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.

[334707]

2. Name of Operator **[215099]**

9. API Well No. **30-025-52012**

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

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

At surface

At proposed prod. zone

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

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

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

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

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

24. Attachments

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

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

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

Title

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

Title	Office

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

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

NGMP Rec 09/20/2023

SL

APPROVED WITH CONDITIONS

KZ
09/21/2023

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 09/13/2023

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
30-025-52012	53805	SAND DUNES;BONE SPRING, SOUTH

[4] Property Code	[5] Property Name	[6] Well Number
334707	JAMES 29-32 FEDERAL COM	31H

[7] OGRID No.	[8] Operator Name	[9] Elevation
215099	CIMAREX ENERGY CO.	3688.0'

[10] Surface Location

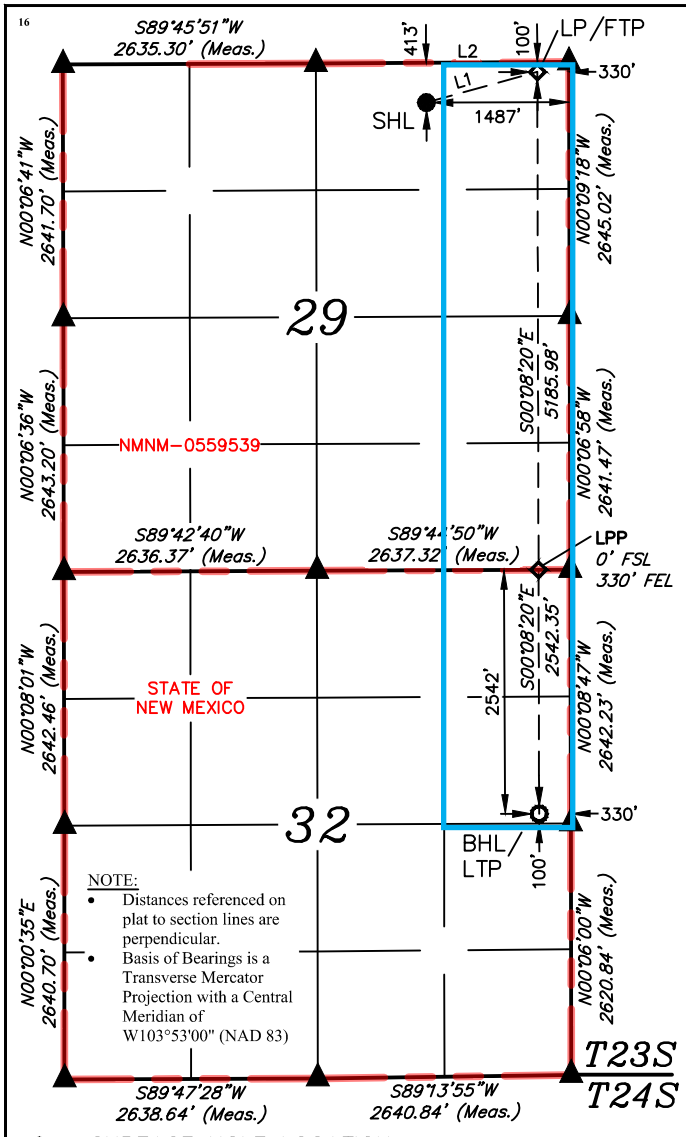
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	29	23S	32E		413	NORTH	1487	EAST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	32	23S	32E		2542	NORTH	330	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
240			

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



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

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

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°16'53.96" (32.281656°)
LONGITUDE = 103°41'34.67" (103.692964°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°16'53.52" (32.281533°)
LONGITUDE = 103°41'32.93" (103.692480°)
STATE PLANE NAD 83 (N.M. EAST)
N: 466790.01' E: 739236.95'
STATE PLANE NAD 27 (N.M. EAST)
N: 466730.60' E: 698053.48'

NAD 83 (LP/FTP)
LATITUDE = 32°16'57.10" (32.282528°)
LONGITUDE = 103°41'21.20" (103.689222°)
NAD 27 (LP/FTP)
LATITUDE = 32°16'56.66" (32.282405°)
LONGITUDE = 103°41'19.46" (103.688739°)
STATE PLANE NAD 83 (N.M. EAST)
N: 467114.22' E: 740391.36'
STATE PLANE NAD 27 (N.M. EAST)
N: 467054.80' E: 699207.90'

NAD 83 (LPP)
LATITUDE = 32°16'05.79" (32.268276°)
LONGITUDE = 103°41'21.16" (103.689212°)
NAD 27 (LPP)
LATITUDE = 32°16'05.35" (32.268153°)
LONGITUDE = 103°41'19.42" (103.688729°)
STATE PLANE NAD 83 (N.M. EAST)
N: 461929.29' E: 740425.68'
STATE PLANE NAD 27 (N.M. EAST)
N: 461870.02' E: 699242.07'

NAD 83 (BHL/LTP)
LATITUDE = 32°15'40.64" (32.261289°)
LONGITUDE = 103°41'21.14" (103.689207°)
NAD 27 (BHL/LTP)
LATITUDE = 32°15'40.20" (32.261166°)
LONGITUDE = 103°41'19.41" (103.688724°)
STATE PLANE NAD 83 (N.M. EAST)
N: 459387.46' E: 740442.50'
STATE PLANE NAD 27 (N.M. EAST)
N: 459328.26' E: 699258.82'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N74°33'12"E	1199.29'
L2	S89°39'35"W	2636.08'

2000' 1000' 0' 2000'

SCALE

DRAWN BY: D.J.S. 07-05-22

[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.

Brittany Gordon 3/28/2023
Signature Date

Brittany Gordon
Printed Name

brittany.gordon@coterra.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

June 16, 2022
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
07-05-22

Certificate Number:

Intent ☐ As Drilled ☐

API #
30-025-52012

Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

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

Latitude	Longitude	NAD

First Take Point (FTP)

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

Latitude	Longitude	NAD

Last Take Point (LTP)

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

Latitude	Longitude	NAD

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

Is this well an infill well? ☐

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

API #

Operator Name:	Property Name:	Well Number

Estimated Formation Tops

Formation:	Top:	Formation:	Top:

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Cimarex Energy Company **OGRID:** 215099 **Date:** 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 29-32 Federal Com 31H	30-025-52012	B, Sec 29 T23S, R32E	413 FNL/1487 FEL	1057	2665	3173

IV. Central Delivery Point Name: James 20 East 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 29 Federal Com 31H		11/1/2023	11/21/2023	1/10/2024	1/24/2024	1/24/2024

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.:	**NMNM0559539**
LOCATION:	Section 29, T.23 S, R.32 E., NMPM
COUNTY:	Lea County, New Mexico
WELL NAME & NO.:	James 29-32 Fed Com 31H
SURFACE HOLE FOOTAGE:	413'/N & 1487'/E
BOTTOM HOLE FOOTAGE:	2542'/N & 330'/E

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

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, 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, 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: 09/13/2023

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 shall be set at **4660ft**:
   - 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 tail cement slurry due to cave/karst.

4. The minimum required fill of cement behind the **4-1/2** inch production liner is:
5. Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification. **Excess calculates to 11%. 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. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   a. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   b. Manufacturer representative shall install the test plug for the initial BOP test.
   c. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

Approval Date: 09/13/2023

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.

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 doghouse 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.

Approval Date: 09/13/2023

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 8/29/2023

Approval Date: 09/13/2023

AFMSS

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

Operator Certification Data Report

09/19/2023

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:** 04/04/2023

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
09/19/2023

APD ID: 10400088888
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 29-32 FEDERAL COM
Well Number: 31H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes
Show Final Text

Section 1 - General

APD ID: 10400088888
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 29-32 FEDERAL COM
Well Number: 31H
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 29-32 FEDERAL COM **Well Number:** 31H

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?** Y

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** James 29 Fed Com W2E2 **Number:** 39H

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: 24 Miles **Distance to nearest well:** 20 FT **Distance to lease line:** 413 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: JAMES_29_32_FEDERAL_COM_31H_C_102_20230713144240.pdf

Well work start Date: 05/14/2023 **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	413	FNL	1487	FEL	23S	32E	29	Aliquot NWNE	32.281656	-103.692964	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	3688	0	0	N
KOP Leg #1	413	FNL	1487	FEL	23S	32E	29	Aliquot NWNE	32.281656	-103.692964	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	-7650	11483	11338	N
PPP Leg #1-1	100	FNL	330	FEL	23S	32E	29	Aliquot NENE	32.282528	-103.689222	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 0559539	-8242	12533	11930	N

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
PPP Leg #1-2	0	FSL	330	FEL	23S	32E	32	Aliquot NESE	32.268276	-103.689212	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8242	16848	11930	Y
EXIT Leg #1	2542	FNL	330	FEL	23S	32E	32	Aliquot SENE	32.261289	-103.689207	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8242	19390	11930	Y
BHL Leg #1	2542	FNL	330	FEL	23S	32E	32	Aliquot SENE	32.261289	-103.689207	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-8242	19390	11930	Y

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

Drilling Plan Data Report
09/19/2023

APD ID: 10400088888
Submission Date: 10/30/2022

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM
Well Number: 31H

Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12114659	RUSTLER	3688	1090	1090	ANHYDRITE	USEABLE WATER	N
12114660	TOP SALT	2288	1400	1400	SALT	NONE	N
12114661	BASE OF SALT	-1027	4715	4715	SALT	NONE	N
12114662	LAMAR	-1052	4740	4740	SANDSTONE	NONE	N
12114663	BELL CANYON	-1128	4816	4816	SANDSTONE	NONE	N
12114664	CHERRY CANYON	-1991	5679	5679	SANDSTONE	NONE	N
12114665	BRUSHY CANYON	-3279	6967	6967	SANDSTONE	NATURAL GAS, OIL	N
12114666	BONE SPRING LIME	-4982	8670	8670	LIMESTONE	NATURAL GAS, OIL	N
12114667	BONE SPRING 1ST	-6092	9780	9780	SANDSTONE	NATURAL GAS, OIL	N
12114668	BONE SPRING 2ND	-6539	10227	10227	SANDSTONE	NATURAL GAS, OIL	N
12114658	BONE SPRING 3RD	-8222	11910	11910	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M
Rating Depth: 1140

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

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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 been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 2000 psi. 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_29_Fed_Com_23H_32H_Choke_2M_3M_20221030150723.pdf

BOP Diagram Attachment:

James_29_Fed_Com_23H_32H_BOP_2M_20221030150747.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 4884

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 9-5/8" surface casing, a 13 5/8 BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendors representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder, monitored by the wellhead vendor representative. .All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. 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_29_Fed_Com_23H_32H_Choke_2M_3M_20221030151255.pdf

BOP Diagram Attachment:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

James_29_Fed_Com_23H_32H_Choke_2M_3M_20221030151255.pdf

James_29_Fed_Com_23H_32H_BOP_3M_20221030151318.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 12232

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 7" 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_29_Fed_Com_23H_32H_Choke_5M_20221030151411.pdf

BOP Diagram Attachment:

James_29_Fed_Com_23H_32H_BOP_5M_20221030151435.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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	3688	2548	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	4884	0	4796	3688	-1108	4884	HCK-55	40	LT&C	1.48	1.54	BUOY	2.92	BUOY	2.92
3	PRODUCTION	8.75	7.0	NEW	API	N	0	11482	0	11482	3688	-7794	11482	L-80	29	LT&C	1.3	1.52	BUOY	1.7	BUOY	1.7
4	PRODUCTION	8.75	7.0	NEW	API	N	11482	12232	11482	11890	-7794	-8202	750	P-110	29	BUTT	1.53	2.02	BUOY	78.52	BUOY	78.52
5	COMPLETION SYSTEM	6	4.5	NEW	API	N	10482	19390	10482	11930	-6794	-8242	8908	P-110	11.6	BUTT	1.36	1.92	BUOY	21.85	BUOY	21.85

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JAMES_29_32_FEDERAL_COM_CASING_ASSUMPTIONS_20230403153742.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JAMES_29_32_FEDERAL_COM_CASING_ASSUMPTIONS_20230403153842.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JAMES_29_32_FEDERAL_COM_CASING_ASSUMPTIONS_20230403153952.pdf

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JAMES_29_32_FEDERAL_COM_CASING_ASSUMPTIONS_20230403154134.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Casing Attachments

Casing ID: 5 **String** COMPLETION SYSTEM

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JAMES_29_32_FEDERAL_COM_CASING_ASSUMPTIONS_20230403154315.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0		0	0
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	4884	921	1.88	12.9	1731	50	35:65 (POZ:C)	Salt + Bentonite
INTERMEDIATE	Tail		0	4884	286	1.34	14.8	383	50	Class C	LCM
PRODUCTION	Lead		4884	12533	418	3.64	10.3	1521	25	Tuned Light	LCM
PRODUCTION	Tail		488	12533	125	1.36	14.8	170	25	Class C	Retarder
COMPLETION SYSTEM	Lead		12533	19390	535	1.3	14.2	696	10	50:50 (POZ:H)	Salt + Bentonite + Fluid Loss + Dispersant + SMS

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

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

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

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1140	OTHER : Fresh Water	7.83	8.33							
1140	4884	OTHER : Brine Water	9.8	10.3							
4884	12533	OTHER : Cut Brine or OBM	8.5	9							
12533	19390	OIL-BASED MUD	8.5	9							

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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: 5583 **Anticipated Surface Pressure:** 2958

Anticipated Bottom Hole Temperature(F): 187

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_29_32_FEDERAL_COM_31H_H2S_20230404080311.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

JAMES_29_32_FEDERAL_COM_31H_AC_Report_20230404081220.pdf
JAMES_29_32_FEDERAL_COM_31H_DIRECTIONAL_PLANS_20230404081220.pdf

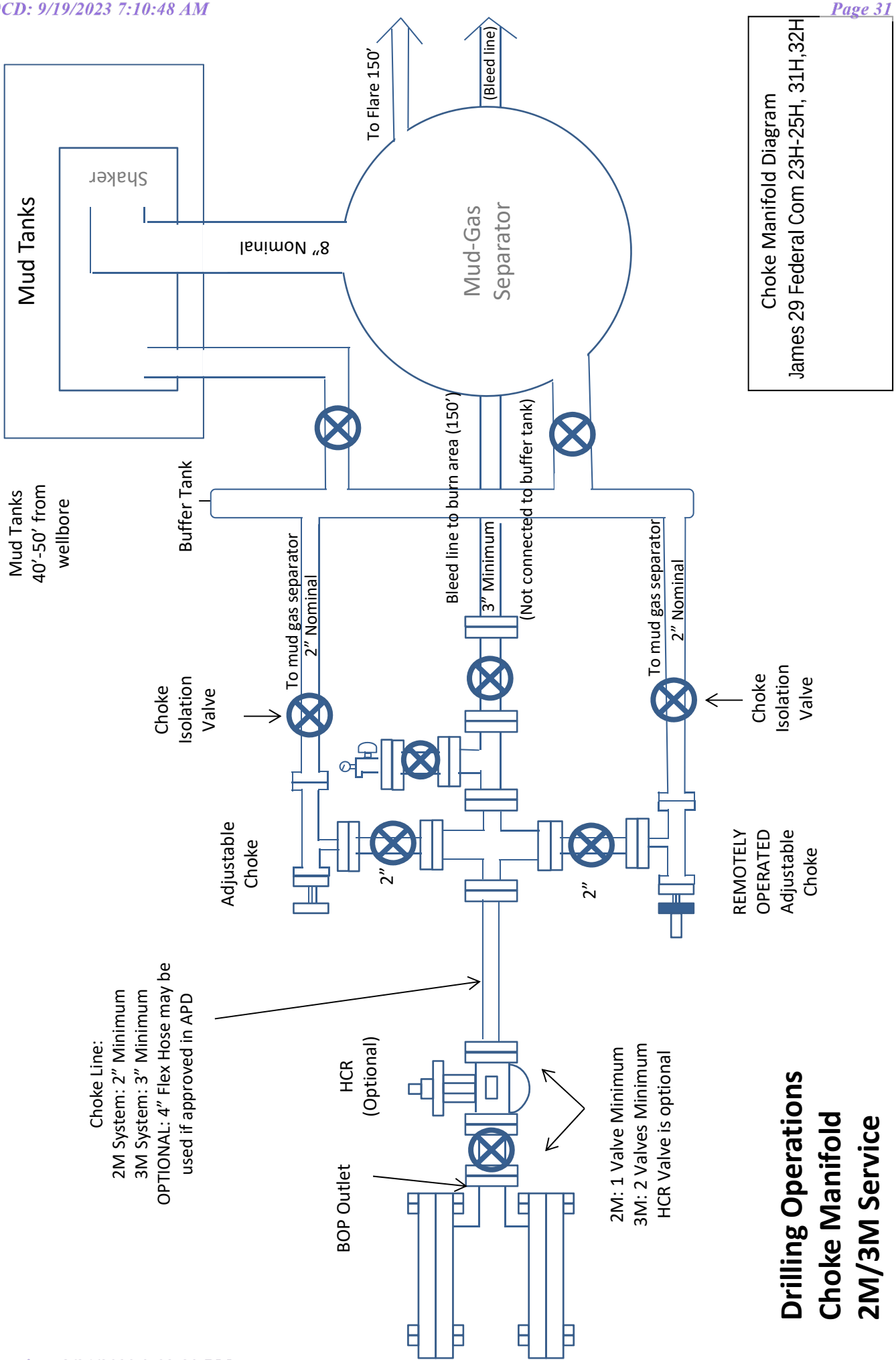
Other proposed operations facets description:

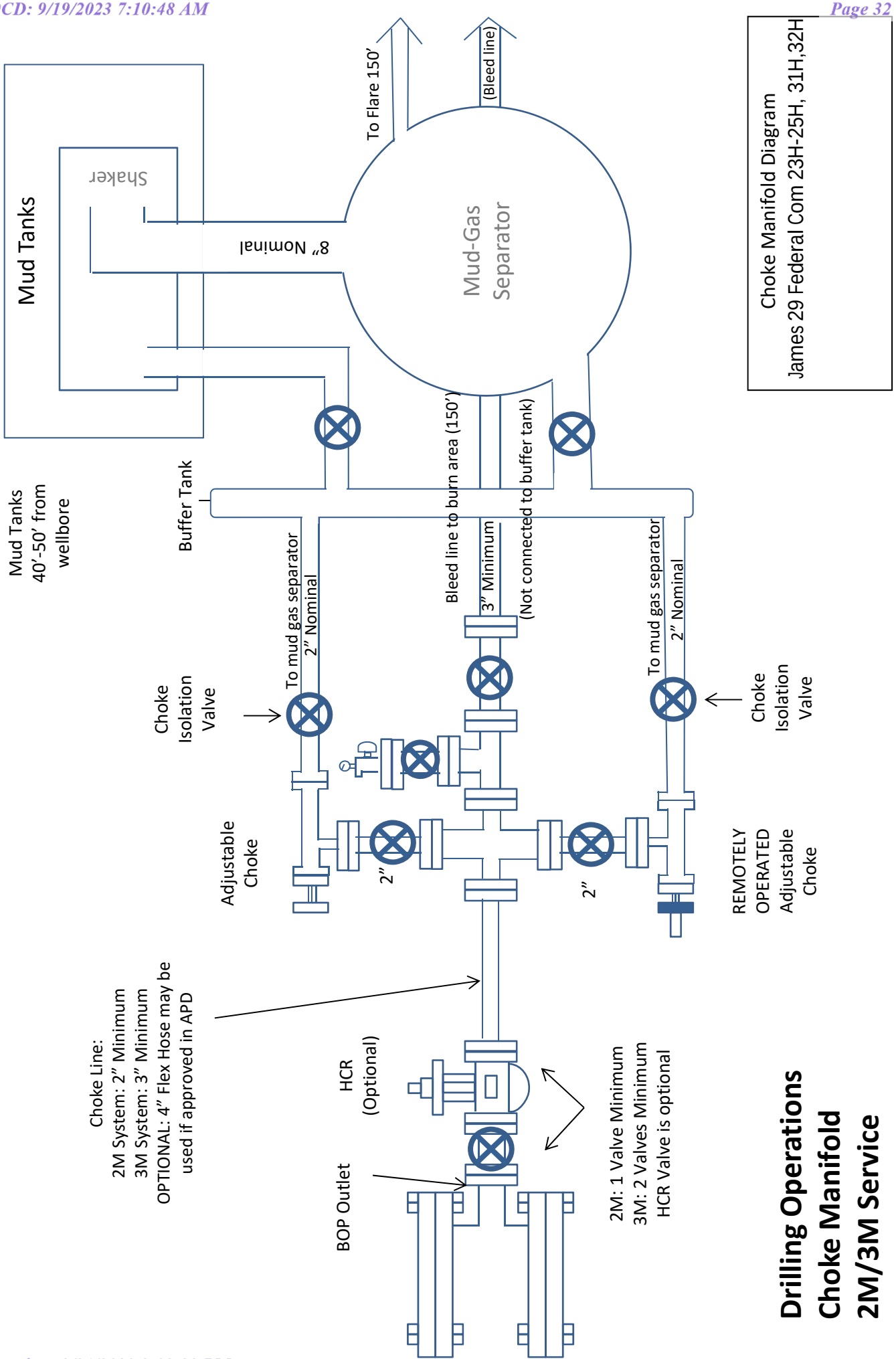
Other proposed operations facets attachment:

JAMES_29_32_FEDERAL_COM_31H_DRILL_PLANS_20230404081234.pdf

Other Variance attachment:

James_29_Federal_Com_31H_Multibowl_13.375_20221030230818.pdf
James_29_Fed_Com_23H_32H_Flex_Hose_20221030152227.pdf
Offline_Cement_Procedure_20221029113736.pdf


Choke Manifold Diagram
James 29 Federal Com 23H-25H, 31H,32H
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 29 Federal Com 23H-25H, 31H,32H
Mud Tanks
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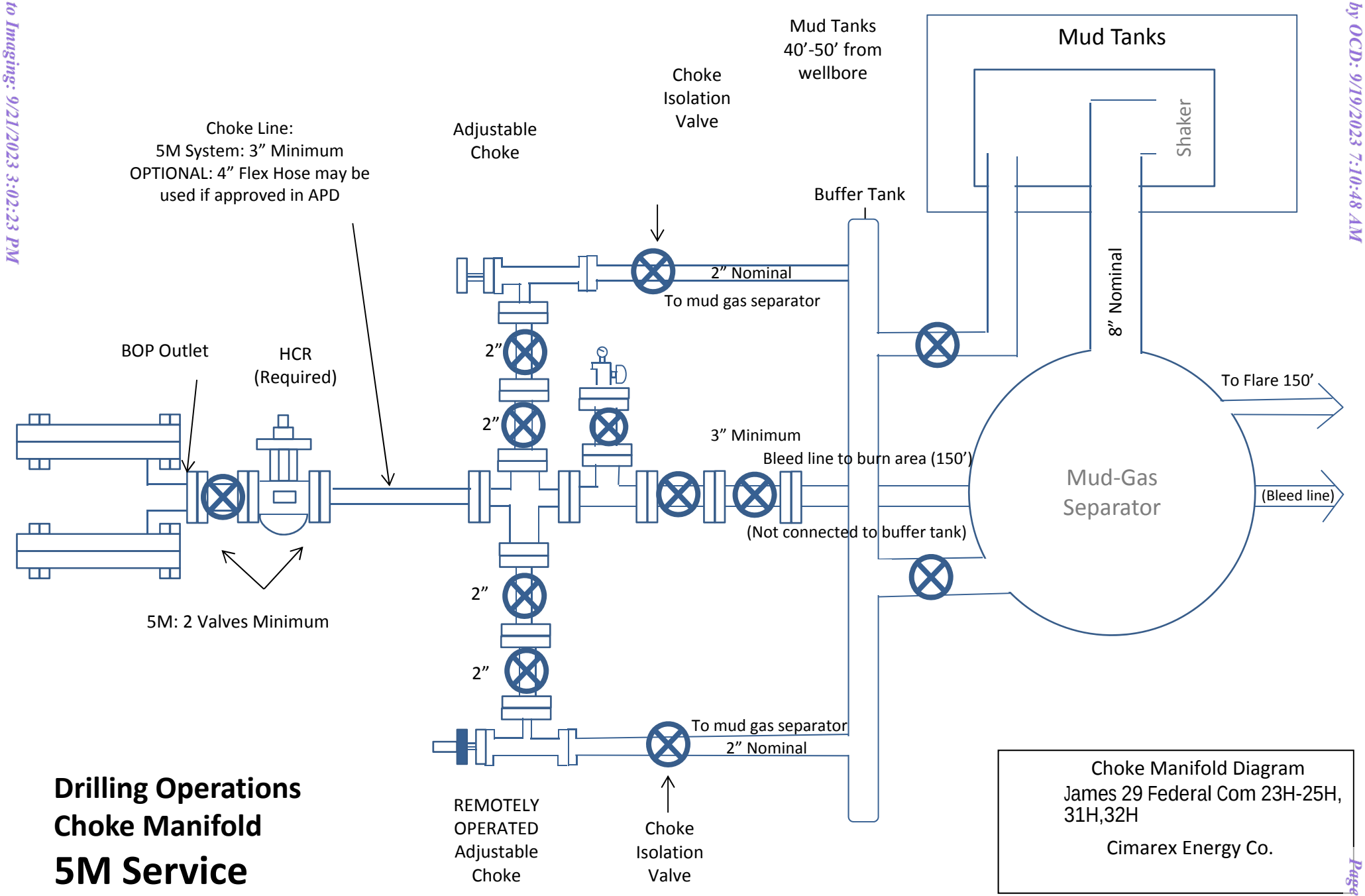
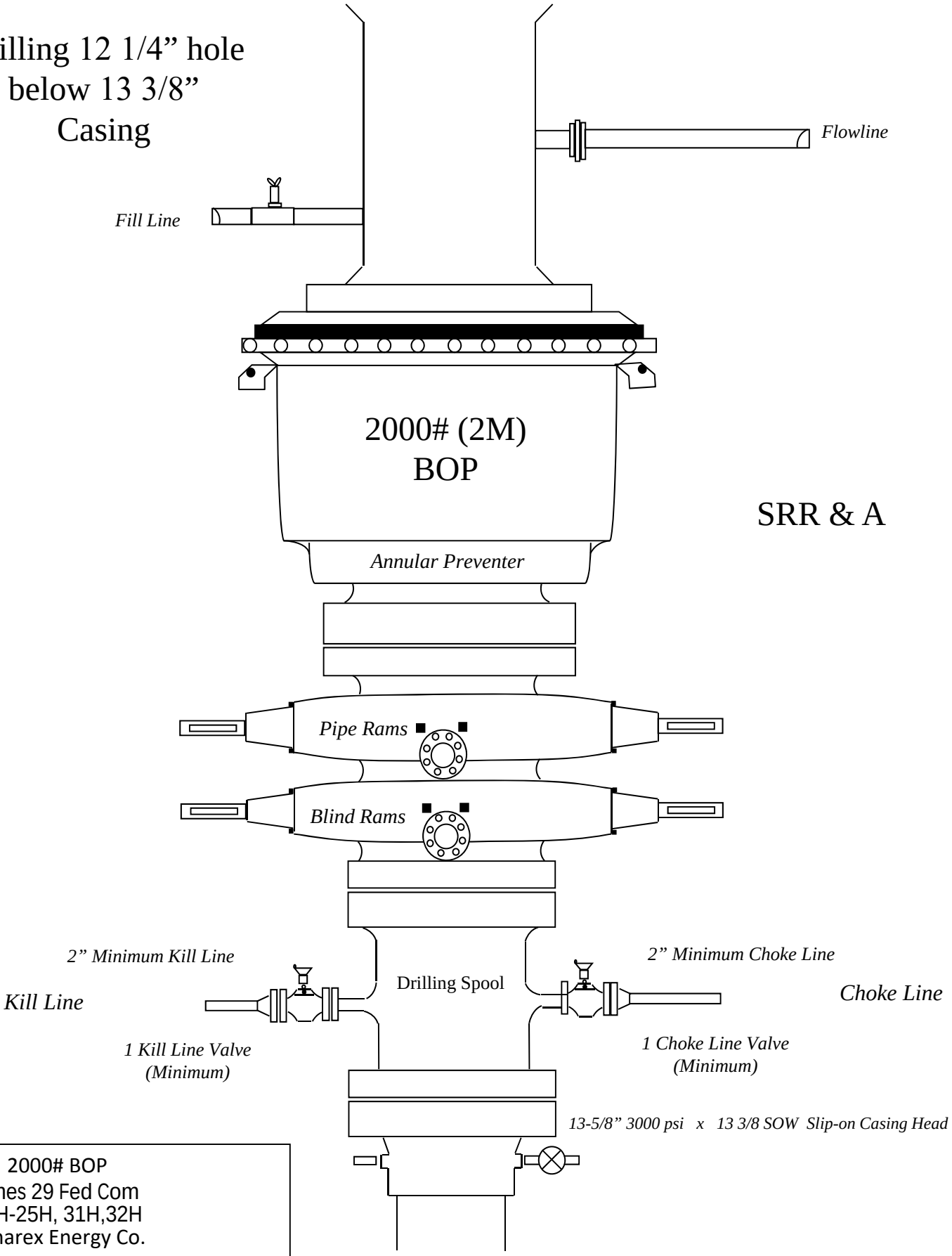
To Flare 150'
(Bleed line)
Mud Tanks 40'-50' from wellbore
Buffer Tank
Bleed line to burn area (150')
3" Minimum
(Not connected to buffer tank)
To mud gas separator
2" Nominal
To mud gas separator
2" Nominal
Choke Isolation Valve
Choke Isolation Valve
Adjustable Choke
REMOTELY OPERATED Adjustable Choke
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

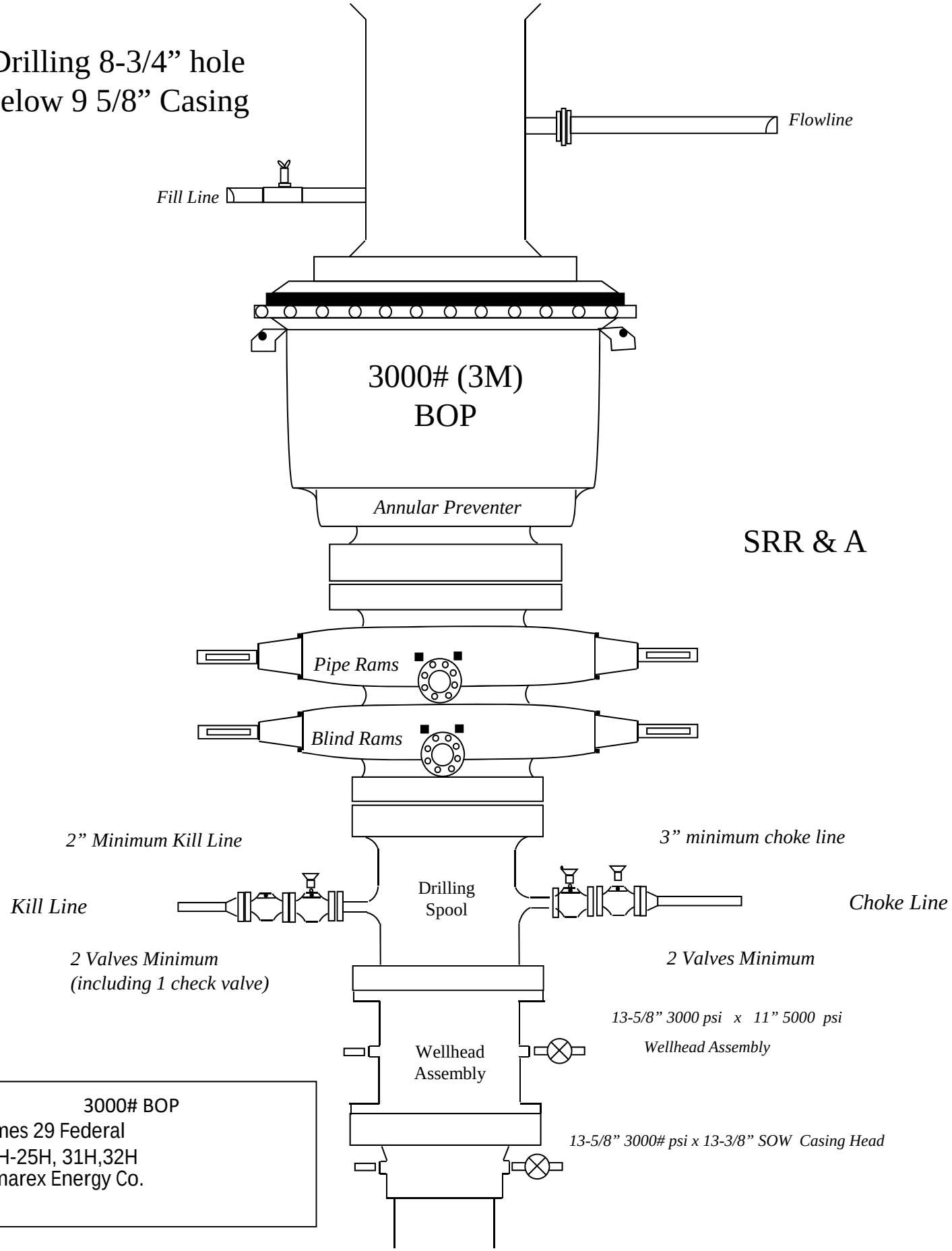
Choke Manifold Diagram
James 29 Federal Com 23H-25H, 31H,32H
Cimarex Energy Co.

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



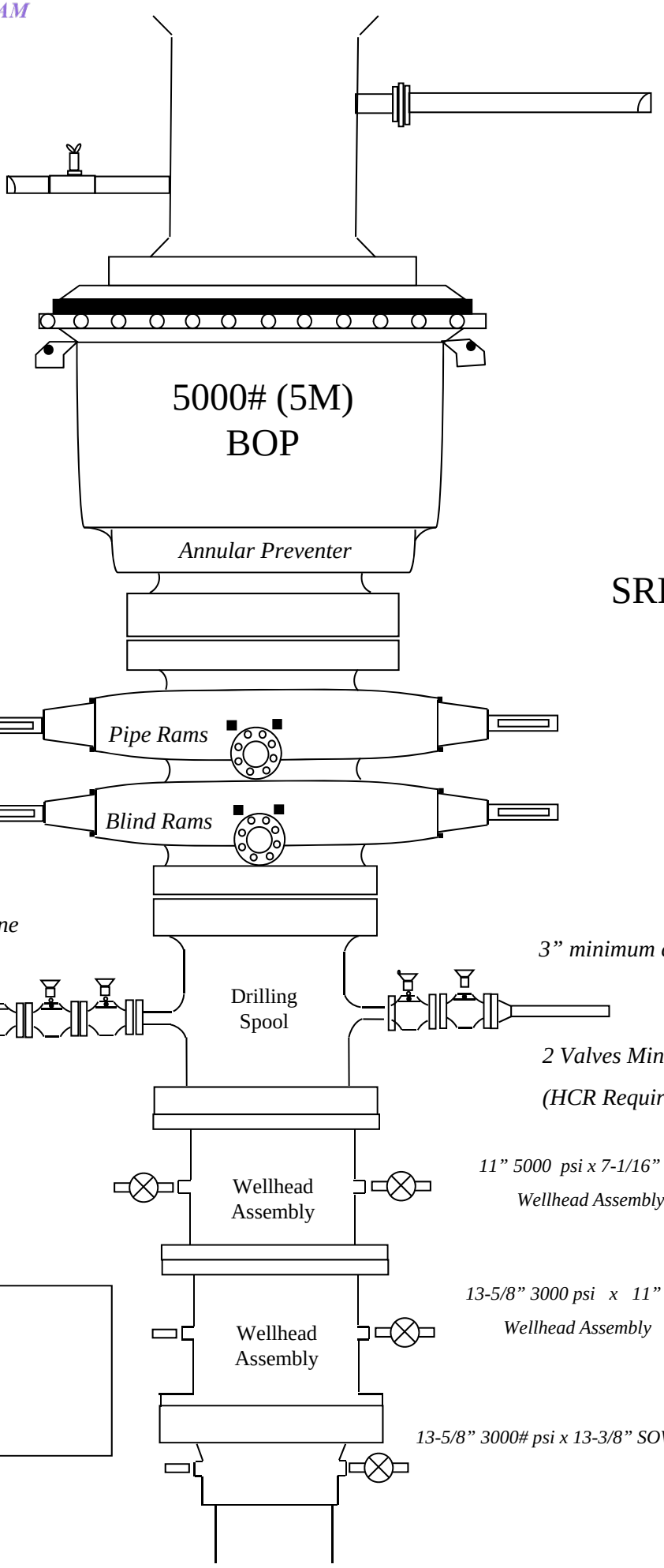
2000# BOP
James 29 Fed Com
23H-25H, 31H,32H
Cimarex Energy Co.

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



3000# BOP
James 29 Federal
23H-25H, 31H,32H
Cimarex Energy Co.

Drilling 6” hole below 7” Casing



SRR & A

5000# BOP
James 29 Federal Com
23H-25H, 31H,32H
Cimarex Energy Co.

James 29-32 Federal Com 31H 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	4884	4796	9-5/8"	40.00	HCK-55	LT&C	1.48	1.54	2.92
8 3/4	0	11482	11482	7"	29.00	L-80	LT&C	1.31	1.52	1.70
8 3/4	11482	12232	11890	7"	29.00	P-110	BT&C	1.53	2.02	78.52
6	10482	19390	11930	4-1/2"	11.60	P-110	BT&C	1.36	1.92	21.85
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

James 29-32 Federal Com 31H 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	4884	4796	9-5/8"	40.00	HCK-55	LT&C	1.48	1.54	2.92
8 3/4	0	11482	11482	7"	29.00	L-80	LT&C	1.31	1.52	1.70
8 3/4	11482	12232	11890	7"	29.00	P-110	BT&C	1.53	2.02	78.52
6	10482	19390	11930	4-1/2"	11.60	P-110	BT&C	1.36	1.92	21.85
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

James 29-32 Federal Com 31H Casing Assumptions

2. Casing Program

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8 3/4	0	11482	11482	7"	29.00	L-80	LT&C	1.31	1.52	1.70
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James 29-32 Federal Com 31H 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
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						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

James 29-32 Federal Com 31H 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
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12 1/4	0	4884	4796	9-5/8"	40.00	HCK-55	LT&C	1.48	1.54	2.92
8 3/4	0	11482	11482	7"	29.00	L-80	LT&C	1.31	1.52	1.70
8 3/4	11482	12232	11890	7"	29.00	P-110	BT&C	1.53	2.02	78.52
6	10482	19390	11930	4-1/2"	11.60	P-110	BT&C	1.36	1.92	21.85
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

Hydrogen Sulfide Drilling Operations Plan
James 29 Federal Com 23H-25H, 31**H**,32**H**
Cimarex Energy Co.
Lea Co., NM

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

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

H_2S Detection and Alarm Systems:

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

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

3 Windsock and/or wind streamers:

A. Windsock at mudpit area should be high enough to be visible.

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

4 Condition Flags and Signs

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

5 Well control equipment:

A. See exhibit "E-1"

6 Communication:

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

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

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

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

H_2S Contingency Plan
James 29 Federal Com 23H-25H, **31H**,**32H**
Cimarex Energy Co.
Lea Co., NM

Emergency Procedures

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

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

Ignition of Gas Source

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

Characteristics of H_2S and SO_2

Please see attached International Chemical Safety Cards.

Contacting Authorities

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

H_2S Contingency Plan Emergency Contacts
James 29 Federal Com 23H-25H, 31H,32H
Cimarex Energy Co.
Lea Co., NM

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

Key Personnel

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

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

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

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

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

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

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

Schlumberger COTERRA

Coterra James 29-32 Federal Com 31H Rev2 kFc 30Mar23 Anti-Collision Summary Report

Analysis Date-24hr Time:	March 30, 2023 - 11:20	**Analysis Method:**	3D Least Distance
Client:	COTERRA	**Reference Trajectory:**	Coterra James 29-32 Federal Com 31H Rev2 kFc 30Mar23 (Def Plan)
Field:	NM Lea County (NAD 83)	**Depth Interval:**	Every 10.00 Measured Depth (ft)
Structure:	Coterra James 29-32 Federal Com 31H	**Rule Set:**	NAL Procedure: D&M AntiCollision Standard S002
Slot:	31H	**Min Pts:**	All local minima indicated.
Well:	James 29-32 Federal Com 31H	**Version / Patch:**	2.10.834.0
Borehole:	James 29-32 Federal Com 31H	**Database \ Project:**	localhost\drilling-project1
Scan MD Range:	0.00ft ~ 19389.58ft		

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		
Coterra James 29-32 Federal Com 32H Rev2 kFc 30Mar23 (Def Plan)													Fail Major
	20.00	16.50	17.50	3.50	N/A	MAS = 5.03 (m)	0.00	0.00	CtCt<=15m<15.00			Enter Alert	
	20.00	16.50	17.50	3.50	24695.80	MAS = 5.03 (m)	23.00	23.00				WRP	
	20.00	20.07	5.79	-0.07	1.49	OSF1.50	1230.00	1230.00		OSF<1.50		Enter Minor	
	20.00	28.64	0.08	-8.64	1.00	OSF1.50	1800.00	1800.00				MinPt-CtCt	
	20.02	28.78	-0.01	-8.77	1.00	OSF1.50	1810.00	1810.00			OSF<1.00	Enter Major	
	20.16	29.08	-0.06	-8.93	1.00	OSF1.50	1830.00	1830.00				MinPts	
	20.28	29.23	-0.04	-8.95	1.00	OSF1.50	1840.00	1840.00			OSF>1.00	Exit Major	
	31.75	32.48	9.26	-0.73	1.46	OSF1.50	2060.00	2059.64		OSF>1.50		Exit Minor	
	125.89	40.07	98.35	85.82	4.93	OSF1.50	2580.00	2570.44	OSF>5.00			Exit Alert	
	1081.48	83.87	1024.74	997.61	19.89	OSF1.50	5470.00	5361.96				MinPt-O-SF	
	1392.87	171.60	1277.64	1221.27	12.33	OSF1.50	11482.75	11337.52				MinPts	
	1392.89	171.60	1277.66	1221.29	12.33	OSF1.50	11570.00	11424.43				MinPt-O-SF	
	1392.97	299.54	1192.44	1093.43	7.02	OSF1.50	19389.58	11930.00				MinPts	
Coterra James 29 Federal Com 25H Rev1 kFc 27Sep22 (Def Plan)													Warning Alert
	89.43	32.81	86.93	56.62	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	89.43	32.81	86.93	56.62	81782.09	MAS = 10.00 (m)	23.00	23.00				WRP	
	89.43	32.81	69.51	56.62	4.99	MAS = 10.00 (m)	1800.00	1800.00	OSF<5.00			Enter Alert	
	83.78	34.88	59.70	48.91	3.77	OSF1.50	2220.00	2218.50				MinPt-CtCt	
	83.97	35.48	59.48	48.49	3.71	OSF1.50	2260.00	2258.03				MINPT-O-EOU	
	84.09	35.63	59.50	48.46	3.69	OSF1.50	2270.00	2267.89				MinPt-O-ADP	
	85.61	36.54	60.42	49.07	3.66	OSF1.50	2330.00	2326.98				MinPt-O-SF	
	132.58	41.70	103.95	90.89	4.98	OSF1.50	2680.00	2667.03	OSF>5.00			Exit Alert	
	1902.34	157.05	1796.81	1745.29	18.44	OSF1.50	10460.00	10314.77				MINPT-O-EOU	
	1902.40	157.12	1796.82	1745.28	18.43	OSF1.50	10470.00	10324.77				MinPt-O-ADP	
	1912.82	158.98	1806.00	1753.84	18.31	OSF1.50	10770.00	10624.77				MinPt-O-SF	
	2241.05	220.64	2093.12	2020.41	15.39	OSF1.50	16750.00	11930.00				MinPt-CtCt	
	2241.12	220.95	2092.99	2020.17	15.37	OSF1.50	16770.00	11930.00				MINPT-O-EOU	
	2241.23	221.10	2092.99	2020.13	15.36	OSF1.50	16780.00	11930.00				MinPt-O-ADP	
	2257.07	224.32	2106.69	2032.75	15.25	OSF1.50	17020.00	11930.00				MinPt-O-SF	
	3461.45	224.06	3311.24	3237.39	23.42	OSF1.50	19389.58	11930.00				TD	
Coterra James 29 Federal Com 24H Rev1 kFc 27Sep22 (Def Plan)													Warning Alert
	99.99	32.81	97.49	67.18	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	99.99	32.81	97.49	67.18	91713.83	MAS = 10.00 (m)	23.00	23.00				WRP	
	97.50	32.81	75.90	64.70	4.97	MAS = 10.00 (m)	1970.00	1969.90	OSF<5.00			Enter Alert	
	85.91	36.70	60.61	49.21	3.66	OSF1.50	2340.00	2336.81				MinPt-CtCt	
	86.07	37.16	60.47	48.92	3.62	OSF1.50	2370.00	2366.25				MINPT-O-EOU	
	86.22	37.31	60.51	48.91	3.61	OSF1.50	2380.00	2376.05				MinPt-O-ADP	
	87.32	37.92	61.20	49.40	3.59	OSF1.50	2420.00	2415.17				MinPt-O-SF	
	141.36	44.22	111.05	97.15	4.99	OSF1.50	2840.00	2821.58	OSF>5.00			Exit Alert	
	1030.95	152.99	928.13	877.97	10.25	OSF1.50	10150.00	10004.77				MINPT-O-EOU	
	1031.02	153.07	928.14	877.95	10.25	OSF1.50	10160.00	10014.77				MinPt-O-ADP	
	1033.24	153.85	929.83	879.38	10.22	OSF1.50	10270.00	10124.77				MinPt-O-SF	
	1763.86	203.41	1627.42	1560.45	13.15	OSF1.50	16750.00	11930.00				MinPt-CtCt	
	1763.98	203.84	1627.25	1560.14	13.12	OSF1.50	16770.00	11930.00				MINPT-O-EOU	
	1764.32	204.25	1627.32	1560.07	13.10	OSF1.50	16790.00	11930.00				MinPt-O-ADP	
	1782.95	208.39	1643.18	1574.55	12.97	OSF1.50	17010.00	11930.00				MinPt-O-SF	
	3174.81	211.07	3033.27	2963.74	22.82	OSF1.50	19389.58	11930.00				TD	
Coterra James 29 Federal Com 23H Rev1 kFc 27Sep22 (Def Plan)													Warning Alert
	113.12	32.81	110.62	80.31	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	113.12	32.81	110.62	80.31	156100.00	MAS = 10.00 (m)	23.00	23.00				WRP	
	103.98	33.08	81.10	70.90	4.98	OSF1.50	2100.00	2099.45	OSF<5.00			Enter Alert	
	88.02	38.24	61.69	49.78	3.59	OSF1.50	2440.00	2434.69				MinPt-CtCt	
	88.14	38.55	61.60	49.59	3.56	OSF1.50	2460.00	2454.18				MINPT-O-EOU	
	88.29	38.71	61.65	49.58	3.55	OSF1.50	2470.00	2463.91				MinPt-O-ADP	
	89.13	39.17	62.18	49.96	3.54	OSF1.50	2500.00	2493.06				MinPt-O-SF	
	130.78	47.22	98.47	83.57	4.30	OSF1.50	3050.00	3024.42				MinPt-O-SF	
	215.28	66.40	170.18	148.88	4.99	OSF1.50	4320.00	4251.15	OSF>5.00			Exit Alert	
	407.87	124.15	324.27	283.71	5.00	OSF1.50	8080.00	7934.77	OSF<5.00			Enter Alert	
	390.44	159.17	283.49	231.27	3.71	OSF1.50	10770.00	10624.77				MinPts	
	473.34	145.85	375.28	327.49	4.93	OSF1.50	11130.00	10984.77	OSF>5.00			Exit Alert	
	1089.56	190.83	961.52	898.75	8.66	OSF1.50	16740.00	11930.00				MinPt-CtCt	
	1089.79	191.71	961.15	898.08	8.62	OSF1.50	16770.00	11930.00				MINPT-O-EOU	
	1090.04	192.01	961.20	898.03	8.61	OSF1.50	16780.00	11930.00				MinPt-O-ADP	
	1101.53	195.68	970.25	905.85	8.53	OSF1.50	16910.00	11930.00				MinPt-O-SF	
	2857.32	201.12	2722.41	2656.20	21.56	OSF1.50	19389.58	11930.00				TD	
30-025-42091 - James 29 Federal 039H - MWD to 13997ft - A (Def Survey)													Warning Alert
	106.36	32.81	103.86	73.55	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	104.46	32.81	101.68	71.65	359.72	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	103.50	32.81	100.81	70.69	529.57	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	103.40	32.81	100.81	70.59	1148.96	MAS = 10.00 (m)	23.00	23.00				WRP	
	97.27	32.81	75.70	64.46	4.97	MAS = 10.00 (m)	1970.00	1969.90	OSF<5.00			Enter Alert	
	90.93	35.41	66.49	55.52	4.03	OSF1.50	2260.00	2258.03				MinPt-CtCt	
	91.08	35.85	66.35	55.23	3.98	OSF1.50	2290.00	2287.61				MINPT-O-EOU	
	91.21	36.00	66.37	55.20	3.97	OSF1.50	2300.00	2297.47				MinPt-O-ADP	
	92.51	36.76	67.16	55.74	3.94	OSF1.50	2350.00	2346.63				MinPt-O-SF	
	130.45	41.22	102.14	89.24	4.96	OSF1.50	2650.00	2638.05	OSF>5.00			Exit Alert	
	1162.89	131.62	1074.31	1031.27	13.48	OSF1.50	8800.00	8654.77				MinPts	
	876.09	146.06	777.89	730.04	9.13	OSF1.50	9590.00	9444.77				MinPts	
	2560.23	101.48	2491.74	2458.75	38.76	OSF1.50	12680.00	11930.00				MinPt-CtCt	
	2560.29	101.62	2491.71	2458.67	38.71	OSF1.50	12700.00	11930.00				MINPT-O-EOU	
	2560.36	101.70	2491.72	2458.66	38.68	OSF1.50	12710.00	11930.00				MinPt-O-ADP	
	2571.82	108.44	2498.70	2463.38	36.38	OSF1.50	13210.00	11930.00				MinPt-CtCt	
	2572.02	109.08	2498.46	2462.94	36.16	OSF1.50	13260.00	11930.00				MINPT-O-EOU	
	2572.22	109.34	2498.50	2462.89	36.08	OSF1.50	13280.00	11930.00				MinPt-O-ADP	
	2560.01	130.83	2471.95	2429.17	29.89	OSF1.50	14300.00	11930.00				MinPt-CtCt	
	2554.56	148.48	2454.74	2406.08	26.22	OSF1.50	15000.00	11930.00				MinPt-CtCt	
	2555.14	150.38	2454.05	2404.76	25.89	OSF1.50	15090.00	11930.00				MINPT-O-EOU	
	2556.47	151.91	2454.36	2404.56	25.64	OSF1.50	15160.00	11930.00				MinPt-O-ADP	
	2429.59	191.04	2301.40	2238.55	19.31	OSF1.50	16500.00	11930.00				MinPt-CtCt	
	2429.69	191.33	2301.31	2238.36	19.28	OSF1.50	16520.00	11930.00				MINPT-O-EOU	
	2429.80	191.47	2301.32	2238.33	19.27	OSF1.50	16530.00	11930.00				MinPt-O-ADP	
	2461.05	196.37	2329.31	2264.69	19.02	OSF1.50	16890.00	11930.00				MinPt-O-SF	
	3777.00	207.43	3637.88	3569.57	27.63	OSF1.50	19389.58	11930.00				TD	
30-025-41363 - James Federal 22H ST01 - MWD to 13853ft - A (Def Survey)													Warning Alert
	857.88	32.81	855.38	825.07	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	857.69	32.81	855.17	824.88	33781.45	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	857.62	32.81	855.11	824.81	120671.53	MAS = 10.00 (m)	23.00	23.00				WRP	
	857.62	32.81	855.03	824.81	9466.25	MAS = 10.00 (m)	40.00	40.00				MinPts	
	863.02	32.81	849.53	830.21	78.27	MAS = 10.00 (m)	1150.00	1150.00				MINPT-O-EOU	
	864.50	32.81	849.50	831.69	69.00	MAS = 10.00 (m)	1300.00	1300.00				MINPT-O-EOU	
	247.01	76.63	195.10	170.39	4.95	OSF1.50	4870.00	4782.41	OSF<5.00			Enter Alert	
	123.46	98.05	57.26	25.41	1.90	OSF1.50	5760.00	5642.08				MinPt-CtCt	
	123.57	98.37	57.16	25.20	1.89	OSF1.50	5780.00	5661.40				MINPT-O-EOU	
	123.70	98.52	57.19	25.19	1.89	OSF1.50	5790.00	5671.06				MinPts	
	264.40	111.73	189.08	152.67	3.60	OSF1.50	7230.00	7084.77				MinPt-CtCt	
	264.94	114.07	188.06	150.87	3.53	OSF1.50	7410.00	7264.77				MINPT-O-EOU	
	266.80	117.90	187.36	148.89	3.44	OSF1.50	7700.00	7554.77				MINPT-O-EOU	
	268.74	120.37	187.66	148.36	3.39	OSF1.50	7890.00	7744.77				MinPt-O-ADP	
	232.15	139.90	138.05	92.25	2.51	OSF1.50	9320.00	9174.77				MinPt-CtCt	
	232.19	139.97	138.05	92.23	2.51	OSF1.50	9330.00	9184.77				MinPts	
	388.46	118.44	308.66	270.02	4.99	OSF1.50	9730.00	9584.77	OSF>5.00			Exit Alert	
	2389.29	96.53	2324.11	2292.76	38.08	OSF1.50	12000.00	11787.32				MinPt-O-SF	
	2421.85	98.08	2355.63	2323.77	37.97	OSF1.50	12080.00	11832.33				MinPt-O-SF	
	2457.88	98.52	2391.37	2359.37	38.36	OSF1.50	12780.00	11930.00				MinPt-CtCt	
	2458.09	99.09	2391.20	2359.00	38.14	OSF1.50	12840.00	11930.00				MINPT-O-EOU	
	2458.43	99.49	2391.27	2358.94	37.98	OSF1.50	12880.00	11930.00				MinPt-O-ADP	
	2447.03	112.45	2371.23	2334.58	33.35	OSF1.50	13750.00	11930.00				MinPt-CtCt	
	2447.53	113.93	2370.75	2333.60	32.91	OSF1.50	13840.00	11930.00				MINPT-O-EOU	
	2448.10	114.61	2370.86	2333.49	32.72	OSF1.50	13880.00	11930.00				MinPt-O-ADP	
	2449.18	116.98	2370.36	2332.20	32.06	OSF1.50	13990.00	11930.00				MinPt-CtCt	
	2434.92	126.50	2349.75	2308.42	29.42	OSF1.50	14440.00	11930.00				MinPt-CtCt	
	2435.70	128.71	2349.06	2306.99	28.92	OSF1.50	14550.00	11930.00				MINPT-O-EOU	
	2436.56	129.73	2349.24	2306.83	28.70	OSF1.50	14600.00	11930.00				MinPt-O-ADP	
	2441.06	133.56	2351.18	2307.49	27.91	OSF1.50	14760.00	11930.00				MINPT-O-EOU	
	2441.54	134.17	2351.26	2307.37	27.79	OSF1.50	14790.00	11930.00				MinPt-O-ADP	
	2444.37	144.58	2347.14	2299.78	25.78	OSF1.50	15200.00	11930.00				MinPt-CtCt	
	2445.17	147.05	2346.31	2298.13	25.35	OSF1.50	15310.00	11930.00				MINPT-O-EOU	
	2446.35	148.41	2346.57	2297.94	25.12	OSF1.50	15370.00	11930.00				MinPt-O-ADP	
	2447.12	168.64	2333.86	2278.48	22.07	OSF1.50	16110.00	11930.00				MinPt-CtCt	
	2448.69	173.20	2332.38	2275.48	21.50	OSF1.50	16290.00	11930.00				MINPT-O-EOU	
	2450.17	174.96	2332.70	2275.22	21.29	OSF1.50	16360.00	11930.00				MinPt-O-ADP	
	2514.80	187.72	2388.82	2327.08	20.35	OSF1.50	17000.00	11930.00				MinPt-O-SF	
	3827.48	204.88	3690.06	3622.60	28.35	OSF1.50	19389.58	11930.00				TD	
30-025-46252 - Alley Cat 17-20 Federal Com 526H - MWD to 19952ft - A (Def Survey)													Warning Alert
	9494.51	261.92	9319.06	9232.59	54.88	OSF1.50	0.00	0.00				Surface	
	9471.69	262.04	9296.17	9209.66	54.73	OSF1.50	23.00	23.00				WRP	
	840.06	254.73	669.41	585.34	4.98	OSF1.50	8770.00	8624.77	OSF<5.00			Enter Alert	
	292.62	187.74	166.63	104.88	2.35	OSF1.50	9460.00	9314.77				MinPt-O-SF	
	273.42	173.54	156.89	99.88	2.38	OSF1.50	9560.00	9414.77				MinPts	
	289.64	185.18	165.35	104.46	2.36	OSF1.50	9660.00	9514.77				MinPt-O-SF	
	850.78	257.00	678.62	593.78	5.00	OSF1.50	10370.00	10224.77	OSF>5.00			Exit Alert	
	8239.72	207.80	8100.35	8031.92	60.18	OSF1.50	19389.58	11930.00				TD	
30-025-36772 - James Federal 10 - INC Only to 8645ft - A (Def Survey)													Warning Alert
	1022.87	32.81	1020.37	990.07	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1022.82	32.81	1019.99	990.01	3048.68	MAS = 10.00 (m)	23.00	23.00				WRP	
	1020.57	32.81	1010.20	987.76	129.34	MAS = 10.00 (m)	280.00	280.00				MinPts	
	1013.32	73.87	963.24	939.45	21.25	OSF1.50	1370.00	1370.00				MinPt-CtCt	
	653.75	199.06	520.22	454.70	4.97	OSF1.50	3820.00	3768.19	OSF<5.00			Enter Alert	
	440.74	298.26	241.06	142.48	2.22	OSF1.50	5680.00	5564.81				MinPt-CtCt	
	444.95	311.34	236.56	133.61	2.15	OSF1.50	5940.00	5815.95				MINPT-O-EOU	
	450.38	317.92	237.60	132.46	2.13	OSF1.50	6070.00	5941.52				MinPt-O-ADP	
	460.15	326.02	241.97	134.13	2.12	OSF1.50	6230.00	6096.07				MinPt-O-SF	
	507.60	428.08	221.38	79.52	1.78	OSF1.50	8200.00	8054.77				MinPt-CtCt	
	510.30	459.71	203.00	50.59	1.67	OSF1.50	8800.00	8654.77				MinPts	
	900.59	275.26	716.25	625.33	4.94	OSF1.50	9540.00	9394.77	OSF>5.00			Exit Alert	
	4494.77	337.67	4268.82	4157.10	20.10	OSF1.50	15360.00	11930.00				MinPt-O-SF	
	7822.32	437.13	7530.07	7385.19	26.99	OSF1.50	19389.58	11930.00				TD	
30-025-45066 - Alley Cat 17-20 Federal Com 215H - MWD to 21436ft - A (Def Survey)													Warning Alert
	10603.59	266.43	10425.14	10337.16	60.25	OSF1.50	0.00	0.00				Surface	
	10580.64	266.52	10402.13	10314.12	60.10	OSF1.50	23.00	23.00				WRP	
	1144.40	347.14	912.13	797.25	4.97	OSF1.50	9780.00	9634.77	OSF<5.00			Enter Alert	
	644.36	470.59	329.80	173.77	2.06	OSF1.50	10730.00	10584.77				MinPts	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	1147.39	348.54	914.20	798.86	4.96	OSF1.50	11670.00	11521.45	OSF>5.00			Exit Alert	
	7964.11	203.91	7827.33	7760.20	59.29	OSF1.50	19389.58	11930.00				TD	
30-025-46251 - Alley Cat 17-20 Federal Com 525H - MWD to 19992ft - A (Def Survey)													Warning Alert
	9411.78	257.13	9239.53	9154.65	55.43	OSF1.50	0.00	0.00				Surface	
	9388.82	257.22	9216.51	9131.61	55.28	OSF1.50	23.00	23.00				WRP	
	1380.25	418.78	1100.23	961.47	4.96	OSF1.50	8600.00	8454.77	OSF<5.00			Enter Alert	
	1010.02	519.50	662.86	490.52	2.92	OSF1.50	9540.00	9394.77				MinPts	
	1392.98	419.86	1112.24	973.12	5.00	OSF1.50	10500.00	10354.77	OSF>5.00			Exit Alert	
	8373.53	215.85	8228.79	8157.68	58.85	OSF1.50	19389.58	11930.00				TD	
30-025-31515 - James Federal 1 - INC Only+Blind to 6160ft - SWD (Def Survey)													Warning Alert
	4111.22	32.81	4108.72	4078.41	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4111.18	32.81	4108.67	4078.37	777949.73	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	4111.16	32.81	4108.63	4078.36	106883.12	MAS = 10.00 (m)	23.00	23.00				MinPts	
	4113.05	63.91	4069.61	4049.14	100.40	OSF1.50	1240.00	1240.00				MinPt-CtCt	
	4129.74	129.30	4042.71	4000.45	48.83	OSF1.50	2420.00	2415.17				MINPT-O-EOU	
	4133.16	133.42	4043.39	3999.75	47.33	OSF1.50	2520.00	2512.44				MinPt-O-ADP	
	4134.44	134.68	4043.82	3999.76	46.89	OSF1.50	2550.00	2541.46				MinPt-O-ADP	
	4204.19	194.54	4073.66	4009.65	32.82	OSF1.50	3640.00	3594.32				MINPT-O-EOU	
	4204.66	195.04	4073.80	4009.62	32.74	OSF1.50	3650.00	3603.98				MinPt-O-ADP	
	4272.55	245.18	4108.26	4027.37	26.39	OSF1.50	4500.00	4425.02				MinPts	
	4409.68	1340.03	3515.50	3069.65	4.94	OSF1.50	5790.00	5671.06	OSF<5.00			Enter Alert	
	4454.64	2235.87	2963.23	2218.78	2.99	OSF1.50	6180.00	6047.77				MinPts	
	5849.97	1757.20	4677.67	4092.77	5.00	OSF1.50	10050.00	9904.77	OSF>5.00			Exit Alert	
	6096.45	787.49	5570.62	5308.96	11.64	OSF1.50	14610.00	11930.00				MinPt-O-ADP	
	5951.09	613.29	5541.40	5337.80	14.61	OSF1.50	15400.00	11930.00				MINPT-O-EOU	
	5908.17	533.68	5551.55	5374.49	16.68	OSF1.50	16110.00	11930.00				MinPt-CtCt	
	6053.09	684.64	5595.83	5368.45	13.30	OSF1.50	17430.00	11930.00				MinPt-O-ADP	
	6755.72	1149.24	5988.73	5606.49	8.83	OSF1.50	19389.58	11930.00				MinPt-O-SF	
30-025-29495 - James Federal 2 - Blind+INC Only to 8151ft - A (Def Survey)													Warning Alert
	4652.89	32.81	4650.39	4620.08	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4652.65	32.81	4650.11	4619.84	125409.57	MAS = 10.00 (m)	23.00	23.00				WRP	
	4652.49	32.81	4637.67	4619.68	377.45	MAS = 10.00 (m)	1800.00	1800.00				MinPts	
	4652.64	32.81	4637.55	4619.83	369.14	MAS = 10.00 (m)	1840.00	1840.00				MINPT-O-EOU	
	5024.12	1510.25	4016.45	3513.86	5.00	OSF1.50	4610.00	4531.27	OSF<5.00			Enter Alert	
	5114.79	2532.37	3425.71	2582.41	3.03	OSF1.50	5160.00	5062.53				MinPts	
	5376.30	2535.81	3684.93	2840.49	3.18	OSF1.50	7360.00	7214.77				MinPt-CtCt	
	5376.33	2535.90	3684.90	2840.44	3.18	OSF1.50	7400.00	7254.77				MINPT-O-EOU	
	5376.35	2535.92	3684.90	2840.43	3.18	OSF1.50	7410.00	7264.77				MinPt-O-ADP	
	5376.50	2536.02	3684.98	2840.48	3.18	OSF1.50	7460.00	7314.77				MinPt-O-SF	
	5382.88	2537.63	3690.30	2845.25	3.18	OSF1.50	8140.00	7994.77				MinPt-O-SF	
	5378.67	2538.90	3685.23	2839.77	3.18	OSF1.50	8360.00	8214.77				MinPts	
	5247.42	1794.78	4050.07	3452.64	4.39	OSF1.50	14190.00	11930.00				MinPt-O-SF	
	4846.87	1634.81	3756.16	3212.06	4.45	OSF1.50	16200.00	11930.00				MinPt-CtCt	
	4846.88	1634.83	3756.16	3212.05	4.45	OSF1.50	16210.00	11930.00				MINPT-O-EOU	
	4846.91	1634.86	3756.17	3212.05	4.45	OSF1.50	16220.00	11930.00				MinPt-O-ADP	
	5258.38	1803.63	4055.12	3454.75	4.38	OSF1.50	18240.00	11930.00				MinPt-O-SF	
	5801.77	1957.58	4495.88	3844.19	4.45	OSF1.50	19389.58	11930.00				TD	
30-025-36028 - James Federal 7 - INC Only to 8603ft - A (Def Survey)													Pass
	451.44	32.81	448.94	418.63	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	451.43	32.81	448.80	418.62	3687.45	MAS = 10.00 (m)	10.00	10.00				MinPts	
	451.44	32.81	448.55	418.63	1164.35	MAS = 10.00 (m)	23.00	23.00				WRP	
	449.93	56.59	411.37	393.34	12.41	OSF1.50	1100.00	1100.00				MinPt-CtCt	
	462.05	101.44	393.59	360.61	6.97	OSF1.50	1920.00	1919.96				MINPT-O-EOU	
	464.89	104.92	394.11	359.97	6.77	OSF1.50	1990.00	1989.86				MinPt-O-ADP	
	528.81	131.39	440.39	397.42	6.13	OSF1.50	2520.00	2512.44				MinPt-O-SF	
	1056.79	242.77	894.11	814.02	6.58	OSF1.50	4630.00	4550.59				MinPt-O-SF	
	1572.05	433.84	1281.99	1138.21	5.46	OSF1.50	8380.00	8234.77				MinPt-CtCt	
	1577.75	454.04	1274.23	1123.71	5.23	OSF1.50	8780.00	8634.77				MinPts	
	4589.75	337.67	4363.80	4252.08	20.53	OSF1.50	15050.00	11930.00				MinPt-O-SF	
	8002.23	436.79	7710.20	7565.44	27.63	OSF1.50	19389.58	11930.00				TD	
30-025-41362 - James Federal 21H ST01 - MWD to 13935ft - A (Def Survey)													Pass
	541.01	32.81	538.51	508.20	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	540.69	32.81	538.15	507.88	12285.18	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	540.56	32.81	538.05	507.75	36837.86	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	
	540.56	32.81	538.06	507.75	151857.64	MAS = 10.00 (m)	23.00	23.00				WRP	
	540.56	32.81	537.97	507.75	6133.47	MAS = 10.00 (m)	40.00	40.00				MinPts	
	544.52	32.81	534.03	511.71	67.87	MAS = 10.00 (m)	850.00	850.00				MINPT-O-EOU	
	546.83	32.81	533.85	514.03	51.91	MAS = 10.00 (m)	1100.00	1100.00				MINPT-O-EOU	
	678.92	41.39	650.49	637.53	26.09	OSF1.50	2660.00	2647.71				MinPt-O-SF	
	729.89	44.34	699.50	685.55	26.08	OSF1.50	2860.00	2840.90				MinPt-O-SF	
	1111.83	65.42	1067.39	1046.41	26.45	OSF1.50	4270.00	4202.85				MinPt-O-SF	
	1241.22	72.81	1191.85	1168.41	26.43	OSF1.50	4750.00	4666.50				MinPt-O-SF	
	1655.94	131.39	1567.52	1524.55	19.24	OSF1.50	8760.00	8614.77				MinPt-O-SF	
	1473.55	144.25	1376.55	1329.30	15.57	OSF1.50	9540.00	9394.77				MinPts	
	1473.94	144.33	1376.89	1329.62	15.56	OSF1.50	9570.00	9424.77				MinPt-O-SF	
	2866.18	112.62	2790.27	2753.56	39.01	OSF1.50	12680.00	11930.00				MinPt-CtCt	
	2866.36	113.10	2790.13	2753.26	38.84	OSF1.50	12730.00	11930.00				MINPT-O-EOU	
	2866.61	113.41	2790.17	2753.21	38.74	OSF1.50	12760.00	11930.00				MinPt-O-ADP	
	2869.97	116.72	2791.32	2753.25	37.66	OSF1.50	13000.00	11930.00				MinPt-O-ADP	
	2884.99	133.66	2795.05	2751.33	32.97	OSF1.50	13830.00	11930.00				MinPt-CtCt	
	2886.08	137.36	2793.67	2748.72	32.07	OSF1.50	14010.00	11930.00				MINPT-O-EOU	
	2861.80	171.21	2746.82	2690.59	25.42	OSF1.50	15200.00	11930.00				MinPt-CtCt	
	2862.21	172.36	2746.48	2689.86	25.25	OSF1.50	15260.00	11930.00				MINPT-O-EOU	
	2862.71	172.93	2746.59	2689.78	25.17	OSF1.50	15290.00	11930.00				MinPt-O-ADP	
	2866.77	179.45	2746.31	2687.32	24.28	OSF1.50	15500.00	11930.00				MINPT-O-EOU	
	2868.21	181.15	2746.61	2687.06	24.06	OSF1.50	15570.00	11930.00				MinPt-O-ADP	
	2865.59	194.96	2734.79	2670.63	22.31	OSF1.50	15960.00	11930.00				MinPt-CtCt	
	2866.72	197.79	2734.03	2668.93	22.00	OSF1.50	16080.00	11930.00				MINPT-O-EOU	
	2868.47	199.87	2734.39	2668.60	21.78	OSF1.50	16160.00	11930.00				MinPt-O-ADP	
	2870.45	204.02	2733.60	2666.43	21.35	OSF1.50	16270.00	11930.00				MINPT-O-EOU	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	2872.17	206.09	2733.95	2666.09	21.14	OSF1.50	16350.00	11930.00				MinPt-O-ADP	
	2875.18	213.24	2732.19	2661.94	20.45	OSF1.50	16550.00	11930.00				MinPts	
	2900.88	217.06	2755.34	2683.82	20.26	OSF1.50	16890.00	11930.00				MinPt-O-SF	
	4074.79	221.28	3926.44	3853.51	27.92	OSF1.50	19389.58	11930.00				TD	
30-025-41852 - James 29 Federal 38H ST01 - MWD to 13640ft - A (Def Survey)													Pass
	821.22	32.81	818.72	788.41	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	821.01	32.81	818.48	788.20	28370.45	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	820.92	32.81	818.41	788.12	85093.65	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	
	820.92	32.81	818.42	788.11	230985.13	MAS = 10.00 (m)	23.00	23.00				WRP	
	820.80	32.81	817.84	787.99	1786.64	MAS = 10.00 (m)	90.00	90.00				MinPts	
	820.66	32.81	815.84	787.85	353.06	MAS = 10.00 (m)	280.00	280.00				MinPts	
	820.61	32.81	814.79	787.80	246.66	MAS = 10.00 (m)	380.00	380.00				MinPts	
	820.68	32.81	814.06	787.87	198.67	MAS = 10.00 (m)	460.00	460.00				MinPts	
	826.48	32.81	808.29	793.67	52.53	MAS = 10.00 (m)	1620.00	1620.00				MINPT-O-EOU	
	828.26	32.81	808.27	795.45	47.21	MAS = 10.00 (m)	1800.00	1800.00				MINPT-O-EOU	
	2006.40	114.01	1929.56	1892.39	26.96	OSF1.50	7470.00	7324.77				MinPt-CtCt	
	2005.36	132.28	1916.34	1873.08	23.15	OSF1.50	8750.00	8604.77				MinPt-CtCt	
	2005.76	134.22	1915.45	1871.54	22.81	OSF1.50	8900.00	8754.77				MINPT-O-EOU	
	2005.85	134.32	1915.47	1871.53	22.80	OSF1.50	8910.00	8764.77				MinPt-O-ADP	
	2014.86	135.94	1923.41	1878.93	22.62	OSF1.50	9140.00	8994.77				MinPt-O-SF	
	2054.20	140.44	1959.74	1913.76	22.31	OSF1.50	9470.00	9324.77				MinPts	
	2056.16	140.65	1961.56	1915.51	22.30	OSF1.50	9500.00	9354.77				MinPt-O-SF	
	3240.78	123.85	3157.38	3116.93	40.03	OSF1.50	12650.00	11930.00				MinPt-CtCt	
	3240.54	126.29	3155.52	3114.25	39.24	OSF1.50	12830.00	11930.00				MinPt-CtCt	
	3240.65	126.56	3155.44	3114.08	39.15	OSF1.50	12860.00	11930.00				MINPT-O-EOU	
	3240.73	126.66	3155.46	3114.07	39.12	OSF1.50	12870.00	11930.00				MinPt-O-ADP	
	3247.69	129.69	3160.40	3118.00	38.27	OSF1.50	13090.00	11930.00				MinPts	
	3223.51	176.06	3105.30	3047.45	27.84	OSF1.50	14860.00	11930.00				MinPt-CtCt	
	3224.06	180.41	3102.95	3043.65	27.16	OSF1.50	15000.00	11930.00				MinPt-CtCt	
	3224.64	182.12	3102.39	3042.52	26.91	OSF1.50	15080.00	11930.00				MINPT-O-EOU	
	3225.35	182.98	3102.52	3042.36	26.79	OSF1.50	15120.00	11930.00				MinPt-O-ADP	
	3219.57	210.17	3078.63	3009.40	23.24	OSF1.50	15870.00	11930.00				MinPt-CtCt	
	3220.14	211.94	3078.01	3008.20	23.04	OSF1.50	15950.00	11930.00				MINPT-O-EOU	
	3220.88	212.82	3078.17	3008.06	22.95	OSF1.50	15990.00	11930.00				MinPt-O-ADP	
	3289.20	229.39	3135.44	3059.81	21.73	OSF1.50	16740.00	11930.00				MinPt-O-SF	
	4527.42	233.53	4370.90	4293.89	29.38	OSF1.50	19389.58	11930.00				TD	
30-025-35888 - James Federal 6 - INC Only to 8700ft - A (Def Survey)													Pass
	1652.45	32.81	1649.95	1619.64	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1652.32	32.81	1649.80	1619.51	86315.17	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	1652.25	32.81	1649.74	1619.44	200133.01	MAS = 10.00 (m)	23.00	23.00				WRP	
	1652.24	32.81	1649.66	1619.44	19216.83	MAS = 10.00 (m)	30.00	30.00				MinPts	
	1647.19	71.35	1598.80	1575.85	35.83	OSF1.50	1420.00	1420.00				MinPt-CtCt	
	1652.82	97.16	1587.21	1555.65	26.15	OSF1.50	1930.00	1929.96				MINPT-O-EOU	
	1663.39	110.05	1589.19	1553.35	23.17	OSF1.50	2170.00	2168.97				MinPt-O-ADP	
	2321.89	401.79	2053.20	1920.10	8.71	OSF1.50	7800.00	7654.77				MinPt-CtCt	
	2330.82	457.82	2024.77	1873.00	7.67	OSF1.50	8870.00	8724.77				MinPts	
	2330.84	457.83	2024.79	1873.01	7.67	OSF1.50	8880.00	8734.77				MinPt-O-SF	
	3539.71	225.07	3388.83	3314.64	23.84	OSF1.50	13590.00	11930.00				MinPt-CtCt	
	3539.75	225.19	3388.79	3314.56	23.83	OSF1.50	13610.00	11930.00				MINPT-O-EOU	
	3539.81	225.26	3388.80	3314.55	23.82	OSF1.50	13620.00	11930.00				MinPt-O-ADP	
	4401.59	342.12	4172.68	4059.47	19.43	OSF1.50	16210.00	11930.00				MinPt-O-SF	
	6791.21	428.81	6504.50	6362.40	23.89	OSF1.50	19389.58	11930.00				TD	
30-025-36773 - James Federal 11 - INC Only to 8639ft - A (Def Survey)													Pass
	1887.81	32.81	1885.31	1855.01	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1887.76	32.81	1884.97	1854.96	6369.64	MAS = 10.00 (m)	23.00	23.00				WRP	
	1885.44	32.81	1871.10	1852.64	158.96	MAS = 10.00 (m)	350.00	350.00				MinPts	
	1733.53	254.13	1563.27	1479.40	10.32	OSF1.50	4870.00	4782.41				MinPt-CtCt	
	1738.38	268.98	1558.23	1469.40	9.77	OSF1.50	5160.00	5062.53				MINPT-O-EOU	
	1746.44	280.55	1558.57	1465.89	9.41	OSF1.50	5370.00	5265.37				MINPT-O-EOU	
	1771.84	322.99	1555.68	1448.85	8.28	OSF1.50	6180.00	6047.77				MINPT-O-EOU	
	1796.59	432.08	1507.70	1364.50	6.26	OSF1.50	8290.00	8144.77				MinPt-CtCt	
	1804.52	456.14	1499.59	1348.38	5.96	OSF1.50	8790.00	8644.77				MINPT-O-EOU	
	1805.39	459.75	1498.06	1345.65	5.91	OSF1.50	8820.00	8674.77				MinPts	
	3285.51	125.61	3200.94	3159.90	40.00	OSF1.50	13610.00	11930.00				MinPt-CtCt	
	3285.59	125.82	3200.88	3159.77	39.93	OSF1.50	13630.00	11930.00				MINPT-O-EOU	
	3285.94	126.24	3200.95	3159.70	39.80	OSF1.50	13660.00	11930.00				MinPt-O-ADP	
	4464.86	340.46	4237.06	4124.40	19.81	OSF1.50	16630.00	11930.00				MinPt-O-SF	
	6651.04	423.16	6368.10	6227.88	23.71	OSF1.50	19389.58	11930.00				TD	
30-025-37778 - James Federal 12 - INC Only to 8865ft - A (Def Survey)													Pass
	1825.33	32.81	1822.83	1792.52	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1825.22	32.81	1822.71	1792.41	120388.07	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	1825.17	32.81	1822.66	1792.36	210667.72	MAS = 10.00 (m)	20.00	20.00				MINPT-O-EOU	
	1825.17	32.81	1822.67	1792.36	732754.00	MAS = 10.00 (m)	23.00	23.00				MinPts	
	1826.14	64.80	1782.11	1761.34	43.91	OSF1.50	1320.00	1320.00				MinPt-CtCt	
	1829.10	94.80	1765.06	1734.30	29.69	OSF1.50	1890.00	1889.99				MINPT-O-EOU	
	1831.76	97.99	1765.60	1733.77	28.74	OSF1.50	1950.00	1949.93				MinPt-O-ADP	
	2994.12	363.01	2751.28	2631.10	12.45	OSF1.50	7100.00	6954.77				MinPt-CtCt	
	2988.11	445.83	2690.06	2542.28	10.10	OSF1.50	8650.00	8504.77				MinPt-CtCt	
	2993.29	465.74	2681.96	2527.55	9.68	OSF1.50	9060.00	8914.77				MinPts	
	4363.67	348.52	4130.49	4015.15	18.91	OSF1.50	13260.00	11930.00				MinPt-O-SF	
	8306.95	455.88	8002.19	7851.07	27.47	OSF1.50	19389.58	11930.00				TD	
30-025-46023 - Alley Cat 17-20 Fed Com 524H - MWD to 19813ft - A (Def Survey)													Pass
	9394.78	257.90	9222.01	9136.88	55.16	OSF1.50	0.00	0.00				Surface	
	9371.87	258.00	9199.04	9113.87	55.01	OSF1.50	23.00	23.00				WRP	
	1847.72	546.70	1482.43	1301.03	5.09	OSF1.50	9500.00	9354.77				MinPt-CtCt	
	1847.74	546.76	1482.39	1300.97	5.09	OSF1.50	9510.00	9364.77				MinPts	
	1847.92	546.86	1482.51	1301.06	5.09	OSF1.50	9530.00	9384.77				MinPt-O-SF	
	8525.37	254.92	8354.59	8270.44	50.65	OSF1.50	19389.58	11930.00				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		
Cimarex James Federal 20H ST01 MWD 8951ft to 14067ft (Def Survey)													Pass
	1911.80	32.81	1909.30	1878.99	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1911.80	32.81	1909.30	1878.99	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	1910.43	32.81	1903.63	1877.62	443.86	MAS = 10.00 (m)	490.00	490.00				MinPts	
	1911.38	32.81	1902.31	1878.57	290.82	MAS = 10.00 (m)	730.00	730.00				MINPT-O-EOU	
	3185.07	108.46	3111.93	3076.61	45.05	OSF1.50	7160.00	7014.77				MinPt-O-ADP	
	3194.32	112.71	3118.35	3081.61	43.44	OSF1.50	7480.00	7334.77				MinPt-O-ADP	
	3195.64	113.84	3118.91	3081.80	43.02	OSF1.50	7540.00	7394.77				MinPt-O-ADP	
	2868.87	148.52	2769.02	2720.35	29.45	OSF1.50	9570.00	9424.77				MinPt-CtCt	
	2868.89	148.56	2769.01	2720.33	29.44	OSF1.50	9580.00	9434.77				MinPts	
	2873.43	149.14	2773.17	2724.29	29.37	OSF1.50	9730.00	9584.77				MinPt-O-SF	
	3709.09	140.25	3614.75	3568.84	40.36	OSF1.50	12970.00	11930.00				MinPt-CtCt	
	3709.71	141.97	3614.22	3567.73	39.87	OSF1.50	13090.00	11930.00				MINPT-O-EOU	
	3713.93	154.60	3610.03	3559.33	36.60	OSF1.50	13620.00	11930.00				MinPt-CtCt	
	3716.20	162.74	3606.88	3553.46	34.76	OSF1.50	13970.00	11930.00				MINPT-O-EOU	
	3719.70	166.81	3607.65	3552.88	33.93	OSF1.50	14140.00	11930.00				MinPt-O-ADP	
	3727.00	174.36	3609.93	3552.65	32.51	OSF1.50	14400.00	11930.00				MinPt-O-ADP	
	3737.74	183.68	3614.45	3554.06	30.92	OSF1.50	14680.00	11930.00				MINPT-O-EOU	
	3743.28	192.20	3614.32	3551.09	29.58	OSF1.50	14920.00	11930.00				MINPT-O-EOU	
	3723.73	238.26	3564.06	3485.47	23.68	OSF1.50	16120.00	11930.00				MinPt-CtCt	
	3726.03	245.04	3561.83	3480.98	23.03	OSF1.50	16350.00	11930.00				MINPT-O-EOU	
	3728.95	248.58	3562.40	3480.37	22.72	OSF1.50	16470.00	11930.00				MinPt-O-ADP	
	3730.69	254.29	3560.33	3476.40	22.21	OSF1.50	16570.00	11930.00				MinPts	
	3746.24	256.40	3574.47	3489.83	22.12	OSF1.50	16860.00	11930.00				MinPt-O-SF	
	4709.62	252.30	4540.59	4457.32	28.27	OSF1.50	19389.58	11930.00				TD	
Cimarex James Federal 20H MWD 0ft to 12150ft (Def Survey)													Pass
	1911.80	32.81	1909.30	1878.99	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	1911.80	32.81	1909.30	1878.99	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	1910.43	32.81	1903.63	1877.62	443.86	MAS = 10.00 (m)	490.00	490.00				MinPts	
	1911.38	32.81	1902.31	1878.57	290.82	MAS = 10.00 (m)	730.00	730.00				MINPT-O-EOU	
	3185.07	108.46	3111.93	3076.61	45.05	OSF1.50	7160.00	7014.77				MinPt-O-ADP	
	3194.32	112.71	3118.35	3081.61	43.44	OSF1.50	7480.00	7334.77				MinPt-O-ADP	
	3195.64	113.84	3118.91	3081.80	43.02	OSF1.50	7540.00	7394.77				MinPt-O-ADP	
	3217.43	128.85	3130.70	3088.59	38.17	OSF1.50	8570.00	8424.77				MinPt-O-ADP	
	3221.83	132.81	3132.46	3089.02	37.06	OSF1.50	8840.00	8694.77				MINPT-O-EOU	
	3222.15	133.17	3132.53	3088.97	36.96	OSF1.50	8870.00	8724.77				MinPt-O-ADP	
	3224.24	137.70	3131.61	3086.54	35.74	OSF1.50	9160.00	9014.77				MinPt-CtCt	
	3224.57	139.94	3130.44	3084.63	35.17	OSF1.50	9330.00	9184.77				MINPT-O-EOU	
	3224.82	140.26	3130.48	3084.56	35.09	OSF1.50	9360.00	9214.77				MinPt-O-ADP	
	3238.81	149.36	3138.40	3089.45	33.06	OSF1.50	9990.00	9844.77				MinPt-O-ADP	
	3252.82	157.64	3146.89	3095.18	31.43	OSF1.50	10560.00	10414.77				MinPt-O-ADP	
	3253.56	168.30	3140.52	3085.25	29.41	OSF1.50	11260.00	11114.77				MinPt-CtCt	
	3255.65	173.15	3139.38	3082.50	28.59	OSF1.50	11750.00	11595.18				MINPT-O-EOU	
	3255.76	173.29	3139.40	3082.47	28.57	OSF1.50	11770.00	11612.88				MinPt-O-ADP	
	3275.48	175.85	3157.41	3099.63	28.32	OSF1.50	12200.00	11881.58				MinPt-O-SF	
	8193.80	203.38	8057.38	7990.42	61.16	OSF1.50	19389.58	11930.00				TD	
30-025-45067 - Alley Cat 17-20 FEDERAL COM 216H - MWD to 21324ft - A (Def Survey)													Pass
	10620.76	266.92	10442.30	10353.84	60.02	OSF1.50	0.00	0.00				Surface	
	10597.84	267.02	10419.32	10330.83	59.87	OSF1.50	23.00	23.00				WRP	
	1933.97	501.34	1599.23	1432.63	5.80	OSF1.50	10730.00	10584.77				MinPts	
	1933.99	501.38	1599.23	1432.61	5.80	OSF1.50	10740.00	10594.77				MinPt-O-ADP	
	1934.07	501.41	1599.29	1432.66	5.80	OSF1.50	10750.00	10604.77				MinPt-O-SF	
	8184.11	235.97	8026.28	7948.14	52.36	OSF1.50	19389.58	11930.00				TD	
30-025-38447 - Lonecat Federal 001 - INC Only to 8870ft - A (Def Survey)													Pass
	2085.56	32.81	2083.06	2052.75	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2085.47	32.81	2082.88	2052.66	22908.72	MAS = 10.00 (m)	23.00	23.00				WRP	
	2082.78	32.81	2068.48	2049.97	176.28	MAS = 10.00 (m)	420.00	420.00				MinPts	
	2084.69	54.37	2047.61	2030.32	60.21	OSF1.50	1080.00	1080.00				MinPt-CtCt	
	2088.02	95.08	2023.80	1992.95	33.79	OSF1.50	1830.00	1830.00				MinPt-CtCt	
	2090.99	104.42	2020.55	1986.57	30.74	OSF1.50	1990.00	1989.86				MINPT-O-EOU	
	2093.20	107.03	2021.01	1986.17	30.00	OSF1.50	2040.00	2039.72				MinPt-O-ADP	
	2653.31	249.59	2486.09	2403.72	16.09	OSF1.50	4770.00	4685.82				MinPts	
	3096.37	411.59	2821.14	2684.78	11.34	OSF1.50	7930.00	7784.77				MinPt-CtCt	
	3095.24	469.79	2781.22	2625.45	9.93	OSF1.50	9030.00	8884.77				MinPt-CtCt	
	3095.25	469.97	2781.11	2625.29	9.92	OSF1.50	9040.00	8894.77				MinPts	
	3095.29	469.98	2781.14	2625.31	9.92	OSF1.50	9050.00	8904.77				MinPt-O-SF	
	9455.40	464.55	9144.87	8990.85	30.69	OSF1.50	19389.58	11930.00				TD	
30-025-36721 - James Federal 5 - INC Only to 8664ft - A (Def Survey)													Pass
	2165.44	32.81	2163.79	2132.64	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2165.07	32.81	2163.37	2132.26	42988.06	MAS = 10.00 (m)	23.00	23.00				MinPt-O-SF	
	2163.03	32.81	2153.32	2130.23	267.99	MAS = 10.00 (m)	310.00	310.00				MinPts	
	2159.97	71.00	2112.09	2088.98	46.69	OSF1.50	1410.00	1410.00				MinPt-CtCt	
	2165.02	94.46	2101.50	2070.56	34.96	OSF1.50	1880.00	1879.99				MINPT-O-EOU	
	2167.63	97.56	2102.04	2070.07	33.88	OSF1.50	1940.00	1939.94				MinPt-O-ADP	
	3155.09	388.03	2895.85	2767.06	12.24	OSF1.50	7550.00	7404.77				MinPt-CtCt	
	3158.65	456.54	2853.73	2702.10	10.41	OSF1.50	8850.00	8704.77				MinPt-CtCt	
	3158.65	456.67	2853.65	2701.98	10.41	OSF1.50	8860.00	8714.77				MinPts	
	3158.68	456.68	2853.68	2702.00	10.41	OSF1.50	8870.00	8724.77				MinPt-O-SF	
	4155.66	306.31	3950.91	3849.35	20.45	OSF1.50	13570.00	11930.00				MinPt-CtCt	
	4155.69	306.35	3950.90	3849.34	20.45	OSF1.50	13580.00	11930.00				MinPts	
	4554.72	346.34	4323.28	4208.39	19.81	OSF1.50	15430.00	11930.00				MinPt-O-SF	
	7154.60	434.58	6864.33	6720.02	24.78	OSF1.50	19389.58	11930.00				TD	
Cimarex James 29 Federal 36H MWD to 13872ft (Def Survey)													Pass
	2339.07	32.81	2336.57	2306.26	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2339.05	32.81	2336.55	2306.24	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	2339.05	32.81	2336.55	2306.24	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	2338.19	32.81	2332.86	2305.39	823.57	MAS = 10.00 (m)	340.00	340.00				MinPts	
	2337.90	32.81	2329.97	2305.09	430.00	MAS = 10.00 (m)	600.00	600.00				MinPts	
	2337.90	32.81	2327.57	2305.09	298.30	MAS = 10.00 (m)	840.00	840.00				MinPts	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	2338.94	32.81	2321.81	2306.13	159.69	MAS = 10.00 (m)	1520.00	1520.00				MinPts	
	2339.83	32.81	2319.62	2307.03	131.93	MAS = 10.00 (m)	1830.00	1830.00				MINPT-O-EOU	
	3467.81	124.66	3383.87	3343.15	42.55	OSF1.50	8270.00	8124.77				MinPt-CtCt	
	3467.16	134.68	3376.56	3332.50	39.32	OSF1.50	8960.00	8814.77				MinPt-CtCt	
	3467.57	135.63	3376.32	3331.94	39.04	OSF1.50	9040.00	8894.77				MinPts	
	3486.86	137.58	3394.30	3349.28	38.69	OSF1.50	9440.00	9294.77				MinPt-O-SF	
	4385.47	134.62	4294.89	4250.85	49.76	OSF1.50	12230.00	11890.24				MinPt-O-SF	
	4410.68	137.18	4318.40	4273.50	49.10	OSF1.50	12610.00	11930.00				MinPt-O-ADP	
	4390.22	158.65	4283.62	4231.57	42.15	OSF1.50	13800.00	11930.00				MinPt-CtCt	
	4391.90	165.43	4280.78	4226.47	40.41	OSF1.50	14100.00	11930.00				MINPT-O-EOU	
	4392.82	166.53	4280.96	4226.29	40.15	OSF1.50	14160.00	11930.00				MinPt-O-ADP	
	4394.76	169.30	4281.06	4225.46	39.50	OSF1.50	14260.00	11930.00				MINPT-O-EOU	
	4397.16	172.32	4281.44	4224.83	38.82	OSF1.50	14380.00	11930.00				MinPt-O-ADP	
	4370.63	210.35	4229.56	4160.28	31.52	OSF1.50	15530.00	11930.00				MinPt-CtCt	
	4371.45	212.97	4228.64	4158.48	31.14	OSF1.50	15650.00	11930.00				MINPT-O-EOU	
	4376.75	219.21	4229.78	4157.55	30.28	OSF1.50	15880.00	11930.00				MinPt-O-ADP	
	4477.36	251.49	4308.86	4225.86	26.96	OSF1.50	17220.00	11930.00				MinPt-O-SF	
	5275.56	258.36	5102.48	5017.20	30.91	OSF1.50	19389.58	11930.00				TD	
Coterra James 20-29 Federal Com 41H Rev0 kFc 08Sep22 (Def Plan)													Pass
	6142.57	32.81	6140.07	6109.76	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6142.56	32.81	6140.06	6109.75	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	2762.48	201.88	2627.06	2560.60	20.76	OSF1.50	10730.00	10584.77				MinPt-CtCt	
	2762.48	201.89	2627.06	2560.59	20.76	OSF1.50	10740.00	10594.77				MinPts	
	2762.71	201.92	2627.27	2560.79	20.76	OSF1.50	10770.00	10624.77				MinPt-O-SF	
	3073.97	301.86	2871.90	2772.11	15.39	OSF1.50	16780.00	11930.00				MINPT-O-EOU	
	3074.08	301.97	2871.93	2772.10	15.38	OSF1.50	16790.00	11930.00				MinPt-O-ADP	
	3083.74	303.97	2880.26	2779.76	15.33	OSF1.50	17000.00	11930.00				MinPt-O-SF	
	4049.45	288.32	3856.41	3761.14	21.24	OSF1.50	19389.58	11930.00				TD	
30-025-45603 - James 20-29 Federal Com 38H - Corrected MWD to 22061 ft - A (Def Survey)													Pass
	6138.13	32.81	6135.63	6105.32	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6138.12	32.81	6135.62	6105.32	N/A	MAS = 10.00 (m)	10.00	10.00				MinPts	
	6138.13	32.81	6135.62	6105.32	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	6087.37	40.63	6059.45	6046.73	239.35	OSF1.50	2410.00	2405.40				MinPt-CtCt	
	6087.78	41.84	6059.06	6045.94	232.00	OSF1.50	2490.00	2483.35				MINPT-O-EOU	
	6088.17	42.28	6059.15	6045.89	229.50	OSF1.50	2520.00	2512.44				MinPt-O-ADP	
	6121.79	58.56	6081.92	6063.23	163.74	OSF1.50	3490.00	3449.43				MinPts	
	6126.37	61.38	6084.62	6064.99	156.02	OSF1.50	3640.00	3594.32				MINPT-O-EOU	
	6126.59	61.69	6084.64	6064.91	155.20	OSF1.50	3650.00	3603.98				MinPt-O-ADP	
	6123.33	69.33	6076.28	6054.01	137.39	OSF1.50	4010.00	3951.71				MinPt-CtCt	
	6123.69	70.36	6075.95	6053.33	135.30	OSF1.50	4090.00	4028.99				MINPT-O-EOU	
	6124.02	70.75	6076.02	6053.27	134.54	OSF1.50	4120.00	4057.96				MinPt-O-ADP	
	6139.63	79.06	6086.08	6060.56	120.23	OSF1.50	4590.00	4511.95				MINPT-O-EOU	
	6140.20	79.93	6086.09	6060.27	118.91	OSF1.50	4620.00	4540.93				MINPT-O-EOU	
	6141.99	81.96	6086.51	6060.02	115.89	OSF1.50	4730.00	4647.18				MinPt-O-ADP	
	6154.30	89.51	6093.79	6064.79	106.05	OSF1.50	5130.00	5033.55				MinPts	
	2928.36	222.35	2779.29	2706.00	19.96	OSF1.50	12390.00	11921.12				MinPt-CtCt	
	2928.50	224.89	2777.74	2703.61	19.74	OSF1.50	12560.00	11930.00				MinPt-CtCt	
	2927.13	231.14	2772.20	2695.99	19.19	OSF1.50	12940.00	11930.00				MinPt-CtCt	
	2923.61	247.94	2757.48	2675.67	17.85	OSF1.50	13860.00	11930.00				MinPt-CtCt	
	2923.87	248.82	2757.15	2675.04	17.79	OSF1.50	13930.00	11930.00				MINPT-O-EOU	
	2924.49	252.05	2755.62	2672.44	17.56	OSF1.50	14070.00	11930.00				MinPt-CtCt	
	2925.19	259.73	2751.20	2665.45	17.04	OSF1.50	14440.00	11930.00				MinPt-CtCt	
	2923.85	271.42	2742.09	2652.45	16.29	OSF1.50	14980.00	11930.00				MinPt-CtCt	
	2923.88	277.68	2737.93	2646.21	15.92	OSF1.50	15260.00	11930.00				MinPt-CtCt	
	2924.95	282.11	2736.04	2642.84	15.68	OSF1.50	15480.00	11930.00				MINPT-O-EOU	
	2925.45	282.69	2736.15	2642.75	15.65	OSF1.50	15520.00	11930.00				MinPt-O-ADP	
	2934.62	296.08	2736.40	2638.54	14.98	OSF1.50	16040.00	11930.00				MinPt-CtCt	
	2932.91	301.36	2731.17	2631.56	14.71	OSF1.50	16260.00	11930.00				MinPt-CtCt	
	2936.52	312.61	2727.28	2623.91	14.19	OSF1.50	16730.00	11930.00				MINPT-O-EOU	
	2936.60	312.73	2727.28	2623.87	14.19	OSF1.50	16740.00	11930.00				MinPt-O-ADP	
	2937.26	312.84	2727.87	2624.42	14.18	OSF1.50	16780.00	11930.00				MinPt-O-SF	
	3974.39	278.12	3788.15	3696.27	21.62	OSF1.50	19389.58	11930.00				TD	
30-025-37786 - James 20 Federal 1 - INC Only to 8889ft - A (Def Survey)													Pass
	2979.07	32.81	2976.57	2946.26	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	2979.05	32.81	2976.54	2946.24	277543.79	MAS = 10.00 (m)	23.00	23.00				WRP	
	2976.55	32.81	2961.18	2943.74	231.07	MAS = 10.00 (m)	440.00	440.00				MinPts	
	2971.25	99.17	2904.31	2872.08	46.07	OSF1.50	1860.00	1860.00				MinPt-CtCt	
	2972.94	104.59	2902.38	2868.35	43.64	OSF1.50	1980.00	1979.88				MINPT-O-EOU	
	2975.46	107.62	2902.88	2867.84	42.42	OSF1.50	2050.00	2049.68				MinPt-O-ADP	
	3657.35	435.59	3366.12	3221.76	12.66	OSF1.50	8290.00	8144.77				MinPt-CtCt	
	3663.27	473.40	3346.84	3189.87	11.66	OSF1.50	9040.00	8894.77				MinPt-CtCt	
	3663.27	473.49	3346.78	3189.79	11.66	OSF1.50	9050.00	8904.77				MinPts	
	3663.31	473.49	3346.81	3189.81	11.66	OSF1.50	9060.00	8914.77				MinPt-O-SF	
	10634.51	470.27	10320.17	10164.24	34.09	OSF1.50	19389.58	11930.00				TD	
30-025-36031 - James Federal 9 - INC Only to 8657ft - A (Def Survey)													Pass
	3004.60	32.81	3002.10	2971.79	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3004.55	32.81	3002.04	2971.74	415412.24	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	3004.53	32.81	3001.99	2971.72	79630.39	MAS = 10.00 (m)	23.00	23.00				WRP	
	3004.32	32.81	2997.15	2971.51	642.74	MAS = 10.00 (m)	240.00	240.00				MinPts	
	3004.22	35.92	2979.44	2968.31	134.74	OSF1.50	740.00	740.00				MinPt-CtCt	
	2995.41	139.71	2901.44	2855.70	32.72	OSF1.50	2740.00	2724.99				MinPt-CtCt	
	3004.63	192.38	2875.54	2812.25	23.72	OSF1.50	3690.00	3642.62				MinPt-CtCt	
	3012.32	217.53	2866.47	2794.79	21.00	OSF1.50	4230.00	4164.22				MINPT-O-EOU	
	3020.21	226.91	2868.10	2793.30	20.17	OSF1.50	4440.00	4367.06				MinPt-O-ADP	
	3032.37	250.67	2864.42	2781.70	18.31	OSF1.50	4790.00	4705.13				MINPT-O-EOU	
	3033.46	252.01	2864.62	2781.44	18.22	OSF1.50	4840.00	4753.43				MinPt-O-ADP	
	3054.63	275.43	2870.18	2779.20	16.77	OSF1.50	5270.00	5168.78				MINPT-O-EOU	
	3064.09	286.80	2872.06	2777.29	16.15	OSF1.50	5520.00	5410.26				MinPt-O-ADP	
	3138.55	392.79	2875.86	2745.76	12.05	OSF1.50	7570.00	7424.77				MinPt-CtCt	
	3141.83	458.45	2835.36	2683.38	10.33	OSF1.50	8820.00	8674.77				MinPt-CtCt	
	3141.84	458.51	2835.33	2683.33	10.33	OSF1.50	8830.00	8684.77				MinPts	
	3141.88	458.52	2835.37	2683.36	10.33	OSF1.50	8840.00	8694.77				MinPt-O-SF	
	3291.00	150.57	3189.79	3140.44	33.31	OSF1.50	14910.00	11930.00				MinPt-CtCt	
	3291.20	151.19	3189.58	3140.01	33.18	OSF1.50	14950.00	11930.00				MINPT-O-EOU	

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)	Dev. (ft)	Fact.	Rule	MD (ft)	TVD (ft)	Alert	Minor	Major		
	3291.89	152.01	3189.72	3139.88	33.00	OSF1.50	14990.00	11930.00				MinPt-O-ADP	
	4370.98	342.77	4141.63	4028.21	19.26	OSF1.50	17790.00	11930.00				MinPt-O-SF	
	5555.78	402.05	5286.91	5153.73	20.85	OSF1.50	19389.58	11930.00				TD	
30-025-35843 - James Federal 4 - INC Only to 8632ft - A (Def Survey)													Pass
	3009.28	32.81	3007.63	2976.47	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3009.15	32.81	3007.48	2976.34	229241.93	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	3009.14	32.81	3007.48	2976.33	284770.98	MAS = 10.00 (m)	23.00	23.00				WRP	
	3009.00	32.81	3003.09	2976.20	704.87	MAS = 10.00 (m)	250.00	250.00				MinPts	
	3011.60	81.49	2956.72	2930.11	56.55	OSF1.50	1640.00	1640.00				MinPt-CtCt	
	3015.19	96.94	2950.01	2918.25	47.44	OSF1.50	1960.00	1959.92				MINPT-O-EOU	
	3018.92	101.43	2950.75	2917.50	45.36	OSF1.50	2050.00	2049.68				MinPt-O-ADP	
	3274.33	225.47	3123.47	3048.86	21.93	OSF1.50	4280.00	4212.51				MinPts	
	3293.06	228.02	3140.50	3065.04	21.81	OSF1.50	4440.00	4367.06				MinPt-O-SF	
	3317.73	238.91	3157.91	3078.83	20.97	OSF1.50	4600.00	4521.61				MinPts	
	3357.76	242.68	3195.43	3115.08	20.89	OSF1.50	4860.00	4772.75				MinPt-O-SF	
	3370.82	255.65	3199.84	3115.17	19.90	OSF1.50	4930.00	4840.36				MinPts	
	3643.54	383.43	3387.37	3260.11	14.31	OSF1.50	7450.00	7304.77				MinPt-CtCt	
	3647.92	454.98	3344.05	3192.94	12.06	OSF1.50	8810.00	8664.77				MinPts	
	3647.99	455.01	3344.10	3192.98	12.06	OSF1.50	8830.00	8684.77				MinPt-O-SF	
	3820.09	265.61	3642.47	3554.48	21.70	OSF1.50	14880.00	11930.00				MinPt-CtCt	
	3820.16	265.76	3642.43	3554.39	21.69	OSF1.50	14900.00	11930.00				MINPT-O-EOU	
	3820.23	265.85	3642.45	3554.38	21.68	OSF1.50	14910.00	11930.00				MinPt-O-ADP	
	4476.08	345.32	4245.32	4130.76	19.53	OSF1.50	17210.00	11930.00				MinPt-O-SF	
	5912.29	410.81	5637.86	5501.47	21.67	OSF1.50	19389.58	11930.00				TD	
30-025-35812 - James Federal 3 - INC Only to 8610ft - A (Def Survey)													Pass
	3254.21	32.81	3251.71	3221.40	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3254.18	32.81	3251.67	3221.37	765818.06	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	3254.17	32.81	3251.67	3221.36	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	3253.22	32.81	3242.67	3220.41	403.70	MAS = 10.00 (m)	340.00	340.00				MinPts	
	3252.20	94.19	3188.57	3158.01	53.16	OSF1.50	1840.00	1840.00				MinPt-CtCt	
	3254.43	101.08	3186.21	3153.35	49.48	OSF1.50	1980.00	1979.88				MINPT-O-EOU	
	3257.22	104.46	3186.74	3152.75	47.88	OSF1.50	2050.00	2049.68				MinPt-O-ADP	
	4031.34	396.04	3766.48	3635.30	15.36	OSF1.50	7670.00	7524.77				MinPt-CtCt	
	4041.06	453.09	3738.17	3587.97	13.44	OSF1.50	8770.00	8624.77				MinPt-CtCt	
	4041.07	453.12	3738.16	3587.95	13.44	OSF1.50	8780.00	8634.77				MinPts	
	4041.16	453.14	3738.23	3588.02	13.44	OSF1.50	8800.00	8654.77				MinPt-O-SF	
	4222.59	305.73	4017.93	3916.86	20.88	OSF1.50	14880.00	11930.00				MinPt-CtCt	
	4222.63	305.86	4017.89	3916.78	20.87	OSF1.50	14900.00	11930.00				MINPT-O-EOU	
	4222.69	305.93	4017.91	3916.77	20.86	OSF1.50	14910.00	11930.00				MinPt-O-ADP	
	4642.73	349.95	4408.59	4292.78	20.03	OSF1.50	16810.00	11930.00				MinPt-O-SF	
	6177.86	415.63	5899.95	5762.24	22.42	OSF1.50	19389.58	11930.00				TD	
Cimarex James 29 Federal 35H MWD to 13649ft (Def Survey)													Pass
	3448.60	32.81	3446.10	3415.80	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	3448.44	32.81	3445.91	3415.63	158424.12	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	3448.42	32.81	3445.90	3415.61	163588.68	MAS = 10.00 (m)	23.00	23.00				WRP	
	3442.11	32.81	3430.20	3409.30	365.56	MAS = 10.00 (m)	1010.00	1010.00				MinPts	
	3444.93	32.81	3425.23	3412.12	200.08	MAS = 10.00 (m)	1810.00	1810.00				MINPT-O-EOU	
	4437.78	134.82	4347.07	4302.96	50.28	OSF1.50	8960.00	8814.77				MinPt-CtCt	
	4437.97	135.45	4346.84	4302.52	50.04	OSF1.50	9020.00	8874.77				MINPT-O-EOU	
	4438.12	135.64	4346.86	4302.48	49.97	OSF1.50	9040.00	8894.77				MinPt-O-ADP	
	4446.04	138.82	4352.66	4307.22	48.89	OSF1.50	9320.00	9174.77				MinPts	
	4505.50	143.79	4408.81	4361.71	47.81	OSF1.50	9990.00	9844.77				MinPt-O-SF	
	5071.23	143.88	4974.48	4927.35	53.78	OSF1.50	11900.00	11718.85				MinPt-O-SF	
	5145.59	144.86	5048.18	5000.73	54.19	OSF1.50	12550.00	11930.00				MinPt-CtCt	
	5145.63	144.95	5048.17	5000.68	54.16	OSF1.50	12570.00	11930.00				MINPT-O-EOU	
	5145.68	145.00	5048.18	5000.68	54.14	OSF1.50	12580.00	11930.00				MinPt-O-ADP	
	5149.56	149.93	5048.79	4999.65	52.37	OSF1.50	12900.00	11930.00				MinPt-CtCt	
	5149.81	150.67	5048.53	4999.14	52.11	OSF1.50	12970.00	11930.00				MINPT-O-EOU	
	5150.17	151.10	5048.61	4999.07	51.96	OSF1.50	13010.00	11930.00				MinPt-O-ADP	
	5135.50	179.58	5014.95	4955.92	43.48	OSF1.50	14110.00	11930.00				MinPt-CtCt	
	5138.38	187.89	5012.29	4950.49	41.55	OSF1.50	14430.00	11930.00				MINPT-O-EOU	
	5143.40	203.78	5006.72	4939.62	38.31	OSF1.50	14830.00	11930.00				MinPt-CtCt	
	5097.00	242.32	4934.62	4854.68	31.86	OSF1.50	15830.00	11930.00				MinPt-CtCt	
	5098.27	246.11	4933.37	4852.16	31.38	OSF1.50	15990.00	11930.00				MINPT-O-EOU	
	5102.09	251.13	4933.83	4850.96	30.77	OSF1.50	16160.00	11930.00				MinPt-O-ADP	
	5170.55	274.77	4986.54	4895.78	28.47	OSF1.50	17130.00	11930.00				MinPt-O-SF	
	5885.66	278.20	5699.36	5607.46	32.01	OSF1.50	19389.58	11930.00				TD	
30-025-27136 - State 'IG' 1 - Gyro to 8630ft - A (Def Survey)													Pass
	5588.11	32.81	5585.61	5555.30	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5588.02	32.81	5585.51	5555.22	608168.95	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	5588.02	32.81	5585.51	5555.21	687493.81	MAS = 10.00 (m)	23.00	23.00				WRP	
	5588.01	32.81	5585.44	5555.20	86907.16	MAS = 10.00 (m)	40.00	40.00				MinPts	
	5587.87	32.81	5581.92	5555.06	1621.15	MAS = 10.00 (m)	420.00	420.00				MinPts	
	5588.08	32.81	5578.77	5555.27	820.74	MAS = 10.00 (m)	760.00	760.00				MinPts	
	5588.64	32.81	5574.58	5555.83	483.23	MAS = 10.00 (m)	1240.00	1240.00				MinPts	
	5589.85	32.81	5569.44	5557.04	312.01	MAS = 10.00 (m)	1890.00	1889.99				MINPT-O-EOU	
	5820.39	84.18	5763.44	5736.21	106.84	OSF1.50	5110.00	5014.23				MinPt-O-ADP	
	5843.17	89.55	5782.64	5753.62	100.65	OSF1.50	5340.00	5236.39				MinPts	
	5911.09	121.10	5829.53	5790.00	74.73	OSF1.50	7150.00	7004.77				MinPt-CtCt	
	5911.36	121.88	5829.28	5789.48	74.24	OSF1.50	7230.00	7084.77				MINPT-O-EOU	
	5911.68	122.27	5829.33	5789.41	74.01	OSF1.50	7270.00	7124.77				MinPt-O-ADP	
	5918.99	126.25	5833.99	5792.74	71.71	OSF1.50	7590.00	7444.77				MinPts	
	5974.73	143.89	5877.97	5830.84	63.36	OSF1.50	9020.00	8874.77				MinPts	
	6048.38	147.37	5949.29	5901.00	62.60	OSF1.50	9750.00	9604.77				MinPt-O-SF	
	3525.07	164.99	3414.24	3360.08	32.52	OSF1.50	17650.00	11930.00				MinPt-CtCt	
	3525.43	166.13	3413.85	3359.31	32.30	OSF1.50	17700.00	11930.00				MINPT-O-EOU	
	3525.99	166.81	3413.95	3359.18	32.17	OSF1.50	17730.00	11930.00				MinPt-O-ADP	
	3760.82	192.65	3631.55	3568.17	29.65	OSF1.50	18960.00	11930.00				MinPt-O-SF	
	3931.19	199.50	3797.36	3731.69	29.91	OSF1.50	19389.58	11930.00				TD	
Coterra James 20-29 Federal Com 42H 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	
	6152.05	32.81	6149.55	6119.24	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	

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		
	6148.38	32.81	6126.08	6115.57	310.40	MAS = 10.00 (m)	1980.00	1979.88				MinPts	
	6148.80	33.40	6125.70	6115.40	298.37	OSF1.50	2060.00	2059.64				MINPT-O-EOU	
	6149.30	34.00	6125.80	6115.30	292.69	OSF1.50	2100.00	2099.45				MinPt-O-ADP	
	3554.40	203.65	3417.80	3350.74	26.49	OSF1.50	11030.00	10884.77				MinPt-CtCt	
	3554.40	203.69	3417.78	3350.71	26.48	OSF1.50	11040.00	10894.77				MINPT-O-EOU	
	3554.43	203.72	3417.79	3350.71	26.48	OSF1.50	11050.00	10904.77				MinPt-O-ADP	
	3557.84	204.14	3420.91	3353.70	26.45	OSF1.50	11190.00	11044.77				MinPt-O-SF	
	3706.97	306.64	3501.71	3400.33	18.27	OSF1.50	16780.00	11930.00				MINPT-O-EOU	
	3707.05	306.74	3501.73	3400.31	18.26	OSF1.50	16790.00	11930.00				MinPt-O-ADP	
	3718.57	308.86	3511.83	3409.71	18.19	OSF1.50	17050.00	11930.00				MinPt-O-SF	
	4547.48	297.54	4348.29	4249.94	23.11	OSF1.50	19389.58	11930.00				TD	
30-025-33001 - Falcon `32` State 1 - INC Only to 10000ft - A (Def Survey)													Pass
	7279.19	32.81	7276.69	7246.38	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	7279.11	32.81	7276.60	7246.30	670845.40	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	7279.10	32.81	7276.59	7246.29	686285.41	MAS = 10.00 (m)	23.00	23.00				WRP	
	7279.09	32.81	7276.52	7246.27	120805.05	MAS = 10.00 (m)	40.00	40.00				MinPts	
	7276.93	97.45	7211.13	7179.47	114.92	OSF1.50	1840.00	1840.00				MinPt-CtCt	
	7279.52	105.49	7208.36	7174.03	105.98	OSF1.50	2020.00	2019.78				MINPT-O-EOU	
	7282.83	109.48	7209.01	7173.35	102.08	OSF1.50	2110.00	2109.40				MinPt-O-ADP	
	7586.75	254.33	7416.37	7332.42	45.18	OSF1.50	4840.00	4753.43				MinPts	
	7821.12	407.24	7548.79	7413.87	28.98	OSF1.50	7830.00	7684.77				MinPt-CtCt	
	7815.19	506.46	7476.72	7308.74	23.25	OSF1.50	9710.00	9564.77				MinPt-CtCt	
	7824.46	527.98	7471.64	7296.48	22.33	OSF1.50	10330.00	10184.77				MINPT-O-EOU	
	7826.34	530.70	7471.71	7295.64	22.22	OSF1.50	10400.00	10254.77				MinPt-O-ADP	
	7826.63	530.83	7471.90	7295.79	22.21	OSF1.50	10410.00	10264.77				MinPt-O-SF	
	3664.24	487.21	3338.61	3177.04	11.33	OSF1.50	18980.00	11930.00				MinPt-CtCt	
	3664.31	487.39	3338.55	3176.93	11.33	OSF1.50	19000.00	11930.00				MINPT-O-EOU	
	3664.39	487.48	3338.57	3176.91	11.33	OSF1.50	19010.00	11930.00				MinPt-O-ADP	
	3677.52	490.33	3349.80	3187.19	11.30	OSF1.50	19290.00	11930.00				MinPt-O-SF	
	3687.31	491.49	3358.82	3195.82	11.30	OSF1.50	19389.58	11930.00				TD	
30-025-37176 - State IG 2 - INC Only to 8625ft - A (Def Survey)													Pass
	6602.92	32.81	6600.42	6570.11	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6602.89	32.81	6600.39	6570.08	N/A	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	6602.86	32.81	6600.34	6570.07	168909.77	MAS = 10.00 (m)	23.00	23.00				MinPts	
	6604.07	83.46	6547.59	6520.61	122.31	OSF1.50	1620.00	1620.00				MinPt-CtCt	
	6608.04	100.97	6539.89	6507.06	100.62	OSF1.50	2010.00	2009.81				MINPT-O-EOU	
	6612.85	106.73	6540.87	6506.12	95.13	OSF1.50	2140.00	2139.20				MinPt-O-ADP	
	6638.17	131.58	6549.62	6506.59	77.11	OSF1.50	2540.00	2531.80				MinPt-O-ADP	
	6662.09	164.89	6551.33	6497.20	61.52	OSF1.50	2960.00	2937.49				MinPts	
	6765.16	233.15	6608.89	6532.01	43.98	OSF1.50	4330.00	4260.81				MinPts	
	6843.71	270.80	6662.34	6572.91	38.25	OSF1.50	5150.00	5052.87				MINPT-O-EOU	
	6844.54	271.67	6662.59	6572.87	38.13	OSF1.50	5160.00	5062.53				MinPt-O-ADP	
	6982.19	423.58	6698.97	6558.61	24.86	OSF1.50	8140.00	7994.77				MinPt-CtCt	
	6987.68	457.94	6681.55	6529.74	23.01	OSF1.50	8800.00	8654.77				MinPts	
	6988.54	458.09	6682.32	6530.45	23.00	OSF1.50	8900.00	8754.77				MinPt-O-SF	
	4124.94	310.54	3917.08	3814.40	20.07	OSF1.50	16860.00	11930.00				MinPt-O-SF	
	3760.34	289.83	3566.29	3470.51	19.62	OSF1.50	18560.00	11930.00				MinPt-CtCt	
	3760.50	290.29	3566.14	3470.21	19.59	OSF1.50	18590.00	11930.00				MINPT-O-EOU	
	3760.89	290.77	3566.21	3470.12	19.56	OSF1.50	18620.00	11930.00				MinPt-O-ADP	
	3851.72	312.03	3642.87	3539.69	18.65	OSF1.50	19389.58	11930.00				MinPt-O-SF	
30-025-38050 - James 20 Federal 2 - INC Only to 8850ft - A (Def Survey)													Pass
	4103.11	32.81	4100.61	4070.30	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	4103.06	32.81	4100.55	4070.25	532729.72	MAS = 10.00 (m)	10.00	10.00				MinPt-O-SF	
	4103.03	32.81	4100.53	4070.22	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	4100.56	32.81	4080.55	4067.75	234.11	MAS = 10.00 (m)	630.00	630.00				MinPts	
	4102.60	99.35	4035.53	4003.25	63.50	OSF1.50	1920.00	1919.96				MinPt-CtCt	
	4106.75	111.58	4031.53	3995.17	56.44	OSF1.50	2170.00	2168.97				MINPT-O-EOU	
	4115.17	122.06	4032.97	3993.11	51.60	OSF1.50	2360.00	2356.44				MinPt-O-ADP	
	4576.79	409.69	4302.83	4167.10	16.85	OSF1.50	7910.00	7764.77				MinPt-CtCt	
	4578.68	467.79	4265.98	4110.89	14.75	OSF1.50	9020.00	8874.77				MinPts	
	4578.69	467.81	4265.99	4110.88	14.75	OSF1.50	9030.00	8884.77				MinPt-O-ADP	
	4578.85	467.84	4266.13	4111.01	14.75	OSF1.50	9060.00	8914.77				MinPt-O-SF	
	11872.50	467.19	11560.21	11405.32	38.32	OSF1.50	19389.58	11930.00				TD	
30-025-45604 - James 20-29 Federal Com 39H - Corrected MWD to 21906ft - A (Def Survey)													Pass
	6148.02	32.81	6145.52	6115.21	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6148.02	32.81	6145.52	6115.21	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	6147.97	32.81	6144.86	6115.16	10067.86	MAS = 10.00 (m)	130.00	130.00				MinPts	
	6150.02	32.81	6144.21	6117.22	1852.04	MAS = 10.00 (m)	430.00	430.00				MINPT-O-EOU	
	6156.80	32.81	6141.20	6123.99	469.83	MAS = 10.00 (m)	1410.00	1410.00				MINPT-O-EOU	
	6558.30	68.13	6512.04	6490.17	149.82	OSF1.50	4280.00	4212.51				MinPt-O-ADP	
	6571.97	71.47	6523.49	6500.51	142.89	OSF1.50	4390.00	4318.76				MinPt-O-ADP	
	4168.27	220.53	4020.42	3947.74	28.66	OSF1.50	12440.00	11926.25				MinPt-CtCt	
	4168.35	222.07	4019.47	3946.28	28.46	OSF1.50	12540.00	11930.00				MinPt-CtCt	
	4168.60	225.98	4017.11	3942.62	27.96	OSF1.50	12780.00	11930.00				MinPt-CtCt	
	4167.33	232.22	4011.68	3935.11	27.19	OSF1.50	13140.00	11930.00				MinPt-CtCt	
	4155.14	248.88	3988.39	3906.26	25.28	OSF1.50	14010.00	11930.00				MinPt-CtCt	
	4155.91	250.86	3987.83	3905.05	25.09	OSF1.50	14140.00	11930.00				MINPT-O-EOU	
	4157.52	253.55	3987.66	3903.97	24.83	OSF1.50	14270.00	11930.00				MINPT-O-EOU	
	4157.63	253.67	3987.69	3903.96	24.81	OSF1.50	14280.00	11930.00				MinPt-O-ADP	
	4169.47	260.16	3995.20	3909.31	24.26	OSF1.50	14650.00	11930.00				MinPt-O-ADP	
	4163.93	283.68	3973.98	3880.25	22.20	OSF1.50	15590.00	11930.00				MinPt-CtCt	
	4164.16	284.34	3973.77	3879.82	22.15	OSF1.50	15640.00	11930.00				MINPT-O-EOU	
	4164.48	284.73	3973.83	3879.76	22.12	OSF1.50	15670.00	11930.00				MinPt-O-ADP	
	4168.80	289.78	3974.78	3879.02	21.75	OSF1.50	15880.00	11930.00				MINPT-O-EOU	
	4169.86	291.07	3974.98	3878.79	21.66	OSF1.50	15950.00	11930.00				MinPt-O-ADP	
	4172.74	301.60	3970.84	3871.14	20.91	OSF1.50	16330.00	11930.00				MinPt-CtCt	
	4173.24	303.04	3970.38	3870.20	20.82	OSF1.50	16420.00	11930.00				MINPT-O-EOU	
	4174.67	308.29	3968.31	3866.38	20.47	OSF1.50	16600.00	11930.00				MinPt-CtCt	
	4175.19	309.76	3967.84	3865.42	20.37	OSF1.50	16690.00	11930.00				MINPT-O-EOU	
	4175.81	312.44	3966.69	3863.37	20.20	OSF1.50	16780.00	11930.00				MINPT-O-EOU	
	4175.88	312.52	3966.70	3863.36	20.19	OSF1.50	16790.00	11930.00				MinPt-O-ADP	
	4188.26	314.58	3977.71	3873.69	20.12	OSF1.50	17080.00	11930.00				MinPt-O-SF	
	4936.63	306.73	4731.30	4629.89	24.33	OSF1.50	19389.58	11930.00				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		
30-025-36555 - Falcon 32 State 4 - INC Only to 8600ft - A (Def Survey)													Pass
	5775.20	32.81	5772.70	5742.39	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	5775.11	32.81	5772.60	5742.30	527786.20	MAS = 10.00 (m)	20.00	20.00				MinPt-O-SF	
	5775.10	32.81	5772.59	5742.29	564853.32	MAS = 10.00 (m)	23.00	23.00				WRP	
	5775.09	32.81	5772.49	5742.28	59471.31	MAS = 10.00 (m)	40.00	40.00				MinPts	
	5775.33	57.74	5736.00	5717.59	156.74	OSF1.50	1190.00	1190.00				MinPt-CtCt	
	5793.61	112.89	5717.52	5680.73	78.69	OSF1.50	2160.00	2159.05				MINPT-O-EOU	
	5801.19	121.84	5719.12	5679.34	72.88	OSF1.50	2310.00	2307.31				MinPt-O-ADP	
	6090.03	264.81	5912.66	5825.23	34.81	OSF1.50	4950.00	4859.68				MinPts	
	6145.89	282.31	5956.85	5863.58	32.93	OSF1.50	5400.00	5294.35				MinPts	
	6304.93	420.33	6023.88	5884.60	22.63	OSF1.50	8100.00	7954.77				MinPt-CtCt	
	6307.44	429.14	6020.51	5878.30	22.17	OSF1.50	8390.00	8244.77				MINPT-O-EOU	
	6310.08	432.31	6021.04	5877.77	22.01	OSF1.50	8510.00	8364.77				MinPt-O-ADP	
	6334.99	454.00	6031.49	5880.99	21.04	OSF1.50	9060.00	8914.77				MinPts	
	4216.58	325.24	3998.92	3891.34	19.59	OSF1.50	17570.00	11930.00				MinPt-CtCt	
	4216.70	325.57	3998.82	3891.13	19.57	OSF1.50	17600.00	11930.00				MINPT-O-EOU	
	4216.90	325.80	3998.86	3891.10	19.55	OSF1.50	17620.00	11930.00				MinPt-O-ADP	
	4539.55	363.87	4296.13	4175.68	18.83	OSF1.50	19250.00	11930.00				MinPt-O-SF	
	4593.08	367.99	4346.92	4225.09	18.84	OSF1.50	19389.58	11930.00				TD	
30-025-35640 - Falcon `32` State 3 - INC Only to 8690ft - A (Def Survey)													Pass
	8390.27	32.81	8387.77	8357.46	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	8390.15	32.81	8387.63	8357.34	469724.70	MAS = 10.00 (m)	23.00	23.00				WRP	
	8390.08	32.81	8387.43	8357.27	56486.63	MAS = 10.00 (m)	60.00	60.00				MinPts	
	8391.03	44.59	8360.47	8346.44	298.97	OSF1.50	990.00	990.00				MinPt-CtCt	
	8390.76	73.68	8340.81	8317.08	176.78	OSF1.50	1540.00	1540.00				MinPt-CtCt	
	8394.66	91.65	8332.73	8303.01	141.21	OSF1.50	1960.00	1959.92				MINPT-O-EOU	
	8398.33	96.00	8333.49	8302.33	134.69	OSF1.50	2060.00	2059.64				MinPt-O-ADP	
	8405.22	111.55	8330.02	8293.67	115.58	OSF1.50	2210.00	2208.60				MINPT-O-EOU	
	8417.58	126.60	8332.35	8290.98	101.71	OSF1.50	2440.00	2434.69				MinPt-O-ADP	
	8474.88	156.65	8369.62	8318.23	82.44	OSF1.50	3110.00	3082.38				MinPts	
	8668.51	252.64	8499.25	8415.87	51.97	OSF1.50	4910.00	4821.04				MinPts	
	8691.82	273.96	8508.35	8417.86	48.01	OSF1.50	5160.00	5062.53				MinPt-O-ADP	
	8771.16	310.00	8563.66	8461.16	42.77	OSF1.50	5940.00	5815.95				MinPts	
	8858.91	368.83	8612.19	8490.08	36.26	OSF1.50	7170.00	7024.77				MinPt-CtCt	
	8859.56	436.50	8567.73	8423.06	30.61	OSF1.50	8480.00	8334.77				MinPt-CtCt	
	8863.61	458.91	8556.84	8404.71	29.12	OSF1.50	9040.00	8894.77				MinPts	
	8864.38	458.95	8557.58	8405.43	29.12	OSF1.50	9080.00	8934.77				MinPt-O-SF	
	4335.59	365.49	4091.09	3970.09	17.91	OSF1.50	19389.58	11930.00				MinPts	
30-025-45602 - James 20 Federal 037H - Corrected MWD to 20191ft - A (Def Survey)													Pass
	6128.34	32.81	6125.84	6095.53	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	6128.33	32.81	6125.83	6095.52	N/A	MAS = 10.00 (m)	23.00	23.00				WRP	
	6127.99	32.81	6123.02	6095.18	2483.50	MAS = 10.00 (m)	330.00	330.00				MinPts	
	6124.14	32.81	6109.16	6091.33	490.52	MAS = 10.00 (m)	1340.00	1340.00				MinPts	
	6123.15	32.81	6102.66	6090.34	340.28	MAS = 10.00 (m)	1870.00	1869.99				MinPts	
	6123.57	32.81	6102.16	6090.76	323.84	MAS = 10.00 (m)	1960.00	1959.92				MINPT-O-EOU	
	6304.41	63.49	6261.24	6240.91	154.98	OSF1.50	3910.00	3855.12				MinPts	
	4695.43	196.21	4563.79	4499.22	36.34	OSF1.50	10690.00	10544.77				MinPt-CtCt	
	4695.48	196.34	4563.75	4499.13	36.32	OSF1.50	10710.00	10564.77				MINPT-O-EOU	
	4695.53	196.41	4563.76	4499.12	36.30	OSF1.50	10720.00	10574.77				MinPt-O-ADP	
	4726.40	199.34	4592.68	4527.06	36.00	OSF1.50	11230.00	11084.77				MinPt-O-SF	
	4870.96	205.18	4733.34	4665.78	36.03	OSF1.50	12040.00	11810.98				MinPt-O-ADP	
	4878.87	224.72	4728.22	4654.14	32.92	OSF1.50	13250.00	11930.00				MinPt-CtCt	
	4879.76	235.52	4721.93	4644.26	31.40	OSF1.50	13790.00	11930.00				MinPt-CtCt	
	4881.35	247.95	4715.22	4633.40	29.82	OSF1.50	14370.00	11930.00				MinPt-CtCt	
	4883.79	258.80	4710.42	4624.99	28.57	OSF1.50	14850.00	11930.00				MinPt-CtCt	
	4883.81	263.93	4707.03	4619.88	28.01	OSF1.50	15070.00	11930.00				MinPt-CtCt	
	4883.73	270.58	4702.51	4613.15	27.31	OSF1.50	15350.00	11930.00				MinPt-CtCt	
	4884.63	278.35	4698.23	4606.27	26.55	OSF1.50	15670.00	11930.00				MinPt-CtCt	
	4885.33	280.43	4697.54	4604.90	26.35	OSF1.50	15790.00	11930.00				MINPT-O-EOU	
	4890.80	290.86	4696.06	4599.94	25.43	OSF1.50	16220.00	11930.00				MINPT-O-EOU	
	4892.95	293.55	4696.42	4599.40	25.20	OSF1.50	16340.00	11930.00				MinPt-O-ADP	
	4897.80	298.98	4697.65	4598.82	24.77	OSF1.50	16540.00	11930.00				MINPT-O-EOU	
	4897.96	299.19	4697.67	4598.77	24.75	OSF1.50	16550.00	11930.00				MinPt-O-ADP	
	4929.42	303.26	4726.41	4626.15	24.57	OSF1.50	17030.00	11930.00				MinPt-O-SF	
	5702.54	303.67	5499.26	5398.86	28.39	OSF1.50	19389.58	11930.00				TD	
30-025-39661 - Falcon 32 State 005Y-H - Gyro+MWD to 12715ft - A (Def Survey)													Pass
	10233.59	32.81	10231.09	10200.78	N/A	MAS = 10.00 (m)	0.00	0.00				Surface	
	10233.44	32.81	10230.92	10200.63	411809.93	MAS = 10.00 (m)	23.00	23.00				WRP	
	10233.29	32.81	10230.58	10200.48	50653.04	MAS = 10.00 (m)	80.00	80.00				MinPts	
	6971.36	228.40	6818.26	6742.96	46.27	OSF1.50	8610.00	8464.77				MinPt-CtCt	
	6971.39	228.48	6818.24	6742.91	46.26	OSF1.50	8630.00	8484.77				MINPT-O-EOU	
	6971.42	228.51	6818.25	6742.91	46.25	OSF1.50	8640.00	8494.77				MinPt-O-ADP	
	6987.80	229.81	6833.76	6757.99	46.10	OSF1.50	9090.00	8944.77				MinPt-O-SF	
	5609.48	276.57	5424.27	5332.91	30.69	OSF1.50	16830.00	11930.00				MinPt-O-SF	
	5590.59	271.56	5408.72	5319.03	31.15	OSF1.50	17130.00	11930.00				MinPts	
	5569.24	263.76	5392.57	5305.48	31.96	OSF1.50	17470.00	11930.00				MinPts	
	5565.21	258.46	5392.07	5306.75	32.60	OSF1.50	17540.00	11930.00				MinPts	
	5511.00	244.49	5347.17	5266.51	34.15	OSF1.50	18200.00	11930.00				MinPt-O-SF	
	5494.43	240.79	5333.07	5253.64	34.57	OSF1.50	18440.00	11930.00				MinPts	
	5470.93	235.44	5313.13	5235.48	35.21	OSF1.50	18690.00	11930.00				MinPt-O-SF	
	5457.00	233.23	5300.67	5223.76	35.46	OSF1.50	18850.00	11930.00				MinPt-O-SF	
	5417.80	234.71	5260.49	5183.09	34.98	OSF1.50	19389.58	11930.00				MinPts	

Schlumberger

Coterra James 29-32 Federal Com 31H Rev2 kFc 30Mar23 Proposal
Geodetic Report
(Def Plan)

COTERRA

Report Date:	March 30, 2023 - 11:20 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	COTERRA	**Vertical Section Azimuth:**	172.620 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Coterra James 29-32 Federal Com 31H / 31H	**TVD Reference Datum:**	RKB = 23ft
Well:	James 29-32 Federal Com 31H	**TVD Reference Elevation:**	3711.000 ft above MSL
Borehole:	James 29-32 Federal Com 31H	**Seabed / Ground Elevation:**	3688.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.349 °
Survey Name:	Coterra James 29-32 Federal Com 31H Rev2 kFc 30Mar23	**Total Gravity Field Strength:**	998.4335mgn (9.80665 Based)
Survey Date:	September 27, 2022	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	120.000 ° / 8746.748 ft / 6.232 / 0.733	**Total Magnetic Field Strength:**	47544.341 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.865 °
Location Lat / Long:	N 32° 16' 53.96233", W 103° 41' 34.66999"	**Declination Date:**	March 30, 2023
Location Grid N/E Y/X:	N 466790.010 ftUS, E 739236.950 ftUS	**Magnetic Declination Model:**	HDGM 2023
CRS Grid Convergence Angle:	0.3420 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99995395	**Grid Convergence Used:**	0.3420 °
Version / Patch:	2.10.834.0	**Total Corr Mag North->Grid North:**	6.0065 °
		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 [413' FNL, 1487' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	466790.01	739236.95	N 32.281656	W 103.692964
	100.00	0.00	81.39	100.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	200.00	0.00	81.39	200.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	300.00	0.00	81.39	300.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	400.00	0.00	81.39	400.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	500.00	0.00	81.39	500.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	600.00	0.00	81.39	600.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	700.00	0.00	81.39	700.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	800.00	0.00	81.39	800.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	900.00	0.00	81.39	900.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1000.00	0.00	81.39	1000.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
Rustler	*1090.00*	*0.00*	*81.39*	*1090.00*	*0.00*	*0.00*	*0.00*	*0.00*	*466790.01*	*739236.95*	*N 32.281656*	*W 103.692964*
	1100.00	0.00	81.39	1100.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1200.00	0.00	81.39	1200.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1300.00	0.00	81.39	1300.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
Top of Salt	1400.00	0.00	81.39	1400.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1500.00	0.00	81.39	1500.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1600.00	0.00	81.39	1600.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1700.00	0.00	81.39	1700.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
Nudge, Build 2°/100ft	1800.00	0.00	81.39	1800.00	0.00	0.00	0.00	0.00	466790.01	739236.95	N 32.281656	W 103.692964
	1900.00	2.00	81.39	1899.98	-0.04	0.26	1.73	2.00	466790.27	739238.68	N 32.281657	W 103.692958
	2000.00	4.00	81.39	1999.84	-0.15	1.04	6.90	2.00	466791.05	739243.85	N 32.281659	W 103.692942
	2100.00	6.00	81.39	2099.45	-0.34	2.35	15.52	2.00	466792.36	739252.47	N 32.281662	W 103.692914
	2200.00	8.00	81.39	2198.70	-0.60	4.17	27.57	2.00	466794.18	739264.51	N 32.281667	W 103.692875
	2300.00	10.00	81.39	2297.47	-0.94	6.52	43.03	2.00	466796.53	739279.98	N 32.281673	W 103.692825
	2400.00	12.00	81.39	2395.62	-1.35	9.37	61.90	2.00	466799.38	739298.84	N 32.281681	W 103.692763
	2500.00	14.00	81.39	2493.06	-1.83	12.74	84.14	2.00	466802.75	739321.08	N 32.281690	W 103.692691
Hold	2550.01	15.00	81.39	2541.47	-2.10	14.62	96.52	2.00	466804.63	739333.46	N 32.281695	W 103.692651
	2600.00	15.00	81.39	2589.76	-2.38	16.55	109.31	0.00	466806.56	739346.25	N 32.281700	W 103.692610
	2700.00	15.00	81.39	2686.35	-2.93	20.43	134.90	0.00	466810.44	739371.84	N 32.281710	W 103.692527
	2800.00	15.00	81.39	2782.94	-3.49	24.31	160.49	0.00	466814.32	739397.43	N 32.281720	W 103.692444
	2900.00	15.00	81.39	2879.54	-4.05	28.18	186.08	0.00	466818.19	739423.02	N 32.281731	W 103.692361
	3000.00	15.00	81.39	2976.13	-4.60	32.06	211.67	0.00	466822.07	739448.61	N 32.281741	W 103.692278
	3100.00	15.00	81.39	3072.72	-5.16	35.93	237.26	0.00	466825.94	739474.20	N 32.281751	W 103.692196
	3200.00	15.00	81.39	3169.31	-5.72	39.81	262.85	0.00	466829.82	739499.79	N 32.281761	W 103.692113
	3300.00	15.00	81.39	3265.91	-6.27	43.68	288.44	0.00	466833.69	739525.38	N 32.281772	W 103.692030
	3400.00	15.00	81.39	3362.50	-6.83	47.56	314.03	0.00	466837.57	739550.97	N 32.281782	W 103.691947
	3500.00	15.00	81.39	3459.09	-7.39	51.44	339.62	0.00	466841.44	739576.56	N 32.281792	W 103.691864
	3600.00	15.00	81.39	3555.68	-7.94	55.31	365.21	0.00	466845.32	739602.15	N 32.281802	W 103.691781
	3700.00	15.00	81.39	3652.28	-8.50	59.19	390.80	0.00	466849.19	739627.74	N 32.281812	W 103.691698
	3800.00	15.00	81.39	3748.87	-9.05	63.06	416.40	0.00	466853.07	739653.33	N 32.281823	W 103.691615
	3900.00	15.00	81.39	3845.46	-9.61	66.94	441.99	0.00	466856.95	739678.91	N 32.281833	W 103.691533
	4000.00	15.00	81.39	3942.05	-10.17	70.81	467.58	0.00	466860.82	739704.50	N 32.281843	W 103.691450
	4100.00	15.00	81.39	4038.65	-10.72	74.69	493.17	0.00	466864.70	739730.09	N 32.281853	W 103.691367
	4200.00	15.00	81.39	4135.24	-11.28	78.57	518.76	0.00	466868.57	739755.68	N 32.281864	W 103.691284
	4300.00	15.00	81.39	4231.83	-11.84	82.44	544.35	0.00	466872.45	739781.27	N 32.281874	W 103.691201
	4400.00	15.00	81.39	4328.42	-12.39	86.32	569.94	0.00	466876.32	739806.86	N 32.281884	W 103.691118
	4500.00	15.00	81.39	4425.02	-12.95	90.19	595.53	0.00	466880.20	739832.45	N 32.281894	W 103.691035
	4600.00	15.00	81.39	4521.61	-13.51	94.07	621.12	0.00	466884.07	739858.04	N 32.281905	W 103.690952
	4700.00	15.00	81.39	4618.20	-14.06	97.94	646.71	0.00	466887.95	739883.63	N 32.281915	W 103.690870
	4800.00	15.00	81.39	4714.79	-14.62	101.82	672.30	0.00	466891.82	739909.22	N 32.281925	W 103.690787
Base of Salt	*4800.21*	*15.00*	*81.39*	*4715.00*	*-14.62*	*101.83*	*672.35*	*0.00*	*466891.83*	*739909.27*	*N 32.281925*	*W 103.690787*
Lamar	*4826.10*	*15.00*	*81.39*	*4740.00*	*-14.76*	*102.83*	*678.98*	*0.00*	*466892.84*	*739915.90*	*N 32.281928*	*W 103.690765*
	4900.00	15.00	81.39	4811.39	-15.18	105.70	697.89	0.00	466895.70	739934.81	N 32.281935	W 103.690704
Bell Canyon	*4904.78*	*15.00*	*81.39*	*4816.00*	*-15.20*	*105.88*	*699.11*	*0.00*	*466895.89*	*739936.03*	*N 32.281936*	*W 103.690700*
	5000.00	15.00	81.39	4907.98	-15.73	109.57	723.48	0.00	466899.58	739960.40	N 32.281945	W 103.690621
	5100.00	15.00	81.39	5004.57	-16.29	113.45	749.07	0.00	466903.45	739985.99	N 32.281956	W 103.690538
	5200.00	15.00	81.39	5101.16	-16.85	117.32	774.66	0.00	466907.33	740011.57	N 32.281966	W 103.690455
	5300.00	15.00	81.39	5197.76	-17.40	121.20	800.25	0.00	466911.20	740037.16	N 32.281976	W 103.690372
	5400.00	15.00	81.39	5294.35	-17.96	125.07	825.84	0.00	466915.08	740062.75	N 32.281986	W 103.690289
	5500.00	15.00	81.39	5390.94	-18.51	128.95	851.43	0.00	466918.95	740088.34	N 32.281997	W 103.690207
	5600.00	15.00	81.39	5487.53	-19.07	132.82	877.02	0.00	466922.83	740113.93	N 32.282007	W 103.690124
	5700.00	15.00	81.39	5584.13	-19.63	136.70	902.61	0.00	466926.70	740139.52	N 32.282017	W 103.690041
Cherry Canyon	*5798.22*	*15.00*	*81.39*	*5679.00*	*-20.17*	*140.51*	*927.75*	*0.00*	*466930.51*	*740164.65*	*N 32.282027*	*W 103.689959*
	5800.00	15.00	81.39	5680.72	-20.18	140.58	928.20	0.00	466930.58	740165.11	N 32.282027	W 103.689958
	5900.00	15.00	81.39	5777.31	-20.74	144.45	953.79	0.00	466934.45	740190.70	N 32.282038	W 103.689875
	6000.00	15.00	81.39	5873.90	-21.30	148.33	979.39	0.00	466938.33	740216.29	N 32.282048	W 103.689792
	6100.00	15.00	81.39	5970.50	-21.85	152.20	1004.98	0.00	466942.21	740241.88	N 32.282058	W 103.689709
	6200.00	15.00	81.39	6067.09	-22.41	156.08	1030.57	0.00	466946.08	740267.47	N 32.282068	W 103.689626
	6300.00	15.00	81.39	6163.68	-22.97	159.95	1056.16	0.00	466949.96	740293.06	N 32.282078	W 103.689544
Drop 2°/100ft	6311.04	15.00	81.39	6174.35	-23.03	160.38	1058.98	0.00	466950.38	740295.88	N 32.282080	W 103.689534
	6400.00	13.22	81.39	6260.62	-23.49	163.63	1080.42	2.00	466953.63	740317.32	N 32.282088	W 103.689465
	6500.00	11.22	81.39	6358.35	-23.95	166.80	1101.35	2.00	466956.80	740338.25	N 32.282097	W 103.689397
	6600.00	9.22	81.39	6456.75	-24.33	169.46	1118.90	2.00	466959.46	740355.79	N 32.282104	W 103.689340
	6700.00	7.22	81.39	6555.72	-24.64	171.60	1133.03	2.00	466961.60	740369.93	N 32.282109	W 103.689295
	6800.00	5.22	81.39	6655.13	-24.87	173.22	1143.75	2.00	466963.22	740380.64	N 32.282113	W 103.689260
	6900.00	3.22	81.39	6754.85	-25.03	174.32	1151.03	2.00	466964.32	740387.92	N 32.282116	W 103.689236

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 °)
	7000.00	1.22	81.39	6854.77	-25.11	174.90	1154.86	2.00	466964.90	740391.75	N 32.282118	W 103.689224
Hold	7061.05	0.00	81.39	6915.82	-25.13	175.00	1155.50	2.00	466965.00	740392.39	N 32.282118	W 103.689222
	7100.00	0.00	81.39	6954.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
Brushy Canyon	*7112.23*	*0.00*	*81.39*	*6967.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	7200.00	0.00	81.39	7054.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7300.00	0.00	81.39	7154.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7400.00	0.00	81.39	7254.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7500.00	0.00	81.39	7354.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7600.00	0.00	81.39	7454.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7700.00	0.00	81.39	7554.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7800.00	0.00	81.39	7654.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	7900.00	0.00	81.39	7754.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8000.00	0.00	81.39	7854.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8100.00	0.00	81.39	7954.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8200.00	0.00	81.39	8054.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8300.00	0.00	81.39	8154.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8400.00	0.00	81.39	8254.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8500.00	0.00	81.39	8354.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8600.00	0.00	81.39	8454.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8700.00	0.00	81.39	8554.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	8800.00	0.00	81.39	8654.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
BS/BS Lime	*8815.23*	*0.00*	*81.39*	*8670.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	8900.00	0.00	81.39	8754.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
Leonard	*8900.23*	*0.00*	*81.39*	*8755.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	9000.00	0.00	81.39	8854.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9100.00	0.00	81.39	8954.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9200.00	0.00	81.39	9054.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
Avalon	*9278.23*	*0.00*	*81.39*	*9133.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	9300.00	0.00	81.39	9154.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9400.00	0.00	81.39	9254.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9500.00	0.00	81.39	9354.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9600.00	0.00	81.39	9454.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9700.00	0.00	81.39	9554.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9800.00	0.00	81.39	9654.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	9900.00	0.00	81.39	9754.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
1st BS Sand	*9925.23*	*0.00*	*81.39*	*9780.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	10000.00	0.00	81.39	9854.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10100.00	0.00	81.39	9954.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10200.00	0.00	81.39	10054.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10300.00	0.00	81.39	10154.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
2nd BS Carb	*10372.23*	*0.00*	*81.39*	*10227.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	10400.00	0.00	81.39	10254.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10500.00	0.00	81.39	10354.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
2nd BS Sand	*10530.23*	*0.00*	*81.39*	*10385.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	10600.00	0.00	81.39	10454.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10700.00	0.00	81.39	10554.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10800.00	0.00	81.39	10654.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	10900.00	0.00	81.39	10754.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	11000.00	0.00	81.39	10854.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	11100.00	0.00	81.39	10954.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
3rd BS Carb	*11165.23*	*0.00*	*81.39*	*11020.00*	*-25.13*	*175.00*	*1155.50*	*0.00*	*466965.00*	*740392.39*	*N 32.282118*	*W 103.689222*
	11200.00	0.00	81.39	11054.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	11300.00	0.00	81.39	11154.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	11400.00	0.00	81.39	11254.77	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
KOP, Build 10°/100ft	11482.75	0.00	81.39	11337.52	-25.13	175.00	1155.50	0.00	466965.00	740392.39	N 32.282118	W 103.689222
	11500.00	1.72	179.62	11354.76	-24.87	174.74	1155.50	10.00	466964.74	740392.40	N 32.282117	W 103.689222
	11600.00	11.72	179.62	11453.95	-13.26	163.05	1155.58	10.00	466953.05	740392.47	N 32.282085	W 103.689222
	11700.00	21.72	179.62	11549.60	15.26	134.31	1155.77	10.00	466924.31	740392.66	N 32.282006	W 103.689222
3rd BS Sand	*11711.24*	*22.85*	*179.62*	*11560.00*	*19.50*	*130.04*	*1155.80*	*10.00*	*466920.05*	*740392.69*	*N 32.281995*	*W 103.689222*
	11800.00	31.72	179.62	11638.80	59.84	89.39	1156.07	10.00	466879.40	740392.96	N 32.281883	W 103.689222
	11900.00	41.72	179.62	11718.85	119.12	29.67	1156.46	10.00	466819.68	740393.36	N 32.281719	W 103.689222
	12000.00	51.72	179.62	11787.32	191.29	-43.04	1156.94	10.00	466746.97	740393.84	N 32.281519	W 103.689221
	12100.00	61.72	179.62	11842.11	274.17	-126.53	1157.50	10.00	466663.48	740394.39	N 32.281289	W 103.689221
	12200.00	71.72	179.62	11881.58	365.23	-218.28	1158.10	10.00	466571.74	740395.00	N 32.281037	W 103.689221
Build 5°/100ft	12232.75	75.00	179.62	11890.95	396.37	-249.66	1158.31	10.00	466540.37	740395.20	N 32.280951	W 103.689221
	12300.00	78.36	179.62	11906.44	461.31	-315.08	1158.74	5.00	466474.94	740395.64	N 32.280771	W 103.689221
	12400.00	83.36	179.62	11922.32	559.28	-413.78	1159.40	5.00	466376.25	740396.29	N 32.280500	W 103.689221
	12500.00	88.36	179.62	11929.53	658.24	-513.49	1160.06	5.00	466276.55	740396.95	N 32.280226	W 103.689220
Landing Point	12532.75	90.00	179.62	11930.00	690.75	-546.23	1160.27	5.00	466243.80	740397.17	N 32.280136	W 103.689220
	12600.00	90.00	179.62	11930.00	757.49	-613.48	1160.72	0.00	466176.56	740397.61	N 32.279951	W 103.689220
	12700.00	90.00	179.62	11930.00	856.74	-713.48	1161.38	0.00	466076.57	740398.27	N 32.279676	W 103.689220
	12800.00	90.00	179.62	11930.00	956.00	-813.47	1162.04	0.00	465976.58	740398.93	N 32.279401	W 103.689220
	12900.00	90.00	179.62	11930.00	1055.25	-913.47	1162.70	0.00	465876.58	740399.59	N 32.279126	W 103.689220
	13000.00	90.00	179.62	11930.00	1154.51	-1013.47	1163.36	0.00	465776.59	740400.26	N 32.278851	W 103.689220
	13100.00	90.00	179.62	11930.00	1253.76	-1113.47	1164.02	0.00	465676.60	740400.92	N 32.278577	W 103.689219
	13200.00	90.00	179.62	11930.00	1353.02	-1213.47	1164.68	0.00	465576.60	740401.58	N 32.278302	W 103.689219
	13300.00	90.00	179.62	11930.00	1452.27	-1313.46	1165.35	0.00	465476.61	740402.24	N 32.278027	W 103.689219
	13400.00	90.00	179.62	11930.00	1551.52	-1413.46	1166.01	0.00	465376.62	740402.90	N 32.277752	W 103.689219
	13500.00	90.00	179.62	11930.00	1650.78	-1513.46	1166.67	0.00	465276.62	740403.56	N 32.277477	W 103.689219
	13600.00	90.00	179.62	11930.00	1750.03	-1613.46	1167.33	0.00	465176.63	740404.22	N 32.277202	W 103.689218
	13700.00	90.00	179.62	11930.00	1849.29	-1713.45	1167.99	0.00	465076.64	740404.88	N 32.276927	W 103.689218
	13800.00	90.00	179.62	11930.00	1948.54	-1813.45	1168.65	0.00	464976.65	740405.55	N 32.276653	W 103.689218
	13900.00	90.00	179.62	11930.00	2047.80	-1913.45	1169.31	0.00	464876.65	740406.21	N 32.276378	W 103.689218
	14000.00	90.00	179.62	11930.00	2147.05	-2013.45	1169.97	0.00	464776.66	740406.87	N 32.276103	W 103.689218
	14100.00	90.00	179.62	11930.00	2246.31	-2113.45	1170.63	0.00	464676.67	740407.53	N 32.275828	W 103.689217
	14200.00	90.00	179.62	11930.00	2345.56	-2213.44	1171.30	0.00	464576.67	740408.19	N 32.275553	W 103.689217
	14300.00	90.00	179.62	11930.00	2444.81	-2313.44	1171.96	0.00	464476.68	740408.85	N 32.275278	W 103.689217
	14400.00	90.00	179.62	11930.00	2544.07	-2413.44	1172.62	0.00	464376.69	740409.51	N 32.275003	W 103.689217
	14500.00	90.00	179.62	11930.00	2643.32	-2513.44	1173.28	0.00	464276.69	740410.17	N 32.274729	W 103.689217
	14600.00	90.00	179.62	11930.00	2742.58	-2613.43	1173.94	0.00	464176.70	740410.83	N 32.274454	W 103.689216
	14700.00	90.00	179.62	11930.00	2841.83	-2713.43	1174.60	0.00	464076.71	740411.50	N 32.274179	W 103.689216
	14800.00	90.00	179.62	11930.00	2941.09	-2813.43	1175.26	0.00	463976.71	740412.16	N 32.273904	W 103.689216
	14900.00	90.00	179.62	11930.00	3040.34	-2913.43	1175.92	0.00	463876.72	740412.82	N 32.273629	W 103.689216
	15000.00	90.00	179.62	11930.00	3139.59	-3013.43	1176.59	0.00	463776.73	740413.48	N 32.273354	W 103.689216
	15100.00	90.00	179.62	11930.00	3238.85	-3113.42	1177.25	0.00	463676.74	740414.14	N 32.273079	W 103.689215
	15200.00	90.00	179.62	11930.00	3338.10	-3213.42	1177.91	0.00	463576.74	740414.80	N 32.272804	W 103.689215
	15300.00	90.00	179.62	11930.00	3437.36	-3313.42	1178.57	0.00	463476.75	740415.46	N 32.272530	W 103.689215
	15400.00	90.00	179.62	11930.00	3536.61	-3413.42	1179.23	0.00	463376.76	740416.12	N 32.272255	W 103.689215
	15500.00	90.00	179.62	11930.00	3635.87	-3513.41	1179.89	0.00	463276.76	740416.78	N 32.271980	W 103.689215
	15600.00	90.00	179.62	11930.00	3735.12	-3613.41	1180.55	0.00	463176.77	740417.45	N 32.271705	W 103.689214
	15700.00	90.00	179.62	11930.00	3834.38	-3713.41	1181.21	0.00	463076.78	740418.11	N 32.271430	W 103.689214
	15800.00	90.00	179.62	11930.00	3933.63	-3813.41	1181.87	0.00	462976.78	740418.77	N 32.271155	W 103.689214
	15900.00	90.00	179.62	11930.00	4032.88	-3913.41	1182.54	0.00	462876.79	740419.43	N 32.270880	W 103.689214
	16000.00	90.00	179.62	11930.00	4132.14	-4013.40	1183.20	0.00	462776.80	740420.09	N 32.270606	W 103.689214
	16100.00	90.00	179.62	11930.00	4231.39	-4113.40	1183.86	0.00	462676.81	740420.75	N 32.270331	W 103.689213
	16200.00	90.00	179.62	11930.00	4330.65	-4213.40	1184.52	0.00	462576.81	740421.41	N 32.270056	W 103.689213
	16300.00	90.00	179.62	11930.00	4429.90	-4313.40	1185.18	0.00	462476.82	740422.07	N 32.269781	W 103.689213
	16400.00	90.00	179.62	11930.00	4529.16	-4413.40	1185.84	0.00	462376.83	740422.73	N 32.269506	W 103.689213

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 °)
	16500.00	90.00	179.62	11930.00	4628.41	-4513.39	1186.50	0.00	462276.83	740423.40	N 32.269231	W 103.689213
	16600.00	90.00	179.62	11930.00	4727.66	-4613.39	1187.16	0.00	462176.84	740424.06	N 32.268956	W 103.689212
	16700.00	90.00	179.62	11930.00	4826.92	-4713.39	1187.83	0.00	462076.85	740424.72	N 32.268682	W 103.689212
	16800.00	90.00	179.62	11930.00	4926.17	-4813.39	1188.49	0.00	461976.85	740425.38	N 32.268407	W 103.689212
Section 29-32 Line, NMNM0559539 exit to State enter Lease Cross	*16847.56*	*90.00*	*179.62*	*11930.00*	*4973.38*	*-4860.95*	*1188.80*	*0.00*	*461929.29*	*740425.69*	*N 32.268276*	*W 103.689212*
	16900.00	90.00	179.62	11930.00	5025.43	-4913.38	1189.15	0.00	461876.86	740426.04	N 32.268132	W 103.689212
	17000.00	90.00	179.62	11930.00	5124.68	-5013.38	1189.81	0.00	461776.87	740426.70	N 32.267857	W 103.689212
	17100.00	90.00	179.62	11930.00	5223.94	-5113.38	1190.47	0.00	461676.88	740427.36	N 32.267582	W 103.689211
	17200.00	90.00	179.62	11930.00	5323.19	-5213.38	1191.13	0.00	461576.88	740428.02	N 32.267307	W 103.689211
	17300.00	90.00	179.62	11930.00	5422.44	-5313.38	1191.79	0.00	461476.89	740428.68	N 32.267032	W 103.689211
	17400.00	90.00	179.62	11930.00	5521.70	-5413.37	1192.45	0.00	461376.90	740429.35	N 32.266757	W 103.689211
	17500.00	90.00	179.62	11930.00	5620.95	-5513.37	1193.11	0.00	461276.90	740430.01	N 32.266483	W 103.689211
	17600.00	90.00	179.62	11930.00	5720.21	-5613.37	1193.78	0.00	461176.91	740430.67	N 32.266208	W 103.689210
	17700.00	90.00	179.62	11930.00	5819.46	-5713.37	1194.44	0.00	461076.92	740431.33	N 32.265933	W 103.689210
	17800.00	90.00	179.62	11930.00	5918.72	-5813.36	1195.10	0.00	460976.92	740431.99	N 32.265658	W 103.689210
	17900.00	90.00	179.62	11930.00	6017.97	-5913.36	1195.76	0.00	460876.93	740432.65	N 32.265383	W 103.689210
	18000.00	90.00	179.62	11930.00	6117.23	-6013.36	1196.42	0.00	460776.94	740433.31	N 32.265108	W 103.689210
	18100.00	90.00	179.62	11930.00	6216.48	-6113.36	1197.08	0.00	460676.95	740433.97	N 32.264833	W 103.689209
	18200.00	90.00	179.62	11930.00	6315.73	-6213.36	1197.74	0.00	460576.95	740434.64	N 32.264559	W 103.689209
	18300.00	90.00	179.62	11930.00	6414.99	-6313.35	1198.40	0.00	460476.96	740435.30	N 32.264284	W 103.689209
	18400.00	90.00	179.62	11930.00	6514.24	-6413.35	1199.07	0.00	460376.97	740435.96	N 32.264009	W 103.689209
	18500.00	90.00	179.62	11930.00	6613.50	-6513.35	1199.73	0.00	460276.97	740436.62	N 32.263734	W 103.689209
	18600.00	90.00	179.62	11930.00	6712.75	-6613.35	1200.39	0.00	460176.98	740437.28	N 32.263459	W 103.689208
	18700.00	90.00	179.62	11930.00	6812.01	-6713.35	1201.05	0.00	460076.99	740437.94	N 32.263184	W 103.689208
	18800.00	90.00	179.62	11930.00	6911.26	-6813.34	1201.71	0.00	459976.99	740438.60	N 32.262909	W 103.689208
	18900.00	90.00	179.62	11930.00	7010.51	-6913.34	1202.37	0.00	459877.00	740439.26	N 32.262635	W 103.689208
	19000.00	90.00	179.62	11930.00	7109.77	-7013.34	1203.03	0.00	459777.01	740439.92	N 32.262360	W 103.689208
	19100.00	90.00	179.62	11930.00	7209.02	-7113.34	1203.69	0.00	459677.02	740440.59	N 32.262085	W 103.689207
	19200.00	90.00	179.62	11930.00	7308.28	-7213.33	1204.35	0.00	459577.02	740441.25	N 32.261810	W 103.689207
	19300.00	90.00	179.62	11930.00	7407.53	-7313.33	1205.02	0.00	459477.03	740441.91	N 32.261535	W 103.689207
James 29-32 Federal Com 31H - BHL [2542' FNL or 100' FSL, 330' FEL]	19389.58	90.00	179.62	11930.00	7496.44	-7402.91	1205.61	0.00	459387.46	740442.50	N 32.261289	W 103.689207

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 29-32 Federal Com 31H / Coterra James 29-32 Federal
	1	23.000	11400.000	1/100.000	30.000	30.000		A001Mb_MWD	James 29-32 Federal Com 31H / Coterra James 29-32 Federal
	1	11400.000	19389.576	1/100.000	30.000	30.000		A008Mb_MWD+IFR1+MS	James 29-32 Federal Com 31H / Coterra James 29-32 Federal

1. Geological Formations

TVD of target 11,930
MD at TD 19,390

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 Salt	1400	N/A	
Base Salt	4715	N/A	
Lamar	4740	N/A	
Bell Canyon	4816	N/A	
Cherry Canyon	5679	N/A	
Brushy Canyon	6967	Hydrocarbons	
Bone Spring Lime	8670	Hydrocarbons	
1st Bone Spring	9780	Hydrocarbons	
2nd Bone Spring	11560	Hydrocarbons	
3rd Bone Spring	11930	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	4884	4796	9-5/8"	40.00	HCK-55	LT&C	1.48	1.54	2.92
8 3/4	0	11482	11482	7"	29.00	L-80	LT&C	1.31	1.52	1.70
8 3/4	11482	12232	11890	7"	29.00	P-110	BT&C	1.53	2.02	78.52
6	10482	19390	11930	4-1/2"	11.60	P-110	BT&C	1.36	1.92	21.85
						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	921	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	286	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	418	10.30	3.64	22.18		Lead: Tuned Light + LCM
	125	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Completion System	535	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	50
Production	4684	25
Completion System	12032	10

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

4. Pressure Control Equipment

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

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

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

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

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

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 1140'	Fresh Water	7.83 - 8.33	28	N/C
1140' to 4884'	Brine Water	9.80 - 10.30	30-32	N/C
4884' to 12533'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
12533' to 19390'	OBM	8.50 - 9.00	50-70	N/C

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

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

6. Logging and Testing Procedures

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

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5583 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, asper 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. Engage pack off 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 31H 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 31H well until at least 8 hours and when both tail and lead slurry reach 500 psi. The mandrel hanger is 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 31H 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.

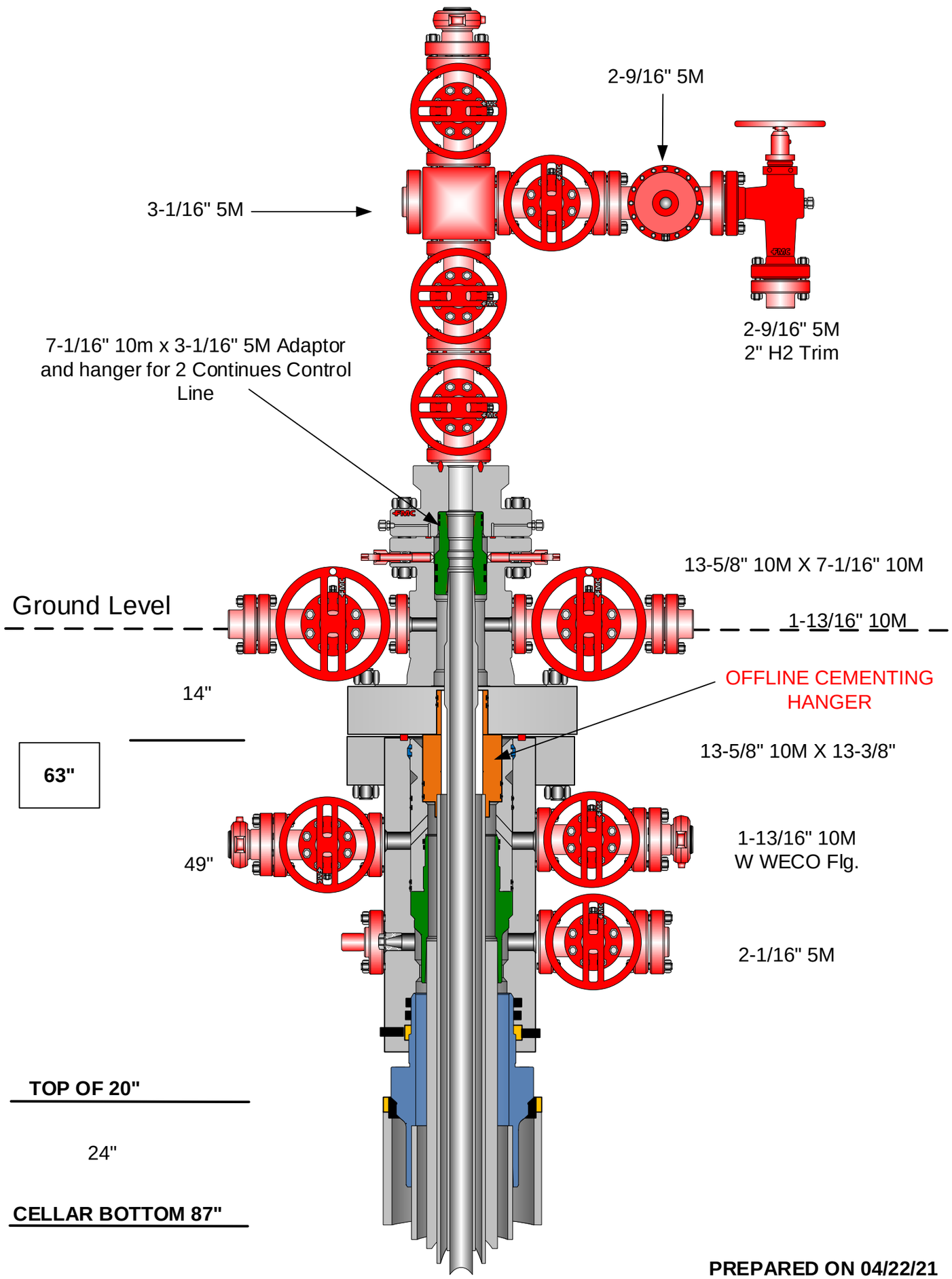
CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM

James 29 Federal Com 31H

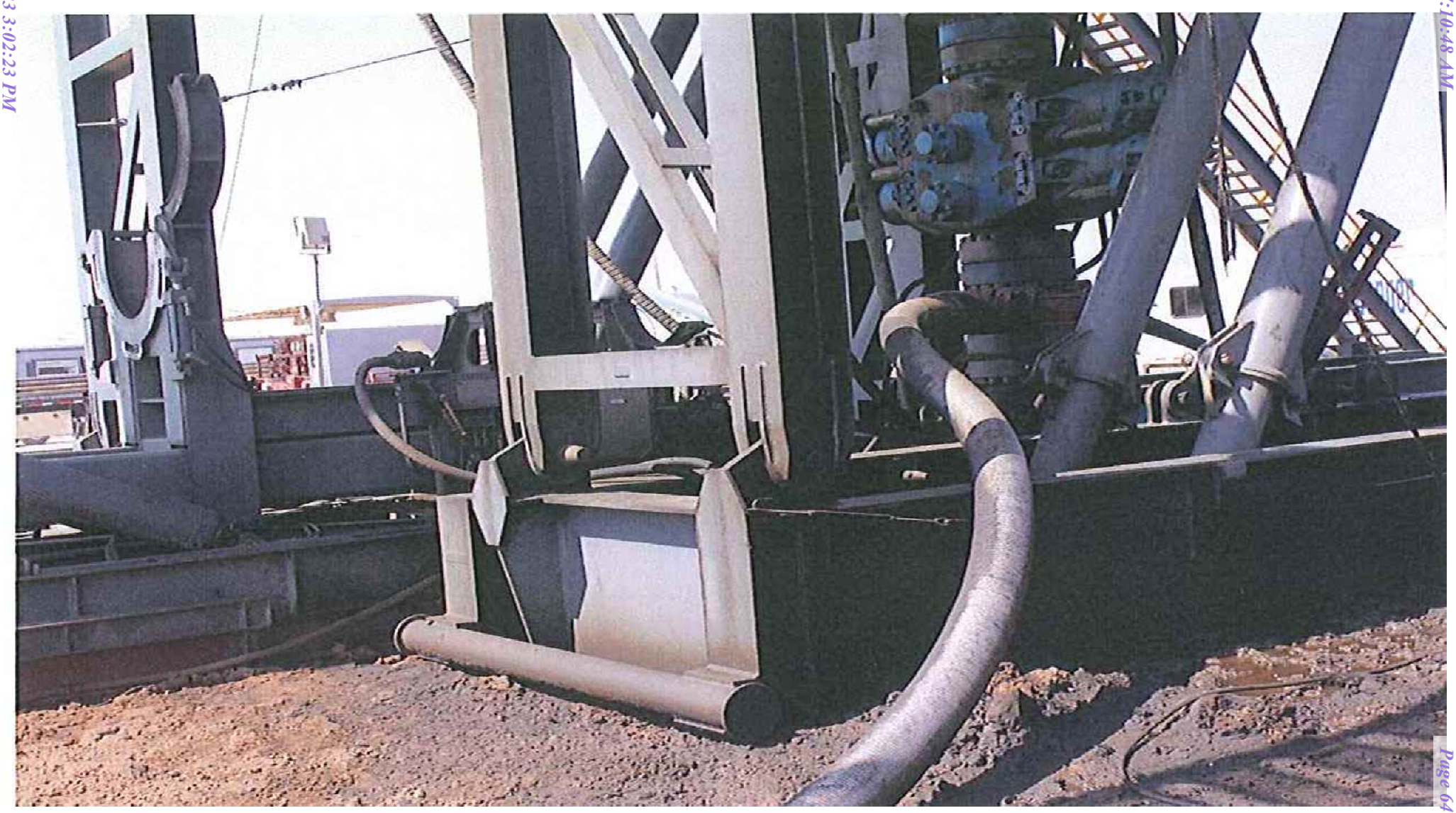
2. Casing Program

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	1205	1205	13-3/8"	48.00	H-40	ST&C	1.42	3.31	5.57
12 1/4	0	4880	4796	9-5/8"	40.00	HCK-55	LT&C	1.48	1.54	2.92
8 3/4	0	11532	11532	7"	29.00	L-80	LT&C	1.30	1.51	1.70
8 3/4	11532	12282	11940	7"	29.00	P-110	BT&C	1.53	2.01	78.52
6	10532	16759	11980	4-1/2"	11.60	P-110	BT&C	1.35	1.91	21.85
						BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet



PREPARED ON 04/22/21

Co-Flex Hose
James 29 Federal Com
23H-25H, 31H,32H
Cimarex Energy Co.



Co-Flex Hose Hydrostatic Test
James 29 Federal Com 23H
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.

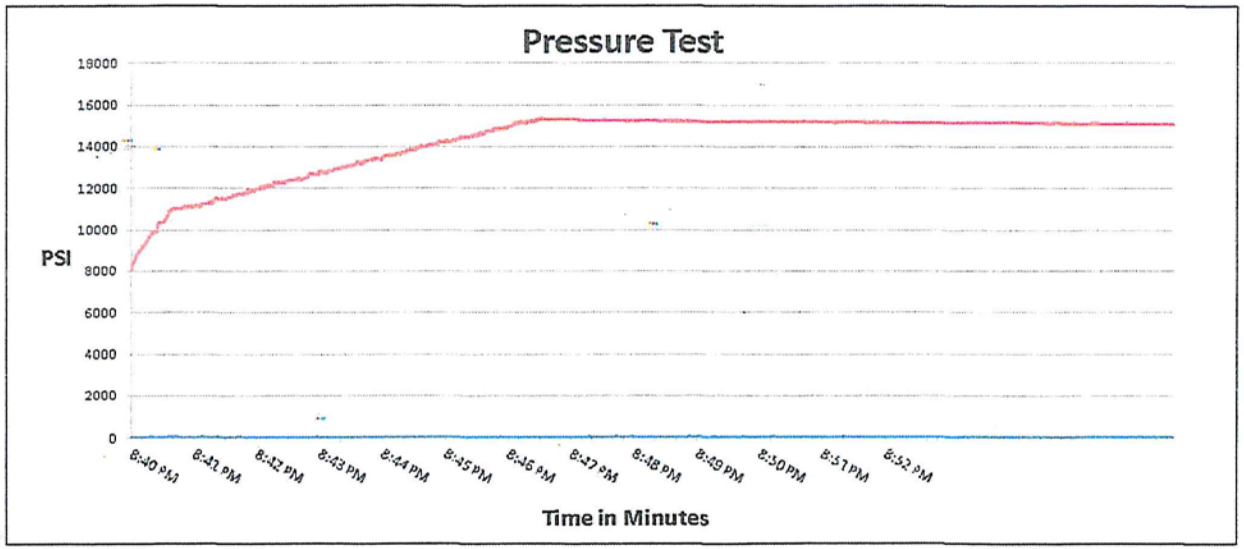
Internal Hydrostatic Test Graph

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
James 29 Federal Com 23H
Cimarex Energy Co.

Co-Flex Hose
James 29 Federal Com 23H
Cimarex Energy Co.

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer:	PO
DEM	ODYD-271

SPECIFICATIONS

Sales Order	Dated:
79793	3/8/2011

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

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

Comments:

Approved:	Date:
Jamal Garcia	3/8/2011

Co-Flex Hose
James 29 Federal Com 23H
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

Cementing Operational Workflow

Conventional Cementing

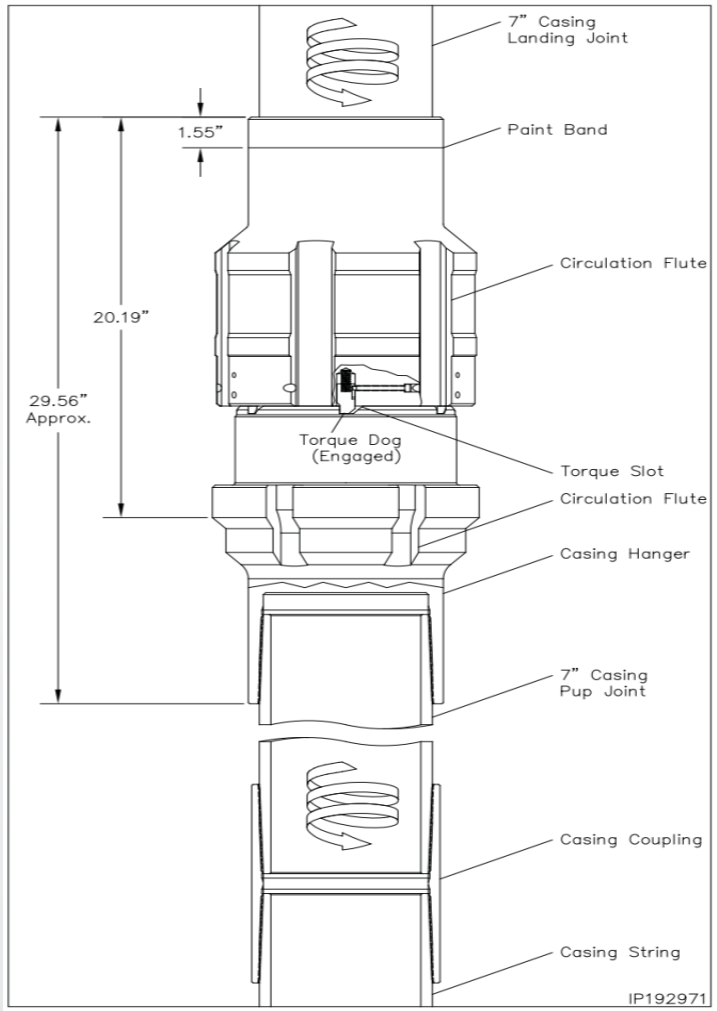
1. Land casing on fluted mandrel hanger
2. Circulate down casing, taking returns through BOP stack
3. Pump lead and tail cement
4. Displace cement and bump the plug
5. Ensure floats are holding pressure
6. RD cement crew
7. Install packoff to isolate pressure
8. Install BPV and skid rig

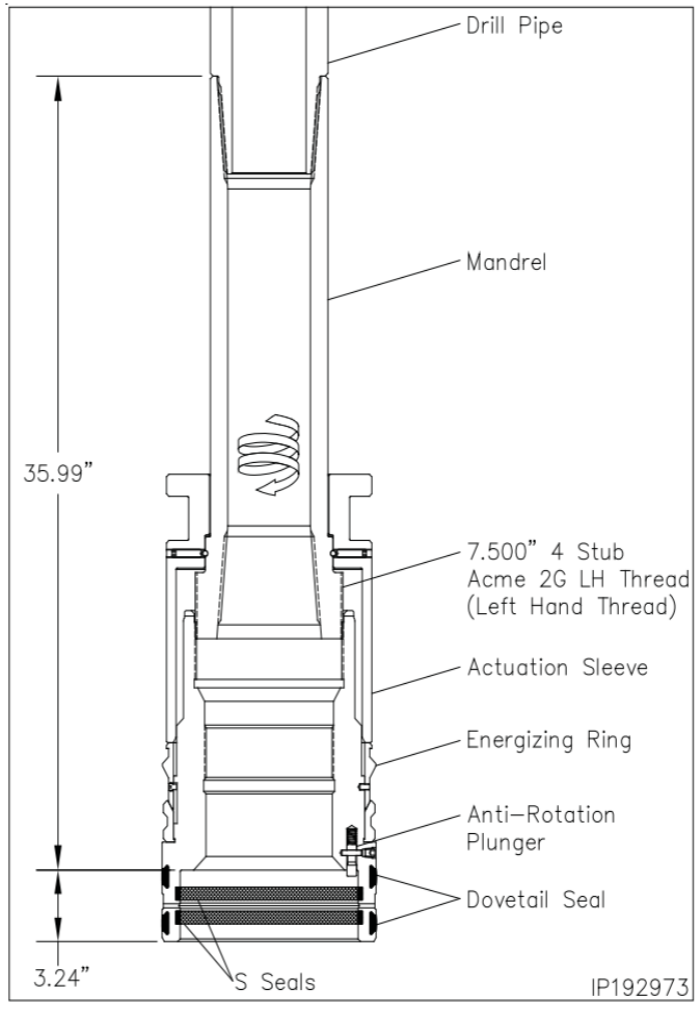
Offline Cementing

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

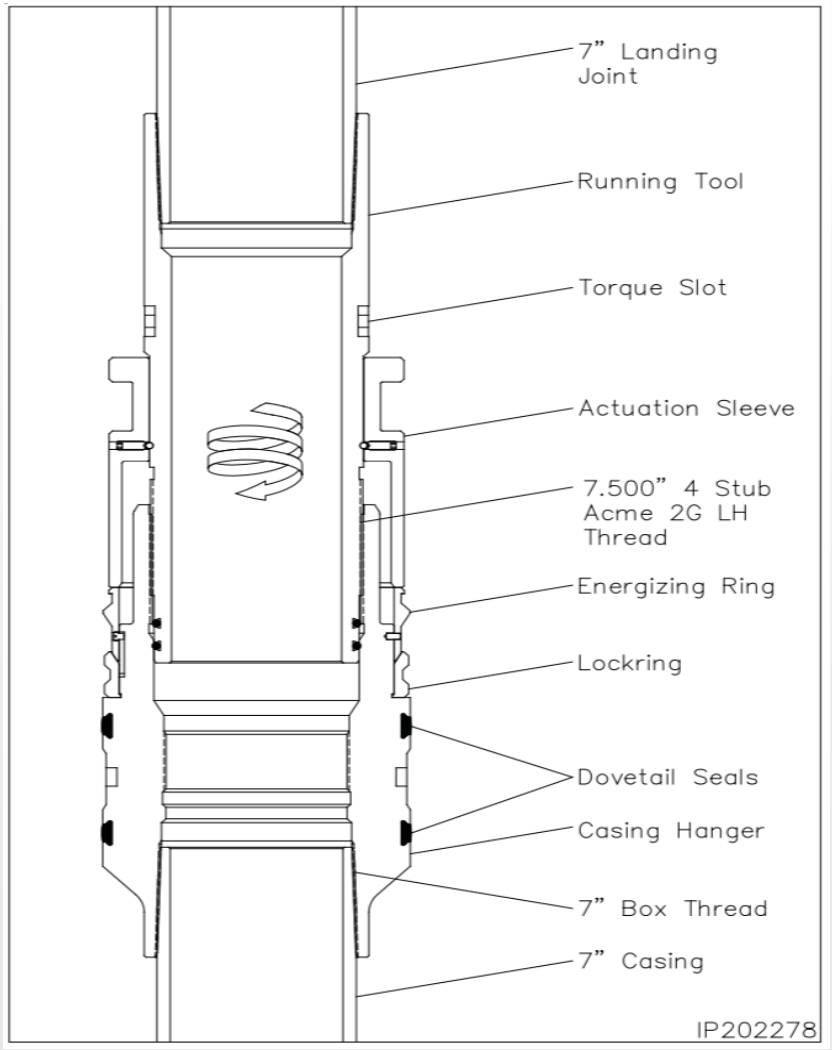
- Fluted Hanger allows returns up past the hanger body
- Returns throughout cement job flow up through BOP stack and into flowline
- Packoff is installed **after** cement job to isolate pressure above and below hanger
- Lockring engaged during packoff installation



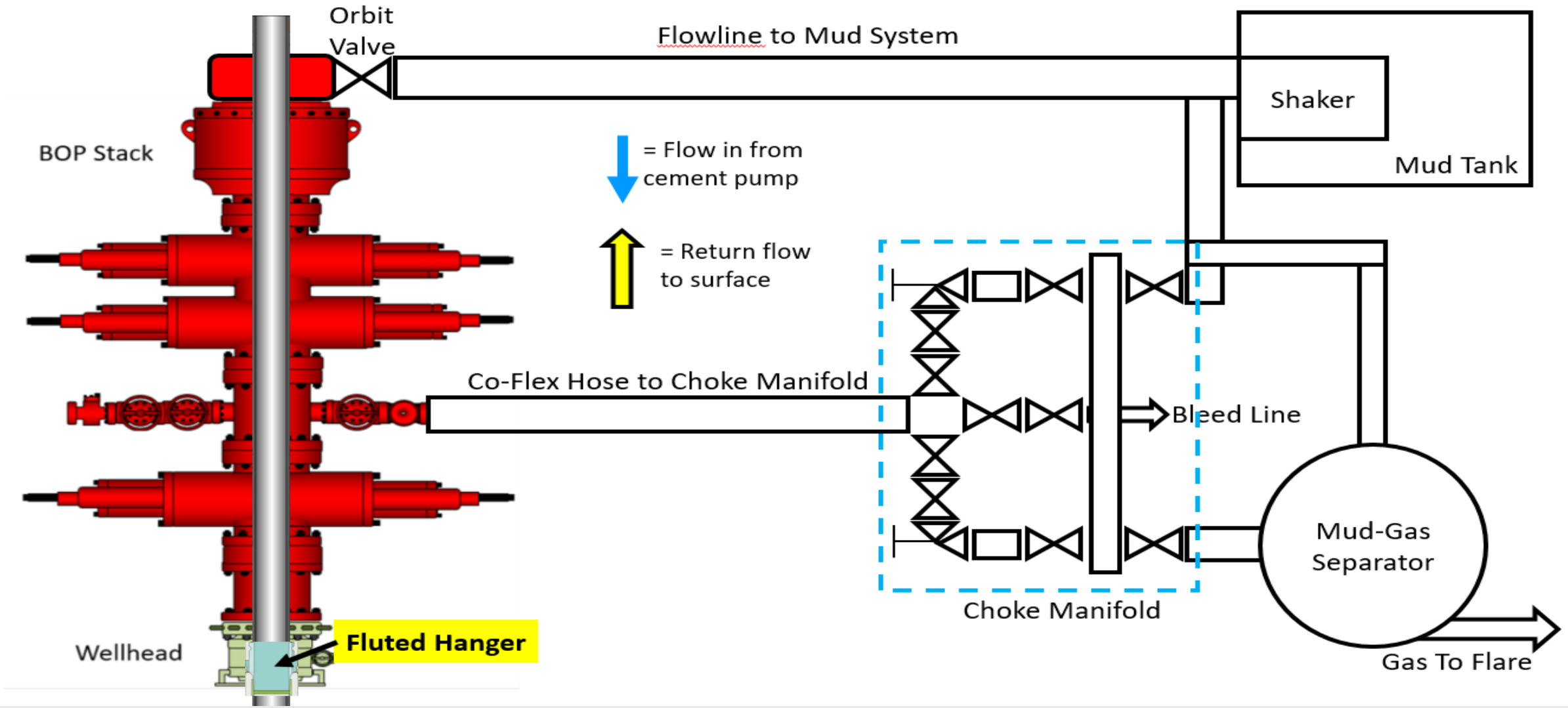


Offline Cementing Equipment-Solid Body Mandrel Hanger

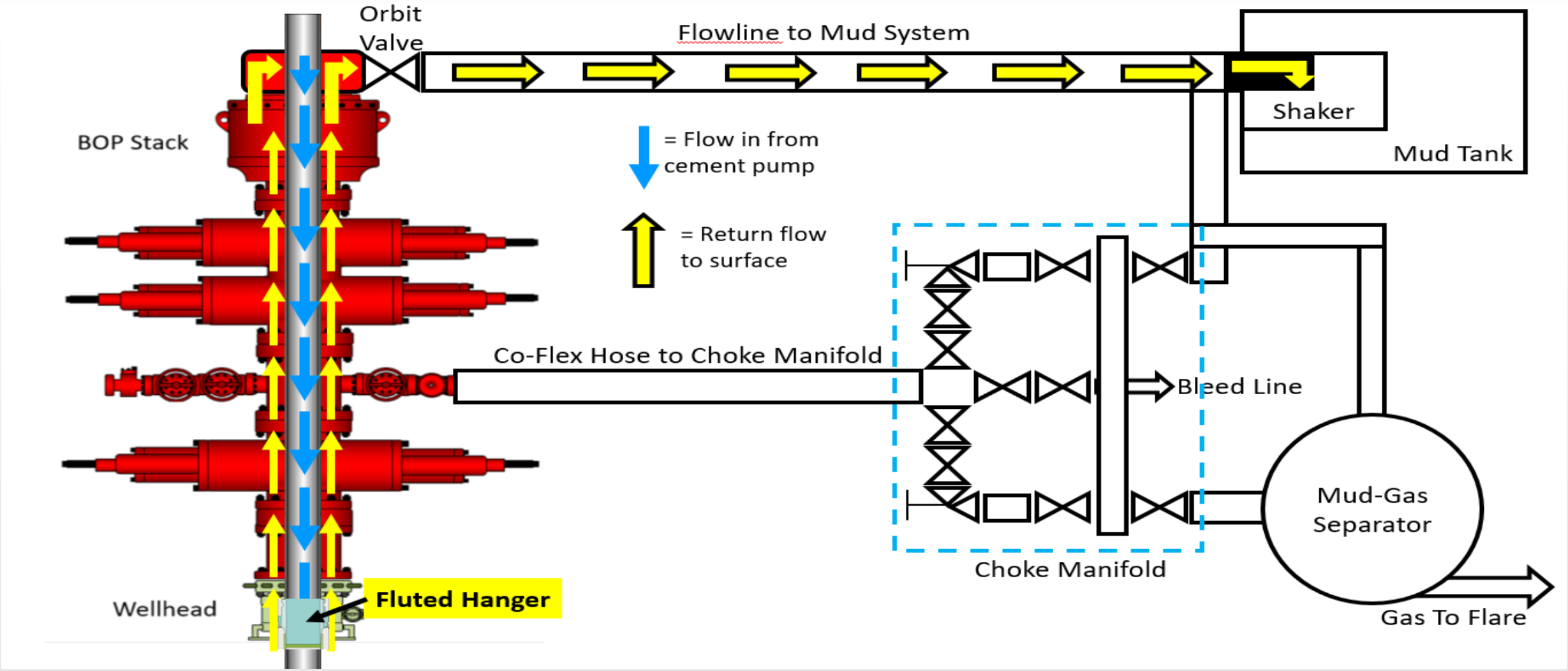
- Solid Body Mandrel Hanger allows for casing to be landed and pressure isolated in one step, **prior** to cementing
- Lockring is engaged to lock casing in place
- Casing is isolated and returns throughout cement job flow through the casing valves and through flowback iron independent of rig



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

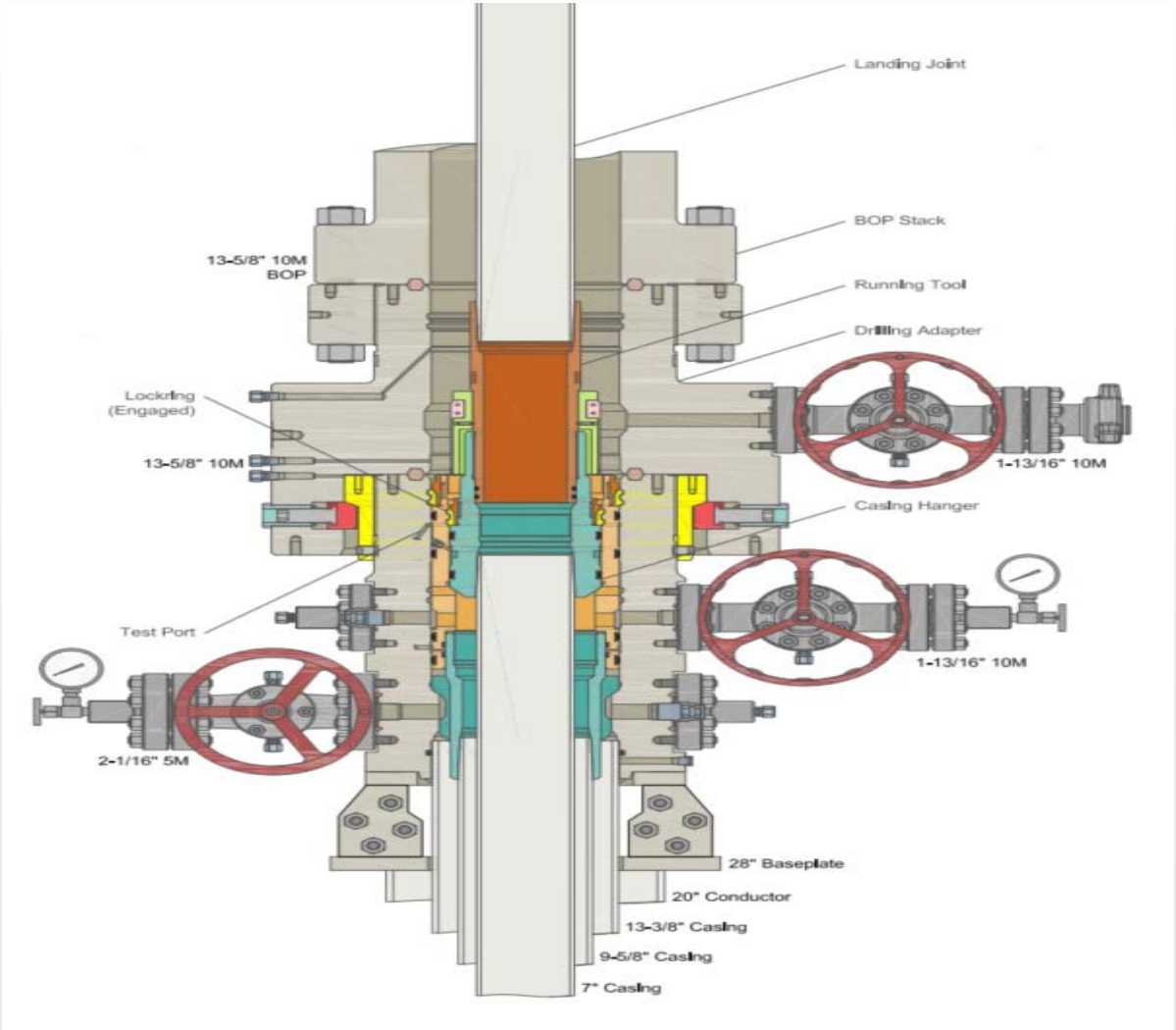
Same process flow as other casing valve

Choke Manifold

Open Top Tank

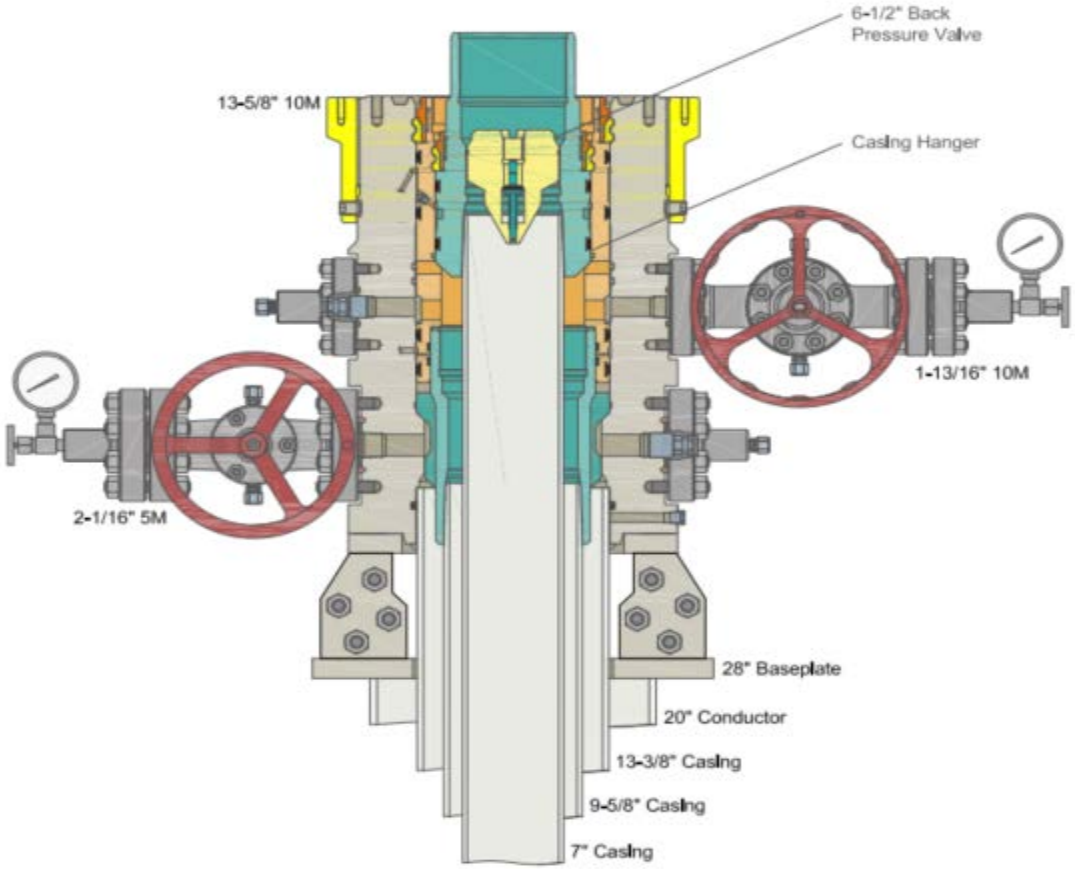
Offline Cementing Progression

- 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>**



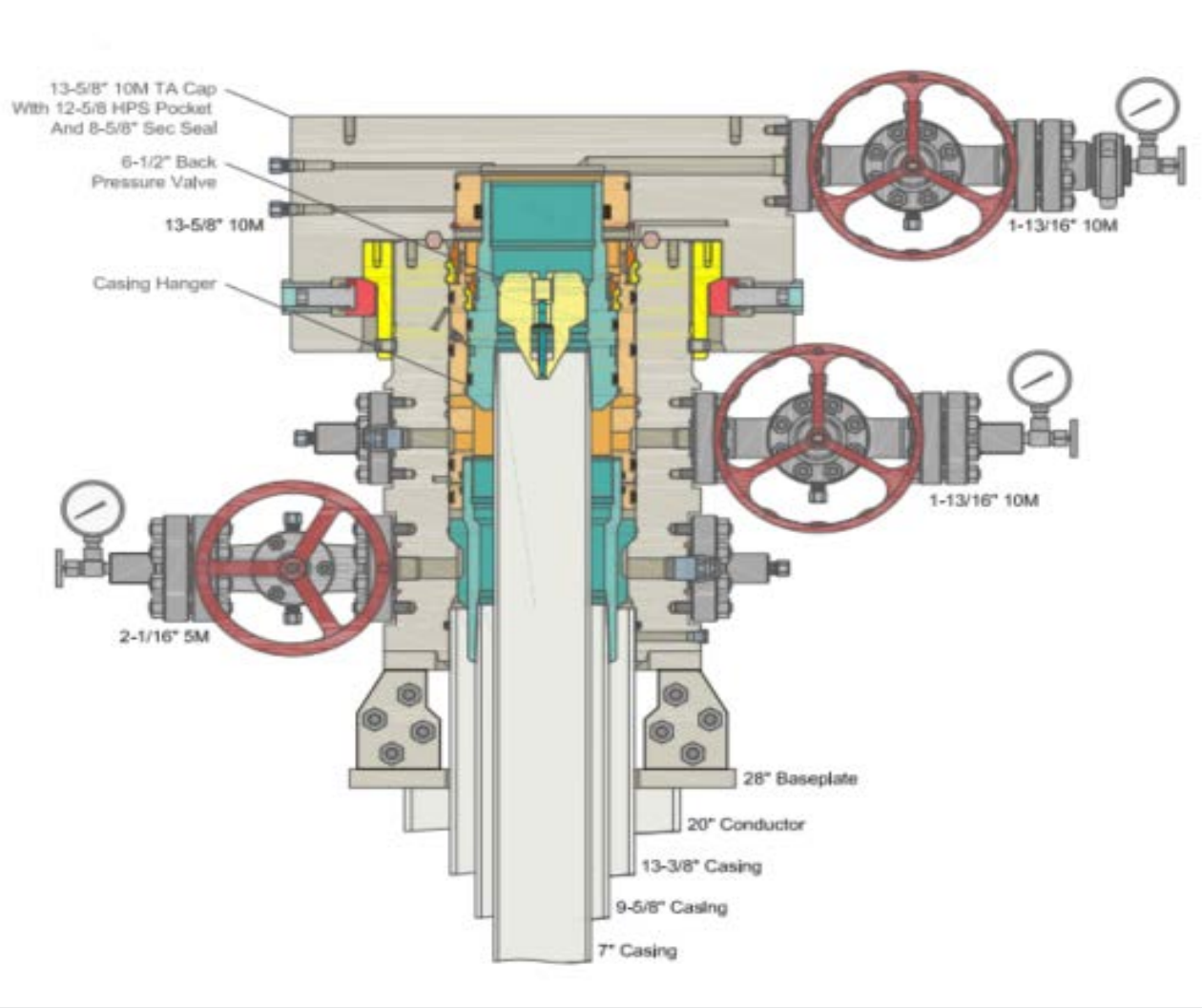
Offline Cementing Progression

- 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



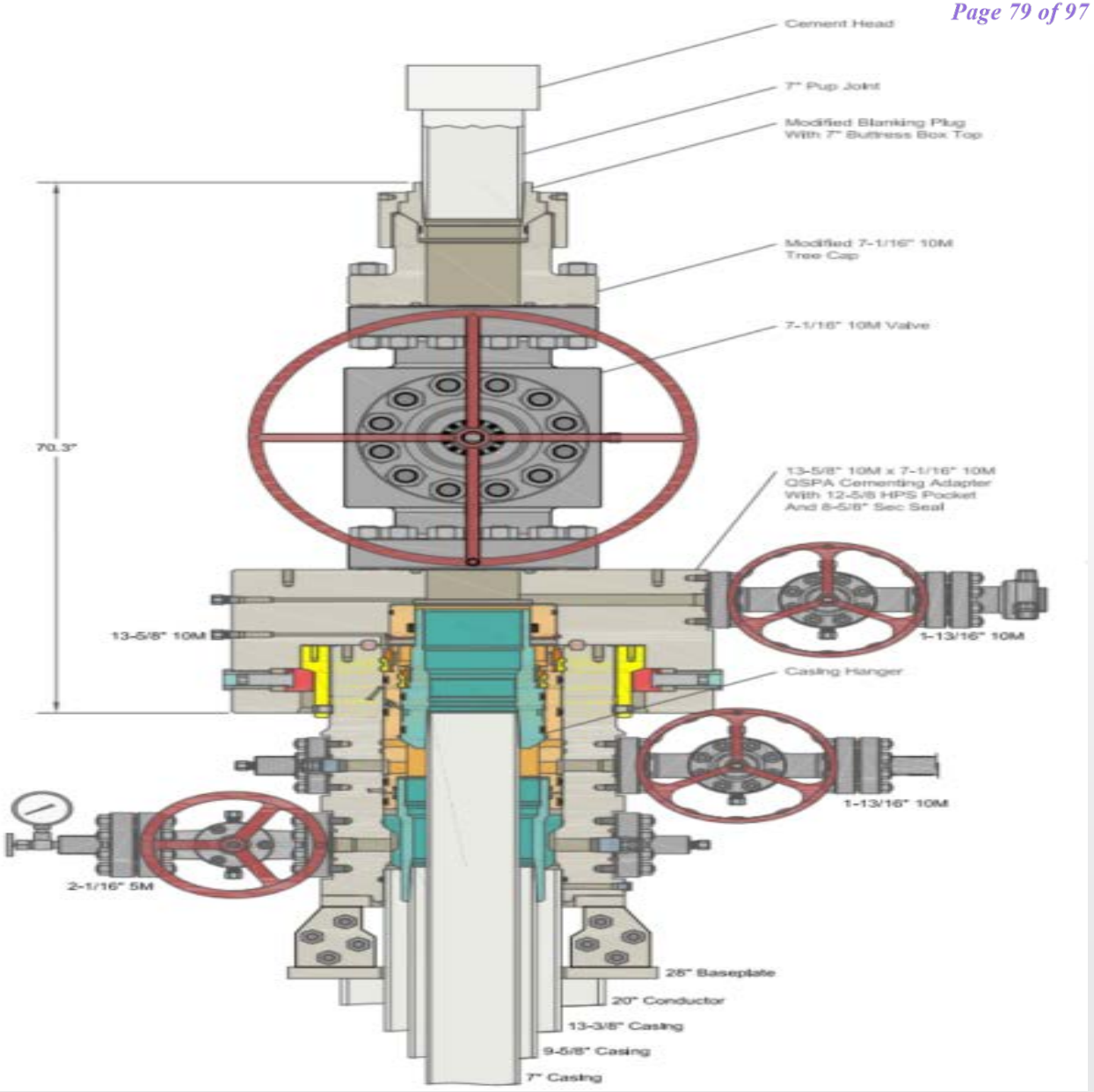
Offline Cementing Progression

- 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

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BUREAU OF LAND MANAGEMENT

SUPO Data Report
09/19/2023

APD ID: 10400088888
Submission Date: 10/30/2022

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM
Well Number: 31H

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_29_32_FEDERAL_COM_EXISTING_PUBLIC_ACCESS_ROAD_MAP_20230404081506.pdf

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

ROW ID(s)

ID: 137119

ID: 138298

ID: 35915

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

JAMES_29_32_FEDERAL_COM_WELL_RADIUS_MAP_20230404083511.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Will use the existing James Fed 38H CTB located at the James Fed 35H well pad on exhibit M.

Production Facilities map:

JAMES_29_32_FEDERAL_COM_FLOW_LINE_ROW_20230404083606.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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Water source and transportation

JAMES_29_32_FEDERAL_COM_PROPOSED_FRESH_WATER_MAP_20230404083930.pdf

JAMES_29_32_FEDERAL_COM_PROPOSED_FRAC_WATER_MAP_20230404083938.pdf

Water source comments: Attached are 2 proposed water routes, fresh water would be trucked, frac water would be moved using a 12" layflat line.
New water well? N

New Water Well Info

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

Well target aquifer:

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

Aquifer comments:

Aquifer documentation:

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

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

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

Drilling method: **Drill material:**

Grout material: **Grout depth:**

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

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be obtained from the actual well site if available. If not available onsite caliche will be obtained from Swag caliche pit located in NE/NE of Sec 21.
Construction Materials source location

JAMES_29_32_FEDERAL_COM_CALICHE_MAP_20230404085055.pdf

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Safe containmant attachment:

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

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

Waste type: SEWAGE

Waste content description: Human Waste

Amount of waste: 300 gallons

Waste disposal frequency : Weekly

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

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

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

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? N

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities

Comments:

Section 9 - Well Site

Well Site Layout Diagram:

JAMES_29_FEDERAL_COM_W2E2_Well_Pad_Layout_20221029123614.pdf

Comments:

Section 10 - Plans for Surface

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** James 29 Fed Com W2E2

Multiple Well Pad Number: 39H

Recontouring

JAMES_29_FEDERAL_COM_Reclamation_plat_20221029123834.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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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.

Well pad proposed disturbance (acres): 4.459	**Well pad interim reclamation (acres):** 1.824	**Well pad long term disturbance (acres):** 2.635
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): 1.553	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 1.553
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 6.012	**Total interim reclamation:** 1.824	**Total long term disturbance:** 4.188

Disturbance Comments: Surface Ownership for pipeline disturbance is BLM.

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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation

Operator Contact/Responsible Official

First Name: **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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface

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:**

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:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: OTHER

Describe: OVERHEAD POWER LINE

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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: 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

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

SUPO Additional Information: Please see attached SUPO with additional attachments.

Use a previously conducted onsite? Y

Previous Onsite information: 6/17/2022 with Caroline Kaufman- BLM and Todd Miller - Coterra.

Other SUPO

JAMES_29_32_FEDERAL_COM_SUPO_20230428105534.pdf
JAMES_19_20_FEDERAL_POWER_LINE_NETWORK___REV_4_26_2023_BG_Edits_20230428105645.pdf

AFMSS

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

PWD Data Report

09/19/2023

APD ID: 10400088888 **Submission Date:** 10/30/2022

Operator Name: CIMAREX ENERGY COMPANY

Well Name: JAMES 29-32 FEDERAL COM **Well Number:** 31H

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 29-32 FEDERAL COM **Well Number:** 31H

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 29-32 FEDERAL COM **Well Number:** 31H

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 29-32 FEDERAL COM **Well Number:** 31H

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
09/19/2023

APD ID: 10400088888
Submission Date: 10/30/2022
Operator Name: CIMAREX ENERGY COMPANY
Well Name: JAMES 29-32 FEDERAL COM
Well Number: 31H
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 266658

CONDITIONS

Operator: CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 266658
	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	9/21/2023
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	9/21/2023
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	9/21/2023
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	9/21/2023
pkautz	IF ON ANY STRING CEMENT DOES NOT CIRCULATE, A RCBL MUST BE RUN ON THAT STRING OF CASING.	9/21/2023