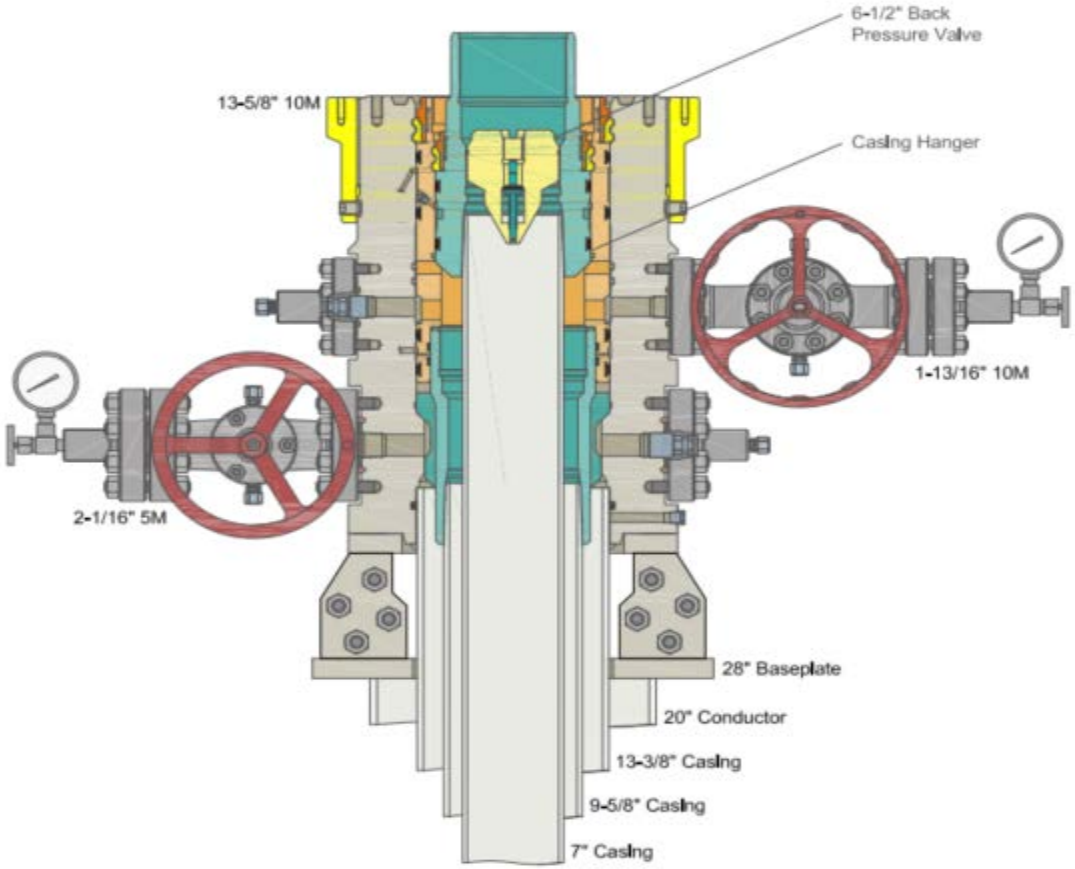
Offline Cementing Progression

- Run 7” casing
- Land 11” nominal x 7” hanger
- Test casing hanger
- Energize 11” nom x 7” hanger lock ring and pull test
- Re-test casing hanger
- Barriers & Procedures after landing casing before setting packoff
  - 10K BOP & 5K Annular-Internal and Annular barrier
  - Kill Weight Fluid in annulus and casing (ensure well is static before setting solid body packoff) Internal and Annular barrier
    - **If well is not static we <u>WILL NOT</u> set solid body packoff.**
  - 10K float collar-Internal Barrier
  - 10k float Shoe-Internal Barrier
    - **<u>After circulating a 1.5 casing capacities to ensure full column of mud and no entrained gas pumps will be shut off and floats checked for flow</u>**



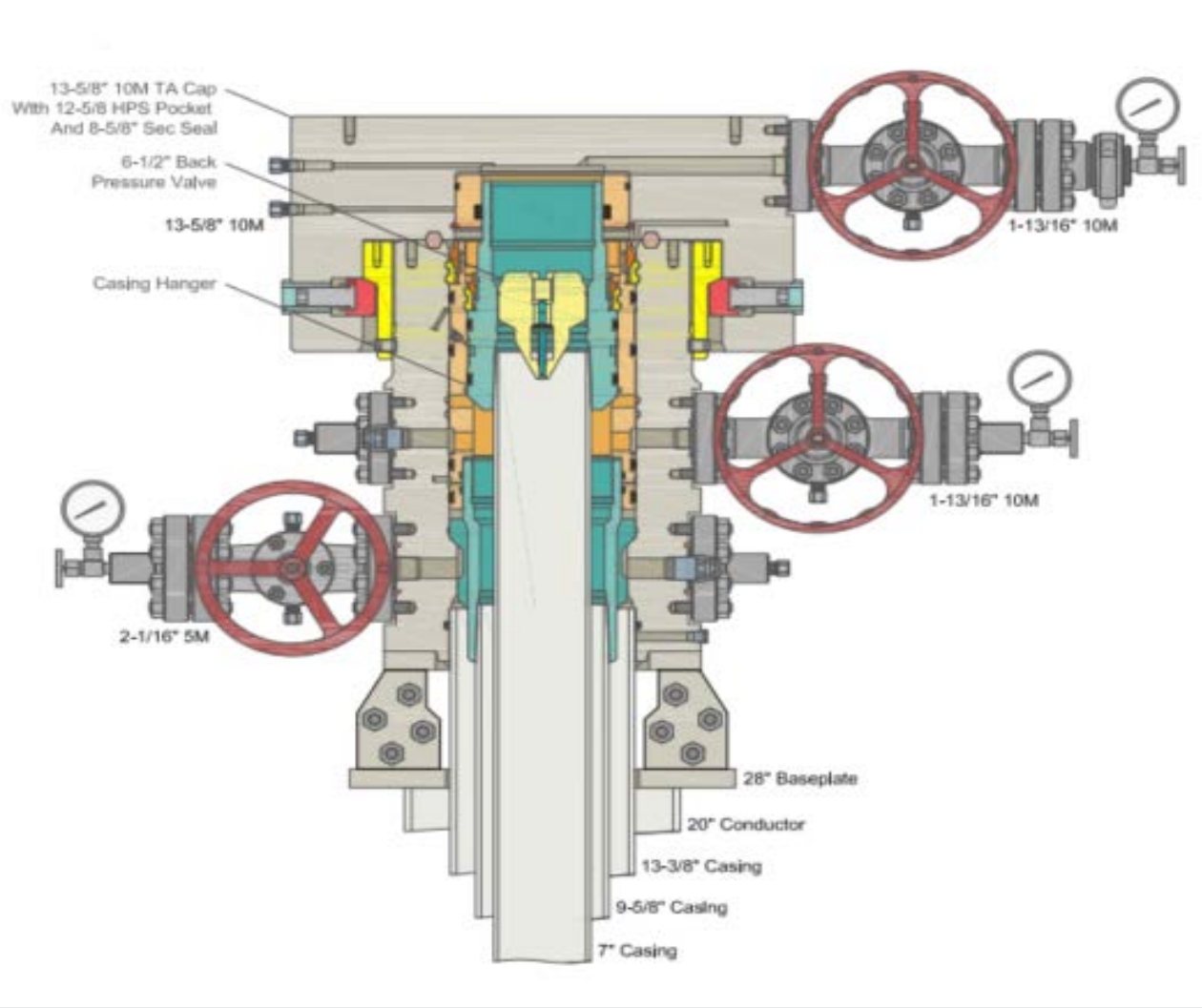
Offline Cementing Progression

- Pick up running tool with 6-1/2” nominal Back Pressure valve run into well and set
- Barriers and procedures **BEFORE** removing BOP’s
  - Kill weight Fluid in annulus-Annular Barrier
  - Solid Body Packoff-Annular Barrier
  - 10K Float Equipment-Internal Barrier
  - 10K Back pressure valve installed with BOP still on well-Internal Barrier
    - BPV will be tested before it arrives on location by Cactus



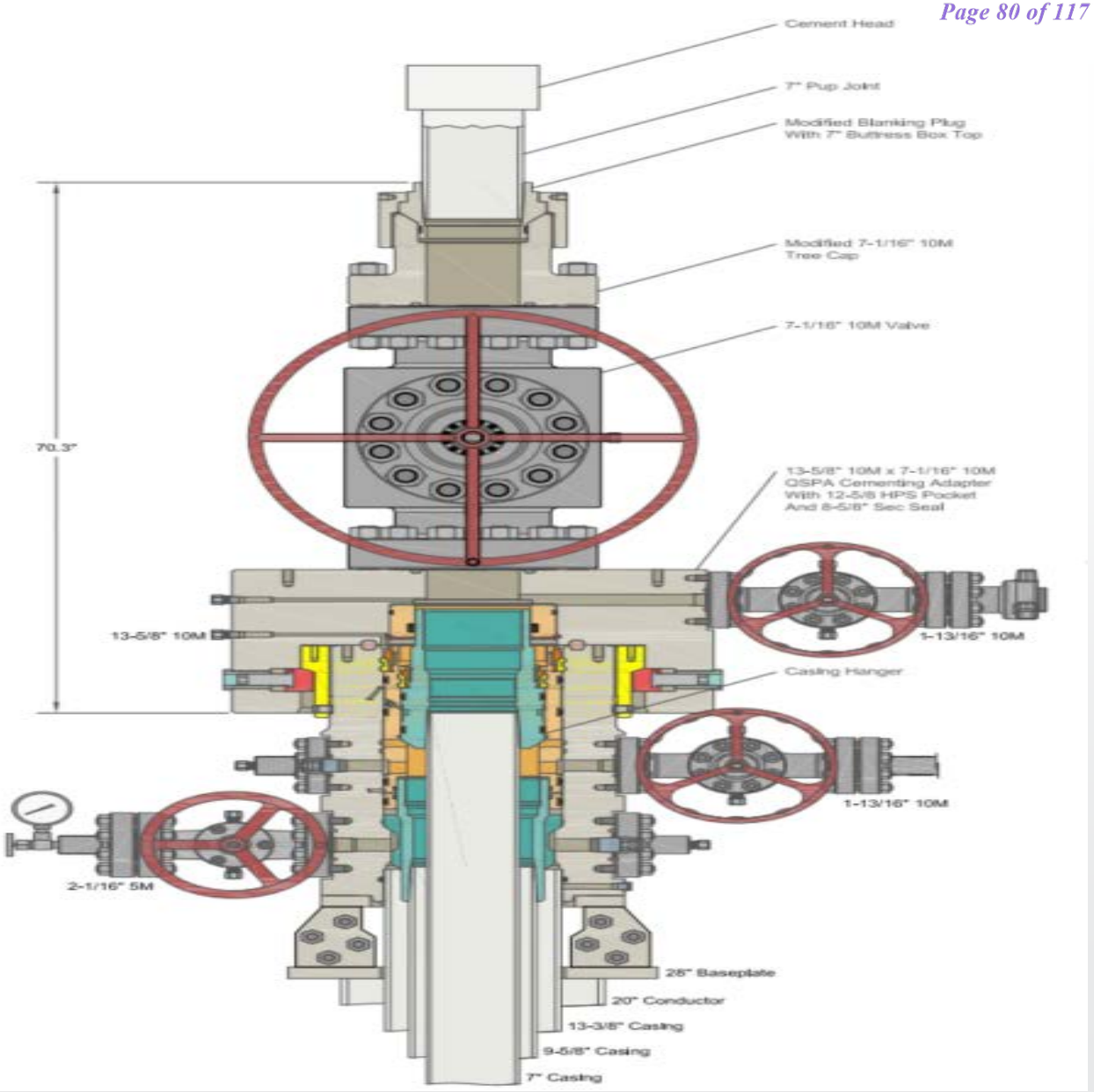
Offline Cementing Progression

- Nipple down BOP
- Nipple up TA Cap and test
- Skid Drilling Rig
- Barriers and procedures **AFTER** removing BOP's
  - Kill weight Fluid in annulus-Annular Barrier
  - Solid Body Packoff-Annular Barrier
  - 10K Float Equipment-Internal Barrier
  - 10K Back pressure valve-Internal Barrier
  - 10K rated TA cap with Valve-Internal Barrier



Offline Cementing Progression

- Check Pressure on TA Cap and remove
- Install adaptor with Gate valve for off line cementing and test
- Rig up flowback iron independent of rig
- Retrieve Back Pressure Valve
- Shut in well
- Rig up to cement and pump job
- NU 10K TA cap after cement job
- Barriers and procedures before **rigging up cementing equipment**
  - **Address well and ensure no pressure on TA cap**
    - **Ability to pump into well through casing valves on backside to kill if needed**
  - Kill weight Fluid in annulus-Annular barrier
  - Solid Body Packoff-Annular barrier
  - 10K Float Equipment-Internal Barrier
  - 10K Back pressure valve-Internal Barrier



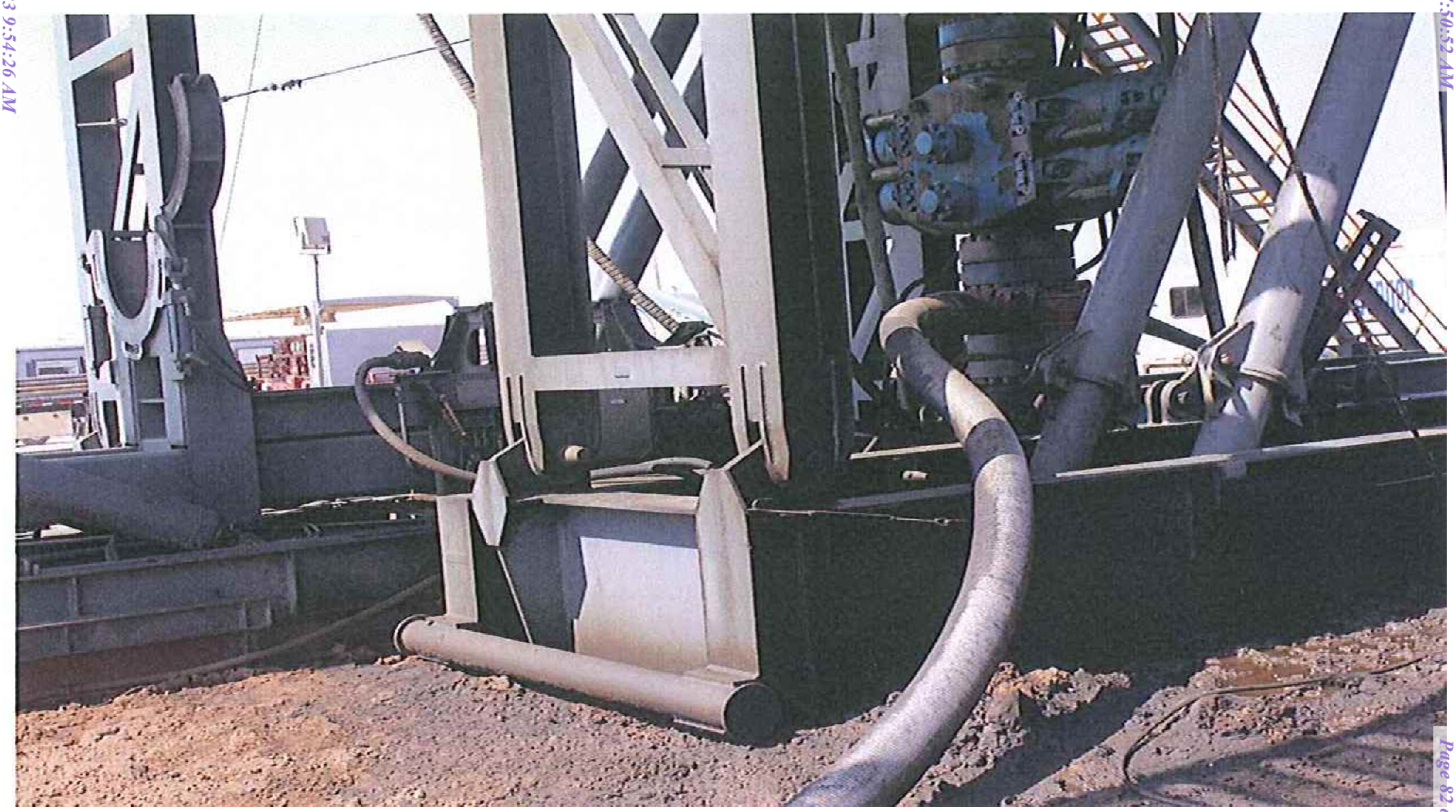
Offline Cementing Risk and COA Compliance

- All testing and breaks tested in accordance with Onshore Order # 2 and COA's
- If no cement to surface, bradenhead squeeze still possible with offline cementing equipment
- Time from skid rig to offline cementing ops typically 24 hours
- Conditions where we would not Offline Cement
  - Well is flowing
- All wellhead equipment equipment rated to 10K maintaining APD compliant
  - 10K flowback iron independent of rig circulating system
  - 10K Back Pressure Valve
  - 10K Gate Valve & TA combo for second barrier during operations
  - 10K 1-13/16 Valve coming off TA cap
  - 10K TA Cap

Co-Flex Hose

James 20-29 Federal Com 41H &

42H Cimarex Energy Co.



Co-Flex Hose Hydrostatic Test
Mighty Pheasant 5-8 Fed Com 204H
Cimarex Energy Co.

Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

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

HOSE SPECIFICATIONS

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

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

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

COUPLINGS

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

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

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

Hose Assembly Serial Number:	Hose Serial Number:
79793	OKC

Comments:

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

Midwest Hose & Specialty, Inc.

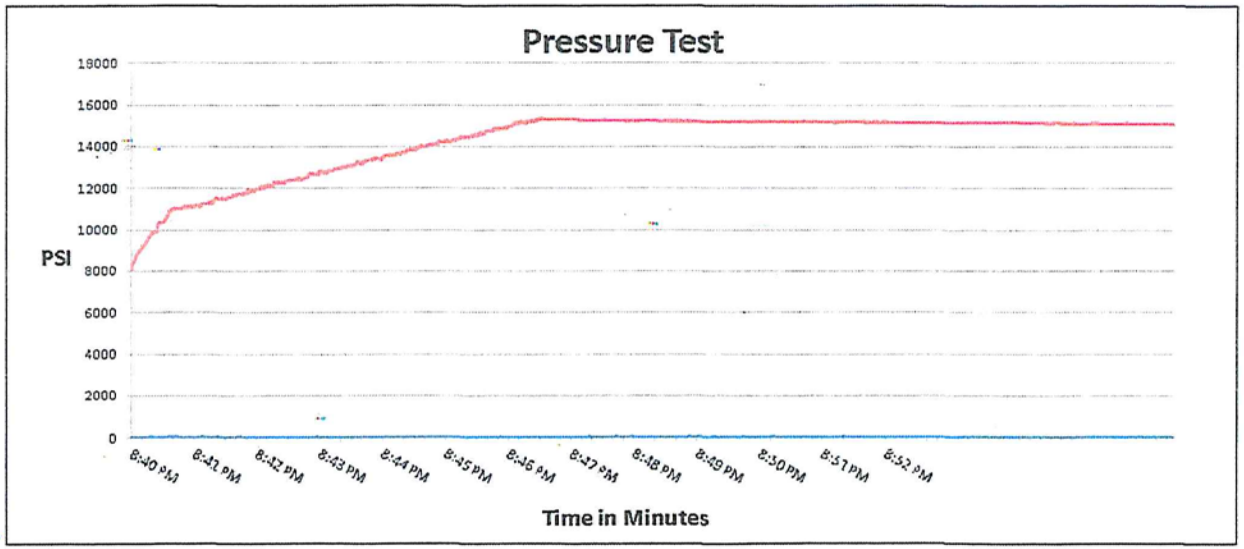
Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

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



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

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

Tested By: *Zac Mcconnell*

Approved By: *Kim Thomas*

Co-Flex Hose Hydrostatic Test
Mighty Pheasant 5-8 Fed Com 204H
Cimarex Energy Co.

Co-Flex Hose
Mighty Pheasant 5-8 Fed Com 204H
Cimarex Energy Co.

Midwest Hose
& Specialty, Inc.

Certificate of Conformity	
Customer: DEM	**PO** ODYD-271
SPECIFICATIONS	
Sales Order 79793	**Dated:** 3/8/2011

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

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

Comments:	
Approved: Jamal Garcia	**Date:** 3/8/2011

Co-Flex Hose
Mighty Pheasant 5-8 Fed Com 204H
Cimarex Energy Co.

Midwest Hose
& Specialty, Inc.

Specification Sheet
Choke & Kill Hose

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

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

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

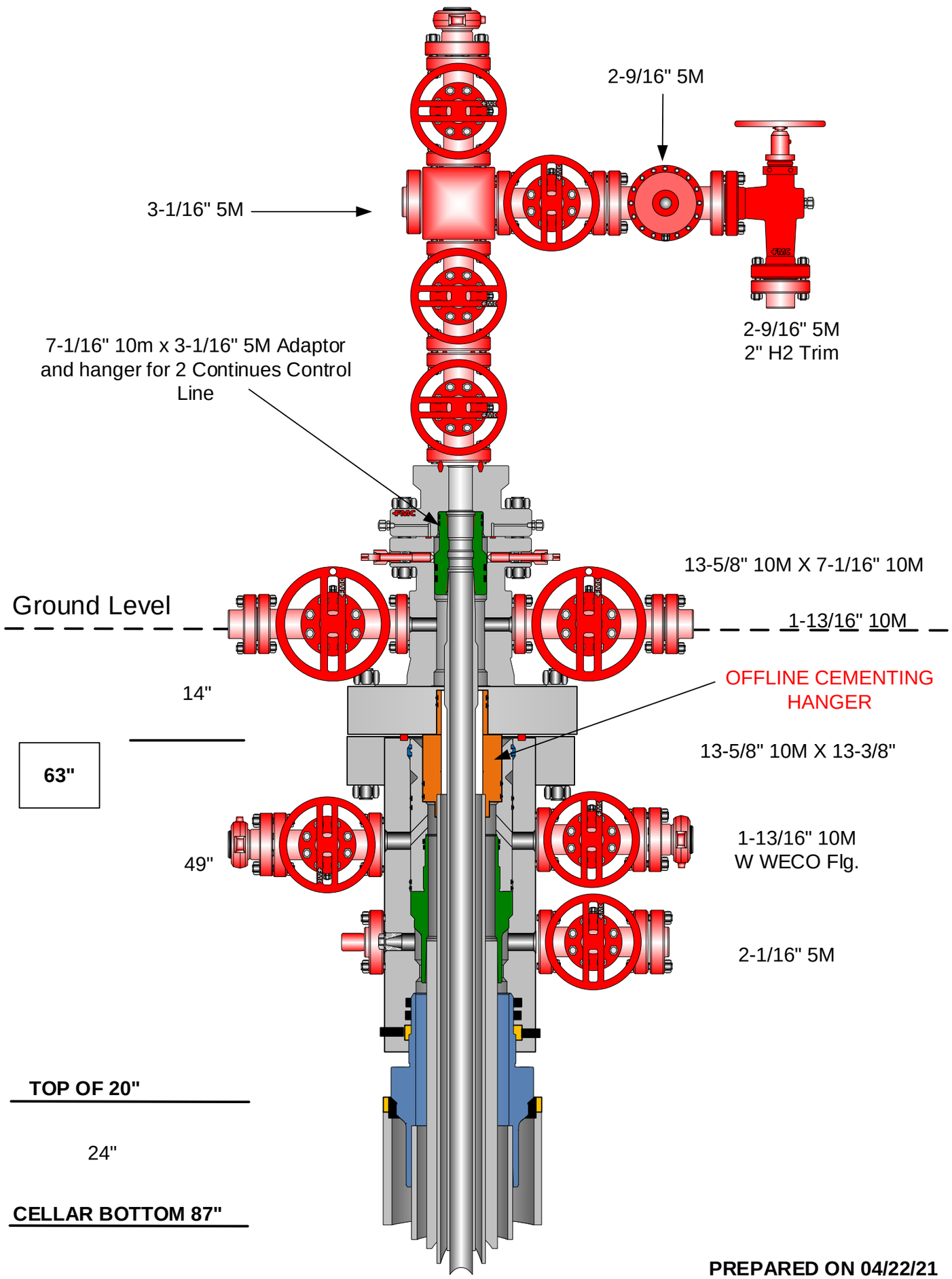
CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM

James 20-29 Federal Com 42H

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	1140	1140	13-3/8"	48.00	H-40	ST&C	1.50	3.50	5.88
12 1/4	0	4786	4786	9-5/8"	40.00	HCK-55	LT&C	1.49	1.54	2.93
8 3/4	0	10322	10322	7"	29.00	P-110	LT&C	1.77	2.32	2.54
8 3/4	10322	11072	10841	7"	29.00	P-110	BT&C	1.68	2.21	61.72
6	9321	21012	10880	4-1/2"	11.60	P-110	BT&C	1.41	1.99	20.29
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet



PREPARED ON 04/22/21

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

SUPO Data Report
09/25/2023

APD ID: 10400088885
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 20-29 FEDERAL COM
Well Number: 42H
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:

JAMES_20_FEDERAL_W2W2__Existing_Rds_20221028133758.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

ROW ID(s)

ID: 145703

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

JAMES_20_FEDERAL_W2W2_Existing_wells_plat_20221028133957.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: We will be using the existing James 19 Federal CTB, located in sec 18, T23S, R32E. Will use existing route for additional flowlines/bulklines and requesting new ROW or amending the existing ROW.

Production Facilities map:

James_20_29_CTB_to_James_19_Fed_Com_CTB_20221029095923.pdf

James_20_29_ROW_need_Bulkline_flowline_route_20221029100004.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: MUNICIPAL

Water source use type: SURFACE CASING

INTERMEDIATE/PRODUCTION CASING

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Permit Number:

Water source transport method: TRUCKING

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 5000

Source volume (acre-feet): 0.64446548

Source volume (gal): 210000

Water source and transportation

James_20_29__Federal_41H_42H_Drilling_Water_Sources_20230505081408.pdf

Water source comments:

New water well? N

New Water Well Info

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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

Well target aquifer:

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

Aquifer comments:

Aquifer documentation:

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

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

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

Drilling method: **Drill material:**

Grout material: **Grout depth:**

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

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: NO

Construction Materials description:

Construction Materials source location

Section 7 - Methods for Handling

Waste type: DRILLING

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

Amount of waste: 15000 barrels

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

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

Disposal type description:

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Waste type: SEWAGE

Waste content description: Human Waste

Amount of waste: 300 gallons

Waste disposal frequency : Weekly

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

Safe containmant attachment:

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

Disposal type description:

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

Waste type: GARBAGE

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

Amount of waste: 32500 pounds

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

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

Disposal type description:

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

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

JAMES_20_FEDERAL_W2W2_Location_Layout_20221028140846.pdf

Comments:

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** James 20 Federal

Multiple Well Pad Number: W2W2

Recontouring

James_20_Federal_41H_Interim_Reclaim_20221028141332.pdf

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

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

Well pad proposed disturbance (acres): 3.9	**Well pad interim reclamation (acres):** 3.6	**Well pad long term disturbance (acres):** 3.6
Road proposed disturbance (acres):	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 1.365	**Pipeline interim reclamation (acres):** 1.365	**Pipeline long term disturbance (acres):** 1.365
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 5.265	**Total interim reclamation:** 4.965	**Total long term disturbance:** 4.965

Disturbance Comments:

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

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

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

Existing Vegetation at the well pad

Existing Vegetation Community at the road: N/A

Existing Vegetation Community at the road

Existing Vegetation Community at the pipeline: N/A

Existing Vegetation Community at the pipeline

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances

Non native seed used?

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project?

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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

JAMES_20_29_FEDERAL_COM_42H_INTERIM_RECLAIMATION_20230505085557.pdf

Operator Contact/Responsible Official

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment

Weed treatment plan description: N/A

Weed treatment plan

Monitoring plan description: N/A

Monitoring plan

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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:**

Disturbance type: OTHER

Describe: CTB

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: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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:**

Section 12 - Other

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

ROW Type(s):

ROW

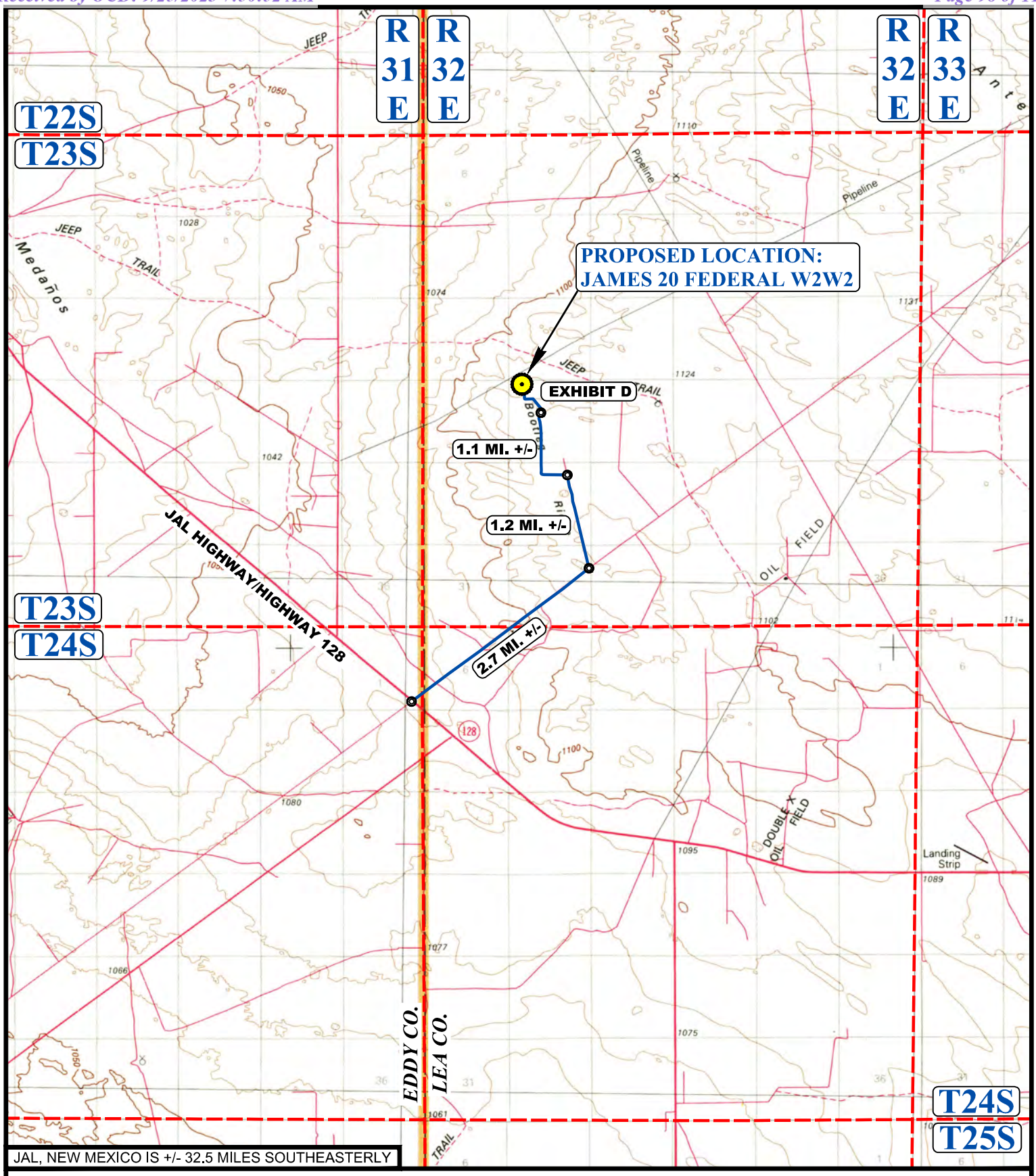
SUPO Additional Information:

Use a previously conducted onsite? Y

Previous Onsite information: 8/29/2017 w Jesse Bassett - BLM, Barry Hunt - Cimarex rep.

Other SUPO

James_20_29_Federal_41H_Surface_Use_Plan_20221029104908.pdf



JAL, NEW MEXICO IS +/- 32.5 MILES SOUTHEASTERLY

LEGEND:

⊙ PROPOSED LOCATION

N

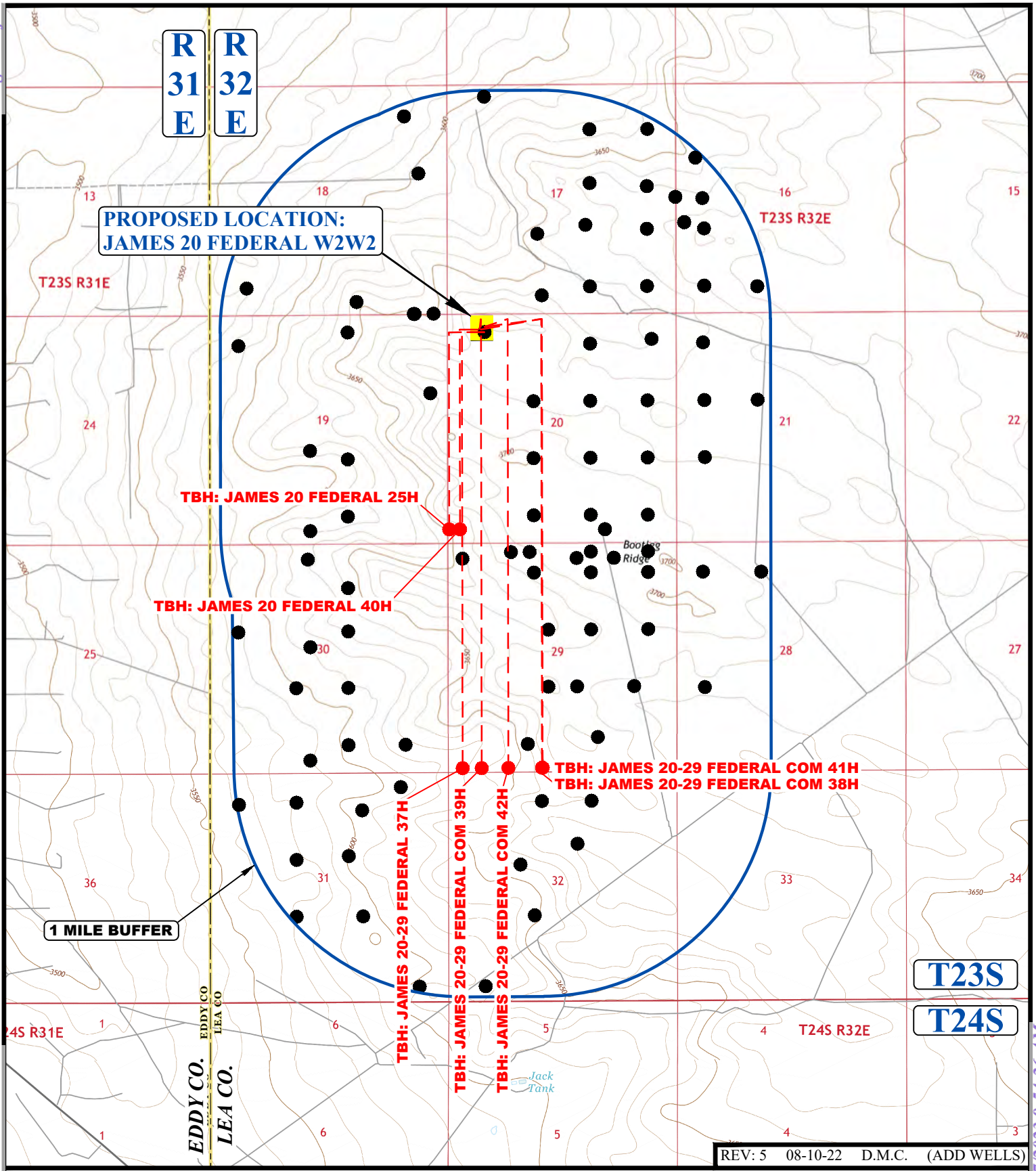
CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 100,000

PUBLIC ACCESS ROUTE MAP | **EXHIBIT B**

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



REV: 5 08-10-22 D.M.C. (ADD WELLS)

LEGEND:

● EXISTING WELLS

N

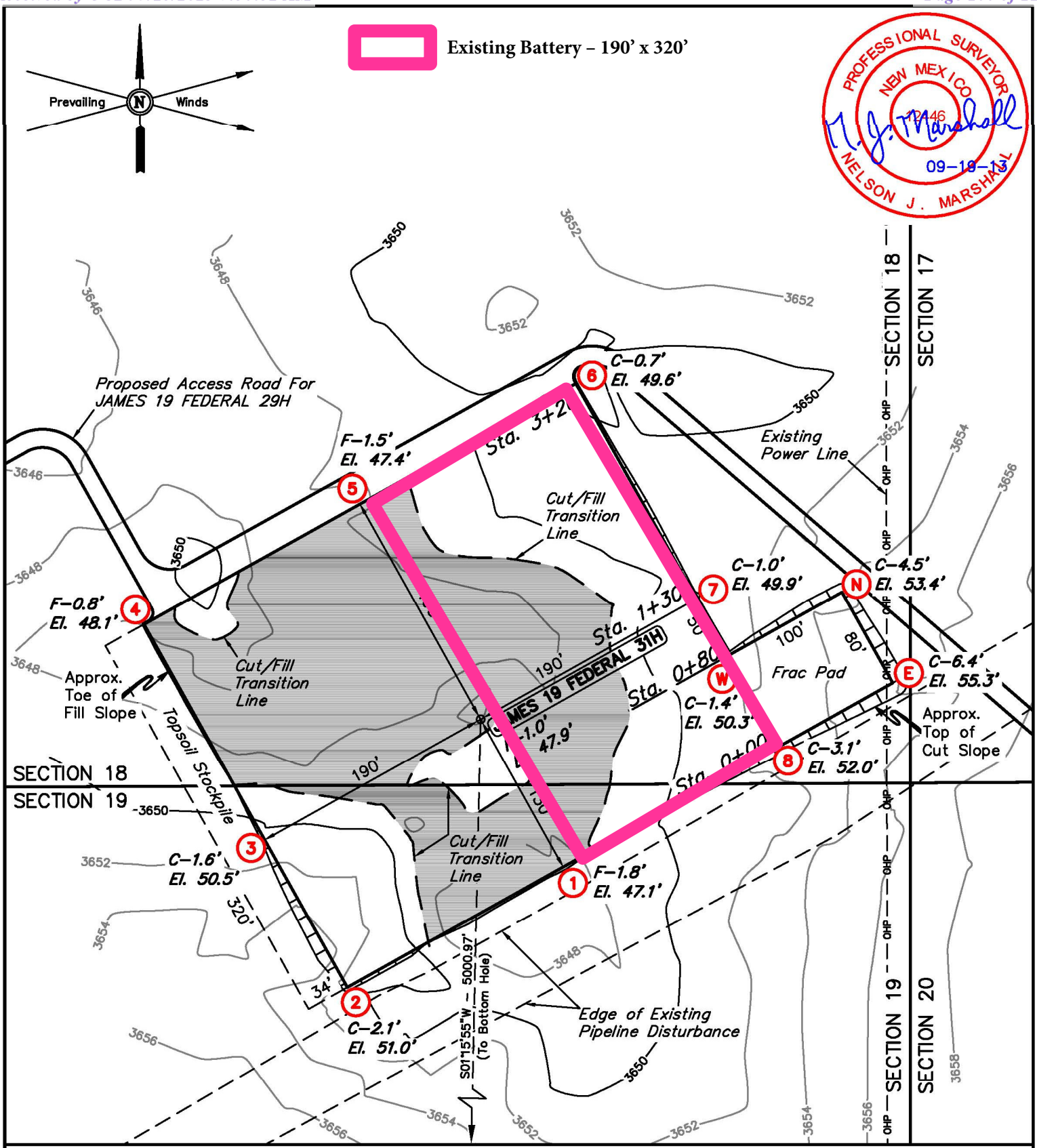
CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 36,000
ONE MILE RADIUS MAP			EXHIBIT E

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

UINTAH ENGINEERING & LAND SURVEYING



ELEV. UNGRADED GROUND AT LOC. STAKE = **3647.9'** FINISHED GRADE ELEV. AT LOC. STAKE = **3648.9'**

NOTES:

- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Earthwork calculations require a fill of 1.0' @ the location stake for balance. All fill is to be compacted to a minimum of 95% of the maximum dry density obtained by AASHTO method t-99.

Exhibit C-1

CIMAREX

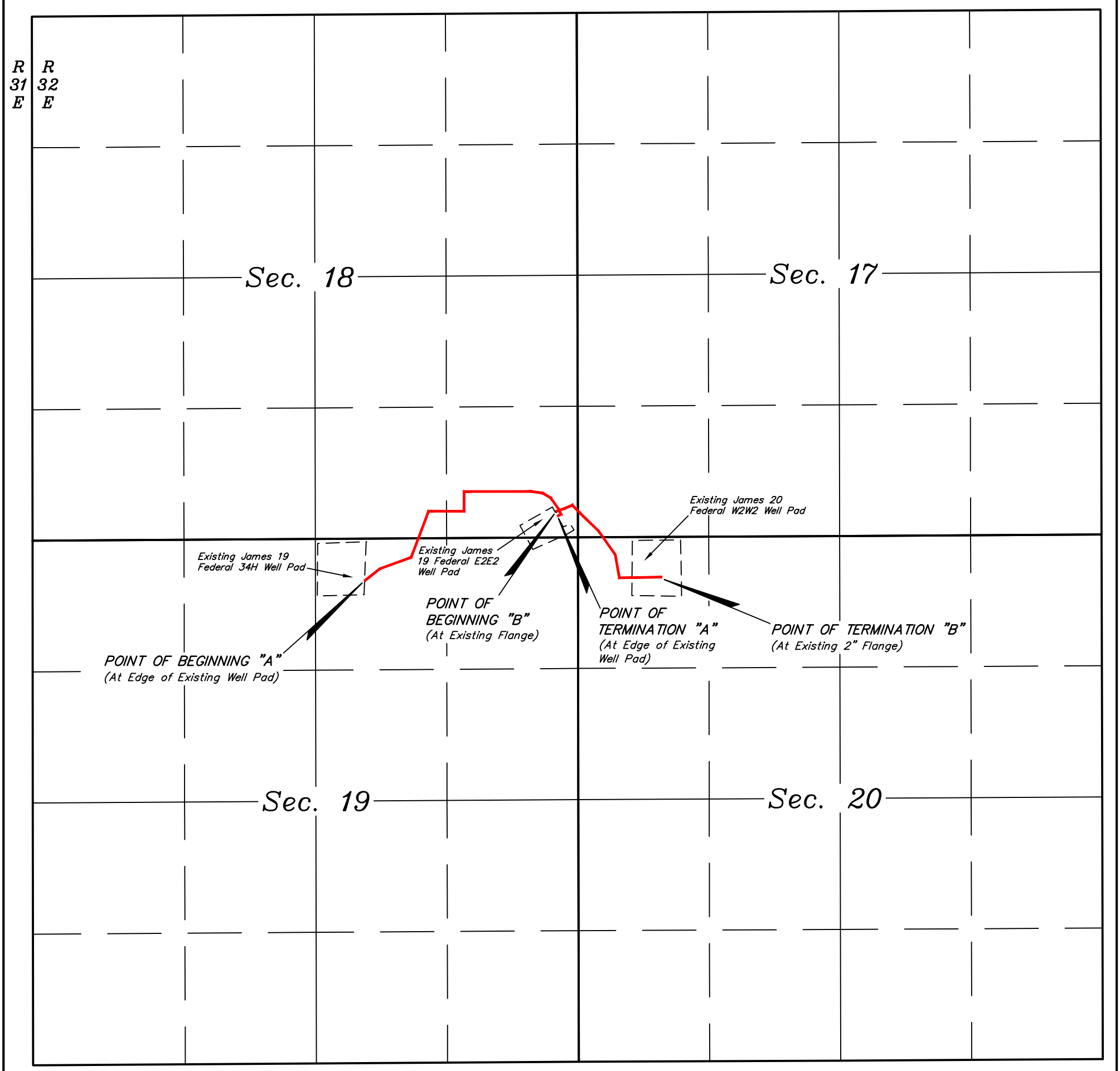
CIMAREX ENERGY CO.

JAMES 19 FEDERAL 31H
SECTION 18, T23S, R32E, N.M.P.M.
50' FSL 330' FEL

DRAWN BY: J.S.	SCALE: 1" = 100'	
DATE: 09-19-13	REVISED:	

LOCATION LAYOUT | **FIGURE #1**

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



LEGEND:

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

UINTAH ENGINEERING & LAND SURVEYING

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

N

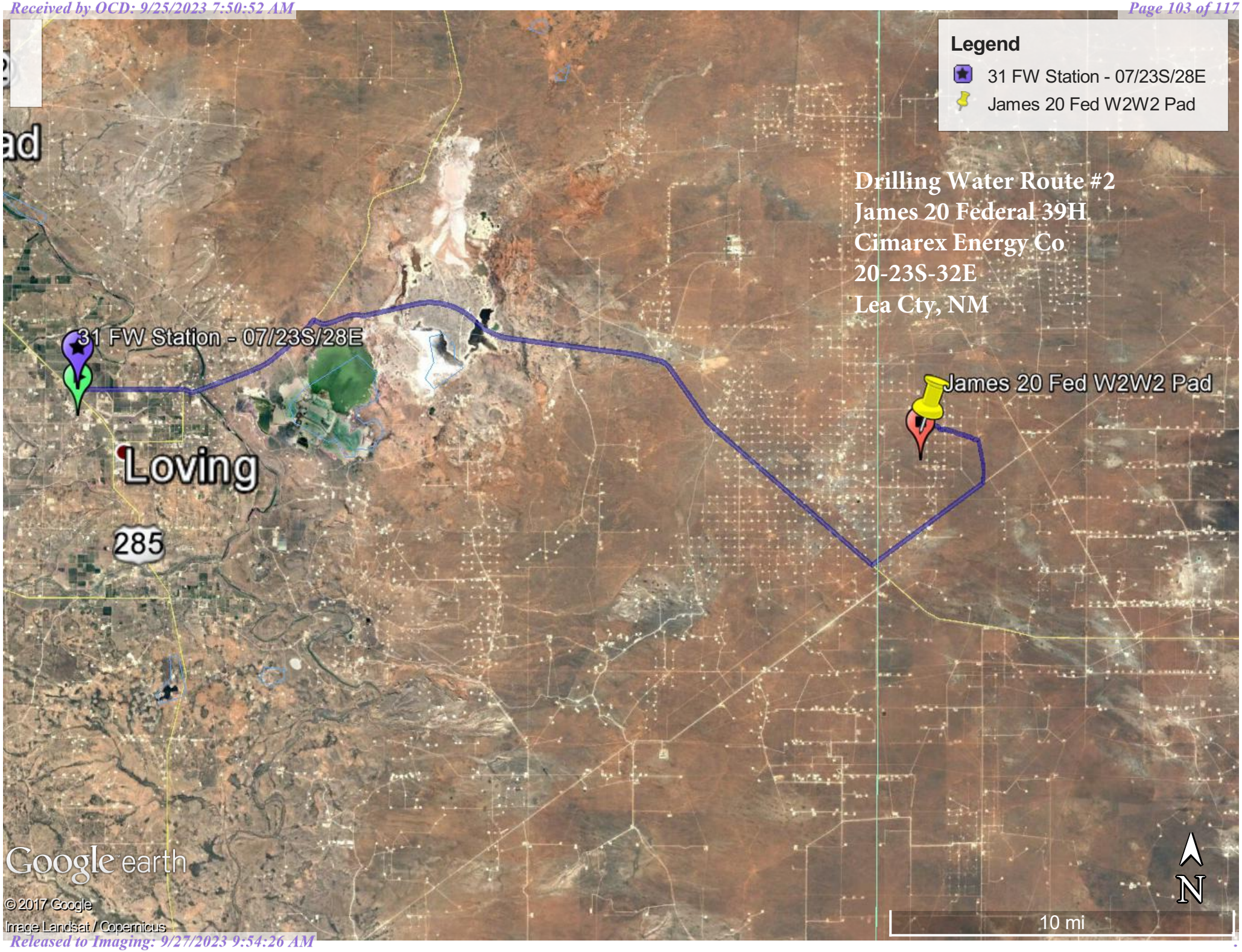
CIMAREX ENERGY CO.

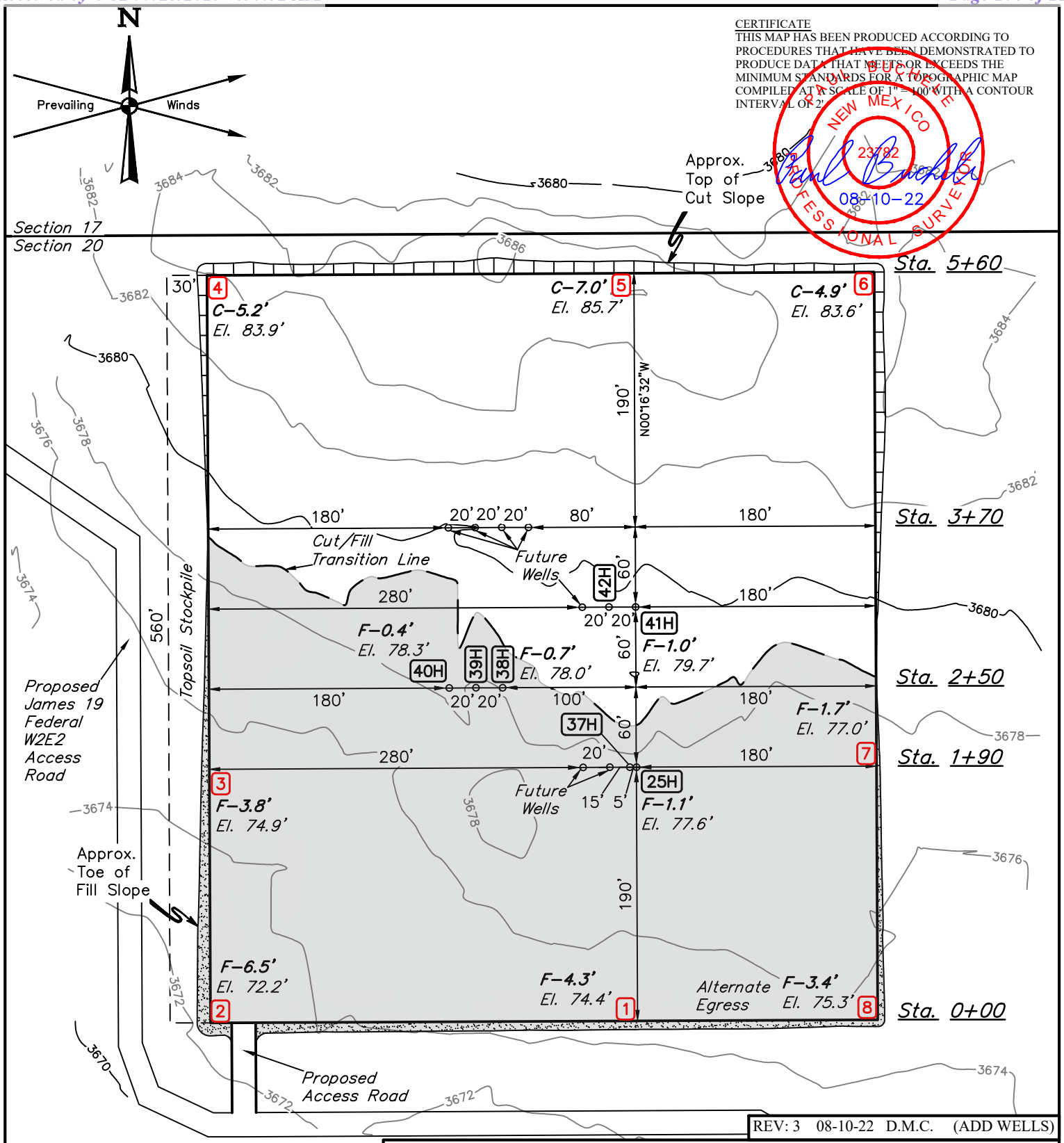
JAMES 34H & 37H FLOW LINE
SECTIONS 17, 18, 19 & 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.C., R.A.	01-31-20	SCALE
DRAWN BY	A.C.	02-10-20	N/A

OVERALL FLOW LINE R-O-W


Legend
James 20 Fed W2W2 Pad
MM Double M Water Sales - 28/24S/33E NE/SE
Drilling Water Route #1
James 20 Federal 39H
Cimarex Energy Co
20-23S-32E
Lea Cty, NM
James 20 Fed W2W2 Pad
Turn left
Turn right
Turn left onto NM-128 W
128
Double M Water Sales - 28/24S/33E
st on Diamond Rd/J-2 toward NM-128 W
Google earth
© 2017 Google
N
5 mi


Legend
31 FW Station - 07/23S/28E
James 20 Fed W2W2 Pad
Drilling Water Route #2
James 20 Federal 39H
Cimarex Energy Co
20-23S-32E
Lea Cty, NM
31 FW Station - 07/23S/28E
James 20 Fed W2W2 Pad
Loving
285
Google earth
© 2017 Google
Image Landsat / Copernicus
N
10 mi



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

BASIN SURVEYS NEW MEXICO 23782 PROFESSIONAL SURVEYOR 08-10-22

REV: 3 08-10-22 D.M.C. (ADD WELLS)

NOTE: Earthwork Calculations Requires 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 = **3678.7'**

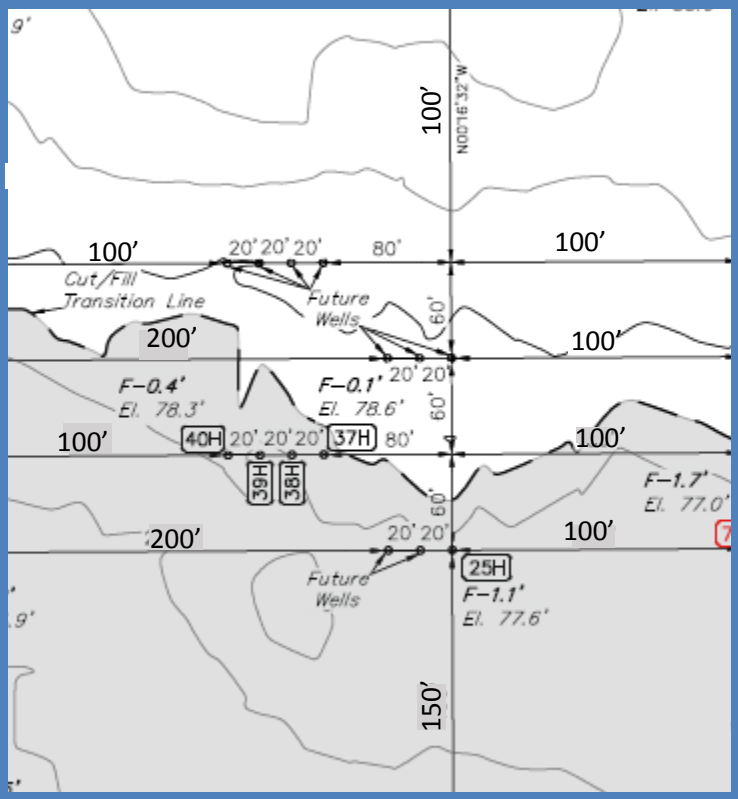
NOTES:
- Contours shown at 2' intervals.
- Cut/Fill slopes 1 1/2:1 (Typ. except where noted)

CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	C.T., J.R.	08-30-17	SCALE
DRAWN BY	C.D.	09-26-17	1" = 100'
LOCATION LAYOUT			EXHIBIT J

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



Access Road

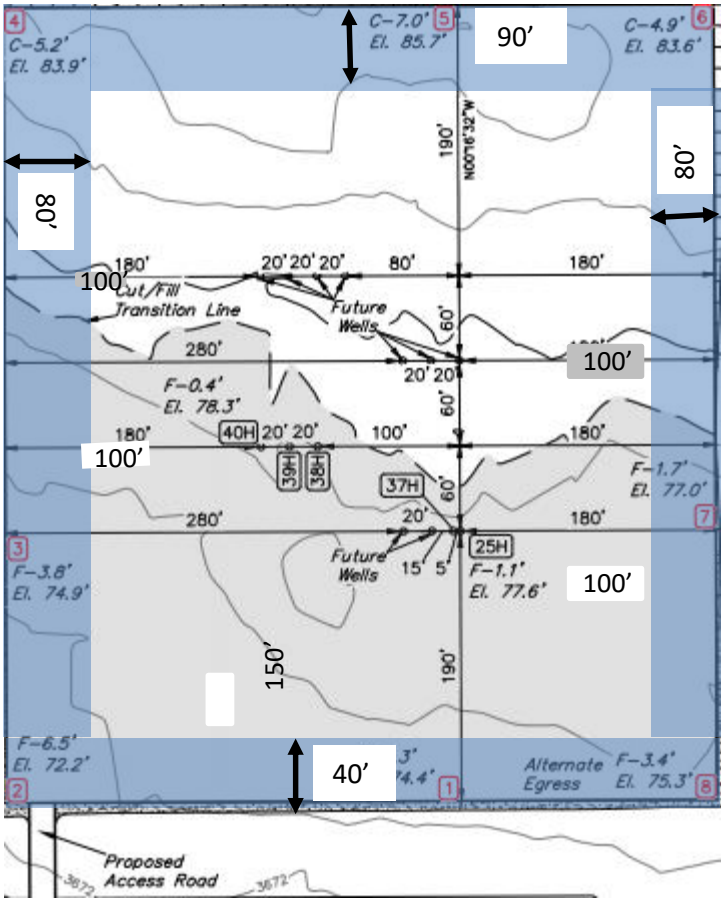
Pad will be reclaimed after cessation of drilling operations. Please see Surface Use Plan for pad reclamation plans.

N

Well locations

Interim Reclamation

Exhibit P
Interim Reclamation Diagram
James 20 Federal W2W2 Pad
Cimarex Energy Co.
Sec 20-23S-32E
Lea Cty, NM



N

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

○ Well locations

Interim Reclamation

Interim Reclamation Diagram

CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

Cimarex James 20-29 Federal Com 41H
Surface Use Plan

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

Existing Roads

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

New or Reconstructed Access Roads

No new roads are proposed for this project.

Well Radius Map

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

Proposed or Existing Production Facility

An existing battery will be utilized for the project if the well is productive.

- James 19 Federal CTB
  - Battery Pad diagram - Exhibit F
  - Battery will not require an expansion in order to accomodate additional production equipment for the project.
  - Battery Pad location previously approved
    - APD: James 19 Federal 31H.

Gas Pipeline Specifications

- No new gas pipelines are required for this project.

Salt Water Disposal Specifications

- No new SWD pipelines are required for this project.

Power Lines

- No new power line is required for this project.

Well Site Location

- An existing well pad will be used to drill the proposed well.
  - Wells drilled or to be drilled: 42H.
- Well pad will not require expansion in order to accommodate additional drilling wells. .
- Well pad previously approved. APD: James 20-29 Federal Com 37H.

Flowlines and Bulklines

We will apply for off lease ROW.

All proposed pipelines will be constructed in a 75' ROW corridor.

Cimarex James 20-29 Federal Com 41H
Surface Use Plan

- Bulkline / Flowlines:

◦ 1 12" Steel Flowline carrying oil gas and water
◦ 4 12" steel bulklines carrying oil gas or water
◦ 1 4" fiber optic cable
◦ 1 12" Air poly line

Water Resources

No temporary fresh water pipelines are proposed for this project.

Methods of Handling Waste

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

Ancillary Facilities

No camps or airstrips to be constructed.

Interim and Final Reclamation

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

Surface Ownership

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

Cultural Resource Survey - Archeology

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

On Site Notes and Information

Onsite Date: 8/29/2017
BLM Personnel on site: Jesse Bassett
Cimarex Energy personnel on site: Barry Hunt
Pertinent information from onsite:

BEGINNING AT THE INTERSECTION OF JAL HIGHWAY/HIGHWAY 128 AND AN EXISTING ROAD TO THE NORTHEAST (LOCATED AT NAD 83 LATITUDE N32.2408° AND LONGITUDE W103.7256°), PROCEED IN A NORTHEASTERLY DIRECTION 2.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST, TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN LEFT AND PROCEED IN A WESTERLY, THEN NORTHERLY DIRECTION APPROXIMATELY 1.1 MILES TO THE EXISTING JAMES 20 FEDERAL #2 AND THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE JAMES 19 FEDERAL W2E2 TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY, THEN WESTERLY DIRECTION APPROXIMATELY 2,306 TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTH; FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 76' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM THE INTERSECTION OF JAL HIGHWAY/HIGHWAY 128 AND AN EXISTING ROAD TO THE NORTHEAST (LOCATED AT NAD 83 LATITUDE N32.2408° AND LONGITUDE W103.7256°) TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 5.5 MILES.

CIMAREX ENERGY CO.

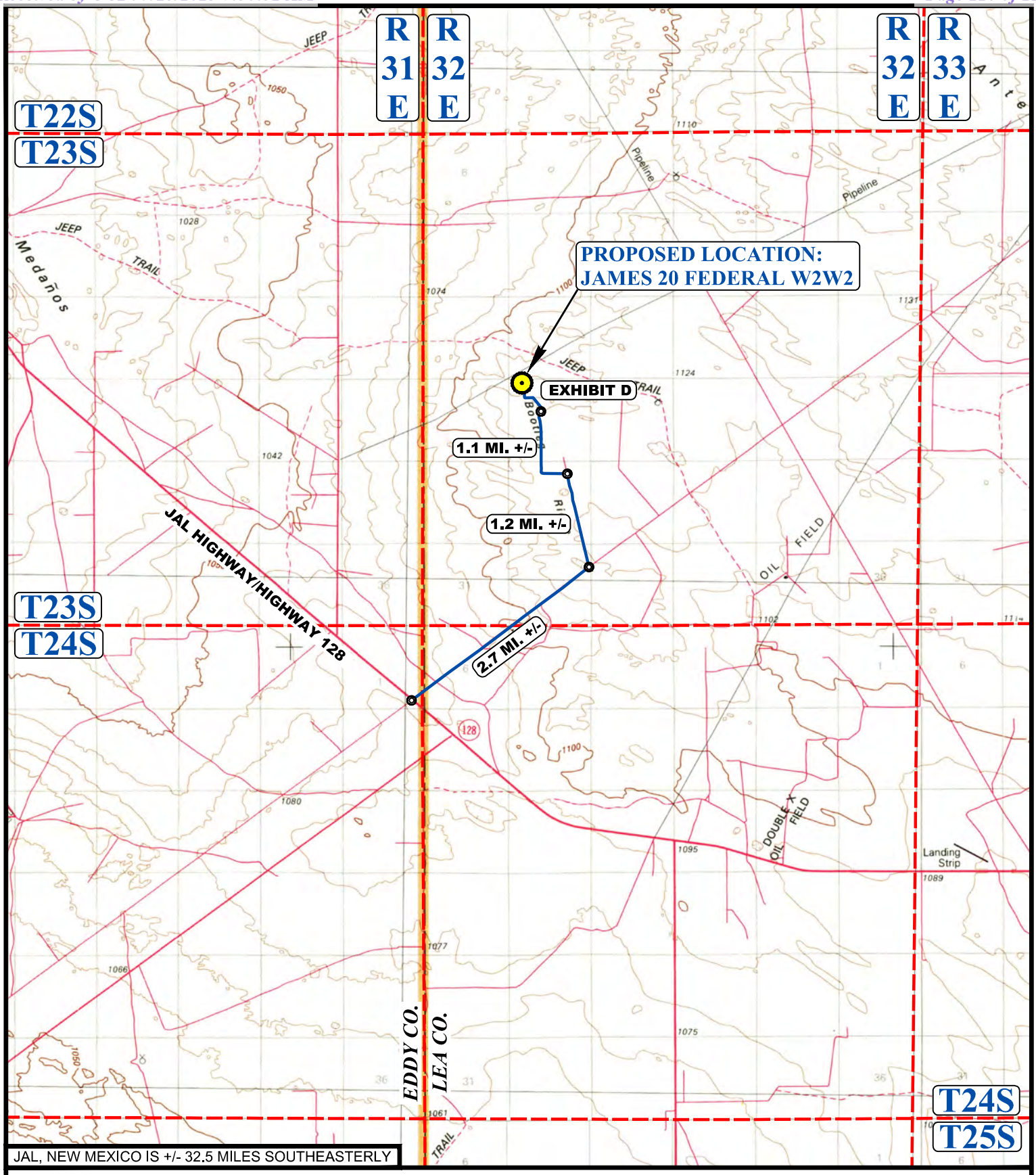
JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

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

SURVEYED BY	S.R.	09-01-17	
DRAWN BY	J.L.G.	09-25-17	

EXHIBIT A **ROAD DESCRIPTION** **EXHIBIT A**



JAL, NEW MEXICO IS +/- 32.5 MILES SOUTHEASTERLY

LEGEND:

PROPOSED LOCATION

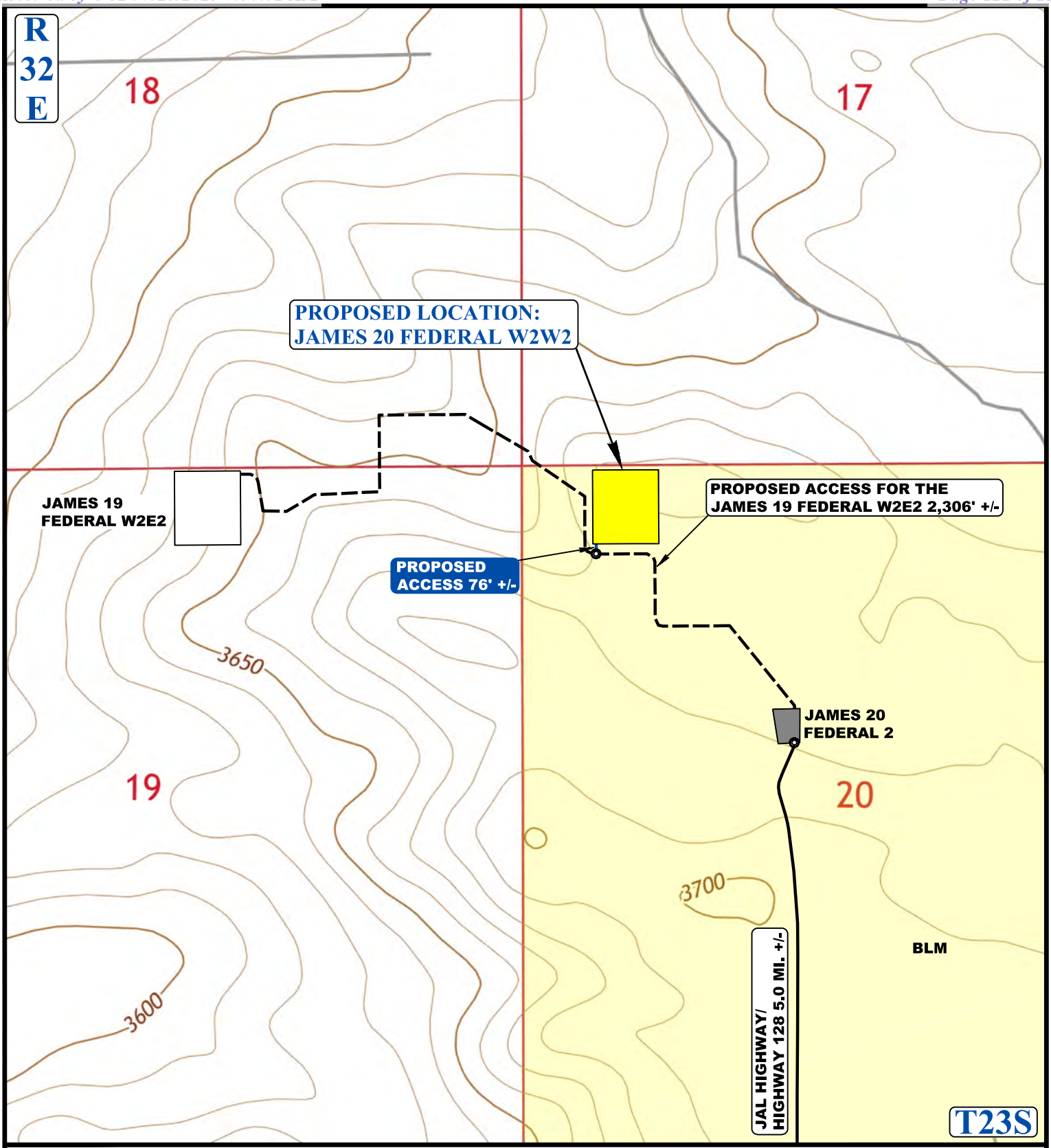
N

CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 100,000
PUBLIC ACCESS ROUTE MAP			EXHIBIT B

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



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
- PROPOSED ROAD (SERVICING OTHER WELLS)

N

CIMAREX ENERGY CO.

JAMES 20 FEDERAL W2W2
NW 1/4 NW 1/4, SECTION 20, T23S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	S.R.	09-01-17	SCALE
DRAWN BY	J.L.G.	09-25-17	1 : 12,000

NEW ROAD PLAT/MAP — EXHIBIT D

EXHIBIT C

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

09/25/2023

APD ID: 10400088885 **Submission Date:** 10/30/2022

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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: JAMES 20-29 FEDERAL COM **Well Number:** 42H

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
09/25/2023

APD ID: 10400088885
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 20-29 FEDERAL COM
Well Number: 42H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Bond

Federal/Indian APD: FED

BLM Bond number: NMB001188

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information

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

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

CONDITIONS

Action 268467

CONDITIONS

Operator: CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 268467
	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	9/27/2023
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	9/27/2023
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	9/27/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	9/27/2023
pkautz	IF ON ANY STRING CEMENT DOES NOT CIRCULATE, A RCBL MUST BE RUN ON THAT STRING OF CASING.	9/27/2023